2012 REFERENCE DOCUMENT

INCLUDING THE CORPORATE SOCIAL RESPONSIBILITY AND SUSTAINABLE DEVELOPMENT REPORT

INNOVATE

THE WORLD LEADER IN GASES FOR INDUSTRY, HEALTH AND THE ENVIRONMENT

AIR LIQUIDE

Contents

2012 Reference document

including the Corporate Social Responsibility and Sustainable Development Report

Air Liquide is the world leader in gases for industry, health and the environment, and is present in **80 countries** with nearly **50,000 employees.** In 2012, the Group's revenues amounted to 15.3 billion euros. Oxygen, nitrogen, hydrogen and rare gases have been at the core of Air Liquide's activities since its creation in 1902. Using these molecules, Air Liquide continuously reinvents its business, anticipating the needs of current and future markets. The Group innovates in the service of the society, to achieve growth and a consistent performance.

Innovative technologies that curb polluting emissions, lower industry's energy use, recover and reuse natural resources or develop the energies of tomorrow, such as hydrogen, biofuels or photovoltaic energy… Oxygen for hospitals, home healthcare, fighting nosocomial infections… Air Liquide combines many products and technologies to develop valuable applications and services not only for its customers but also for society.

A partner for the long term, Air Liquide relies on employee commitment, customer trust and shareholder support to pursue its vision of sustainable, competitive growth.

The **diversity** of Air Liquide's teams, businesses, markets and geographic presence provides a solid and sustainable base for its development and strengthens its ability to push back its own limits, conquer new territories and build its future.

Air Liquide explores the best that air can offer to preserve life, staying true to its Corporate Social Responsibility and Sustainable Development approach.

Meet us on our website
www.airliquide.com

AUTORITÉ
DES MARCHÉS FINANCIERS
AMF

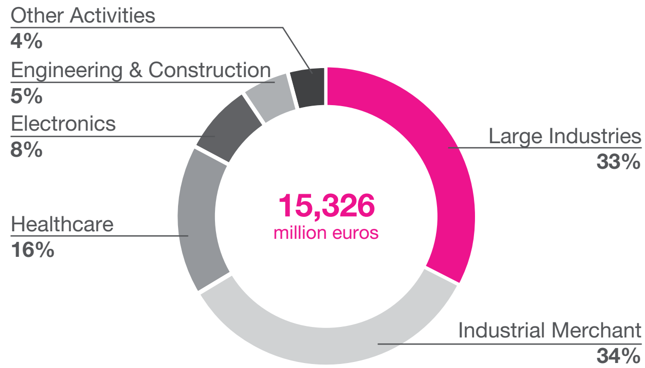
The original French version of this Reference document was fined with the French financial markets Authority (AMF), on March 14, 2013, in accordance with Article 212-13 of its General regulations. It may be used in support of any financial transaction if it is supplemented by a prospectus approved by the AMF. This document contains all information required for the Financial Annual report. It was prepared by the issuer and its signatories assume responsibility for it.

This document is a free translation from French into English and has no other value than an informative one. Should there be any difference between the French and the English version, only the text in French language shall be deemed authentic and considered as expressing the exact information published by Air Liquide.

A financial and technical glossary is provided at the end of the document – page 334.

Group

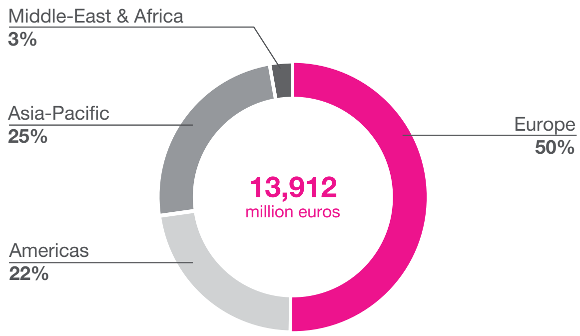
2012 Revenue by activity [a]



Gas & Services

World leader in Gas & Services

Gas & Services 2012 revenue by geography [a]



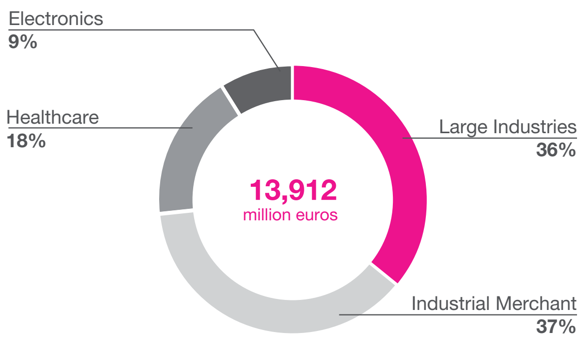
23% of sales in developing economies in 2012

39% of Net investments located in developing economies in 2012

Gas & Services 2012 revenue by World Business Line

Electronics
1,222 million of euros
-8% in 2012 [b]
+5% 5-year average

Healthcare
2,482 million of euros
+7% in 2012 [c]
+9% 5-year average



Large Industries
5,015 million of euros
+6% in 2012 [b]
+11% 5-year average

Industrial Merchant
5,193 million of euros
+2% in 2012 [b]
+3% 5-year average

18.8% Gas & Services Operating margin/Revenue

+6.1% Growth in current operating income for Gas & Services

Numerous financial terms as well as their calculation method are explained in the Glossary provided at the end of this Reference Document.

(a) Aggregate presented for financial information and from Consolidated financial statements.
(b) Comparable growth, excluding currency, natural gas and significant perimeter impacts.
(c) Growth excluding currency impact, compared to 2011, and 2011 revised to include the specialty ingredients activities in Healthcare.

Present in **80 countries** | **49,500** employees | Founded in **1902**

€2.9 billion
2012 investment decisions

€2.8 billion
2012 Net capex [(a)] [(b)]

18.9%
2012 capex/sales ratio [(a)] [(b)]

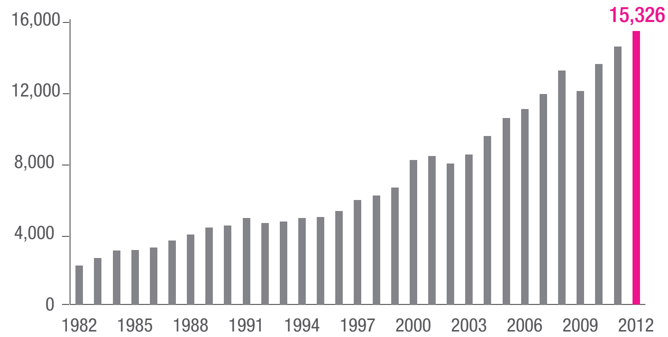
58%
2012 gearing [(a)]

11.9% 2012 ROCE [(c)]

Performance ***regularity***

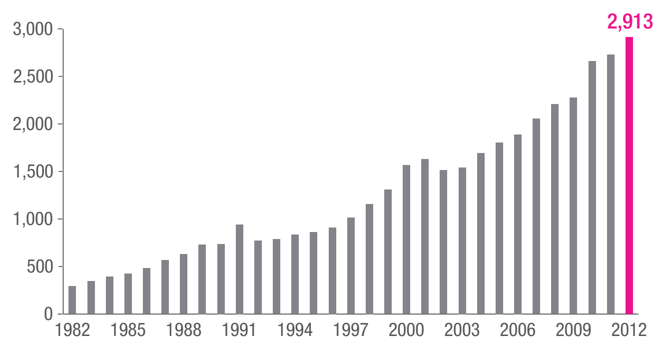
Revenue *(in millions of euros)*

Average annual growth over 30 years: +6.7%
2012-2011Growth: +6.0%



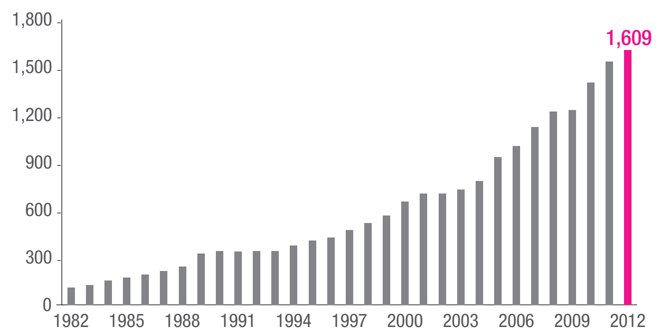
Cash Flow from operating activities before changes in working capital requirement [(a)] *(in millions of euros)*

Average annual growth over 30 years: +8.0%
2012-2011 Growth: +6.8%



Net profit (Group share) *(in millions of euros)*

Average annual growth over 30 years: +9.4%
2012-2011 Growth: +4.9%

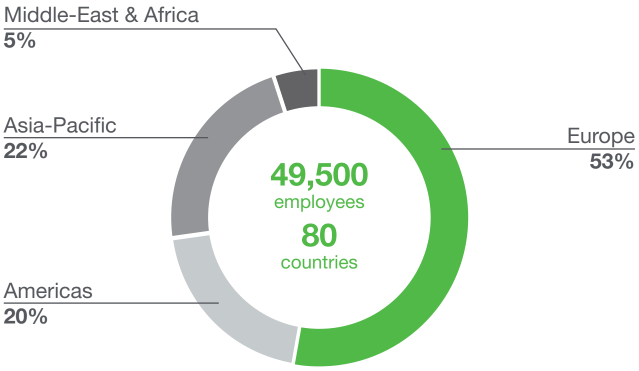


(a) Aggregate presented for financial information and from Consolidated financial statements.
(b) Industrial and financial, including transactions with minority shareholders.
(c) Pro forma, including impact of LVL Médical and Gasmedi acquisitions.

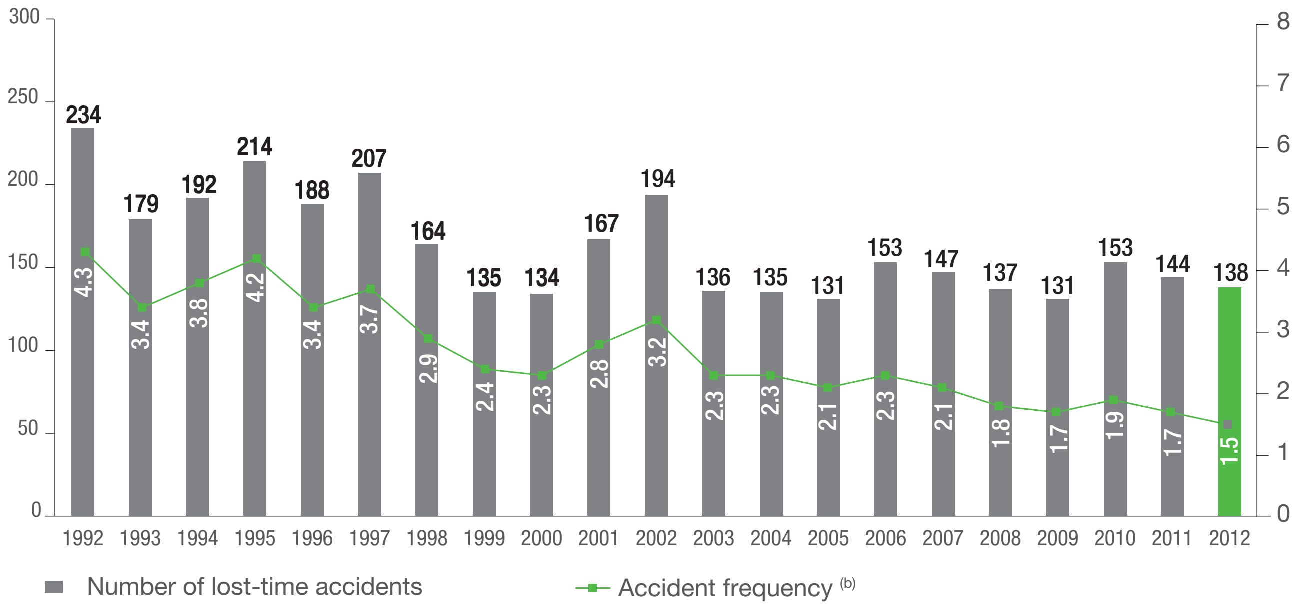
4 Stakeholders

EMPLOYEES

2012 employees by zone



Number of lost-time accidents and accident frequency [a] since 1992



SHAREHOLDERS

TSR [a] +13.9%
per year as of December 31, 2012
for a registered shareholder over 10 years.

CUSTOMERS AND PATIENTS

In 2012: 1 million customers
1 million patients
supported by the Air Liquide Home Healthcare business line

Customer and patient satisfaction surveys cover patients
66% of the Group sales

COMMUNITIES

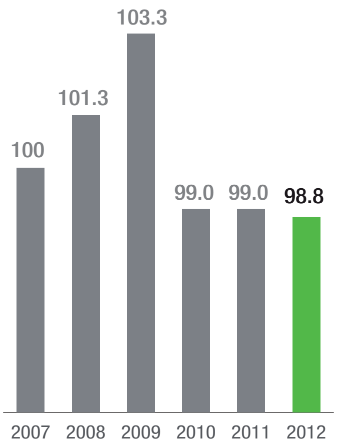
Air Liquide Foundation
126 projects in 33 countries supported since its creation
42% in developing countries
160 employees involved

(a) Total Shareholder Return.
(b) Number of lost-time accidents per million hours worked by Group employees.

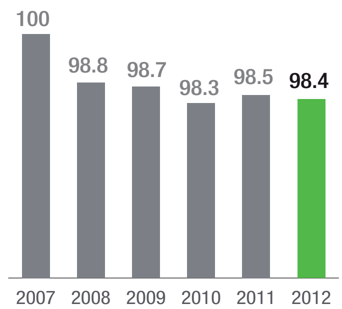
3 Fields of action

ENVIRONMENTAL FOOTPRINT

Energy consumption per m³ of produced gas (2007 average base 100)



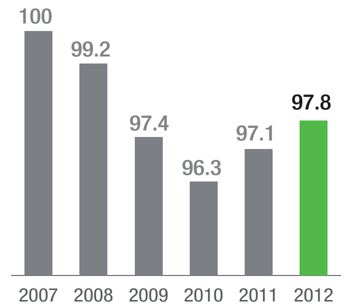
Air separation



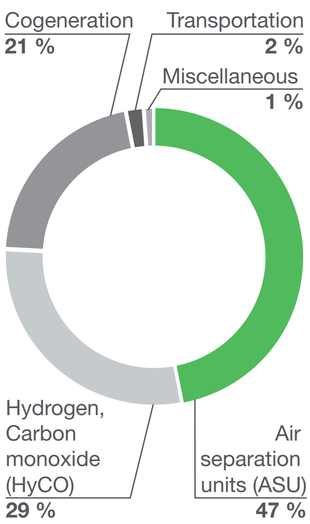
Hydrogen

Distance traveled per ton of gas delivered

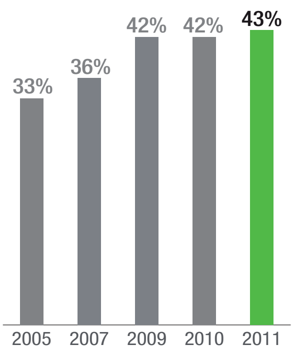
(2007 average base 100)



2012 direct and indirect greenhouse gas emissions

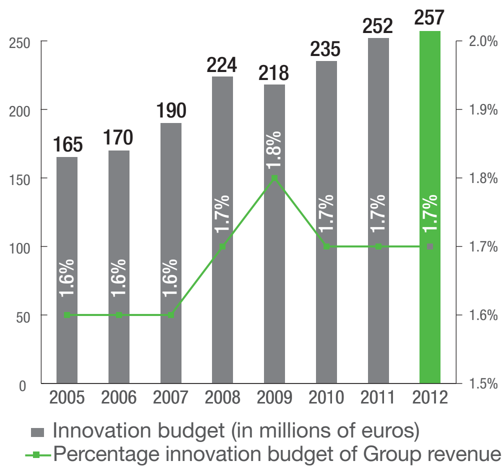


Revenue linked to life and environment



INNOVATION

Innovation budget



RULES OF CONDUCT AND GOVERNANCE

Corporate governance in 2012

75% of Board members are independent directors

25% of Board members are women

Internal governance in 2012

91% of the Group's employees belong to subsidiaries that have a local Code of Conduct

93% of the Group's revenues have been covered by the Industrial Management System audit over the last five years

> STOCK MARKET INDICATORS

Numerous financial terms as well as their calculation method are explained in the Glossary provided at the end of this Reference document.

+7.1%

Total Shareholder Return over five years
for a registered shareholder [(a)]

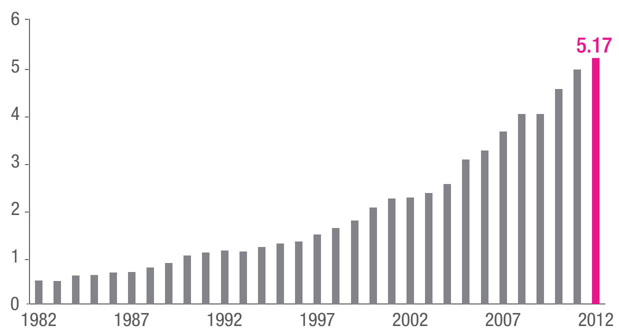
Stock market performance

(in euros)

		2008	2009	2010	2011	2012
Market capitalization at December 31 *(in millions of euros)*		17,077	21,941	26,887	27,130	29,682
Adjusted closing share price [(b)]	high	80.81	71.43	89.78	90.70	99.52
	low	49.67	47.52	64.03	76.03	84.12
	At December 31	55.57	70.50	85.84	86.70	95.05
Net earnings per share [(b)]		3.99	3.99	4.52	4.93	5.17
Net dividend per share [(b)]		1.91	1.91	2.13	2.27	2.50 [(c)]
Distribution rate		49.3%	49.5%	48.7%	47.5%	49.9%
Dividend yield		3.4%	2.7%	2.5%	2.6%	2.6%
Ex-dividend date		May 13, 2009	May 12, 2010	May 11, 2011	May 11, 2012	May 16, 2013

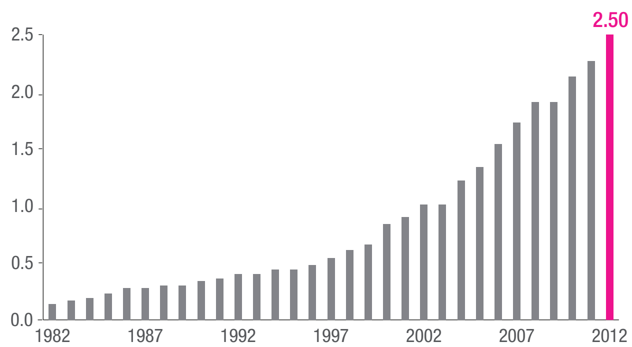
Net earnings per share – adjusted [(b)]

+8,2% average annual growth over 30 years



Dividend per share – adjusted [(b)]

+10,1% average annual growth over 30 years



(a) At December 31, 2012, for capital invested since December 31, 2007.
(b) Adjusted for previous two-for-one share splits and free share attributions.
(c) To be proposed at the Annual General Meeting on May 7, 2013.

100 years on the stock market

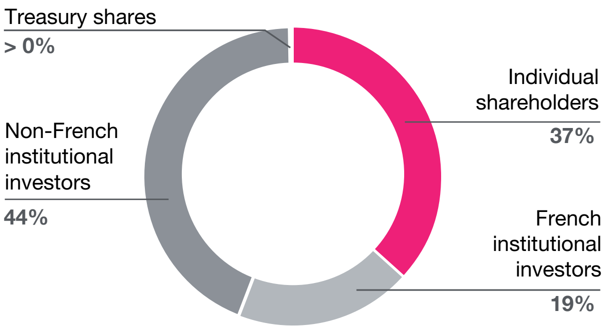
Eleven years after its creation through private funding, Air Liquide was listed on the Paris Stock Exchange on February 20, 1913 and therefore this year commemorates its 100th anniversary on the stock market. Its stock market performance has since been remarkable: in 100 years, the Company has moved from 154th to 5th place in terms of French market capitalization with a current value of almost 30 billion euros [(a)].

Whereas a one euro investment in 1913 in a French State treasury bond would today amount to 300 euros, the same investment in Air Liquide shares would today amount to 1,800 euros [(a)]!

Key dates

1913: Listing of Air Liquide on the Paris Stock Exchange.
1987: To better anticipate shareholder needs, Air Liquide broke new ground by creating the first Shareholders' Communication Committee.
1988: Air Liquide enters the CAC 40 as from the creation of the index and has been a member ever since.
1996: The Group introduced a loyalty bonus for loyal registered shareholders.
1998: Air Liquide has been part of the Euro Stoxx 50 index since its creation.
2012: Individual shareholders still hold 37% of the capital of the Group, a distinguishing characteristic of Air Liquide.
2012: Loyal to the Company, together the ten current largest institutional shareholders already had a similar stake in the Group at the end of 2008.

Shareholder breakdown at December 31, 2012



A strong share ownership culture

A differentiating feature of Air Liquide Group is the high proportion of loyal individual shareholders: together, over 390,000 individual shareholders hold some 37% of the share capital at the end of 2012.

This loyalty is attributable to a long history of steady earnings growth, resulting from the constant development of Air Liquide's markets and the solidity of its economic model.

Free share grants: 1 for 10 in 2012

At the May 30, 2012 closing date, each shareholder received a free share for 10 existing shares. Registered shareholders having held their shares continuously since December 31, 2009 also received a 10% loyalty premium (1 additional share for 100 shares held). As a result of this attribution, the total number of outstanding Air Liquide shares increased by +10.25%.

All the historical published per share data concerning stock market prices, earnings and dividends were adjusted to take into account this increase in the number of shares.

Free share offers do not modify the value of the portfolio of an Air Liquide shareholder.

(a) Source: Euronext.

1 Management Report

> HISTORY OF THE AIR LIQUIDE GROUP

1902

ORIGIN

Air Liquide was born of innovation and an encounter between two men: Georges Claude, inventor of an industrial process for the production of oxygen from liquid air and Paul Delorme, a visionary entrepreneur.

1906

FIRST INTERNATIONAL DEVELOPMENTS

Gas by its very nature is difficult to transport and thus local production is required. This was one of the reasons Air Liquide set its sights internationally early on, building numerous production units abroad. Development was rapid in Europe (1906), Japan (1907), Canada (1911) and the United States (1916). See "A Century of Development."

1913

LISTING ON THE STOCK EXCHANGE

The critical role played by shareholders became evident in the first years of the Company's development. First listed on the Paris Stock Exchange in 1913, the share has now been listed for 100 years; 100 years in which Air Liquide has endeavored to forge a strong and privileged relationship with its shareholders.

1946

NEW ADVENTURES, DIVING

New adventures shared with Captain Cousteau led to the creation of Spirotechnique (today known as Aqua Lung), which designs, manufactures and sells diving regulators and other equipment used for professional and leisure diving.

A Century of International Development

Air Liquid's development was rapid during the early part of the 20th century, with significant business growth between the two wars. From 1945 to 1970, in an economy that was being rebuilt, the Group consolidated its positions and established itself in South America and South Africa (1946), and in Australia and North Africa (1956).

In the 1970s, international growth was renewed with a major acquisition: Big Three in the United States in 1986. At the end of the 1980s, taking advantage of its long-time presence in Japan, Air Liquide set its sights on other Asian countries and accompanied the development of its Electronics market. In the early 2000s, the Group invested massively in China, a major growth market, and entered into numerous air gas outsourcing contracts.

In the 1990s, the Group began to develop in Eastern Europe. During a second phase, in the 2000s, it made inroads further east in Russia, Ukraine and Turkey, winning Large Industries contracts. The Middle-East also became a new investment priority.

In 2004, there was a second major acquisition: certain businesses of Messer Griesheim in Germany, the United Kingdom and the United States. In 2007, the Group purchased minority interests in joint ventures in Japan and Southeast Asia.

Today, Air Liquide continues to pursue a global presence strategy, convinced that this geographical diversity will guarantee resilience and future growth. As a result, the Group is reinforcing its historical positions in the major world economies and relentlessly seeking footholds in new markets.

Air Liquide is now present in 80 countries, its international dimension being a fundamental component of its identity.

1952

THE CRYOGENIC REVOLUTION

Storing gas in liquid form in cryogenic tanks allowed vast quantities to be transported by road or rail within a radius of around 250 km from the production site. In 1954, the first liquid oxygen plant was commissioned in the North of France.

1960

PIPELINE NETWORK STRATEGY

By delivering gas to several customers through pipelines, Air Liquide adopted a network strategy for the first time. Linking its gas production units through a network of pipelines, the Group multiplied production capacity to meet soaring demand from large industries: firstly, for oxygen in steel, and secondly, for nitrogen in chemicals.

The Large Industries business was launched with customers committing to long-term contracts of 15 years or more.

1962

SPACE INDUSTRY

Convinced of the industrial potential of cryogenics, Jean Delorme, Chairman and Chief Executive Officer, decided to create a research center near Grenoble dedicated to these technologies. The first applications were rapidly integrated in the space industry. Air Liquide has been a partner of the space adventure and the Ariane program for 50 years. The Group's contribution has been as much in the production of the fluids essential for launch (oxygen, hydrogen, helium and nitrogen) and associated services, as in the design and production of the cryogenic tanks and equipment.

1970

A TRADITION OF INVENTIONS

The Claude-Delorme Research Center was created in the greater Paris region to enhance gas production techniques and their applications (combustion, welding, metalworking, chemicals, electronics, food, respiratory functions, and environmental treatment). It is evidence of the Group's desire to perfectly understand the industrial processes of its customers and develop new gas applications to better satisfy their requirements (in terms of quality, productivity and the environment). The Center also develops partnerships with universities and industrialists. The Group currently has eight research centers around the world: in France, Germany, the United States and Japan.

1976

A TECHNOLOGICAL BREAKTHROUGH

With the Sasol project in South Africa, transforming coal into synthetic fuel, air gas separation units (ASUs) have scaled up, dramatically increasing in size. Following this technological breakthrough, Air Liquide became the leader in large ASUs, and remains so today.

1985

A NEW MARKET, ELECTRONICS

In Japan, the Group began to supply ultra-high purity gases to the semiconductor industry. This involves carrier gases, mainly nitrogen, used to inert the fabs, and specialty gases that are used directly in the manufacturing of semiconductors. In 1987, Air Liquide inaugurated the Tsukuba research center in Japan, which is dedicated to the Electronics industry.

1995

EXTENDED OFFERING: HYDROGEN AND STEAM

In addition to oxygen and nitrogen, as part of its commitment to protecting the environment and promoting energy efficiency, Air Liquide extended its offering to hydrogen and steam. To ensure the success of this new offering, the Group has used the business model, which is behind the success of its air gas activity, deploying from the beginning a basin strategy based on a pipeline network, offering customers flexibility, reliability, distribution and service quality at the best price.

PROTECTING LIFE

Originally, an oxygen supplier to hospitals, Air Liquide became a specialist in the Health sector. The Group launched its Home Healthcare activity and set up a network of dedicated specialist teams. Medical gases were classified as drugs and manufacturers were required to file market authorizations. The Group also developed in the Hygiene sector, an activity that naturally complemented the hospital services. Most recently, Air Liquide launched significant research programs in therapeutic gases, used for anesthesia, pain relief, and post-operative recovery.

2007

STRUCTURING OF EXPERTISE: ENGINEERING AND ORGANIZATION BY BUSINESS LINE

The Air Liquide growth drivers for the coming decades are solid and sustainable, based on changing lifestyles: industrial growth of developing economies, increasing energy needs and environmental challenges and high technology. To capture this growth, the Group created a new organization based on four World Business Lines. They combine the technical, financial and operational expertise that are specific to each of the businesses of the Group: Large Industries, Industrial Merchant, Healthcare, Electronics,. The Group remains anchored geographically, but each zone or country benefits from the support and experience of the business lines to accelerate its development.

Conscious of the strategic dimension of the Engineering & Construction business unit, the Group acquired Lurgi in 2007. This company provides Air Liquide with major proprietary technologies such as hydrogen and carbon monoxide production, or processes relating to the gasification or CO_2 purification. Thanks to this acquisition, the Group now has a complete technological offering and a greater engineering capacity.

2008

LAUNCH OF THE ALMA PROGRAM TO STEP UP GROWTH

The Group launches the ALMA program. Driven by the ambition to be the recognized leader of its industry, the Group announces its mid-term objectives for an annual revenue growth of +8% to +10%, 600 million euros in efficiencies over three years and a return on capital employed of between 11% and 12%.

2009

RESILIENCE IN AN UNPRECEDENTED CRISIS

Affected by a crisis of unprecedented magnitude, the Group focuses its efforts on the management of its cash, costs and investments (capex). Having tested the solidity of its long-term contracts, Air Liquide confirms their resilience and demonstrates the relevance of its economic model. In the midst of a global recession, the Group is an exception, posting a flat net income while preserving a solid balance sheet.

2010-2012

NEW TERRITORIES: ACQUISITIONS AND HYDROGEN ENERGY

Slowly emerging from a crisis that reshuffled global growth, Air Liquide announces new objectives for its ALMA program in terms of performance and responsibility.

The Group accelerates its presence in new territories, including Turkey, Ukraine and Mexico, thereby increasing, within a space of five years, the Gas & Services revenue share in developing economies from 15% to 23% in 2012.

In a weaker growth environment in the advanced economies, and particularly in Western Europe, Air Liquide intensifies its acquisitions. By the end of 2012, **two major home healthcare players** have joined the Group: LVL Médical in France and Gasmedi in Spain.

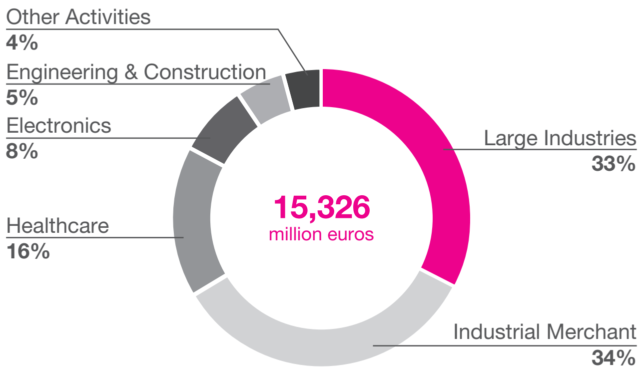
The hydrogen fuel cell is gradually becoming an alternative for the supply of a new generation of electrical vehicles. Air Liquide confirms its commitment to a more environmentally friendly energy source, with the creation of its **Blue Hydrogen** label accompanied by ambitious objectives. The first consumer hydrogen distribution stations open.

> ACTIVITIES AND RISK FACTORS

Activities

The Group classifies its activities as follows: Gas & Services, Engineering & Construction and Other activities. Additional information is available in the “2012 Performance” section of this report.

2012 Group revenue



GAS & SERVICES

The supply of gas requires local production in order to avoid disproportionate transport costs. Air Liquide gas production units are therefore located throughout the world and can supply several types of customers and industries, with the relevant volumes and services required. The operational management of Gas & Services activities is organized by geographical area (Europe, Americas, Asia-Pacific and the Middle-East and Africa) and coordinated at World Business Line level to better adapt to the changes in the different customer markets:

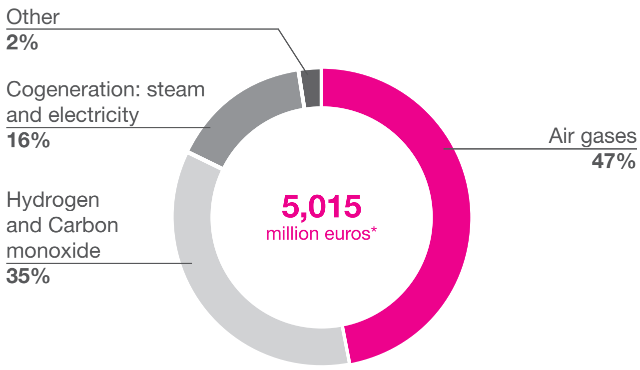
- **Large Industries** supply industrial gases by operating major production units to serve customers in the steel, chemicals and refining industries with high gas consumption, requiring delivery through a pipeline. Large Industries also supplies the Group’s other business lines.
- **Industrial Merchant** supplies a wide range of different gases, application equipment and services to industries of all sizes requiring variable quantities, distributed in bulk (liquid form) or in cylinders (gaseous form).
- **Healthcare** supplies medical gases, hygiene products, medical devices and services to hospitals and patients in their homes. It also produces and distributes healthcare specialty ingredients for the personal care, pharmaceutical and vaccine markets.
- **Electronics** supplies gas and services for the production of semi-conductors, flat panels and photovoltaic panels.

Depending on their end use, gases are distributed in different states and using various means: in gaseous form through a pipeline, in liquid form in cryogenic trailers, and in gaseous form in high pressure cylinders for small quantities or specialty gases. The Gas & Services activities represent 91% of the Group’s total revenue.

LARGE INDUSTRIES

The Large Industries business line proposes gas and energy solutions to its customers, essential for their own production, to improve process efficiency and to help them better respect the environment. The world leader in this sector, Air Liquide boasts dedicated in-house development and engineering teams, differentiating proprietary technologies and rigorous processes for selecting investments and carrying out major projects, which often include pipelines networks, reaching out over several hundreds of kilometers.

2012 Large Industries revenue by activity



* *36% of Gas & Services revenue.*

Large Industries business line

Separation of air gases (ASU: Air Separation Unit)
An ASU compresses, liquefies and distills air in order to separate it into its different components: 78% nitrogen, 21% oxygen, and 1% rare gases (argon, neon, krypton and xenon). Only certain extremely large ASUs can produce rare gases. Electricity consumption is significant.

Hydrogen and carbon monoxide production (SMR: Steam Methane Reformer)
By steam reforming natural gas, an SMR produces hydrogen (used in desulfurizing fuel, in certain chemical processes, transforming heavy crudes into lighter fuels and as a clean energy vector) and carbon monoxide (used as a basis for numerous chemical products).

Cogeneration
Cogeneration consists of simultaneously and efficiently producing electricity and steam generally by consuming natural gas and water. The electricity is supplied to the local network while the steam is required for certain industrial processes.

This business line provides oxygen, nitrogen, argon, hydrogen, carbon monoxide and steam to the metal, chemical, energy conversion and oil and gas sectors through a network of plants and pipelines, which include 309 large Air Separation Units (ASUs) producing nitrogen, oxygen and argon, 43 Steam Methane Reformers (SMRs) producing hydrogen and carbon monoxide and 17 co-generation plants producing energy and steam around the world.

In the **metals** industry, oxygen is used to produce steel by improving energy performance, and reduce emissions. The majority of new projects are currently located in developing economies.

The **chemicals** industry uses mainly oxygen, hydrogen and carbon monoxide in its manufacturing processes, and nitrogen for the inerting of installations.

The **refining** industry requires hydrogen to desulfurize fuels and break up heavy hydrocarbons. The demand for hydrogen is growing due to the combination of increasingly stringent emissions legislation and use of heavier hydrocarbons. Numerous firms in the **energy** or **chemicals** industries use oxygen to transform large quantities of coal and natural gas into syngas (raw materials in the production of chemical products) or electricity. To meet customer requirements, the supply of large quantities of gas is indispensable. Air Liquide supplies gas directly by pipeline from dedicated plants or through a pipeline network. Air Liquide has built its own pipeline networks progressively over the last 40 years. With a total length of more than 9,000 km, these networks stretch, for example, across Northern Europe, from Rotterdam through to Dunkirk, and across the US Gulf Coast from Lake Charles to Corpus Christi. Many other mid-sized local networks have also been built in other significant and fast developing industrial basins in Germany, Italy, Singapore and more recently, South Korea and China.

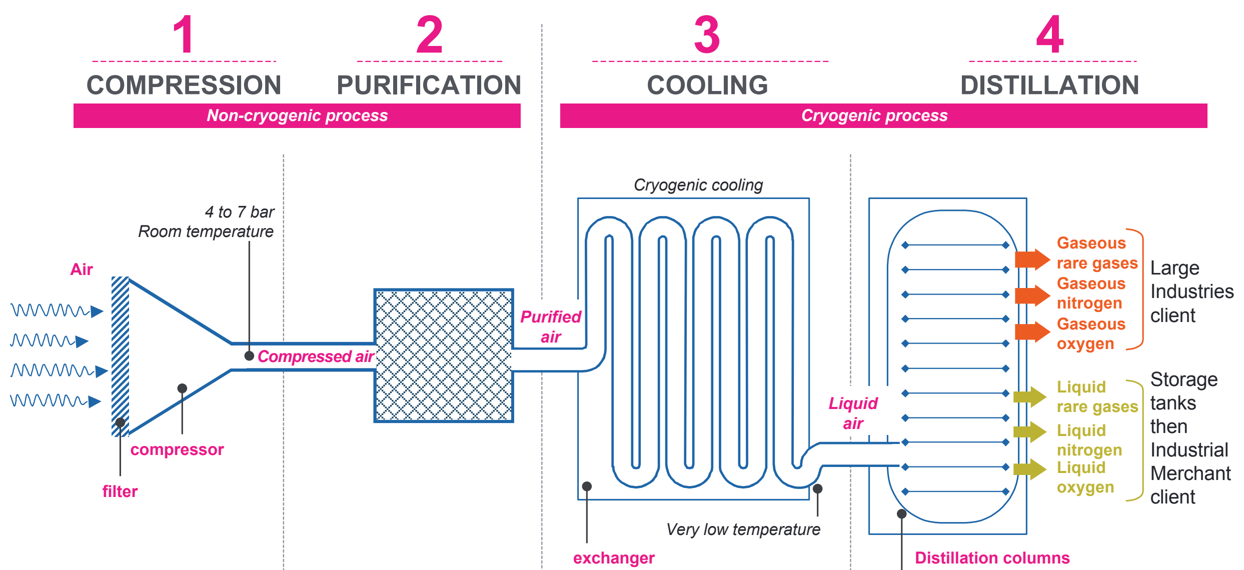
The use of industrial gases is indispensable for these various industrial processes. As any discontinuity in the supply necessitates a stoppage of the customer's production operations, supply reliability is crucial. However, for the customer, albeit crucial, generally, industrial gases represent a very small part of total production cost.

The raw materials necessary for the production of industrial gases vary according to the type of unit and the region. The production of oxygen and nitrogen requires air and a large quantity of electricity. Hydrogen and carbon monoxide production units mainly consume natural gas and little electricity. Cogeneration units consume natural gas and water. The energy and capital intensity of these industrial processes is generally significant.

The supply of gas is generally contracted for 15 years. For certain specific projects this can be extended to 20 years. Within these contracts, the Group guarantees long-term service continuity and availability with respect to gas supply *via* a high-performing industrial solution. In return, the contracts include the indexation of input costs, mainly electricity and natural gas, and guaranteed payment levels through take-or-pay clauses.

Air gas production

Simplified diagram of an air separation unit's operation



Air is composed of:
- 78% nitrogen
- 21% oxygen
- 1% rare gases (argon, xenon, krypton)

Elimination of water and impure molecules (CO_2...) to avoid ice formation during cooling.

A part of the product in the 4th stage is reused to cool the air in the exchanger.

The molecules are delivered directly to the Large Industries clients through the pipelines or into the storage tanks to supply the Industrial Merchant bulk distribution or cylinder filling units.

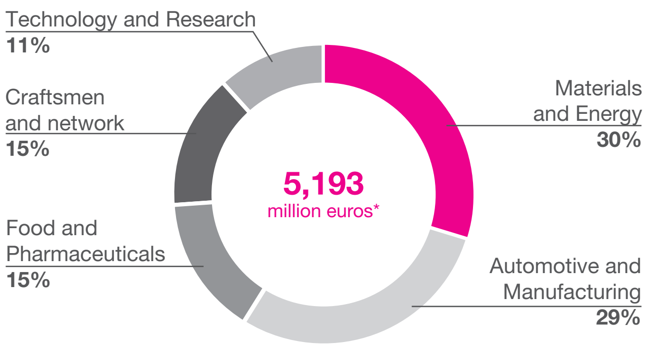
The Large Industries business line operates under long-term contracts, including indexation of energy costs and take-or-pay clauses. These contracts offer considerable visibility of future revenue and protection in the event of a significant fall in customer volume demand (below the minimum take-or-pay level). The investment cycle is long and the high capital intensity of this business line requires a solid balance sheet. The signature of new contracts is a guarantee of future growth.

Air Liquide is developing a strategic network in the industrial basins in order to provide customers with greater supply reliability while optimizing operating costs.

INDUSTRIAL MERCHANT

The Industrial Merchant business line serves a wide range of markets and customers—craftsmen, SMEs, large multi-national industrial groups—offering comprehensive gas solutions for the implementation and optimization of their industrial processes. The business line's core activity primarily consists in gas distribution. Supported by a global network of business experts and extensive geographical coverage, Air Liquide provides its customers with innovative solutions including industrial gases, application equipment and related services.

2012 Industrial Merchant revenue by end market



* *37% of Gas & Services revenue.*

The Industrial Merchant business line serves five primary markets:

- **Materials and energy:** Oxygen is used to reduce energy consumption in glass and metal manufacturing processes and treat wastewater. Nitrogen is used to create inert atmospheres for the conservation of oxygen-sensitive products. Carbon dioxide is used in drinking water treatment, helium for professional diving and magnetic resonance imaging. Nitrogen and carbon dioxide can be used for the enhanced recovery of oil and gas and, in certain cases, the reduction of water and solvent consumption.
- **Automotive and manufacturing:** Argon and argon mixtures are used for metal parts welding in manufacturing industries, hydrogen and nitrogen for thermal treatment, specialty gases for waste gas analysis and helium for airbags. Oxygen and acetylene are used in metal heating and cutting operations. Air Liquide therefore enables customers to improve their manufacturing processes and preserve the working environment.
- **Food and pharmaceuticals:** The Group's technologies help improve shelf-life and food and pharmaceutical manufacturing and cooling processes. The three major activities in this market are the supply of carbon dioxide for beverages, gas mixtures for modified atmosphere packaging and nitrogen for process inerting and cold production. Air Liquide ensures these products comply with prevailing market regulations and in particular the complete traceability of its gases.
- **Technology and research:** Industrial gases are used in the assembly and encapsulation of electronic components in optoelectronics processes—particularly LED manufacturing and optic fiber and silicon cylinder drawing. Special gases required, in particular, for the calibration of analysis instruments are widely used in research centers and analytical laboratories. Specific, highly technical gases and equipment have been developed for these various applications.
- Finally, Air Liquide provides the **Craftsmen and Distributors** sector with a wide range of gases for use in plumbing, heating, ventilation, air conditioning, industrial maintenance and auto repair, with special-purpose packaging tailored to customer utilization requirements.

Such gases can be supplied to the customer's site in liquid form using dedicated cryogenic trailers, by means of on-site equipment, and, in gaseous form, in high pressure cylinders. Historically, distribution remains local, with deliveries rarely exceeding 250 km from the production site. To support this local presence, the Industrial Merchant business line mainly relies on the gas production capacities of the Large Industries business line and develops its own distribution logistics. Furthermore, Air Liquide leases out tanks and cylinders to ensure a reliable and optimized gas supply and quality equipment. Increasingly, the installation of telemeters and tracking systems enables distribution logistics to be optimized.

The Industrial Merchant business line is characterized by a wide range of customers, end markets and solutions or services. Contract terms vary and are less than five years. A portion of revenue comes from the lease of tanks and cylinders. It is an expert service business with a high technology and innovation contact, extremely local, with geographical density of coverage being a key factor. Competition can vary between areas.

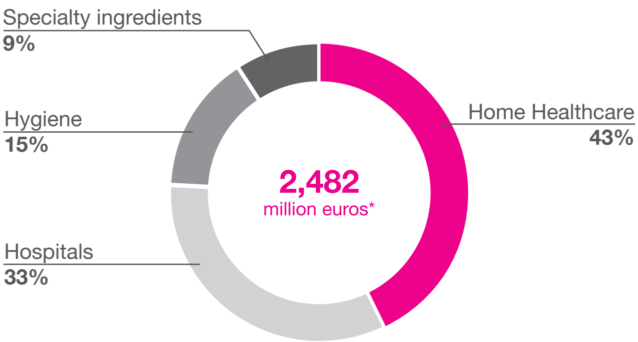
Innovation with regards to markets, products and applications is a major growth driver. Business growth is generally a function of local industrial production growth.

HEALTHCARE

The Healthcare business line provides gases, services, medical devices, equipment and hygiene products to more than 7,500 hospitals and clinics and 1,000,000 homecare patients around the world. It integrated a new activity segment in the first quarter of 2012 involving the specialty ingredients of its subsidiary Seppic, which serves the personal care, pharmaceutical and vaccine markets.

Air Liquide is one of the world leaders in this business segment, which is subject to stringent regulatory requirements relating to the drug designation status of several gases and multiple stakeholders (patients, doctors and payers).

2012 Healthcare revenue by activity



* 18% of Gas & Services revenue.

In Hospitals, Air Liquide provides medical gases, such as oxygen and nitrous oxide, for operating rooms, intensive care, emergency care and, more generally, medical wards.

The Group also innovates and develops therapeutic gases used particularly for resuscitation in cases of pulmonary arterial hypertension (VasoKinox™), and pain relief (Kalinox™). Several therapeutic gases are still in the Research & Development phase and the Group is in the process of extending its existing market authorizations.

Air Liquide also supplies hospitals with a large range of medical hygiene products (for hands, skin, instruments, surfaces) to fight in particular nosocomial infections. Air Liquide thus contributes to patient safety, particularly in operating rooms and intensive care units. Some hygiene products are also supplied to manufacturers, whose processes require impeccable cleanliness.

In Home Healthcare, Air Liquide has extended its services beyond oxygen therapy. Air Liquide looks after more than 1 million patients at home suffering from chronic obstructive lung disease, sleep apnea, diabetes, or Parkinson's disease, etc. by providing them with long-term medico-technical services and follow-up care. By closely monitoring patient prescriptions and by enhancing patient observance of treatments, Air Liquide is now a key player in patient/doctor/payer relations and contributes to improving patient health and quality of life on a daily basis, as well as enhancing efficiency of public health systems.

The Healthcare activity has been growing worldwide through the implementation of healthcare infrastructures and systems in many developing economies. The Home Healthcare activity, which allows a patient with a chronic disease to stay at home is developing due to high prevalence of chronic diseases and longer life. This activity also helps to meet the growing constraints on health spending in developed countries.

Following the sale of the industrial and commodity activities of its subsidiary Seppic early in the year, Air Liquide integrated the Seppic personal care, pharmaceutical and vaccine activities into its Healthcare Division. It supplies specialty ingredients such as excipients and active ingredients for cosmetology, adjuvants for vaccines, film-coating systems for medication.

Over the last 20 years, Air Liquide has become a leading healthcare player in Europe (France, Germany, Italy, the United Kingdom, Spain, and the Netherlands), Canada and Australia. The Group also has businesses in the United States (medical gases only), South America, Africa and Japan and has recently expanded in Eastern Europe, South Korea and China, as the local healthcare reimbursement systems develop.

The Healthcare activity is organized around two major businesses: the production and distribution of medical gases to hospitals and the provision of home healthcare services to patients. It operates in a strict regulatory framework. Density, quality of support services and efficiency are essential to offset the pressure on prices exercised by healthcare systems, particularly in developed economies.

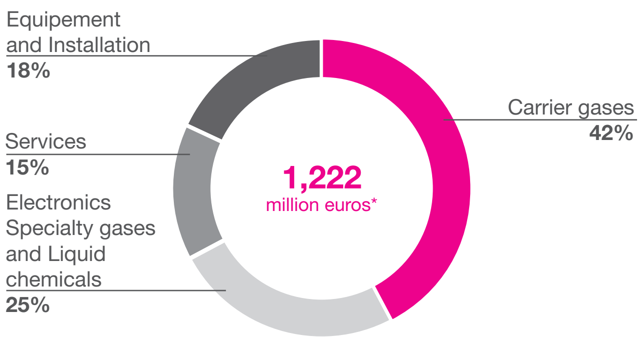
With the ageing population and the greater need for care services due to an increase in chronic illnesses and the development of healthcare systems in developing countries, the Healthcare sector represents a solid driver of growth for the Group.

1

ELECTRONICS

The Electronics business line supplies its customers with ultra-pure carrier gases, specialty gases and advanced precursors as well as molecule distribution equipment and associated on-site services, used in the manufacturing of semi-conductors, flat panels and photovoltaic cells. Air Liquide has developed considerable expertise in the photovoltaic cell and next generation semi-conductor applications and is the global leader in specialty gases for these two markets.

2012 Electronics revenue by product



* 9% of Gas & Services revenue.

Air Liquide provides carrier gases (primarily ultra-pure nitrogen, oxygen and hydrogen) through on-site facilities in order to carry other molecules, inert and protect electronic chips and flat screens and purge customer manufacturing tools. The need for a regular and constant supply of carrier gas results in long-term commitments and the building of production units nearby or on the customer's premises.

The Group also distributes specialty gases and advanced precursors used in semi-conductor, flat screen and solar cell manufacturing. Air Liquide has a silane production unit, in a joint venture with Denal, a Japanese chemicals company. This gas, as well as the so-called precursor gases, are of major importance as they are essential to all silicon-based manufacturing processes for products such as semi-conductors, photovoltaic solar cells and flat panels. Air Liquide is also developing and marketing a significantly value-added range of advanced precursors known as Aloha.

The Electronics business line also supplies equipment and installs ultra-pure gas and chemicals distribution piping and units to equip new customer manufacturing facilities.

Finally, given its expertise and its desire to offer customers a comprehensive service, Air Liquide also provides just-in-time, high security on-site fluid management and quality control services.

The Electronics business model is therefore generally based on long-term carrier gas supply contracts, market volume-driven growth for electronics specialty gases and constant technological innovation to satisfy customer requirements by designing new precursor molecules. The combination of carrier gas, specialty gases, new molecule and equipment and installation activities enables Air Liquide to limit revenue volatility in this cyclical sector that offers strong growth potential.

The Electronics activities are based 67% in Asia, 19% in America and 14% in Europe.

The Group's Electronics business line encompasses three different activities:

- **Carrier gases have a business model that is generally based on 10-year contracts with the indexation of energy costs and take-or-pay-type clauses. Growth is dependent upon the signature of new contracts and investment in small on-site production units.**
- **Specialty gases distribution activity is worldwide. Demand varies with the electronics goods consumption and production cycle. These gases are high purity products requiring high tech expertise.**
- **Finally, equipment and installation sales depend on the Electronics sector investment cycle.**

In the Electronics sector, where long-term growth is accompanied by short-cycles, long-term contracts, specific to Air Liquide offer a real advantage.

INDUSTRIAL SYNERGIES

The four business lines comprising the Gas & Services activity are closely tied by a strong industrial logic where proximity is key. The diagram below illustrates the mutualization of both production and distribution assets, between the different business lines, for a given geographical area. Leveraging this efficient industrial network, Air Liquide capitalizes on its proximity to its customers to anticipate their needs, understand market changes and offer innovative solutions.

In its search for improved performance, the Group favors synergies in a number of areas:

- Industry: local investment in new assets, followed by mutualization of these assets between the different business lines; globalization of energy supply and specifically energy (electricity and natural gas) purchasing;
- Technology and Engineering: sharing of global Group expertise, knowledge transfer, regional technological support;
- Research & Development: constant efforts to develop new applications;
- Human Resources: common managerial culture across a range of regions and businesses, aimed at selecting, training and developing the potential of the Group's men and women and favoring a unique sharing of competencies.

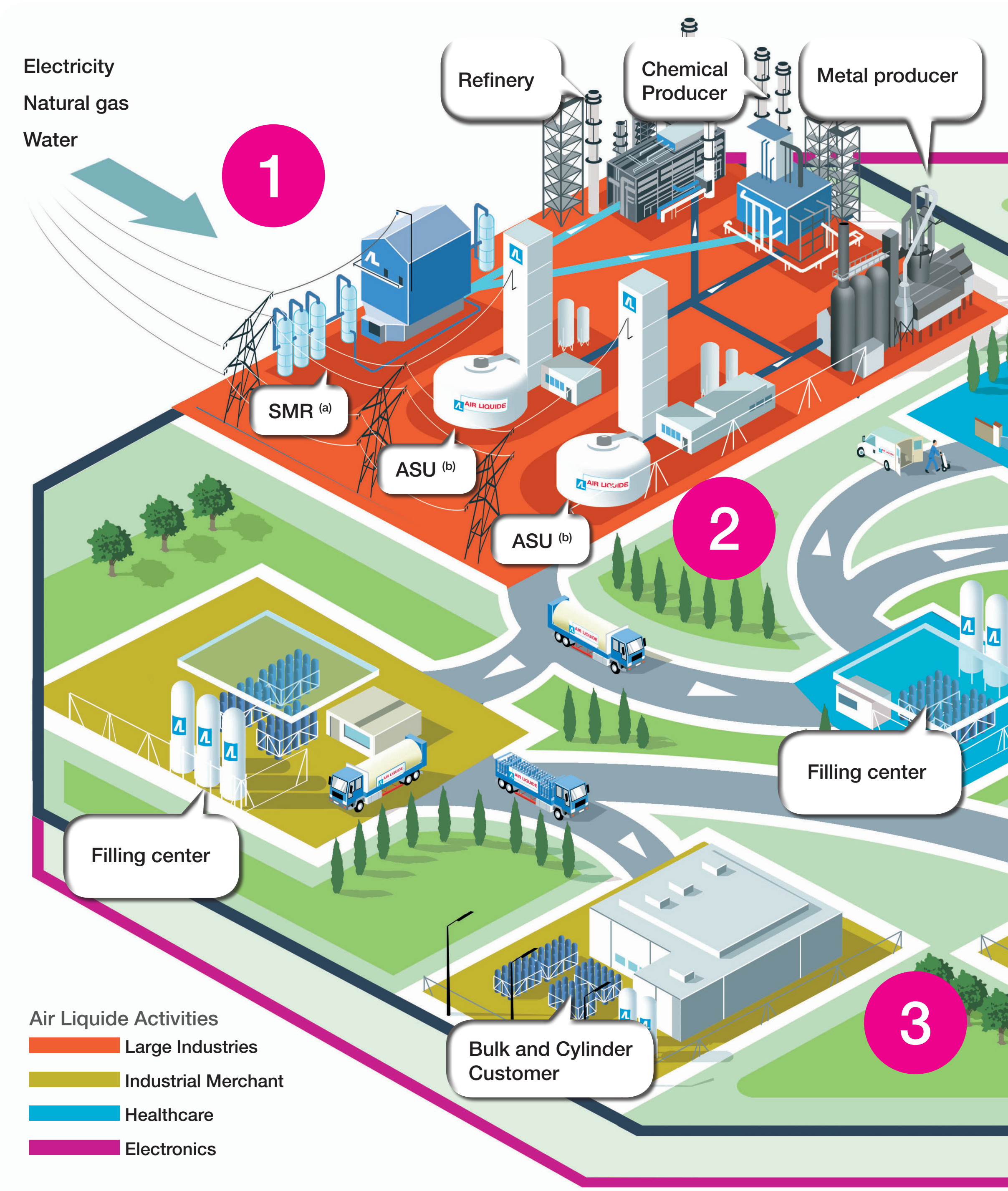
The combination of all these synergies represents a true ecosystem and allows Air Liquide to grow while continuing to create long-term value.

Standard development model

1

- Identification of industrial basins and their potential in terms of growth and mutualization
- Signature of various Large Industries contracts
- Mutualization of production assets (construction of a pipeline network) in order to strengthen guaranteed supply and optimize operating costs

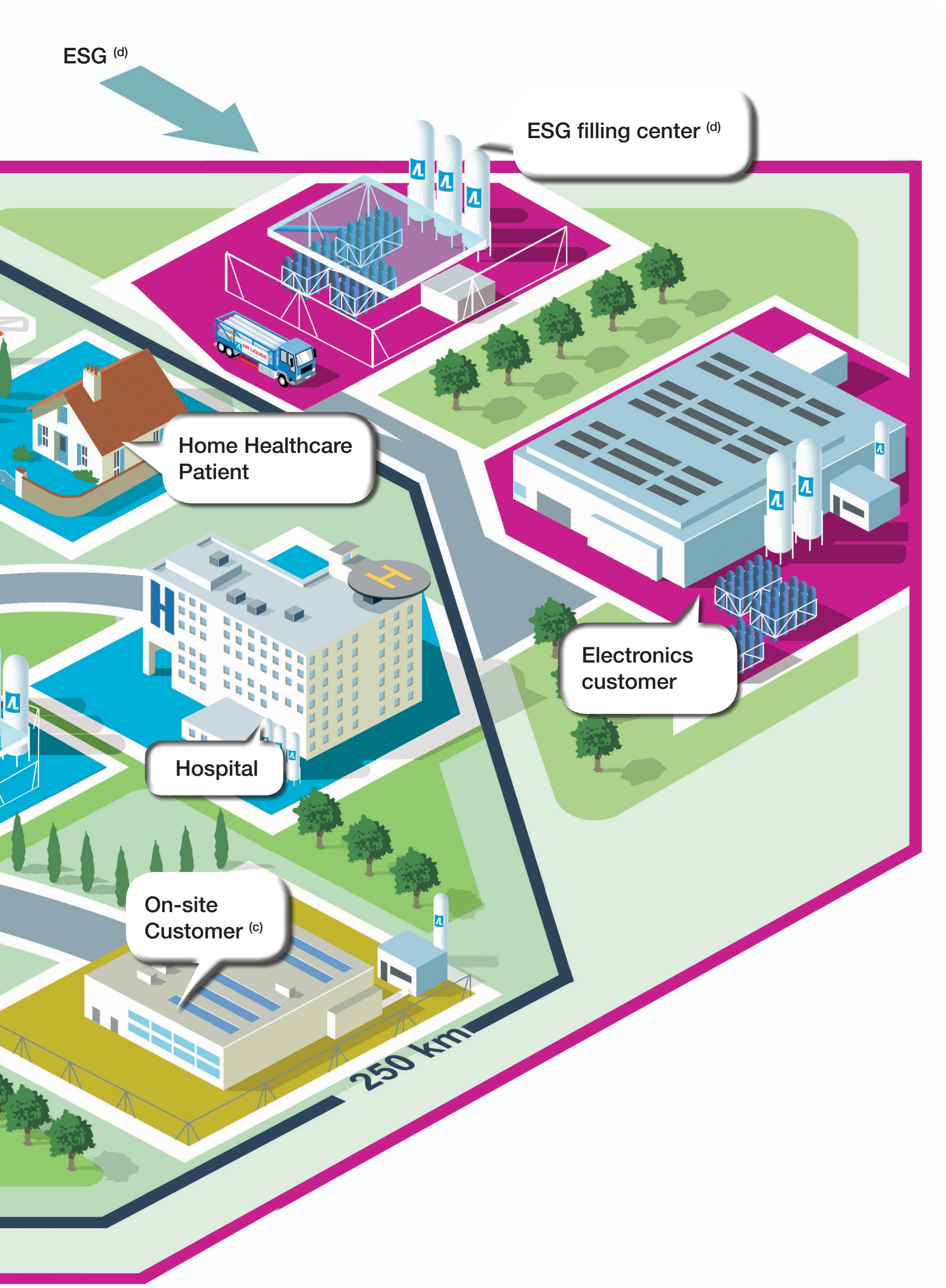
Industrial Synergies



(a) Hydrogen and carbon monoxyde production unit (Steam Methane Reformer)
(b) Air gases production unit (Air Separation Unit)
(c) Small local production unit
(d) Electronic Specialty Gases

2
- Liquefaction of gas sourced from Large Industries to supply Industrial Merchant, Healthcare and Electronics (piggyback principle)

3
- Acquisition of local distributors to accelerate roll-out in the area



ENGINEERING & CONSTRUCTION

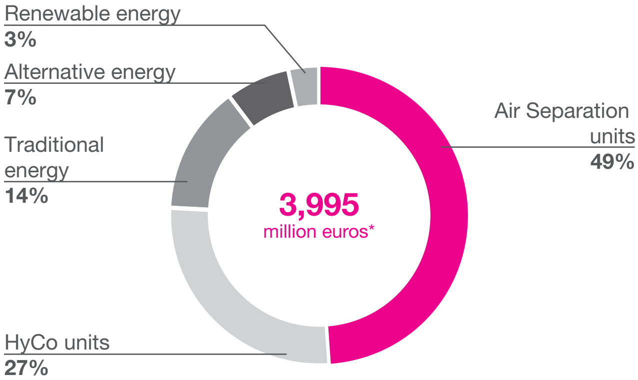
Air Liquide was founded upon innovation: a new industrial process for air separation. To provide its customers with the gases required for their industrial production, Air Liquide engineers developed proprietary technologies. For over a century, the Group has therefore designed and produced units for its own use or for sale to customers who prefer to produce their gas requirements internally. Today, Air Liquide is still recognized for its ability to constantly improve ASU productivity based on its mastery of proprietary technologies.

The whole range of the Group proprietary technologies enables Air Liquide customers to optimize the use of natural resources in order to provide clean and sustainable energy. The Global E&C Solution activity contributes to the transformation of the energy industry and helps to preserve & protect the atmosphere.

Indeed, since the acquisition of Lurgi in 2007, the Group has expanded its range of expertise. It now possesses its own proprietary technologies, developed by Lurgi for over 50 years, to produce hydrogen and carbon monoxide through steam-methane reforming. This acquisition also widened the Group's offering into coal and natural gas conversion technologies to produce syngas, synthetic natural gas, methanol, propylene, liquid fuels and biofuels. Given the very large quantity of gases required in all these activities, this expanded Engineering & Construction know-how has helped the Group to be associated, upstream of gas production projects, in the development of its customer processes and thus boosting its gas or equipment sales growth. Some of these processes, at varying stages of development, offer technical solutions to fight climate change by enabling the capture of a virtually pure CO_2 flow emitted by industrial sites.

The Engineering & Construction activity of Air Liquide is primarily geared towards gas production technologies. Accordingly, in 2012, 76% of its portfolio of orders in hand concerned the manufacture of air gas or hydrogen and carbon monoxide production units.

Engineering & Construction orders in hand [(a)] as of end of 2012



* *Including 2.3 billion euros from third-party orders*

To cover all the Group's primary markets, the Engineering & Construction business has extensive geographical coverage with 15 major engineering centers, including three manufacturing workshops, based in North America, Europe (France, Germany, Poland), Asia (China, India, Japan) and South Africa. Because of this coverage, the Group is able to meet global demand, while controlling its production costs.

The Group favors the development of its gas sales over equipment sales. However, Engineering & Construction has great strategic value for the Group, both internally and externally.

Internally, the Group is able to benefit from the division's engineering resources that are necessary to investment projects related to the development of its Gas & Services activity. It provides a high level of expertise, which is crucial to the design of efficient units that specifically respond to the needs of the Group's industrial gases customers. It enables optimal operational management for operating units, in order to reduce energy costs and limit technical disruptions. It also facilitates site takeovers for the Group, by providing a fair assessment of the quality of the assets purchased.

(a) Orders in hand represent the contractual value of all Group and third-party contracts managed by the Engineering & Construction entities, excluding projects under warranty, from the signature date.

Engineering & Construction also acts for third parties. In 2012, consolidated third-party sales totaled 785 million euros. Air Liquide designs and builds customized units that the customer will own and operate. First and foremost, this third-party activity allows the Group to permanently assess the competitiveness of its technologies and commercial offering. Air Liquide is also able to forge close relations with customers that produce their own gas and better understand their industrial processes and investment projects upstream of discussions. In certain cases, negotiations initially steered towards the sale of equipment were finalized by the signature of a long-term industrial gas supply contract. As part of this third-party activity, the strategy consists in favoring research and equipment supply contracts which are less risky than contracts that include construction. Accordingly, the contribution to consolidated revenue can vary significantly from year to year.

The Engineering & Construction activity provides the Group with a genuine competitive edge, enabling it to strengthen its relations with customers and, for its own units, to engage a procedure of continuous improvement of industrial processes and reduction in the cost of its assets.

OTHER ACTIVITIES

Over time, Air Liquide has developed other activities as a complement to the sale of gas and equipment. The 2012 consolidated sales of Other activities amounted to 629 million euros, or 4% of Group revenue.

From January 1, 2012, the Specialty Chemicals activity of Seppic, which develops and markets healthcare specialty ingredients, was integrated into the Healthcare business line of Gas & Services.

Welding

Air Liquide is a leading player in the development of welding and cutting technologies, offering a complete range of related equipment, consumables and services on the market, through internationally renowned brands. Established primarily in Western and Eastern Europe, Air Liquide Welding covers a wide market range: naval shipyards, automotive, transport equipment, infrastructures, boilers, distributors, machinery and equipment, energy, etc.

With its Technical Center for Welding Applications, acknowledged as the largest private welding research center in the world, Air Liquide Welding pursues continuous innovation, constantly striving to improve the performance, productivity, safety and comfort of operators.

Diving

The Diving business markets, through the Aqua Lung trademark, deep-sea diving and swimming equipment to professionals and private individuals. It has a worldwide presence.

Competition

On a worldwide scale, the **Industrial Gases** sector comprises four global companies: Air Liquide, the German Linde Group, and two American players, Air Products and Praxair.

There are also a number of regional players, such as Taiyo Nippon Sanso (Japan), Airgas (in the US) and Messer (Germany). Several competitors are emerging in developing countries such as Yindge and Hangzhou Oxygen Plant Group Co in China.

Numerous medium-sized players are also present in local markets.

In **Large Industries,** the customer can choose between self-production and over-the-fence supply. Self-production is estimated to account for 80% of hydrogen production and 65% of oxygen production, although with significant geographical disparities. Self-producers of gas thus remain the Group's greatest competition. Nevertheless, the potential to convert self-production into over-the-fence supply represents a major growth opportunity for the Large Industries business line. The level of self-production varies strongly depending upon the customer's geographical area, sector and culture. In advanced economies, the supply of oxygen is largely over-the-fence, while the supply of hydrogen for refining remains essentially in-house. In developing economies, while relatively new, over-the-fence supply is accelerating significantly. Air Liquide, the worldwide leader in over-the-fence supply, is in competition with the three other major global players and local players, particularly in China.

Industrial Merchant is a local business, as transport costs limit a player's operating area to within 250 km of its production unit. This market, which is highly diversified due to the size and activity of its customers, thus includes numerous small and medium-sized local competitors, either ensuring gas production and distribution or simply playing the role of a gas distributor.

In **Electronics,** the market is more concentrated with three companies playing a major role: Air Liquide, Air Products and Taiyo Nippon Sanso.

Finally, in **Healthcare,** most of the gas industry players also provide hospitals with oxygen, but few are present on the promising therapeutic gas market. The Home Healthcare segment grew in 2012, with the ramp-up of Linde following the purchases of activities in Europe and the United States. Air Liquide has consolidated its number 1 position in Europe. Nevertheless, the market remains fragmented in all global zones with a multitude of small companies and associations. This fragmentation provides acquisition opportunities for the Group. Finally, Air Liquide is the only industrial and medical gas producer to have developed a Hygiene and Specialty Ingredients activity. Air Liquide is positioned as a fully-fledged player in the Health sector, which represents a significant differentiating factor.

In **Engineering & Construction,** Air Liquide also competes with industrial gas players such as Linde or Air Products in cold technologies that separate gas from air. In the "hot" technologies used for producing hydrogen, in coal gasification and the chemical conversion of syngas, the most widely known competitors are Technip (France), Foster Wheeler (Switzerland), CB&I (US), and ThyssenKrupp Uhde (Germany).

Competition is also coming from developing economies and particularly China. This is the case with the Chinese companies Hangzhou Oxygen Plant Group and Kaifeng in the area of air gases and Wison in the area of coal gasification and syngas conversion.

Risk factors

The Group identifies the risk factors to which it is exposed using a formal risk management approach. This approach involves the regular monitoring of risks and the implementation of necessary mitigation measures.

The Report from the Chairman of the Board (page 130) presents the main underlying internal control and risk management procedures.

SPECIFIC BUSINESS-RELATED RISKS

The industrial gas business is characterized by a significant technology content (both in the design phase and the construction of production units), high capital intensity, local production capacity and substantial energy requirements.

The risks associated with these characteristics are mitigated by various factors and primarily the diversity of customers, industries served, applications and countries in which the Group operates, as well as the significant share of business that is subject to specific contracts, a strict authorization and project management process and a tailored energy policy.

Innovation and intellectual property-related risks

The Group's activities are not dependent on third-party patents. Manufacturing processes and designs have been developed by Group Research & Development, Marketing and Engineering teams for over 100 years and are protected by the filing of patents, drawings and models. Brands are similarly protected. Each year the Group registers more than 300 patents for all its activities. The Group also protects its intellectual property rights in developing countries where it is expanding.

Engineering & Construction-related risks

Air Liquide enters into major contracts to design and build gas production plants for its customers and itself worldwide. The primary role of the Group Engineering Department is to undertake internal investment projects. It also performs projects, including turnkey projects, for third party customers, that are selected based on strict criteria aimed at limiting the risks associated with these Engineering & Construction activities.

Measures to limit commitments on the most complex projects are described in the Control Activities section of the Chairman's Report, page 132.

These projects generally extend over several years. Potential risks relating to design, purchasing, transport or construction may arise at different stages of the project, but are often more significant in the construction phase.

- Delivery times and costs for critical equipment may have an impact on project schedules and profitability.
- On-site construction costs and deadlines may vary depending on the environment, and may give rise to project start-up setbacks and impact project profitability.
- Unexpected technical problems may also arise as a result of new innovative processes being implemented. Preliminary tests on pilot plants and demonstration units therefore help reduce such risks prior to commercial implementation. Certain projects are located in regions that may be a source of political risks. Constant monitoring of such projects over the long term limits such risks.

The impact of the risks described above depends also on the contractual commitments given to customers.

Industrial investment-related risks

The Group may be exposed to certain risks specific to its industrial investment. Each investment project may be affected by different factors linked primarily to project location, customer quality and the competitiveness of the site, as well as to design, cost estimates and the construction of gas production units. The investment authorization process is led by Resources and Investment Committees which apply extremely strict appraisal criteria to projects. These Committees comprise regional, technical and financial managers that vary depending on the nature of the project considered, and are chaired by an Executive Committee member. The investment decision-making process is explained in the Investment cycle and financing strategy section on page 46.

Business-related risks

The primary business-related risk is the risk of customer bankruptcy. The diversity of the Group's geographic presence in 80 countries mitigates customer and market risks. The Group's subsidiaries serve a very large number of customers (more than one million worldwide) in a broad range of industries: chemicals, steel, refining, food, pharmaceuticals, metals, automobile, health, electronics, photovoltaic and research laboratories. The Group's top customer represents around 2% of revenue, the Group's top 10 customers represent around 13% of revenue and the top 50 customers represent around 29% of revenue.

A significant part of the Industrial Gases business is covered by customer contracts, with commitment periods specific to the relevant business line:

- the Large Industries business and a third of the Electronics business respectively rely on 15-year to 20-year and 10-year take-or-pay secured contracts, ensuring a guaranteed minimum revenue. These contracts provide strong future cash flow predictability;
- in the Industrial Merchant business, contracts are for one to five years, including leases of tanks and cylinders;
- in the Home Healthcare business, positions vary between health systems, with certain countries awarding one to five-year contracts on a regional and pathology basis following invitations to tender.

Risks of customer business interruption following major climatic or political events are limited by the wide diversity of countries in which the Group operates and the necessary recourse to gases in critical situations. Gases are needed to secure industrial or chemical installations (inert gases), maintain local industrial activity (essential to industrial processes) and even sustain life (medical gases). They are therefore often protected or prioritized depending on the situation.

Supply-related risks

Electricity and natural gas are the main raw materials used by production plants. Due to the geographical spread of its activities, Group supply contracts are diversified. Where the local market permits, Group subsidiaries secure these resources through medium to long-term supply commitments and competitive bidding scenarios with the objective of achieving the most reliable and competitive energy costs available in any particular market. The Group passes on cost variations to its customers *via* indexed invoicing integrated into medium and long-term contracts.

Commodity risk is described in Note 28.2 to the Consolidated financial statements on page 238.

INDUSTRIAL RISKS

Industrial risks concern numerous sites and various industrial processes and distribution methods.

The Group's key priority is its safety policy, with a formal objective of "zero accidents, on every site, in every region, in every unit." The safety results for the past 20 years illustrate the long-term effectiveness of Group policy in this area.

Over and above the usual risks inherent in all industrial activities, Air Liquide's businesses entail more specific risks relating to:

- products: the intrinsic properties of certain products packaged by the Group classifies them in the dangerous materials category, for which tailored procedures and means of detection have been defined;
- processes and their operation: cryogenics is used to separate gases by distillation, stock them and transport them. This very low temperature technique requires specific means of control and protection. In addition, pressure is at the heart of Group processes. Pressurized equipment is designed with security features restricting uncontrolled release;
- logistics and transportation: each year, delivery vehicles, sales staff and technicians travel many kilometers. Strict compliance with the highway code and the regular maintenance of vehicles contributes to the safety of drivers and third parties. Furthermore, industrial sites use several types of motorized lifting gear. Training in the use of such equipment and user permits are required;

- engineering and construction: industrial risks are factored in from the design phase of future installations. Subsequently, during the construction phase, prevention plans and rigorous organization enables the coordination of the various trades that interact to differing degrees;
- delivery reliability: a variety of solutions ensure the supply of gas to customers; direct pipeline to a production plant, on-site storage with remote surveillance enabling the automatic trigger of resupply or bar-coded gas cylinders ensuring the traceability of products.

The Group has an Industrial Management System (IMS) which defines the management processes covering the above points. It is described in greater depth in the Chairman's Report on page 132.

ENVIRONMENTAL AND CLIMATE RISKS

The industrial and medical gas business presents few environmental risks. Some 85% of the Group's large production units separate the components of atmospheric air, that is oxygen, nitrogen, argon and rare gases. These plants "without chimneys" do not use any combustion processes and consume almost exclusively electrical energy. They are particularly environmentally friendly as they emit almost no CO_2, sulfur oxide or nitrogen oxide. Nonetheless, electricity consumption generates CO_2 emissions by the suppliers of this energy, known as indirect emissions. The Group's two other main activities are hydrogen production and cogeneration, which account for 15% of large production units and which use combustion processes emitting CO_2 and nitrogen oxide, as well as low quantities of sulfur oxide.

Water is a resource necessary to these three main Group processes. Air gas separation units use water exclusively for cooling purposes during the separation process. Hydrogen production units require water in the form of steam in the reaction producing hydrogen. Finally, the cogeneration plants produce steam which is mainly supplied to customers.

Environmental risks primarily comprise the following components:

- the Environmental Footprint, involving the Group's activities worldwide, is closely monitored: sites under the European Seveso directive and equivalent sites worldwide, electrical and thermal energy consumption, annual water supply, emissions into water and the atmosphere, waste and by-products, the distance covered by delivery trucks and progress made towards quality (ISO 9001) and environmental (ISO 14001) certifications;
- Group direct and indirect greenhouse gas emissions are precisely measured at all production sites;
- the Group analyzes and monitors the environmental risk factors at the main stages of its product life cycles;
- a mapping of sites located in hydric stress areas enables the identification of water supply risks;
- the Group is in constant dialogue with stakeholders to assess the risk to its image of environmental issues.

Climatic risks are reviewed at both Group and site level:

- Air Liquide continuously monitors risks associated with changes in environmental protection legislation, particularly concerning the European Trading Scheme and other CO_2 allocation exchange systems existing or under development around the world, in order to assess the impact of any regulatory changes on the Group's activities;
- weather-related and climatic disasters risk disrupting the smooth running of operations. Preventive measures targeting extreme weather-related phenomena exist at the main sites located in high-risk areas.

A detailed energy and environment report is presented in the Corporate Social Responsibility and Sustainable Development report in this Reference Document on page 84.

FINANCIAL RISKS

Risk management is a priority for the Group.

The financial risk management process is detailed in the Chairman's Report on page 133, in accordance with a governance structure that defines the role of the Finance and Management Control Department, the various committees and the role of local entities.

The Finance and Management Control Department also analyzes country and customer risks and provides input on these risks at Investment Committee meetings.

Foreign exchange risk

Since industrial and medical gases are not transported over long distances, most products are manufactured in the country where they are sold. Thus, the risk of currency fluctuations affecting the Group's activities is limited.

Foreign exchange transaction risk is marginal. It is related to cash flows arising from royalties, technical support and dividends, and foreign currency commercial cash flows from operating entities. These commercial cash flows in foreign currencies are not material when compared to consolidated revenues on an annual basis. This foreign exchange transaction risk is managed through the hedging policy implemented by the Finance and Operations Control Department.

Furthermore, the Group provides a natural hedge and reduces its exposure to exchange rate fluctuations by raising debt in the currency of the cash flows generated to repay debt. In countries outside the euro, US dollar and yen zones, financing is raised in local currency or when contracts are indexed in euros or US dollars, in foreign currency (EUR or USD).

Foreign exchange translation risk (translation of local currency financial statements into euros) correspond to the sensitivity to the two main foreign currencies—the US dollar (USD) and the yen (JPY).

Note 28.2 to the Consolidated financial statements describes the foreign exchange transaction risk management process and the derivative instruments used, as well as sensitivity to foreign currency exchange rates.

Interest rate risk

The Group's objective is to reduce the impact of interest rate fluctuations on its interest expenses and, guided by the principle of prudence, to finance long-term assets with shareholders' equity and fixed-rate long-term debt. Since most of Air Liquide's activities are based on long-term contracts (10 to 15 years), a policy promoting interest rate risk hedging ensures control over financing costs when deciding on long-term investments.

Group policy is to maintain over a medium to long-term period a majority of total debt at fixed rates, mainly by using option hedges. This approach enables the Group to limit the impact of interest rate fluctuations on financial expenses.

Note 28.2 to the Consolidated financial statements describes the sensitivity of the Group's financial expenses to interest rate fluctuations and the interest rate repricing schedule for fixed-rate debt and interest rate hedging instruments.

Financial counterparty and liquidity risk

Financial counterparty risk primarily relates to outstanding amounts on financial instruments (deposits and derivatives) and to lines of credit contracted with each bank. To ensure its development and independence, the Group must have sufficient and permanent sources of liquidity, meaning adequate financing resources available at any time and at the lowest cost from banks and financial markets. In this area, the Group adopts a prudent approach to counterparties and their diversification, applying a strict limit on individual outstandings.

Note 28.2 to the Consolidated financial statements describes financial counterparty and liquidity risk for the year ended December 31, 2012. Notes 6, 18.1 and 18.2 to the consolidated financial statements provide a breakdown of trade and other operating receivables and allowances for doubtful receivables.

DIGITAL RISKS

The Group's activities, expertise and, more generally, its relations with all the players in its social and economic environment depend on increasingly dematerialized and digitalized operations, based on communications networks and information systems that have become ever more complex through their human and technical or functional interdependence.

This digital dependency accentuates the risks of data confidentiality, data processing integrity and information systems availability that may have important financial, operational or corporate image impacts for the Group.

A long-term plan launched in 2011 aims to strengthen the Group's prevention and control mechanisms in a context of increasing cyber-attacks and digital risks. It is founded on a special-purpose structure and internal control procedures aimed at ensuring the protection of data and information systems, as described in the Chairman's Report on page 133.

HUMAN RESOURCE MANAGEMENT RISKS

The long-term performance of Air Liquide Group is driven, in particular, by the quality of its employees, their expertise and their motivation.

The Group therefore encourages a performance-focused, motivating and involved professional environment, through a human resources policy aiming to identify, attract, retain and develop competent employees from all walks of life. The objectives of this policy are set out in the Chairman's Report on page 133.

LEGAL RISKS

The Group has a worldwide presence. Its companies operating industrial and medical gas production units must comply with the rules and regulations in force locally, particularly in the technical field.

Furthermore, in Healthcare, certain products may be subject to drug regulatory control.

As indicated in the Report from the Chairman of the Board of Directors on the internal control and risk management procedures implemented by the Company (page 130), the risks relating to contracts and competition law, as well as anticorruption issues, are specifically monitored.

To the Group's knowledge, there have been no governmental, judicial or arbitration proceedings, including any such proceedings which are pending or threatened of which we are aware which may have, or have had in the past twelve months, significant impacts on the financial position or profitability of the Company and/or Group.

Liabilities and contingent liabilities related to litigations are described in Notes 23 and 31 to the consolidated financial statements.

INSURANCE MANAGEMENT

The Group has adequate insurance coverage, underwritten by first-rate insurers, for civil liability, property damage and business interruption.

Property damage and business interruption

Group property and business interruption are covered by property and casualty insurance policies underwritten in each country in which the Group operates. Most all of these policies are integrated into an international program.

These policies, which are generally of the "All Risks" form, cover fire, lightning, water damage, explosions, vandalism, impact, machinery breakdown, theft and, depending on the country and in limited amounts, natural disasters.

Business interruption is insured for most production sites under these same policies.

The coverage period for business interruption is 12 to 18 months.

Deductible amounts are proportional to the size of the sites.

The Group has retained a portion of property damage and business interruption risk through a captive reinsurance company in Luxembourg. This captive reinsurance company is fully integrated within the property damage and business interruption international program. This company covers losses of up to 5 million euros per loss over and above the deductibles to a maximum of 10 million euros per year. Beyond these amounts, risks are transferred to insurers. The captive reinsurance company is run by a captive manager approved by the Luxembourg Insurance Commission

This reinsurance company is fully consolidated. Its balance sheet as of December 31, 2012 totaled 51 million euros.

Insurers conduct regular visits at the main industrial sites for risk prevention purposes.

Civil liability

In terms of civil liability, the Group maintains two separate covers, one for the North American zone and another for the rest of the world. The North American zone is covered by insurance underwritten in the United States. For the other zones, the Group has subscribed an umbrella policy, underwritten in France, which covers both the Company and its subsidiaries outside of the United States and Canada, beyond any local coverage provided for the subsidiaries.

These two policies cover liability of the Group companies for any damage they might cause to a third party in the course of doing business (operational risk) or arising from their products (product risk). Furthermore, with certain limitations, these policies cover "pollution" risk and product recall costs.

The coverage amounts underwritten exceed 500 million euros. Both policies are built on several overlapping insurance lines and each line has been underwritten for a given amount with several insurers sharing the risk. Beyond the first line, the upper lines pick up the excess risk from the lower lines.

The policy underwritten by the Company in France serves as an umbrella for subsidiaries outside of North America. Under this umbrella, each foreign subsidiary has its own policy covering damages to third parties incurred through its activities or products. The amount insured for each subsidiary in its policy depends on the amount of its revenue. The coverage under the Group's umbrella policy is supplemental to any local amounts.

The main exclusions are deliberate acts, war, nuclear incidents and repair of defective products.

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> 2012 PERFORMANCE

2012 key figures

In 2012, the Group once again achieved its objective of net profit growth due to sound activity. Gas & Services activity continued to improve in all divisions and across all regions, with +11% comparable growth for developing economies, and more subdued +1% growth for advanced economies. Gas & Services operating margin was preserved due to an efficiency retention rate of 29%. An overheads cost alignment program was also initiated.

Despite worldwide customer prudence due to short-term economic uncertainties, the strong investment momentum was maintained with a continued high level of industrial investment decisions, a particularly significant level of acquisitions and very strong engineering order intake. The Group's financial structure remained solid.

The Board of Directors therefore proposes to maintain the dividend par value to be submitted to the Shareholders' Meeting of May 7, 2013 at 2.50 euros per share. Considering the free share attribution in May 2012, this dividend guarantees an increase of +10.3% for each shareholder and a pay-out ratio of 49.9%.

(in millions of euros)	2011	2012	2012/2011 published change	2012/2011 comparable change
Total revenue	14,457	15,326	+6.0%	+2.5% (a)
Of which Gas & Services	*13,064 (b)*	*13,912*	*+6.5%*	*+2.8% (a)*
Operating income recurring	2,409	2,560	+6.3%	
Operating income recurring as % of revenue	16.7%	16.7%		(c)
Net profit – Group share	1,535	1,609	+4.9%	
Net earnings per share *(in euros)*	4.93 (d)	5.17	+4.9%	
Adjusted dividend per share *(in euros)*	2.27 (d)	2.50 (e)		
Cash flow from operating activities before change in working capital requirement	2,728	2,913	+6.8%	
Net capital expenditure (f)	1,676	2,848	+70.0%	
Net debt	5,248	6,103		
Debt-to-equity ratio	53%	58%		
Return On Capital Employed — ROCE after tax (g)	12.1%	11.9% (h)		

(a) Excluding natural gas, currency and significant scope impacts. Natural gas is an essential raw material for the production of hydrogen and the operation of cogeneration units. All Large Industries hydrogen and cogeneration contracts have clauses indexing sales to the price of natural gas. Hence, when the price of natural gas varies, the price of hydrogen or steam for the customer is automatically adjusted proportionately, according to the index.

(b) Revenue adjusted to include the specialty ingredients activities in Healthcare previously consolidated in Other activities.

(c) Excluding the natural gas impact. Explanation of the natural gas impact on revenues and operating margin, page 38.

(d) Adjusted for the free share attribution in May 2012.

(e) Subject to the approval of the May 7, 2013 Shareholders' Meeting.

(f) Including transactions with minority shareholders.

(g) Return On Capital Employed — ROCE after tax: (net profit after tax before deduction of minority interests - net cost of debt after taxes)/weighted average of (shareholders' equity + minority interests + net indebtedness).

(h) Pro forma, including annualized profit impact of the acquisition of LVL Médical and Gasmedi.

SUMMARY

Group revenue increased by +6.0%, amounting to 15,326 million euros. Gas & Services revenue totaled 13,912 million euros, up +6.5%. In terms of comparable growth, excluding the impacts of exchange rate differences, the acquisitions of LVL Médical and Gasmedi and rising natural gas prices, Gas & Services revenue rose by +2.8%. Group operating margin was stable at 16.7%. Net profit (Group share) increased by +4.9%, amounting to 1,609 million euros.

Net cash from operating activities before changes in working capital requirement amounted to 2,913 million euros, up +6.8%. Capital expenditure, net of disposals, rose sharply to 2,848 million euros, due to the numerous acquisitions carried out during the year and industrial investments which remained at a high level. Net debt as of December 31, 2012 totaled 6,103 million euros, and the debt-to-equity ratio increased slightly compared to December 31, 2011, to 58%.

2012 highlights

Despite an uncertain economic context, 2012 was marked by customer confidence in the outlook for the medium and long-term. Whereas the slowdown in global demand led to short-term growth uncertainties, Air Liquide signed investment decisions of more than 2.9 billion euros over the period that will contribute to growth in the years to come. This amount of investment decisions, close to a record level, included industrial investments of 2 billion euros and acquisitions of 887 million euros.

Throughout 2012, the Group therefore on the one hand, pursued its organic development strategy with the signature of numerous contracts worldwide and, on the other, bolstered its current positions through targeted acquisitions.

HEALTHCARE: GROWTH DRIVER IN EUROPE

The contribution of Healthcare to Gas & Services revenue increased significantly from 16%, as published in 2011, to 18% for the year 2012 due to several factors:

- The finalization of several acquisitions, of which two were of an important size, enabled the Group to reinforce its positions in the European Home Healthcare market. In August and September 2012, the Group acquired, respectively, the French activities of LVL Médical for 316 million euros and Spanish Gasmedi, ranked number three in its Home Healthcare market, for 330 million euros. The revenues of LVL Médical in France and Gasmedi amounted to 104 and 82 million euros, respectively, in 2011. The combined expertise of LVL Médical in France and Gasmedi in Spain and Air Liquide's ability to innovate will enable the Group to improve the service rendered to all patients. These acquisitions bring the number of patients treated by Air Liquide to more than one million worldwide.

  To finance these two acquisitions, Air Liquide issued, under its EMTN program, 9-year bonds at a rate of 2.125%. This issue was qualified as a Socially Responsible Investment (SRI) based on a rating from the ESG agency Vigeo. This assessment was based on the social, environmental and governance criteria of Air Liquide's Home Healthcare activity. The Group has thus become the first company to issue bonds that specifically meet the criteria of Socially Responsible Investors. This issue, placed mainly with SRI mandated investors, has enabled the Group to diversify its financing sources.

- Furthermore, to optimize the synergies, in terms of the market or regulatory framework, at the start of the fiscal year Air Liquide integrated its Seppic subsidiary, recognized leader in healthcare specialty ingredients into its Healthcare World Business Line.

DEVELOPMENT OF ACTIVITY IN ALL REGIONS AND BUSINESS LINES

In 2012, Air Liquide pursued its growth strategy through industrial investments and acquisitions. In developing economies, the Group extended its operations in the fast growing regions of Eastern Europe and Latin America. In advanced economies, Air Liquide leveraged its existing positions and, based on its proprietary technologies, strengthened its presence.

- In Russia, the Group accelerated its growth by starting up two new air separation units: the first will serve merchant customers in the Tatarstan region, while the second will supply the customer Severstal in Cherepovets. Air Liquide also acquired two regional industrial gas bulk and cylinder activities, Logika in Moscow, and Lentechgas in Saint Petersburg. These two initial investments will be supplemented by the commissioning of air separation units. In Poland, the Group also pursued its growth and signed a contract with KGHM Polska Miedz, leader in the copper industry. These new contracts are aligned with the contracts signed in 2011 with Metinvest in Ukraine and Severstal in Russia, and emphasize the Group's interest in this rapidly developing region.

- In South America, after having invested in Chile last year, Air Liquide intensified its development in the region. In Brazil, the Group has undertaken to build two new production units to satisfy the growing demand from local players such as FEMSA, the world's leading bottler of Coca-Cola and Suzano Papel e Celulose, the leading paper manufacturer in Latin America. After an initial investment in Mexico in 2011, Air Liquide pursued its development in the steel industry by signing a gas supply contract in Pesqueria, in the state of Nuevo Léon, providing for the construction of an air separation unit and a hydrogen production unit.
- In China, the industrial gas business, which has until now focused on steel production, is gradually diversifying with new opportunities, particularly in the electronics and chemicals sectors. After having commissioned a major hydrogen production unit in Shanghai, in January 2012, the Group decided to build a new hydrogen unit in the Liaoning province.
- The Group has expanded its coverage in South Africa and has signed a contract with the country's second largest steel producer, Evraz Highveld Steel and Vanadium, by investing in a new air separation unit.
- In Western Europe, the Group acquired the British company Energas & Engweld, a distributor in the cylinder market. In Germany, benefiting from the competitive advantage of its pipeline network, the Group won a major long-term contract with Bayer MedicalScience amounting to an investment of 100 million euros for the construction of a new hydrogen and carbon monoxide production unit.
- Finally, in the Electronics sector, in the United States, following the technological and commercial success of the ALOHA range, the Group has doubled its world advanced precursor production capacity.

HYDROGEN: THE ENERGY CARRIER OF TODAY AND THE FUTURE

Significant progress has been achieved in the promising development of hydrogen energy. Today, this technology is already used for targeted applications: back-up electric generators, supply of electricity to remote locations, bus or forklift captive fleets. Recently, in the automobile sector, several manufacturers have announced the planned sale of electrical vehicles powered by hydrogen fuel cells by 2015.

Similarly, in 2012, Air Liquide inaugurated its first hydrogen filling station accessible to passenger cars in Dusseldorf, and has entered into a contract with the German government to build 10 new filling stations over the next three years. The Group has also installed two new stations: in Oslo, Norway and Brugg, Switzerland. At the year-end, the Group decided to build and operate a public filling station in Rotterdam. These development projects have extended beyond the boundaries of Europe; in Japan, Air Liquide set up a team to respond to the Japanese government's project to install 100 hydrogen filling stations by 2015.

In order to offer its customers a complete hydrogen chain with no CO_2 emissions – from well to wheel – the Group is actively working upstream on various clean hydrogen production projects. Accordingly, Air Liquide acquired biogas installations in the state of Georgia, United States. The recovery of biogas from buried waste will enable Air Liquide to produce Blue Hydrogen using renewable and carbon-free energy sources.

2012 income statement

Preliminary note: The consolidation of Seppic within Gas & Services at the start of 2012 modified the Group revenue segment breakdown. The 2011 Gas & Services and Other activities revenues have been revised to take account of this change. Similarly, the 2011 operating income recurring breakdown has been revised.

REVENUE

Revenue *(in millions of euros)*	**2011 as published**	**2011 revised**	**2012**	**2012/2011 change**	**2012/2011 comparable change (a)**
Gas & Services	12,839	13,064	13,912	+6.5%	+2.8%
Engineering & Construction	705	705	785	+11.3%	+9.4%
Other activities	913	688	629	-8.4%	-9.8%
TOTAL REVENUE	**14,457**	**14,457**	**15,326**	**+6.0%**	**+2.5%**

(a) Excluding currency, natural gas and significant scope impacts.

Group

In 2012, Group revenue totaled **15,326 million euros,** up +6.0% as published compared to 2011, due to a +3.2% positive currency impact and the contribution from two significant acquisitions progressively from the 3rd quarter. **On a comparable basis,** revenue increased by **+2.5%** compared to 2011.

Revenue by quarter *(in millions of euros)*	**Q1 12**	**Q2 12**	**Q3 12**	**Q4 12**
Gas & Services	3,443	3,394	3,490	3,585
Engineering & Construction	178	188	167	252
Other activities	158	172	146	153
TOTAL REVENUE	**3,779**	**3,754**	**3,803**	**3,990**
2012/2011 published change	**+6.7%**	**+5.1%**	**+5.7%**	**+6.6%**
2012/2011 comparable change (a)	**+4.5%**	**+1.2%**	**+1.0%**	**+3.3%**

(a) Excluding currency, natural gas and significant scope impacts.

Currency, natural gas and significant scope impacts

In addition to the comparison of published figures, financial information is given excluding currency, natural gas price fluctuation and significant scope impacts.

Since industrial and medical gases are rarely exported, the impact of currency fluctuations on activity levels and results is limited to euro translation impacts with respect to the financial statements of subsidiaries located outside the euro zone. Fluctuations in natural gas prices are generally passed on to our customers through indexed pricing clauses.

(in millions of euros)	**Group**	**Gas & Services**
2012 revenue	15,326	13,912
2012/2011 % published change	+6.0%	+6.5%
Currency impact	+464	+441
Natural gas impact	+17	+17
Significant scope impact	+25	+25
Comparable change	+364	+365
2012/2011 % comparable change (a)	+2.5%	+2.8%

(a) Excluding currency, natural gas and significant scope impacts.

Gas & Services

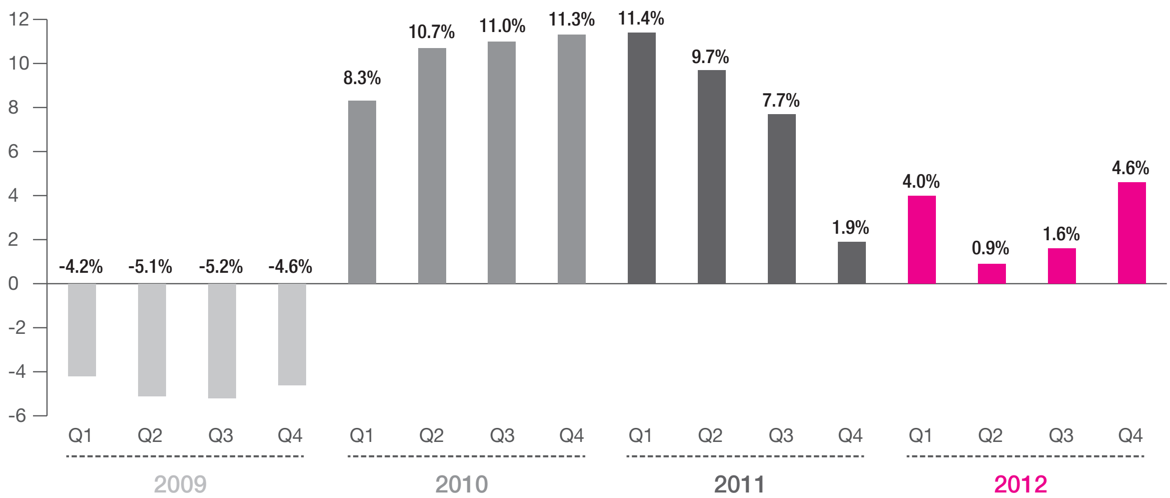
Unless otherwise stated, all the changes in revenue outlined below are based on comparable data (excluding currency, natural gas and significant scope impacts).

Gas & Services revenue totaled **13,912 million euros,** up +6.5% as published, and benefited from a +3.4% positive currency impact. The net impact of the sale of the Electronics equipment activity in 2011 and the acquisitions of LVL Médical and Gasmedi was +0.2%. The impact of rising natural gas prices was limited this year to +0.1%, with the decrease in prices in Americas and Asia-Pacific offsetting the overall increase worldwide. On a comparable basis, revenue increased by +2.8% compared to 2011, with growth in all regions and business segments.

The renewed growth in the first quarter was of short duration, with a marked slowdown in the second and third quarters. Growth improved in the fourth quarter, due to a more favorable comparison base of the 4th quarter 2011, which has already been affected by the global economic slowdown.

Comparable [a] [b] Gas & Services sales

(in percentage)



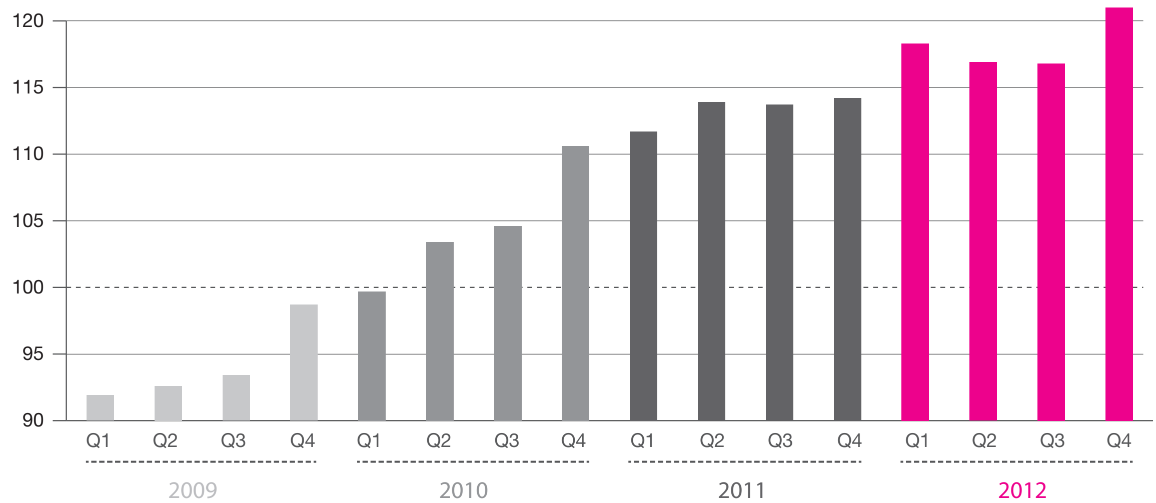
(a) Comparable: excluding currency, natural gas and significant scope impacts.

(b) Growth rates prior to 2012 are not revised for the integration of Seppic into the Gas & Services activity.

The activity level in 2012, which varied quarter on quarter, remained solid throughout the year and was overall significantly higher than in 2011, exceeding the 2008 benchmark level on average by 20%.

Gas & Services quarterly activity indicator [a]

(2008 average base 100)

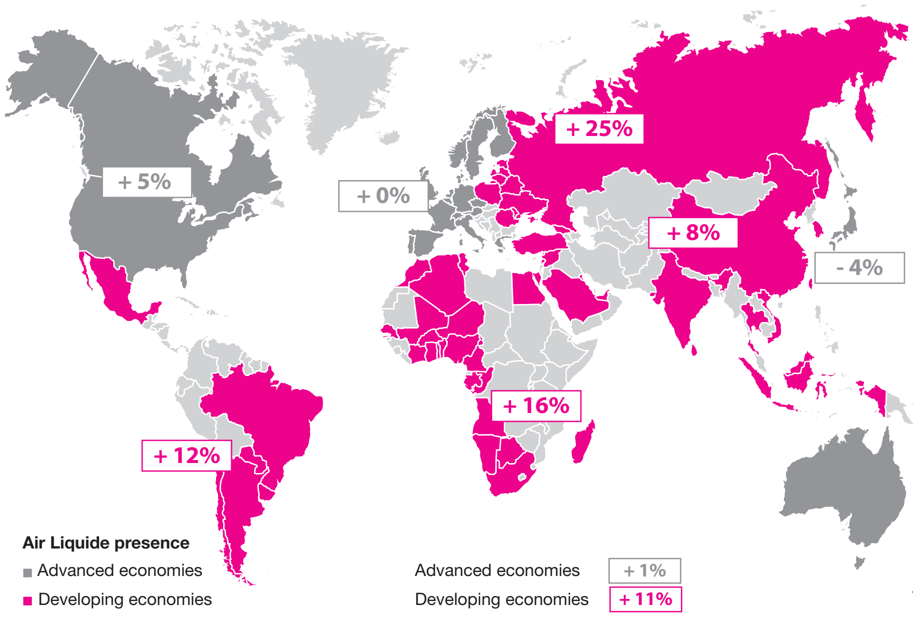


(a) Revenue excluding currency, natural gas and significant scope impacts, adjusted for the number of days per month.

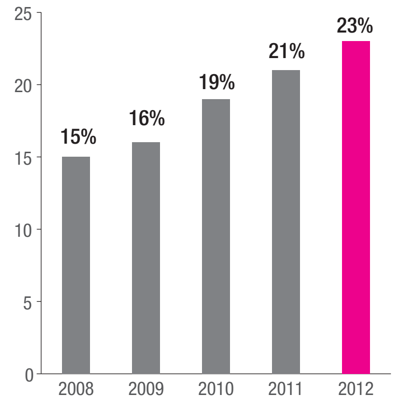
This annual performance was attributable to:

- a +11% increase in sales in developing economies, where growth was sustained due to continued start-ups and ramp-ups, solid growth in demand and some small acquisitions;
- a +1% increase in advanced economies, where the low demand growth in Europe and Japan was offset by the steady performance in North America and Australia.

Comparable [a] Gas & Services sales growth (2012/2011)



Gas & Services sales share in developing economies



(a) Excluding currency, natural gas and significant scope impacts.

Due to a higher growth rate, the contribution of developing economies to Gas & Services revenue again increased to reach 23% of sales in 2012. This contribution was even higher for industrial activities.

Despite a few start-up delays during the year, the contribution of start-ups, ramp-ups, site takeovers and minor acquisitions to Gas & Services sales was +3.5%, and +3.7% including the significant scope impact.

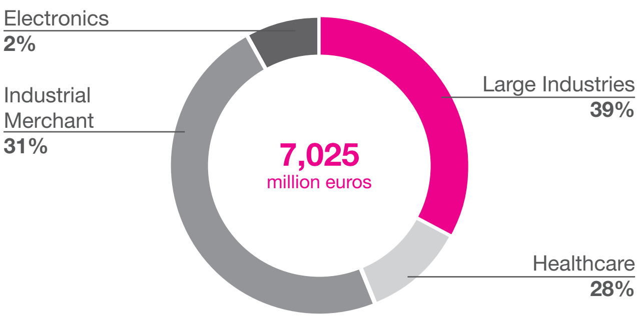
Revenue *(in millions of euros)*	**2011 revised** [(a)]	**2012**	**2012/2011 change**	**2012/2011 comparable change** [(b)]
Europe	6,810	7,025	+3.2%	+1.0%
Americas	2,859	3,108	+8.7%	+6.2%
Asia-Pacific	3,083	3,416	+10.8%	+2.2%
Middle-East and Africa	312	363	+16.5%	+16.0%
GAS & SERVICES	**13,064**	**13,912**	**+6.5%**	**+2.8%**
Industrial Merchant	4,892	5,193	+6.2%	+2.5%
Large Industries	4,585	5,015	+9.4%	+5.6%
Healthcare	2,301	2,482	+7.9%	+4.2%
Electronics	1,286	1,222	-5.0%	-8.4%

(a) Figures adjusted for the transfer of the specialty ingredients activities to Healthcare.
(b) Excluding currency, natural gas and significant scope impacts.

Europe

Revenue in Europe totaled **7,025 million euros,** up **+1.0%.** Demand for hydrogen increased sharply, whereas the growth in volumes of other industrial gases remained low, particularly in Southern Europe. The region continued to benefit from regular growth in Healthcare and the strong momentum of the developing economies, which generated growth of +25% due to ramp-ups, site takeovers and minor acquisitions in Russia, Poland and Turkey.

Europe Gas & Services 2012 revenue

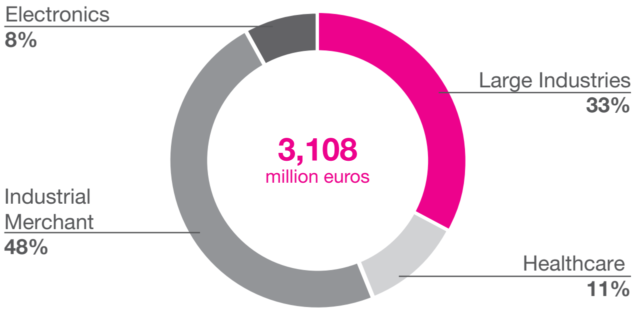


- **Large Industries** revenue increased by **+2.5%.** This performance reflects sustained demand in the Chemicals and Refining sectors throughout Europe that offset the dwindling demand in the metals sector and some customer plant closures. Expansion in the major industrial countries of Eastern Europe has produced results: Large Industries revenue rose by +20% due to start-ups in Russia and a site takeover in Turkey.
- **Industrial Merchant** sales declined slightly by **-0.5%.** Double-digit growth continued in developing economies due to new facilities, acquisitions of distributors close to new facilities and strong demand. However, business in advanced economies suffered from a difficult economic climate. Cylinder and bulk volumes are well short of 2008 levels, particularly in Southern Europe where business continued to decline. In Northern Europe, volumes were stable and business benefited from the acquisition of Energas, a local player in the UK. Pricing remained positive during the year at +0.9%.
- The **Healthcare** development continued, with growth of **+2.7%,** and +6.1% including the impact of the acquisitions since September of LVL Médical in France and, since October, Gasmedi in Spain. Excluding LVL Médical and Gasmedi acquisitions, Home Healthcare rose by +3%, driven by the steady growth of demand and the expansion of the portfolio of therapies provided to patients despite intense price pressure during contract renewals. The rise in medical gas volumes was hindered by the budgetary pressures of certain states. Hygiene activities developed steadily due to sustained demand. Specialty ingredients posted +1% increase in revenue due to a very high comparison base in 2011.
- **Electronics** revenue decreased by **-12.9%** following record Equipment and Installations sales in 2011, mainly due to the construction of a new photovoltaic panel fab in Italy. Carrier and specialty gas sales growth, however, remained solid, benefiting from new contracts, including the start-up of the fab in Italy.

Americas

Gas & Services revenue in the Americas totaled **3,108 million euros,** up **+6.2%.** Industrial activity remained sustained in North America, with strong demand in hydrogen for Refining and greater Industrial Merchant price elasticity than in Europe. In South America, regular growth of more than +12%, was achieved during the year, in both the industrial and healthcare domains.

Americas Gas & Services 2012 Revenue

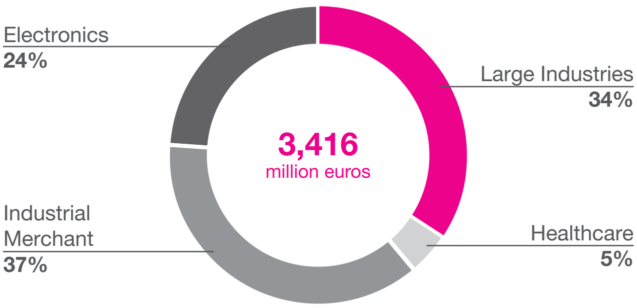


- **Large Industries** posted solid **+7.8%** sales growth benefiting from site ramp-ups in Texas and Louisiana, a site takeover and particularly robust demand in the Chemicals sector, which benefited from declining natural gas prices. Demand in the metals sector remained buoyant in South America and gradually recovered in the Northern economies. Cogeneration unit sales were affected by declining electricity prices.
- **Industrial Merchant** sales rose by **+5.7%** with a consistent performance across the entire region. The business momentum was sustained by steady industrial demand, acquisitions of distributors in Canada and Brazil as well as the development of bulk gas sales for oil exploration. Cylinder activity also improved over the entire region and particularly in South America. Pricing campaigns continued throughout the year.
- **Healthcare** revenue rose by **+11.3%** driven by the performance of Home Healthcare in Latin America (Argentina, Brazil and Chile). The more subdued growth in North America was attributable to the solid Home Healthcare growth in Canada, primarily due to minor acquisitions and a slight slowdown in medical gases in the United States at the end of the year.
- **Electronics** activity, which declined by **-5.0%,** suffered from the end of the investment cycle in 2011. Equipment and Installations revenue declined after a very profitable first half of 2011, due to the installation of a new fab in the United States. A new installation project should begin in early 2013. Specialty gas sales, particularly those from the Aloha range, remained buoyant.

Asia-Pacific

Revenue in the Asia-Pacific region increased by **+2.2%** to **3,416 million euros.** Performance remained very contrasted, with a decline of almost -8% in Japan and an +8% rise in developing economies. The region, which represents two-thirds of the Group's Electronics business, was marked by the turnaround in this sector's investment cycle, as well as a certain prudence of customers in their inventory management. The momentum remained strong in China, at +15%, due to solid demand in all business lines which improved at the end of the year, and despite a lower contribution from start-ups than in previous years.

Asia-Pacific Gas & Services 2012 Revenue



- **Large Industries** sales increased by **+10.8%.** Growth was less than in previous years due to fewer start-ups. Growth was more sustained in the fourth quarter due to the ramp-up of a major unit in China and strong hydrogen volumes across the region. Growth in China remained high at +25% for the year as a whole.
- **Industrial Merchant** posted **+1.5%** growth during the year. The situation was contrasted from country to country. Activity in Japan declined, and showed no signs of the expected post-earthquake recovery. Sales growth was positive in all other countries in the region. Sales growth in China improved quarter by quarter to return to the level of 2011.
- **Electronics** posted a **-8.1%** decline for the year. Equipment and Installations sales declined throughout the region compared to very high levels in 2011. The Electronics sector restructuring continued in Japan and impacted the entire production chain, and particularly industrial gas demand. Excluding Japan, gas sales growth remained positive, particularly in China, due to new specialty and carrier gas contracts.

Middle-East and Africa

Middle-East and Africa revenue totaled **363 million euros,** up **+16.0%.** Large Industries posted strong growth in the Middle-East and South Africa due to ramp-ups of new units. The construction of the major hydrogen unit in Yanbu continued to schedule. Industrial Merchant growth bounced back after a subdued 2011 marked by the impact of the Arab Spring. Healthcare activities continued to develop steadily, particularly in South Africa and Tunisia.

Engineering & Construction

Engineering & Construction revenue totaled **785 million euros,** up **+11.3%** as published compared to 2011 reflecting progress of third-party sale of equipment projects.

In 2012, total order intake rose significantly to 1.7 billion euros, a +69% increase compared to the previous year. The vast majority of projects involve air gas and hydrogen production units. This strong growth reflects an increase in projects for third-party customers, particularly in North America, and an amount of Group projects slightly up on the previous year.

Orders in hand totaled 4.0 billion euros as at December 31, 2012, reflecting the high order intake during the year.

Other activities

Revenue *(in millions of euros)*	**2011 as published**	**2011 revised**	**2012**	**2012/2011 change**	**2012/2011 comparable change** [(a)]
Welding	469	469	450	-3.9%	-4.0%
Diving and other	444	219	179	-18.1%	-22.1%
TOTAL	**913**	**688**	**629**	**-8.4%**	**-9.8%**

(a) Comparable: excluding currency impact.

The -8.4% decline in revenue from **Other activities** in 2012 was attributable to the disposal of certain industrial activities from Specialty Chemicals in the second half of 2011.

After a stable first half-year, **Welding** activity declined in the second half of 2012, reflecting the problems in the European economy, particularly in the metals, automobile and construction sectors.

Diving (Aqua Lung) posted +8.2% published growth for 2012, due to steady demand in Asia and Africa.

OPERATING INCOME RECURRING

Operating income recurring before depreciation and amortization totaled 3,792 million euros, up **+6.4%.** Depreciation and amortization amounted to 1,232 million euros, up +6.7%, reflecting the impact of unit start-ups during the year and acquisitions.

Group operating income recurring (OIR) totaled **2,560 million euros** in 2012, up **+6.3%** compared to 2011. Operating margin (OIR over revenue) was stable at 16.7% mainly due to the increase in the level of **efficiencies.** For the full year, efficiencies amounted to **284 million euros**, exceeding the annual target of more than 200 million euros. Excluding the effect of energy indexation, pricing was positive over the period, and partially offset cost inflation on constant volume of +2.3%.

These efficiencies represent a 2.6% cost saving. More than 40% of this stems from purchasing and the realignment in structures where activity has suffered from falling demand, particularly in Japan and Welding. Other projects designed to reduce energy consumption, optimize the logistics chain and roll out worldwide or regional purchasing platforms continued.

Explanation of the natural gas impact

Natural gas is an essential raw material for the production of hydrogen and the operation of cogeneration units. All Large Industries hydrogen and cogeneration contracts have clauses indexing sales to the price of natural gas. Hence, when the price of natural gas varies, the price of hydrogen or steam for the customer is automatically adjusted proportionately, according to the index.

When the price of natural gas increases, revenue and costs rise by the same euro amount, without significantly impacting Operating income recurring. This mechanism has a negative effect on the operating margin.

Conversely, when the price of natural gas decreases, revenue and costs decrease and operating income recurring is maintained, which has a positive effect on the operating margin.

In both cases, natural gas price fluctuations do not change the intrinsic profitability of the activity.

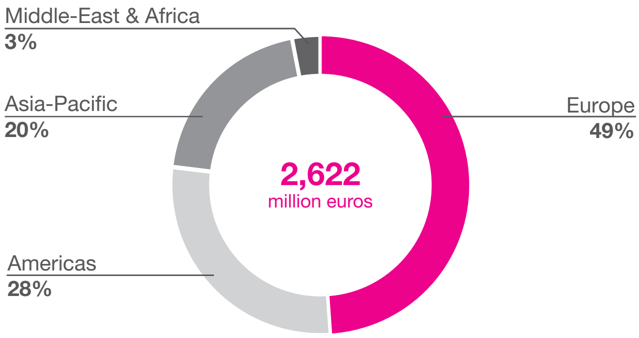
In 2012, considering the minimal fluctuations in the average price of natural gas, Gas & Services operating margins were not impacted. Nevertheless, at the regional level, the decline in prices in North America led to a decrease in revenue and automatically increased the operating margin. Conversely, in the rest of the world, the rise in the price of natural gas slightly increased revenue therefore leading to a decrease in operating margin.

Gas & Services

Gas & Services operating income recurring totaled **2,622 million euros,** up **+6.1%.** The published operating income recurring over revenue amounted to 18.8%, compared to 18.9% in 2011. Excluding the natural gas impact, it remained stable at **18.9%.**

Cost inflation, excluding the impact of energy indexation, gradually decreased in the second half and totaled +2.7% for the year. Prices continued to rise by +0.4% due to persistent efforts in Industrial Merchant (+1.9%) and despite continuous price decreases in Electronics and Healthcare. In addition, efficiencies totaled 272 million euros. A portion of efficiencies was absorbed to offset the difference between cost inflation and rising prices. The remaining efficiencies, *i.e.* the retention, helped sustain the margin. The retention rate was 29% in 2012.

Gas & Services 2012 operating income recurring by geography



Gas & Services Operating margin [a]	2010	2011 [b]	2012
Europe	19.1%	18.8%	18.3%
Americas	21.5%	22.0%	24.0%
Asia-Pacific	16.4%	16.3%	15.1%
Middle-East and Africa	25.0%	20.8%	21.2%
TOTAL	**19.2%**	**18.9%**	**18.8%**

(a) Operating income recurring/revenue.

(b) Revised for integration of Seppic in Gas & Services.

Operating income recurring in **Europe** totaled **1,285 million euros,** up **+0.6%.** The operating margin, excluding the natural gas impact, was broadly stable at **-20 basis points.** Despite a gradual improvement in prices quarter by quarter, the low level of activity in certain Western European countries and the time lag between the increase in prices and inflation weighed on the margin in Industrial Merchant. Margins for the other business lines slightly improved or remained stable.

Operating income recurring in the **Americas** amounted to **745 million euros,** up **+18.6%.** Excluding the natural gas impact, the operating margin rose by **+120 basis points** due to business growth and non recurring items in 2012.

In **Asia-Pacific,** operating income recurring amounted to **516 million euros,** an increase of **+2.8%.** Excluding the natural gas impact, the operating margin as a percentage of revenue declined by **-120 basis points** due to a change in business mix with greater share of hydrogen sales in the region.

Operating income recurring for **Middle-East and Africa** amounted to **77 million euros,** an increase of **+18.3%.** The operating margin rose by **+40 basis points,** due to a favorable comparison base following the Arab Spring of 2011.

Engineering & Construction

Operating income recurring for Engineering & Construction was **79 million euros.** The operating margin reached 10.0%, slightly down compared to the exceptional 10.6% in the previous year.

Other activities

The Group's Other activities reported operating income recurring of **37 million euros,** down **-33.5%,** while the operating margin totaled 5.8%, a decrease of -220 basis points. This decline reflects the sale of industrial activities from Specialty Chemicals at the end of 2011 and the difficult context for Welding. Margins increased slightly for the Diving activity.

Research & Development and corporate costs

Research & Development and corporate costs include intersector consolidation adjustments and amounted to **177 million euros,** down **-8.6%.** This decline reflected the Group's efforts to control corporate holding costs whilst maintaining its research and innovation initiatives and investments.

NET PROFIT

Other operating income and expenses was a negative **balance of -27 million euros** in 2012 compared to a positive balance of 28 million euros in 2011. They include primarily higher restructuring and acquisition costs than in previous years. As a reminder, in 2011, they benefited from capital gains on the disposal of non-strategic subsidiaries.

Net financial expenses, at -312 million euros increased by +4.6% compared to -298 million euros in 2011. **Net finance costs,** up +1.8%, excluding the currency impact, reflected a slight increase in average debt over the year offset by a decline in the average financing rate from 4.8% in 2011 to 4.6%.

Other financial income and expenses were virtually stable.

Taxes totaled 566 million euros, down -1.8%. The **effective tax rate** was **25.5%** compared to 27.0% in 2011. This rate was attributable to a tax gain resulting from the favorable evolution of tax audits. Excluding this impact, the effective tax rate for the year would have been 27.7%.

Profit from associates amounted to **20 million euros,** compared to 33 million euros in 2011. This decline was primarily due to the change to proportionate consolidation of an Engineering & Construction subsidiary in Asia. **Minority interests** rose by **+10.6%,** amounting to 66 million euros.

Overall, **net profit (Group share)** amounted to **1,609 million euros** in 2012, up +4.9%.

Net earnings per share was 5.17 euros, up **+4.9%** compared to 2011, after adjustments for the free share attribution in May 2012. The average number of outstanding shares used for the net earnings per share calculation as of December 31, 2012 was 311,147,191.

Change in the number of shares

	2011	2012
Average number of outstanding shares [(a)]	311,594,600 [(b)]	311,147,191

(a) Used to calculate net earnings per share.

(b) Adjusted for the free share attribution in May 2012.

Number of shares as of December 31, 2011	283,812,941
Options exercised during the year, prior to the free share attribution	245,020
Cancellation of treasury shares	(1,200,000)
Free shares issued	29,003,797
Options exercised during the year, after the free share attribution	419,401
NUMBER OF SHARES AS OF DECEMBER 31, 2012	**312,281,159**

DIVIDEND

At the Shareholders Meeting of May 7, 2013, the payment of a dividend of 2.50 euros per share will be proposed to shareholders in respect of fiscal year 2012, a +10.3% increase, taking into account the free share attribution in May 2012. This represents an estimated distribution amount of 803 million euros, up +10.2% and a pay-out ratio of 49.9%.

The ex-dividend date has been set for May 16, 2013 and the dividend will be paid on May 22, 2013.

2012 cash flow and balance sheet

(in millions of euros)	2011	2012
Cash flow from operating activities before changes in working capital	**2,728**	**2,913**
Change in working capital requirement	(193)	(67)
Other	(109)	(137)
Net cash from operating activities	**2,426**	**2,709**
Dividends	(721)	(781)
Purchases of property, plant and equipment and intangible assets, net of disposals [(a)]	(1,676)	(2,848)
Increase in share capital	52	37
Purchase of treasury shares	(94)	(104)
Other	(196)	132
Change in net indebtedness	**(209)**	**(855)**
Net indebtedness as of December 31	(5,248)	(6,103)
Debt-to-equity ratio as of December 31	**53%**	**58%**

(a) Including minority interest transactions.

CASH FLOW FROM OPERATING ACTIVITIES

Cash flow from operating activities before changes in the working capital requirement amounted to 2,913 million euros, up +6.8% on 2011, compared to a 4.9% increase in net profit. This performance, which was partially attributable to the rise in depreciation and amortization charges during the year, mainly reflects the quality of the operating results.

CHANGE IN WORKING CAPITAL REQUIREMENT

The working capital requirement increased by +67 million euros in 2012, strictly managed relative to the growth in revenue. The working capital to sales ratio, excluding taxes, was 7.1%, compared to 7.0% in 2011. A decline in Engineering advances was compensated by an improvement in the performance of Gas & Services, primarily due to the considerable rise in cash inflows in the Southern European healthcare sector.

TOTAL CAPITAL EXPENDITURE

Following the significant level of investment decisions in 2010 and 2011, totaling on average 2.1 billion euros per year, total industrial capital expenditure increased to 2.0 billion euros in 2012. Acquisitions, intended to strengthen the Group's local presence in Home Healthcare and Industrial Merchant, totaled nearly 890 million euros, including buybacks of minority interests.

Group gross capital expenditures

(in millions of euros)	Industrial investments	Financial investments [(a)]	Total capex
2007	1,359	1,308	2,667
2008	1,908	242	2,150
2009	1,411	109	1,520
2010	1,450	332	1,782
2011	1,755	103	1,858
2012	**2,008**	**890**	**2,898**

(a) Including minority interest transactions.

Industrial investment

Industrial investment amounted to 2.0 billion euros in 2012, up +14% compared to 2011. The amount of Gas & Services investment breaks down as follows:

Gas & Services Industrial investment by geographical area

	Gas & Services				
(in millions of euros)	**Europe**	**Americas**	**Asia-Pacific**	**Middle-East and Africa**	**Total**
2011	690	387	510	137	1,724
2012	**691**	**467**	**570**	**224**	**1,952**

Industrial disposals amounted to 49 million euros.

Financial investment

Financial investment amounted to 890 million euros, including minority interest transactions of 11 million euros. This comprises two acquisitions in Home Healthcare, LVL Médical in France and Gasmedi in Spain, for a net amount of 632 million euros, as well as numerous small acquisitions in Healthcare and Industrial Merchant. Disposals of financial investments totaled 1 million euros.

NET INDEBTEDNESS

Net indebtedness as of December 31, 2012 totaled **6,103 million euros**, up 855 million euros compared to December 31, 2011, reflecting the acceleration in the acquisition program. The debt-to-equity ratio was 58%, a slight increase compared to December 31, 2011. The Group's financial structure remained extremely secure.

ROCE

The return on capital employed after tax was 11.7%. The pro forma ROCE, including the annualized profit impact of the acquisition of LVL Médical and Gasmedi, was **11.9%**, compared to 12.1% published at the end of 2011. This decrease reflects the substantial ongoing industrial investment, which will contribute to medium-term growth.

> INVESTMENT CYCLE AND FINANCING STRATEGY

The Group's steady long-term growth is largely due to its ability to invest in new projects each year. Industrial gas investment projects are widespread throughout the world, highly capital intensive and supported by long-term contracts, particularly for Large Industries. Air Liquide has thus tailored its financing strategy to the nature of its projects, based on the diversification of funding sources, the prudential management of the balance sheet and innovative financing sourcing. This financing strategy is fundamental for the Group's continued development.

Investments

The Group's investments reflect its growth strategy.

They can be classified into two categories:

- Industrial investments, which bolster organic growth or guarantee the efficiency, maintenance or safety of installations;
- Financial investments, which strengthen existing positions, or accelerate penetration into a new region or business segment through the acquisition of existing companies or assets already in operation.

The nature of the industrial investment differs from one World Business Line to the next: from gas production units for Large Industries, to filling centers, logistics equipment, storage facilities and management systems for Industrial Merchant, Electronics and Healthcare. Capital intensity varies greatly from one business line to another.

Capital intensity

Capital intensity is **the ratio of capital required to generate one euro of supplementary revenue, when projects or activities reach maturity**. This capital is either invested into industrial assets (production units, storage facilities, logistics equipment, etc.), or used as working capital to finance the development of the activities.

Capital intensity on new projects varies significantly from one business line to another:

- **Air gases** production in Large Industries has a capital intensity of **between 2 and 3**. It varies with the trend in electricity prices;
- **Hydrogen and cogeneration** have a lower capital intensity of **between 1 and 1.5**, due to a relatively high proportion of natural gas in the cost of sales. It varies with the trend in natural gas prices;
- **Industrial Merchant** capital intensity to launch the activity in a new market is **between 1.5 and 2**;
- **Electronics** has an average capital intensity **close to 1**.
- **Healthcare** has a capital intensity, excluding acquisitions, of **around 1**, depending on the product mix.

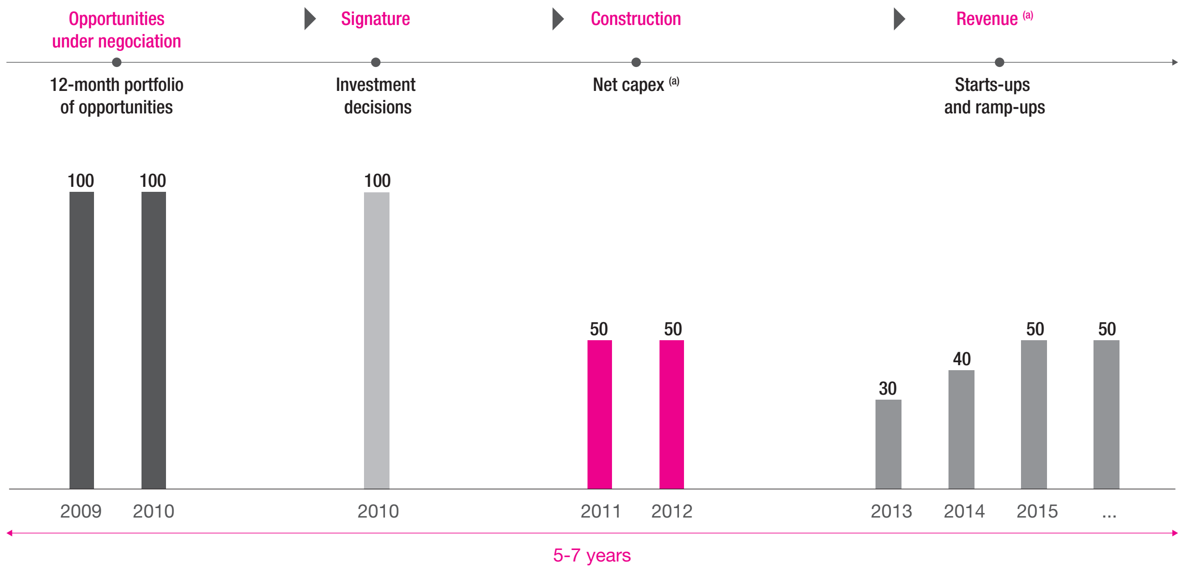
Whatever the capital intensity, any project must enable the Group to achieve its return on capital employed (ROCE) objective over the long term.

Because of the differences in capital intensity among the various Group activities, **operating margins will vary accordingly**.

Capital intensity can also vary, in a given period, according to the position of the various projects in their lifespan

Long-term development is one of the key characteristics of the industrial gases business. It is particularly evident in the investment cycle, where there is approximately a 5-year span between the study of a new construction project for a Large Industries customer and the first corresponding industrial gas sales. **Monitoring this cycle is essential to anticipating the Group's future growth.** The following chart sets out each stage in this process.

The theoretical lifespan of a project in Large Industries



(a) Applying a capital intensity of two, an investment of 100 million euros should generate 50 million euros of sales per annum, fully ramped-up.

Negotiation phase: projects exceeding 5 million euros of investment are monitored within the portfolio of potential opportunities and split between those for which a decision is expected within 12 months and those for which the investment decision will take more than one year. Projects are then discussed and negotiated with the client. Contracts can be removed from the portfolio for several reasons: 1. The contract is signed, it is removed from the portfolio and therefore becomes an investment decision. 2. The project is abandoned by the client. 3. The client decides not to outsource its gas supply, or the project is awarded to a competitor. 4. The project is delayed beyond 12 months: it is removed from the 12-month portfolio but remains in the long-term portfolio.

Signature phase: the two parties reach an agreement. The signature of a long-term contract represents the business entity's commitment to an investment decision.

Construction phase: capital expenditure begins with the construction of the unit by Air Liquide, which takes approximately 12-24 months and sometimes up to three years depending on the size of the project.

Revenue phase:

1. **Commissioning**: the unit starts up. Sales begin at the **take-or-pay** level, guaranteeing minimum profitability from the beginning of the contract.
2. **Ramp-up**: over the course of the contract term, sales should increase above the **take-or-pay** level to the nominal amount defined in the contract: this is the ramp-up phase. Nominal capital intensity is achieved at the end of this phase.

Between years four and five after the start-up, the production unit is already partially depreciated and the contract reaches an average after-tax Return On Capital Employed (ROCE) exceeding 12%, in line with Group objectives. In the following years, ROCE continues to increase.

PORTFOLIO OF OPPORTUNITIES

As at December 31, 2012, the 12-month portfolio of opportunities totaled 4.0 billion euros, virtually stable compared to December 31, 2011. This level of opportunities remains high, even though the investment decisions during the year, and which were therefore removed from the portfolio, were very substantial. This relative portfolio stability was attributable to the entry of new projects, some of which were of considerable size, mostly located in developing economies. Project reviews increased compared to 2011.

As at December 31, 2012, 64% of projects in the portfolio were located in developing economies, very similar to the previous year. In advanced economies, there were renewals and also the commissioning of new facilities in the world's most competitive industrial basins (Northern Europe, United States, etc.).

Projects are spread out over the Group's four geographical areas, but the percentage in the Americas and the Middle-East and Africa is increasing. The percentage of projects in China decreased slightly but was offset by the rest of Asia. In Europe, projects are evenly spread between Western Europe and Central and Eastern Europe.

The outsourcing of industrial gas production continued, both in advanced economies when replacing old plants, and in developing economies for new facilities. The 12-month portfolio of opportunities includes 12 planned site takeovers, currently operated by the clients themselves.

The majority of the portfolio concerns Large Industries, since Industrial Merchant, Healthcare and Electronics projects frequently amount to less than 5 million euros. The percentage of Large Industries projects relating to metals was stable, while Chemicals sector projects declined. Energy-related projects have increased significantly and tend to be individually much larger. They generally take longer to negotiate and therefore remain longer in the portfolio. The weight of Industrial Merchant, Electronics and Healthcare projects remained close to that of the previous year.

INVESTMENT DECISIONS

The Investment decision process is at the heart of the Group's growth strategy and covers:

- internal and external growth projects;
- equipment renewals;
- investments contributing to efficiency and reliability;
- industrial safety improvement.

Strict discipline drives investment decisions, as they commit the Group over the long term (see "Investment decision process"– page 46). A dedicated process is in place to ensure that selected projects comply with the Group's rules and sustain long-term growth with a required minimum return on capital employed of between 12% and 13%.

The return on capital employed (ROCE) for a major Large Industries long-term contract will change over the term of the contract. It is lower in the first four to five years, due to the ramp-up in client demand, compared to a straight-line depreciation over time. Return on capital employed increases rapidly thereafter (refer to "The theoretical lifespan of a project in Large Industries"). The Group's ROCE is calculated using net profit, after taxes, depreciation, amortization and impairment – see definition page 29.

Investment decisions

(in billions of euros)	Industrial investment decisions	Financial investment decisions (acquisitions)	Total investment decisions
2008	2.2	0.2	2.4
2009	1.0	0.1	1.1
2010	1.8	0.4	2.2
2011	1.9	0.1	2.0
2012	**2.0**	**0.9**	**2.9**

In 2012, industrial and financial investment decisions, representing Group commitments to invest, rose by +45% amounting to a particularly high level of 2.9 billion euros and were staggered over the four quarters of the year. They include the still significant level of industrial investments of 2.0 billion euros and almost 1 billion euros of acquisitions.

Large Industries, Industrial Merchant and Healthcare each represent around 30% of investment decisions. Industrial investments in developing economies account for 28% of total decisions, industrial investments in advanced economies for 42% and acquisitions for 30%.

- **Industrial investment decisions** were spread throughout the year. The percentage of decisions regarding investments located in developing economies declined compared to 2011. This change was due to several important projects won in Germany and the Netherlands. In developing economies, the most significant projects were located in Poland, Ukraine, China and Brazil.

In geographical terms, industrial decisions were spread across all regions. This year, Europe represented 50% of decisions: new facilities for chemicals in Germany and the Netherlands and for the treatment of metals in Poland, contract renewals and CO_2 capture in France and a site takeover in Ukraine. The percentage for the Americas increased this year and reached the same level as Asia. Among the developing economies, China, Brazil and Poland are the leading countries in terms of 2012 decisions.

In Large Industries, decisions were balanced between air gas and hydrogen units. In Industrial Merchant and Electronics, decisions mainly concerned on-site (customer sites) and carrier gas production units.

- **Financial investment decisions** amounted to more than 887 million euros in 2012 and include two major acquisitions in Home Healthcare in France and Spain for a total of 646 million euros. The remaining amount involves more modest Home Healthcare acquisitions in Canada, Poland, Brazil and South Korea, and acquisitions of local Industrial Merchant players in the United Kingdom, Russia, the United States and Canada. The contribution of all acquisitions, less the impact of disposals, including those of insignificant scope, to Gas & Services sales was around +1% during the year.

With three consecutive years amounting to more than 2 billion euros, investment decisions are in line with the Group's medium-term objectives and will guarantee part of its future growth. The investment portfolio stability and the substantial level of decisions together illustrate the dynamism of the industrial gas investment cycle and customers confidence in the medium-term.

INVESTMENT DECISION PROCESS

An investment decision amounting to over 2 million euros is subject to a precise evaluation and authorization process, undertaken at Group level by the Resources and Investment Committee. Each meeting is chaired by the Executive Committee member in charge of the World Business Line concerned and brings together the Director of the business and regions concerned by the investment, the Group Chief Financial Officer or Deputy Chief Financial Officer, the Operations Control Director, as well as the Group Human Resources Director (when HR subjects are examined).

Decisions are based on a rigorous assessment of individual projects. The following criteria are systematically reviewed:

- **location of the project: the analysis will take into account whether the project is based in an industrial basin with high potential, whether it is connected to an existing pipeline network, or whether it is in an isolated location;**
- **competitiveness of the site: based on size, production process, cost of raw materials and access to markets;**
- **customer risk;**
- **contract clauses;**
- **end products and the stability of future demand for these products;**
- **quality of the technical solution;**
- **country risk: evaluated on a case-by-case basis and can lead to specific financing policies and supplementary insurance cover.**

CAPITAL EXPENDITURE

In 2012, gross capital expenditure totaled 2,898 million euros, including minority interest transactions. This amount comprised several acquisitions totaling 890 million euros, including two of significant scope in Healthcare and several reasonably-sized acquisitions in Healthcare and Industrial Merchant, as well as a site takeover in Ukraine.

Asset disposals amounting to 49 million euros concerned non-strategic activities, and particularly two minor subsidiaries in Oceania.

Net capital expenditure therefore totaled 2,847 million euros. Gas & Services gross capital expenditure represented 20.3% of sales, compared to 14.2% in 2011.

START-UPS

In 2012, 17 units were commissioned, evenly split between advanced and developing economies. Many of the start-ups were air gas production units for the steel industry, in China, Russia and Egypt. There were also four Industrial Merchant start-ups: in Canada and the United States to supply the oil exploration services sector, in Sweden to extend Air Liquide's coverage and in Portugal to optimize logistics.

Certain start-ups initially scheduled for 2012 were postponed for periods ranging from one month to a few quarters. The reasons for these delays were mainly technical setbacks relating to customer unit start-ups. There should be more start-ups in 2013 and 2014: 50 are expected for this period.

Financing strategy

The Group's financing strategy is regularly reviewed to provide support to the Group's growth strategy and take into account changes in financial market conditions, while respecting a gearing ratio in line with a Standard & Poor's long term "A" rating (positive outlook since May 8, 2012).

In 2012, the existing prudential principles were maintained:

- diversifying funding sources and debt maturities in order to minimize refinancing risk;
- backing commercial paper issues with confirmed lines of credit;
- hedging interest rate risk to ensure visibility of funding costs, in line with long-term investment decisions;
- funding of investments in the currency of the operating cash flows generated, to ensure a natural foreign exchange hedge;
- centralizing excess cash through Air Liquide Finance, a wholly owned entity of L'Air Liquide S.A.

Notes 25 and 28 to the Consolidated financial statements for the year ended December 31, 2012 describe in detail the characteristics of the financial instruments used by the Group as well as the debt structure.

DIVERSIFYING FUNDING SOURCES

Air Liquide diversifies its funding sources by accessing various debt markets: commercial paper, bonds and banks.

Air Liquide uses short-term commercial paper market, in France through two French Commercial Paper programs of up to an outstanding maximum of 3 billion euros, and in the United States through a US Commercial Paper program (USCP) of up to an outstanding maximum of 1.5 billion US dollars.

Air Liquide also has a Euro Medium Term Note (EMTN) program to issue long-term bonds of up to an outstanding maximum amount of 6 billion euros. At the end of 2012, outstanding bonds issued under this program amounted to 3.9 billion euros (nominal amount).

In 2012, the Group conducted several bond issues in US dollars, yen and euros under its EMTN program for an amount equivalent to 770.4 million euros (nominal amount), in order to finance its acquisitions and investments.

Air Liquide Finance carried out a US private placement in September 2012 for 700 million US dollars, to renew the US private placement issued in 2004, for which the last tranche matured in August 2012.

As of December 31, 2012, funding through capital markets still accounts for more than two thirds of the Group's gross debt, for an amount of bonds outstanding of 4.8 billion euros (nominal amount).

The Group also obtains funding through bank debt (loans and lines of credit).

To avoid liquidity risk relating to the renewal of funding at maturity, and in accordance with the Group's internal policy, the Group aims to limit its short-term debt maturities to 2.1 billion euros, an amount which is covered by committed credit lines.

These credit lines include a 1 billion euro 5-year syndicated credit facility (with two one-year extension options) with the Group's core banks, renewed in advance in November 2011 to replace a syndicated credit facility that matured in July 2012. On October 12, 2012, the participating banks renewed their first extension option, extending the initial maturity by an additional year.

Note 25 to the Consolidated financial statements describes in detail the Group's indebtedness, in particular by instrument type and currency.

Net indebtedness by currency

	2011	2012
EUR (euro)	22%	35%
USD (US dollar)	30%	27%
JPY (Japanese yen)	23%	16%
CNY (Chinese renminbi)	12%	12%
Other	13%	10%
TOTAL	**100%**	**100%**

Investments are essentially funded in the currency in which the cash flows are generated, thus creating a natural foreign exchange hedge. Air Liquide's debt is thus mainly in euro, US dollar, Japanese yen and Chinese renminbi, which reflects the significant weight of these currencies in the Group's investments and cash flow.

The share of the Group net indebtedness denominated in euros increased because of the two significant Home Healthcare acquisitions in Europe.

For additional information, refer to Note 25 to the Consolidated financial statements.

INNOVATIVE FINANCING

In 2011, Air Liquide was the first French corporate to issue renminbi-denominated bonds for a record total amount of 2.6 billion renminbis (or 316.3 million euros equivalent) with 5 and 7-year maturities.

In 2012, Air Liquide continued to innovate in the bond markets, and became the first corporate to issue a Socially Responsible Investment-labeled bond, for a total amount of 500 million euros and a coupon of 2.125% with a 9-year maturity. This bond was used to refinance the Home Healthcare acquisitions of LVL Médical and Gasmedi. The attribution of a rating of the Group's Home Healthcare segment from the extra-financial rating agency Vigeo provided qualification as a Socially Responsible Investment (SRI). More than 60% of this bond was placed with investors holding SRI mandates.

CENTRALIZATION OF FUNDING AND EXCESS CASH

To benefit from economies of scale and facilitate capital markets funding (bonds and commercial paper), the Group uses a dedicated subsidiary, Air Liquide Finance. This subsidiary centralizes the Group's funding activities, particularly in Europe, North America, Japan and China. It also hedges foreign exchange and interest rate risk for the Group's subsidiaries in those countries where it is permissible under law.

As of December 31, 2012, Air Liquide Finance had granted, directly or indirectly, the equivalent of 6.3 billion euros in loans and received 3.3 billion euros in cash surpluses as deposits. These transactions were denominated in 19 currencies (primarily the euro, US dollar, Japanese yen, Chinese renminbi, British pound sterling, Swiss franc, Singapore dollar and Brazilian real) and extended to approximately 200 subsidiaries.

The matching positions per currency within Air Liquide Finance, resulting from the currency hedging of intra-group loans and borrowings, ensure that these intra-group funding operations do not generate foreign exchange risk for the Group.

Furthermore, in certain specific cases (*e.g.:* regulatory constraints, high country risk, partnerships), the Group limits its risk by setting up independent funding for these subsidiaries in the local banking market, and by using credit-risk insurance.

DEBT MATURITY AND SCHEDULE

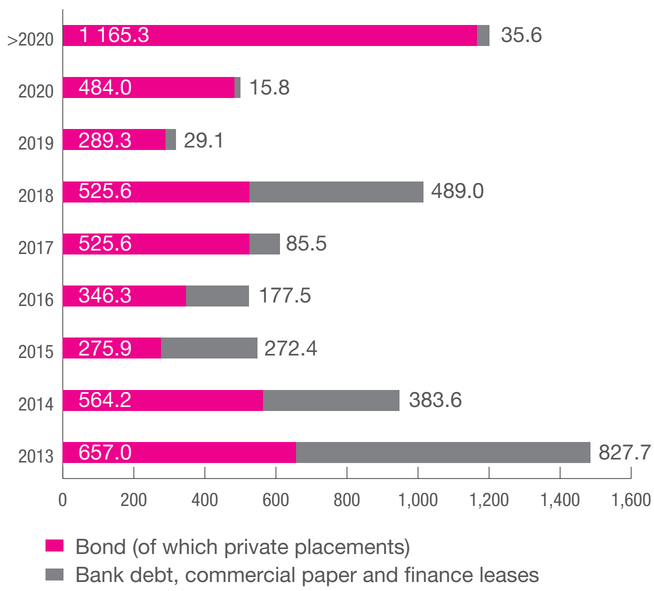
To minimize the refinancing risk related to debt repayment schedules, the Group diversifies funding sources and spreads maturities over several years. This refinancing risk is also reduced by the regularity of the cash flow generated from the Group operations.

The 2012 bond issues (including the US private placement) have helped to continue to extend the average maturity of the Group's debt, which is now 5.1 years (compared to 4.6 years at the end of 2011 and 4.4 years at the end of 2010).

The following chart represents the debt maturity schedule. The single largest annual maturity represents approximately 20% of gross debt.

Debt maturity schedule

(in millions of euros)



Commercial paper is reclassified under the maturities of the credit facilities serving as guarantees.

A detailed debt maturity schedule is presented in Note 25 to the Consolidated financial statements.

CHANGE IN NET INDEBTEDNESS

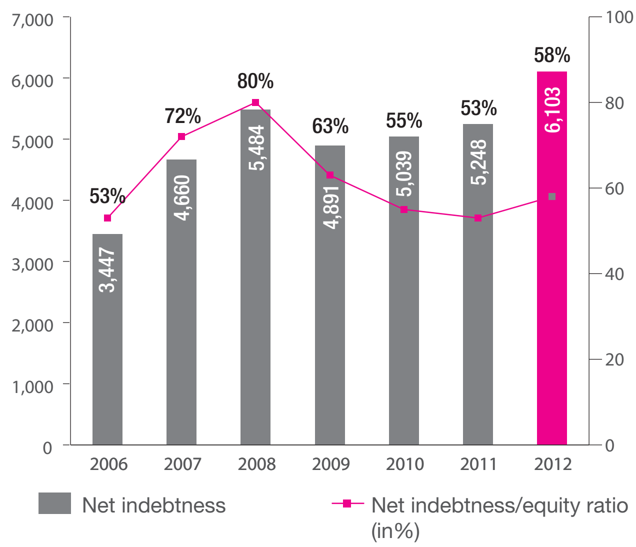
Net indebtedness stood at 6,103 million euros as of December 31, 2012, compared to 5,248 million euros as of December 31, 2011, an increase of 855 million euros.

This increase primarily reflects the financing of acquisitions, particularly in France and Spain, partially offset by the positive impact of foreign currency fluctuations. The Group's 2012 capital expenditure and the dividends paid to shareholders were funded from the cash flows generated by the Group's commercial activities.

The Statement of changes in net debt is presented on page 181.

Net indebtedness as of December 31

(in millions of euros and percentage)



The net indebtedness to equity ratio stood at 58% at the end of 2012 (compared to 53% at the end of 2011). The higher level is the result of a significant increase in 2012 industrial investments and acquisitions. The equivalent ratio calculated using the US method of net indebtedness/(net indebtedness + shareholder's equity), reached 37% at the end of 2012, compared to 35% at the end of 2011. The financial expenses coverage ratio (operating income recurring + share of profit of associates)/net finance costs stood at 10.3 in 2012 compared to 10.5 in 2011.

The average cost of net indebtedness stood at 4.6% in 2012, a slight decrease compared to 2011 (4.8%). Cost of net indebtedness is calculated by dividing net finance costs for the fiscal year (274.1 million euros in 2012, excluding capitalized interest) by the year's average outstanding net indebtedness.

The average cost of gross indebtedness also declined in 2012.

The reduction in the average cost of net indebtedness arises primarily from lower interest rates on the portion of the variable debt and significantly lower fixed rates on the new bond issues compared to those that matured in 2012.

The breakdown of indebtedness is presented in Note 25 to the Consolidated financial statements.

BANK GUARANTEES

In connection with its Engineering & Construction activity, the subsidiaries of the Group sometimes grant bank guarantees to customers, during tendering period (bid bond), and after contract award, during contract execution until the end of the warranty period (advance payment bond, retention bond, performance bond, warranty bond).

The most common bank guarantees extended to clients to secure the contractual performance are advance payment guarantees and performance guarantees.

The projects for which these guarantees are granted are regularly reviewed by Management and, accordingly, when guarantee calls become probable, the necessary provisions are recorded in the Consolidated financial statements.

The breakdown of indebtedness is presented in Note 25 to the Consolidated financial statements.

CREDIT RATINGS

The Air Liquide long-term credit rating from Standard & Poor's has remained unchanged at "A" since 2007, with a positive outlook issued on May 8, 2012.

The short-term credit ratings of "A-1" from Standard & Poor's and "P-1" from Moody's have remained unchanged for 10 years.

The main indicators analyzed by the rating agencies are net debt to equity and the ratio of cash flow from operations before change in working capital to net debt, adjusted primarily for pension liabilities.

> INNOVATION

Innovation is a strategic driver for the Group. Innovating allows Air Liquide to open up new markets, to develop its core business by creating new solutions for its customers and to fully play its role towards society.

The innovation cycle

The Air Liquide technological innovation strategy aims at addressing the complete innovation cycle from idea generation to full market maturity.

- The generation of a new idea is a continuous process led by Research & Development (R&D) teams in close connection with all the stakeholders of the innovation ecosystem: Air Liquide entities as well as external partners such as academics, start-ups, SMEs, industry leaders and customers. New idea generation and evaluation is supported by the analysis of societal trends over the long term.
- The next step – transformation of the idea into a new solution – means gathering all the appropriate competences (marketing, technical, operational) for an efficient development execution.
- In case of disruptive technologies with long-term perspective involving external collaborations, a demonstration stage is critical to have new industrial solutions emerging on the market. Two current application cases notably include technologies for hydrogen energy and carbon capture.
- Maximizing the value obtained from our innovation requires high reactivity and short time-to-market. Air Liquide develops competitive solutions based on cost-efficient industrialization and successful market introduction.
- The renovation stage in the innovation cycle relies on the capacity to revamp existing offers based on customer segmentation and extended offers.

Air Liquide manages a broad portfolio of innovation programs that are currently at different stages of this cycle to secure mid- and long-term growth.

An international network

Innovation programs rely on several entities worldwide within the Group that focus on:

- Technology: 8 Research & Development centers in Europe, the United States, Japan; 7 sites for Technologies of the Future and Advanced Technologies; 7 technical development centers for Engineering & Construction;
- Marketing: 9 Altec technical centers within World Business Lines and application expert networks; and
- Operations (countries).

The number of patents registered illustrates the Group's innovation capacity and team dynamism. In 2012, 316 patents for new inventions were filed. Air Liquide holds a portfolio of 3,215 inventions protected by 10,910 patents.

The Group maintained its innovation expenditure -257 million euros in 2012, or 1.68% of its revenue.

The talent and skills of Group employees and experts are at the heart of innovation. The recognition of technical expertise is a key element of talent development. In 2003, Air Liquide launched the Technical Career Ladder (TCL), a promotion and recognition program for the technical field and for the expertise of Group employees. Since the TCL creation, 2,000 experts have been appointed, thus playing a key role for sharing expertise, knowledge and technical excellence. In 2012, 100 new international experts, including two Fellows, were named within technological and operating Group entities, based in very different geographies (Europe, Asia-Pacific, North and South America).

Some initiatives launched in 2012

Air Liquide explores new territories by developing technologies to meet societal trends and deliver growth to the energy, environment, high-tech and health fields.

PAVING THE WAY FOR SOLAR ENERGY

Air Liquide focuses its innovation programs on developing clean energies and contributes to the photovoltaic industry expansion, a sector of which the Group is the leading supplier of industrial gases. In 2012, Air Liquide inaugurated an R&D laboratory for the solar industry. The Group is the first player in this market segment to roll out a pilot manufacturing line for solar cells using crystalline silicon technology. Today, this technology accounts for 88% of total production worldwide.

This crystalline solar cell manufacturing line will be used to fully test and evaluate new molecules and processes tailored to the needs of each client. The research being undertaken seeks to improve the performance of solar cells while lowering the production cost per watt, with the aim of making solar energy more competitive.

A pool of scientists, all experts in photovoltaic technologies, will supervise the research carried out at the Air Liquide Group R&D center located on Plateau de Saclay, West of Paris, (France), in order to develop a gas offer dedicated to photovoltaic.

PRESERVING OUR ATMOSPHERE

Growth in global energy demand and greater awareness of environmental issues have gradually induced major changes among the energy industry. Air Liquide supports these changes by providing new solutions, notably for alternative and renewable energies. **Hydrogen** has become one of the most promising alternatives in this field.

Present across the entire hydrogen chain, Air Liquide innovates daily, at each step (production, distribution, filling stations, applications and fuel cell), to develop new markets and takes part in several research programs. Fuel cell components and hydrogen quality were streamlined to improve the system's performance. In terms of hydrogen safety, tools were designed to help the general public better understand the behavior of this gas.

Air Liquide also innovates for the hydrogen logistics chain by developing composite cylinders that can resist pressure of up to 700 bar, in partnership with Composites d'Aquitaine (as part of the H2E program supported by OSEO, the French Agency for Innovation Support) and the associated filling centers.

The Group developed distribution stations to fill a vehicle tank with gaseous hydrogen in less than five minutes at a pressure of up to 700 bar. Over 60 Air Liquide filling stations are currently operated worldwide, notably in the United States and Japan.

In September 2012, the Group inaugurated its first hydrogen filling station accessible to the general public in Düsseldorf, Germany. Over the next three years, Air Liquide will build 10 new stations to form a supply network of at least 50 public filling stations in Germany. The Group also installed two other stations in Oslo, Norway, and Brugg, Switzerland.

The transportation industry is constantly moving towards more efficient and sustainable solutions. Mechanical refrigerated trucks and trailers provide most of the **world chilled and frozen food** transportation. Mechanical cooling systems are now exposed to increased competition, rising fuel costs and a stronger environmental impact compared to other technologies.

As a consequence, refrigerated transportation is the most appropriate industry to implement technological changes and to provide cleaner, more efficient and profitable solutions. To meet this challenge, Air Liquide leveraged its strong expertise to launch in 2012 an alternative to existing technologies called Blueeze™, a comprehensive cryogenic solution based on indirect cooling with liquid nitrogen. It includes on-board cooling equipment, a supply station and services. Trucks equipped with this technology were deployed at customer sites in Europe and the United States, thus validating this solution and confirming its benefits.

LEADING PROGRESS

In the field of low temperatures, Air Liquide has developed a unique expertise and recognized know-how in the design, manufacture and installation of high-capacity gas liquefaction and refrigeration systems. An example is the LHC (Large Hadron Collider) of the CERN (European organization for nuclear research) in Switzerland.

The research carried out on the topic of fusion, as part of the ITER project and its related project in Japan, aims to develop knowledge on this new source of energy to meet increasing energy demand. For these two major projects, Air Liquide will provide extreme cryogenic systems, including the biggest centralized refrigeration system built to date.

This cryogenic equipment is crucial for maintaining the extremely cold temperatures of the 10,000 tons of superconducting magnets used on the Tokamak (magnetic confinement chamber). This sophisticated scientific device confines the plasma that makes it possible to achieve the conditions necessary for controlled fusion. This closed circuit refrigeration system is based on the properties of liquefied helium, whose temperature is close to the lowest possible temperature called "absolute zero", *i.e.* 0 K or -273°C. Between the end of 2015 and the beginning of 2017, Air Liquide will install three refrigerators for a global cooling capacity of 75 kW at 4.5 K, or -269 °C.

PROTECTING VULNERABLE LIVES

Air Liquide designs and evaluates new technologies dedicated to the home healthcare industry. The Group is creating support programs for patients, in cooperation with medical experts, to improve patience adherence to their treatment as well as their quality of life. The Group also develops associated equipment and solutions.

Considering the rise in expenditure linked to sleep apnea (+11% between 2010 and 2011), French health authorities decided to modify the overall treatment of this pathology by improving patient compliance to the treatment.

Air Liquide developed Nowapi™, a telemonitoring solution for the transfer of patients' compliance data. This solution has the enormous advantage of being compatible with all available devices on the market today. Besides, Nowapi™ is much more cost effective than other providers' solutions and is available for deployment in 2013 by our French subsidiaries.

> STRATEGY AND OUTLOOK

Strategy

For many years, Air Liquide's development strategy has been founded on creating long-term value. The Group is committed to delivering sustainable growth in results and maintaining its strong pay-out policy year after year.

Compound Annual Growth Rate (CAGR) over 30 years

- Revenue: +6.7%
- Cash flow from operating activities before changes in WCR: +8.0%
- Net profit: +9.4%
- Net profit per share: +8.2%
- Dividend per share: +10.1% [(a)]

This long-term performance is based on continuous growth of the industrial gas market worldwide, a solid business model and a managerial culture founded on consistent performance.

Following five years of an unstable economy marked by a succession of crises, the sources of growth have evolved. The Group's historical base is growing more slowly and the organic growth is mainly localized in developing economies. However, the Group's growth drivers remain solid throughout the world.

SOLID GROWTH DRIVERS

The industrial gas industry has enjoyed steady growth over the last 100 years due to the ever increasing needs of new and growing economies, the emergence of new applications supported by innovation and technological research, and increased customer outsourcing of gas production. Historically, the demand for industrial gas has risen faster than industrial production. Despite economic turbulence, this trend should continue thanks to five growth drivers: developing economies, energy, the environment, healthcare, and high tech.

- **Opportunities offered by developing economies:** These countries are investing heavily in the upgrade and development of their industrial infrastructures. This is driving significant demand for industrial gases, particularly oxygen, whose production is increasingly outsourced. More generally, industrial development in these countries has been accompanied by increased demand for gas in a variety of applications.

  Air Liquide Gas & Services revenue growth in developing economies was +11% in 2012, while growth was only slight in advanced economies. The percentage of Gas & Services revenue realized in developing economies continues to increase, reaching 23% in 2012, compared to 21% in 2011 and 15% in 2008. In over five years, investment opportunities have multiplied in developing economies. Nearly half of the industrial investment decisions of the past five years have involved developing economies, and these regions now account for nearly a quarter of revenue.

- **Energy and environmental challenges:** Industrial gases play two roles in this area: they help customers improve their energy efficiency or are used directly in the production of certain alternative energies. In the refining industry, there is a growing need for hydrogen to break up heavier hydrocarbons and reduce sulfur content.
- Hydrogen fuel cell technology is gaining momentum as a clean energy carrier, as demonstrated by the development of captive fleets (forklifts and buses). Converting one percent of the world's vehicles to hydrogen would represent a worldwide market of 15 billion euros.
- The coal or biomass gasification processes consume a substantial amount of oxygen.
- The development of renewable energies, such as photovoltaic or wind, relies partly on industrial gas solutions: electronics specialty gases for the construction of photovoltaic cells and hydrogen for the storage of intermittent energies.
- The majority of solutions to reduce CO_2 in the atmosphere require the supply of industrial gases and Air Liquide has the necessary proprietary technologies to offer innovative solutions to its clients.

(a) *Adjusted for previous two-for-one share splits and free share attributions.*

- Lastly, the use of nitrogen or carbon dioxide to extract shale gas and oil minimizes the environmental impact and specifically the consumption of water and chemical solvents.

  The challenges of a growing energy demand, coupled with the determination to better protect the environment, will thus result in increased demand for oxygen, hydrogen, and specialty gases. Industrial projects in the energy sector represent approximately 50% of the new entries in the opportunities portfolio at the end of 2012.

- Constant development is a characteristic of the **Healthcare** market, primarily led by an aging population, and the increase in chronic diseases such as obstructive lung disease, sleep apnea, diabetes, and Parkinson's, primarily due to changes in lifestyle. In addition, the budget restraints of the public health systems in the advanced economies are encouraging the development of homecare solutions that reduce the cost to the community, while allowing chronic patients to remain at home, with increasingly effective medical monitoring thanks to on-line information systems. The emergence of health insurance in developing economies can be a growth driver over the long-term.

  Air Liquide is strategically positioned in the Home Healthcare sector. In Europe, it is leading the way with an expanding range of therapies. With respect to medical gases, our research teams are innovating *via* the development of new applications to ventilate, oxygenate or anesthetize patients, manage pain and treat acute respiratory distress syndromes.

  In 2012, the Group made two significant acquisitions in the Home Healthcare sector in France and in Spain to considerably bolster its position in these two markets and confirm its position as European leader. In an environment where pricing pressure is a little more significant than in the past, particularly related to state budget deficits, the number of acquisition opportunities has risen.

- The significant development in the **high technology** market, driven by numerous consumer product innovations and, more generally, by the increasing complexity of our industries. Hence, demand for high purity industrial gases has risen substantially to meet the needs of semiconductor, flat panel or solar panel manufacturers, particularly in Asia. In addition, the Group's expertise in gases, and more specifically in very low temperatures, allows it to contribute to major technological projects seeking to enhance knowledge in many fields such as fundamental physics, space or energy (nuclear fusion, superconductivity).

Air Liquide is extremely well placed to benefit from these growth opportunities. In addition to its position as the world leader in cryogenics, the Group currently has a wide range of proprietary hydrogen technologies, heightened expertise in engineering, a leading position in the electronics sector and a highly promising R&D portfolio, with 60% of projects focused on preserving life and the environment.

A SOLID BUSINESS MODEL

Air Liquide confirmed the **resilience of its business model** in 2009. In an economic crisis of exceptional scale, Air Liquide, the global leader in its sector, reported a slight decline in sales and stable net profit, thanks to the variety of applications, the diversity of its geographical coverage, solid contracts and record efficiency gains. In 2012, in a context of slower growth in the advanced economies, Air Liquide again relied on the solidity of its model to preserve its performance.

It is the Large Industries business line, which benefits from long-term contracts with take-or-pay clauses, and the Healthcare business line, which is enjoying steady growth independently of the economic cycle which provides this security. They now account for over half of Gas & Services revenue. In addition, through its four World Business Lines, the Group serves a wide range of customers and industries, with an extensive regional diversity and a growing market share in developing economies. Each of these characteristics represents an asset that supports the Group's long-term growth.

The Group's debt is tightly controlled. The balance sheet strength facilitates the financing of its development projects, site takeovers and acquisitions in all business lines.

GROUP DEVELOPMENT STRATEGY

The Group launched its new ALMA program at the end of December 2010. It is based on the ambition to lead the industry through Performance and Responsibility over the long-term, including a reinforced commitment to responsibility.

Since 2010, the Group's growth has been based on its four strategic drivers:

- establish leading positions in developing economies and technologies and new markets;
- strengthen its operational competitiveness through efficiency and investment optimization;
- expand its offering through constant product and process innovation;
- develop talents and expertise in order to support growth,

and its four enablers:

- improve customer mind-set;
- increase the Group's attractiveness;
- behave responsibly towards all stakeholders;
- cultivate an entrepreneurial culture.

Performance

Based on growth estimates for the industrial gas market of between +7% and +8% by 2015, the Group set new and ambitious **performance objectives** at the end of 2010:

- average annual revenue growth of between +8% and +10%, in a normalized environment, requiring capital expenditure of 12 billion euros for the 2011-2015 period;
- continued delivery of operational efficiencies of over 200 million euros annually;
- improved ROCE of between 12% and 13% by 2015.

In 2012, with market growth that was lower than the initial estimates, the Group's published revenue growth stood at +6.0%. Gas & Services posted growth of +6.5% due to the highly positive contribution of the start-ups and the ramp-up of new units and a more substantial acquisition programme than was the case in previous years, while internal growth, excluding start-ups, declined in Europe and Japan and overall in the Electronics business line.

Over the 2011-2012 period, gross capital expenditure has amounted to 4.8 billion euros, perfectly in line with the 12 billion euro target over five years.

For the second consecutive year, efficiency largely exceeded the annual objective reaching 284 million euros in 2012. This brings the cumulated efficiency to 554 million euros for the period 2011-2012.

The ROCE, adjusted for the calendar impact of the acquisitions, stood at 11.9%, which is very close to the objective in a highly contrasted economic environment.

Responsibility

Air Liquide places **responsibility at the heart of its ambition.**

The responsibility approach seeks to serve the interests of all stakeholders: shareholders, employees, customers, patients and communities where the Group is present and active. It is founded on three fields of action: improve the environmental footprint, enhance business practices and governance and innovate relentlessly.

Over the last two years, significant work has been done to establish relevant performance indicators and objectives that are both demanding and motivating for each stakeholder and area of action. This is a long-term endeavor comprising various internal and then external steps. The progress made for each commitment is indicated in the Sustainable Development Report – page 57.

Outlook

In the context of the global economic slowdown in 2012, the Group's performance is solid. Its extensive geographic presence, the initiatives in new markets and targeted acquisitions allow it to show further growth in activity and operating results.

In 2012, the total amount of investment decisions rose to 2.9 billion euros, the highest level since 2007. The increase in the Engineering & Construction order intake, the high level of our 12-month portfolio of investment opportunities and the scheduled commissioning of 50 plants in the next two years confirm customer confidence in the medium-term.

The Group continues to strengthen its competitiveness and innovation to ensure profitable growth over the long-term, based upon a sustained investment program and upon efficiencies for which the 2011-2015 objective is increased +30% to 1.3 billion euros.

In the short term, the Group is actively working on controlling costs, streamlining its internal processes and adapting its organization. Accordingly, during 2013, an organization founded on a base in Paris and three principal hubs in Houston, Frankfurt and Shanghai will gradually take shape, in order to optimize the Group's resources and be more agile in responding to market trends.

Barring a degradation of the environment, Air Liquide is confident in its ability to deliver another year of net profit growth in 2013.

2

2012 Corporate Social Responsibility and Sustainable Development Report

> INTRODUCTION

The search for economic performance and the attention paid to society's major issues, notably, the preservation of the environment, are closely linked. Companies are no longer solely evaluated on their financial performance, but also on their respect for their commitments and their achievements in the area of responsibility. An integral part of Air Liquide's strategy, responsibility creates new opportunities, stimulates innovation and constitutes a lever of performance while providing solutions that respond to society's major issues. In this way, the Group creates a **virtuous dynamic by connecting Performance and Responsibility.**

At the end of 2010, Air Liquide asserted its ambition "of being the leader of its industry through **Performance and Responsibility** over the long term". The Group's conviction is that it is by developing responsibility that it will best ensure its **timelessness** over the long term. The **Corporate Social Responsibility** – CSR – approach designates how the Group and its employees take **the interest of all the stakeholders** into account to orient its action and achieve its results. It is the framework that makes sure that the responsibility commitments are clearly anchored in the heart of the Company's strategies and practice. This approach includes the **Sustainable Development** policy rolled out since 2003 and that is at the heart of the **strategy** developed in the **ALMA** corporate program.

Air Liquide has defined its **commitments** toward the **four stakeholders:**

- shareholders;
- customers and patients;
- employees;
- communities.

It also relies on **three fields of action:**

- reducing the environmental impact;
- strengthening corporate rules of conduct and governance;
- innovating relentlessly.

Each of these **commitments** is supervised by a member of the Executive Committee and corresponds to a part of this report. A certain number of the **responsibility objectives for 2015** and their corresponding **key indicators** are presented in it. Other objectives and key indicators will be gradually communicated.

The Corporate Social Responsibility and Sustainable Development Report, an integral part of the Air Liquide Responsibility approach, relies on **reporting** on over 170 indicators, presented in the following pages, to measure the Group's sustainable development performance. Most of these indicators are collected worldwide.

Just like financial reporting, extra-financial reporting has been **reviewed each year since 2003 by the Statutory Auditors.** They conduct a mission of analysis and verification on a selection of indicators not only on the corporate level but on industrial sites and Human Resources Departments of the subsidiaries. This year, 18 industrial sites or Human Resources Departments of subsidiaries were examined. Since 2003, nearly 80 sites and departments have been verified.

Air Liquide was one of the first CAC 40 companies to have this review done by the Statutory Auditors and to include the Corporate Social Responsibility and Sustainable Development Report **in the Reference Document.** In 2012, this review became a legal obligation in France. At the end of the Corporate Social Responsibility and Sustainable Report, you will find the Statutory Auditors Report in the framework of this new obligation.

> SHAREHOLDERS

Commitment

Deliver long-term performance thanks to a regular increase in investment value, attest respect and consideration in the relationship with shareholders.

Key Responsibility Indicator

Total Shareholder Return (TSR) [a]

On December 31, 2012, the Total Shareholder Return (TSR) was 11.4% per year over 20 years for a registered shareholder.

The Group has instituted a relationship of confidence with its shareholders by associating them with its continuous growth and successful business model through a strong and steady distribution policy maintained over time.

Being an Air Liquide shareholder means backing, over the long term, a responsible actor who demonstrates his or her commitment to human, social and societal issues.

The Corporate Social Responsibility and Sustainable Development approach *vis-à-vis* shareholders is based on the following four principles:

- consideration and respect for all shareholders;
- remuneration and increased value of their investments in the long term;
- listening to and informing shareholders;
- specific services for registered shareholders.

Consideration and respect for all shareholders

Financial performance is not enough to sum up the relationship between Air Liquide and its shareholders. Air Liquide maintains a dialogue of proximity with its shareholders to best meet their needs because they are genuine partners over the long run who have supported the Group's growth since its creation and especially since its listing on the Paris Stock Market in 2013 whose 100th anniversary will be celebrated in 2013.

To make sure that these expectations and their evolution are identified and understood, Air Liquide endeavors to get to know its shareholders in their diversity. To this end, it notably proposes that they place their shares in registered form.

STABLE AND BALANCED SHARE OWNERSHIP

It is important for Air Liquide to preserve the balance between individual shareholders and institutional investors. The Group's strategy, focused on the long term, and the soundness of its business model, offer shareholders a sustainable and regular return on their investment.

The 390,000 individual shareholders hold 37% of the capital. French and non-French institutional investors represent respectively 19% and 44% of the capital.

(a) *Total Shareholder Return (TSR) is an annualized return rate for a shareholder who buys a share at the beginning of a period and sells it at the end of the period. This calculation takes into account the change in the share price, dividends paid, including loyalty bonuses, considering that they are also reinvested in shares, as well as free share attributions.*

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Individual shareholders	40%	39%	38%	38%	37%	38%	38%	36%	37%	37%
French institutional investors	23%	24%	25%	24%	30%	26%	26%	23%	21%	19%
Non-French institutional investors	35%	36%	36%	37%	32%	35%	36%	40%	42%	44%
Treasury shares	2%	1%	1%	1%	1%	1%	>0%	<1%	>0%	>0%
Registered capital	28%	30%	31%	32%	37% (a)	33%	32%	34%	35%	36%
Capital eligible for the loyalty bonus	24%	24%	25%	26%	26%	26%	25%	25%	28%	29%

(a) In 2007, the share of capital owned by institutional investors holding direct registered shares increased notably due to one important institutional investor that sold its shares in 2008.

THE SHAREHOLDERS' MEETING, A PRIVILEGED MOMENT OF EXCHANGE

Each year, all the Air Liquide shareholders **who hold at least one share** are invited to the Shareholders' Meeting. They are helped in their voting by all the relevant documents over a month before the Meeting, sent by mail and available on the Company's Internet site: practical information on the voting procedure and clear explanations of the resolutions and their objectives. Didactic animations detailing the voting procedure are also available online. Air Liquide endeavors to make all its supports in English available to its non-French shareholders in similar time frames. In certain countries, systems have been set up with intermediary banks to facilitate and ensure a fluid transmission of the votes of the shareholders concerned.

Air Liquide centralizes its Shareholders' Meeting by directly collecting its shareholders' votes. Starting in 2013, the Company will propose **voting *via* the Internet** through the Votaccess platform.

The day of the Meeting, the bureau, composed of the Chairman of the Board of Directors, two polling officials and a secretary, ensure that the Meeting is held in compliance with the law. The officials are representatives of the two investors that hold the largest number of shares who have agreed to fulfill this function. They are asked about a month before the event and a *vade mecum* is given to them two weeks before the Meeting. This document describes their tasks as well as the welcome and voting procedures set up by the Company.

The Shareholder Services advisors as well as the Investors Relations team are also mobilized to answer by telephone and at the Shareholders Lounge at corporate headquarters in Paris all the individual and institutional shareholders' questions on voting and participation in the Shareholders' Meeting.

In 2012, over 5,000 people were welcomed at this Shareholders' Meeting.

The dates for the next Air Liquide Combined Shareholders' Meeting are:

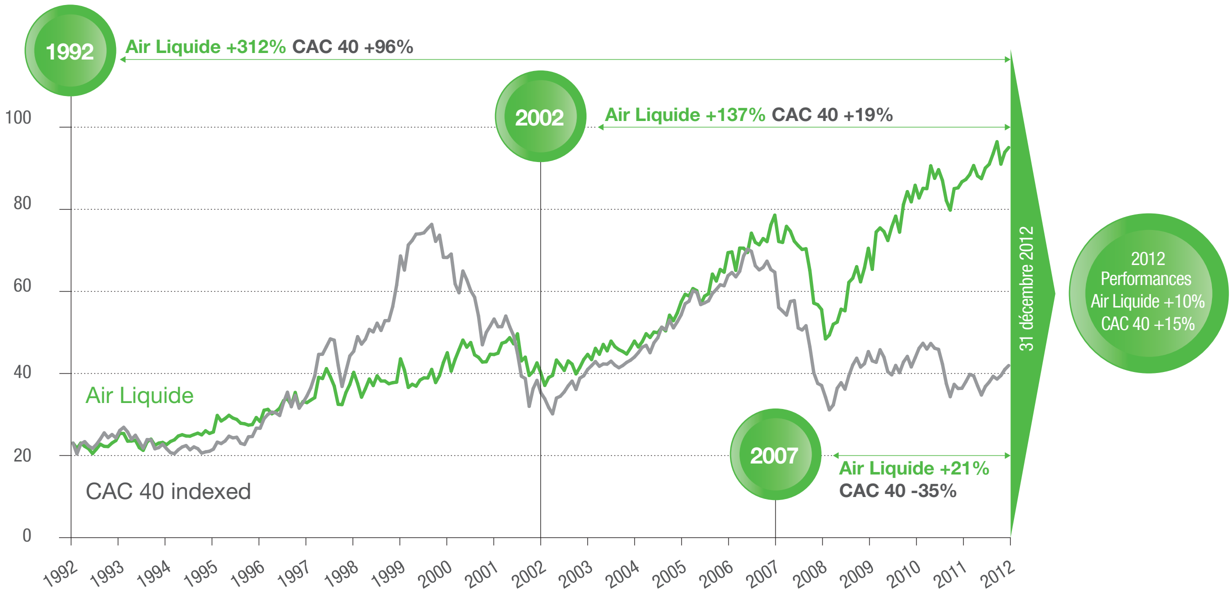
- Tuesday, May 7, 2013;
- Wednesday, May 7, 2014;
- Wednesday, May 6, 2015.

Remuneration and increased value of the shareholders' investments in the long term

AIR LIQUIDE, A CONTINUOUS GROWTH

The share's value is based on the rise in its stock market price over the long term and the distribution of dividends. Since its creation in 1902, Air Liquide has always shared the fruits of its growth and rewards its shareholders' confidence through a remuneration and loyalty policy that is based on regular dividend distribution, free share attribution and a loyalty bonus.

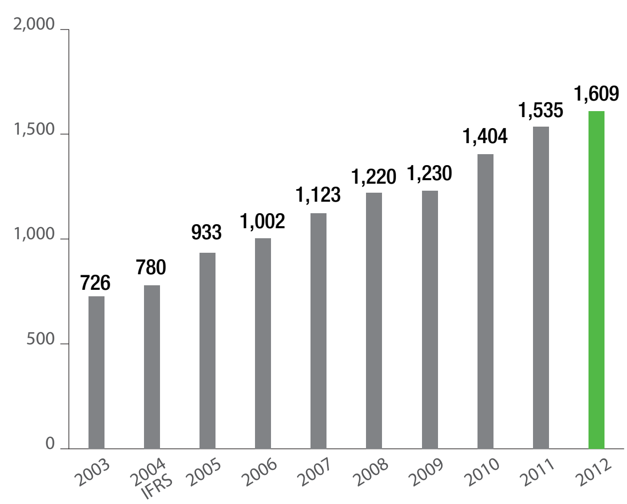
Evolution in the stock market price *(in euros)*



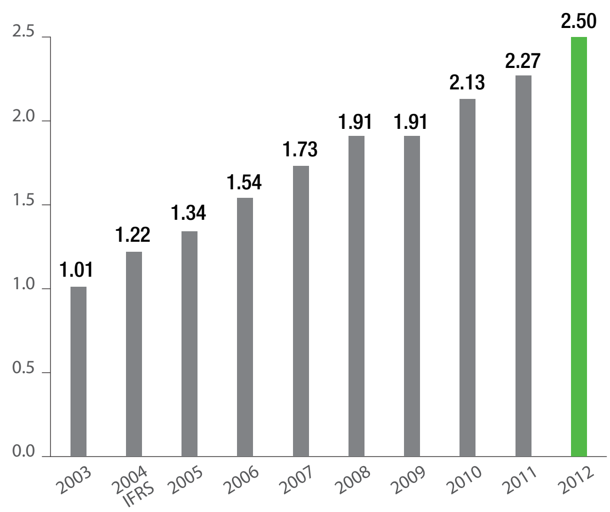
Since it was first listed on the French Stock Market in 1913, Air Liquide has always shown a profit. The Group creates value by developing its activities and optimizing its performances over the long run. Over the last 20 years, Air Liquide's revenue has shown an average annual growth of +6.2%. This growth has been profitable: the Group's earnings have followed a similar trend, with an average annual growth of the net profit per share of +7.9%. Over the same period, the dividend has had an average annual growth of +9.6%.

During the last 10 years, nearly 50% of earnings have been distributed to shareholders.

Net profit – Group share *(in millions of euros)*



Adjusted dividend per share *(in euros/share)*



RETURN ON AN INVESTMENT IN AIR LIQUIDE SHARES FOR THE SHAREHOLDER

To further increase the investment value of Air Liquide shares, subscribing to registered shares permits shareholders who choose this option to benefit from a privileged relationship with Air Liquide and a loyalty bonus: +10% on the amount of the dividends received and +10% on the number of free shares granted. This loyalty bonus is granted to shareholders who have held direct registered or intermediary registered shares for two calendar years and who still hold them on the date of dividend payment and the attribution of free shares.

Total Shareholder Return (TSR) is an annualized rate of return for shareholders who purchased a share at the beginning of the period and sold it at the end of the period, including the contribution from both the share price performance and dividends paid (including loyalty bonus), assuming that the dividend is immediately reinvested in shares, as well as free share attributions.

Average annual growth of the portfolio as of December 31, 2012

FOR A CAPITAL INVESTED	Air Liquide – Registered shareholder (a)	Air Liquide – Bearer shareholder (a)	CAC 40 index – reinvested (b)
■ over 5 years (December 31, 2007)	+7.1%	+6.7%	-4.4%
■ over 10 years (December 31, 2002)	+13.9%	+13.4%	+5.4%
■ over 20 years (December 31, 1992)	+11.4%	+10.7%	+6.6%

(a) The TSR on shares for the registered shareholder is higher than the TSR on shares for the bearer shareholder because the registered shareholder benefits from loyalty bonuses.

(b) CAC 40 index with gross dividends reinvested.

During the last 10 years, the return rate for an Air Liquide shareholder has been on average +13.9% per year, with gross dividends reinvested in shares, attributions of free shares and loyalty bonuses to registered shareholders.

	2003	2004 IFRS	2005	2006	2007	2008	2009	2010	2011	2012
Net profit per share *(in euros)* (a)	2.33	2.52	3.03	3.22	3.62	3.99	3.99	4.53	4.92	5.17
Dividend per share *(in euros)* (a)	1.01	1.22	1.34	1.54	1.73	1.91	1.91	2.13	2.27	2.50 (b)

(a) Based on the average annual number of shares (excluding treasury shares) and adjusted to account for increases in capital performed via capitalization of reserves or additional paid-in capital, cash subscription and the two-for-one share split on June 13, 2007.

(b) Subject to the approval of the May 7, 2013 Shareholders' Meeting.

The Air Liquide value codes

Air Liquide shares are divided into four categories, called "value codes" (or ISIN codes), according to when they were recorded as registered shares. There are two permanent value codes (FR0000120073, which is also Air Liquide's stock market ISIN negotiation code, and FR0000053951, which corresponds to shares already benefiting from the loyalty bonus) and two intermediate value codes (FR0011147412 and FR0011336254, which identify the share that will benefit from the loyalty bonus, respectively in 2014 and 2015).

Listening to and informing shareholders

LISTENING AND PROXIMITY

Shareholder Services is specific to Air Liquide. Directly attached to Executive Management, this team manages the accounts of nearly 80,000 shareholders with direct registered shares and accompanies them in their steps by offering them, without any intermediaries, a broad range of personalized services. It is also dedicated to listening to and informing all the 390,000 individual shareholders who receive information all year long through different communication supports. In addition, many events and meetings that are highlights between Air Liquide and its shareholders are organized as for example the Shareholders' Meeting, regional meetings and fairs dedicated to share ownership in France and Europe.

The **Shareholders' Communication Committee,** composed of 12 Air Liquide shareholders, is regularly consulted to improve the quality of information and services provided to shareholders. Apart from plenary meetings with the Chairman and CEO, the Committee is involved through the year in working groups on subjects that are essential to the shareholders' concerns. A Committee member is part of the Air Liquide Foundation's Project Selection Committee.

The Chairman and CEO, after the Shareholders' Meeting, continues his exchanges with **shareholders in the regions** by traveling to several cities in France to present the results, the Group's prospects and answer their questions. Finally, to strengthen this dialogue, the Director of Shareholder Services regularly meets shareholders during meetings and fairs (about 10 events a year) held in France and Europe (Germany, Belgium, Denmark, Finland, Switzerland). In 2012, 8,000 shareholders were met.

The **Investors Relations** Department, attached to the Financial Department, specifically answers the questions of institutional investors and financial analysts of brokerage companies. The four annual announcements of revenue or profits are of course privileged moments of exchange, but throughout the year, this dedicated team meets investors, either at its offices at corporate headquarters in Paris, or during travel to the world's major stock markets. Air Liquide does not hesitate to organize road shows or take part in conferences to go before international investors and present them with the solidity of its business model, the dynamism of its growth levers and the soundness of its strategy. On average, the Investors Relations Department meets over 300 institutions each year. It also regularly organizes Investor Days, bringing together the international financial community and Air Liquide's management for targeted strategic discussions whose theme varies according to economic issues and current events.

Contacts

Shareholder Services:

Air Liquide – 75, quai d'Orsay 75007 Paris, France
N° Vert 0 800 166 179 FREE FROM A FRENCH LANDLINE (free number from a French landline), or +33 (0)1 57 05 02 26 from outside France

http://contact.shareholders.airliquide.com

Investors Relations:

Air Liquide – 75, quai d'Orsay 75007 Paris, France
+33 (0)1 40 62 51 50
http://contact.investors.airliquide.com

TRANSPARENT INFORMATION

Air Liquide provides for its individual and institutional shareholders through various communication supports, transparent information on the Group's activities, strategy, performances and perspectives.

Pedagogy is one of the major concerns that takes priority in the design of information supports like the Annual Report, the Shareholder's Guide and the Invitation to the Shareholders' Meeting. The latter document didactically presents the resolutions submitted to the shareholders' vote and is sent to all the shareholders who hold at least one share. Air Liquide also publishes, in the month after the event, a report of its Shareholders' Meeting, presenting in a detailed manner all the participations and discussions. These publications are available in French and English. The minutes of the Shareholders' Meeting are established during the two months following the Meeting.

Moreover, Shareholder Services has designed an educational and entertaining **learning module** to better understand the stock market. The first module, "The stock market today", available on the Company's Internet site in the Shareholders section, sheds light on the role and history of the stock market, its different players and Air Liquide's history in the Paris Stock Market. Shareholder Services also makes available a free **Air Liquide Shareholder application** for iPhone and Android to follow stock market prices, use simulators and to stay informed about the Group at every moment.

In addition, Air Liquide welcomes its shareholders in a dedicated venue, the **Shareholders Lounge,** at the Group's head office in Paris, so that they can obtain complete information on the Company's activities, the life of the share, and for those who hold direct registered shares, how to carry out operations on their accounts.

Since 2011, the Shareholders Lounge has also been proposing simple, didactic and interactive temporary exhibitions: an additional occasion for shareholders who wish to find out more about the Group's activities and initiatives and to strengthen the link of proximity. In 2012, Shareholder Services organized two online conferences, live from the Shareholders Lounge, about "How free shares are allocated" and "Registered shares made easy".

For information

More information on Air Liquide and its share ownership is available in the **Shareholder's Guide,** available online on the Internet site www.airliquide.com, Shareholders section.

Specific services for registered shareholders

Specifically organized to provide answers to shareholders with direct registered shares, the Shareholder Services, composed of 26 people, offers its expertise in share account management: how to open an account, how to place orders on the stock market, how to determine taxation of securities and how to transmit a portfolio. Throughout the year, Air Liquide advisors answer the shareholders' questions *via* the toll-free number mentioned previously (also accessible from outside France) or directly at the Shareholders Lounge.

Air Liquide directly manages the accounts of its shareholders with direct registered shares. They pay no handling fees, and broker fees are reduced to 0.18% excluding tax of the gross amount of the transaction. Air Liquide endeavors to regularly communicate to its shareholders on all the benefits of holding registered shares (privileged relationships with Air Liquide, loyalty bonus). Every year, an information campaign is organized for shareholders who have bearer shares: presentation of the registered share on all the communication supports aimed at shareholders and a booth dedicated to registered shares during the Actionaria fair held every year in November in Paris.

Direct registered shareholders have access to a personal secure space on the Internet so that they can consult their share portfolio, modify their personal information or consult documents useful for managing their account. They can also place buy and sell orders on the stock market online and view, in real time, the operations conducted on their account and the amounts received (payment of the dividend, sale of shares, etc.).

> CUSTOMERS AND PATIENTS

Commitment

Deliver added value to customers and patients through safe, reliable and cost-effective solutions; proactively dialogue with customers and patients.

2015 objective

Increase customer satisfaction and loyalty and patient satisfaction. By 2015, customer and patient interviews and the related action plans will cover entities representing 85% of the Group's sales.

Key Responsibility Indicator

Percentage of the Group's sales concerning the units where a customer or patient satisfaction survey has been conducted over the last two or three years, according to the business line concerned [(a)].

In 2012, the percentage of Group sales related to units where a customer or patient satisfaction survey has been conducted was 66%.

A responsible company: from listening to action

Air Liquide's relationship with industrial customers of very diverse sizes and sectors as well as with healthcare professionals, patients and associations in the Healthcare activities are at the heart of the concerns of the Group's teams and guide the Company's development. The quality of this relationship engages each unit and employee. It is based on the definition of precise commitments that its teams endeavor to respect in their daily activities, in a spirit of professionalism, with a sense of service and innovation.

Customer and patient satisfaction is a priority for Air Liquide. In a context of increased competition, a change in its customers and patients' expectations and a growing diversity of its customers and patients, reaching the growth objectives that the Group has set itself requires:

- creating loyalty and satisfaction in customers;
- understanding patient expectations;
- conquering new ones through the relevance and attractiveness of Air Liquide's offerings.

This strategy requires that the Group's employees focus more on customers and patients to better understand their priorities, current and future needs and their satisfaction level. In the framework of the ALMA strategic corporate program and its **initiative "Improving our customer approach",** a project called "Action surveys" has been launched. It presents three steps:

- Listen: to better understand the customers and patients' expectations, this takes the form of interviews conducted by specialized companies. After these interviews, the managers of the units concerned meet certain unsatisfied customers. In 2012, over 15,000 interviews were conducted and a large number of visits made in 26 units in China, the Benelux countries, the United States and France.
- Build: This listening phase helps identify improvement tracks and define related action plans. To mobilize the organization transversally, workshops to raise awareness of employees on the customer experience have been rolled out. These workshops can bring together employees in the Purchasing, Sales, Production and Human Resources Departments and have already been organized in subsidiaries in Tunisia, Spain, Portugal, India and France.
- Act: The action plans chosen are communicated to all the subsidiary's employees. Managers are responsible for implementing the action plans and measuring their progress. Certain action plans are shared with customers.

These surveys are gradually being extended to all the subsidiaries.

To include this approach in a continuous improvement process and measure progress in terms of satisfaction and loyalty, these surveys will be conducted every two or three years, depending on the business line concerned.

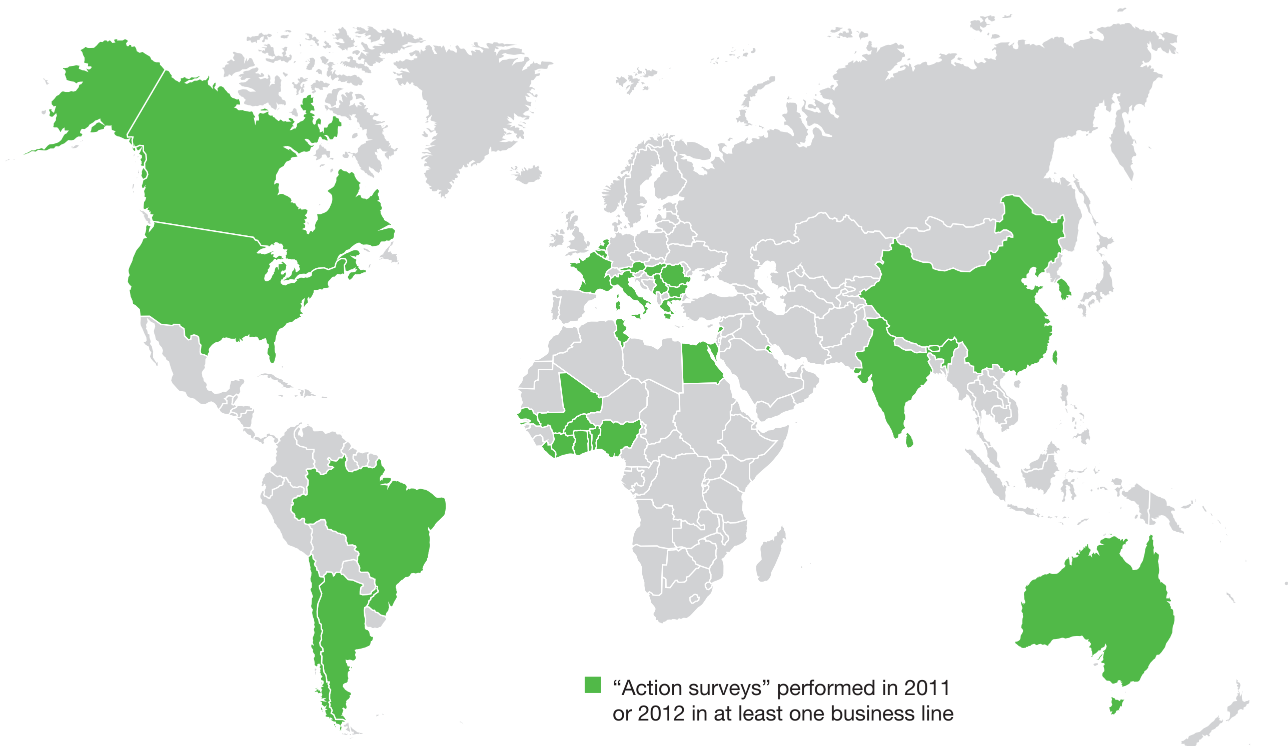
(a) Three years for the Large Industries business line, two for other business lines.

In 2012, the percentage of the Group's revenue concerning the units where customer satisfaction surveys and action plans were carried out was about 66%. This percentage, which is the Key Responsibility Indicator of this stakeholder, is now followed up annually. It takes into account the satisfaction surveys rolled out over the last two or three years.

Percentage of the Group's revenue concerning the units where customer satisfaction surveys were carried out

Year	2011	2012	2013	2014	2015 objective
Percentage of the Group's revenue concerning the units where customer satisfaction surveys were carried out	39%	66%			85%

"Action surveys" rollout since 2011



Air Liquide and its customers: proximity and expertise

Air Liquide serves a **great diversity of industrial customers, estimated at over a million** and in sectors ranging from the steel to the food industry as well as electronics, pharmaceuticals and craftsmen. Their expectations are extremely varied, constantly changing and their requirements are ever greater. In each market segment, Air Liquide has set an objective of accompanying its customers by acquiring the deepest understanding possible of their business. In this way the Group can **offer its customers innovative services and solutions.**

The Group's decentralized structure enables each unit, in each geographic area, to meet the specific expectations of local customers, instituting a **close relationship of confidence** with each of them. More than just a product, customers demand **flexibility, rapidity, service, availability and a real partnership over the long run.**

A CUSTOMER COMMITMENT

After the rollout of the first "Action surveys", the results were generally positive with most customers satisfied or very satisfied. Product and service quality, strict respect for safety rules, the teams' behavior in contact with the customers and their efficiency, notably in emergency situations, were particularly appreciated.

These surveys also brought out concerns and incidents encountered by the customers in their relations with the Group. Priority action plans are being created to respond to these dissatisfactions.

For example, after the “Action surveys” rolled out by Air Liquide in China, a business line decided to regionalize its organization to better meet a demand for proximity from a large customer segment. In addition, the Australian subsidiary defined action plans involving all its organization’s functions. To steer these plans and maintain team mobilization, it appointed a manager in charge of customer satisfaction.

A DIALOGUE WITH CUSTOMERS ON THE RESPONSIBILITY AND SUSTAINABLE DEVELOPMENT APPROACH

Air Liquide also answers its customers’ growing requests on its own responsibility and sustainable development. The Group can in this way contribute to its customers’ own responsibility and sustainable development approach. Over the last three years, about 50 customers queried the Group on this subject, notably through detailed questionnaires. The Group’s Sustainable Development Department contributed its support to local units to respond to this new type of request from its customers. The data on the carbon content of Air Liquide products in the principal countries presented in the Environment part of this Report specifically meets customer expectations on this issue.

Air Liquide and its patients

A GROUP ATTENTIVE TO HOSPITALS AND HOME HEALTHCARE PATIENTS’ NEEDS

The Group’s determination to improve its listening capacities for its stakeholders also concerns the Healthcare World Business Line. Air Liquide is particularly attentive to its patients’ needs to guarantee irreproachable service.

The first “Action surveys” adapted to this activity were rolled out in 2012. The subsidiaries that produce and distribute medical gases to hospitals conducted these surveys with the technical and purchasing departments of the customer hospitals as well as with doctors who use these gases.

In the Home Healthcare activity, patients benefiting from Air Liquide’s services as well as the doctors prescribing the treatments, but also the pharmacists distributing these products and the healthcare coverage authorities directly responded to these satisfaction surveys.

Italy was the pilot country for this initiative’s launch. Over 500 surveys were done at hospitals and other healthcare service providers by telephone or e-mail. For each hospital, five people representing the main services (purchasing, technicians, pharmacists, biologists and doctors) were queried. The results on satisfaction and loyalty were generally positive. Site visits as well as action plans were done for each customer indicating dissatisfaction points. A second survey campaign is planned for 2013 to measure this initiative’s benefits. As for Homecare, nearly 1,650 patients, prescribers, pharmacists and regional healthcare authorities were queried.

MEDICAL GAS PRODUCTION AND DISTRIBUTION FOR HOSPITALS

Air Liquide, a major player in medical gases for hospitals

Air Liquide is one of the world leaders in medical gas production and distribution and related services for hospitals. The Group supplies oxygen for operating rooms, intensive care units and patients’ rooms, as well as therapeutic gases for anesthesia, pulmonary arterial hypertension or pain relief. Air Liquide also offers a range of hygiene products used for disinfection and the fight against nosocomial illnesses. The Group currently supplies 7,500 hospitals and clinics worldwide.

A confirmed commitment for the safety of patients under anesthesia

Air Liquide places the safety of patients and healthcare professionals at the heart of its concerns. The **quality** and **safety of medical gases and devices** as well as related services shows Air Liquide’s commitment to the patient’s safety. In this framework, Air Liquide is one of the leading healthcare manufacturers to have signed the “Helsinki Declaration for the safety of patients under anesthesia” during the 2011 congress of the European Society of Anesthesiology in Amsterdam. This declaration plans to reduce complications follow anesthesia during major surgery by recalling good clinical practices, the anesthesiologist’s key role in treatment safety and the importance of cooperation between healthcare manufacturers and the medical community.

THE HUMAN AND SOCIAL DIMENSION OF AIR LIQUIDE'S HOME HEALTHCARE ACTIVITY

Attention to the person, proximity and human relations are particularly important with the growing presence of Healthcare teams at patients' homes. Compared to the Group's activities in the hospital milieu, this Home Healthcare activity has greatly developed due to the strong prevalence of chronic illnesses, the increase in life span and budget constraints related to the healthcare expenditures of economically advanced countries. The development of healthcare systems in certain economies with strong growth is also contributing to this increase in the Home Healthcare activity.

Air Liquide's Home Healthcare activity now concerns over **1,000,000 patients worldwide.** It has a very strong human dimension because it focuses on having patients and their families accept a treatment that is sometimes long term and accompanied by constraints. Air Liquide's employees accompany and support at home patients suffering from chronic pathologies (respiratory insufficiency, sleep apnea, diabetes, Parkinson's disease, etc.). Innovative education and support programs aim at improving the patients' quality of life by helping reinforce treatment follow-up and increasing their autonomy.

The Home Healthcare activity is at the heart of the healthcare system. Air Liquide has therefore become a link between the patient, hospital, doctors, nurses, medical insurance organizations and pharmacists. The Group supplies products and medical equipment necessary to start treatment at the patient's home following the medical prescription, and trains the patients and their families in the proper use of devices (oxygen therapy, ventilator, insulin pump, etc.). Air Liquide therefore makes a major contribution to the care chain by ensuring the patients' follow-up at home over the long run. It is an activity that demands a high level of quality of service on a daily basis and that is clearly long term, with all the caregivers who want to improve the patient's quality of life at home.

The Group's Home Healthcare activity is an integral part of Air Liquide's **Responsibility and Sustainable Development approach,** in line with its preoccupations with the protection of vulnerable lives, improvements in the quality of life, proximity, the deeply human dimension of this service, relationships built over time and a strong involvement in the social fabric.

ACQUISITION OF LVL MÉDICAL AND GASMEDI, TWO MAJOR PLAYERS IN HOME HEALTHCARE IN FRANCE AND SPAIN

In 2012, Air Liquide acquired two new companies: LVL Médical, a French homecare player (respiratory assistance, perfusion/nutrition, etc.) and Gasmedi, the third largest homecare player in Spain. These two acquisitions have brought the Group 175,000 new patients and 1,500 additional employees. The combination of the performance of the two companies, the know-how of their teams, along with Air Liquide's innovation capacity, will permit the Group to continue to develop its activities for all its patients. The details of these acquisitions are provided in the 2012 Highlights section on page 30.

An acquisition financed by raising socially responsible bonds

In 2012, Air Liquide issued its first SRI-labeled bonds [(a)] under its Euro Medium Term Notes (EMTN) program, for a total amount of 500 million euros. This operation, issued at a very competitive rate, allowed the acquisition of Gasmedi and LVL Médical to be financed for a total amount of about 650 million euros. This bond was mostly placed with investors having SRI management mandates and permitted the Group to diversify its financing sources. After public authorities and supranational issuers, **Air Liquide became the first company to issue bonds meeting the criteria of SRI investors.**

Obtaining a rating from the extra-financial rating agency Vigeo about the Home Healthcare activity led to this issue being given a SRI label. This evaluation is based on the social, environment and governance criteria of the Home Healthcare activity that concerns one million patients worldwide.

(a) Socially Responsible Investment: application of sustainable development principles to investment. Approach consisting in systematically considering the three dimensions – environment, social/societal, governance – in addition to the usual financial criteria.

Indicators concerning the Home Healthcare activity

In the framework of this SRI bond issue, Air Liquide made a commitment to publishing during the life of these bonds, *i.e.,* nine years, indicators specific to the Home Healthcare activity in the area of the environment, safety and employee diversity.

Number of patients treated	2010	2011	2012
Total number of patients treated by the Air Liquide Home Healthcare Division	600,000	700,000	1,000,000
Employees			
Home Healthcare activity employees [(a)]	4,893	5,494	7,303
Safety			
Number of lost-time accidents of at least one day among employees	29 [(b)]	28 [(b)]	42 [(b) (c)]
Number of accidents of subcontractors and temporary workers [(d)]	15 [(b)]	7 [(b)]	10 [(b)]
Parity			
% of women among Managers and Professionals (MP)	53%	55%	55%
% of women among the MPs hired during the year	62%	62%	40%
Training			
Average number of training days per employee per year	2	2.1	1.6 [(e) (f)]
Kilometers driven and CO_2 emissions related to transportation			
Kilometers driven per patient followed per year			155
CO_2 emissions related to transportation per patient ($kgCO_2$/patient) per year			39

(a) Employees under contract.

(b) No fatal work accidents.

(c) Of which 11 accidents in the framework of the LVL Médical and Gasmedi activity, after the acquisition of these subsidiaries on October 1, 2012. Only the accidents of the last quarter of these subsidiaries are noted.

(d) Personnel working in the framework of a contract with Air Liquide, on an Air Liquide site, or on a customer site, or as a delivery driver.

(e) Or 12 hours a year following the calculation in hours (base: 1 day = 7.5 hours).

(f) Impact of the recently acquired companies, LVL Médical and Gasmedi.

PARTNERSHIP WITH THE EUROPEAN FEDERATION OF ALLERGY AND AIRWAY DISEASES PATIENTS ASSOCIATIONS

The European leader of Homecare, Air Liquide is in charge some 800,000 patients in Europe suffering from sleep apnea or insufficient respiration, notably those with severe chronic obstructive pulmonary disease (COPD), under long-term oxygen therapy.

Since 2011, the Group's Worldwide Healthcare Activity Branch has been developing a partnership with the EFA (European Federation of Allergy and Airways Diseases Patients Associations). This Brussels-based organization brings together the national associations of patients (22 countries represented) with respiratory ailments. In the framework of this partnership, Air Liquide supports the actions on information and raising awareness initiated by the EFA in public opinion and the European authorities. COPD is an under-diagnosed pathology and a major public health issue. The World Health Organization forecast that in 2015, COPD would go from being the fourth to the third cause of mortality in the world and estimates the total cost of COPD in Europe at 45 billion euros.

> EMPLOYEES

Commitment

Be a great place to develop one's potential providing employees with a safe, performing and respectful work environment.

2015 objective

Continue to improve the safety of employees with a goal of reducing each year the frequency rate of lost-time accidents.

Ensure the employee development, diversity and engagement by raising the "Our Talents" Index from 100 in 2010 to 115 in 2015.

Key Responsibility Indicator

Frequency rate of lost-time accidents of the Group's employees.
In 2012, the frequency rate of lost-time accidents of the Group's employees was 1.5.

The "Our Talents" Index measures the progress of the development, diversity and engagement of the Group's employees. With a base of 100 in 2010, its value was 100 in 2012.

49,500 men and women in 80 countries compose multicultural teams with a host of skills. Air Liquide is involved in promoting diversity, facilitating and accelerating knowledge transfer, motivating and involving its employees and encouraging a social and human commitment, notably through the Air Liquide Foundation. Safety remains a top priority for the Group's management and employees.

Safety: the first priority

Continuously and durably improving the health and safety in the workplace of its employees and subcontractors is one of Air Liquide's major challenges, which is expressed by the keyword "zero accidents" on each site, in each region, in each unit. Employees are mobilized through active communication on this objective. In addition, safety objectives are part of the variable remuneration of the Group's Senior Managers. In particular, the variable share of the remuneration of the executive officers is notably linked to safety objectives (see page 140).

Prevention, protection, early detection and rapid reaction are at the heart of the Group's concerns. Air Liquide rolled out its Industrial Management System (IMS) [(a)] in 2005 and it has deeply changed work methods and improved processes involving safety management, reliability, preservation of the environment and industrial risk management.

The Group has set up procedures, training sessions and an appropriate follow-up to encourage each employee to work responsibly and in total safety, respecting the laws and regulations in force. A central team of experts pilots networks of specialists in the field to see to the proper implementation of the IMS. Together, they provide local managers in the Group's different units with technical and methodological support and participate in managing industrial risks.

In 2012, the frequency rate of lost-time accidents was 1.5, which is the lowest level the Group has ever had. These results show the teams' capacity to mobilize around safety. The seriousness rate, equal to the average number of days of lost time per thousand hours worked for Air Liquide employees, excluding fatalities, was below 0.1 in 2012.

The Group's focuses for safety in 2012 stressed the understanding and prevention of major risks linked to its activities. So Air Liquide launched an awareness-raising program for all the employees on technical risks that can have serious consequences. This program increases safety in everyone's daily life. It permits each field manager to start the discussion with his or her team to share the best rules, practices and daily experience in this area. This campaign will be continued in 2013.

(a) More information on the IMS is presented in the Governance section – page 103.

Safety indicators for the Group as a whole

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Number of lost-time accidents of at least one day of Group employees [a]	136	135	131	153	147	137	131	153	144	138 [b]
Accident frequency of Group employees [c]	2.3	2.3	2.1	2.3	2.1	1.8	1.7	1.9	1.7	1.5* [b]
Accident seriousness rate [d]									<0.1	<0.1
Number of accidents of subcontractors and temporary workers [e] [f]						154	148	155	118	142

(a) *Fatal accidents since 2008: one in 2012, one in 2011, one in 2010.*

(b) *Except LVL and Gasmedi subsidiaries, integrated on October 1, 2012. Including the accidents of the last quarter 2012 of these subsidiaries, this number reaches 149.*

(c) *Number of accidents involving lost time, of at least 1 day, per million hours worked by Group employees. Accidents defined as recommended by the International Labor Office.*

(d) *Average number of days of lost time per thousand hours worked. Accidents defined as recommended by the International Labor Office.*

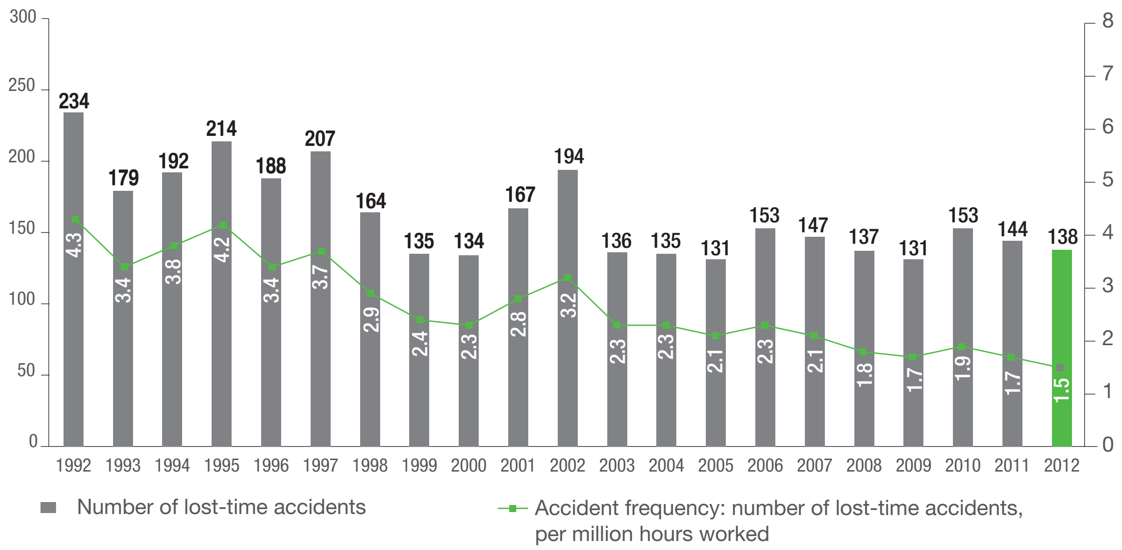
(e) *Personnel working in the framework of a contract with Air Liquide or on a Group site, or on a customer site or as a delivery vehicle driver.*

(f) *Fatal accidents since 2008: three in 2012, four in 2011, one in 2010, four in 2009, three in 2008. Among them eight are traffic accidents.*

* *Indicator verified by the Statutory Auditors.*

The indicators presented above are calculated on a worldwide scale. The percentages of those entering and leaving the Group notably include hires and layoffs.

Number of lost-time accidents and accident frequency since 1992



A committed enterprise

Air Liquide, winner of the Human Capital Trophy in 2012 for the coherence of its actions facilitating personal, social and economic well-being. This trophy awarded each year in France jointly by the Michael Page recruitment firm and the newspaper *Le Monde* distinguishes the prizewinning company for the good management of its human resources.

Since its creation in 1902, Air Liquide has always considered that the competence, performance and motivation of its employees are key differentiation factors and a **major feature of the Company's DNA, from the top to the bottom of the hierarchy.** Thanks to a long-term vision of the development of technologies, geographies and expertise, the Group has continued its growth while providing its employees with an attractive and diversified work environment. The Human Resources Departments are closely associated with Air Liquide's strategy. At Group level and in the countries, this function is always composed of mixed teams of Human Resources professionals and managers coming from the operations. Finally, the Group's Human Resources Vice President is a member of the Executive Committee and reports directly to the Chairman and CEO.

"OUR TALENTS" INDEX

Starting in 2012, Air Liquide publishes annually a Key Responsibility Index called **"Our Talents"** reflecting the Group's efforts and results in the development, diversity and engagement of its employees. The objective is to encourage the organization to set up progress actions in these areas. It is calculated by integrating the indicators presented in this section, weighed as follows: a third for development, a third for diversity and a third for employee engagement.

Development	■ Percentage of employees who benefited from at least one training session during the year
	■ Percentage of employees who had an annual evaluation interview with their immediate supervisor during the year
Diversity	■ Percentage of women among Managers and Professionals hired during the year
	■ Number of nationalities among the Senior Managers/Number of countries where the Group is present
Engagement	■ Percentage of employees belonging to a unit where an internal satisfaction survey was conducted over the last three years
	■ Percentage of employees holding Air Liquide shares
	■ Loyalty rate of Managers and Professionals

The value of the "Our Talents" Index in 2012 was **100.** It was calculated from a reference value of 100 in 2010. Air Liquide's objective is to reach 115 in 2015.

	2010	2011	2012	2015 objective
"Our Talents" Index	100	102	100	115

Even if certain indicators have progressed, notably the one on the number of internal satisfaction surveys, the value of the "Our Talents" index declined slightly in 2012, compared to 2011, mainly for two reasons:

- a decrease in the proportion of Group employee shareholders in the Company because there has been no capital increase reserved for employees over the last two years;
- the integration at the end of 2012 of over 2,000 employees from companies that have not yet reached the Group's standards in the Human Resources area.

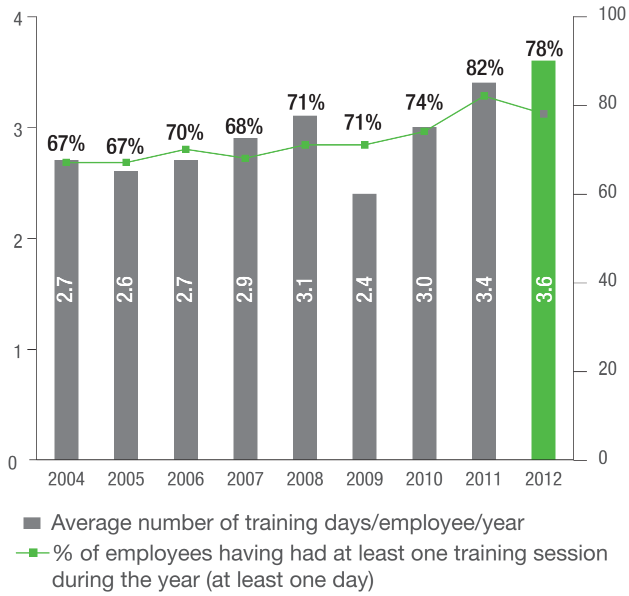
In addition, this index, also calculated for the preceding years, shows a strong increase, having gone from 86 in 2008 to 100 in 2012.

DEVELOPMENT

Training

Air Liquide takes particular care to develop the competencies and expertise of its employees. Training is an integral part of this development. It allows employees to work safely as well as to improve their performance, contribution and employability. In 2012, 78% of the Group's employees had at least one training session during the year. The average number of training days per employee and per year reached more than 3.6 days in 2012, which is the largest number of days ever attained by the Group. This represents an amount of more than 1,272,000 training hours in 2012.

Average number of training sessions per employee and per year/percentage of employees having had at least one training session during the year



The Group has invested in better professional qualifications and training programs for young people to facilitate their integration into the business world. As a result, more than 400 young people have benefited from work-study contracts in France, combining theoretical learning in their university or school and a practical internship at Air Liquide.

Through its **Corporate University,** created in 2009, Air Liquide has developed its training programs to meet the needs of employees while including the Group's values. Based on a decentralized model that permits a very large number of employees to be trained, with modern pedagogic techniques like e-learning, it has a dual objective:

- formalizing and rolling out the training processes and disseminating good practices that go hand in hand with the Group's training dynamic;
- proposing about 20 specific programs, ranging from integrating new employees to developing leadership capacities, as well as "business" training programs given by the different business lines. The Group's values, Principles of action and key challenges are systematically included in the different modules. In 2012, the programs expanded to offer training sessions to Senior Managers and were enriched notably with the launch of sessions "of finance for non-financiers", called "Cash".

The e-learning platform provides employees with a support for their training. In line with preceding years, the on-line training offering has been enriched by many themes such as safety, ethics and office automation. An on-line language course will also be offered in the near future. The e-learning module, "Discover", rolled out in 2011, presents new arrivals with the Group's history and key messages, safety, Principles of action and core businesses. It is available this year in six languages (French, English, Spanish, Italian, Russian and Portuguese). Over 3,600 people were already trained through this module since its launch in the different countries where Air Liquide is present.

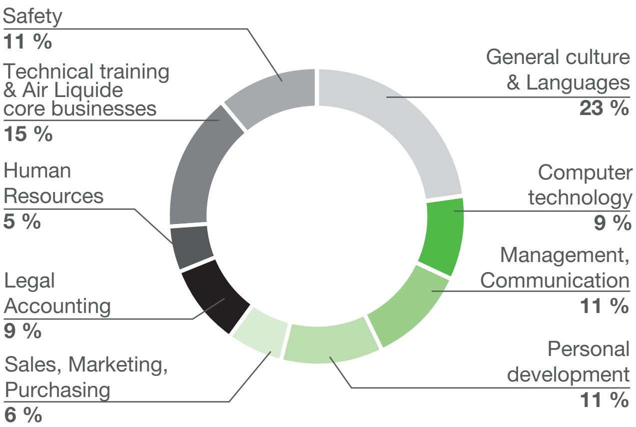
Training in ethics and in particular in anti-corruption was also continued in 2012. This module is planned first for sales, procurement and legal teams as well as for the Executive Committees and Senior Managers in the Group's units. Nearly 1,000 employees have already been trained in the Group's different geographies, mostly in Asia (China, India, South Korea, etc.), Europe (Russia, Ukraine, Greece, Bulgaria, etc.), the Middle East and Africa (United Arab Emirates, North Africa, South Africa) and South America (Brazil, Argentina, etc.). It was reinforced in 2012 by the creation of e-learning modules on employee Codes of Conduct and the Anti-corruption Code.

In 2012, Air Liquide innovated by organizing two encounter and training campuses in Paris and Houston (Texas). The goal was to bring employees together around a range of training programs and to promote contacts and meetings through networking.

Since its creation in 2009, the Air Liquide University has already trained nearly 7,000 employees.

Training themes [(a)]

The range of training themes offered to employees is quite broad. Among the nine themes offered, the largest share goes to safety and foreign languages.

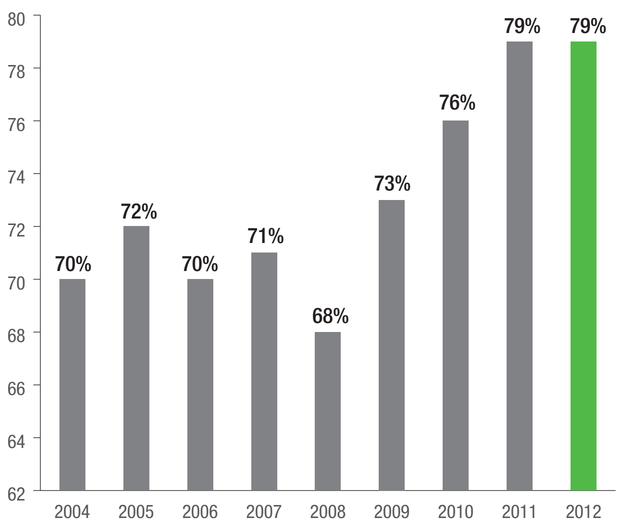


Follow-up of employee performance

It is through the commitment and contribution of its employees that Air Liquide gives more value to its customers and shareholders. This performance is followed and measured during interviews that each employee has every year with his or her immediate supervisor but also during career development interviews that permit each employee to talk about more long-term prospects with the local Human Resources Department. The Group's Human Resources Division particularly encourages these meetings as they are one of the cornerstones of the Company's Human Resources policy.

In 2012, 79% of the employees had a performance evaluation interview with their immediate supervisor, which is the highest rate in the last nine years. In addition, 17% of the employees had a career interview with their unit's Human Resources Department.

Percentage of employees having had an annual interview with their immediate superior during the year



(a) Breakdown of training sessions, estimated in days, in France.

DIVERSITY

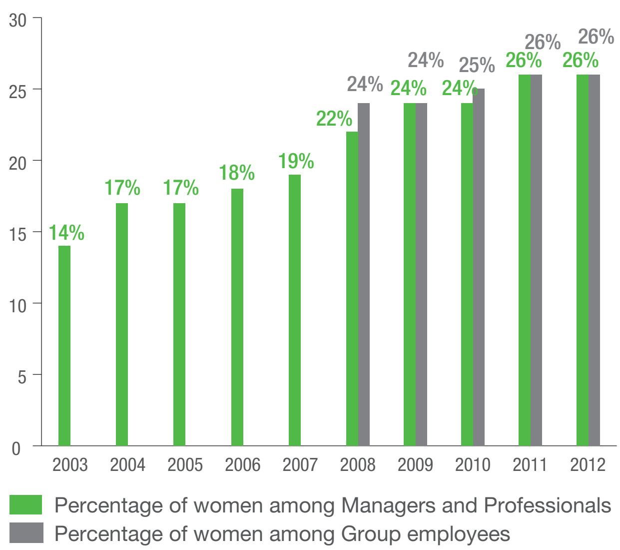
Diversity/Parity

Air Liquide is strongly committed to **fighting all forms of discrimination.** Diversity is a priority of the Air Liquide's Human Resources policy. The Group considers it is a source of dynamism, creativity and performance and has always desired to broaden hiring and attract the best talent. Air Liquide's markets are varied and complex. The diversity of its employees should notably reflect its customers' geographic diversity.

The Group's objectives are to continue to increase this diversity among its employees by notably seeking a better division of responsibilities between men and women while promoting the many cultures represented at Air Liquide. The five poles of the Group's Human Resources policy concerning diversity are: diversity of nationality, gender, educational background, age and disability. The international character of the Group's Senior Managers – 29 different nationalities represented in 2012 – is a considerable asset from this viewpoint and continues to be a strong growth track. A team in the Corporate Human Resources Department is in charge of steering the diversity projects.

Equality between men and women is an essential point in the expression of this diversity. For the last several years, Air Liquide has had a global action plan. For example, between 2003 and 2012, the percentage of women who were hired for Manager and Professional positions rose from 14% to 26%. This latter percentage for women Managers and Professionals in the Group corresponds to the global percentage of women in the Group (26%) and illustrates the good representation of women in Air Liquide's management. In addition, women now represent 41% of employees considered high potential. 17 executive management positions in the subsidiaries are held by women in the Group; the number of women in this type of position has increased six-fold since 2007. Moreover, three women are now members of the Group's Board of Directors.

Percentage of women among Managers and Professionals



These results are the fruit of a concrete, rigorous and global Human Resources strategy based on four focuses:

1. **Recruiting:**

   Strengthening the place of women in the Group, in particular through hires of Managers and Professionals.

2. **Developing careers and increasing responsibilities for women in the Company:**

   - for every management position that becomes available, Human Resources examines the application of at least one woman among the applicants;
   - regular Human Resources reviews dedicated to women with high potential are conducted by the Group's Executive Committee;
   - a meeting before and after maternity leave has been organized in a certain number of units in France.

3. **Communicating with and involving all the managers:**

   In the framework of Air Liquide's policy on promoting parity, the hiring and career development of women and strengthening their place and responsibilities in the Company, a program on awareness-raising and exchanges on "men/women" differences and the benefits that parity induces has been organized in the Group since 2007, aimed at managers. More than 700 managers in the Group have followed this program, in Europe and Asia. The objective is to continue rolling out these awareness programs at all the Group's subsidiaries. A communication support kit, containing a video message from the Group's Chairman and CEO, was deployed by the Human Resources teams for the different Air Liquide units to implement these actions locally with their teams.

   In addition to these many local initiatives, each year, Air Liquide joins forces with the International **Women's Day celebrated on March 8.**

   Moreover, this year, Air Liquide took part in two seminars on diversity, one on the initiative of Shell, a historic customer of international dimension, and the other on the initiative of BNP Paribas, one of the main French banking groups.

4. **Better balancing professional and private life:**

   The **CESU** (Universal Service Employment Check), whose aim is to facilitate childcare in the home, has been implemented for certain units in France since 2007 for men and women in the Group who have young children.

   The **Diversity Charter** that Air Liquide signed in France is available on this organization's website and is an illustration of the Group's commitment to diversity.

   Other information on the actions Air Liquide has undertaken on balancing professional and private life can be consulted in the **"Well-being"** paragraph presented on page 76.

Disability

For Air Liquide, diversity and equal opportunity also mean better insertion of disabled employees into its teams, but also through subcontracting to firms in the protected sector [(a)], particularly in France.

In 2012, disabled employees represented 1.3% of the Group's personnel.

In France, the general Human Resources policy on disability took concrete form through the signature of three agreements with social partners and a complementary agreement on local hiring initiatives. At the end of 2012, the percentage of disabled workers for all the French subsidiaries was 4.3%. Through these company agreements, Air Liquide has an employment policy with objectives in recruitment, integration into the Company, training, job maintenance, awareness-raising and subcontracting from the Protected Sector.

To carry out these operations favoring the disabled in the field, Air Liquide's *Mission Handicap* calls on employees who are "disability advisors" divided among the main French subsidiaries. They are accompanied by multidisciplinary working groups that meet three times a year to work on different subjects connected to disabilities.

Among the new operations implemented in 2012 was the **signing of a partnership with a company specialized in hiring disabled people** to further integrate the disabled into the Group, and a survey conducted by a sociologist on three sites in France on employment, daily work and relations with the managers and colleagues of disabled people. This study revealed that disability in a company is a subject that identifies the strengths and weaknesses of each individual and that makes a team more aware of its group dynamics.

In November 2012, as every year, *Mission Handicap,* renewed its "Disability Month" operation on the occasion of the national week for the employment of the disabled. For this event, Air Liquide mobilized all its employees through awareness-raising actions to develop a better knowledge of disabilities and to look at differences in another way. This year, Air Liquide focused on the theme of the Paralympic Games and organized a series of personal accounts and exhibitions on Paralympic sports (photo exhibitions, drawing contest for employees' children, etc.).

Lastly, in 2012, the Group's Human Resources Division held a seminar for all of the managers of disabled employees to promote their actions.

(a) Sector of the economic activity giving priority to employing disabled workers.

ENGAGEMENT/LOYALTY

Participation of employees in the capital of Air Liquide S.A.

The Group wants to have its employees worldwide more broadly participate in the capital of Air Liquide S.A. So, since 1986, 11 capital increase operations have been especially reserved for the Group's employees so that they can take advantage of preferential conditions.

At the end of 2012, the share of capital held by the Group's current and former employees was estimated at 2.1%, of which 1.5% (in the meaning of Article L. 225-102 of the French Code of Commerce) corresponded to the shares subscribed by the employees in the framework of capital increases that are reserved for them or that are held in the framework of collective management.

Remuneration

Employee remuneration is based on local market conditions, internal equity, applicable legislation and their performance. It is generally made up of a base salary plus complementary compensation elements. In 2012, 54% of the employees received an individual variable share in their remuneration. Most of the Managers and Professionals have a variable remuneration, which includes sustainable development objectives: they focus on subjects such as **safety** (number of accidents with lost time, number of "behavioral safety visits"), the **reliability of production facility operation energy efficiency** and **hiring diversity.**

In addition, remuneration can also include benefits such as provident insurance and medical expenses. In 2012, 98% of the employees benefited from some sort of social coverage through the Group.

HEALTH IN THE WORKPLACE

Air Liquide is particularly concerned with ensuring that its employees' working conditions do not present any health risks. This is notably demonstrated through preventive actions on the ergonomics of workstations and the implementation of specific safety rules in the Group's Industrial Management System (IMS). For example, in 2012, an action plan targeted on the handling and carrying of heavy loads was instituted in France on a CO_2 filling site. The risk of musculoskeletal disorders was reduced on the workstations concerned. In Indonesia, a training campaign was launched on noise-related risks. In this region, the local climate makes it difficult to install acoustic cladding for industrial equipment, which increases noise-related health risks. This training reinforced instructions on wearing hearing protection.

In France, a diagnosis undertaken in 2011 on difficult working conditions for employees (physical constraints, environment and work rhythm) established that a very small number of the Group's employees work in harsh conditions. In the units where this diagnosis was carried out, the results were systematically presented to the Hygiene, Safety and Working Conditions Committee (CHSCT) to collect opinions, and action plans were organized. In 2012, no specific agreement on safety and health was signed in France.

Air Liquide creates awareness-raising campaigns and training worldwide on safety, health and risk management especially at workstations. This year, a section of the different types of risks was rolled out in the form of posters and training to be organized by managers.

General information on health is also regularly distributed. For example, in France, an information article on "nutrition and cancer" was made available on the Group's intranet for its employees. In South Africa, local subsidiaries are continuing their awareness operations on the AIDS epidemic.

In addition, some of Air Liquide's activities concern hygiene and disinfection, through the Group's specialized subsidiaries Schülke and Anios, which make their products available to other units.

WELL-BEING

Continuing the measures carried out these last few years to increase well-being at work, in 2012, Air Liquide signed three agreements for France with external service providers to promote the personal/professional life balance of its employees, whatever their age or position.

First, an agreement was established with a French firm of inter-company crèches to reserve places for the employees of the subsidiaries concerned. The objective is to have 40 places in the next three years. At the end of 2012, 22 places had already been provided.

Next an e-portal was created so that employees can access practical, administrative and legal information from home or the office to facilitate daily life. It can be used by the employee and his or her family *via* a personal access code. Over 70% of the Group's employees in France now have access to this portal.

Lastly, an agreement with the Mondial Assistance company permits employees to call, from their office or home, experts (doctors, legal specialists, social workers, orientation counselors) who answer their questions with complete confidentiality on areas as varied as the family, housing, well-being and healthcare, unforeseen events, budget management, taxation and retirement. Air Liquide is a forerunner in this area as the Group is currently one of the only ones in France to offer its employees such a large range of services.

ABSENTEEISM

This year, Air Liquide is communicating its employees' absentee rate. The definitions of working time and absenteeism differ according to the subsidiaries and their locations. The Group's Human Resources Division is currently reflecting on how to harmonize the follow-up of absenteeism on a worldwide level. In 2012, the absentee rate reported concerned France. This reporting will be expanded to Europe, then the rest of the world in the years to come. The Group's absentee rate was established by counting the total number of days absent due to illness, whatever their duration and cause, including commuting and work accidents, compared to the number of days worked per year [(a)]. In 2012, the absentee rate of the Air Liquide Group in France was 3.2%.

ORGANIZATION OF WORK TIME

In France, the general framework of work time organization was defined by all the agreements signed in 2000 and 2001 with the unions. Very few activities operate with shiftwork, which concerns fewer than 10 plants in France, mainly in the Large Industries business line. On the other hand, most of industrial activities, such as those in Healthcare, include on-call systems that are regularly discussed with the unions.

SOCIAL DIALOGUE

Air Liquide is particularly concerned about encouraging and respecting social dialogue and to this end 76% of the Group's employees have access to a representation, dialogue or consultation structure.

The European Works Council has 28 employee representatives from 15 countries [(b)]. The composition of the Council evolves with the Group's acquisitions, the expansion of the European Union and according to the rules established by the Council's constitutional agreement. The Council meets once a year chaired by a member of the Executive Committee. The main themes discussed during this meeting are: safety, the Group's current activities, the annual financial statements and Air Liquide's strategy.

In France, an agreement was signed on paying a profit-sharing bonus, instituted by the law of July 28, 2011. In 2012, French employees benefited from this bonus. Three other agreements were created for 11 French subsidiaries on union representation, the Company's contribution to a group saving plan and the profit-sharing bonus. Over 30 agreements in total were signed in France with the representative unions on the subjects mentioned above, as well as on professional equality. This set of collective agreements will gradually be extended to the entire Group.

In Germany, the local subsidiaries are members of the chemical sector employers association (BAVC [(c)]). Negotiations are carried out directly between this association and the German unions. Several agreements were signed in May 2012 in this country. They cover a raise in wages applicable to all the professions represented, greater flexibility of the duration of the work week and an increase in employee social contributions to anticipate the effect of the demographic evolution, notable to offset the cost of implementing part-time contracts for employees over the age of 60.

In addition, in Italy, several agreements were signed between the local subsidiaries and the unions notably on flexible hours and the partial coverage of transportation, school and healthcare expenses.

EMPLOYEE AWARENESS-RAISING ON SUSTAINABLE DEVELOPMENT

Many initiatives are created at Air Liquide to raise employee awareness on sustainable development issues and encourage them to promote them in their daily activities. The "Better and Cleaner" initiative and the "Car-free Day" are a few examples.

The "Better and Cleaner" initiative, launched in France at the end of 2009 and expanded to all of the Group's R&D centers, continued in 2012. The objective of this program is to raise awareness in the Group's employees on their environmental impact by bringing them together around a common project whose goal is to reduce greenhouse gas emissions. These initiatives decrease the carbon footprint of each unit, while finding the best environmental practices developed by researchers worldwide. The best overall performances and local initiatives that are remarkable because of their contribution to a decrease in environmental impact, sustainable development or social benefits are rewarded.

At the Group's head office in Paris, "Better and Cleaner" is being launched on the initiative of employees who wish to get involved in sustainable development at Air Liquide on a daily basis. This year, a study quantified the environmental impact of an employee at the head office by establishing a carbon footprint assessment and identifying improvement tracks to define an action plan to be implemented.

In addition, each year, the Group rolls out, on "World Car-free Day" on September 22, an awareness campaign on the environmental impact of road transportation and highlights alternative means of transportation like carpooling. Many initiatives, in over 40 countries, show the employees' increasingly greater commitment to a more responsible approach in this area.

(a) 365 days minus weekends and legal holidays.

(b) Austria, Belgium, Denmark, France, Germany, Great Britain, Greece, Italy, the Netherlands, Poland, Portugal, Romania, Slovakia, Spain, Sweden.

(c) Bundesarbeitgeberverband Chemie: Federal Association of Chemical Industry Employers.

Human resources indicators concerning the Group as a whole

Employees [a]	2008	2009	2010	2011	2012
Group employees	43,000	42,300	43,600	46,200	49,500*
■ Women	10,300	10,300	11,100	12,100	12,800
In %	24%	24%	25%	26%	26%
■ Men	32,700	32,000	32,500	34,100	36,700
In %	76%	76%	75%	74%	74%
Joining the Group [b]	19.2%	10.5%	15.1%	20.4%	19.9%
Leaving the Group [c]	12.5%	12.2%	11.9%	14.3%	12.7%
% of employees having resigned during the year [d]	5.0%	3.2%	4.0%	5.3%	4.6%

(a) Employees under contract, excluding temporary employees.

(b) Hiring or integration due to acquisitions. The percentage is based on the number of employees as of December 31 of the preceding year.

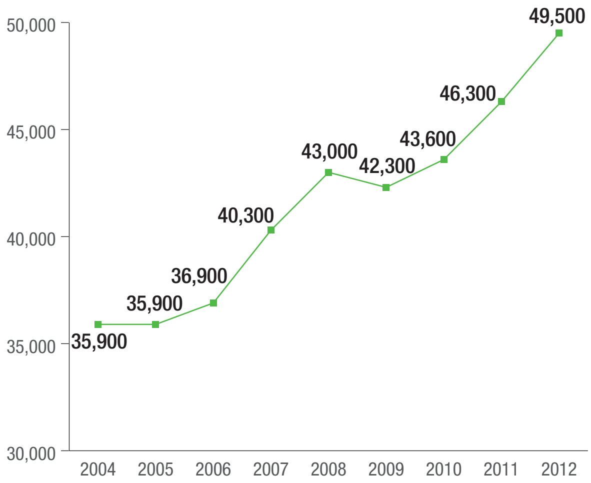
(c) Retirement, resignations, layoffs, departures due to disposals, etc. The percentage is calculated based on the number of employees as of December 31 of the preceding year.

(d) Since 2009, calculated on the number of employees as of December 31 of the preceding year.

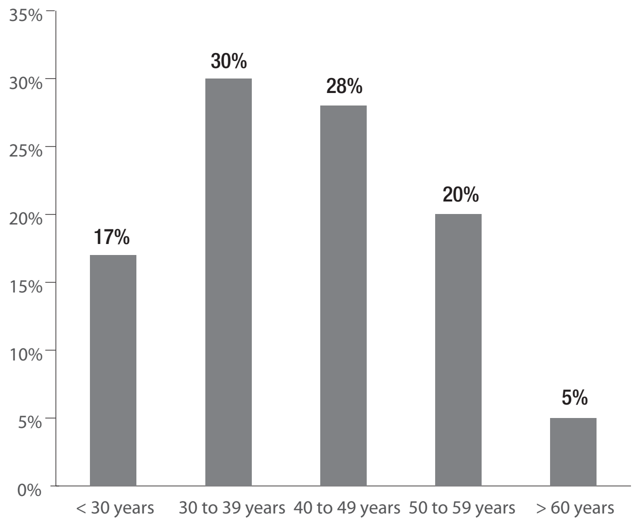
* *Indicator verified by the Statutory Auditors.*

The indicators presented above are calculated on a worldwide scale. The percentages of those entering and leaving the Group notably include hires and layoffs.

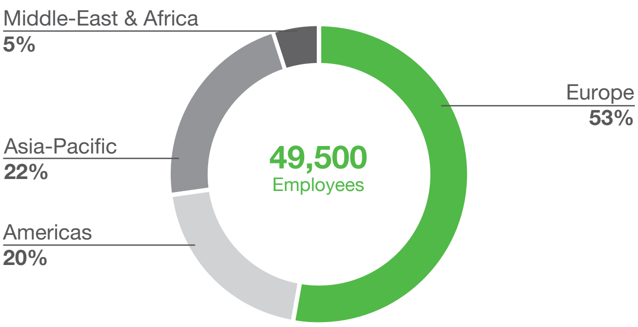
Employees



Distribution of employees by age braket in 2012



2012 employees by zone



	2008	2009	2010	2011	2012
Parity and diversity					
Parity					
% women among Managers and Professionals	22%	24%	24%	26%	26%*
% women among Managers and Professionals hired during the year	29%	29%	29%	29%	28%*
% women among employees considered high potential	32%	36%	40%	39%	41%
Number of nationalities					
Among expatriates	48	46	53	48	44
Among Senior Managers	22	25	27	28	29
Among employees considered high potential	42	47	46	46	44
Number of nationalities among Senior Managers/Number of countries where the Group is present				35%	36%
Training					
% total payroll allocated to training	About 3%	About 2%	About 2%	About 2%	About 2%
Average number of days of training per employee and per year	3.1 days	2.4 days	3.0 days	3.4 days	3.6 days* (a)
% employees who attended a training program at least once during the year	71%	71%	74%	82%	78%*
Performance review					
% employees who have had a performance review meeting with their direct supervisor during the year (b)	68%	73%	76%	79%	79%*
% employees who have had a career development meeting with the HR Department during the year (b)	16%	14%	15%	18%	17%
Remuneration					
% employees with an individual variable share as part of their remuneration	51%	50%	51%	53%	54%
Absenteeism					
Absentee rate of Air Liquide employees (c)					3.2%
Ethics					
% employees belonging to a unit with a local Code of Conduct	55%	67%	71%	90%	91%
Employee loyalty					
Average seniority in the Group	10 years	11 years	10 years	10 years	10 years
Retention rate of Managers and Professionals over a year				94.5%	95.4%
Social performance					
% disabled employees (d)	1.2%	1.2%	1.2%	1.3%	1.3%
% employees having access to a representation/dialogue/consultation structure	81%	82%	79%	77%	76%
% employees belonging to a unit at which an internal satisfaction survey was conducted within the last three years (e)	58%	37%	43%	48%	55%
% employees with benefits coverage through the Group (f)	98%	97%	98%	98%	98%
Employee shareholders					
% capital held by Group employees (g)	1.0%	1.4%	1.6%	1.6%	1.5%
% Group employees that are shareholders of L'Air Liquide S.A.	>40%	>60%	>60%	>50%	About 50%

(a) 27 hours a year according to counting in hours (base: 1 day = 7.5 hr.).
(b) Since 2010, calculated on the basis of employees with "long-term contracts".
(c) Calculated in 2012 in France only.
(d) For the countries where regulations allow this data to be made available.
(e) Indicator for units of over 300 employees until 2011. All units from 2012.
(f) Includes notably retirement benefits.
(g) In the meaning of article L. 225-102 of the French Code of Commerce.
** Indicator verified by the Statutory Auditors.*

> COMMUNITIES

Commitment

Act as a good citizen where the Group operates, by participating in the development of local economies, the protection of life and the environment and through a proactive dialogue with communities.

2015 objective

Put the expertise of the Group's teams at the service of communities by carrying out at least one philanthropic project per country.

In this framework, the Group commits to supporting, over the long term, the Air Liquide Foundation so that it can help reach this objective through the projects.

Key Responsibility Indicator

Number of countries having carried out at least one philanthropic project directly or through the Air Liquide Foundation from 2011 to 2015.

In 2012, Air Liquide supported projects in 19 countries through its subsidiaries and its Foundation, which brings the total number of countries in which a corporate philanthropy project was carried out since 2011 to 30.

Each Air Liquide unit is located in communities for which respect is at the heart of the concerns of the Group's employees. They are aware that each decision, each action commits them vis-à-vis customers and partners but also vis-à-vis those individuals or firms that are affected by the Group's activities. The consideration of these communities' needs is necessary to guarantee the sustainability of the environment where the Group carries out its action.

Relations with public authorities

In 2012, Air Liquide formalized a "Public Affairs" policy governing the Group's interactions with public authorities throughout the world. It deals with reducing risks related to regulatory changes, developing market opportunities and more generally bringing the Group into the public debate.

This policy specifies that Air Liquide works with the public authorities of each country in which it does business, in a transparent manner, following ethical rules and applying political neutrality. All the Group's actions respect the official lobbying regulations in force in the countries in which it is present. Air Liquide is thus registered in the "transparency register" of European institutions and has committed to following the rules enacted by this register's Code of Conduct.

Managers specialized in public affairs have been appointed in the principal countries, comprising a network coordinated on the Group level by the European and International Affairs Division.

The tasks of these managers is to follow public initiatives that may have an impact on the Group and to interact with the public authorities to defend Air Liquide's interests. These interactions can take place either directly or through the professional associations of which Air Liquide is a member. The Group is active in several federations and associations, for example, the European Roundtable of Industrialists, of which Benoît Potier, Chairman and CEO of Air Liquide, is vice president. The Group also calls on outside consultants in this area.

Public affairs cover all the Group's activities. In 2012, the priorities in this sphere were:

- energy transition and the environment with the boom in alternative energies (hydrogen energy, biogases, etc.), energy efficiency and intermittent energy management (photovoltaics, wind turbines, etc.);
- the carbon market with changes in European regulations and the development of regional markets in North America and Asia-Pacific;

- the defense of Air Liquide's shareholding model;
- on the European level, the space question notably concerning current discussions on the future European space launcher;
- the defense of intellectual property and the launch of the European patent;
- the competitiveness of companies on the worldwide level.

Relations with local communities

Air Liquide's teams are very committed to taking part in the local economic life near the Group's sites. This participation includes hiring employees in the area and developing close relations with training organizations and universities that can prepare people for the Group's core businesses.

In the industrial basins where over 1,000 of the Group's sites are located, the Company also wishes to develop subcontracting and local procurement to make a contribution to local economic life.

For example, the Association Air Liquide Maroc has supported a welding school in Casablanca for the last two years. Its aim is to train young adults from disadvantaged milieus in welding techniques. Since the school's creation, about 30 young people have received a capacity certificate enabling them to more easily find a job. Likewise in India, the Cryolor Asia subsidiary has set up training in welding specifically for women from local communities.

In addition, the Group's activities as well as the means implemented to prevent and manage industrial risks are regularly presented to the populations near Air Liquide's sites. In France, the industrial sites participate in CLICs and CLIEs, local committees that provide information and regulatory consultations on the communes' initiative, with the aim of providing transparent information on their activities to representatives of the local populations.

Corporate philanthropy and the Air Liquide Foundation

Social and human commitment is an ongoing concern for Air Liquide. Since its very beginning, the Group has carried out philanthropic actions, especially in the preservation of life and the environment.

Whether they are directly carried out by the Group's subsidiaries or initiated by the Air Liquide Foundation, these corporate philanthropy actions represented nearly **2 million euros in 2012.**

Subsidiaries committed to communities

Throughout the world, Air Liquide's subsidiaries interact with their direct environment, supporting local corporate philanthropy initiatives. The success of these actions owes a great deal to the employees' involvement in them.

For example, in **Canada,** the subsidiary contributed 50,000 Canadian dollars (37,900 euros) to the creation of the Neonatal Intensive Care Unit at the Montreal Children's Hospital. Through this donation, Air Liquide Canada contributed to the community's development by investing in permanent medical infrastructures. In addition, the subsidiary is supporting, for an amount of 10,000 Canadian dollars (7,600 euros) the Reconnect program of the South Peace Community Resources Society whose aim is to reestablish links between young people and their families, school and community.

In the **United States,** the Group's subsidiaries and their employees have donated over 362,000 dollars (269,000 euros) to charitable organizations working in the healthcare sector (American Heart Association, National Multiple Sclerosis Society) and education area (Partnership for the Advancement & Immersion of Refugees).

In the framework of celebrations of the 101st anniversary of SOXAL, an Air Liquide subsidiary in **Singapore,** a donation of 40,000 euros was made to the Garden City Fund, an environmental NGO whose purpose is to protect Singapore's biodiversity. This funding will make it possible to conduct a biodiversity study on the coral reefs in the waters around Singapore. In addition, over 250 employees got together on September 29, 2012 in Punggol Waterway Park to plant 101 trees in the framework of the Garden City Fund's Plant-A-Tree program.

Three missions for the Air Liquide Foundation

Created in 2008, the Air Liquide Foundation shows the Group's commitment to being a responsible enterprise. It has a worldwide scope and supports projects in the 80 countries where the Group operates. With a budget of nearly 3 million euros over five years, the Foundation has three missions:

- environment: support for scientific research on the preservation of our planet's atmosphere;
- healthcare: support for scientific research on improving the human respiratory function;

- Micro-Initiatives on local development: the Foundation supports proximity actions (education, access to treatment, energy and water, micro-entrepreneurship, disabilities, etc.) in the regions of the world where the Group is present.

Each Micro-Initiative is followed by an Air Liquide employee who is a volunteer. The Group's employees who wish to can evaluate and follow a project and get personally involved in the field. Today, over 160 Group employees are involved alongside the Foundation.

Headed by Benoît Potier and composed of Senior Managers of the Group, a personnel representative and outside experts, the Foundation's Board of Directors meets twice a year to determine corporate philanthropy focuses and to examine scientific research projects. It is assisted in its functions by a Project Selection Committee, which about four times a year studies the projects submitted to it. This Committee is composed of seven members including a representative of the Shareholders Communication Committee.

Projects can be submitted on line, in French or in English, on the Foundation's site, www.fondationairliquide.com.

In 2012, the Air Liquide Foundation supported 31 new projects, including two scientific research projects in the environment and 29 Micro-Initiatives. In 2012, these projects were located in 16 countries, four of which were new. Since its creation in 2008, the Foundation has supported 126 projects in 33 countries, among which **over 100 Micro-Initiatives.**

Among the environmental research projects, the Foundation has supported the University of Bern, in **Switzerland,** over the last two years for its Oldest Air program, a long-term scientific project whose purpose is to reconstitute climate changes over a period of 1.2 million years by means of the analysis of air bubbles trapped in the Antarctic ice.

In the framework of its Micro-Initiative support program, the Foundation favors actions whose goal is the development of local communities over the long term.

In **education and training,** the Foundation supports the fight against illiteracy and school dropouts and works to promote literacy training and the socio-professional reinsertion for adults. In 2012, the Foundation supported a dozen initiatives in this field for an amount of 85,000 euros. These funds permitted the renovation and construction of schools in **Morocco** and **Indonesia,** the purchase of computer equipment for a women's training center in **Lebanon,** teacher training in **Mali** and, in **France,** awareness-raising for secondary school children in difficulty to prevent them from dropping out of school.

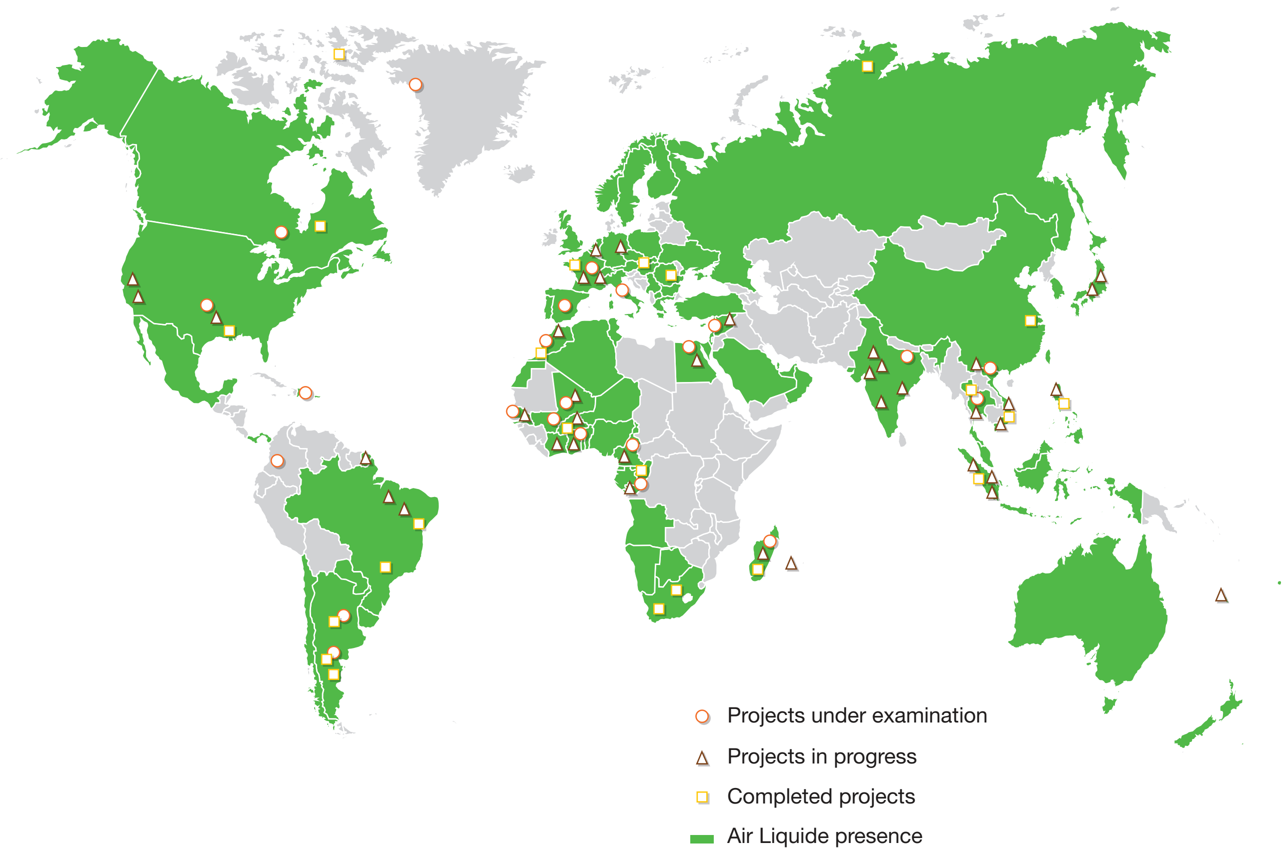
To complement the action of ***Mission Handicap*** conducted in France, the Foundation accompanies projects that contribute to the coverage and social autonomy of the disabled. In 2012, the Air Liquide Foundation helped six organizations whose aim is to assist these people by notably helping them to surpass themselves and to encourage their self-development. With 45,000 euros of subsidies granted, the Foundation made it possible to renovate reception and learning centers and to develop new therapeutic methods in **France and Belgium.**

In **micro-entrepreneurship,** the Foundation contributes its assistance to the start-up or development of Micro-Initiatives that help revitalize Air Liquide's local environment. In 2012, the Foundation supported, with a subsidy of 32,000 euros, four organizations whose purpose is to durably improve living conditions in local communities by giving them the capacities to generate income and become autonomous in the longer run. For example, it supported the training and equipping of peasant communities in Rio Grande do Norte in **Brazil** so that they could develop apiculture. In **Japan,** the Foundation supported the startup of oyster farming in Miyagi and Iwate, cities devastated by the tsunami in 2011. In **Mali,** it took part in rolling out the traditional construction technique called the "Nubian vault". The objective was to promote the access and dissemination of this ancestral know-how to masons and to create an autonomous local market.

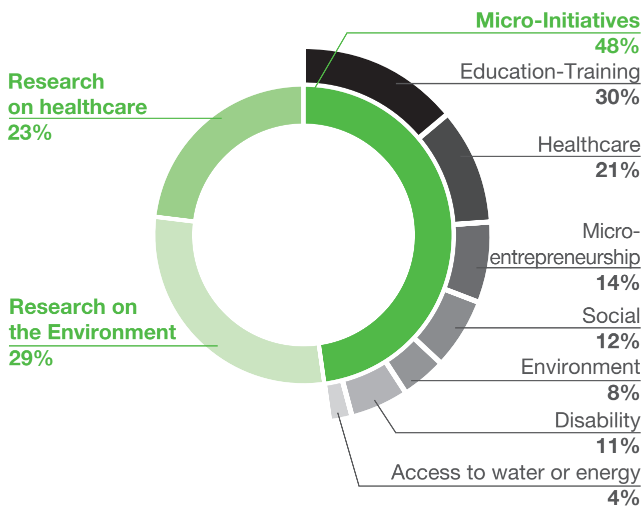
In **healthcare,** the Air Liquide Foundation supports the development of access to healthcare for the most disadvantaged populations, promotes medical skills transfer and helps organizations that respond to emergency situations. In 2012, the Foundation supported five organizations with subsidies of 55,000 euros. These funds were used to equip dispensaries in **Senegal** and **Burkina Faso,** and to accompany patients with chronic illnesses in **France**.

In the **social** sphere, the Foundation helps people to be reinserted socially and professionally. In 2012, it contributed its assistance to three organizations for an amount of 18,000 euros, notably to accompany people in an exclusion situation in **France** or to help communities that had become vulnerable after natural disasters, like **Japan** in 2011.

Air Liquide Foundation projects



The Air Liquide Foundation's actions per mission since its creation in 2008



> IMPROVE THE ENVIRONMENTAL FOOTPRINT

Commitment

Continuously improve the environmental footprint of the Group's operations, products, customers, suppliers and communities.

2015 objective

Improve by at least 2% from 2011 to 2015 the energy efficiency of each of its activities: air separation units, hydrogen units and products delivery.

Key Responsibility Indicators

- **Evolution of energy consumption for air separation units per m^3 of gas produced: improved by 0.2% from 2011 to 2012.**
- **Evolution of energy consumption for hydrogen units per m^3 of gas produced: improved by 0.1% from 2011 to 2012.**
- **Evolution of the distance traveled per ton of gas delivered (Industrial Merchant activity): worsened by 0.7% from 2011 to 2012.**

Air Liquide made the strategic choice of allocating its resources, in particular its investments, to help reduce the direct CO_2 emissions of its activities on its operational scope as well as on its customers sites. This is notably achieved by offering customers solutions to enable them to reduce their own emissions and by steadily improving production and transportation operations.

Revenue linked to life and the environment

Over 40 applications of industrial and medical gases preserve life and the environment at the Group's customers: these applications represent **43% of revenue** [(a)].

In order for the Group to offer its customers solutions so that they can improve their environmental footprint, Air Liquide consolidated, starting in 2003, these "blue" [(b)] sales every other year. In 2010, the Group decided to communicate on this indicator every year. "Blue sales" are calculated **for each of the Group's World Business Lines: Large Industries, Industrial Merchant, Healthcare, Electronics and Engineering & Construction.**

A few examples of applications that preserve the environment:

- filling under modified atmosphere to protect foods and reduce chemical additives;
- inerting with nitrogen industrial installations;
- fusing glass by using pure oxygen, which considerably reduces emissions of nitrogen oxides, gases that cause acid rain;
- using special gases to produce photovoltaic panels;
- treating water in purification stations;
- using rare gases like krypton to improve the insulation of double-glazed windows;

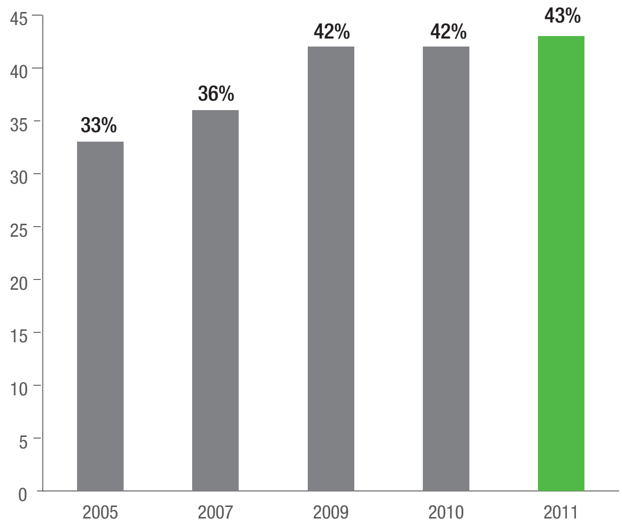
(a) Percentage calculated on the basis of the Group's 2011 revenue.

(b) Air Liquide describes this specific revenue as "blue" to evoke the color of the sky since air is the main raw material in the Group's production units and it is the blue of the atmosphere that we must preserve.

- using hydrogen in refineries to remove sulfur from hydrocarbons, reducing the emissions of sulfur oxide, which also contribute to acid rain;
- manufacturing adjuvants for vaccines;
- using oxygen in blast furnaces to reduce the consumption of coke whose production is very polluting.

The percentage of Air Liquide's "blue sales" noticeably increased between 2005 and 2011, going from 33% to 43% of the Group's total revenue. This growth illustrates the development of the applications linked to preserving life and the environment in Air Liquide's global revenue. In addition, **over 60% of the Group's Research & Development budget is earmarked for work on preserving life and the environment** and is a "blue sales" growth driver for the future.

Percentage of applications that preserve life and the environment in the Group's revenue



The environmental footprint of the Group

ENVIRONMENTAL INDICATORS CONCERNING THE GROUP AS A WHOLE

In its **production** activities, the main trends concerning environmental data in 2012 are the following:

- **the volumes of air gas** produced continued to **rise** compared to 2011. As a result, electrical energy consumption, which is mainly used in air separation units, increased, as did indirect CO_2 emissions, which are connected to it;
- **thermal energy consumption and direct CO_2 emissions** increased mainly due to a sustained rise in volumes of hydrogen production notably due to the startup of two new large units in the United States and China.

Presented here are the environmental elements most representative of the Group's businesses. They cover a total of **524** Air Liquide production units or sites and concern:

- large air separation units;
- hydrogen and carbon monoxide units;
- cogeneration units;
- acetylene units;
- nitrous oxide units;
- carbon dioxide liquefaction and purification units;
- units in the Hygiene and Specialty Ingredients activity;
- Engineering & Construction units;
- units for Welding equipment and products;
- Research & Development centers and technical centers.

The indicators concerning the environmental impact of the **transportation** of products of the Group's Industrial Merchant and Healthcare activities as well as those on water management and the main **waste and byproducts** are presented. Other indicators are also communicated.

The most relevant environmental indicators for the total of the 10 types of production units (524 units) and transportation on a worldwide scope

	2008	2009	2010	2011	2012
Evolution of energy consumption per m³ of air gas produced [(a) (b)]	101.3	103.3	99.0	99.0	98.8*
Evolution of energy consumption per m³ of hydrogen produced [(a) (c)]	98.8	98.7	98.3	98.5	98.4*
Evolution of the distance traveled per ton of industrial gas delivered [(a) (d)]	99.2	97.4	96.3	97.1	97.8*
Annual electricity consumption *(in GWh)*	23,223	21,139	24,924	26,661	27,578*
Annual thermal energy consumption *(in LHV Terajoules)* [(e)]	177,395	183,381	204,434	213,198	229,177* [(f)]
Annual water supply *(in millions of m³)*	59.7	59.9	66.1	67.2	66.4* [(g)]
Annual emissions of CO_2 avoided by cogeneration and on-site units *(in thousands of tons)*	-625	-819	-870	-1,051 [(j)]	-987
Total direct greenhouse gas (GHG) emissions *(in thousands of tons CO_2 eq.)* [(h)]	9,014	9,386	10,181	10,549	11,272*
Total indirect GHG emissions *(in thousands of tons CO_2)* [(i)]	7,952	7,447	9,294	10,606 [(j)]	10,853*
Total direct and indirect GHG emissions *(in thousands of tons CO_2 eq.)*	16,966	16,833	19,475	21,155 [(j)]	22,125*

(a) Calculated from base 100 in 2007.

(b) Gases produced (oxygen, nitrogen, argon) calculated in m³ of equivalent gaseous oxygen.

(c) Hydrogen and carbon monoxide.

(d) In kilometers per ton delivered within the framework of the Industrial Merchant business line, for oxygen, nitrogen, argon and carbon dioxide.

(e) LHV: Lower Heat Value, which includes the fact that energy from water vaporizing in fuel is not recovered.

(f) Or approximately 63,600 GWh LHV.

(g) Representing less than 0.5 one-thousandth of the industrial water consumption of the economies under review.

(h) Includes CO_2 emissions and nitrous oxide emissions.

(i) Total indirect GHG emissions generated by the production of electricity purchased outside the Group. The indirect emissions only concern CO_2 emissions. Calculation takes into account the primary energy source each country uses to produce electricity (source: International Energy Agency).

(j) At the end of 2012, the International Energy Agency changed the methodology of calculation of the emissions factors related to energy production. 2012 indirect emissions take this referential change into account. 2011 indirect energy emissions have been recalculated according to these new factors so that indirect and total CO_2 emissions between 2011 and 2012 could be comparable. The values published in 2011 were, in thousands of tons of CO_2, 863 for the emissions avoided by cogeneration and on-site units, 9,994 for total indirect GHG emissions and 20,543 for total GHG emissions.

* *Indicator verified by the Statutory Auditors.*

DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS AND ORIGIN OF THE ELECTRICITY USED

Companies' direct and indirect greenhouse gas emissions are usually divided into three scopes depending on their origin:

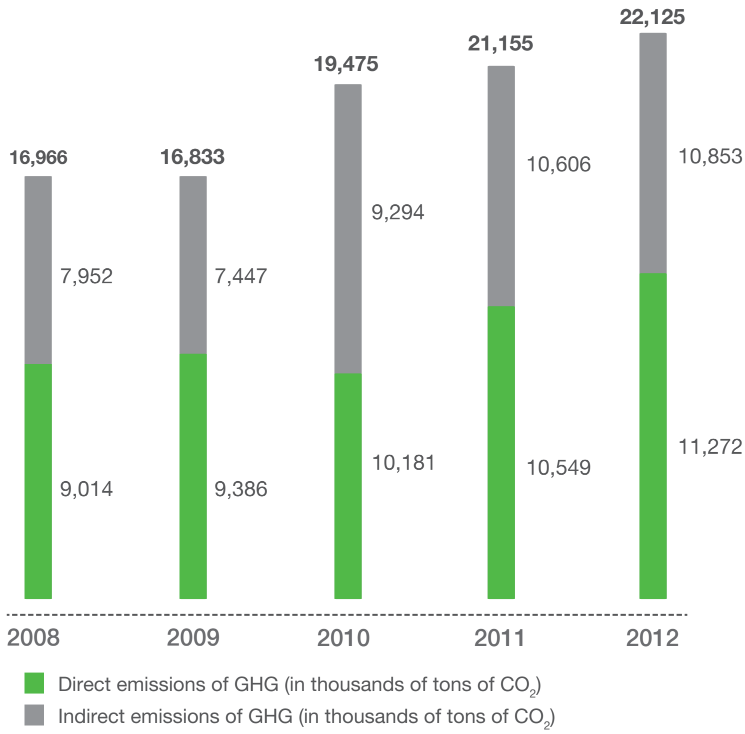
- Scope 1 includes direct emissions generated by all possible emission sources owned or controlled by the Group. This scope brings together the Group's production units as well as the transportation of products and equipment to the customers;
- Scope 2 is composed of all the indirect emissions related to the 10 types of production units;
- Scope 3 encompasses the other indirect emissions generated, for example, by professional travel and commuting or the treatment of products at end of life.

Direct and indirect emissions of Scopes 1 and 2

Direct and indirect emissions of Scopes 1 and 2 represented 99% of the Group's total emissions in 2012.

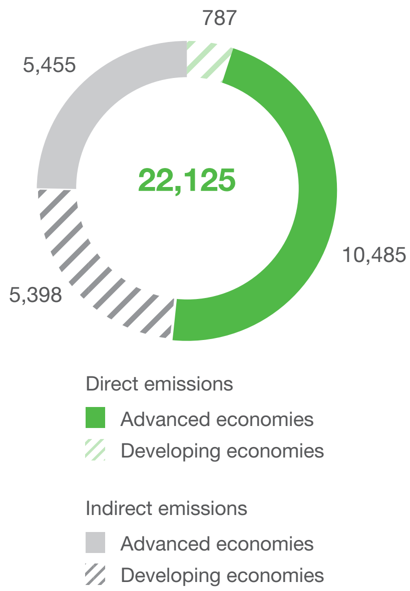
In order to distinguish the differentiated growth dynamics between advanced economies and developing economies, Air Liquide decided, in 2010, to segment its direct and indirect CO_2 emissions between these economies.

Direct and indirect greenhouse gas emissions



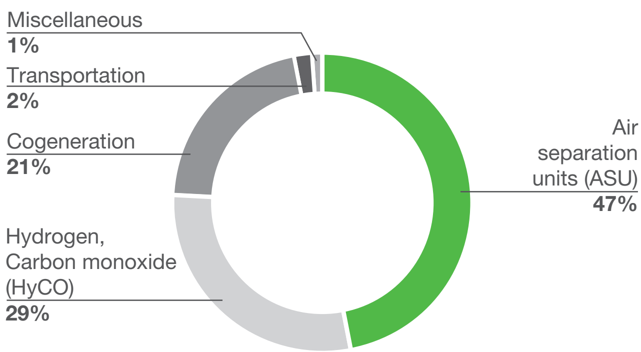
Breakdown of greenhouse gas emissions between advanced and developing economies

(in thousands of tons of CO_2)



In this report, the advanced economies are defined in accordance with the financial reporting: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Great Britain, Greece, Italy, Japan, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United States. The developing economies refer to the other countries in which Air Liquide operates.

Breakdown of direct and indirect greenhouse gas emissions



Scope 3 emissions related to professional travel

Professional travel by car, train or plane is one of the main sources of Scope 3's CO_2 emissions. These were estimated at 50,000 tons of CO_2 in 2012 for all the subsidiaries, which represents less than 1% of the Group's total emissions. This estimate was done based on the European subsidiaries' emissions, representing 53% of the Group's employees. The total of Scope 3 emissions was then extrapolated by hypothesizing that emissions are homogeneous in all the countries where the Group is present.

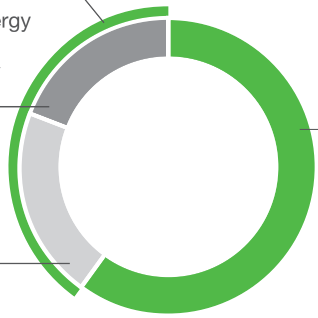
Air Liquide endeavors each year to reduce the greenhouse gas emissions generated by its subsidiaries' activities, notably those caused by professional travel. In France, Air Liquide's objective is to decrease the CO_2 emissions generated by the fleet of cars leased for personnel. To reduce this impact, the French subsidiaries decrease, each year, in their selection criteria for leased vehicles, the CO_2 emission per kilometer ceiling. Set at 147 grams per kilometer in 2008, this ceiling was 109 grams in 2012, with the goal of under 105 grams per kilometer in 2013. With over 3,300 vehicles each traveling on average 40,000 kilometers per year, this has made it possible to avoid the emission of about 14,000 tons of CO_2 between 2006 and 2012.

In addition, since the summer of 2012, 10 telepresence rooms have been operational worldwide: Paris and Champigny in France, Frankfurt in Germany, Houston in the United States, Krakow in Poland, Johannesburg in South Africa, Shanghai and Hangzhou in China, Hyderabad and New Delhi in India. These rooms enable remote meetings by guaranteeing each participant a presence similar to a physical meeting. Launched in the Engineering & Construction activity, Air Liquide has been gradually expanding the use of these rooms to other Group activities, as well as to interactions with customers, partners and investors. This technology reduces the CO_2 emissions generated by the employee's air transportation. Since their service start-up in 2012, the number of trips saved for the Engineering & Construction activity is estimated at 270 round-trips, or over 500 tons of CO_2 emissions avoided.

Origin of electricity used

Taking into account the different natures of primary energy of the countries where Air Liquide is present, it is possible to present the breakdown of the origin of the electricity used worldwide. The Blue Hydrogen® program is currently the main Group initiative on developing the use of renewable energy (see. Innovation section – page 105).

Origin of electricity used in 2012 [(a)]



ENERGY EFFICIENCY OF LARGE PRODUCTION UNITS

Created from an invention that considerably reduced the energy used to separate air gases, Air Liquide has always been involved in preserving the environment and natural resources. The Group has initiated an approach to steadily reduce the environmental footprint of its activities and contributes to improving that of its partners and customers. The objective of improving by at least 2% from 2011 to 2015 the energy efficiency of its air separation units, its hydrogen units and the efficiency of liquefied gas deliveries **corresponds to over 300,000 tons a year of direct and indirect CO_2 emissions avoided** [(b)].

Through its Engineering & Construction activity, the Group designs its own production units: it can therefore adapt these units' concept to the customers' needs, technological evolutions and energy costs. It directly and rapidly profits from the improvement of these units' energy efficiency. Air Liquide has been operating air separation units and hydrogen units for many years. It therefore benefits from a virtuous circle of steady improvement through **its control of design and operating experience of these units.** Whenever circumstances permit, old units are replaced by new ones that are more energy efficient.

In addition, the Group builds **larger and larger units** that generally provide more efficient energy through economy of scale.

(a) The calculation takes into account the different natures of primary energy that each country uses to produce electricity (source: International Energy Agency).

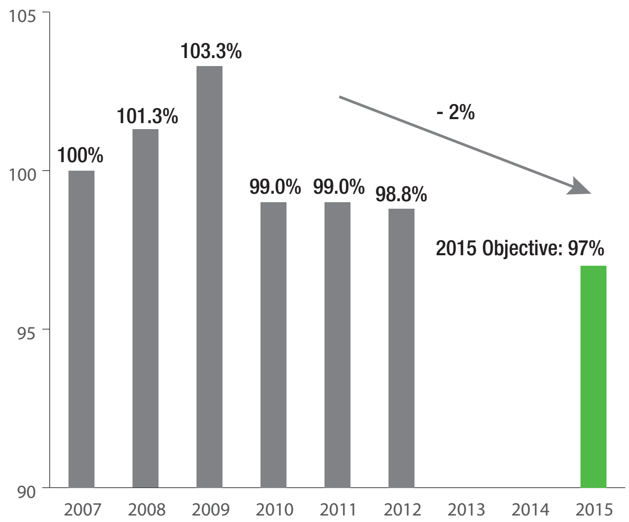
(b) Estimate on the basis of CO_2 emissions in 2012.

Air Liquide has also set up a program to **improve the reliability** of the units' operation that, in addition to providing better service to customers, has direct consequences on energy efficiency. Every shutdown and startup of these units creates an energy consumption sequence. Increasing reliability, *i.e.*, reducing the number of excessive shutdowns, results in better energy efficiency in production units.

Large units are often interconnected through a **pipeline system** supplying a customer industrial basin. This group of interlinked units creates a synergy of their operation both for production and energy consumption. The steady development of the Group's oxygen, nitrogen and hydrogen pipeline systems clearly helps improve its energy efficiency.

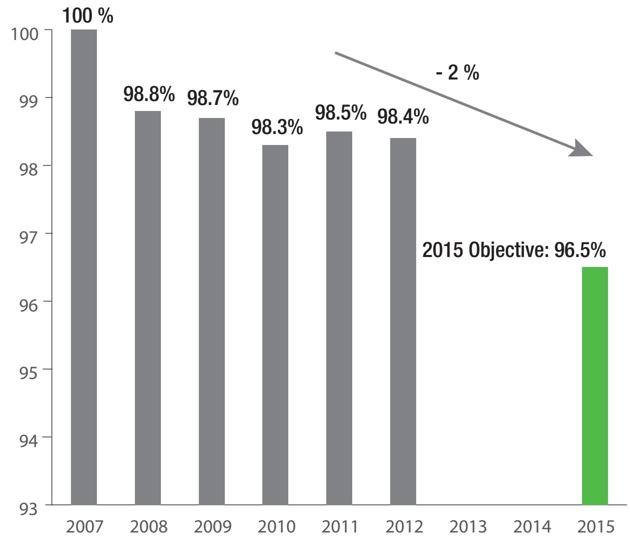
Lastly, more efficient **computer technology** is being rolled out to centrally monitor and run the Group's large units so that **production can be adjusted to the customers' needs.** This initiative leads to substantial savings in energy consumption.

Evolution of energy consumption per m³ of gas produced for air separation units [(a)]



The energy consumption per m³ of air gas produced, *i.e.*, **the energy efficiency of these units, continued to improve in 2012** and is at its best level since 1998.

Evolution of energy consumption per m³ of gas produced for hydrogen and carbon monoxide units [(a)]



The energy efficiency of hydrogen units has slightly improved in 2012.

TRANSPORTATION

For Air Liquide, gas transportation is mainly achieved by pipelines. Supplying large customers *via* pipeline from the Group's production units also considerably limits truck transportation. These pipeline systems, which are environmentally friendly and safe, total over **9,000 kilometers worldwide.** For air gases and hydrogen, which represent most of the volumes the Group delivers, **86% of deliveries are made *via* pipeline or through on-site units. As a result, only 14% of all air gases or hydrogen are delivered by trucks.**

Industrial Merchant activity

In 2012, trucks delivering Air Liquide liquid gases or gas cylinders in the Industrial Merchant activity traveled **428 million kilometers** throughout the world and emitted about **471,000 tons of CO_2**. On-site nitrogen, oxygen and hydrogen units reduced truck deliveries, a source of CO_2 emissions. These on-site units were able to save the **68 million extra kilometers** traveled by trucks and therefore the emission of **68,000 tons of CO_2**.

(a) *Calculated from base 100 in 2007.*

In addition, the Industrial Merchant activity has developed software that **optimizes truck deliveries** to reduce the number of kilometers traveled per ton of gas delivered. In particular, the levels of the customers' stock delivered in liquid form are automatically measured and transmitted to Air Liquide's logistics teams. These data determine the optimal delivery frequencies and itineraries to resupply these customers.

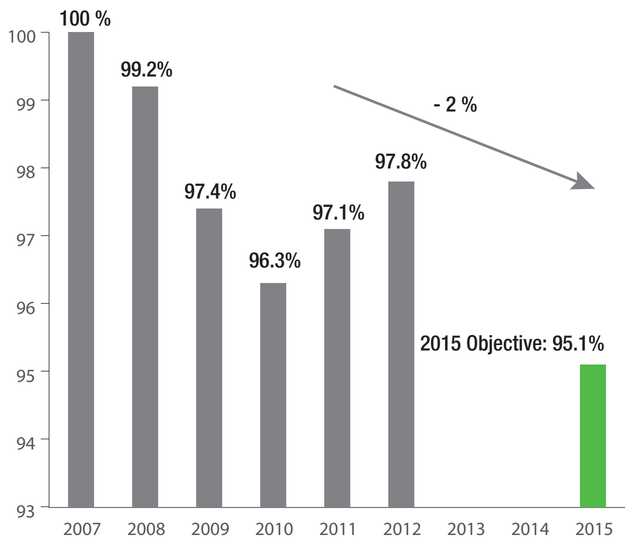
	2008	2009	2010	2011	2012
Kilometers traveled by all vehicles delivering gas in liquid or cylinder form *(in millions of km)*	395	363	361	428	428*
Estimate of CO_2 emissions generated by these vehicles in the Industrial Merchant activity *(in thousands of tons)*	433	399	396	471	471*
Evolution of the distance traveled per ton of industrial gas delivered (oxygen, nitrogen, argon, carbon dioxide) [(a) (b)]	**99.2**	**97.4**	**96.3**	**97.1**	**97.8***
Estimate of truck transport kilometers avoided through on-site customer units *(in millions of km)*	-58	-54	-61	-70	-68
Estimate of CO_2 emissions avoided by these on-site units *(in thousands of tons)*	-63	-58	-66	-70	-68
Percentage of deliveries of air gases and hydrogen *via* pipeline or on-site	84%	85%	86%	86%	86%

(a) In kilometers per ton delivered for the Industrial Merchant activity.

(b) Calculated from base 100 in 2007.

** Indicator verified by the Statutory Auditors.*

Evolution of the distance traveled per ton of industrial gas delivered (oxygen, nitrogen, argon, carbon dioxide)



In 2012, the increase of the distance traveled per ton of industrial gas delivered represented a decrease in the efficiency of truck delivery, **due to problems supplying liquid CO_2**, in particular in Europe and Australia where in-depth maintenance operations were carried out on the main sources of this gas. Delivery vehicles traveled more kilometers to stock up and supply customers. Nevertheless, over the last 10 years, the energy efficiency of truck deliveries has improved by over **4%**.

Air Liquide innovates for cleaner and quieter refrigerated transportation with the Blueeze™ technology

In France, refrigerated transportation is handled by 66,000 refrigerated trucks including 34,000 trailer trucks. Each day, this fleet delivers thousands of tons of fresh and frozen products, a large part of which goes to metropolitan areas. Today's refrigerated trucks produce cold by means of a refrigerating unit run by a diesel engine. With Air Liquide's Blueeze™ technology, chilling inside the truck is done by the circulation of liquid nitrogen at -196°C, in a totally airtight exchanger that can be adjusted to within 1°C. This safe and innovative solution reduces greenhouse gas emissions since its carbon footprint is limited to the very small amount of waste generated by nitrogen production and also reduces noise pollution because this system is silent, unlike the traditional diesel engine system. This innovation by Air Liquide decreases the environmental impact of customers and improves the acoustic comfort of users and local residents and businesses..

Healthcare activity

In 2012, the total number of kilometers traveled for deliveries of gas cylinders for the Home Healthcare activity was **141 million kilometers**. The quantity of CO_2 emitted for these deliveries was **35,000 tons** [(a)]. The number of kilometers traveled for the delivery of medical gases to hospitals [(a)] amounted to 20,000 million kilometers, which represented **17,000 tons of CO_2** in 2012.

	2012
Transportation Home Healthcare activity	
Kilometers traveled *(in millions of km)*	141
Associated CO_2 emissions *(in thousands of tons)*	35
Transportation Medical Gases activity	
Kilometers traveled *(in millions of km)*	20
Associated CO_2 emissions *(in thousands of tons)*	17
TOTAL KILOMETERS TRAVELED HEALTHCARE ACTIVITY *(in millions of km)*	**161**
TOTAL ASSOCIATED CO_2 EMISSIONS *(in thousands of tons)*	**52**

WATER MANAGEMENT

Fresh water used for human activities **represents less than 1%** of the water present on the earth. Its rational use is a subject of growing importance. According to the OECD [(b)], the worldwide demand for water should rise more than 50% by 2050. This increasing demand generates tensions both between countries for the control of supply sources and between activity sectors (agriculture, industry and domestic use). The water stress indicator, as defined by the World Business Council for Sustainable Development (WBCSD), locally measures the quantity of renewable water available in m^3 per person and per year. This data enables risk zones to be identified.

In 2012, among the 276 analyzed sites, 30 were located in a very high water stress zone (<500 m^3 per person per year), **which represents about 5% of the annual water supply of Air Liquide's industrial sites.** More generally, about 100 of the 276 main industrial sites analyzed are located in a high or moderate water stress zone [(c)] [(d)].

In 2012, Air Liquide used 66.4 million m^3 of water broken down as follows:

- 60% by air separation units for cooling air after compression. 70% of this water is evaporated and 30% is treated on-site or by treatment plants in neighboring communes;
- 40% in other industrial processes such as hydrogen production units and cogeneration units. About 80% of the water used by these units is supplied then consumed in the form of steam by Air Liquide's customers.

(a) Extrapolated from the main countries of the Healthcare activity.

(b) Organisation for Economic Co-operation and Development.

(c) A zone is considered in a moderate water stress situation when this volume of renewable water is between 1,700 and 1,000 m^3 per person and per year, and in a high water stress situation when this volume is below 1,000 m^3.

(d) Study conducted by using the Global Water Tool developed by the World Business Council for Sustainable Development (WBCSD).

Air Liquide assumes its responsibility as an industrialist, working on reducing the volumes used. Several notable action plans have been implemented recently in the world in the Group's different activities:

- in São Paolo in Brazil, a city wastewater recovery and treatment system was set up in partnership with 10 other local chemical companies to use this water in industrial processes and in this way totally replace the supplying of water from rivers;
- in Tunisia, work carried out on two air separation units improved the quality of the water discharged from the cooling towers and reduced the annual amount of water supplied by 21%;
- in South Africa, a recovery system for water used to cool acetylene cylinders during their filling reduced consumption at two production sites from 4,000 liters an hour to 4,000 liters a week, a saving of about 30,000 m^3 per year.

These examples are disseminated *via* the Air Liquide internal information networks to help all the subsidiaries make progress in this area.

ENVIRONMENTAL INCIDENTS AND CONSIDERATION OF RISKS RELATED TO CLIMATE CHANGES

Reporting and classification procedures for environmental incidents depending on their seriousness included in the Group's IMS (Industrial Management System) have been rolled out in all the units. Every event reported at the Group level is systematically analyzed so that preventive actions can be created to avoid repetition of the incident. Environmental risks related to industrial processes and risks related to climate change are presented in the Risk factors section – page 26.

Environmental incidents in the industrial and medical gases activity, compared to the traditional chemicals industry, have a very low impact on the environment most of the time. For example, in air gas production, any possible leak of these gases presents absolutely no danger for the atmosphere. Likewise, the water used in Air Liquide's processes are primarily used in cooling and steam production. The risk of possible pollution of the water used is therefore also very low.

The amount of financial provision and guarantees earmarked for environmental risks is 15 million euros.

WASTE AND BYPRODUCTS

Although the quantity of waste and byproducts produced in the Group's industrial and medical gases activity is small, with a concern for the exhaustiveness of the reporting, Air Liquide nonetheless decided to publish the following estimated figures. The main waste and byproducts produced by the Group's production units are lime from the acetylene production units (byproduct), metal waste, oils, paints and solvents. The average recycling ratio of waste [(a)] is over 90%.

Waste and byproducts	**2008**	**2009**	**2010**	**2011**	**2012**
Waste and byproducts that are not dangerous					
■ Annual quantity of lime produced (extracted dry equivalent) by the acetylene production units *(in tons)*	47,000	39,400	36,900	36,800	30,400
% recycled	> 90%	> 90%	> 90%	> 90%	> 80%
■ Metal waste *(in tons)* [(b)]	9,500	6,000	9,200	8,200	9,200
% recycled	> 99%	99%	> 99%	> 99%	> 99%
■ Oils *(in tons)*	700	600	750	750	825
% recycled	88%	89%	90%	84%	91% [(c)]
TOTAL NON-DANGEROUS WASTE AND BYPRODUCTS *(estimate in tons)*	**57,200**	**46,000**	**46,850**	**45,750**	**40,525**
Dangerous waste					
■ Paints and solvents *(in tons)*	200	200	200	150	101
% recycled	8%	30%	45%	54%	43% [(d)]
TOTAL WASTE AND BYPRODUCTS *(estimate in tons)*	**57,400**	**46,200**	**47,050**	**45,900**	**40,626**

(a) Calculation is based on the weight of the waste.
(b) Metal waste that is not dangerous.
(c) In addition, 9% is incinerated.
(d) In addition, 48% is incinerated.

SECONDARY ENVIRONMENTAL INDICATORS

As a complement of the main environmental indicators presented at the beginning of the environment chapter, there are other environmental indicators for the Group but that are of lesser importance and relevance for Air Liquide's business. Among them and with a concern for transparency and exhaustiveness in reporting, Air Liquide presents below the synthesis table of emissions into the atmosphere of nitrogen oxide (NOx), sulfur oxide (SOx), Volatile Organic Compounds (VOC) as well as discharge to water of oxidizable matter and suspended solids.

	2008	2009	2010	2011	2012
Total emissions into the air: NOx (nitrogen oxide) *(in tons)*	3,560	3,910	3,500	3,710	3,940
Total emissions into the air: SOx (sulfur oxide) *(in tons)*	< 300	< 300	< 300	< 300	< 300
Total volatile organic compounds (VOC) emitted into the atmosphere *(estimate, in tons)*	390	300	330	320	124
Total discharge to water: oxidizable matter *(in tons)*	< 1,500	< 1,400	< 1,600	< 1,700	< 1,700
Total discharge to water: suspended solids *(in tons)*	< 1,400	< 1,400	< 1,400	< 1,500	< 1,500

"CARBON CONTENT" OF AIR LIQUIDE'S MAIN PRODUCTS

Taking into account the characteristics of electricity supplied to Air Liquide, the Group has built a model [a] calculating the "carbon content" of its main products in certain countries where the Group is located [b]. These figures include both direct and indirect [c] emissions, those connected to production, cylinder filling and also transportation. These data are increasingly requested by the Group's customers to integrate the carbon content of industrial gases into the global life-cycle analysis of their products.

"Carbon content" of Air Liquide's main products in 2012 (gCO_2/Nm^3 [a])

		France	Germany	Italy	Spain	Sweden	United States [b]	Canada	Japan	China
Oxygen	Oxygen in pipelines [c]	62	293	252	222	16	375	133	307	454
	Liquid oxygen	136	524	469	411	72	670	259	562	796
	Oxygen in cylinders [d]	559	969	843	825	247	1,015	688	1,243	1,118
Nitrogen	Nitrogen In pipelines [c]	20	97	83	73	5	124	44	101	150
	Liquid nitrogen	98	345	315	276	62	440	177	375	518
	Nitrogen In cylinders [d]	519	781	681	683	236	775	603	1,046	827
Argon	Argon In cylinders [d]	650	1,400	1,215	1,152	271	1,569	884	1,696	1,789
CO_2	Liquid CO_2 [e]	59	120	127	107	34	130	62	[f]	[f]

(a) $Nm^3 = m^3$ of gas at atmospheric pressure at 0°C.

(b) In 2012, the calculation of indirect emissions in the United States takes into account the emission factor provided by the International Energy Agency. In 2011, this calculation only took into account the electricity production units supplying Air Liquide. This change in base explains the increase between 2011 and 2012.

(c) At 40 bar, pressure standard for these pipelines.

(d) At 200 bar, pressure standard for cylinders.

(e) Exceptionally, the data on liquid CO_2 are expressed in gCO_2/kg.

(f) Product not distributed by Air Liquide in this country.

In 2012, the emissions generated by primary transportation, *i.e.,* between cylinder filling sites and distribution platforms, were counted, unlike the preceding years. This change in the calculation method explains an increase of about 12% of the carbon content of gases in cylinders.

The average carbon content of **the hydrogen supplied by the Group's units in Europe** was **761 gCO_2/Nm^3**. With a concern for simplification, this calculation was made solely on the units producing hydrogen but not carbon monoxide (CO) or syngas, and the CO_2 emissions related to the steam production of these units were deducted by considering a factor of 176 tCO_2/kt.

(a) The methodology and calculations for the model of these figures were validated in 2008 by Ecofys, a consulting firm specialized in sustainable development. These calculations take into account in each country the different energy sources used to produce electricity (source: International Energy Agency).

(b) These nine countries represent about 80% of the Group's Gas revenue.

(c) Concerning the CO_2 emissions from electricity production consumed by Air Liquide.

BIODIVERSITY

As for biodiversity, the impact of Air Liquide's activities is limited because the Group's production units are generally located on small sites in industrial zones.

Nevertheless, Air Liquide supports the preservation of terrestrial and marine biodiversity through its Foundation, which finances projects favoring this subject throughout the world.

In 2012, the Foundation supported the following projects:

- **the WWF association** to set up a pilot site of the REDD [a] program in the **Tesso Nilo Park, in Sumatra in Indonesia.** The object is to reduce deforestation in the park to decrease CO_2 emissions into the atmosphere;
- **the CNRS** [b] **in French Guiana,** which is conducting a study on chemical diversity in this area of the Amazon, to develop natural insecticides;
- in addition, the Foundation has continued to support biodiversity projects launched in 2010. The goal of one of them is to develop and structure apiculture activities to benefit 850 beekeepers of the **Apodi community in the state of Rio Grande do Norte in Brazil,** an arid region where the local vegetation, called "caatinga", makes up an ecosystem that is very vulnerable to desertification. This project is being conducted by the *Agronomes et Vétérinaires Sans Frontières* (AVSF) [c] association, which has worked since 1977 for the development of agriculture and livestock farming in peasant communities threatened by hunger and exclusion. Profitable very rapidly, apiculture enables the caatinga, a local natural resource, to be developed while **preserving biodiversity through pollination by bees.**

Details on indicators for each of the 10 unit types

1. AIR SEPARATION UNITS

Worldwide, Air Liquide operates **309 large air separation units.** These units produce oxygen, nitrogen and argon, with some sites producing rare gases like krypton and xenon.

These **factories "without chimneys"** do not use any combustion processes. Since they **discharge almost no CO_2**, sulfur oxide (SOx) or nitrogen oxide (NOx) emissions, they are particularly environmentally friendly. They consume electricity almost exclusively: worldwide, they use about **3,000 MW** each instant, the equivalent of the production of two nuclear power plant units. Their cooling systems require back-up water.

Air separation units	2008	2009	2010	2011	2012
Number of production units	257	265	287	298	309
Annual electricity consumption *(in GWh)* (a)	22,235	20,141	23,774	25,398	26,203
Evolution of energy consumption per m³ of gas produced (b) (c)	**101.3**	**103.3**	**99.0**	**99.0**	**98.8***
Indirect GHG emissions *(in thousands of tons of CO_2)*	7,612	7,105	8,893	10,158 (d)	10,364
Annual make-up water *(in millions of m³)* (e)	34.6	33.2	36.7	37.7	37.9
Make-up water per m³ of gas produced (c)	**97.6**	**104.1**	**102.0**	**97.2**	**96.8**

(a) *Also including small volumes of purchased steam.*

(b) *Gases produced (oxygen, nitrogen, argon) calculated in m³ of equivalent gaseous oxygen.*

(c) *Calculated from base 100 in 2007.*

(d) *Value recalculated in 2012 taking into account the reference provided by the International Energy Agency. The reported value in 2011 was 9,568 thousand tons.*

(e) *Excluding the energy consumption of units with an open and closed cycle water cooling system.*

* *Indicator verified by the Statutory Auditors.*

(a) *The United Nations REDD (Reducing Emissions from Deforestation and Forest Degradation) program aims an encouraging the preservation of forests through financial incentives offered to developing economies that reduced their greenhouse gas emissions from wooded areas and that invest in carbon emission reduction projects.*

(b) *National Center for Scientific Research (France).*

(c) *Agronomists and Veterinarians without Borders.*

2. HYDROGEN AND CARBON MONOXIDE PRODUCTION UNITS

Worldwide, Air Liquide operates **43 large hydrogen and carbon monoxide production units.** These units also produce steam for certain customers. They primarily use natural gas as a raw material and certain amounts of water required for the reaction that produces hydrogen. Carbon monoxide is an indispensable raw material in the chemical industry for producing plastic materials. The **desulfurization of hydrocarbons** to produce sulfur-free fuels is one of the main applications for hydrogen. These units emit CO_2 and nitrogen oxides (NOx) but produce practically no sulfur oxide (SOx). They also consume electricity and their cooling systems require make-up water.

In 2012, the hydrogen Air Liquide supplied to refineries throughout the world resulted in **avoiding about 810,000 tons of sulfur oxide emissions being discharged into the atmosphere,** which is more than twice as much as all the sulfur oxide emissions from a country like France.

Hydrogen and carbon monoxide units	2008	2009	2010	2011	2012
Number of production units	38	36	39	41	43
Annual thermal energy consumption *(in LHV Terajoules)* (a)	102,717	95,306	119,205	128,075	146,525
Annual electricity consumption *(in GWh)*	518	478	620	700	823
Evolution of energy consumption per m³ of gas produced (b) (c)	**98.8**	**98.7**	**98.3**	**98.5**	**98.4***
Emissions into the air: CO_2 *(in thousands of tons)*	4,226	3,923	4,875	5,202	6,067
Annual process water consumption and water supply *(in millions of m³)*	10.6	10.2	13	11.8	13.1
Emissions into the air: NOx (nitrogen oxide) *(in tons)*	860	750	850	800	870
Emissions into the air: SOx (sulfur oxide) *(in tons)*	< 250	< 250	< 250	< 250	< 250

(a) LHV: Lower Heat Value, which includes the fact that energy from water vaporizing in fuel is not recovered.

(b) Hydrogen and carbon monoxide.

(c) Calculated from base 100 in 2007.

* *Indicator verified by the Statutory Auditors.*

3. COGENERATION UNITS

Worldwide, Air Liquide operates **17 cogeneration units.** These units produce steam and electricity simultaneously. They consume natural gas and water, most of which is converted into steam for customers. The steam can be condensed by these customers and then reused in the cogeneration unit. In most cases, the electricity produced is supplied to the local electricity distribution network. Combustion of natural gas produces CO_2 and leads to nitrogen oxide (NOx) emissions, but practically no sulfur oxide (SOx) emissions.

The cogeneration units are more energy efficient concerning CO_2 emissions than separate production units for electricity and steam. They therefore help reduce CO_2 emissions in the industrial basins they supply. In 2012, the Group's cogeneration units avoided **919,000 tons of CO_2** emissions being discharged into the atmosphere, so they were about 16% more efficient than the separate production of electricity and steam.

Cogeneration units	2008	2009	2010	2011	2012
Number of production units worldwide	18	18	17	17	17
Annual natural gas consumption (or thermal energy) *(in LHV Terajoules)* (a)	74,168	87,642	84,763	84,654	82,308
Annual amount of CO_2 emissions into the atmosphere prevented through cogeneration units (b) *(in thousands of tons)*	**-562**	**-761**	**-804**	**-981** (c)	**-919**
Emissions into the air: CO_2 *(in thousands of tons)*	4,161	4,917	4,755	4,749	4,617
Annual water supply *(in millions of m³)*	11.5	13.5	13.1	14.6	12.8
Emissions into the air: NOx (nitrogen oxide) *(in tons)*	2,700	3,160	2,650	2,910	3,070
Emissions into the air: SOx (sulfur oxide) *(in tons)*	< 50	< 50	< 50	< 50	< 50

(a) LHV: Lower Heat Value, which includes the fact that energy from water vaporizing in fuel is not recovered.

(b) Calculation takes into account the primary energy source that each country uses to produce electricity (source: International Energy Agency).

(c) Values recalculated in 2012 taking into account the change in reference provided by the International Energy Agency. The value published in 2011 was 793,000 tons.

4. ACETYLENE PRODUCTION UNITS

Worldwide, Air Liquide operates **53 acetylene production units** (a gas used mainly in welding and metal cutting). 51 of them produce this gas through the decomposition of a solid – calcium carbide – using water. Two units fill cylinders with this gas, which is supplied by another industrial company. This process produces lime, which is generally recycled (at over 90%) in industrial and agricultural applications (see. paragraph on waste and byproducts).

Acetylene units	2008	2009	2010	2011	2012
Annual electricity consumption *(in GWh)*	10	10	10	11	11
Annual water consumption *(in millions of m^3)*	0.4	0.3	0.3	0.2	0.2
Annual calcium carbide consumption *(in thousands of tons)*	41	34	32	31	28 [b]
Estimate of emissions of volatile organic compounds (VOC) into the air *(in tons)* [a]	140	150	140	130	120

(a) Losses of acetylene and acetone into the atmosphere.

(b) The ratio between electricity consumption and calcium carbide consumption changed between 2011 and 2012 due to increased activity at two sites where acetylene is supplied by another manufacturer.

5. NITROUS OXIDE PRODUCTION UNITS

Worldwide, Air Liquide operates **eight nitrous oxide production units.** Nitrous oxide is used primarily as an anesthetic gas in the healthcare sector and as a sweetening agent in the food industry. It is produced from ammonium nitrate in solid form or as a solution in water. The Group's policy on reducing greenhouse gases emitted into the atmosphere has seen results, with a **decrease of almost 70% of these emissions in five years.**

Nitrogen oxide units	2008	2009	2010	2011	2012
Annual electricity consumption *(in GWh)*	6	5	6	6	6
Annual water consumption *(in millions of m^3)*	0.1	0.1	0.1	0.1	0.1
Annual ammonium nitrate consumption *(in thousands of tons)*	20	19	21	21	22
Emissions of nitrous oxide into the air *(in tons)*	550	410	430	340	160 [a]

(a) Which corresponds to the equivalent of 49,600 tons of CO_2.

6. CARBON DIOXIDE LIQUEFACTION AND PURIFICATION UNITS

Worldwide, Air Liquide operates **64 carbon dioxide liquefaction and purification units.** Carbon dioxide has many industrial applications but is used mainly in the food industry to deep-freeze foods or to produce carbonated beverages.

Carbon dioxide is most often a byproduct of chemical units operated by other manufacturers. In some cases, it is found naturally in underground deposits. It is purified and liquefied in Air Liquide units, which consume electricity and cooling water. In this way, carbon dioxide is reused for other industrial applications instead of being directly emitted into the atmosphere.

Carbon dioxide liquefaction and purification units	2008	2009	2010	2011	2012
Annual electricity consumption *(in GWh)*	375	411	420	450	450
Annual water consumption *(in millions of m^3)*	1.3	1.7	1.8	1.8	1.4

7. HYGIENE AND SPECIALTY INGREDIENTS PRODUCTION UNITS

Hygiene and specialty ingredients production units are located at **six sites** in France, Germany and China and belong to the subsidiaries Seppic (specialty ingredients) and Anios and Schülke (hygiene). Air Liquide experts work closely with hospitals to help them reduce the risk of nosocomial infection and contamination through the products the Group has developed. After the sale at the end of 2011 of two of this activity's industrial sites in Lyon in France and Antwerp in Belgium, the environmental indicators notably dropped compared to 2011, in particular, the volatile organic compounds emissions, mainly generated by these two sites.

These units consume natural gas, electricity and water. Combustion of natural gas produces small amounts of CO_2.

Hygiene and specialty ingredients units	2008	2009	2010	2011	2012
Annual electricity consumption *(in GWh)*	22	21	22	24	19
Annual thermal energy consumption *(in LHV Terajoules)* (a) (b)	274	234	272	266	145
Air emissions: CO_2 *(in thousands of tons)*	10	9	10	10	8
Air emissions of volatile organic compounds (VOC) *(in tons)*	250	150	190	190	4
Annual water consumption *(in millions of m^3)*	0.6	0.4	0.5	0.5	0.3
Discharge to water: oxidizable matter *(in tons)*	< 1,000	< 800	< 1,000	< 1,000	< 1,000
Discharge to water: suspended solids *(in tons)*	< 100	< 100	< 100	< 100	< 50

(a) Including thermal energy corresponding to steam purchases.

(b) LHV:Lower Heat Value, which includes the fact that energy from water vaporizing in fuel is not recovered.

8. ENGINEERING & CONSTRUCTION UNITS

The **Engineering & Construction units** taken into account in this reporting are located at **five sites,** in France, China, Japan and India. They are mainly units for the construction of air separation columns and cryogenic tanks. Lurgi, a Group subsidiary, has enabled the Group to have a portfolio of engineering technologies, in particular in production processes for hydrogen and syngas, biofuels (bioethanol, biodiesel) and methanol. In addition, Lurgi is one of the world leaders in sulfur recovery processes.

Engineering & Construction units	2008	2009	2010	2011	2012
Annual electricity consumption *(in GWh)*	10	11	11	10	8
Annual water consumption *(in millions of m^3)*	0.1	0.1	0.1	0.1	0.1
Annual consumption of raw materials *(in thousands of tons)* (a)	7.7	4.5	4.5	4	4.6

(a) Mainly metals.

9. WELDING EQUIPMENT AND PRODUCTS PRODUCTION UNITS

The **Welding equipment and products production units** are mainly located on **13 sites** in the world. They are welding equipment assembly (electric welding units, torches, regulators) or welding consumables (electrodes, solid and flux-cored welding wire) production units.

Welding equipment and products production units	2008	2009	2010	2011	2012
Annual electricity consumption *(in GWh)*	68	49	52	54	49
Annual thermal energy consumption *(in LHV Terajoules)* (a)	218	166	160	177	165
Emissions of CO_2 into the air *(in thousands of tons)*	12	9	9	10	9
Annual water consumption *(in millions of m^3)*	0.5	0.4	0.5	0.4	0.5
Annual consumption of raw materials *(in thousands of tons)* (b)	170	116	130	136	127

(a) LHV: Lower Heat Value, which includes the fact that energy from water vaporizing in fuel is not recovered.

(b) Metals and materials for the production of welding products.

10. PRINCIPAL RESEARCH & DEVELOPMENT CENTERS AND TECHNICAL CENTERS

The **principal Research & Development centers and technical centers** [(a)] are located at **six sites** in France, Germany, the United States and Japan. Although these centers' environmental impact is very low compared to other Group units, it was nevertheless decided to present their environmental impact.

Over **60% of the Research & Development budget** is directly earmarked for **protecting life** and **environmental issues:** saving energy, producing in a cleaner way, developing energies of the future.

Research & Development centers and technical centers	2008	2009	2010	2011	2012
Annual electricity consumption *(in GWh)*	8	13	9	8	9
Annual thermal energy consumption *(in LHV Terajoules)* [(a)]	18	33	34	26	34
Emissions of CO_2 into the air *(in thousands of tons)*	1	2	2	2	2
Annual water consumption *(in millions of m^3)*	0.02	0.02	0.01	0.01	< 0.01

(a) LHV: Lower Heat Value, which includes the fact that energy from water vaporizing in fuel is not recovered.

Product stewardship

Air Liquide has set up procedures to decrease its products' impact on the environment, health and safety, in particular for substances like oxygen, hydrogen and the gases used in Electronics. Product stewardship is concretely carried out by:

- the identification of physical and chemical, toxicological or ecological dangers related to certain products;
- the evaluation of risks during different phases of production, transportation and storage from raw materials to finished products;
- the implementation of systems guaranteeing customers and patients' safety during the handling of products and their incorporation into the customers' industrial processes.

EUROPEAN REACH REGULATION

REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) is a European Union regulation (therefore directly applicable in the Union's member states) that governs the registration, evaluation and authorization of chemical products produced in or imported to the Union. Any chemical substance imported to or manufactured in Europe of over one ton a year must be registered with the European agency ECHA. Each manufacturer or importer must have its own registration. The rule is part of the responsible product management approach developed by the chemicals industry.

The European REACH regulation went into effect on June 1, 2007 and registration and authorization procedures were spread over about 12 years for products already on the market.

Air Liquide's main products such as oxygen, nitrogen, rare gases, CO_2, hydrogen and helium are excluded from the scope of REACH. Until now, four products (carbon monoxide, acetylene, methanol [(a)] and lime [(b)]) have been registered in compliance with the schedule established by this regulation. Nitrous oxide and a few specialty gases in the Electronics business such as nitrogen trifluoride and silane must be registered by June 1, 2013 for annual quantities between 100 and 999 tons.

In addition, the Specialty Ingredients activity falls under the REACH regulation for about 35% of its revenue. Depending on the annual tonnage imported or manufactured, these products must be declared in compliance with the regulation at the latest on June 30, 2018.

Air Liquide must also make sure that the raw materials it uses are in compliance with the REACH regulation.

In 2012, Gas revenue concerned by REACH represented less than 6% of the Group's revenue.

CUSTOMER SAFETY IN PRODUCT USE

Air Liquide makes sure that its customers, patients and subcontractors know how to correctly use its products and equipment and are aware of the related risks, especially through specific training programs.

(a) Apart from the research centers of the Hygiene and Specialty Ingredients activity, which are included in paragraph 7.

(b) Methanol is the raw material used to produce hydrogen in one of the Group's units.

(c) Lime is a byproduct of the acetylene activity (see. paragraph of the Report on the acetylene units).

In addition, the Group constantly updates safety information on its products through product safety data sheets and also fulfills the requirements of national and international directives (REACH) – registration, evaluation and authorization of chemical substances; GHS – Globally Harmonized System of Classification and Labelling of Chemicals). This information is available in the Air Liquide Gases Encyclopedia, accessible on the Group's Internet site at the following address:
http://www.airliquide.com/our-offer.html

A specific example of responsible product management: the Specialty Ingredients activity

SEPPIC, an Air Liquide subsidiary in the Healthcare activity, develops and markets a broad range of **specialty ingredients in the health sector** – excipients and active ingredients – for the cosmetic and pharmaceutical markets and vaccines, whose raw materials partially come from plants. SEPPIC's strategy is based on a "green" innovation and the constant concern for minimizing its activities' environmental impact. To meet these goals, SEPPIC has created innovative tools: eco-design, life-cycle analysis (LCA) and the global Carbon Assessment.

- Eco-design is an analytical method for creating new products with a low impact on the environment during their entire life cycle, but also for improving the manufacturing of existing products. The method SEPPIC has chosen consists in evaluating projects using a grid of 12 environmental criteria based on "green chemistry" principles like the use of plant-based raw materials, solvent-free processes and the reduction of energy consumption. Eco-design enables safer production for both the user and the environment.
- In 2012, SEPPIC carried out, for the first time, a life-cycle analysis on a "green" emulsifier [a] used in cosmetics and pharmaceuticals. This methodology, certified by the international standard ISO 10444 specific to the LCA methodology, consists of a detailed analysis of a product's environmental impacts from raw material extraction to its end use by the consumer. The life-cycle analysis goes beyond the greenhouse gas emissions assessment because it takes other environment impacts into account like the consumption or acidification of water resources that can intervene during certain product treatment stages. This first study conducted in 2012 on a product range shows SEPPIC's desire to develop expertise in this area. These LCAs will be done in the future on an increasing share of the product range.
- Last year, SEPPIC carried out a global Carbon Assessment on all its activities, from obtaining its raw materials to making its products available to its customers worldwide. This assessment will be used as the basis of a long-term plan to further reduce greenhouse gas emissions.

Moreover, quality, safety and the environment are continuously the focus of the management of SEPPIC's industrial sites, totally certified by the international standards ISO 9001, ISO 14001 and OHSAS 18001 [b].

PRINCIPAL EUROPEAN DIRECTIVES AND REGULATIONS APPLICABLE TO AIR LIQUIDE IN THE ENVIRONMENTAL FIELD

Seveso 2 directive

This European directive focuses on preventing major industrial risks. It applies to any facility where dangerous substances exceed certain quantities. These facilities are divided into two categories according to this quantity: Seveso 2 "high threshold" and "low threshold". In Europe, mainly because of their stocks of oxygen, 90 "low threshold" and 26 "high threshold" Air Liquide sites are involved principally due to stockage of oxygen.

Seveso regulations apply only to Europe but if the Seveso "high threshold" criteria were applied worldwide, 21 other Group sites could be included.

CO_2 emissions quotas

The objective of the European directive ETS (Emission Trading Scheme),which establishes a quota system for greenhouse gas emissions in the European Union, is to decrease these emissions, respecting the Kyoto Protocol. Implementation for CO_2 in the industrial sector began on January 1, 2005. The first phase (2005-2007) only concerned Air Liquide's five cogeneration sites and two hydrogen production sites and the allocated quotas (about 1.2 million tons of CO_2 per year) for this period covered the emissions observed.

(a) Molecule that stabilizes an emulsion between an aqueous phase and a phase composed of lipids.

(b) International standards of quality (ISO 9001), environment (ISO 14001) and safety (OHSAS 18001) management.

For the second period (2008 to 2012), the directive concerned seven cogeneration sites in France, Germany, the Netherlands and Spain and a single hydrogen production site in Belgium. Air Liquide's quotas (about 3.3 million tons of CO_2 per year) covered the anticipated emissions [(a)].

The third period (2013-2020), defined during the revision of the ETS Directive, voted by the European Council in December 2008, broadened the scope of industrial facilities subject to the ETS. For Air Liquide, the application of this directive's measures adds to the sites previously concerned, the Group's large hydrogen product sites in Europe.

Concerning hydrogen production units, the CO_2 emission quotas are mostly allocated for free. Only the emissions that exceed a ceiling calculated on the basis of the most efficient European facilities must be purchased. The detailed calculation of the quotas allocated for free is being finalized by the European Union.

As of January 1, 2013, Air Liquide was required to obtain CO_2 quotas from the market or its customers for emissions from hydrogen production sites not covered by the free allocations as well as for all the emissions from the cogeneration sites.

In California, the AB32 (Assembly Bill 32) directive establishes a CO_2 quota system for industrialists, with the obligation to comply with a cap-and-trade program as of January 2013 and sets emission reduction objectives of 2% per year until 2020. The volume of allocated quotas will be reduced by half as of 2018. This new regulation concerns two hydrogen production sites in this state.

In addition, Australia and the European Union want to make their quota systems compatible by 2018.

New greenhouse gas emissions regulation in France

The application of article 75 of the French law of July 12, 2010, called "Grenelle 2", makes it mandatory for companies with at least 500 employees to establish a greenhouse gas emissions assessment. This assessment, transmitted to the French authorities and published at the end of 2012, concerns emissions in 2011. An action plan explaining the measures planned to reduce these emissions was also included in this assessment. Seven French subsidiaries were concerned in 2012: Air Liquide France Industrie, L'Air Liquide S.A., Air Liquide Engineering, SEPPIC, Air Liquide Welding France, Pharmadom/ Orkyn and Vitalaire. The assessment takes into account all the direct and indirect emissions related to each subsidiary's activity, including emissions at service sites. Electricity, natural gas and other energies used for heating buildings and lighting are also counted in the assessment in the same way as all the production-related emissions. In 2012, the seven subsidiaries concerned emitted 1.6 million tons of CO2 eq.

(a) The amount of the allocated quotas is calculated following the same consolidation rules as the environment and energy indicator reporting.

> ENHANCE BUSINESS PRACTICES AND GOVERNANCE

Commitment

Maintain a well-designed organization and effective decision processes, committed to ethical behavior, appropriate risk management and proactive compliance with internal and external rules and regulations.

2015 objective

- **Maintain, on an operational level in the Group, the risk management process.**
- **Incorporate ethics and/or respect for competition law into training sessions for those whose activity justifies it.**

Key Responsibility Indicators will be established to measure progress on this subject.

The Group endeavors to take into account the interests of its different stakeholders through its decision-making processes as well as in carrying out each of its actions. This approach, inspired by the Group's executive management, guides the action of each unit and employee to ensure the Company's responsible growth.

A corporate citizen

PRINCIPLES OF ACTION

In 2006, the Group formalized its Principles of action, driving the Group strategy and development, in a document that explains its approach to all its key stakeholders. Available in 16 languages, this document was distributed to all the Group's units and can be consulted on the website www.airliquide.com in the section The Group/Ethics, in French and English.

SOCIAL AND ENVIRONMENTAL RESPONSIBILITY

Social and Environmental Responsibility Policy

As a complement to the Principles of action, the Group's policies were completed and regrouped in 2009 in a global reference guide called the BLUEBOOK. This reference guide is accessible to all the Group's employees and concerns the internal information systems that they usually use. These policies are in the form of Procedures, Codes and Reference Guides.

In the BLUEBOOK, the Social and Environmental Responsibility Policy defines the commitments made by the Group in the framework of its activities to promote the respect for and safety of men and women, the protection of the environment, ethics and participation in the economic and social development of the regions in which it operates.

This Social and Environmental Responsibility Policy has implemented a coherent Responsibility and Sustainable Development approach on every level of the Company and defines the orientations on this subject for the subsidiaries and departments. It is available on the website www.airliquide.com in the section The Group/Ethics, in French and English.

Commitment to Human Rights

This policy specifies that Air Liquide respects human rights and the dignity of its employees, subcontractors, temporary workers and suppliers. In this framework, the Group's units notably exclude any form of discrimination, harassment, the use of forced labor or child labor and any undermining of the freedom of association. Air Liquide's policy aims at respecting labor law in all the countries in which it operates, and is therefore considering taking into account the fundamental agreements of the International Labour Office (ILO) on this subject.

EMPLOYEE CODES OF CONDUCT

The Group's subsidiaries are encouraged to implement a local Code of Conduct. This decentralized approach combines respect for local customs and regulations and Air Liquide's ethical commitment. It also helps the subsidiaries to embrace the Group's ethical principles by writing their own Codes of Conduct themselves in their working language. As a result, in 2012, **91%** of the Group's employees belonged to subsidiaries that have a local Code of Conduct. Today, these Codes of Conduct are available in 23 languages.

The implementation of these Codes of Conduct is supported by the Group Guidelines, which are a reference guide to Air Liquide's Social and Environmental Responsibility Policy. These Group Guidelines are based on 10 fundamental principles:

- respect for laws and regulations;
- respect for human beings: health and safety conditions in the workplace, prevention of discriminatory actions, respect for third parties;
- respect for the environment;
- respect for competition law;
- respect for rules on insider trading;
- prevention of conflicts of interest: ties with a competitor, customer or supplier, respect for rules on corruption;
- protection of Air Liquide's activities: protection of information, property and resources;
- transparency and integrity of information;
- internal controls and audits;
- implementation of Codes of Conduct.

Details on these 10 fundamental principles are available on the Group's Internet site.

These Codes of Conduct demonstrate the Group's commitment to respect the regulations concerning its economic activity but also ethical principles such as social rights and the fight against discrimination and harassment.

In addition, since 2007, a Group Ethics Officer has been responsible for providing advice and assistance to the units in applying their Codes of Conduct. He also handles all the questions submitted by employees on implementing these Codes of Conduct.

RESPECT FOR COMPETITION LAW

Instructions and codes at the Group level were established as to proper behavior concerning respect for competition law, especially in Europe and the United States. The most important rules on competition law are also included in the employees' local Codes of Conduct. For some of the Group's activities, Healthcare in particular, specific Codes of Conduct have been developed on competition law as well.

Audits are jointly conducted on a regular basis by the Group's internal audit departments and an external attorney. They carry out tests and interviews to identify practices at risk in this area or deviations.

Finally, awareness-raising meetings on compliance with competition law are regularly held throughout the Group.

FIGHT AGAINST CORRUPTION

In 2009, the Group formalized an anti-corruption Code of Conduct that was made available to all the subsidiaries. This code, which is linked to the Social and Environmental Responsibility Policy of the BLUEBOOK, provides a reminder of the laws on the fight against corruption and deals with relations with intermediaries, particular cases such as mergers, acquisitions and partnerships, types of payments requiring particular attention, as well as administrative and accounting traceability requirements.

To strengthen the rollout of this anti-corruption Code of Conduct throughout the Group, Air Liquide launched a training program in 2010 dedicated to disseminating knowledge of the anti-corruption Code of Conduct and its good practices to the Group's employees. This training course is now an integral part of the Air Liquide University program and is specifically aimed at sales and procurement teams as well as managers. It has been gradually rolled out throughout the Group.

Once detected, the most significant cases of fraud and deviations are transmitted to the Audit Committee of the Board of Directors, as well as the investigative and treatment measures taken for these situations.

Responsible procurement in the Group

Air Liquide's responsible procurement approach is an integral part of the Group's Responsibility and Sustainable Development approach.

The Group's **Responsible Procurement Policy** makes use of several tools:

- First, the **buyers' Code of Conduct,** which is a code that is part of the Group's procurement policy, spells out the ethical principles of sustainable development on which procurement is based. Translated into 13 languages, this code specifies that suppliers must be transparently and fairly evaluated and that they are bound to respect Air Liquide's Responsibility and Sustainable Development Commitments.
- In addition, sustainable development clauses are being gradually included in new Group **framework contracts.** These clauses allow for the possibility of conducting external audits at the suppliers and subcontractors concerned. They also include compulsory reporting elements from the supplier, in particular on safety and energy and water consumption.
- Since 2009, the Responsible Procurement Policy has been strengthened by the distribution of a **sustainable development questionnaire,** now accessible to all the Group's buyers who are systematically required to present it to new major suppliers. Certain answers are considered eliminatory: for instance, the absence of a commitment on health and safety, of regular inspections of high-risk tools, of respect for local legislation on minimum wage and of the measurement of energy consumption.

Air Liquide is developing, with all its subsidiaries, this evaluation approach concerning its suppliers, with the support of a partner specialized in responsible procurement. A new campaign was carried out in 2012 with 150 suppliers. The evaluation includes the following themes: the Environment, Social issues, the Ethics of Business and these suppliers' own procurement policy. **This supplier evaluation policy** was formalized in the BLUEBOOK.

Risk mapping on procurement has been carried out and followed up since 2010 to target critical suppliers and determine specific actions to be carried out at these suppliers.

Apart from respect for **human rights** by Air Liquide's employees, the Group considers it important to monitor these rights at its suppliers. To prevent these risks, the Group conducts CSR (Corporate Social Responsibility) analysis with its main critical suppliers. The methodology of these analyses is described in an internal procedure that every Group employee can consult in the BLUEBOOK. These analyses primarily concern environmental and social questions, notably on monitoring human rights, including excluding child labor and all forms of forced labor, discrimination, working conditions and freedom of association.

Training sessions on responsible procurement for the Group's buyers continue to be offered as in the preceding years.

In addition, in July 2012, Air Liquide organized in Asia, in partnership with international companies and customers of the Group, an information session with 10 suppliers considered at risk. Tailored action plans were proposed according to these suppliers' level of maturity on social, ethical and environmental risks.

A worldwide campaign was also launched at the end of 2012 to reevaluate suppliers identified as being at risk.

The total amount of **subcontracting** for the Air Liquide Group was 1,486 million euros in 2012. Subcontracted activities are mainly those that are not core businesses of the Group, such as haulage, that require specific resources or that can be called on to handle production overload. The total amount of Group purchases in 2012 was 6.1 billion euros, most of which is related to energy.

Since 2008, Air Liquide has published the number of accidents of its subcontractors and temporary workers. In 2012, there were 142 lost-time accidents of this type, including three fatalities.

Industrial Management System and certifications

In 2004, the Group launched a new Industrial Management System (IMS) to strengthen safety, reliability, the preservation of the environment and industrial risk management. **This system is now rolled out in nearly all the Group's operations (over 99% of the Group's revenue).** An indicator makes it possible to track the percentage of revenue covered by the Group's IMS internal audits. **Between 2008 and 2012, 97 units were audited, representing 93% of the Group's activities** in terms of revenue. In five years, almost the entire Group was audited for the implementation of its Industrial Management System (IMS).

The Group considers that the IMS industrial management system that it specifically created is the best adapted to its activity. Nevertheless, notably to meet the requests of certain customers, other initiatives in the Group are a matter of a quality approach such as the ISO certifications.

The **ISO 9001** quality certifications cover about **76%** of the Group's revenue. Likewise, the **ISO 14001** certifications, an international reference in environmental management, **cover about 29% of the Group's revenue.**

A few years ago, the Group undertook a certification approach concerning healthcare and safety in the workplace called "**OHSAS 18001** certification", which now covers **18%** of the Group's revenue.

Likewise, **environmental incidents,** like **accidents involving personnel safety,** are reported by Air Liquide subsidiaries worldwide. They are analyzed in depth depending on their nature so that prevention measures can be strengthened.

The worldwide **"Responsible Care"** Charter is an initiative of the International Council of Chemical Associations. It formalizes the commitment of the signatories to improve the global performances of the chemical industry in health, safety and protection of the environment. Many Air Liquide subsidiaries had already signed this charter locally. L'Air Liquide S.A. signed it in 2010 on the Group level, confirming many principles that the Company already very largely follows.

	Scope	2008	2009	2010	2011	2012
Estimate of the Group's units revenue covered by an ISO 9001 quality certification	World	75%	74%	71%	76%	76%
Estimate of the Group's units' revenue covered by an ISO 14001 environmental certification	Wolrd	24%	25%	25%	27%	29%
Estimate of the Group's units' revenue covered by an OHSAS 18001 occupational health and safety management system	World		14%	12%	15%	18%

A recognized Responsibility and Sustainable Development approach

Ethibel Sustainability Index

Forum Ethibel, an independent European certification agency for socially responsible investment (SRI), reconfirmed Air Liquide as a component of its Ethibel Sustainability Index® (ESI) Excellence Europe, for the ninth year in a row. The selection, based on the analyses provided by Vigeo, indicates that Air Liquide is one of the most high-performance groups in its sector in terms of social and environmental responsibility.

"Environment Social Governance" (ESG) Vigeo index

In 2012, Air Liquide was included in the **ESG Europe 120** index awarded by the **Vigeo** extra-financial rating agency. It selects the most high-performance companies in their region and activity sector in terms of developing human resources, respecting human right in the workplace and society, protecting the environment, complying with the requirements of ethical business practices, and on the basis of transparency and efficiency in corporate governance and a commitment to the economic and social development of the areas where they do business.

> INNOVATE RELENTLESSLY

Commitment

Innovate relentlessly in order to bring sustainable and cost-effective solutions to the stakeholders, leveraging partnerships with customers, suppliers, academics and communities.

An objective and a related Key Responsibility Indicator reflecting the vitality of the Group's innovation with its customers is currently being developed.

Air Liquide was founded in 1902 on an innovation, a new technology for liquefying and separating air gases, particularly efficient in terms of energy performance. The molecules Air Liquide produces (oxygen, nitrogen, hydrogen, rare gases, etc.) have not changed since the Group's creation. It is innovation that has made the difference and that is responsible for new applications.

Innovating enables Air Liquide to open new markets, expand its business by creating new solutions for its customers and fully play its role *vis-à-vis* society. Anticipating its markets' challenges and innovating permit the Group to progress and ensure competitiveness, in a way that increasingly respects life and the environment.

Innovation remains an essential value for the Company and is an integral part of Air Liquide's culture. It is one of the fundamental components of the Group's Responsibility and Sustainable Development approach.

Recognition of the spirit of innovation

Air Liquide files about 300 patents a year. Certain patented innovations significantly contribute to the Group's development. The Inventors Recognition Program rewards inventors who are responsible for successfully marketing patents. The recognition of technical expertise in the Group is also shown through the Technical Career Ladder (TCL), which has designated 2,000 experts since it was launched in 2003. In 2012, the TCL appointed 100 new international experts. Technical expertise, the spirit of innovation and the creative talent of Air Liquide's men and women are key factors in the Company's growth.

In a world where innovation is rapidly accelerating, where scientific knowledge is more and more widely disseminated, the response to major global issues (healthcare, the environment, resource availability, mobility, urbanization, etc.) is found by pooling the efforts of all the actors in the innovation ecosystem.

More than ever, the dynamic management of interactions with this innovation ecosystem – called "open innovation" – has become an essential component of innovation. Through the development of new collaborations with academic partners, young innovative firms and operational units in contact with customers, this "open innovation" makes it possible to explore new technological opportunities by following the evolution of markets. In 2012, 60% of our Research and Development projects were carried out in cooperation with public-private partnerships.

Innovation and sustainable development

The traditional fossil resources like coal, oil and natural gas are gradually being exhausted while energy needs are constantly increasing. It is therefore indispensable to use energy more efficiently and to development cleaner and renewable alternative energies. Moreover, greenhouse gas emissions damage our environment and have a harmful impact on climate change. **Air Liquide develops, with its partners, solutions that help limit these emissions and produce the energies of tomorrow.**

In 2012, over 60% of the Group's Research & Development budget was earmarked for work connected to life, the environment and sustainable development, focused on the following tracks:

- **Environment:**
  - energy efficiency;
  - hydrogen, clean energy carrier;
  - use of industrial gases in the photovoltaic industry;
  - development of biogas;
  - CO_2 capture and storage;
  - second-generation biofuels.
- **Healthcare and hygiene:**
  - new medical gases to relieve pain and for anesthesia;
  - products and lotions to avoid nosocomial illnesses;
  - homecare for patients suffering from chronic ailments.

The Group's different innovation tracks on energy, the environment and healthcare are more specifically developed and illustrated below.

HYDROGEN, CLEAN ENERGY CARRIER

Air Liquide is capitalizing on the Group's technologies and know-how to develop and roll out competitive solutions for the markets of hydrogen, a clean energy carrier.

Used in a fuel cell, hydrogen combines with the oxygen in air to **produce electricity, rejecting nothing but water.** It can be produced from various energy sources, notably natural gas, but also from renewable energies. **Hydrogen therefore has a strong clean energy production potential.**

In this field, **Air Liquide is already marketing solutions** such as:

- supplying stationary silent energy with zero emissions at the point of use for facilities far from the electricity distribution network, like mobile phone relay antennas;
- supplying captive fleets with their hydrogen filling infrastructure to increase productivity while decreasing emissions at the point of use. The main applications are for fleets of logistics warehouse forklifts, baggage transport vehicle fleets in airports and buses.

These different experiences in hydrogen energy and fuel cell applications confirm this technology's development potential and its competitiveness.

The *Horizon Hydrogène Énergie* (H2E) program

The *Horizon Hydrogène Énergie* (H2E) program, initiated, and coordinated by Air Liquide, was launched in 2008. Its aim is to build a durable and competitive hydrogen energy activity by developing a complete offering from production to distribution. This seven-year program is currently at the halfway point. Since the startup of the H2E program, over a hundred experimental rollouts have been undertaken, enabling 19 industrial partners to capitalize on the feedback and deepen their knowledge of the markets. In addition, a new generation of products was developed from work carried out since 2009 in hydrogen production, storage and distribution, providing a first technological breakthrough. The H2E program also has helped to establish an adapted regulatory framework and included a program of pedagogic demonstrations and actions so that a broad public can become familiar with this new clean energy carrier.

Hydrogen for supplying stationary energy

The Group already markets solutions for supplying stationary silent energy with zero emissions at the point of use and has already rolled out hydrogen fuel cells at over 76 telecom sites around the world, corresponding to 120 MWh delivered over the last three years. These systems have demonstrated excellent availability and have avoided the emission of 700 tons of CO_2 a year.

Hydrogen for vehicles

Hydrogen, as a **clean energy carrier, is one of the solutions to the challenges of sustainable mobility:** reduction of greenhouse gases, local pollution in cities, noise and dependence on fossil fuel.

Air Liquide has made a major commitment to developing technologies to contribute solutions to our society's major issues like that of hydrogen energy. The Group has in-depth knowledge of this sector, which **is very actively developing:** from production to distribution as well as pressurized storage, fuel cells and hydrogen distribution stations.

To develop and roll out a competitive offering for the first hydrogen markets, **Air Liquide has created a specific hydrogen energy organization, based on three of the Group's subsidiaries: Air Liquide Hydrogen Energy** proposes innovative solutions for the implementation and marketing of hydrogen energy. **Axane** and its subsidiary **Hypulsion,** a joint venture with Plug Power, are developing fuel cells for hydrogen applications for electricity production in isolated sites and for forklift trucks. Finally, a division of the Air Liquide Technology branch (AL-AT) develops, installs and runs hydrogen distribution centers for buses, cars and forklift trucks.

After celebrating in February 2012 the opening of the facility to supply forklift trucks with hydrogen for Coca-Cola in California, Air Liquide also inaugurated facilities to supply hydrogen-powered buses in Brugg in Switzerland and Oslo in Norway, in the framework of the European CHIC [(a)] project. The first Air Liquide hydrogen distribution station accessible to the general public was officially opened in September in Dusseldorf in Germany. 10 new hydrogen distribution stations will now be designed, built and rolled out over the next three years, in the framework of a large-scale demonstration project conducted by the German government. By 2015, Germany will have a supply network of at least 50 public hydrogen distribution stations. The Japanese government is also planning the rollout of an infrastructure composed of 100 of these stations by 2015. In this context, Air Liquide plans to create about 20 stations to add to the three already established. One of them, producing hydrogen from wood shavings, is in line with the objectives the Group set with its **Blue Hydrogen®** initiative.

The Blue Hydrogen® initiative

Currently, 95% of the hydrogen the Group produces is made from natural gas. Air Liquide plans, by 2020, to gradually increase the share of hydrogen produced from carbon-free energy sources, *i.e.,* without any CO_2 emissions. The Group's objective is to produce, within this time frame, at least 50% of the hydrogen needed for hydrogen energy applications from carbon-free energy sources by combining:

- the use of renewable energies, water electrolysis and biogas reforming;
- the use of capture and storage techniques for the CO_2 emitted during hydrogen production based on natural gas.

BIOGAS DEVELOPMENT

Air Liquide works on global solutions for the development of biogas with the aim of extracting it from methane that can, for example, be used as a fuel.

Biogas is a renewable energy produced during the anaerobic digestion of the biomass or household waste. It is mostly composed of methane and CO_2. Air Liquide is implementing a process that extracts the methane from biogas by using gas separation membranes that the Group has designed and developed. The biogas produced in this way can be injected into the natural gas network.

Air Liquide proposes development solutions that cover all its customers' needs: purification, injection, cryodistillation and liquefaction of methane. The modular biogas treatment systems the Group has designed and developed to meet this demand cover flows of 100 to several thousand m^3 per hour.

In 2012, Air Liquide installed and started up, on the Methavalor site in Forbach in eastern France, its first biogas purification and injection unit in the natural gas network and, in Lidköping in Sweden, one of the first biomethane liquefaction units in the world. In the United States, the Group also acquired a biogas development site in Conley, Georgia. The Group has to date sold 23 biogas development facilities worldwide.

PHOTOVOLTAICS AND ELECTRONICS

Air Liquide, a leader in gases for the photovoltaics industry

If the solar energy market is in constant growth – about 10% a year –, notably sustained by the demand of China and other Asian countries, the worldwide photovoltaic industry is currently in a consolidation phase. The acquisition or regrouping of firms in this sector by leading companies, mainly based in Asia, has resulted in economies of scale and has considerably reduced the production costs of photovoltaic panels over the last few years. Due to this decrease in costs, in certain cases, photovoltaics have become a competitive energy compared to fossil fuels or nuclear energy. In this industrial consolidation context, Air Liquide, as a recognized supplier for this industry, is interested in proposing innovative solutions to its customers to help them to reduce their own production costs.

Industrial gases are used at every stage of the manufacturing process for photovoltaic cells. Present in over 20 countries with 3,500 dedicated employees, Air Liquide Electronics World Business Line's offering covers all the gas needs of its customers in the photovoltaics industry. The historic partner of this industry, the Group has worked with its customers both on their technological development contributing to research and development by broadening its product offering, but also by investing in production and filling centers in China, Taiwan, Southeast Asia and the Middle East.

Air Liquide has therefore become the **world leader** in this rapidly expanding sector:

- **50% of solar cell manufacturers in the world** are Air Liquide customers;
- most of Air Liquide's sales in this activity are to the **20 leading companies in the sector.**

(a) Clean Hydrogen in European Cities.

Many Research and Development programs are focused on adapting the Air Liquide offering to changes in photovoltaic technologies. In September 2012, Air Liquide inaugurated an experimental solar cell production line at its man research center near Paris in France. The Group is the first in its sector to acquire this production line equipped with crystalline silicon. This technology now represents 88% of the solar industry market. This line can test new molecules and processes adapted to each customer's needs. This research will also increase the cells' performance and reduce their per-watt production cost, in this way helping to strengthen solar energy's competitiveness.

Electronics: launch of an innovative offering that respects the environment

The demand in fluorine cleaning gases, used in high-tech equipment manufacturing processes, for example, for flat screens or solar panels, has strongly increased. Since May 2012, the Group has been offering its customers the possibility of equipping their sites with units that produce gaseous fluorine, required to clean these technologies' production equipment.

This solution was developed with the Solvay group, in a joint venture with global aims that will invest, build and operate the next generation of on-site fluorine production units. A first unit will be installed in 2013 in South Korea.

Fluorine gas will be proposed to these industrialists as an alternative to trifluoride nitrogen, now widely used for these applications. This gas has a global heating power 17,000 higher than that of CO_2, and for this reason was added to the list of regulated products in the framework of the second engagement period of the Kyoto Protocol (2013-2020). Unlike this product, gaseous fluorine has no impact on global warming.

CARBON CAPTURE AND STORAGE OR CCS

The Group's teams are taking part in developing CO_2 storage and capture processes. This means creating technologies, in particular, oxycombustion, to easily capture CO_2 to store it in the subsoil. Oxycombustion enables the CO_2 in fumes from combustion to be highly concentrated and therefore to make its capture, purification and then underground storage by specialized companies much less expensive. Two projects are notably underway, one in Lacq in France and the other in Queensland in Australia, in partnership with the Callide Oxyfuel Services company.

Air Liquide is also building in Port-Jérôme in France a new "Cryocap H2" unit for CO_2 capture and liquefaction on its hydrogen production site.

INNOVATION IN HEALTHCARE

Air Liquide is also innovating in the homecare field. In 2012, this activity launched the rollout of two new products, Nowox™ and Nowapi™, developed to facilitate treatment follow-up at the home of patients with respiratory ailments like chronic obstructive pulmonary disease (COPD). Nowapi™ is a teleobservation system that remotely informs the family doctor about the proper use by the patient of his or her PAP [a] breathing device. Nowox™ is a device that continuously measures the flow of oxygen for patients undergoing oxygen therapy as well as their movements. These data are recorded and a detailed report is automatically transmitted to the doctor through the healthcare service provider. These solutions enrich the Group's range of services dedicated to improving its patients' quality of life.

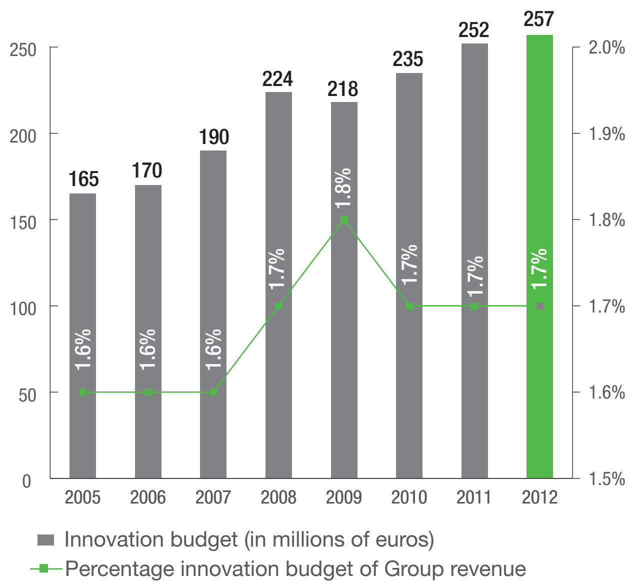
(a) Positive Airway Pressure.

INDICATORS CONCERNING THE GROUP AS A WHOLE

	2012
Number of researchers	1,000 researchers of 35 nationalities
Number of research centers	8
Industrial partnerships	Over 100
Academic collaborations with universities and research institutes	Over 120

	2008	2009	2010	2011	2012
Innovation budget *(in millions of euros)*	224	218	235	252	257
Revenue of the Group *(in millions of euros)*	13,103	11,976	13,488	14,457	15,326
% innovation budget of revenue	**1.7%**	**1.8%**	**1.7%**	**1.7%**	**1.7%**

Innovation budget



Patents	2008	2009	2010	2011	2012
Number of inventions patented	2,640	2,508	2,830	3,109	3,215
New inventions patented during the year	257	280	301	332	316
Patents filed directly in the Group's four main zones of operation [(a)]	129	156	145	144	160

(a) Europe, United States, Japan, China.

> REPORTING METHODOLOGY

Protocol and definitions

In the absence of a relevant and recognized benchmark for industrial gas activities, Air Liquide has created its own protocol to define its reporting methods for human resources, safety and environmental indicators. This protocol includes all the definitions, measurement procedures and collection methods for this information. In line with the Group's commitment to continuous improvement, Air Liquide is gradually making adjustments to its responsible and sustainable development indicators protocol to reflect changes in the Group.

This protocol is based on the general principles defined by the Group with regard to scope, responsibilities, controls and limits, and establishes definitions, responsibilities, tools and data-tracing methods for each indicator. This document is regularly updated. Moreover, this protocol takes into account all the Group's formalized procedures in the framework of the IMS (Industrial Management System).

Scope and consolidation methods

Human resources and environmental indicators are consolidated worldwide for all companies globally and proportionally integrated within the financial consolidation scope pro rata according to the integration percentage.

Safety indicators are consolidated worldwide for all companies in which Air Liquide has operational control or is responsible for safety management.

Apart from these general rules, there are certain specific ones:

- information on the impact of transportation (kilometers traveled by delivery truck, CO_2 emitted) is calculated on the basis of data collected in the main countries where the Group is established around the world;
- information on kilometers saved and CO_2 emissions avoided through on-site air gas production units concerns the subsidiaries globally integrated within the financial consolidation scope;
- environmental and energy indicators for the main types of production units operated by the Group cover about 99% of the Group's revenue in Gas & Services, and 98% of the Group's total revenue;
- production units, concerning environmental and energy indicators, are included in the reporting system as of their industrial service start-up;
- electricity consumption, and the indirect CO_2 emissions related to it, is only taken into account when Air Liquide pays for this electricity. Energy consumption of on-site units, as well as water consumption specific to the sale of treated water (which is not part of the Group's core business) are excluded from the data consolidation scope;
- the segmentation between advanced economies and developing economies for direct and indirect greenhouse gas emissions is established by the Finance Division.

Reporting and responsibilities

The human resources, safety and environmental indicators are produced by several data-collection systems in the Group, each under the responsibility of a specific department:

- human resources indicators included in the Group's general accounting consolidation tool are under the responsibility of the Human Resources Department;
- the energy consumption and CO_2 emissions indicators from the main air separation units, cogeneration, hydrogen and carbon monoxide units are tracked by the Large Industries business line using a dedicated intranet tool;
- as a complement, the collection of environmental and safety data is carried out by the Safety and Industrial Management System Department using a dedicated intranet tool, and includes accident reporting:
  - for all units the data of the Group's accident reporting,

- for the units mentioned above, other environmental indicators (atmospheric emissions, water consumption, discharge to water, etc.),
- for the smaller units (acetylene, nitrous oxide, carbon dioxide units and Hygiene and Specialty Ingredients units), the Welding units and the Engineering & Construction units, the Research & Development centers and the technical centers all indicators (energy use, atmospheric emissions, water consumption, discharge to water, etc.);

- indicators on Industrial Merchant transportation are the responsibility of this business line;
- indicators on the transportation of Medical Gases and Home Healthcare are the responsibility of the Healthcare business line;
- the estimate of the percentage of the Group's revenue where the Industrial Management System (IMS), the ISO standards 9001 and 14001 and the OHSAS 18001 are being rolled out are indicators under the responsibility of the Safety and Industrial System Department;
- indicators for the "carbon content" of the Group's main products are established by the Industrial Merchant Division from energy and transportation indicators. The carbon content of hydrogen is calculated by the Large Industries business line.

Among the subjects covered by the French "Grenelle 2" law, ground plans and the consideration of noise pollution are not relevant for the industrial gases activity given the size of the Group's sites and the noise levels generated. They are therefore not mentioned in this Report.

Controls

Each department in charge of collecting data is responsible for the indicators provided. Control occurs at the time of consolidation (review of changes, intersite comparisons).

Safety and energy indicators are tracked monthly. In addition, audits of environmental data are carried out by the Safety and Industrial System Department on a sample of sites representative of the various types of units monitored. Where the data reported are incoherent or missing, an estimated value may be used by default.

Methodological limits

The methodologies used for certain human resources, safety and environmental indicators can have certain limits:

- the absence of nationally or internationally recognized definitions, in particular for indicators on Managers and Professionals and social performance indicators;
- how representative the measurements taken and necessary estimates are, in particular, concerning indicators on CO_2 emissions avoided, water consumption, kilometers avoided per on-site units and training.

> INDEPENDENT VERIFIER'S ATTESTATION AND ASSURANCE REPORT ON SOCIAL, ENVIRONMENTAL AND SOCIETAL INFORMATION

To the General Management,

Pursuant to your request and in our capacity as independent verifier of L'Air Liquide, we hereby report to you on the consolidated social, environmental and societal information presented in the management report in the section «2012 Corporate Social Responsibility and Sustainable Development Report" issued for the year ending December 31, 2012 in accordance with the requirements of Article L. 225-102-1 of the French Commercial Code *(Code de commerce).*

MANAGEMENT'S RESPONSIBILITY

The Board of Directors is responsible for the preparation of the management report including the consolidated social, environmental and societal information (the «Information») in accordance with the requirements of Article R. 225-105-1 of the French Commercial Code *(Code de commerce),* presented as required by the entity's internal reporting standards (the «Guidelines») and a summary of which can be provided upon request.

OUR INDEPENDENCE AND QUALITY CONTROL

Our independence is defined by regulatory requirements, the Code of Ethics of our profession *(Code de déontologie)* and Article L. 822-11 of the French Commercial Code *(Code de commerce).* In addition, we maintain a comprehensive system of quality control including documented policies and procedures to ensure compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

INDEPENDENT VERIFIER'S RESPONSIBILITY

It is our role, on the basis of our work:

- to attest whether the required Information is presented in the management report or, if not presented, whether an appropriate explanation is given in accordance with the third paragraph of Article R. 225-105 of the French Commercial Code *(Code de commerce)* and Decree no. 2012-557 dated April 2012 (Attestation of presentation);
- to provide limited assurance on whether the Information is fairly presented, in all material aspects, in accordance with the Guidelines (Limited assurance).

We called upon our Corporate Social Responsibility experts to assist us in the performance of our work.

1. Attestation of presence

Our engagement was performed in accordance with professional standards applicable in France:

- We compared the Information presented in the management report with the list provided in Article R. 225-105-1 of the French Commercial Code *(Code de commerce).*
- We verified that the Information covers the consolidated perimeter, namely the entity and its subsidiaries within the meaning of Article L. 233-1 and the controlled entities within the meaning of Article L. 233-3 of the French Commercial Code *(Code de commerce)* and within the limits specified in the "Reporting Methodology" section of the "2012 Corporate Social Responsibility and Sustainable Development Report".
- In the event of the omission of some consolidated Information, we verified that an appropriate explanation was given in accordance with Decree no. 2012-557 dated April 24, 2012.

On the basis of our work, we attest that the required Information is presented in the management report.

2. Assurance report

NATURE AND SCOPE OF THE WORK

We conducted our engagement in accordance with ISAE 3000 (International Standard on Assurance Engagements) and French professional guidance. We performed the following procedures to obtain limited assurance that nothing has come to our attention that causes us to believe that the Information is not fairly presented, in all material aspects, in accordance with the Guidelines. A higher level of assurance would have required more extensive work.

Our work consisted in the following:

- We assessed the appropriateness of the Guidelines regarding their relevance, completeness, neutrality, clarity and reliability, taking into consideration, where applicable, the good practices in the sector.
- We verified that the Group had set up a process for the collection, compilation, processing and control of the Information to ensure its completeness and consistency. We examined the internal control and risk management procedures relating to the preparation of the Information. We conducted interviews with those responsible for social and environmental reporting.
- We selected the consolidated Information to be tested and determined the nature and scope of the tests, taking into consideration their importance with respect to the social and environmental consequences related to the Group's business and characteristics, as well as its societal commitments. This information is:

Subject	Group indicator
Environment	Annual electricity consumption
	Annual thermal energy consumption
	Evolution of energy consumption per m^3 of air gas produced
	Evolution of energy consumption per m^3 of hydrogen produced
	Evolution of the distance traveled per ton of industrial gas delivered
	Kilometers traveled by all vehicles delivering gas in liquid or cylinder form
	Estimate of CO_2 emissions generated by these vehicles in the Industrial Merchant activity
	Total direct greenhouse gas (GHG) emissions
	Total indirect GHG emissions
	Annual water supply
Safety	Accident frequency of Group employees
Social	Headcount end of period
	% women among Managers and Professionals
	% women among Managers and Professionals hired during the year
	Number of hours of training per employee
	% employees having attended a training during the year
	% performance appraisals performed by managers
	% of employees belonging to a subsidiary in which an employee satisfaction survey was conducted in the last 3 years
	Retention rate of Managers and Professionals over a year

Concerning the quantitative consolidated information that we deemed to be the most important:

- at the consolidating entity level and the controlled entities level, we implemented analytical procedures and, based on sampling, verified the calculations and the consolidation of this information;

- at sites level that we selected(a) based on their activity, their contribution to the consolidated indicators, their location and a risk analysis:
  - we conducted interviews to verify that the procedures were correctly applied,
  - we performed tests of detail based on sampling, consisting in verifying the calculations made and reconciling the data with the supporting documents.

The sample thus selected represents on average 16% of the consolidated value of Environment Indicators(b), 17% of the consolidated value of Human Resources Indicators(c) and 21% of the consolidated worked hours upon which Safety Indicators are calculated.

- As regards the other consolidated information published and presented in the sections "Employees", « Communities », « Improve the environmental footprint » and « Enhance business practices and governance(d), we assessed its fairness and consistency according to our knowledge of the company and, where applicable, with interviews or the consultation of documentary sources.
- Finally, we assessed the relevance of the explanations given in the event of the absence of certain information.

COMMENTS ON THE INFORMATION

We wish to make the following comments on the verified Information (limited assurance) above-cited:

- For the "Frequency rate of Group employees", the definition of "worked hours" should be clarified to ensure a more consistent implementation between business units, in particular integrating more frequently overtime and removal of leave of absence and the realization of a reconciliation with Human Resources data.
- For the « Annual water supply», the reporting methodology could be reminded and internal controls strengthened, in particular at site level, to ensure the consistency and reliability of the reported data.
- For Human Resources Indicators, the controls undertaken by business units which consolidate multiple subsidiaries should be strengthened, to ensure the consistency, reliability and completeness of the reported data.
- The census methodology regarding the following indicators should be clarified to ensure consistent application of the guidelines within the Group: the "number of employees having attended a training during the year", the "number of annual performance appraisals completed".

CONCLUSION

Based on our work described in this report, nothing has come to our attention that causes us to believe that the Information is not fairly presented, in all material aspects, in accordance with the Guidelines.

Courbevoie and Paris-La Défense, February 20, 2013

The Statutory Auditors
French original signed by:

Mazars		Ernst & Young et Autres	
Lionel Gotlib	Daniel Escudeiro	Jean-Yves Jégourel	Emmanuelle Mossé

(a) *For Environment Indicators: The air gases networks of Germany, the air separation units of Sarlux 1&2 (Italy), Fos Tonkin (France) and Fos Audience (France), the hydrogen production units of Yeochon (Korea), Rodeo (USA) and J10 Hermes (Singapore), the cogeneration units of Scotford (Canada) and Bayport (USA) and the filling centers of Villaverde (Spain) and Oberhausen (Germany). For Safety Indicators: Air Liquide France Industrie-Large Industrie (France), Air Liquide Spain (Spain), Air Liquide Korea (Korea), Air Liquide Italy (Italy), Air Liquide Industrial US LP (USA), Air Liquide Canada (Canada), Japan Air Gas (Japan), Air Liquide Brazil (Brazil) and Air Liquide Germany (Germany).*

For Social Indicators: JAG (Japan), AL Sanita Italy (Italy), Air Liquide France Industrie (France), AL Brazil (Brazil), AL Germany (Germany), Carbagas (Switzerland), SOAEO, Aqualung and AL Egypt (Egypt).

(b) *On average 10% of the produced air volumes from the air separation units (ASU), 16% of the produced volumes from hydrogen production units (HyCO), 12% of water consumption, 9% of electricity consumption, 25% of thermal energy consumption, 27% of direct CO_2 emissions and 13% of the travelled kilometers by Industrial Merchant.*

(c) *On average 17% of headcount, 14% of women among managers and professionals, 11% of women among managers and professionals hired during the year, 14% of training hours, 15% of employees having attended a training during the year , 19% of employees who had an annual performance review with their supervisor, 6% of resignations among managers and professionals.*

(d) *Except information related to respect for competition law.*

> APPENDIX

Correspondence between Air Liquide's Responsible and Sustainable Development indicators and the indicators of the "Global Reporting Initiative" (GRI) [(a)]

Air Liquide indicators	GRI indicators
Human Resources	
Group employees	LA1
Distribution of employees by geographic zone	LA1
Turnover of employees (leaving the Group)	LA2
Retention rate of Managers and Professionals	LA2
% of women	LA13
% of women among Managers and Professionals	LA13
Average number of days of training per employee and per year	LA10
% of employees who have had a performance review meeting with their direct supervisor during the year	LA12
Diversity (number of nationalities)	LA13
% employees with benefits coverage through the Group	LA3
Safety	
Number of lost-time accidents of Group employees	LA7
Accident frequency of Group employees	LA7
Number of lost-time accidents of subcontractors and temporary workers	LA7
Energy and environment	
Total annual electricity consumption	EN3/EN4
Total annual thermal energy consumption	EN3/EN4
Evolution of energy consumption per m^3 of air gas produced (ASU)	EN6
Evolution of energy consumption per m^3 of hydrogen produced (HyCO)	EN6
Evolution of the distance traveled per ton of gas delivered	EN6
Total annual water consumption	EN8
Total direct greenhouse gas emissions	EN16
Total indirect greenhouse gas emissions	EN16
Total direct and indirect greenhouse gas emissions	EN16
Consumption of materials (calcium carbide, ammonium nitrate, materials for Welding)	EN1
Emissions into the atmosphere (NOx)	EN20
Emissions into the atmosphere (SOx)	EN20
Emissions into the atmosphere (VOC)	EN20
Discharge to water (oxidizable matter, suspended solids)	EN21
Total mass of waste by type and waste treatment	EN22
Transportation	
Estimate of CO_2 emissions by truck delivery	EN29
Estimate of CO_2 emissions avoided through on-site units	EN29
Social	
% employees belonging to a unit with a local Code of Conduct	SO3
Responsibility	
% of the Group sales concerning the units where a customer or patient satisfaction survey has been conducted	PR5

(a) Global Reporting Initiative (GRI): network-based organization that sets out principles and indicators that can be used to measure and report economic, environmental and social performances.

3 Corporate Governance

Illustration: members of the Board of Directors of L'Air Liquide S.A.

> MANAGEMENT AND CONTROL

Board of Directors

Benoît Potier Chairman and Chief Executive Officer Expiration date of term: 2014	**Thierry Peugeot** Director Expiration date of term: 2013 (a)
Thierry Desmarest Director Expiration date of term: 2013 (a)	**Paul Skinner** Director Expiration date of term: 2014
Alain Joly Director Expiration date of term: 2013 (a)	**Karen Katen** Director Expiration date of term: 2016
Gérard de La Martinière Director Expiration date of term: 2015	**Jean-Paul Agon** Director Expiration date of term: 2014
Cornelis van Lede Director Expiration date of term: 2015	**Siân Herbert-Jones** Director Expiration date of term: 2015
Béatrice Majnoni d'Intignano Director Expiration date of term: 2014	**Pierre Dufour** Director – Senior Executive Vice-President Expiration date of term: 2016

(a) Term of office expires at the Annual General Meeting of May 7, 2013.

RENEWAL OF TERM PROPOSED TO THE ANNUAL GENERAL MEETING OF MAY 7, 2013

- Thierry Desmarest, Director
- Thierry Peugeot, Director

CENTRAL WORKS COUNCIL DELEGATES

- Marc Tisseront
- Laurence Dezier

Executive Management and Executive Committee

Benoît Potier Chairman and Chief Executive Officer Born in 1957—French	**Fabienne Lecorvaisier** Group Vice-President, Finance and Operations Control Also supervising Diving activities Born in 1962—French
Pierre Dufour Senior Executive Vice-President Also supervising the Large Industries World Business Line Born in 1955—Canadian	**Guy Salzgeber** Vice-President, Western Europe Born in 1958—French
Jean-Pierre Duprieu Executive Vice-President Also supervising the Healthcare World Business Line and Welding activities Born in 1952—French	**Augustin de Roubin** Vice-President, South America Born in 1953—French
François Darchis Senior Vice-President Research and Development, New Business – Innovation & Technology, Intellectual Property, Engineering & Construction Also supervising the Industrial Merchant World Business Line Born in 1956—French	**Mok Kwong Weng** Vice-President, North-East Asia Born in 1953—Singaporean
Jean-Marc de Royere Senior Vice-President Asia-Pacific Born in 1965—French	**François Abrial** Vice-President, Human Resources Born in 1962—French
Michael J. Graff Senior Vice-President Vice-President, Americas Also supervising Electronics World Business Line, Safety and Industrial Systems Born in 1955—American	**Pascal Vinet** Vice-President, Healthcare Global Operations Born in 1962—French

> REPORT FROM THE CHAIRMAN OF THE BOARD OF DIRECTORS

(prepared pursuant to article L. 225-37, paragraph 9, of the French Commercial Code)

This report has been prepared by the Chairman of the Board of Directors. It was approved by the Board of Directors on February 13, 2013 on the recommendation of the Appointments and Governance Committee.

Composition, preparation and organization of the work of the Board of Directors

As of December 31, 2012, the Board of Directors was comprised of 12 members appointed by the Annual Shareholders' Meeting, including five foreign members and three female members. A Director's term of office is four years. Renewals are staggered. In May 2013, at the close of the Shareholders' Meeting, subject to the approval of the proposed resolutions, the Board of Directors will comprise 11 members, including five foreign members: British, Dutch, American and Canadian. Since May 2006, the Board of Directors has elected to assign the role of Chief Executive Officer to the Chairman.

The continued holding of both functions by the same person is essentially justified by the wish to promote a close relationship between Executive Officers and shareholders, in keeping with Air Liquide tradition. The combined duties are carried out in compliance with the rules of good governance to which Air Liquide has always adhered: high prevalence of independent Directors within the Board of Directors and three specialized Board Committees each chaired by an independent member; breakdown of appointments and remuneration issues between two separate Committees, it being specified that the Chairman and Chief Executive Officer may not be present for any discussions relating to him personally; strengthening of the role of the Appointments Committee with regard to governance which changed its name to Appointments and Governance Committee as from 2010 and which has been entrusted with most of the tasks traditionally assigned to a lead independent Director; a high degree of transparency in the Board's operation, particularly for decisions relating to remuneration which are published on the Company's website after meetings; steady balance in the relations between Executive Management and the Board, mainly due to the limitations on Executive Management's powers, with the Board's approval being required for major transactions.

CODE OF CORPORATE GOVERNANCE

The Board of Directors confirmed that, in keeping with the Group's previous practices, the AFEP/MEDEF Code of corporate governance for listed companies is the code to which the Company voluntarily refers. This Code, as last updated in April 2010, is available on the http://www.medef.com/medef-corporate.html website ("Publications" section, under "Economy").

At their meetings in January, the Appointments and Governance Committee and Remuneration Committee reviewed each of the provisions of the AFEP/MEDEF Code of corporate governance with regard to the Company's current practices and acknowledged that the Company complied with virtually all the provisions.

Pursuant to article L. 225-37 of the French Commercial Code, where applicable, those provisions of the aforementioned Code that were not taken into consideration and the reasons for this are stated in this Report and in the section on the remuneration of the Executive Officers and Directors. A summary is presented in table format on page 149.

The principles governing the professional ethics of Directors, the composition, the role and the rules of operation of the Board and its Committees are for the most part defined in the internal regulations.

PROFESSIONAL ETHICS OF DIRECTORS— RIGHTS AND OBLIGATIONS OF DIRECTORS

- The internal regulations summarize the **main obligations** imposed on Directors.

  The Directors represent all the shareholders and shall act in all circumstances in the Company's best interests.

  Each Director undertakes to meet the obligations imposed upon him by the articles of association and the various legal, regulatory or internal Company provisions and, more specifically, the internal rules relating to the prevention of insider trading or the obligations to report transactions in the Company's shares.

  Each Director undertakes to notify the Board of any or potential conflict of interest with the Company and to refrain from voting in the corresponding deliberation. Each Director is bound by an obligation of secrecy.

  Each Director shall endeavor to take part in all meetings of the Board and the Committees of which the Director is a member, and attend the Shareholders' Meetings.

Each Director shall keep him/herself informed and devote the time and attention required to perform his/her duties.

Under the Company's articles of association, each Director must hold at least 500 registered shares in the Company.

- Furthermore, **an internal memo on the prevention of insider trading** sent to the Directors at the beginning of the year outlines in greater detail the applicable legal and regulatory obligations; it also sets the restrictions for dealing in Company shares by defining abstention periods during which members may not trade in those shares.
- Directors are also informed of the provisions relating to **obligations to report any transactions** involving the Company's shares.

All the provisions governing Directors' rights and obligations are included in the manual for members of the Board of Directors updated annually, the last version having been adopted in June 2012.

COMPOSITION OF THE BOARD OF DIRECTORS

The internal regulations stipulate that:

> "Members are chosen for their skills, their integrity, their independence of mind and their determination to take into account the interests of all shareholders."
>
> "The composition of the Board of Directors shall reflect diversity and complementarity of experience, nationalities and cultures, including a significant number of executive managers or former executive managers; the Board of Directors shall look for persons possessing skills in the following areas: marketing, services, industry, finance, health, research and technology."

The internal regulations include **guidelines,** although not written in stone, **for the Board's composition,** particularly in terms of number (normally between 10 and 12), the balance between (former) executives and external members, the duration of the terms of office (four years, staggering of renewals of terms of office, limiting the proportion of members with more than 12 years of office to one third), age or the proportion of independent members, thus aiming to comply with best practices in terms of corporate governance. Finally, the internal regulations specify that the objective of increasing the number of women on the Board of Directors will be pursued in accordance with the legal principle to institute a balance of male and female Board members. Since 2010, the internal regulations have been published in their entirety on the Company's website.

INDEPENDENCE OF BOARD MEMBERS

Based on the full definition of independence set out in the AFEP/MEDEF Code of corporate governance, the internal regulations define the criteria applied within the Company to assess the **independence** of Board members.

> "A member of the Board of Directors is independent when he/she has no relationship of any kind with the Company, its Group or its management which may interfere with his/her freedom to exercise his/her judgment.
>
> In this frame of mind, the criteria which may provide guidance to the Board in order to classify a member as independent will be as follows:
>
> - he/she is not and has never been an employee or member of the Executive Management of the Company;
> - he/she does not hold office as Chairman, Chief Executive Officer, Chairman or member of the Management Board of a company in which the Chairman of the Board of Directors, the Chief Executive Officer or a Senior Executive Vice-President of Air Liquide is a Director or member of the Supervisory Board;
> - he/she must not have any business relations with the Air Liquide Group which represent a significant part of the business activities (i) of the company of which the Director is a member of the Executive Management or (ii) of Air Liquide;
> - he/she does not have any close family links with the Chief Executive Officer or a Senior Executive Vice-President;
> - he/she must not have been an auditor of the Company during the previous five years."

The criteria used are mainly based on the aforementioned AFEP/MEDEF Code of corporate governance. However, the Board did not consider that terms of office exceeding 12 years would disqualify a Board member from being independent. The industrial gases business is characterized by highly capital-intensive investment projects accompanied by long-term contracts, with a typical length of 15 years for Large Industries. The experience acquired on the Board is therefore an asset to ensure the monitoring of the Group's development cycles over the long-term and enables the Directors to make an informed judgment on growth strategy for the future with complete autonomy and express it freely. Conversely, the Board considered that former employees or officers of the Company may not be considered as independent even if the termination of their duties took place more than five years earlier.

An assessment of the independence of the members is included on the agenda for Board meetings once a year. To support its analysis, the Board uses a chart summarizing the purchases and sales implemented during the previous year between companies of the Air Liquide Group and companies of the Group within which an Air Liquide Director (or proposed Director) also exercises a term of office or executive role. Such figures are weighted against the total purchases and sales of each group to measure their significance. For fiscal year 2012, such chart shows that the sales of the Air Liquide Group to any of the groups concerned or the purchases of the Air Liquide Group from any of these groups do not exceed 0.4% of the overall sales or purchases of the Air Liquide Group or any of the groups concerned.

Following such analysis, the Board determined that, as of December 31, 2012, the following members are independent: Béatrice Majnoni d'Intignano, Thierry Desmarest, Cornelis van Lede, Gérard de La Martinière, Thierry Peugeot, Karen Katen, Paul Skinner, Jean-Paul Agon and Siân Herbert-Jones. Thus, nine of the 12 members of the Board of Directors are independent as of December 31, 2012. At the close of the Shareholders' Meeting of May 7, 2013 called to make a decision on the renewal of the respective terms of office of Thierry Desmarest and Thierry Peugeot, as Alain Joly is not seeking renewal of his term of office, nine out of the 11 members of the Board of Directors will be independent.

ROLE OF THE BOARD OF DIRECTORS

The Board of Directors **determines the major orientations** of the Company's activities. Accordingly, it examines and approves the Group's **major strategic orientations.**

It ensures the implementation of these orientations by Executive Management.

Subject to the powers expressly attributed to Shareholders' Meetings by law and in accordance with the corporate purpose, the Board deals with any issues concerning the smooth running of the Company and manages corporate business pursuant to its decisions.

The internal regulations stipulate that the **specific powers** legally attributed to the Board of Directors include in particular the choice of Executive Officers, the determination of the terms and conditions governing the remuneration and performance of their duties, the convening of Shareholders' Meetings, the determination of the agenda and draft resolutions, the preparation of the financial statements and Annual Management Report as well as the drafting of its operating procedures (formation of Committees, distribution of Directors' fees, etc.). The Board also exercises the **powers granted to it by the Shareholders' Meeting,** particularly with regard to the granting of stock options or the conditional grant of shares to employees, issues of marketable securities, or share buyback or employee savings programs.

RELATIONSHIP WITH EXECUTIVE MANAGEMENT

The internal regulations specify the rules **limiting the powers of Executive Management,** by defining the thresholds above which certain key decisions require prior authorization by the Board of Directors, in accordance with article 13 of the articles of association:

- sureties, endorsements and guarantees for an individual amount in excess of 100 million euros or for an annual cumulative amount above 500 million euros;
- external sales or contributions (to non-controlled companies) of equity investments or lines of business, mergers, demergers or partial business transfers, completed for an individual amount in excess of 250 million euros or for an annual cumulative amount, for each of these categories of transactions, in excess of 400 million euros; external sales or contributions of real estate assets for an individual amount in excess of 80 million euros or for an annual cumulative amount in excess of 150 million euros;
- creation of pledges or security for an individual amount in excess of 80 million euros or for an annual cumulative amount in excess of 150 million euros;
- commitments to invest, acquire investments which will be listed under "Fixed Assets" on the balance sheet, to subscribe to share capital increases for an individual amount in excess of 250 million euros or for an annual cumulative amount in excess of 400 million euros; the Board of Directors is informed, if possible *ex ante* and in any case *ex post*, of operations of the same nature, relating to items that cannot be listed under "Fixed Assets" on the balance sheet for an individual amount in excess of 250 million euros;
- financing operations concerning the Group for an amount likely to substantially alter the Group's financial structure;
- operations likely to substantially alter the Group's strategy.

Furthermore, the Board shall be given prior information in the event of a fundamental modification of the Group's information system leading to an investment exceeding an amount of 250 million euros.

FUNCTIONING OF THE BOARD OF DIRECTORS

Informing the Directors: The internal regulations define the methods for informing the Directors. They specify, in particular, that prior to Board meetings, a file of meeting documentation dealing with key items on the agenda is sent out to Board members. The Chairman and Chief Executive Officer, assisted, if need be, by Executive Management members presents to the Board of Directors a quarterly report on the Company's management, the draft annual and interim financial statements and the various issues requiring the Board's authorization or approval.

Conduct of meetings: The internal regulations define the frequency of meetings and the rules of convening meetings and participation by video-conference or telecommunications.

Formation of Committees: The internal regulations define the purpose and operating procedures of the three Committees set up (see below).

Training measures: The internal regulations stipulate that training relating to the Company's businesses is offered to Directors, particularly through site visits or meetings with senior management executives. More particularly, information on the Group's accounting, financial and operational specificities is offered to members of the Audit and Accounts Committee.

PARTICIPATION OF EMPLOYEE REPRESENTATIVES ON THE BOARD

Two members of the Central Works Council delegated by this Council attend all Board of Directors' meetings with a consultative vote. The delegates receive the same documents as those provided to the Directors on the occasion of these meetings. A preparatory meeting in the presence of the Senior Vice-President and the Secretary of the Board of Directors is systematically held before each Board meeting. This preparatory meeting enables the Senior Vice-President to go through the whole file for the Board meeting with the delegates and comment on the items on the agenda. It offers the delegates the opportunity to raise their questions and make their initial comments. At Board meetings, the delegates are able to express their opinion on the matters discussed.

APPRAISAL OF THE BOARD OF DIRECTORS

The internal regulations stipulate that:

> "The Board will ensure that an evaluation is carried out periodically of its composition, its organization and its functioning as well as those of its Committees. An update will be made by the Board on this topic once a year and a formal evaluation will be carried out under the authority of the Chairman of the Board of Directors every three years."

An evaluation of the functioning of the Board of Directors is carried out every year, alternating between a full appraisal questionnaire leading to a summary showing the replies and the adoption of recommendations for action one year and a questionnaire aimed at making an assessment of the actions implemented in the light of the recommendations made the next year. Following on from the formal appraisals carried out most recently in 2007 and 2009, the functioning of the Board of Directors and its Committees was fully evaluated in 2011. The summary of responses presented by the Chairman of the Appointments Committee to the February 2012 Board meeting revealed an overall very positive assessment of the Board's operation, with again particular emphasis on the freedom of expression within the Board. Among the wishes expressed during this appraisal was the strengthening of the Board's **composition** in terms of competencies (financial) and diversity (increase in the number of female Board members, representation of developing countries). With regard to the Board's **scope of involvement,** it was agreed to intensify the changes in direction undertaken in 2011 to highlight in detail the growth strategy of the industry's various players as well as the Company's Social and Environmental Responsibility strategy, and continue to discuss the share ownership policy on a regular basis. With regard to **informing the Directors,** it was agreed that the organization of meetings in 2012 would take into account promotion of their awareness of the Group's major technological challenges.

A new questionnaire was prepared in 2012 to enable the Directors to evaluate the actions undertaken in the light of the recommendations on agreed action and to make further comments, where applicable.

The summary of replies presented by the Chairman of the Appointments and Governance Committee to the February 2013 Board meeting highlights that the Directors give a very positive assessment with regard to the presentations relating to the development strategy of the various industry players and the Group's strategy made in the autumn, leaving a lot of room for discussion; similarly, the presentation with regard to CSER policy and more specifically shareholder strategy at the meeting in November was acclaimed by the vast majority of the Directors. The work currently being carried out to enhance the diversity of the Board (in terms of expertise, gender and geographic representation) will be continued. A detailed presentation will be made in 2013 on the major technological challenges facing the Group.

Due to the collective nature of the Board Air Liquide is attached to, the assessment questionnaire concentrates on an appraisal of the overall contribution of members to the Board's operation; for this same reason, the internal regulations do not provide for the meeting of external Board members without the presence of internal Directors. The Appointments and Governance Committee is however given the task of assisting the Chairman and Chief Executive Officer, at his request, in his dealings with independent Directors, and acting as an instrument of dialogue aimed at preventing potential situations of conflict on the Board.

THE BOARD OF DIRECTORS' WORK IN 2012

In 2012, the Board of Directors met seven times with an effective attendance rate or attendance rate by telephone of 94% of its members. A full-day meeting on the monitoring of the main strategies was held in September.

The Board's activities related to the following issues:

Monitoring of the Group's day-to-day management

Monitoring of the Group's day-to-day management is carried out particularly by:

- reviewing the **quarterly activity reports** presented by Executive Management; the annual and interim parent company and consolidated **financial statements** in the presence of the Statutory Auditors used to determine the **dividend distribution policy;** the Board of Directors thus authorized the allotment of one free share for 10 existing shares in 2012;
- reviewing regularly in an uncertain international economic and financial context, of the Group's **financial position,** and more specifically: financing (socially responsible bond issue), and debt management strategies;
- reviewing the **minutes** of **Committee** meetings;

- making **decisions,** in particular with respect to the investments necessary for the Group's medium-term development and corresponding financing capacities, the bond program, the stock option and conditional grant of shares to employees plans or the development of employee savings schemes;
- reviewing at each meeting the report on acquisitions, disposals and major projects in progress;
- reviewing **corporate documents:** responding to wishes from the Central Works Council, and reviewing the report on employee-related matters and forward-planning documents;
- preparing the **Annual Shareholders' Meeting** (agenda, draft resolutions, Annual Management Report and other reports or sections contained in the Reference Document prepared or approved by the Board of Directors, responses to shareholders' written questions);
- **human resources issues,** and particularly the implementation of the bonus to share in profits pursuant to the law of July 28, 2011 (May, July); the annual deliberation with regard to the Company's professional equality and equal pay policy pursuant to the law of January 27, 2011 (July).

Monitoring of the Group's main strategies on significant issues

As part of the presentations made by Executive Management and certain senior executives, the Board of Directors closely considered the following in 2012:

(i) **questions relating to strategy** and particularly competitive analysis (September), industrial development strategy, the Group's growth drivers and acquisition and external growth strategy (June and September); development of major projects; the geostrategic consequences and the consequences for the Group of the changes in the energy situation in the United States (November); proposed changes in the Group's operational organization (September, November);

(ii) **governance issues** concerning in particular changes in the rules of corporate governance and the Group's good governance practices (February 2012, September 2012, February 2013), the composition of the Board and changes in composition of the Committees (February, May, July, September); risk management issues (November); and

(iii) **questions relating to the Group's Social and Environmental Responsibility,** particularly share ownership policy in a highly changing regulatory context (November 2012); the report on actions and prospective actions by the Air Liquide Foundation at the time of extension of the term of the Foundation (May, September).

Functioning of the corporate governing bodies

With respect to the functioning of the corporate governing bodies, as well as complying with the AFEP/MEDEF Code of corporate governance, the Company strives to reflect the international environment in which the Group carries out its business.

Concerning Executive Management:

The Executive Management team consists of Pierre Dufour, Director, as Senior Executive Vice-President and Jean-Pierre Duprieu, Senior Vice-President, who assist the Chairman and Chief Executive Officer, Benoît Potier.

Employment contract/corporate office of the Chairman and Chief Executive Officer

In accordance with the AFEP/MEDEF Code of corporate governance, which recommends that Chairmen and Chief Executive Officers of listed companies do not combine an employment contract with their corporate office, Benoît Potier put an end to his employment contract as of May 5, 2010.

Remuneration

The Board determined the remuneration policy applicable to the Executive Officers which is set out in detail in the section on remuneration on pages 137 *et seq.* below.

Shareholding obligation

The rules with regard to the holding of shares set by the Board of Directors are described in detail in the section on remuneration set out below.

Concerning the Board of Directors itself:

Composition

Appointment—Renewal of terms of office:

- After placing on record the decision by Professor Krebs and Jean-Claude Buono not to seek the renewal of their terms of office, the Board of Directors proposed to the Shareholders' Meeting of May 9, 2012 to renew the term of office as Director of Karen Katen and appoint Pierre Dufour as a new Director. At the close of the Shareholders' Meeting, the Board decided to appoint Karen Katen as a member of the Appointments and Governance Committee, Thierry Peugeot as a member of the Audit and Accounts Committee and Jean-Paul Agon as a member of the Remuneration Committee.
- As the terms of office of Thierry Desmarest, Thierry Peugeot and Alain Joly expire at the Shareholders' Meeting of May 7, 2013, the Board duly took note of the decision of Alain Joly not to seek the renewal of his term of office as Director. The Board thanked Alain Joly warmly for his very big contribution to the development of Air Liquide and the attention paid to the relationship with the shareholders. The Board proposed to renew the terms of office of Thierry Desmarest and Thierry Peugeot as Directors for four years.

Directors' fees

The Board set the formula for distributing Directors' fees among its members for 2012 within the budget authorized most recently by the Annual Shareholders' Meeting of May 4, 2011 for a maximum amount of 800,000 euros per fiscal year (see detailed presentation in the section on remuneration on page 141 below).

Appraisal (See above)

- In 2012, the Board carried out an evaluation of its functioning within the scope of a new survey.
- The Board assessed the independence of each of its members.

Several days prior to each of the Board's meetings, a file of meeting documentation dealing with key items on the agenda is sent out to Board members. For material substantive issues, a very comprehensive summary note is prepared. Every meeting then includes a short presentation by the members of Executive Management or the Group Vice-President Finance and Operations Control on all items, leaving a lot of room to exchange views and for discussions. On specific issues such as strategic objectives in September 2012, share ownership policy, risk management policy and the impact of the changes in the energy situation in the United States in November 2012, members of the Executive Committee or senior managers were asked to provide their input. In addition, the Statutory Auditors are involved in meetings where financial statements are reviewed. Presentations give rise to questions and discussions follow before resolutions are put to the vote. Detailed written minutes are then sent to members for review and comment before being approved by the Board of Directors at the next meeting.

THE COMMITTEES

The Board of Directors has set up three Committees:

The Audit and Accounts Committee

As of December 31, 2012, the Audit and Accounts Committee had four members: Gérard de La Martinière, Chairman of the Committee, Paul Skinner, Béatrice Majnoni d'Intignano and Thierry Peugeot. All the members, including the Chairman, are independent.

The Committee members combine experience in business management with economic and financial expertise (see professional careers in the bibliographical memos on Directors on page 160). A former finance inspector, former secretary general of the COB and former member of the Management Board and Vice-President of Finance, Audit and Strategy of the AXA Group, Gérard de La Martinière provides the Committee with his extensive financial expertise and knowledge of stock market regulations.

Composition and purpose as defined in the internal regulations

The Audit and Accounts Committee must be comprised of three to five members of the Board of Directors and at least two-thirds of its members must be independent.

Tasks

"The purpose of the Committee is to prepare the decisions to be taken by the Board of Directors by examining the following issues and reporting on them to the Board:

By receiving reports:

Jointly and separately, in order to compare and combine different points of view, from:

- the Finance & Operations Control and Legal Departments;
- the Audit and Control Department;
- the external auditors.

Concerning the following points:

- existing organization and procedures in the Group;
- their actual functioning;
- how the financial statements and the accounts are drawn up.

In order to reach:

- by comparing and combining the points of view collected and using their business judgment based on professional experience, a **reasonable judgment** concerning:
  1. accounts and accounting principles used (their conformity in relation to the reference standards, a fair and complete reflection of the Group's situation, transparency, readability, consistency over time);
  2. existence and functioning of control organizations and control procedures adapted to the Group, making it reasonably possible to identify and manage the risks incurred and to report on them;
  3. organization of the internal audit function, the plans for assignments and actions in the internal audit field, the findings of these assignments and actions and the recommendations and ensuing measures taken;
  4. choice and renewal of the external auditors, review of the tendering process, opinion on the selection of external auditors and the rotation of audit partners, review of proposed fees, information on the overall fees paid indicating the amount of fees paid for non-audit services.

The Committee:

1. collects the observations of Executive Management on these various issues. It hears the Chief Executive Officer or Senior Executive Vice-Presidents at the Committee's request or at the request of the persons concerned;
2. reports to the Board of Directors on its work, informing it of any problems that may be encountered, observations made to Executive Management and progress made in relation to these observations."

The Committee meets at least three times a year, and always before the Board meetings during which the annual or interim financial statements are reviewed.

An initial verbal report is given to the Board by the Committee Chairman. Written minutes of the meeting, approved by the Committee members, are transmitted to the Directors. The Committee may ask to convene Group employees. It may meet the Statutory Auditors or members of the Internal Control Department in person. It may call on external experts for assistance.

The Audit and Accounts Committee's work in 2012

The Audit and Accounts Committee met four times with an effective attendance rate or attendance rate by telephone of 94% of its members.

- The Committee **reviewed** the consolidated annual and interim **financial statements** and the annual parent company financial statements and took due note of the Company's financial situation, cash flow position and commitments. During the presentation by the Group Vice-President Finance, the Committee more particularly analyzed provisions, "other operating income and expenses", cash flow, taxation, risk exposure and off-balance sheet items. It reviewed the draft analyst presentation relating to the financial statements.
- In addition, the Committee heard the **presentations of the Statutory Auditors** underlining the key results and the accounting options adopted and took note of their conclusions.
- At the beginning of the year, the Committee reviewed the amount of the Statutory Auditors' fees in respect of the prior year.
- The Committee reviewed more specifically the Group's financing policy, debt and liquidity management.
- The Committee also heard regular reports on the main assignments carried out by the **Internal Control Department,** the follow-up of any corrective actions taken and the Internal Control Department's main assignments for the forthcoming year. Within this framework, the Committee reviewed the main points of the Group's **Ethics Plan** (report on the ethics actions for the year in progress; areas of focus for the following year). The Committee also regularly monitored the process for **deployment of the risk management procedure** within the Group. It reviewed the Group's risk map and the changes made to it. The Committee took due note of the section in this Report on internal control and risk management procedures and recommended its approval by the Board of Directors.
- In accordance with longstanding practice in the Group, the Committee is tasked with carrying out the monitoring of the **management** of all the **risks** identified by the Group, even if particular attention is paid to accounting or financial risks; a methodology for the monitoring of each type of risks identified by the Group (including, in particular, the identification of the management and control bodies and procedures) and an appropriate time scale (annual review or regular review at less frequent intervals depending on the type of risks) were defined. At the end of fiscal year 2012, 88% of the risks identified on the risk map that should be regularly reviewed had been covered in the past three fiscal years by the Audit Committee. The work program prepared for fiscal year 2013 should make it possible to cover all the risks identified by the end of 2013.
- In addition, **specific presentations** were made to the Committee on the following matters: actions taken in connection with the monitoring of regulatory developements (June); financing of external growth transactions; the procedures put in place for large industrial project execution (November); pension schemes (July); prevention and treatment of risk of fraud in the management of business practices (November); environmental risk management (July); information systems security (November); following of actions aiming at raising awareness with regard to compliance with antitrust rules and disputes (November).

Several days prior to each meeting, a file of meeting documentation is sent out to Committee members. Each Committee meeting is preceded by a preparatory meeting attended by the Committee Chairman assisted by the Committee Secretary, the Group Vice-President Finance, the Vice-President Group Audit, and if necessary the Group Internal Audit Director, the Vice-President Group Risk Management and the Group executives who will make presentations to the Committee. During the meeting, presentations given with the presence of a member of the Executive Management, either by the Group Vice-President Finance, the Internal Audit Director, the management executive specializing in the area under discussion or the Statutory Auditors during the accounts review meetings are followed by discussions. A verbal report, then written minutes of each meeting, are prepared for the Board of Directors.

The Committee Chairman regularly meets alone with the Vice-President Group Audit and the Statutory Auditors outside the presence of members of Executive Management. He receives the internal audit report summaries. In addition, after presentation meetings for the accounts, Committee members meet alone with the Statutory Auditors without the presence of company representatives.

Considering the presence within the Committee of Directors from abroad, the two Committee meetings with regard to review of the financial statements were held the morning before Board of Directors' meetings; in these circumstances, the financial statements cannot be reviewed by the Committee at least two days prior to the Board's review as recommended in the AFEP/MEDEF Code of corporate governance. However, Committee members are in a position to review the financial statements well in advance through other means (preparatory meeting with the Committee's Chairman more than one week prior to the meeting as provided for above; dispatch of files to Committee members several days in advance).

The Appointments and Governance Committee

As of December 31, 2012, the Appointments and Governance Committee had four members: Thierry Desmarest, Chairman of the Committee, Alain Joly, Cornelis van Lede and Karen Katen. Of the four Committee members, three are independent. The Chairman is independent.

Composition and purpose as defined in the Company's internal regulations

The Appointments and Governance Committee must be comprised of three to five members of the Board of Directors and the majority of its members must be independent. The Chairman and Chief Executive Officer attends Committee meetings and is closely involved in its discussions. However, he may not be present for any discussions of the Committee relating to him personally. The Committee meets at least three times a year. The conclusions of Committee meetings are presented by the Committee Chairman for discussion and decision-making at the next Board of Directors' meeting.

Tasks

Pursuant to the internal regulations, the purpose of the Appointments and Governance Committee is to:

"1. Concerning the Board of Directors:
- make proposals to the Board of Directors for renewal and appointment of Directors. This Committee looks for new members on the basis of its evaluation of the needs and developments expressed by the Board of Directors, and taking into consideration, in particular, the principle of attempting to achieve balanced representation of men and women on the Board of Directors;
- make proposals to the Board of Directors for the creation and composition of Board Committees;
- periodically evaluate the structure, size and composition of the Board of Directors and submit to it recommendations regarding any potential change;
- the Committee periodically reviews the criteria applied by the Board to classify a Director as independent; once a year, it examines, on a case-by-case basis, the situation of each Director or each candidate for the duties of Director in light of the criteria applied and makes proposals to the Board of Directors.

2. Concerning the Chairman and Chief Executive Officer or the Chief Executive Officer, as the case may be:
- examine, as necessary and, in particular at the time of expiration of the term of office concerned, the renewal of the term of office of the Chairman and Chief Executive Officer, or the terms of office of both the Chairman and of the Chief Executive Officer. It also examines, if necessary, the question of whether or not it is appropriate to continue to combine these duties (or to separate them);
- examine the changes in these duties and provide for solutions for their renewal, where applicable;
- examine the succession plan for members of the Executive Management applicable in particular in the case of an unforeseen vacancy;
- examine periodically developments with regard to the Senior Executive Vice-Presidents, hear the Chairman and Chief Executive Officer (or the Chief Executive Officer) on the needs and the potential proposals for their replacement;
- more generally, ensure that it is kept informed by the Chairman and Chief Executive Officer (or the Chief Executive Officer) of planned changes in Executive Management resources (and, in particular, the Executive Committee).

3. Concerning governance:
- monitor the changes in the rules of corporate governance, in particular within the scope of the Code to which the Company refers and inform the Board of Directors of its conclusions; follow up on the application of the rules of corporate governance defined by the Board of Directors and make sure of the information given to the shareholders on this topic;
- prepare the evaluation of the way the Board operates provided for by the internal regulations;
- examine issues of ethics that the Audit and Accounts Committee, the Board of Directors or its Chairman may decide to refer to it;
- ensure the proper functioning of the governance bodies and in particular the transmission of information requested by independent Directors;
- assist, at their request, the Chairman and the Chief Executive Officer in their dealings with independent Directors, and be the instrument of dialogue aimed at preventing potential situations of conflict on the Board.

The Committee can request the assistance of outside experts if necessary. The Company shall provide the Committee in such a case with the corresponding funding."

With regard to governance, the Committee is requested to collectively fulfill the tasks which may traditionally be incumbent on lead independent Directors, by being the instrument of dialogue to assist the Chairman and Chief Executive Officer in his dealings with the independent Directors.

The Appointments and Governance Committee's work in 2012

The Appointments and Governance Committee met four times in 2012 with an effective attendance rate or attendance rate by telephone of 100% of its members.

Concerning the Board of Directors

The Committee reviewed the possible future changes in the composition of the Board of Directors. It recommended proposing the renewal of the terms of office as Directors of Thierry Demarest and Thierry Peugeot.

In accordance with the legal principle of instituting a balance of male and female members on the Board, included in the Board's internal regulations, the Committee continued to coordinate the procedure for the search for and assessment of possible candidates, in particular female candidates, and recommended a timetable making it possible to give priority to the quality of the candidates who will be proposed.

Concerning Executive Management

The Committee looked at the composition of the Executive Committee and its prospects for changes as well as the pool of high-potential young talents (January, March).

Concerning governance

The Committee reviewed the Group's practices with regard to the AMF recommendations published on July 2, 2012 in its Report on General Meetings of Shareholders of Listed Companies and submitted its recommendations to the Board of Directors (September 2012).

The Committee participated in the process of assessment of the Board's operation: updating of the questionnaire; review of the summary of responses and recommendations; report by the Committee Chairman to the Board of Directors (September 2012, January 2013).

The Committee also reviewed the personal situation of each member of the Board with regard to the independence criteria defined in the internal regulations. In this context, it reviewed, in particular, the chart summarizing the purchases and sales implemented during the previous year between companies of the Air Liquide Group and companies of the group within which an Air Liquide Director (or candidate proposed for such duties) also holds a post or a term of office. It issued its recommendations to the Board (January).

Finally, at the beginning of the fiscal year, the Committee reviewed the practices adopted by the Company with regard to (i) the provisions of the AFEP/MEDEF Code of corporate governance and (ii) the recommendations of the AMF's Annual Report on Corporate Governance. It issued its recommendations. It reviewed the draft of this Report and recommended its approval by the Board of Directors (January 2013).

In 2012, the Committee did not have to handle any situation of conflict between the independent Directors and the Chairman and Chief Executive Officer.

The Remuneration Committee

As of December 31, 2012, the Remuneration Committee had four members: Cornelis van Lede, Chairman of the Committee, Alain Joly, Thierry Desmarest and Jean-Paul Agon. Of the four Committee members, three are independent. The Chairman is independent.

Composition and purpose as defined in the internal regulations

The Remuneration Committee must be comprised of three to five members of the Board of Directors and the majority of its members must be independent. The Chairman and Chief Executive Officer may not be present for any deliberations of the Committee relating to him personally. The Committee meets at least three times a year. The conclusions of Committee meetings are presented by the Committee Chairman for discussion and decision-making at the next Board of Directors' meeting.

Tasks

Pursuant to the internal regulations, the purpose of the Remuneration Committee is to:

- "examine the performance and all the components of remuneration including stock options, or other forms of deferred remuneration, pension plans and, in general, the conditions of employment of the Chairman and Chief Executive Officer or both the Chairman and the Chief Executive Officer as well as the Senior Executive Vice-Presidents and make the corresponding recommendations to the Board of Directors;
- propose, where applicable, the remuneration of the Vice-Chairman or Vice-Chairmen;
- examine the remuneration and retirement policy applied to Executive Management and in particular the Executive Committee;
- examine the proposals by Executive Management concerning the granting of stock options and other incentive systems related to the share price to other Group employees and propose their granting to the Board of Directors;
- examine and propose to the Board of Directors the allocation of Directors' fees among Board members.

The Committee can request the assistance of outside experts if necessary. The Company shall provide the Committee in such a case with the corresponding funding."

The Remuneration Committee's work in 2012

The Remuneration Committee met four times in 2012 with an effective attendance rate or attendance rate by telephone of 87.5% of its members.

The Committee submitted proposals to the Board of Directors for the setting of the variable remuneration of Executive Management members for fiscal year 2011, based on developments in the financial results and individual performance appraisals. It made proposals regarding the fixed remuneration and the formulas used to calculate the variable remuneration of Executive Management members applicable for fiscal year 2012 (for further details on all these points, see the section on remuneration on page 137). The Chairman and Chief Executive Officer is not present for any discussions of the Committee relating to him personally. At Board meetings, the Committee Chairman reports on the work of the Remuneration Committee.

The Committee verified the enforcement of the employee profit-sharing scheme in accordance with the December 2008 law on income from employment (September) and reviewed the timing of employee subscription operations with a view to a new operation in 2013.

The Committee reviewed the components of the long-term incentive policy and issued recommendations for changes (March). The Committee recommended at its September meeting, (i) the 2012 plan for the conditional grant of shares to employees (ACAS plan), proposing performance criteria governing the definitive allocation of the shares, and (ii) the 2012 share subscription plan (see corresponding part in the section on remuneration—page 142).

The Committee recommended that Executive Committee members and the Company's Executive Officers should be allowed to benefit from conditional grants of shares (October). It reviewed the draft resolutions to be put to the Annual Shareholders' Meeting on May 7, 2013 aimed at renewing the authorizations to issue stock options and make conditional grants of shares.

The Committee reviewed the pension schemes in force in the Group and recommended changes (January, March, September, and October).

The Committee made recommendations concerning the level of Directors' fees to be allocated in respect of fiscal year 2012 within the scope of the total amount authorized by the Shareholders' Meeting (September).

This work is described in the section on remuneration set out below. After review, the Committee recommended that the Board of Directors approve this section.

At the beginning of the fiscal year, the Committee reviewed the practices adopted by the Company with regard to (i) the provisions of the AFEP/MEDEF Code of corporate governance relating to remuneration and (ii) the recommendations of the AMF's Annual Report on the Remuneration of Executive Officers of Listed Companies and prepared its recommendations (January).

EMPLOYEE PARTICIPATION AT THE SHAREHOLDERS' MEETING

In accordance with article L. 225-37 of the French Commercial Code, the specific terms and conditions relating to the participation of shareholders at the Shareholders' Meeting are set out in articles 5 to 10 and 18 and 19 of the Company's articles of association (set out on pages 315 to 322 of this Reference Document).

FACTORS LIKELY TO HAVE AN IMPACT IN THE EVENT OF A TAKEOVER BID

In accordance with article L. 225-37 of the French Commercial Code, the factors likely to have an impact in the event of a takeover bid are set out and explained pursuant to article L. 225-100-3 of the French Commercial Code on page 326 of this Reference Document.

Internal control and Risk Management procedures instituted by the Company

The Group Control Director was requested by the Chairman and Chief Executive Officer to compile the elements of this report, which was prepared with contributions from several departments (particularly Finance and Operations Control, Group Control, Legal and Safety and Industrial System).

This report was transmitted to the Statutory Auditors and presented to Executive Management, which judged it compliant with existing Group measures. It was approved by the Board of Directors, upon the recommendation of the Audit and Accounts Committee.

The report is based on the "Internal Control and Risk Management Systems Reference Framework", developed under the supervision of the AMF.

In 2012, the Group pursued the actions undertaken in 2011, with more than 70 material Group entities (representing over 90% of consolidated Group revenue) reviewing the appropriateness of their internal control system in relation to the reference framework. These entities also implemented actions aimed to improve the scope and traceability of operating controls. These actions were the subject of audits coordinated between the Group Control Department and the Statutory Auditors to verify their proper implementation. They were monitored by the Group Control Department and the Finance and Operations Control Department, which reported their findings to Executive Management.

INTERNAL CONTROL OBJECTIVES

In addition to the Principles of Action, which reaffirm the Group values for each major zone (shareholders, customers, employees, etc.), the Group's policies are grouped together in an overall Reference Document, the BLUEBOOK, which is available to employees on the intranet. They constitute a set of internal control and risk management procedures, which should be implemented by each entity included in the Group's consolidated financial statements.

The BLUEBOOK is the cornerstone of the Group's internal control system.

The internal control system aims to ensure that:

- the Group's activities and the conduct of its members:
  - comply with laws and regulations, internal standards and applicable best practices,
  - comply with the objectives defined by the Company, especially in terms of risk prevention and management policies,
  - contribute to safeguarding the Group's assets;
- all financial and accounting information communicated either internally or externally gives a true and fair view of the situation and activity of the Group and complies with prevailing accounting standards.

Generally, the Group's internal control system should contribute to the management of its activities, the efficiency of its operations and the efficient use of its resources.

As with other "assurance systems", it cannot provide an absolute guarantee that the Group's objectives will be met.

In 2012, the Group continued its measures to improve the quality of its internal control system, with in particular:

- the enhancement of the BLUEBOOK in several areas (social and environmental responsibility, industrial, human resources, management control, crisis management, communication, procurement and intellectual property);
- the issue of specific procedures for the Healthcare business line under the anti-corruption program already rolled-out in the Engineering & Construction business and the Group's Industrial Gas activities. These procedures will be deployed and supplemented by training in 2013;
- the strengthening of security in certain key information system areas and the identification of priority applications for protection, as part of the long-term plan led by the newly formed Digital Security Department;
- the continuation, across a wider scope, of the standardization of methods, tools and timetables used to assess internal control and risk management systems launched in 2011 in order to streamline the process.

ORGANIZATION

The Group is organized based on a highly consistent Group strategy, of which the main driving force is the internal growth of its activities.

This strategy is relayed through management which centers on mid-term objectives that are categorized by business activity, as well as through a steering process based on annual budgetary objectives, which are further categorized down to the individual plan level.

The organization breaks down into:

- **entities** which ensure the operational management of their activities in the countries where the Group is located;
- **geographical zones** which supervise and monitor the performance of the entities under their responsibility and ensure that strategies are properly implemented and the main financial indicators maintained.

- **World Business Lines** that:
  - present mid-term strategic objectives for their related activities to Executive Management,
  - are responsible for Marketing, the Industrial Policy and the appropriateness of skills in their field of activity,
  - chair the Resources and Investment Committee (RIC) meetings, which decide on the necessary investments and resources presented by the zones.

This organization also includes Holding and Group Departments which notably comprise the three key control departments that report independently to Executive Management:

- the **Finance and Operations Control Department,** which is responsible for:
  - the reliability of accounting and financial information,
  - the Group financial risk management,
  - Management Control through the drafting and monitoring of Group objectives on the basis of financial data prepared by the accounting teams and analyses conducted by the financial teams of the various entities;
- the **Group Control Department,** which:
  - provides expertise and assistance to entities in the roll-out of their risk management approach (see below) and builds a Group synthesis,
  - verifies the effective application of internal control and risk management procedures through audits carried out according to a defined program presented to the Group's Audit and Accounts Committee. This program, developed based on the risk analysis, is regularly monitored by the Audit and Accounts Committee itself. Audit reports are systematically supplemented by corrective action plans, which are supervised by a member of the Executive Committee. These reports, as well as subsequent follow-up reports, are the subject of various communications and periodic discussions with the Statutory Auditors,
  - helps Group entities ensure compliance with the Group's ethical values particularly training and awareness-raising actions and the treatment of fraud and deviations,
  - provides guidance to Group entities, through the newly formed Digital Security Department, which reports directly to the Group Control Department, on the identification and protection of their data and computer applications (definition of rules, roll-out expertise and advice, control of proper implementation);
- the **Legal Department,** which identifies legal risks, issues internal guidelines and codes, and then oversees their proper implementation. It also monitors the main litigation cases and manages insurance:

Finally, this organization relies on a framework of authorizations and delegations granted by Executive Management:

- to members of the Executive Committee and certain departments and services in order to define their commitment and payment powers for commercial transactions (sales or purchases);
- to certain executives in charge of entities or sites in France, in order to ensure the prevention and control of industrial risks in terms of health and safety;
- to certain financial executives, in order to ensure the security of transactions and financial flows.

The managers of the various Group subsidiaries exercise their duties under the control of the Boards of Directors and in accordance with laws and regulations applicable in the countries where they operate.

RISK MANAGEMENT

To ensure the continued development of its activities, the Group must actively pursue an approach to prevent and manage the risks (especially industrial and financial risks) to which it is exposed.

In terms of the Group's business activities, industrial risk management must essentially focus on prioritizing safety and security while maintaining a permanent focus on the reliability of installations.

Financial risk management requires strict control over investments, combined with prudent and rigorous practices regarding the accounting and financial aspects of the activities.

The Group risk management approach, which has been formalized since 2009, aims to ensure:

- the regular identification of the different forms of risk (industrial, financial and other) encountered by the Group during the pursuit of business activity, which are assessed according to both potential damage and probability of occurrence;
- the assessment of the risk management level based on a common scale with respect to the quality of policies, organizations, processes and controls in place;
- the progress of the main corrective action plans undertaken to mitigate the risks, by focusing monitoring activities on a limited number of priorities.

This three-phase risk management process (mapping, management levels, mitigation plans) is now in place in the Group and covers over 70 entities representing more than 90% of consolidated Group revenue.

The Risk Management Department within the Group Control Department leads this approach using:

- resources dedicated by the zones and World Business Lines to manage the approach in their respective areas of responsibility (under the supervision of the Boards of Directors of the entities concerned) and provide a zone or World Business Line summary;
- the work of members of the Risk Committee that it coordinates. This Committee brings together the main Group support functions, which provide their expertise[(a)] to the zones and World Business Lines. Presided by Executive Management, it meets twice a year to report on the progress of initiatives, particularly in terms of priorities, and prepare a Group risk management synthesis.

Finally, the Audit and Accounts Committee reviews Group risk management based on presentations covering:

- the progress of the approach (on an annual basis);
- each major risk management system based on a multi-year program structured according to the challenges;
- internal audit summaries of these risk management systems.

In addition, the Board of Directors retains the right to request that certain risk control systems be presented directly to it.

CONTROL ACTIVITIES

Control activities aim to ensure that internal control procedures are properly implemented and respected and notably rely on strict control of Group investments, with:

- a centralized, in-depth review (above certain thresholds) of investment requests and the medium and long-term contractual commitments which may arise there from;
- control of investment decisions through the specific follow-up of the authorizations granted;
- a comparative profitability analysis, for certain significant investments prior and subsequent to completion and the obligation for subsidiaries to report all budget overruns and implement corrective action plans aimed at ensuring the profitability of the investment concerned.

The main internal control and risk management procedures drafted and communicated by the Company in the BLUEBOOK aim to:

1. Ensure the safety and security of employees, products and installations, as well as the reliability of operations in compliance with the rules and regulations for accident prevention.

To this end, the Company has an Industrial Management System (IMS), which operates based on:

- empowerment of the Management bodies governing the Group's various entities for the effective implementation of this system;
- the issue of key management and organizational procedures that aim to ensure:
  - regulatory compliance,
  - design management,
  - industrial risk management,
  - hygiene, health and environmental management,
  - training and certification of personnel,
  - management of operating and maintenance procedures,
  - management of industrial purchases,
  - change management,
  - analysis and treatment of incidents and accidents,
  - system effectiveness control through management audits and reviews;
- shared technical standards within Group entities.

The IMS document base is updated and supplemented on an ongoing basis.

The **Safety and Industrial System Department** and the **Industrial Departments of the relevant World Business Lines** supervise and control the effective implementation of the IMS, by notably relying on:

- continually increasing team awareness by providing specifically related training, and the distribution of a monthly security report available to all employees on the Group Intranet;
- the presentation of various indicators designed to monitor performance in terms of the safety and reliability of operations, as well as the deployment of certain Group key standards;
- the process audits conducted by the Safety and Industrial System Department to verify the implementation conditions and compliance of operations with IMS requirements;
- technical audits carried out by the Industrial Departments to ensure the compliance of operations with Group security and technical rules.

(a) Legal, Finance and Operations Control, Communication, Safety and Industrial System, Human Resources and Group Control.

The changes in the safety performance of operations and their level of compliance with IMS requirements are regularly monitored by the Executive Committee.

2. Ensure control of energy purchases, particularly with respect to availability and matching with Group commitments to customers.

The energy management policy defines rules governing energy purchases and the related decision-making processes. The Enrisk Group Committee reviews the procurement strategies of the entities, validates the most significant commitments and ensures the relevant policies are properly applied.

Each month, the Enrisk Group Committee brings together primarily the Vice-President in charge of the Large Industries Global Business Line, the Energy Group Vice-President and the Group Deputy Chief Financial Officer.

Meeting minutes are sent to Executive Management.

3. Ensure the protection of Group IT data and applications.

Information protection rules are defined in the Group Information Protection procedure, which sets out the fundamental rules to be implemented in each Group entity to ensure the protection of data, applications and critical IT infrastructure components, as well as in a specific code documenting the key principles to be observed by all users.

The newly formed Digital Security Department reports directly to the Group Control Department and uses resources set aside by the zones, business lines and entities to coordinate and control the roll-out of this procedure and code, in conjunction with the IT Department.

These actions helped strengthen security in certain key areas of the information system.

4. Ensure the development of the Group's expertise and talents.

The Human Resources policy defines the main rules, together with the roles and responsibilities of the different parties in their implementation, in particular with respect to:

- acquisition of the requisite skills;
- accompanying employees in their personal development;
- measuring and recognizing performance and contributions.

5. Ensure that laws, regulations and internal management rules are respected within the Group, notably in the legal and intellectual property areas.

- In the legal area the Group legal policy, which encompasses:
  - a Group procedure relating to Powers (limitations and delegations) for use by Group entities,
  - a Group procedure on subsidiaries governance (Boards of Directors),
  - an Insurance Guide for all Group entities,
  - Group instructions and codes on how to behave in order to comply with competition laws (mainly in Europe and the United States), followed by awareness meetings held in several European and North American entities in 2012,
  - a Group code recapping the rules of ethical behavior to prevent the risk of corruption, and related procedures, followed by training sessions in the Engineering and Construction and Gas and Services activities.
  - a memorandum, specifying the rules to be observed to prevent insider trading,
  - various contract guides (for Large Industries, Engineering and Construction, Industrial Merchant, Electronics and Financing) and codes of good practices (for Healthcare);
- In the intellectual property area, with a Group policy and procedures aimed at:
  - ensuring Air Liquide's compliance with valid patents held by third parties in its different areas of activity,
  - protecting Group intellectual property, by protecting its inventions, designs and brands through their identification (on an official filing basis) and favoring the recognition of their inventors.

To this end, the Group Intellectual Property Department comprises professionals located at the Group's head office and in the main countries.

6. Manage and minimize financial risk.

Financial decision-making governance is the responsibility of the two Finance Committees, which consider the financing strategy and the practical implementation of the financial policy, respectively.

The Company has defined financial policies, which forbid speculative transactions notably on derivatives, and that are subject to regular review. These policies were brought together in a Group financial policy. These procedures set-out the principles and procedures for the management of financial risk to which the activity is exposed, notably in relation to:

- liquidity risks: the Company has defined rules aimed at ensuring an appropriate level of "confirmation" and diversification (by nature and maturity) for all sources of external financing; The Group staggers short- and long-term repayment maturities over time in order to limit amounts to be refinanced each year;
- counterparty risks: the Company has defined rules aimed at ensuring that there is sufficient diversification and financial solidity of counterparties at Group level (commitment limits/ minimum rating);
- interest rate risk: the Company has defined methods managed on a centralized basis for the hedging of interest rates related to debt that is carried in major currencies (principally, Euro, USD, JPY, which represent 75% of total net debt) with:
  - a selection of authorized tools,
  - the hedging decision processes,
  - the methods of executing transactions.

  For other foreign currency debts, rules have been defined in order to ensure that the decentralized transactions initiated to hedge interest rate risk are consistent with Group objectives;
- exchange rate risk: the Company has defined methods for hedging exchange rate risk, whether this is carried by the holding companies or the operating entities, in terms of authorized hedging instruments, the decision process and the execution of transactions.

These measures are supplemented by treasury management rules adapted to local circumstances, which are aimed at ensuring secure transactions and forecasting treasury inflows/outflows with an objective of optimizing the management of liquidity (forecasting of cash in/cash out).

The application of this financial policy is controlled by the Finance and Operations Control Department. Certain transactions are executed on a centralized basis (financing and management of related interest rate risk, hedging of foreign exchange risk), which is completed by consolidated reports provided by various Group entities on a monthly or quarterly basis, depending on the type of risk.

7. Ensure the reliability of financial and accounting information.

In order to guarantee the quality and reliability of financial and accounting information produced, the Group primarily relies on a set of accounting principles and standards as well as a consistent accounting and management reporting system for data which feeds both the Group consolidation process and the business analysis that is under the responsibility of independent departments, which report to the Finance and Operations Control Department.

The Group accounting manual, which includes the Group financial policy, defines the accounting rules and principles as well as the consolidation methods applicable and states the formats applicable for reporting financial and accounting information. This manual is regularly updated by the Finance and Operations Control Department with the amendments to IFRS or their interpretations.

Management and Accounting Reports are each prepared under the responsibility of independent but interactive departments that follow identical methods and principles:

- this independence allows for the enhancement of information and analysis through the use of complementary indicators and data in particular those which are specific to each activity;
- the fact that these bodies are interactive provides for better control of the reliability of information through the systematic and regular reconciliation of data.

The reports primarily include:

- monthly management reporting, known as the "Monthly Flash Report" that provides information on revenue and the main financial indicators: income statement, funds from operations (cash flow), net indebtedness and amount of investments authorized and committed;
- quarterly reporting, known as the "Management Control Report" that provides details of the primary items of the income statement, balance sheet and statement of cash flows;
- a quarterly "variance analysis" report to assess the various components of the change in operating income recurring.

  These three documents are compiled by each management entity according to a predefined yearly timetable.

  They are systematically accompanied by comments on activities drawn up by the Director and the controller within the entity, and are consolidated at Group level with a breakdown for each geographical zone and activity;

- quarterly reporting for accounting consolidation is compiled by each subsidiary which, in addition, must provide (on a semi-annual basis) information on off-balance sheet commitments that may include:
  - energy purchases,
  - financial guarantees and deposits,
  - all other contractual commitments, and, in particular, information on operating leases.

Accounting consolidation and monthly reporting is sent to the Central Consolidation Department. This department prepares the consolidated data and works in conjunction with the Operations Control Department, whose duty is to analyze and comment on the results, identify and explain any differences with respect to forecasts, and to update the forecasts.

Within the monthly Executive Operations Meetings, a rolling forecast for the current year is systematically presented by the Finance and Operations Control Department, in order to identify, when applicable, any differences with respect to yearly targets and take the necessary steps.

Through regular controls, the Finance and Operations Control Department ensures the effective application of accounting methods and principles in the various Group entities. The most complex accounting standards, particularly those relating to employee benefits (IAS19) and derivative financial instruments (IAS32/39, IFRS7) are subject to tighter controls or treated directly by the Finance and Operations Control Department.

It also relies on audits carried out by the Group Control Department with which it has regular contact.

The quality and reliability of financial and accounting information also depends on information systems which are increasingly integrated (such as ERP), a Group consolidation software package and a treasury consolidation package.

A project was launched to further harmonize the Group's financial systems and models, based on the definition of an accounting and financial framework tailored to the various World Business Lines.

MONITORING OF CONTROL MEASURES

The Board of Directors exercises its control over Group Management based on the various quarterly reports it receives from Executive Management and the work of the Audit and Accounts Committee, according to the methods and principles described above (reports, debriefings, etc.).

Executive Management exercises its control over risk management, particularly through monthly meetings with the Chairman and Chief Executive Officer, the Senior Executive Vice-President and the Executive Vice-President aided by the Finance and Operations Control Director and the Legal Director who also acts as secretary. It also relies on existing reports and:

- Executive Committee Meetings, with, in particular, debriefings from the Safety and Industrial System Department regarding Group performance in terms of security and the progress of current actions;
- Risk Committee Meetings;
- Resources and Investment Committee Meetings;
- Work carried out by the Finance and Operations Control Department, and the Group Control Department which report directly to Executive Management;
- Finance Committee Meetings that determine the Group's financial policy.

These control measures are enhanced by the involvement of entity departments and the Executive Committee in the implementation and follow-up of actions needed to improve and strengthen the quality of internal controls.

The Risk Committee

This Committee brings together the Group's major support functions: Legal, Finance and Operations Control, Communication, Safety and Industrial Systems, Human Resources and Group Control.

Its purpose is to assess the geographical zones and business lines that must implement and coordinate the risk management approach in their respective areas of responsibility.

Presided by Executive Management, it meets twice a year to report on the progress of initiatives, particularly in terms of priorities, and prepare a Group risk management synthesis.

The Finance Committees

The Strategic Finance Committee

The purpose of this Committee is to verify the effective application of the Group's financial policy, approve financial management proposals and suggestions that have been submitted and approve the rules governing the Group's financial policy, that are subjected to regular review.

It brings together the Group Finance and Operations Control Director, the Corporate Finance and M&A Director and the Group Treasury and Financing Director, who meet under the authority of the Chairman and Chief Executive Officer.

The Committee meets at least three times a year and upon request, if necessary.

The Operational Finance Committee

The purpose of this Committee is to make day-to-day decisions concerning the financial management of the Group, to propose structuring transactions to the Strategic Finance Committee and to ensure their implementation after approval.

It brings together the Group Finance and Operations Control Director, the Corporate Finance and M&A Director and the Group Treasury and Financing Director, assisted by a Committee secretary.

The Committee meets every four to six weeks, and the minutes of these meetings are sent to the Chairman and Chief Executive Officer.

The Resources and Investment Committees

The purpose of these Committees is to assess and approve requests for investments that have been submitted, as well as medium and long-term contractual commitments and Human Resource requirements that may arise there from.

They meet once or twice a month for each World Business Line (Large Industries, Industrial Merchant, Electronics and Healthcare), and several times a year for technological activities (Research and Development, High Tech, Engineering and Construction, Information Technologies).

In 2011, the agenda of these Committees was expanded to include Welding/Diving activities.

Each Committee Meeting is chaired by the Executive Committee member responsible for the relevant World Business Line, and brings together Directors of the World Business Lines and zones concerned by the investments and representatives of the Group Finance and Operations Control Department.

The Committee's decisions are reviewed at Executive Management Meetings.

> REMUNERATION OF THE EXECUTIVE OFFICERS AND DIRECTORS OF L'AIR LIQUIDE S.A.

(pursuant to article L.225-102-1 of the French Commercial Code)

This section was approved by the Board of Directors on February 13, 2013, on the Remuneration Committee's recommendation. It incorporates, by reference, certain sections which should be part of the report from the Chairman, included here for the purpose of clarity and better understanding.

The information reported in this document takes into account the provisions of the AFEP/MEDEF Code of corporate governance for listed companies (April 2010) and the Recommendation issued by the French financial market authority, the AMF, on disclosures in Reference Documents concerning corporate officers' remuneration, issued on December 22, 2008.

The Board determines the remuneration policy applicable to Executive Officers. This policy, which is based on the relevance and stability of performance criteria, in order to develop a long-term vision securing the best interests of the Company and shareholders, includes:

- a **short-term component** systematically compared with the practices of other similar companies, comprising a fixed portion and a variable portion. The criteria governing the fixed and variable portions are set out below;
- a **long-term incentive** by granting share subscription options that are fully subject to performance requirements since 2009 and a share ownership obligation since the plan of May 9, 2007; it is proposed that from 2013 onwards Executive Committee members and Executive Officers should also be able to benefit from conditional grants of shares (ACAS);
- **other conditions governing the terms of office** of Executive Officers.

Benoît Potier, in his capacity as Chairman and Chief Executive Officer, and Pierre Dufour, in his capacity as Senior Executive Vice-President and employee, benefit from:

(i) the **pension plans** applicable to senior managers and executives that break down into two parts: defined contribution plans and a defined benefit plan. The details relating to these pension plans and, in particular, the changes in the defined-contribution plan for senior managers and executives, which has been closed above a certain level of remuneration, are set out below;

(ii) a **collective life insurance plan** which, at an unchanged cost for the Company, has been put in place with a concern for good management (see below);

(iii) the **death and disability benefits plan** applicable to senior managers;

(iv) **commitments to pay termination indemnities** in certain cases of **termination of duties** on the Company's initiative and subject to performance conditions in accordance with the "TEPA" law of August 21, 2007.

Benoît Potier, whose employment contract was terminated on May 5, 2010, is entitled to the **unemployment insurance for company managers and corporate officers.** He was also entitled, if applicable, to an **indemnity to compensate for the loss of pension rights,** subject to performance conditions, under a transitional plan approved by the Annual Shareholders' Meeting of May 5, 2010, pursuant to the regulated agreements and commitments procedure. This commitment terminated in 2012 on the day when Benoît Potier reached 55 years of age.

A full description of short- and long-term commitments as well as commitments relating to the termination of duties is set out in detail below. When such commitments are subject to the regulated agreements and commitments procedure, they are also mentioned in the Statutory Auditors' Special Report on page 298.

To determine all the various components of remuneration of the Executive Officers, as proposed by the Remuneration Committee, the Board of Directors strives to take into account the principles of comprehensiveness, balance, benchmarking, consistency, readability and measurement as recommended by the AFEP/MEDEF Code of corporate governance and relies specifically on several external reviews, the interest of shareholders who expect steady performance and the motivation of the officers concerned.

In accordance with the aforementioned Code, the remuneration components of the Executive Officers are made public after the Board's meeting during which they are approved. For a summary of the Code's application, refer to the table on page 149.

Short-term benefits

EXECUTIVE MANAGEMENT

Amounts paid during fiscal years 2010, 2011 and 2012

Table 1 below presents a summary of all remuneration components paid to Executive Officers with regard to fiscal years 2010, 2011 and 2012. They are then more fully described in the other tables below.

Table 1 — Summary of remuneration and stock options granted to each Executive Officer

(in thousands of euros)	2010	2011	2012
Benoît Potier			
Remuneration payable in respect of the fiscal year (see breakdown in Table 2)	2,660	2,700	2,743
Value of stock options granted during the fiscal year (see breakdown in Table 4)	1,302	1,610	1,660
TOTAL	**3,962**	**4,310**	**4,403**
Pierre Dufour			
Remuneration payable in respect of the fiscal year (see breakdown in Table 2)	1,336	1,357	1,371.3
Value of stock options granted during the fiscal year (see breakdown in Table 4)	739	915	943
TOTAL	**2,075**	**2,272**	**2,314.3**

Total gross annual remuneration before tax paid to each Executive Officer of L'Air Liquide S.A. by the Company (and all Group companies), with respect to his corporate office for the Chairman and Chief Executive Officer and both for his duties as employee, and those as corporate officer for the Senior Executive Vice-President, including the benefits in kind, amounted to the figures presented in Table 2 below for fiscal years 2010, 2011 and 2012:

Table 2—Summary of remuneration paid to each Executive Officer

	2010		2011		2012	
(in thousands of euros)	Amounts due	Amounts paid	Amounts due	Amounts paid	Amounts due	Amounts paid
Benoît Potier—Chairman and Chief Executive Officer [(a) (b)]						
■ Fixed remuneration	1,060	1,097	1,060	1,060	1,080	1,080
Including Directors' fees	*0*	*37*	*0*	*0*	*0*	*0*
■ Variable remuneration	1,590	1,171	1,630	1,590	1,653	1,630
■ Benefits in kind	10	10	10	10	10	10
TOTAL	**2,660**	**2,278**	**2,700**	**2,660**	**2,743**	**2,720**
Pierre Dufour—Senior Executive Vice-President [(b) (c)]						
■ Fixed remuneration	600	600	620	620	627.5	627.5
Including Directors' fees	-	-	*0*	*0*	*0*	*0*
■ Variable remuneration	720	498	720	720	726.8	720
■ Benefits in kind	16	16	17	17	17	17
TOTAL	**1,336**	**1,114**	**1,357**	**1,357**	**1,371.3**	**1,364**

(a) *In accordance with the recommendations of the AFEP/MEDEF Code of corporate governance, Benoît Potier resigned from his employment contract at the time of the renewal of his terms of office as Director and Chairman and Chief Executive Officer in May 2010. Benoît Potier receives all his remuneration in his capacity as a corporate officer.*

(b) *During 2012, the Company paid amounts to third parties on behalf of Benoît Potier and Pierre Dufour with respect to supplementary defined contribution pension plans (84,570 euros and 84,570 euros respectively), the collective life insurance contract (113,126 euros and 113,126 euros respectively), and the supplementary death and disability benefits plan (65,099 euros and 28,480 euros respectively) for a total of 488,971 euros.*

These plans are described below.

(c) *For Pierre Dufour, the reported amount includes the remuneration payable under his employment contract.*

The Senior Executive Vice-President was appointed at the end of 2007. The adjustment of his fixed remuneration was spread over several years. This was justified by the new responsibilities assumed as of January 1, 2010 and by the wish to limit the loss resulting from the amendment to the pension plan for senior managers and executives on the same date.

With respect to 2013, the fixed portions and the maximum percentage of variable remuneration as compared to fixed remuneration have been determined as follows:

Fixed remuneration:

(in thousands of euros)	Benoît Potier	Pierre Dufour
Fixed portion [(a)]	1,100	635

(a) *For Pierre Dufour, the reported amount includes the remuneration payable under his employment contract.*

The fixed portion remains unchanged as compared to that set as from July 1, 2012.

Pierre Dufour will receive, in the form of a benefit-in-kind, a housing allowance amounting to €250,000 in 2013 from a Group subsidiary. In December 2012, Pierre Dufour ceased to benefit from the accommodation previously made available to him.

Variable remuneration:

The weight of the financial and personal criteria in the weighting **formula** for the various components of the variable portion remains unchanged, as does the maximum percentage of **variable remuneration** as compared to the fixed remuneration, which has been set as follows, since July 1, 2012:

	Benoît Potier	Pierre Dufour
Maximum variable remuneration (as a % of the fixed remuneration)	170%	130%

Criteria

- **Fixed remuneration** is determined based on the level of responsibility and experience in the management function, as well as with reference to current market practices.
- The entire **variable part** of the remuneration, due in respect of a fiscal year, is paid in the following fiscal year, after approval of the financial statements by the Annual Shareholders' Meeting. The criteria, which consist of two financial criteria and personal objectives, are adopted by the Board of Directors at the beginning of the fiscal year in line with the Group's strategic priorities and the results are assessed, after the fiscal year-end, on the basis of the consolidated financial statements for the fiscal year approved by the Annual Shareholders' Meeting and the evaluation of the performance of each Executive Officer by the Board of Directors.

  In 2011, 2012 and 2013, variable remuneration is assessed on the basis of the financial criteria of (i) growth in net Earnings per Share (excluding significant exceptional items and foreign exchange impact) and (ii) Return On Capital Employed (ROCE) after tax, which have the majority weighting.

  The desired level of achievement of these quantitative criteria is precisely set by the Board of Directors every year and is based:

  - on an objective of an increase in EPS set on a consistent basis with regard to historical performances,
  - on a significant outperformance of ROCE as compared to the weighted average cost of capital.

  It is not made public for reasons of confidentiality.

  Variable remuneration is also based on personal objectives:

  In 2011, the objectives shared by the two Executive Officers were primarily related to investments making it possible to nurture growth under the ALMA 2015 program and to Corporate Social Responsibility objectives (identification of significant indicators for the Group).

  In 2012, the objectives shared by the two Executive Officers were primarily related to keeping control over costs, pursuing investments in growth and the innovation policy, continuous improvement in the Corporate Social and Environmental Responsibility objectives, particularly with regard to security and development of human resources.

  For 2012, the variable portion could reach a maximum of 170% of the fixed portion for the Chairman and Chief Executive Officer and 130% of the fixed portion for the Senior Executive Vice-President as from July 1, 2012. During its meeting on February 13, 2013, the Board evaluated the performance of the Executive Officers. **The results obtained in 2012** and the assessment of the Executive Officers' performance, led the Board to set the total annual gross remuneration (fixed and variable) for Benoît Potier and Pierre Dufour with respect to 2012, corresponding to an increase of +1.6% for Benoît Potier and + 1% for Pierre Dufour as compared with 2011, as indicated in Table 2.

  The 2013 personal objectives will be specifically related to gradual implementation of the market-focused organization, preserving the financial balances, pursing the objectives of Corporate Social and Environmental Responsability particularly in terms of safety and human resources development.

- The **benefits-in-kind** paid to the benefit of the Executive Officers in 2012 include, for each of the two Executive Officers, the use of a company car and contributions to supplementary pension plans, the collective life insurance plan and supplementary death and disability plans, as well as:

  - for Benoît Potier, contributions to the unemployment insurance for company managers and corporate officers;
  - for Pierre Dufour, the provision of accommodation until the end of 2012.

BOARD OF DIRECTORS

Amounts paid in 2011 and 2012

Table 3 below summarizes the Directors' fees (in the absence of payment of any other exceptional remuneration) received by non-executive corporate officers in 2011 and 2012 and the amounts of Directors' fees payable in 2013 in respect of fiscal year 2012:

Table 3—Directors' fees and other exceptional remuneration received by non-executive corporate officers

(in thousands of euros)	Amounts paid in 2011 in respect of 2010	Amounts paid in 2012 in respect of 2011	Amounts paid in 2013 in respect of 2012
Alain Joly [(c)]	54	49	60
Thierry Desmarest [(d)]	57	59	74
Rolf Krebs [(b)]	74	71	8
Gérard de La Martinière [(a)]	79	76	88
Béatrice Majnoni d'Intignano	59	56	69
Cornelis van Lede [(d)]	82	75	90
Thierry Peugeot	43	40	65
Paul Skinner	66	71	76
Jean-Claude Buono [(b) (c)]	43	40	18
Karen Katen	55	50	75
Jean-Paul Agon [(e)]	28	40	50
Sîan Herbert-Jones [(f)]	-	29	53
TOTAL	**640**	**656**	**726**

(a) The indicated amounts include additional remuneration of 20,000 euros with respect to the Chairmanship of the Audit and Accounts Committee.

(b) Term of office terminated on May 9, 2012.

(c) Moreover, in 2012, the following gross amounts were paid to Alain Joly and Jean-Claude Buono pursuant to the retirement plan presented below in the section "Former Executive Officers—Pension benefit obligations" (in thousands of euros): Alain Joly: 1,188 and Jean-Claude Buono: 355.

(d) The amounts indicated include, on a pro rata basis to the number of meetings chaired, a supplementary amount of 10,000 euros with respect to the Chairmanship of the Appointments and Governance Committee for Mr. Desmarest as of 2010 and 10,000 euros with respect to the Chairmanship of the Remuneration Committee for Mr. van Lede as of 2010.

(e) Term of office that began on May 5, 2010.

(f) Term of office that began on May 4, 2011.

Benoît Potier and Pierre Dufour do not receive any Directors' fees with regard to their terms of office as Directors.

Criteria

Total Directors' fees for allocation to members of the Board of Directors were set at 800,000 euros per fiscal year at the Annual Shareholders' Meeting of May 4, 2011.

The allocation formula adopted by the Board of Directors comprises a fixed remuneration and a variable remuneration based on lump-sum amounts per meeting, thereby taking account of the effective participation of each Director in the work of the Board and its Committees. For fiscal year 2012, it has been decided to increase the remuneration for participation in a Board meeting from 4,000 euros to 5,000 euros and the remuneration for an intercontinental trip for a non-resident Director from 3,000 euros to 5,000 euros; the amounts calculated break down as follows:

Fixed remuneration (for a fiscal year)

- Each member receives fixed annual remuneration of 20,000 euros for fiscal year 2012.
- The Chairman of the Audit and Accounts Committee receives supplementary fixed annual remuneration of 20,000 euros.
- The Chairmen of the Appointments and Governance Committee and the Remuneration Committee each receive a supplementary fixed annual remuneration of 10,000 euros.

Variable remuneration

Attendance at the various meetings is remunerated as follows:

- 1 meeting of the Board of Directors 5,000 euros
- 1 meeting of the Audit and Accounts Committee 4,000 euros
- 1 meeting of the Appointments and Governance Committee 1,500 euros
- 1 meeting of the Remuneration Committee 1,500 euros
- 1 trip for a non-resident:
  - in Europe 2,500 euros
  - Intercontinental 5,000 euros

Participation by telephone is remunerated at one-half of the lump-sum amounts set for each meeting.

Travel expenses incurred by non-residents are reimbursed by the Company.

Stock options

STOCK OPTIONS GRANTED TO EXECUTIVE OFFICERS

Grant policy: review

Stock options granted by the Board of Directors to both Executive Officers and employees are a long-term incentive, aligned with the interests of shareholders to create long-term value.

The granting of stock options is examined with regard to the total annual remuneration of the Executive Officer, taking into account several external market surveys and respecting the interests of shareholders. The allocation, examined by the Remuneration Committee at the same time as the allocation plan for Group employees and decided by the Board of Directors, is conducted as part of annual plans, approved at pre-defined periods in the autumn, in the form of share subscription options granted without a discount.

The plan regulations are the same for all option beneficiaries within the Group, it being specified that, since 2009, the Executive Officers have been subject to the additional conditions set out below.

Pursuant to the decision made by the Board of Directors (most recently on September 27, 2012), the total number of options allotted each year to Executive Officers may not grant entitlement to a total number of shares exceeding:

- for all Executive Officers, 0.1% of the share capital (while remaining within the total allocation amount of 2% last authorized for three years by the Annual Shareholders' Meeting of May 5, 2010);
- for each individual Executive Officer, a multiple determined, which represents approximately the amount of the Executive Officer's maximum gross annual remuneration, the options being valued under the applicable IFRS.

In addition, the Board of Directors stated (most recently at its meeting on September 27, 2012), that during the "negative window" periods surrounding the publication of the financial statements as determined by the Company, Executive Officers may not exercise the stock options that have been allocated to them. These abstention periods begin 21 days before the date of publication of the results and end at the close of a period of three days after this date.

At its February 12, 2010 meeting, the Board ensured that in accordance with the AFEP/MEDEF Code of corporate governance and consistent Company practice, no active Executive Officer benefiting from stock options had made use of hedges and duly noted the commitment of Benoît Potier and Pierre Dufour not to make use of such instruments during their terms of office.

Performance conditions

Pursuant to the AFEP/MEDEF Code of corporate governance, since 2009 the Board of Directors has decided that stock options granted to Executive Officers would be subject, in their entirety, to performance conditions calculated over three years.

At the time of the Board of Directors' option allocation on September 27, 2012, it was thus decided that the number of stock options that could be exercised by each Executive Officer out of the total number of stock options allocated to him under the 2012 plan would be based:

- partly on the rate of achievement of an objective, set by the Board, of Group growth in undiluted earnings per share excluding foreign exchange impact and exceptional items (Recurring EPS) for fiscal year 2014, as compared to Recurring EPS for the 2011 fiscal year; and
- partly on an objective of shareholder return, set by the Board, defined as the compound annual growth rate for an investment in Air Liquide shares with respect to fiscal years 2012, 2013 and 2014.

These performance conditions are now also applicable to all stock options granted to Executive Committee members. Any other beneficiary of a number of stock options exceeding the threshold of 1,500 is subject to the same performance conditions, in the amount of 50% of the stock options allocated over and above such threshold.

On the basis of the financial statements adopted for the 2012 financial year submitted for the approval of the Annual Shareholders' meeting of May 7, 2013, the Board of Directors recorded, at its meeting on February 13, 2013, that the performance conditions defined at the time of implementation of the share subscription option plan of June 28, 2010 were met. Accordingly, all the stock options awarded to Benoît Potier and Pierre Dufour under the 2010 share subscription option plan may be exercised.

Fiscal year 2012

In 2012, it was confirmed that the Group was compliant with the conditions laid down by the French law of December 3, 2008, under which all employees in France must be associated with the Company's performance.

Pursuant to the authorization granted by the Annual Shareholders' Meeting of May 5, 2010 and on the recommendation of the Remuneration Committee, the Board of Directors decided at its meeting held on September 27, 2012 to grant share subscription options for 2012.

The 2012 Plan has a term of 10 years. The options granted in compliance with the above-mentioned principles can only be exercised if certain performance conditions are met by the Company (see previous section). A condition regarding continued service within the Group at the time of exercise of the options has also been defined.

Table 4 presents information on share subscription options granted to each of the Executive Officers in connection with the 2012 Plan. These amounts are unchanged for the fifth year running for Benoît Potier and for the third year running for Pierre Dufour. These grants were made by the Company and no grants were made by any other Group company.

Table 4—Share subscription options granted during the 2012 fiscal year to each Executive Officer

	Plan grant date	Option type	Option value (pursuant to IFRS2) *(in thousands of euros)*	Number of options granted in 2012	Strike price *(in euros)*	Exercise period
Benoît Potier	09/27/2012	Share subscription options	1,660	88,000	96.61	09/27/2016 to 09/26/2022
Pierre Dufour	09/27/2012	Share subscription options	943	50,000	96.61	09/27/2016 to 09/26/2022

The adjusted fair value of stock options granted in 2012 to employees and Executive Officers of the Group, and determined according to IFRS2 (as presented in note 22 Shareholders' equity on page 215) amounts to:

- 19.56 euros for the options not subject to performance conditions and options subject to performance conditions linked to the Group's results;
- 17.58 euros for the options subject to performance conditions linked to the change in the share price.

The options granted to the Executive Officers in 2012 represent 0.044% of the number of shares making up the share capital.

In accordance with French law, at the time of the grant of the 2012 stock option plan, the Board of Directors defined the rules governing the holding of shares resulting from the exercise of options, applicable to Executive Officers (see the details set out below).

Table 5 presents the total number of stock options exercised by Executive Officers in 2012.

Table 5—Share subscription options exercised during the 2012 fiscal year by each Executive Officer

The Company's Executive Officers did not exercise any share subscription options in 2012.

Total adjusted stock options granted to Executive Officers and not exercised as of December 31, 2012

	Total adjusted stock options not exercised	Average price *(in euros)*
Benoît Potier	666,144	72.36
Pierre Dufour [(a)]	250,136	75.88

(a) Stock options granted in respect of his corporate office since his appointment in November 2007.

Medium-term issues

The authorization to grant stock options, the renewal of which is submitted for approval by the Extraordinary Shareholders' Meeting of May 7, 2013, should make it possible to pursue the above-mentioned grant policy. The draft resolution maintains the total number of shares to which the number of options granted over a period of 38 months could grant entitlement at 2% of the capital; it also sets a limit on stock option grants which could be decided in favor of the Executive Officers and which may not grant entitlement to a number of shares exceeding 0.3% of the Company's capital over a period of 38 months.

SHAREHOLDING OBLIGATION

- In accordance with article L. 225-185 of the French Commercial Code, the Board of Directors decided that for each allocation of stock options to an Executive Officer, starting with the May 9, 2007 plan and as from the exercise date of the granted options, the Executive Officer should hold a defined minimum quantity of registered shares arising from each exercise of stock options under each plan until the termination of his duties.

  This quantity will be calculated at the option exercise date based on the stock market price of the shares on this date (opening quoted price) and shall represent a minimum amount equal to 50% of the capital gain on acquisition less social security contributions and taxes (calculated at the maximum theoretical tax rate) on each exercise.

  However, this percentage may be revised downwards without falling below 10%, provided that the quantity of shares arising from the exercise of stock options held by an Executive Officer, covering all plans from May 9, 2007 onwards and calculated at the stock market price (opening quoted price), shall represent at the date of each exercise a minimum amount at least equal to 50% of the total capital gains on acquisition less social security contributions and taxes (calculated at the maximum theoretical tax rate) on all plans as from May 9, 2007 (including the exercise of stock options concerned).

  This rule is regularly reviewed by the Board at the date of each stock option plan.

  This rule was reiterated by the Board of Directors in September 2012 when share subscription options were granted to the Executive Officers.

- In addition, in February 2008, the Board decided to impose on Executive Officers an obligation to hold a number of shares equivalent to double the annual gross fixed remuneration for the Chairman and Chief Executive Officer and equal to the annual gross fixed remuneration for the Senior Executive Vice-President. The number of shares includes the quantity of shares arising from the exercise of the stock options that Executive Officers must hold pursuant to the decisions of the Board of Directors adopted in accordance with article L. 225-185 of the French Commercial Code, without however restricting the enforcement of such decisions. The number of shares required to be held is assessed on January 1 and July 1 of each year. Recommendations encouraging the holding of a minimum number of shares of the Company equivalent to 0.5 times their annual gross fixed remuneration have also been issued to Executive Committee members since 2009. The application of this rule by Executive Officers as of January 1 of the fiscal year was the subject of an evaluation by the Board of Directors in February. The Board noted that the valuation of the shares held at January 1, and July 1, 2012 and at January 1, 2013 by the Chairman and Chief Executive Officer and the Senior Executive Vice-President was respectively much higher than the required amounts and concluded that the stock ownership obligation is largely respected by each of the Executive Officers.

Conditional grants of shares to employees

Tables 6 and 7 — Performance shares awarded to each Executive Officer

Not applicable to L'Air Liquide S.A. at the date hereof.

The proposal to allow the Company's executive officers to benefit from conditional grants of shares made within the scope of the renewal of the authorization submitted to the Annual Shareholders' Meeting on May 7, 2013 would allow the Group to have at its disposal all the different remuneration tools in line with the Group's remuneration policy.

The draft resolution maintains the total number of shares that may be granted within the scope of this authorization at 0.5% of the share capital for 38 months; it sets the limit of the number of shares that may be granted to Executive Officers at 0.15% of the share capital at the same time.

Long-term commitments

FORMER EXECUTIVE OFFICERS

Pension benefit obligations

The Board has agreed that the Company will pay former Chairmen and Chief Executive Officers and Senior Executive Vice-Presidents who, as a result of their age or length of service, were entitled to the pension benefits applicable to all employees covered by the Company's collective agreement of December 12, 1978, as amended, additional benefits, over and above those payable under the normal pension plans, of a fixed amount determined by the Board which is in excess of the capped amount based on the rules of the Company's collective agreement.

These amounts were set on retirement of the parties concerned by the Board of Directors' meeting of November 14, 2001 for Alain Joly, taking into account changes in common practice regarding pension benefits for executive managers then in effect, and by the Board of Directors' meeting of May 10, 2006 for Jean-Claude Buono. All other conditions of this agreement (described in greater detail on page 221), in particular, changes in amounts and the limits potentially applicable by the Company to its retired employees and the conditions for reverting such pension benefits to the surviving spouse, are applicable to the above-mentioned Executive Officers. This plan, open to retired former employees and to employees aged 45 or older or with more than 20 years' length of service as of January 1, 1996, was closed on February 1, 1996.

In 2012, the amounts indicated in footnote (c) to Table 3 were paid to Alain Joly and Jean-Claude Buono under the aforementioned pension plans.

MEMBERS OF THE EXECUTIVE MANAGEMENT

Pension benefit obligations

The Board of Directors has authorized that Benoît Potier in his capacity as Chairman and Chief Executive Officer and Pierre Dufour, in his capacity as Senior Executive Vice-President, who did not meet the age or length of service conditions allowing them to benefit from the above-mentioned collective agreement of December 12, 1978, shall benefit from the supplementary pension plans set up, as of January 1, 2001 for all senior managers and executives meeting certain eligibility conditions. These plans allow senior managers and executives to constitute (i) for the portion of the remuneration up to 24 times the annual social security ceiling, reduced at the beginning of 2013 to eight times the annual social security ceiling, under defined contribution plans managed by a third party and (ii) for the portion of the remuneration exceeding 24 times the annual social security ceiling under a defined benefit plan, an additional annuity as well as an annuity paid to the surviving spouse, subject to certain conditions, particularly with regard to age. Benoît Potier, as a corporate officer, and Pierre Dufour, with respect to his duties both as an employee and corporate officer, fall within this category.

- For the portion managed as part of defined contribution plans, the Company pays an outside fund manager a contribution representing a fixed percentage of the portion of the beneficiary's remuneration concerned. Amounts paid as well as the corresponding investment income will be used to pay an additional pension benefit in the form of a life annuity, supplemented by an annuity paid to the surviving spouse, subject to the beneficiary being able to claim his pension entitlements under the standard old age pension plan applicable to all French retired employees. Should the term of office or employment contract be terminated, the contributions will cease to be paid.
- Pension benefits corresponding to the defined benefit plan are equal to 1% for each year of service based on the average of the three best years of the last five years' total annual remuneration exceeding 24 times the annual social security ceiling. For beneficiaries' length of service, see the dates when the persons concerned joined the Group set out on page 160 and 171). For the calculation, the average of the total variable portions taken into account cannot exceed 100% of the average of the total fixed portions used for this calculation. Where applicable, an annuity equal to 60% of the above-mentioned benefits will be paid to the surviving spouse, if certain age conditions are satisfied. The defined benefit plan only applies if the beneficiary is still with the Company at the time of his retirement. In the event the term of office or employment contract is terminated at the Company's initiative, the beneficiary may nevertheless maintain his rights if he has reached at least 55 years of age with a length of service of at least five years and ceases all professional activity. This rule reflects the human resources policy at Air Liquide, for which long careers within the Group constitute a key element. Moreover, in accordance with the AFEP/MEDEF Code of corporate governance, a minimum length of service of three years is required for the defined benefit portion and included in the plan regulations to apply to all potentially eligible Executive Officers and senior managers.

As for all senior managers benefiting from the defined benefit plan, total pension benefits, under all pension plans, are capped in all cases at 45% of the average of the three best years of the last five years' total annual remuneration, it being understood that for this calculation, the variable portion taken into account cannot exceed 100% of the fixed remuneration. Should this ceiling be reached, the amount paid under the defined benefit plan will be reduced accordingly.

The individual application of these plans to Benoît Potier and Pierre Dufour was last made by the Board of Directors' meeting of February 12, 2010 in accordance with the regulated agreements and commitments procedure. It was made public on the Company's website on February 17, 2010, and was approved by the Annual Shareholders' Meeting of May 5, 2010 in a specific resolution for each Executive Officer.

During the 2012 fiscal year, the amount paid by the Company to the fund manager for the supplementary defined contribution plans in favor of Benoît Potier and Pierre Dufour is disclosed in the footnotes to Table 2.

Life insurance plan

Following the closing of the defined contribution pension plan for senior managers and executives for the portion of remuneration exceeding eight times the annual social security ceiling, the Board of Directors has authorized the entry into a collective life insurance contract in favor of the Executive Officers. The objective of this contract is to create available savings. The contributions paid by the Company to the plan manager are assessed on the basis of the portion of the reference remuneration of the beneficiaries amounting to between eight and 24 times the annual social security ceiling, in accordance with conditions identical to those of the previous plan. The opening of this plan, at an unchanged cost for the Company, responds to a concern for good management.

The signature of this contract was authorized by the Board of Directors' meetings of November 20, 2012 and February 13, 2013 in accordance with the regulated agreements and commitments procedure; it is mentioned in the Statutory Auditors' special Report set out on page 298. These agreements and the related Statutory Auditor's special Report are subject to approval by the Annual Shareholders' Meeting of May 7, 2013 in a specific resolution for each Executive Officer.

For the 2012 fiscal year, the amount paid by the Company to the insurance company in favor of Benoît Potier and Pierre Dufour is disclosed in the footnotes to Table 2.

In parallel, a life insurance plan linked to the end of their career has also been set up for senior managers and executives whose remuneration exceeds eight times the annual social security ceiling.

Death, disability and related benefits plan

An additional death, disability and related benefits plan has been subscribed with an insurance company to enable senior managers, whose remuneration exceeds eight times the annual social security ceiling and satisfying certain age and length of service conditions, to receive a capital sum in the event of death or permanent and absolute invalidity. This capital sum is equal to four times the portion of gross annual remuneration exceeding eight times the annual social security ceiling. The contributions corresponding to this plan are paid in full by the Company and added back to the remuneration of beneficiaries as benefits in kind. Benoît Potier, in his capacity as Chairman and Chief Executive Officer and Pierre Dufour in his capacity as Senior Executive Vice-President and employee, benefited from this plan in 2012.

For the 2012 fiscal year, the amount paid by the Company to the insurance company in favor of Benoît Potier and Pierre Dufour is disclosed in the footnotes to Table 2.

The individual application of this plan, as last amended as of January 1, 2010, to Benoît Potier and Pierre Dufour was authorized by the Board of Directors' meeting of February 12, 2010 in accordance with the regulated agreements and commitments procedure and approved by the Annual Shareholders' Meeting of May 5, 2010 in a specific resolution for each Executive Officer. It was also made public on the Company's website as of February 17, 2010.

Commitments relating to termination of duties

TERMINATION INDEMNITIES

Benoît Potier

Termination indemnity

In accordance with the "TEPA" law and the AFEP/MEDEF Code of corporate governance, most recently at its meeting on February 12, 2010, the Board of Directors set the terms of the agreement applicable to Benoît Potier as from the renewal of his terms of office as Chairman and Chief Executive Officer in May 2010, along the following main lines:

(i) only the forced departure of Benoît Potier from his offices as Chairman and Chief Executive Officer (removal from office, non-renewal, request for resignation) related to a change of strategy or a change in control may give rise to an indemnity;

(ii) the amount of the indemnity in any of these cases is set at 24 months' gross fixed and variable remuneration;

(iii) the amount of the indemnity due decreases gradually as Benoît Potier, as Chairman and Chief Executive Officer, approaches the age limit defined in the Company's articles of association (63 years of age); in the event of a forced departure in the 24 months preceding this date, the amount of the indemnity due will be capped at the number of months of gross remuneration separating the date of forced departure from the date when he reaches the age limit. In any case, no indemnity shall be paid should the beneficiary claim his pension entitlements on the date of his forced departure;

(iv) the right to payment of the indemnity is subject to the achievement of performance conditions, the proportion of the indemnity due decreasing according to the rate of achievement of such conditions according to the formula described below (see section on "Performance conditions–Termination indemnities" below).

The decision made by the Board of Directors at its meeting on February 12, 2010 pursuant to the regulated agreements and commitments procedure provided for under the "TEPA" law was published in full on the Company's website. The commitment was approved by the Annual Shareholders' Meeting of May 5, 2010 in a specific resolution concerning Benoît Potier.

Indemnity to compensate for the loss of pension rights

The Company had undertaken to grant all employee beneficiaries of the defined benefit pension plan mentioned on page 145 who are less than 55 years of age and have at least 20 years' length of service, in the event of early termination of their employment contract at the Company's initiative, except in cases of serious misconduct or gross negligence, benefits equivalent to those obtained under the plan in the form of a compensatory indemnity. The commitment to pay such an indemnity, subject to performance conditions, made in favor of Benoît Potier was last authorized by the Board of Directors at its meeting on February 12, 2010, pursuant to the regulated agreements and commitments procedure provided for by the "TEPA" law and approved by the Annual Shareholders' Meeting of May 5, 2010. This commitment, which was made on a transitional basis until Benoît Potier reached 55 years of age, ceased to apply in 2012.

Pierre Dufour

Termination indemnity

In accordance with the "TEPA" law and the AFEP/MEDEF Code of corporate governance, the Board of Directors, most recently at its meeting on May 4, 2011, following the Annual Shareholders' Meeting during which it renewed the term of office of Pierre Dufour as Senior Executive Vice-President for a term of three years, set the terms of the agreement applicable to Pierre Dufour as Senior Executive Vice-President, regarding the following three points:

(i) only the forced departure of Pierre Dufour from his office as Senior Executive Vice-President (removal from office, non-renewal, request for resignation) related to a change of strategy or a change in control may give rise to an indemnity;

(ii) the amount of the indemnity in any of these cases (including any statutory indemnity or indemnity provided for by the collective bargaining agreement including any non-competition indemnity due, where applicable, in respect of termination of the employment contract or any other indemnity received on a similar basis from subsidiaries) is set at 24 months' gross fixed and variable remuneration;

(iii) no indemnity will be paid if the beneficiary is entitled to claim his full pension entitlements in the short term at the date of a forced departure;

(iv) the right to payment of the indemnity is subject to achievement of the performance conditions, with the proportion of the indemnity due decreasing according to the rate of achievement of such conditions, based on the formula described below (see section on "Performance conditions—Termination indemnities" below).

The decision made by the Board of Directors at its meeting on May 4, 2011 pursuant to the regulated agreements and commitments procedure provided for under the "TEPA" law was published in full on the Company's website. The commitment was approved by the Annual Shareholders' Meeting of May 9, 2012 in a specific resolution concerning Pierre Dufour.

PERFORMANCE CONDITIONS APPLICABLE TO THE TERMINATION INDEMNITIES DUE TO THE EXECUTIVE OFFICERS

The Board of Directors decided that payment of the termination indemnities due to Benoît Potier and Pierre Dufour mentioned above (excluding however for Pierre Dufour the statutory indemnity or the indemnity provided for in the collective bargaining agreement, as well as any non-competition indemnity which could be due in respect of termination of his employment contract or any other indemnity received on a similar basis from subsidiaries) is subject to compliance, duly acknowledged by the Board of Directors at the time of or subsequent to the termination of their duties, with conditions relating to the beneficiary's performance assessed in relation to the Company's performance, to date defined as follows:

entitlement to the indemnity referred to above shall depend on, and the amount of the indemnity paid shall be adjusted on the basis of, the average of the annual variance between the Return On Capital Employed after tax (ROCE) and the Weighted Average Cost of Capital (WACC) (assessed using accounting net equity) calculated (based on the certified consolidated financial statements approved by the Shareholders' Meeting) with respect to the last three fiscal years prior to the fiscal year in which the departure occurs. For the purposes of this calculation, the variance between the ROCE and the WACC will be measured for each fiscal year and the average of the three annual variances over the three fiscal years prior to the fiscal year during which the departure occurs shall be calculated.

The following formulas will be applied:

Average variance (ROCE—WACC)	Proportion of the indemnity due
≥ 200 bp [(a)]	100%
≥ 100 bp and < 200 bp	66%
≥ 50 bp and < 100 bp	50%
≥ 0 bp and < 50 bp	33%
< 0	0

(a) bp: basis point.

These conditions will be reviewed by the Board of Directors and, where applicable, amended to take account particularly of changes in the corporate environment each time the beneficiary's term of office is renewed and, where applicable, during his term of office. The renewal of Benoît Potier's term of office as a Director will be submitted to the Annual Shareholders' Meeting in 2014.

Unemployment insurance for Company managers and corporate officers

Pursuant to a decision of the May 2006 Board of Directors' meeting, Benoît Potier benefits, in his capacity as a corporate officer, from the unemployment insurance for Company managers and corporate officers subscribed by the Company. Contributions paid by the Company are added back to Benoît Potier's remuneration as benefits in kind.

This decision was approved by the Annual Shareholders' Meeting of May 9, 2007, pursuant to the regulated agreements procedure.

At its meeting in May 2010, the Board of Directors confirmed that Benoît Potier would continue to benefit from this insurance within the scope of the renewal of his terms of office.

Table 8 (see page 154) and table 9 (see page 155)

Table 10

The table below summarizes commitments at December 31, 2012 relating to the termination of duties of the Executive Officers as set out above.

Executive Officers	Employment contract	Supplementary pension plan (see details above)	Indemnities or benefits due or that may be due on termination or a change of duties (see details above)	Non-competition indemnity
Benoît Potier Chairman and Chief Executive Officer Term of office start date: 2006 Date of renewal of term of office: 2010 Term of office end date: 2014	**NO**	**YES** Pension plan for senior managers and executives: ■ partly a defined contribution plan ■ partly a defined benefit plan	**YES** Termination indemnity: ■ case: forced departure related to a change of strategy or a change in control; ■ maximum amount: 24 months of gross fixed and variable remuneration; ■ subject to performance conditions; ■ reduction as he approaches the age limit pursuant to the articles of association, exclusion should the beneficiary claim his pension entitlements on the date of a forced departure.-	**NO**
Pierre Dufour Senior Executive Vice-President Term of office start date: 2007 Date of renewal of term of office: 2011 Term of office end date: 2014	**YES**	**YES** Pension plan for senior managers and executives: ■ partly a defined contribution plan ■ partly a defined benefit plan	**YES** Termination indemnity ■ case: forced departure related to a change of strategy or a change in control; ■ maximum amount (including any statutory indemnity or indemnity provided for by the collective bargaining agreement including any non-competition indemnity due where applicable relating to termination of his employment contract or any other indemnity received on a similar basis from subsidiaries): 24 months of gross fixed and variable remuneration; ■ subject to performance conditions; ■ exclusion if the beneficiary is entitled to claim in the short term his full pension entitlements on the date of a forced departure.	**YES** In respect of the employment contract: 16 months of remuneration as an employee, indemnity included in the overall maximum limit of 24 months' fixed and variable remuneration

APPLICATION OF THE AFEP/MEDEF CORPORATE GOVERNANCE CODE: SUMMARY TABLE

L'Air Liquide applies the AFEP/MEDEF Code with the exception of the following recommendations:

Recommendations	L'Air Liquide practice and justification
Independence criteria of Directors (point 8 of the Code). Independent Director qualification criteria to be examined: ■ Not to have been a Director of the Company for over 12 years; ■ Not to have been an employee or executive Director of the Company or a company it has consolidated over the five preceding years.	The Board did not consider that terms of office exceeding 12 years would disqualify a Board member from being independent; the industrial gases business is characterized by highly capital-intensive investment projects accompanied by long-term contracts, with a typical length of 15 years for Large Industries. The experience acquired on the Board is therefore an asset to ensure the monitoring of the Group's development cycles over the long-term and enables the Directors to make an informed judgment on growth strategy for the future with complete autonomy and express it freely (see page 121). Conversely, the Board considered that former employees or officers of the Company may not be considered as independent even if the termination of their duties took place more than five years earlier (see page 121).
Evaluation of the Board of Directors (point 9 of the Code). The evaluation of the Board of Directors should seek to measure the actual contribution of each Director to the Board's work through his or her competence and involvement in discussions. It is recommended that the Directors who are external to the company meet periodically without the "in-house" Directors.	Due to the collective nature of the Board Air Liquide is attached to, the assessment questionnaire concentrates on an appraisal of the overall contribution of members to the Board's operation; for this same reason, there is no meeting of external Board members without the presence of internal Directors. The Appointments and Governance Committee is however given the task of assisting the Chairman and Chief Executive Officer, at his request, in his dealings with independent Directors (see page 123).
Audit Committee (point 14 of the Code) The time available for reviewing the accounts should be sufficient (no less than two days before review by the Board).	Considering the presence within the Audit Committee of Directors from abroad, the Committee meetings covering the review of the financial statements were held the morning before Board of Directors' meetings. However, Committee members are in a position to review the financial statements well in advance through other means (preparatory meeting with the Committee's Chairman more than one week prior to the meeting; dispatch of files to Committee members several days in advance) (see page 126).
Remuneration Committee (point 16 of the Code) During the presentation of the report on the proceedings of the Compensation Committee, the Board must deliberate on compensation issues without the presence of executive Directors.	During meeting of the Remuneration Committee, the Chairman and Chief Executive Officer is not present for any discussions of the Committee relating to him personally (see page 128).
Compensation of Executive Directors (point 20 of the Code) In principle, fixed compensation may only be reviewed at relatively long intervals, *e.g.* every three years.	The Senior Executive Vice-President was appointed at the end of 2007. The adjustment of his fixed remuneration was spread over several years. This was justified by the new responsibilities assumed as of January 1, 2010 and by the wish to limit the loss resulting from the amendment to the pension plan for senior managers and executives on the same date (see page 139).

> STATUTORY AUDITORS' REPORT

Prepared in accordance with article L. 225-235 of the French Commercial Code (*Code de commerce*), on the report prepared by the Chairman of the Board of Directors of L'Air Liquide S.A.

This is a free translation into English of a report issued in the French language and is provided solely for the convenience of English speaking users. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

To the Shareholders,

In our capacity as Statutory Auditors of L'Air Liquide S.A., and in accordance with Article L. 225-235 of the French Commercial Code (*Code de commerce*), we hereby report to you on the report prepared by the Chairman of the Board of Directors of your Company in accordance with article L. 225-37 of the French Commercial Code (*Code de commerce*) for the year ended December 31, 2012.

It is the Chairman's responsibility to prepare, and submit to the Board of Directors for approval, a report on internal control and risk management procedures implemented by the Company and to provide the other information required by articles L. 225-37 of the French Commercial Code (*Code de commerce*) relating to matters such as corporate governance.

It is our responsibility:

- to report to you on the information contained in the Chairman's report in respect of the internal control procedures relating to the preparation and processing of financial and accounting information; and
- confirm that the report also includes the other information required by article L. 225-37 of the French Commercial Code (*Code de commerce*), it being specified that it is not our responsibility to verify the fairness of this other information.

We conducted our work in accordance with professional standards applicable in France.

INFORMATION ON INTERNAL CONTROL AND RISK MANAGEMENT PROCEDURES RELATING TO THE PREPARATION AND PROCESSING OF ACCOUNTING AND FINANCIAL INFORMATION

The professional standards require that we perform the necessary procedures to assess the fairness of the information provided in the Chairman's report in respect of the internal control and risk management procedures relating to the preparation and processing of the accounting and financial information. These procedures consist mainly in:

- obtaining an understanding of the internal control and risk management procedures relating to the preparation and processing of the accounting and financial information on which the information presented in the Chairman's report is based, and of the existing documentation;
- obtaining an understanding of the work involved in the preparation of this information and of the existing documentation;
- determining if any material weaknesses in the internal control procedures relating to the preparation and processing of financial and accounting information that we would have noted in the course of our work are properly disclosed in the Chairman's report.

On the basis of our work, we have no matters to report on the information relating to the Company's internal control and risk management procedures relating to the preparation and processing of the accounting and financial information contained in the report prepared by the Chairman of the Board of Directors in accordance with article L. 225-37 of the French Commercial Code *(Code de commerce)*.

OTHER INFORMATION

We confirm that the report prepared by the Chairman of the Board of Directors also contains the other information required by article L. 225-37 of the French Commercial Code (*Code de commerce*).

Paris-La Défense, March 1, 2013

The Statutory Auditors

Ernst & Young et Autres		Mazars	
Jean-Yves Jégourel	Emmanuelle Mossé	Lionel Gotlib	Daniel Escudeiro

> TRANSACTIONS INVOLVING COMPANY SHARES PERFORMED BY CORPORATE OFFICERS AND MEMBERS OF EXECUTIVE MANAGEMENT

In 2012, the following transactions involving Company shares were performed by corporate officers and members of Executive Management, pursuant to article L. 621-18-2 of the French Monetary and Financial Code:

	Nature of the transaction	Date of transaction	Average price *(in euros)*
Jean-Claude Buono	Sale of 23,000 shares of L'Air Liquide S.A.	January 3, 2012	96.99
Béatrice Majnoni d'Intignano	Purchase of 56 shares of L'Air Liquide S.A.	June 4, 2012	86.25

> SHARE SUBSCRIPTION OPTION PLANS AND CONDITIONAL GRANT OF SHARES TO EMPLOYEES (CGSE)

Allotment policy

Each year, the Company sets up in principle:

- a share subscription option plan for its corporate executive officers and employees; and
- since 2008, plans for Conditional Grants of Shares to Employees (CGSE Plans).

These allotments are decided by the Board of Directors pursuant to the authorizations granted by Shareholders' Meetings. The renewal of these authorizations will be submitted to the Combined Shareholders' Meeting of May 7, 2013 (see page 275).

The introduction of CGSE Plans since 2008 has enabled the Company to offer a medium-term compensation scheme with features that are complementary to the long-term share subscription option plan and to increase the number of beneficiaries.

The current share subscription option and conditional share grant system is therefore intended for three groups of beneficiaries:

- the Company's corporate executive officers and members of the Executive Committee, who to date can only receive options and are excluded from the CGSE Plans (pursuant to the resolution voted by the 2007 Extraordinary Shareholders' Meeting, renewed in 2010, for the Company's corporate executive officers and the recommendation of the Remuneration Committee for the members of the Executive Committee); on the recommendation of the Remuneration Committee, the extension of CGSE Plans to members of the Executive Committee and to corporate executive officers of the Company will be proposed as part of the renewal of the authorization submitted to the Combined Shareholders' Meeting of May 7, 2013 (see page 291);
- Group managers who have a high level of responsibility or make specific contributions to the Group and benefit from a double allotment of both options and conditional shares (the conditional share grant partially replaces the options at a ratio of four options for one share), and specific contributors, such as inventors and innovators, or employees who have distinguished themselves in unusual situations, who are rewarded with an exceptional option allotment;
- other employees corresponding to middle managers and a category of new employee beneficiaries, who receive conditional shares only.

The criteria used to draw up the lists of employee beneficiaries reflect the business segments and geographical areas in which the Group conducts its business, as well as the specific contribution, potential, or individual or cooperative effort of the relevant persons. The list of employee beneficiaries is also prepared in such a way as to ensure a certain turnover and an increase in the number of beneficiaries.

All the stock options granted to corporate executive officers and Executive Committee members can only be exercised if certain performance requirements are met by the Company (for details of performance requirements, see page 142). In addition, any allocation to a beneficiary exceeding the threshold of 1,500 options, in the amount of 50% of the options allocated exceeding the threshold, is subject to the same performance requirements. A Group continued service requirement at the time the options are exercised is also stipulated.

Furthermore, the number of shares definitively vested by conditional share beneficiaries depends on the achievement of a performance target and a continued service requirement.

The total outstandings as of December 31, 2012 for CGSE plans, for which the definitive grant date has not yet occurred, and share subscription options not yet exercised, represent a number of shares amounting to less than 1.70% of the share capital at this same date.

The number of share grant plan beneficiaries is growing steadily. The changes in overall volume of option allotments and CGSE plans over the last five years break down as follows:

	2008	2009	2010	2011	2012
Total number of options/equivalent options [(a)] granted	977,944	977,036	1,107,640	1,102,312	1,173,931
% of capital [(a)]	0.38 %	0.37 %	0.39 %	0.39 %	0.38%
Number of beneficiaries	660	908	965	1,200	1,352
% of employees	1.65 %	2.1 %	2.4 %	2.67 %	2.8%

(a) Based on a ratio of four options for one share for the CGSE plans.

Total numbers of options/equivalent options are in historical data not restated for free share attributions.

Share subscription option plans

(Information to be regarded as the Special Report of the Board of Directors within the meaning of Article L. 225-184 of the French Commercial Code)

DESCRIPTION

Pursuant to the decisions of the Board of Directors, the Supervisory Board and the Management Board, following the authorizations of the Shareholders' Meeting and on the recommendation of the Remuneration Committee, the Company has adopted share subscription option plans for certain employees (including corporate officers) at the Group level worldwide.

The purpose of these options is to motivate top-performing Company managers and reward contributors who have distinguished themselves for the quality of their conduct in exceptional situations, as well as inventors, and for the first time this year, innovators, whose work contributes to the Group's dynamism, by associating them with the long-term interests of shareholders.

Stock options are granted for a minimum unit amount equal to or greater than the average market price during the twenty trading days prior to the date they are granted. The maximum exercise period is seven years for options granted between June 14, 2002 and April 8, 2004 inclusive, eight years for options granted between November 30, 2004 and June 28, 2010 inclusive, and 10 years as from the October 14, 2011 option plan.

Stock options can only be exercised after a four-year minimum term from the date they were granted. The Board of Directors has the option of closing this lock-in period in the event of a takeover bid on the Company's shares and the Company's merger or absorption.

The total number of stock options, granted by the Board of Directors, the Supervisory Board, and the Management Board under the plans authorized by Shareholders' Meetings, but not exercised as of December 31, 2012, amounted to 4,854,395 options (average price of 71.93 euros) after adjustment, or 1.55% of the share capital, of which 916,280 options (average price of 73.32 euros) granted to corporate executive officers present as of December 31, 2012 during their term of office.

Out of the total number of options issued pursuant to the authorization of the May 5, 2010 Shareholders' Meeting, a possible allotment of 4,326,392 options remained as of December 31, 2012. This authorization is due to expire and its renewal will be submitted to the Combined Shareholders' Meeting of May 7, 2013 (see proposed conditions of this renewal — pages 280 and 290).

STOCK OPTIONS GRANTED IN 2012 (SEPTEMBER 27 AND MAY 11, 2012 PLANS)

Pursuant to the authorization of the Combined Shareholders' Meeting on May 5, 2010, the Board of Directors, in its meeting on September 27, 2012, granted 704,791 share subscription options at a unit price of 96.91 euros, without a discount, equal to 100% of the average opening trading price of the Air Liquide share during the 20 trading days preceding the date on which the options were granted to 672 beneficiaries and, on May 11, 2012, 6,000 share subscription options were granted at a unit price of 97 euros, without a discount, equal to 100% of the average opening trading price of the Air Liquide share during the 20 trading days preceding the date on which the options were granted to an employee beneficiary.

These options can only be exercised after a four-year minimum term from the date they were granted and must be exercised within a 10-year maximum term as from such date.

The options granted as part of the September 27, 2012 plan are subject to performance requirements according to the conditions mentioned above and on page 142 and a Group continued service requirement at the time the options are exercised. The options granted as part of the May 11, 2012 plan are also subject to performance requirements, in the amount of 50% of the stock options allocated over and above the threshold of 1,500 options, and a Group continued service requirement at the time the options are exercised is also stipulated.

Breakdown between the various beneficiary categories

In 2012 (September 27)	Number of beneficiaries	Number of options
Corporate executive officers of L'Air Liquide S.A.	2	138,000
Senior executives (not corporate officers of L'Air Liquide S.A.) and exceptional contributors	670	566,791

Table 8—Options granted during the last ten years (no grant in 2003)

	2004	2004	2005	2006	2007	2007	2008	2009	2010	2011	2012	2012	Total
Date of authorization by the EGM	04/30/02	05/12/04	05/12/04	05/12/04	05/09/07	05/09/07	05/09/07	05/09/07	05/05/10	05/05/10	05/05/10	05/05/10	
Date of grant by the Board of Directors or the Management Board	04/08/04	11/30/04	03/21/05	03/20/06	05/09/07	11/08/07	07/09/08	06/15/09	06/28/10	10/14/11	05/11/12 [h]	09/27/12	
Total share subscription options granted [a] [e]	500,000	35,385	428,000	444,000	431,150	4,000	513,392	484,292	532,760	675,680	6,000	704,791	
including to officers and Directors	*57,000*	*15,000*	*70,000*	*90,000*	*75,000*		*168,300*	*128,000*	*138,000*	*138,000*		*138,000*	
Benoît Potier [a] [b]	40,000		40,000	50,000	40,000		88,000	88,000	88,000	88,000		88,000	
Jean-Claude Buono [b]	17,000		15,000	20,000	15,000								
Klaus Schmieder [a] [b]		15,000	15,000	20,000	20,000		44,000						
Pierre Dufour [a] [b]							36,300	40,000	50,000	50,000		50,000	
including to the top ten employees (excluding corporate officers) receiving the highest number of options	*77,000*	*12,325*	*61,800*	*62,000*	*59,000*		*92,620*	*124,180*	*165,000*	*172,000*		*183,000*	
Number of beneficiaries [f]	448	38	520	500	535	1	328	308	305	578	1	672	
Exercise period start date	04/08/08	11/30/08	03/21/09	03/20/10	05/09/11	11/08/11	07/09/12	06/15/13	06/28/14	10/14/15	05/11/16	09/27/16	
Expiration date	04/07/11	11/29/12	03/20/13	03/19/14	05/08/15	11/07/15	07/08/16	06/14/17	06/27/18	10/13/21	05/10/22	09/26/22	
Subscription price in euros	139.00	131.00	138.00	168.00	183.00	94.00	84.00	65.00	83.00	87.00	97.00	96.61	
Subscription price in euros as of 12/31/2012 [c]	48.86	45.94	48.39	58.92	70.61	72.54	71.31	55.18	75.28	78.90	87.97	96.61	
Restated total number of share subscription options granted as of 12/31/2012 [c] [e]	1,339,630	89,028	1,118,332	1,201,390	1,097,107	5,185	603,533	570,201	586,668	743,058	6,616	704,791	
Total shares subscribed as of 12/31/2012 [e]	1,304,606	74,866	852,186	585,909	172,254		37,199	342 [g]					
Total share subscription options cancelled as of 12/31/2012 [c] [d] [e]	35,024	14,162	18,564	26,760	40,188		11,046	5,439	9,588	23,011			
TOTAL SHARE SUBSCRIPTION OPTIONS REMAINING AS OF 12/31/2012 [C]			**247,582**	**588,721**	**884,665**	**5,185**	**555,288**	**564,420**	**577,080**	**720,047**	**6,616**	**704,791**	**4,854,395**
												As a percentage of share capital	**1.55%**

(a) Stock options granted from November 2007 take into account the one-for-two share split on June 13, 2007 (par value split from 11 euros to 5.50 euros).

(b) Stock options granted during office as corporate officer (historical data).

(c) Adjusted to take into account share capital increases through free share attributions (2012, 2010, 2008, 2006, 2004) and the two-for-one share split (11 euros par value split to 5.50 euros) on June 13, 2007.

(d) Loss of exercise rights.

(e) Number of shares or stock options expressed historically.

(f) The number of beneficiaries decreased after 2008 following the first implementation of a CGSE Plan in addition to a stock option plan. Corporate officers and Directors are not entitled to CGSE Plans.

(g) Early exercise of rights provided for in the stock option plans.

(h) As delegated by the Board of Directors on May 9, 2012.

Table 9

Table 9.1 — Options granted to the 10 employees (excluding corporate officers) who were granted the highest number of options

In 2012 (September 27)	Number of options	Average price *(in euros)*
For L'Air Liquide S.A.	145,260	96.61
For L'Air Liquide S.A. and its subsidiaries	183,000	96.61

The specific conditions applicable to corporate executive officers of the Company as part of the share subscription options granted in 2012 are described on pages 142 *et seq*.

STOCK OPTIONS EXERCISED IN 2012

Some of the options granted, as the case may be, from 2005 to 2008, by the Board of Directors or the Supervisory Board and the Management Board were exercised in fiscal year 2012, for a total of 664,421 shares at an average price of 59.48 euros.

Table 9.2 — Options exercised by the 10 employees of L'Air Liquide S.A. and its subsidiaries (excluding corporate officers) with the highest number of options exercised

Grant date	Number of options exercised	Average price [(a)] *(in euros)*
March 21, 2005	43,239	51.92
March 20, 2006	37,374	61.89
May 9, 2007	10,943	75.28
July 9, 2008	13,737	71.31
TOTAL	**105,293**	**60.42**

(a) In historical data, not adjusted for the May 2012 free share attribution.

Table 9.3 — Options exercised by the 10 employees of L'Air Liquide S.A. (excluding corporate officers) with the highest number of options exercised

Grant date	Number of options exercised	Average price [(a)] *(in euros)*
March 21, 2005	30,060	53.25
March 20, 2006	40,700	62.63
May 9, 2007	9,129	76.21
July 9, 2008	11,146	71.31
TOTAL	**91,035**	**61.96**

(a) In historical data, not adjusted for the May 2012 free share attribution.

Conditional grant of shares to employees

(Information to be regarded as the Special Report of the Board of Directors within the meaning of Article L. 225-197-4 of the French Commercial Code)

DESCRIPTION

In order to retain and motivate talented employees and compensate their medium-term performance, an additional compensation system was set up in 2008 involving conditional share grants to employees (CGSE).

The 17th resolution adopted by the Extraordinary Shareholders' Meeting of May 5, 2010 authorized the Board of Directors to grant free shares to Group employees (with the exception of the Group's corporate executive officers), up to a maximum of 0.5% of the Company's share capital on the date the Board decides to grant such shares.

Under this authorization, the Board of Directors adopted two different plans on September 27, 2012 ("France" Plan and "World" Plan) governing the conditional grant of Company shares to employee beneficiaries determined by the Board of Directors. The differences between the "France" and "World" Plans are mainly the number of years of service required—paragraph a) below, and the correlative absence of any holding requirement for the "World" Plan—paragraph c) below.

Conditional employee share grants are subject to:

a) a continued service requirement during a vesting period

Shares granted to a beneficiary shall only be definitively vested if he or she has been a salaried employee or corporate officer of a Group company during a vesting period, calculated as from the grant date, of two years for "France" Plan beneficiaries and four years for "World" Plan beneficiaries. In the event of retirement, the beneficiary retains his rights, but is no longer required to satisfy the continued service requirement;

b) a performance requirement for all CGSE

For 2012, this requirement is identical for both Plans (see the performance requirement in the summary table of conditional share grants to employees below);

c) a holding requirement

As from the final grant date, the beneficiaries of the "France" Plan are required to hold their shares for two additional years during which such shares may not be transferred (except in the event of disability or death).

To date, the CGSE delivered represent treasury shares from the Company's buyback program (see pages 278 and 312 and the report on the buyback program).

The outstandings of CGSE plans thus granted by the Board of Directors pursuant to the authorizations approved by Shareholders' Meetings, for which the definitive grant date has not been determined, amount to 413,194 shares, after adjustment, as of December 31, 2012, or 0.13 % of the share capital.

Out of the total of the shares for which conditional grant has been authorized by the Shareholders' Meeting of May 5, 2010, a possible allotment of 1,193,743 CGSE remained as of December 31, 2012. This authorization is due to expire and its renewal will be submitted to the Combined Shareholders' Meeting of May 7, 2013 (see proposed conditions of this renewal and the extension of CGSE to corporate executive officers of the Company—pages 281 and 291).

CONDITIONAL SHARE GRANTS TO EMPLOYEES DECIDED IN 2012

In connection with the "France" Plan and the "World" Plan of September 27, 2012, a total of 117,285 shares were granted on a conditional basis to 1,022 beneficiaries (43,525 shares allotted to "France" Plan beneficiaries and 73,760 shares allotted to "World" Plan beneficiaries). As of December 31, 2012, the unit fair values of the shares granted under the "France" Plan and the "World" Plan were 96.59 euros and 90.41 euros, respectively (calculated under IFRS). Subject to the achievement of the continued service and performance requirements, these shares shall be definitively vested by the beneficiaries on September 27, 2014 for the "France" Plan (with no possibility of transfer prior to September 27, 2016) and September 27, 2016 for the "World" Plan.

The number of definitively vested shares shall depend on the achievement rate set by the Board for the Group's undiluted net earnings per share, excluding foreign exchange impacts and exceptional items (recurring net earnings per share), for fiscal year 2013, compared to the recurring net earnings per share for fiscal year 2011.

For the 2012 grant, the performance requirement achievement rate shall be determined by the Board of Directors at the meeting held to approve the 2013 financial statements, according to a straight-line reducing-balance method.

Breakdown between the various beneficiary categories

	2011	2012
	Number of shares[(a)]	Number of shares
Senior executives (excluding the corporate officers and Executive Committee members of L'Air Liquide S.A.) receiving both options and conditional shares	48,080	47,385
Other executives and employees receiving conditional shares only	58,578	69,900

(a) In historical data, not adjusted for the May 2012 free share attribution.

Shares granted to the 10 employees (excluding corporate officers and Executive Committee members of L'Air Liquide S.A.) who were granted the highest number of shares

	2011	2012
	Number of shares[(a)]	Number of shares
For L'Air Liquide S.A.	2,380	2,405
For L'Air Liquide S.A. and its subsidiaries	2,625	2,650

(a) In historical data, not adjusted for the May 2012 free share attribution.

Summary table of conditional share grants to employees

	CGSE 2008	CGSE 2009	CGSE 2010	CGSE 2011	CGSE 2012	Total
Date of authorization by the EGM	05/09/2007	05/09/2007	05/05/2010	05/05/2010	05/05/2010	
Date of grant by the Board of Directors	07/09/2008	06/15/2009	06/28/2010	10/14/2011	09/27/2012	
Total number of conditional shares granted	116,138	123,186	143,720	106,658	117,285	
including to the top 10 employees (excluding corporate officers) receiving the highest number of shares	*5,720*	*4,955*	*4,700*	*2,625*	*2,650*	
Number of beneficiaries	651	897	952	972	1,022	
Performance requirement (“France” and “World” Plans)	Achievement rate of the average growth target set for net profit attributable to ordinary shareholders of the parent (excluding foreign exchange impact and exceptional items) for fiscal years 2008 (compared to 2007) and 2009 (compared to 2008) [(a)]	Achievement rate of the average growth target set for recurring net earnings per share for fiscal year 2010 compared to recurring net earnings per share for fiscal year 2008	Achievement rate of the average growth target set for recurring net earnings per share for fiscal year 2011 compared to recurring net earnings per share for fiscal year 2009	Achievement rate of the average growth target set for recurring net earnings per share for fiscal year 2012 compared to recurring net earnings per share for fiscal year 2010	Achievement rate of the average growth target set for recurring net earnings per share for fiscal year 2013 compared to recurring net earnings per share for fiscal year 2011	
Number of conditional shares cancelled before definitive grant	9,823	6,760	4,440	2,270		
Performance requirement achievement rate	25% [(a)]	100%	100%	100% [(e)]	Determined in 2014	
“France” Plan definitive grant date	07/09/2010	06/15/2011	06/28/2012	10/14/2013	09/27/2014	
“France” Plan definitive grant before adjustment	10,280 [(a)]	44,610	53,335			
“France” Plan definitive grant after adjustment	11,094 [(a)(b)]	47,780 [(c)]	59,009 [(d)]			
Total number of «France» Plan conditional shares not definitively granted after adjustment				**42,936**	**43,525**	
End of “France” Plan holding period	07/09/2012	06/15/2013	06/28/2014	10/14/2015	09/27/2016	
“World” Plan definitive grant date	07/09/2012	06/15/2013	06/28/2014	10/14/2015	09/27/2016	
“World” Plan definitive grant before adjustment	16,372 [(a)]					
“World” Plan definitive grant after adjustment	19,575 [(a)(b)]					
Total number of «World» Plan conditional shares not definitively granted after adjustment		**85,056**	**95,146**	**72,771**	**73,760**	
TOTAL NUMBER OF CONDITIONAL SHARES NOT DEFINITIVELY GRANTED AFTER ADJUSTMENT						**413,194**
					As a percentage of share capital	**0.13%**

(a) *The performance requirement of the 2008 CGSE Plan has been partially realized. The definitive grant amounted to 25% of the number of shares granted in 2008.*

(b) *For the 2008 CGSE Plan, the definitive grant corresponds to the “France” Plan and the «World» Plan and has been adjusted to take into account the share capital increase through the free share attribution of May 28, 2010 and the free share attribution of May 31, 2012 for the «World» Plan.*

(c) *For the 2009 CGSE Plan, the definitive grant corresponds to the “France” Plan and has been adjusted to take into account the share capital increase through the free share attribution of May 28, 2010.*

(d) *For the 2010 CGSE Plan, the definitive grant corresponds to the “France” Plan and has been adjusted to take into account the share capital increase through the free share attribution of May 31, 2012.*

(e) *The Board of Directors determined the 2011 CGSE Plan performance requirement achievement rate during its meeting held to approve the 2012 financial statements. Subject to the approval of the financial statements by the Shareholders’ Meeting, the number of shares definitively granted to the beneficiaries shall amount to 100% of the conditional share grant.*

> EMPLOYEE SAVINGS AND SHARE OWNERSHIP

For many years, Air Liquide has pursued an active policy promoting employee profit-sharing and incentive schemes in connection with the Group's development and the association of its employees with the Company's capital.

Profit-sharing

Profit-sharing and incentive schemes have been organized for many years in Group companies in France. This year they cover over 95% of employees in France, thus complying with the requirements of the Law of December 3, 2008 aimed at associating all employees in France with the Company's performance.

In 2012, L'Air Liquide S.A. paid 7.6 million euros in respect of profit-sharing and incentives. The number of beneficiaries decreased from 5,168 in 2011 to 1,467 employees following the spin-of certain L'Air Liquide S.A. activities. Company contributions to the Company Savings Plan are negotiated every year and amounted to nearly 1.17 million euros in 2012. Profit-sharing and incentives represent an average of 6,073 euros per employee without Company contributions.

Under the Profit-sharing Bonus Law, a supplementary incentive payment or otherwise an average gross bonus of 300 euros was paid in almost all companies in France.

Under the main Company Savings Plans, Group employees in France can make payments to diversified investment funds, on a voluntary basis or based on profit-sharing, incentives and, where applicable, contributions, and benefit from the preferential tax regime applicable in consideration for the blocking of their assets over a period of five years.

In 2012, 83% of L'Air Liquide S.A. employee profit-sharing and incentives was invested respectively in bond-weighted assets (70%) and equity-weighted assets (30%).

A total of 74% of employee savings was invested in corporate mutual funds holding only Air Liquide securities (54% in Air Liquide bonds, 20% in Air Liquide shares).

Employee share ownership

Since 1986, the Company has regularly performed share capital increases reserved for Group employees, for which subscription is offered at a preferential rate. The most recent capital increase was performed in December 2010 (for details see 2010 Reference Document).

In France, the shares subscribed in these capital increases are also eligible for the preferential tax regime applicable provided that they are blocked over a period of five years, while those held abroad are governed by the legal regulations prevailing in each relevant country.

At the end of 2012, the share of capital held by Group employees and former employees was estimated at 2.1%, of which 1.5% corresponds (within the meaning of Article L. 225-102 of the French Commercial Code) to shares subscribed by employees under employee-reserved capital increases or held through mutual funds. The percentage of Group employees holding L'Air Liquide S.A. shares totaled nearly 50% of the workforce.

Air Liquide wishes to pursue this strategy and further the development of its employee share ownership, by regularly proposing share capital increases to employees.

> INFORMATION CONCERNING MEMBERS OF THE BOARD OF DIRECTORS AND EXECUTIVE MANAGEMENT

(Information as of December 31, 2012) [(a)]

Listed companies are indicated by an asterisk (*)

BENOÎT POTIER
Chairman and Chief Executive Officer

Nationality: French

Born in 1957
Date of first appointment: 2000
Start of current term: 2010
End of current term: 2014
Number of shares owned as of December 31, 2012: 169,366

Business address

Air Liquide, 75, quai d'Orsay—75321 Paris Cedex 07

CAREER

A graduate of *École centrale de Paris*, Benoît Potier joined Air Liquide in 1981 as a Research and Development engineer. After serving as a Project Manager in the Engineering and Construction Division, he was made Vice-President of Energy Development in the Large Industries business line. In 1993, he became Director of Strategy & Organization and, in 1994, was put in charge of the Chemicals, Iron & Steel, Oil and Energy Markets. He was made an Executive Vice-President of Air Liquide in 1995 with additional responsibilities over the Engineering & Construction Division and the Large Industries operations in Europe.

Benoît Potier was appointed Chief Executive Officer in 1997. He was appointed to the Board of Directors in 2000 and became Chairman of the Management Board in November 2001.

In 2006, he was appointed Chairman and Chief Executive Officer of L'Air Liquide S.A.

POSITIONS AND ACTIVITIES HELD DURING 2012

Functions within the Air Liquide Group

- **Chairman and Chief Executive Officer:** L'Air Liquide S.A. *, Air Liquide International, Air Liquide International Corporation (ALIC)
- **Director:** American Air Liquide Holdings, Inc.
- Chairman of the Air Liquide Foundation

Positions or activities outside the Air Liquide Group

- **Director:** Danone * (member of the Appointment and Governance Committee)
- **Member of the Supervisory Board:** Michelin * (Member of the Audit Committee)
- **Vice-Chairman:** European Round Table (ERT)
- **Director:** *École centrale, Association nationale des sociétés par actions (ANSA), Cercle de l'Industrie, La Fabrique de l'industrie*
- **Member of the Board:** *Association française des entreprises privées (AFEP)*
- **Member of the French Board:** INSEAD

POSITIONS AND ACTIVITIES HELD DURING THE LAST FIVE YEARS AND THAT HAVE EXPIRED

2010

- **Chairman and Member of the Audit Committee:** Danone * (until February 2010)

2009

- **Chairman and Chief Executive Officer:** American Air Liquide Inc. (AAL) (until September 2009)
- **Chairman:** American Air Liquide Holdings, Inc. (until September 2009)

(a) Pursuant to Article L. 225-102-1, paragraph 4 of the French Commercial Code and Annex 1 of EC Regulation no. 809/2004 of April 29, 2004 (point 14.1).

THIERRY DESMAREST

Independent Director

Nationality: French

Born in 1945
Date of first appointment: 1999
Start of current term: 2009
End of current term: 2013[(a)]
Number of shares owned as of December 31, 2012: 6,775

Business address
Total, Tour Coupole, 2, place de la Coupole—92078 Paris-La Défense

CAREER

A graduate of *École polytechnique and École des Mines*, Thierry Desmarest spent four years with the New Caledonia Department of Mines, before serving as a Technical Advisor at the Ministry of Industry in 1975, and then at the Ministry of Economic Affairs in 1978.

He joined Total in 1981 as Managing Director of Total Algeria. He held various executive positions within Total Exploration Production, ultimately becoming its Chief Executive Officer in 1989 and a member of the Group's Executive Committee that same year. He became Chairman and Chief Executive Officer of Total in 1995, of Totalfina in 1999, and then of Elf Aquitaine and TotalFinaElf in 2000.

Thierry Desmarest was Chairman and Chief Executive Officer of Total S.A. from 2003 to February 2007, when he became Chairman of the Total S.A. Board of Directors. Appointed Honorary Chairman of Total S.A. in May 2010, he remains a Director and Chairman of the Total Foundation.

POSITIONS AND ACTIVITIES HELD DURING 2012

Functions within the Air Liquide Group

- **Director:** L'Air Liquide S.A. * (Chairman of the Appointments and Governance Committee and Member of the Remuneration Committee)

Positions or activities outside the Air Liquide Group

- **Honorary Chairman, Director:** Total S.A. * (Chairman of the Appointments and Governance Committee, member of the Remuneration Committee)
- **Director:** Sanofi-Aventis * (member of the Remuneration Committeee, member of the Appointments and Governance Committee, member of the Strategic Committee), Renault S.A. * (member of the Remuneration Committee, Chairman of the International Strategy Committee, member of the Industrial Strategy Committee), Renault S.A.S. and Bombardier Inc. * (member of the Appointments and Governance Committee, member of the Human Resources and Remuneration Committee)
- **Director:** *École polytechnique, musée du Louvre*
- **Chairman:** Total Foundation, *École polytechnique* Foundation

POSITIONS AND ACTIVITIES HELD DURING THE LAST FIVE YEARS AND THAT HAVE EXPIRED

2010

- **Chairman of the Board of Directors:** Total S.A. * (until May 2010)
- **Member of the Supervisory Board:** Areva * (until March 2010)

(a) *Renewal of term proposed to the Shareholders' Meeting of May 7, 2013.*

NB: *Independent Director within the meaning of the Board of Directors' Internal Regulations. For information regarding independence criteria, please refer to this Reference Document - p.149.*

ALAIN JOLY

Director

Nationality: French

Born in 1938
Date of first appointment: 1982
Start of current term: 2009
End of current term: 2013[(a)]
Number of shares owned as of December 31, 2012: 82,297

Business address

Air Liquide, 75, quai d'Orsay—75321 Paris Cedex 07

CAREER

A graduate of *École polytechnique*, Alain Joly joined Air Liquide's Engineering Division in 1962. From 1967 to 1973, he held various responsibilities in Montréal at Air Liquide Canada and then in the Americas Division. From 1973 to 1985, he served successively as Vice-President of Corporate Strategy and Management, Regional Manager of the French Gases Division, Company Secretary and Secretary of the Board of Directors.

He became Director of Air Liquide in 1982, then Chief Executive Officer in 1985 and Chairman and Chief Executive Officer in 1995. Alain Joly was Chairman of the Supervisory Board of L'Air Liquide S.A. from November 2001 until May 10, 2006, and has been a Director of L'Air Liquide S.A. since this date.

POSITIONS AND ACTIVITIES HELD DURING 2012

Functions within the Air Liquide Group

- **Director:** L'Air Liquide S.A. * (member of the Appointments and Governance Committee, member of the Remuneration Committee)

Positions or activities outside the Air Liquide Group

- **Member of the Supervisory Board:** *Bac Partenaires Gestion*

POSITIONS AND ACTIVITIES HELD DURING THE LAST FIVE YEARS AND THAT HAVE EXPIRED

2009

- **Director:** BNP Paribas * (until May 13, 2009)

2008

- **Director:** Lafarge * (until May 2008)

(a) Renewal of term not requested.

GÉRARD DE LA MARTINIÈRE

Independent Director

Nationality: French

Born in 1943
Date of first appointment: 2003
Start of current term: 2011
End of current term: 2015
Number of shares owned as of December 31, 2012: 4,054

CAREER

A graduate of *École polytechnique* and *École nationale d'administration*, Gérard de La Martinière held several positions with the French Ministry of Finance from 1969 to 1984. He was then General Secretary of the COB (formerly the French securities and exchange regulatory body) from 1984 to 1986, Chairman of the Paris Financial Instruments Clearing House from 1986 to 1988, and Chief Executive Officer of the Paris Stock Exchange (SBF) from 1988 to 1989.

Gérard de La Martinière joined the Axa Group in 1989 as Chairman and Chief Executive Officer of the Meeschaert-Rouselle brokerage unit. In 1991, he was named Executive Vice-President in charge of the Group's investments and financial services operations. In 1993, he took responsibility for the Group's Holding Companies and Corporate Affairs. He was a member of the Management Board between 1997 and 2003, and Vice-President of Finance, Audit and Strategy between 2000 and 2003.

Gérard de La Martinière was Chairman of the French Federation of Insurance Companies, the *Fédération française des sociétés d'assurances*, from May 2003 to September 2008. He was also Chairman of the European Insurance and Reinsurance Federation (CEA) from 2004 to 2008 and then Vice-Chairman until November 2009.

POSITIONS AND ACTIVITIES HELD DURING 2012

Functions within the Air Liquide Group

- **Director:** L'Air Liquide S.A. * (Chairman of the Audit and Accounts Committee)

Positions or activities outside the Air Liquide Group

- **Member of the Supervisory Board:** Schneider Electric S.A. * (Chairman of the Audit Committee)
- **Member of the Supervisory Board:** EFRAG (until October 2012)
- **Director:** Standard & Poor's Credit Market Services France SAS
- **Chairman:** *Comité de la Charte du don en confiance* (French Donations Charter Committee)
- Member of the *Haut Conseil à la vie associative* (French High Council for Associations)
- **Director:** Allo Finance

POSITIONS AND ACTIVITIES HELD DURING THE LAST FIVE YEARS AND THAT HAVE EXPIRED

2010

- **Director:** Banque d'Orsay (until November 2010)

2009

- **Vice-Chairman:** European Insurance and Reinsurance Federation (until November 2009)

2008

- **Chairman:** *Fédération Française des Sociétés d'Assurance (FFSA)* (until September 2008); *Association Française de l'Assurance (AFA)* (until September 2008)

NB: Independent Director within the meaning of the Board of Directors' Internal Regulations. For information regarding independence criteria, please refer to this Reference Document - p.149.

CORNELIS VAN LEDE
Independent Director

Nationality: Dutch

Born in 1942
Date of first appointment: 2003
Start of current term: 2011
End of current term: 2015
Number of shares owned as of December 31, 2012: 1,612

Business address

Jollenpad 1 0A—1081 KC Amsterdam—The Netherlands

CAREER

With a law degree from the University of Leiden and an MBA from INSEAD, Cornelis van Lede successively worked for Shell from 1967 to 1969 and McKinsey from 1969 to 1976 before joining Koninklijke Nederhorst Bouw B.V. as Chairman and Chief Executive Officer from 1977 to 1982. He was then member of the Management Committee of Hollandse Beton Groep from 1982 to 1984.

From 1984 to 1991, he was Chairman of the Federation of Netherlands Industries, then Vice-President of the Union of Industrial and Employer's Confederations of Europe (UNICE) from 1991 to 1994.

In 1991, Cornelis van Lede joined Akzo N.V. as a member of the Management Board. Then, he became Vice-Chairman of the Management Board in 1992 and was Chairman of the Management Board of Akzo Nobel N.V. from 1994 to 2003. He was a member of the Supervisory Board of Akzo Nobel N.V. from 2003 to 2007.

POSITIONS AND ACTIVITIES HELD DURING 2012

Functions within the Air Liquide Group

- **Director:** L'Air Liquide S.A. * (member of the Appointments and Governance Committee, Chairman of the Remuneration Committee)

Positions or activities outside the Air Liquide Group

- **Director:** Air France-KLM *, Sara Lee Corporation * / D.E Master Blenders * (July 2012)
- **Member of the Supervisory Board:** Royal Philips Electronics N.V. *
- **Chairman of the Supervisory Board:** Heineken N.V. *

POSITIONS AND ACTIVITIES HELD DURING THE LAST FIVE YEARS AND THAT HAVE EXPIRED

2010

Member of the Board of Directors: INSEAD (until December 2010)

NB: Independent Director within the meaning of the Board of Directors' Internal Regulations. For information regarding independence criteria, please refer to this Reference Document - p.149.

BÉATRICE MAJNONI D'INTIGNANO

Independent Director

Nationality: French

Born in 1942
Date of first appointment: 2002
Start of current term: 2010
End of current term: 2014
Number of shares owned as of December 31, 2012: 2,006

CAREER

Having graduated with a high-level teaching degree in economics in 1975, Béatrice Majnoni d'Intignano is *Professeur Émérite* (Professor Emerita of University) (Paris-Est—Créteil). Béatrice Majnoni d'Intignano was *Professeur agrégé* (tenured senior university professor) at the Paris-Est—Créteil University from 1980 to 2012 (currency, international relations, macroeconomics, economics of healthcare). She was also *conseiller économique à l'Assistance Publique* (business consultant) for Paris Hospitals, from 1980 to 1987, and has been a temporary consultant with the World Health Organization from 1980 to 2001.

She is a member of the editorial committee of the magazine *Commentaire*. She was also a member of the Economic Analysis Council of the French Prime Minister from 1997 to 2008 and a member of *Société d'économie politique* until 2009.

Béatrice Majnoni d'Intignano is the author of a large number of books and articles about economics, employment, Europe, the economics of healthcare and women's role in society.

POSITIONS AND ACTIVITIES HELD DURING 2012

Functions within the Air Liquide Group

- **Director:** L'Air Liquide S.A. * (member of the Audit and Accounts Committee)

Positions or activities outside the Air Liquide Group

- Professor Emerita of the University (Paris-Est—Créteil)
- Tenured professor at the University (Paris-Est—Créteil) (until August 2012)

POSITIONS AND ACTIVITIES HELD DURING THE LAST FIVE YEARS AND THAT HAVE EXPIRED

2008

- Member of the Economic Analysis Council chaired by the French Prime Minister (Conseil d'analyse économique auprès du Premier *ministre*)

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NB: Independent Director within the meaning of the Board of Directors' Internal Regulations. For information regarding independence criteria, please refer to this Reference Document - p.149.

THIERRY PEUGEOT

Independent Director

Nationality: French

Born in 1957
Date of first appointment: 2005
Start of current term: 2009
End of current term: 2013[(a)]
Number of shares owned as of December 31, 2012: 1,454

Business address

Peugeot S.A., 75, avenue de la Grande-Armée—75116 Paris Cedex 16

CAREER

A graduate of ESSEC, Thierry Peugeot began his career with the Marrel Group in 1982 as Export Manager for the Middle East and English-speaking Africa for Air Marrel, and then Director of Air Marrel America. He joined Automobiles Peugeot in 1988 as Regional Manager of the South-East Asia zone, then Chief Executive Officer of Peugeot do Brasil in 1991 and Chief Executive Officer of Slica in 1997. In 2000, he became International Key Accounts Director of Automobiles Citroën and then, in 2002, Vice-President of Services and Spare Parts before being appointed to the PSA Peugeot Citroën Vice-Presidents Committee. Thierry Peugeot has been Chairman of the Supervisory Board of Peugeot S.A. since 2002. He is also a member of the Board of Faurecia.

POSITIONS AND ACTIVITIES HELD DURING 2012

Functions within the Air Liquide Group

- **Director:** L'Air Liquide S.A. *

Positions or activities outside the Air Liquide Group

- **Chairman of the Supervisory Board:** Peugeot S.A. * (member of the Audit and Accounts Committee)
- **Vice-Chairman:** *Établissements Peugeot Frères*
- **Vice-Chairman of the Supervisory Board:** Gefco (since January 2013)
- **Director:** Société FFP *, *La Société anonyme de participations,* Faurecia *, *Compagnie Industrielle de Delle*
- Permanent representative of the *Compagnie Industrielle de Delle* on the LISI * Board of Directors
- **Chairman:** *Association nationale des sociétés par actions (ANSA)* (since February 2012)

POSITIONS AND ACTIVITIES HELD DURING THE LAST FIVE YEARS AND THAT HAVE EXPIRED

2010

- **Director:** *La Française de Participations Financières* (until July 2010), *Immeubles et Participations de l'Est* (until November 2010)

(a) Renewal of term proposed to the Shareholders' Meeting of May 7, 2013.

NB: Independent Director within the meaning of the Board of Directors' Internal Regulations. For information regarding independence criteria, please refer to this Reference Document - p.149.

PAUL SKINNER

Independent Director

Nationality: British

Born in 1944
Date of first appointment: 2006
Start of current term: 2010
End of current term: 2014
Number of shares owned as of December 31, 2012: 1,439

Business address
P.O. Box 65129, London SW1P 9LY

CAREER

Paul Skinner has a law degree from the University of Cambridge and is a graduate of the Manchester Business School. He started his career in 1966 with the Royal Dutch/Shell group. After having been responsible for managing several subsidiaries in Greece, Nigeria, New Zealand and Norway, Paul Skinner was President of the Shell International Trading and Shipping Company from 1991 to 1995. He was later appointed Chief Executive Officer of Royal Dutch/Shell's global Oil Products business and then Group Managing Director of the Royal Dutch/Shell group from 2000 to 2003.

After his retirement from Shell, he was Chairman of Rio Tinto plc, the global mining company, over the period 2003-2009. He is currently Chairman of Infrastructure UK, a division of HM Treasury, non-Executive Director of Standard Chartered plc and Tetra Laval Group, and a member of the Public Interest Body of PricewaterhouseCoopers LLP.

POSITIONS AND ACTIVITIES HELD DURING 2012

Functions within the Air Liquide Group

- **Director:** L'Air Liquide S.A. * (member of the Audit and Accounts Committee)

Positions or activities outside the Air Liquide Group

- **Non-Executive Director:** Standard Chartered plc *, Tetra Laval Group
- **Chairman:** Infrastructure UK (a division of HM Treasury)
- **Member:** Public Interest Body of PricewaterhouseCoopers LLP

POSITIONS AND ACTIVITIES HELD DURING THE LAST FIVE YEARS AND THAT HAVE EXPIRED

2011

- **Member of the Board of Directors:** INSEAD (until November 2011)

2009

- **Chairman:** Rio Tinto plc * (until April 2009), Rio Tinto Ltd. * (until April 2009)
- **Member of the Board:** UK Ministry of Defense (until July 2009)

NB: Independent Director within the meaning of the Board of Directors' Internal Regulations. For information regarding independence criteria, please refer to this Reference Document - p.149.

KAREN KATEN

Independent Director

Nationality: American

Born in 1949
Date of first appointment: 2008
Start of current term: 2012
End of current term: 2016
Number of shares owned as of December 31, 2012: 1,776

Business address

Essex Woodlands Health Ventures—280 Park Avenue, 27th Floor East—New York, NY 10017-USA

CAREER

Karen Katen, a US citizen, is a graduate of the University of Chicago (BA in Political Science and MBA).

In 1974, she joined Pfizer and carried out various management and executive positions during more than 30 years. In her last position with Pfizer, she was Vice-Chairman of Pfizer Inc. and President of Pfizer Human Health, the group's main operating department. Karen Katen played a major role in the introduction of new medicines for the treatment of cardiovascular and mental diseases, as well as diabetes and cancer. She also successfully oversaw the integration of Warner Lambert (acquired in 2000) and Pharmacia (acquired in 2003) in the Pfizer Group. Having retired from Pfizer in March 2007, she was recently Chairman of the Pfizer Foundation. Currently she is a Senior Advisor at Essex Woodlands Health Ventures, a healthcare venture and growth equity firm, based in their New York office.

POSITIONS AND ACTIVITIES HELD DURING 2012

Functions within the Air Liquide Group

- **Director:** L'Air Liquide S.A. * (member of the Appointments and Governance Committee)

Positions or activities outside the Air Liquide Group

- **Director:** Harris Corporation *, Home Depot *, Catalyst, Armgo Pharmaceuticals, Catamaran Inc. * (since December 2012)
- **Chairman and Director:** Rand Corporation's Health Board of Advisors
- **Director:** The Economic Club of New York Board of Trustees, Peterson Institute for International Studies, Takeda Global Advisory Board
- **Senior Advisor:** Essex Woodlands Health Ventures
- **Trustee:** University of Chicago
- **Trustee:** University of Chicago Graduate School of Business

POSITIONS AND ACTIVITIES HELD DURING THE LAST FIVE YEARS AND THAT HAVE EXPIRED

2009

- **Director:** General Motors Corporation * (until July 2009)

2008

- **Chairman:** Pfizer Foundation

NB: Independent Director within the meaning of the Board of Directors' Internal Regulations. For information regarding independence criteria, please refer to this Reference Document - p.149.

JEAN-PAUL AGON

Independent Director

Nationality: French

Born in 1956
Date of first appointment: 2010
Start of current term: 2010
End of current term: 2014
Number of shares owned as of December 31, 2012: 1,172

Business address

L'Oréal—41, rue Martre—92110 Clichy

CAREER

A graduate of HEC Business School, Jean-Paul Agon began his career with the L'Oréal Group in 1978. From 1981 to 1997, he held various senior management positions first as General Manager of L'Oréal Greece and General Manager of L'Oréal Paris, then International Managing Director for Biotherm International, Managing Director for L'Oréal Germany and finally Managing Director for L'Oréal Asia Zone. From 2001 to 2005, he was Chairman and Chief Executive Officer of L'Oréal USA as well as several subsidiaries of the L'Oréal Group in the USA. In 2005, he was appointed Deputy Chief Executive Officer of the L'Oréal Group, and became Chairman and Chief Executive Officer of the Group in 2006. He is Chairman and Chief Executive Officer of L'Oréal since March 2011.

POSITIONS AND ACTIVITIES HELD DURING 2012

Functions within the Air Liquide Group

- **Director:** L'Air Liquide S.A. * (member of the Remuneration Committee)

Positions or activities outside the Air Liquide Group

- **Chairman and Chief Executive Officer:** L'Oréal *
- **Director:** L'Oréal USA Inc. (United States)
- **Chairman of the Board of Directors (until April 2012) and Director:** Galderma Pharma S.A. (Switzerland)
- **Vice-Chairman and Director (until March 2012):** The Body Shop International plc (United Kingdom)—L'Oréal Group
- **Chairman (since April 2012) and Director:** *Fondation d'entreprise* L'Oréal (L'Oréal Foundation)

POSITIONS AND ACTIVITIES HELD DURING THE LAST FIVE YEARS

2008

- **Chairman of the Board of Directors:** Galderma Pharma S.A. (Switzerland) (until May 2008)

3

NB: Independent Director within the meaning of the Board of Directors' Internal Regulations. For information regarding independence criteria, please refer to this Reference Document - p.149.

SIÂN HERBERT-JONES
Independent Director

Nationality: British

Born in 1960
Date of first appointment: 2011
Start of current term: 2011
End of current term: 2015
Number of shares owned as of December 31, 2012: 660

Business address
255, quai de la Bataille-de-Stalingrad—92866 Issy-les-Moulineaux Cedex 9

CAREER

Holder of a Master of Art degree in History from Oxford University and a graduate from the Institute of Chartered Accountants in England and Wales, Siân Herbert-Jones first practiced for 13 years with the firm of PriceWaterhouseCoopers, in the London office from 1983-1993 in particular in the capacity of Corporate Finance Manager, then in the Paris office from 1993 to 1995 in the capacity of Mergers & Acquisitions Manager. She then joined the Sodexo Group in 1995 in which she was successively in charge of international development from 1995 to 1998 and the Group's treasury department from 1998 to 2000 then Deputy Chief Financial Officer in 2000. Since 2001, she has been the Sodexo Group's Chief Financial Officer; she is a member of the Executive Committee.

POSITIONS AND ACTIVITIES HELD DURING 2012

Functions within the Air Liquide Group

- **Director:** L'Air Liquide S.A. *

Positions or activities outside the Air Liquide Group

- **Chief Financial Officer and member of the Executive Committee:** Sodexo Group *
- **Chairman:** ETIN SAS (France); Sodexo Etinbis SAS (France); Sofinsod SAS (France)
- **Director:** Sodexho Awards Co, Sodexo Japan Kabushiki Kaisha Ltd, Sodexo Pass Luxembourg SA, Sodexho Mexico SA de CV, Sodexho Mexico Servicios de Personal SA de CV, Sodexo Remote Sites the Netherlands, Sodexo Remote Sites Europe Ltd, Universal Sodexho Eurasia Ltd, Sodexo, Inc., Sodexo Management, Inc., Sodexo Remote Sites USA, Inc., Sodexo Services Enterprises LLC, Universal Sodexho Services de Venezuela SA, Universal Sodexho Empresa de Servicios y Campamentos SA
- **Member of the Management Board:** Sodexo en France SAS (France), Sodexo Entreprises SAS (France), Sodexo Pass International SAS (France), One SAS (France)
- Permanent representative of Sofinsod SAS on the Supervisory Board of One SCA (France)

POSITIONS AND ACTIVITIES HELD DURING THE LAST FIVE YEARS AND THAT HAVE EXPIRED

2011

- **Director:** Sodexo Remote Sites Support Services Ltd, Universal Sodexho Kazakhstan LTD, Universal Sodexo Euroasia Ltd, Sodexo Motivation Solutions Mexico SA de CV, Sodexo Motivation Solutions UK Ltd

2010

- **Director:** Sodexo Solutions de Motivation France SA (France), Universal Services Asia LLC (USA), Sodexo Pass Belgium SA (Belgium)
- **Gérant:** Imagor Services & Cie (Belgium)

2009

- **Director:** Sodexo Asia Pacific Pte Ltd (Singapore), Sodexo Scandinavian Holding AB (Sweden)
- **Chairman and Chief Executive Officer:** Armement Lebert Buisson SA (France)

2008

- **Chairman:** Mobility SAS (France),
- **Director:** Sodexo Argentina SA (Argentina)

NB: Independent Director within the meaning of the Board of Directors' Internal Regulations. For information regarding independence criteria, please refer to this Reference Document - p.149.

PIERRE DUFOUR

Senior Executive Vice-President and Director

Nationality: Canadian

Born in 1955
Date of first appointment: 2012
Start of current term: 2012
End of current term: 2016
Number of shares owned as of December 31, 2012: 75,572

Business address

Air Liquide, 75, quai d'Orsay—75321 Paris Cedex 07

CAREER

A graduate of *École polytechnique*, Montréal University, Stanford University (California) and Harvard University (Massachusetts), Pierre Dufour began his career in 1976 at SNC-Lavalin, a leading engineering contractor in Montreal, Canada. From 1991 to 1997, he was Chief Executive Officer of SNC-Lavalin Inc.

In 1997, he joined the Air Liquide Group as Vice-President of Worldwide Engineering. In 1998, he was appointed Group Industrial Director, overseeing the technical aspects of Group operations worldwide. In 2000, he was appointed Chairman and Chief Executive Officer of American Air Liquide Holdings Inc., in Houston, Texas and joined L'Air Liquide S.A. Executive Committee. He became Vice-President of L'Air Liquide S.A. in 2001, Executive Vice-President in 2002 and was appointed Senior Executive Vice-President in November 2007. He is currently responsible for Large Industries, Engineering, Research and Safety business lines in the Americas, Africa, the Middle East and Asia Pacific.

POSITIONS AND ACTIVITIES HELD DURING 2012

Functions within the Air Liquide Group

- **Senior Executive Vice-President and Director:** L'Air Liquide S.A. *
- **Senior Executive Vice-President and Director:** Air Liquide International
- **Chairman of the Board of Directors and Director:** Air Liquide Middle East
- **Director:** American Air Liquide Holdings, Inc., Air Liquide Arabia (until May 2012), Air Liquide Japan
- **Chairman and Director:** American Air Liquide Inc.
- **Managing Director:** Air Liquide Global Management Services GmbH (since December 2012)

Positions or activities outside the Air Liquide Group

- **Director:** Archer Daniels Midland Company * (member of the Audit Committee)

POSITIONS AND ACTIVITIES HELD DURING THE LAST FIVE YEARS AND THAT HAVE EXPIRED

2009

- **Chairman and Chief Executive Officer:** American Air Liquide Holdings, Inc. (until September 2009)

2008

- **Chairman and Director:** Air Liquide Canada, Inc. (until January 2008)
- **Director:** VitalAire Canada, Inc. (until January 2008)

> STATUTORY AUDITORS’ OFFICES AND REMUNERATIONS

Statutory Auditors’ offices

Ernst & Young et Autres

Principal Statutory Auditor

The Ernst & Young firm is represented by Jean-Yves Jégourel and Emmanuelle Mossé

Tour First—TS 14444—1, place des Saisons

92037 Paris-La Défense Cedex (Courbevoie)

Deputy Statutory Auditor

Auditex

Tour First—TS 14444—1, place des Saisons

92037 Paris-La Défense Cedex (Courbevoie)

Mazars S.A.

Principal Statutory Auditor

The Mazars firm is represented by Lionel Gotlib and Daniel Escudeiro

61, rue Henri-Regnault

92400 Courbevoie

Deputy Statutory Auditor

Patrick de Cambourg with Mazars.

61, rue Henri-Regnault

92400 Courbevoie

Statutory Auditors'remunerations

	2012							
(In thousands of euros)	Ernst & Young		Mazars		Autres		Total	
Statutory audit, certification, review of individual and consolidated financial statements	5,606	69.1%	4,468	90.6%	815	69.3%	10,889	76.6%
■ Issuer	723		574		0		1,297	
■ Fully consolidated subsidiaries	4,883		3,894		815		9,592	
Other statutory audit engagements	1,005	12.4%	387	7.8%	18	1.5%	1,410	9.9%
■ Issuer	298		169		0		467	
■ Fully consolidated subsidiaries	707		218		18		943	
Total of audit services	**6,611**	**81.5%**	**4,855**	**98.4%**	**833**	**70.8%**	**12,299**	**86.5%**
Legal, employee and tax services	1,159	14.3%	73	1.5%	234	19.9%	1,466	10.3%
Other services	337	4.2%	3	0.1%	110	9.3%	450	3.2%
Total other services rendered by the network to the fully consolidated subsidiaries	**1,496**	**18.5%**	**76**	**1.6%**	**344**	**29.2%**	**1,916**	**13.5%**
TOTAL OF AUDITORS' REMUNERATION	**8,107**	**100.0%**	**4,931**	**100.0%**	**1,177**	**100.0%**	**14,215**	**100.0%**

	2011							
(In thousands of euros)	Ernst & Young		Mazars		Autres		Total	
Statutory audit, certification, review of individual and consolidated financial statements	5,203	75.9%	4,180	90.8%	625	35.8%	10,008	75.8%
■ Issuer	752		497				1,249	
■ Fully consolidated subsidiaries	4,451		3,683		625		8,759	
Other statutory audit engagements	814	11.9%	377	8.2%	149	8.5%	1,341	10.2%
■ Issuer	403		289		0		692	
■ Fully consolidated subsidiaries	411		88		149		649	
Total of audit services	**6,017**	**87.7%**	**4,558**	**99.0%**	**774**	**44%**	**11,349**	**85.9%**
Legal, employee and tax services	829	12.1%	41	0.9%	730	41.8%	1,600	12.1%
Other services	11	0.2%	3	0.1%	243	13.9%	256	1.9%
Total other services rendered by the network to the fully consolidated subsidiaries	**839**	**12.2%**	**44**	**1.0%**	**972**	**55.7%**	**1,855**	**14.0%**
TOTAL OF AUDITORS' REMUNERATION	**6,857**	**100.0%**	**4,602**	**100.0%**	**1,746**	**100.0%**	**13,205**	**100.0%**

In addition, the Group uses other audit firms to cover some smaller entities for audit services amounting to 833 thousand euros in 2012 and 774 thousand euros in 2011.

Other than Audit fees concern services provided outside of France that relate to the application of local tax regulations within the foreign countries where the Group operates.

4 Financial statements

> CONSOLIDATED FINANCIAL STATEMENTS

Consolidated income statement

For the year ended December 31

(in millions of euros)	Notes	2011	2012
Revenue	**(4)**	**14,456.9**	**15,326.3**
Other income	(5)	139.3	134.5
Purchases	(5)	(5,761.6)	(6,098.6)
Personnel expenses	(5)	(2,481.5)	(2,666.7)
Other expenses	(5)	(2,789.5)	(2,903.2)
Operating income recurring before depreciation and amortization		**3,563.6**	**3,792.3**
Depreciation and amortization expense	(5)	(1,154.9)	(1,231.8)
Operating income recurring		**2,408.7**	**2,560.5**
Other non-recurring operating income	(6)	123.1	13.4
Other non-recurring operating expenses	(6)	(95.3)	(40.5)
Operating income		**2,436.5**	**2,533.4**
Net finance costs	(7)	(235.5)	(248.1)
Other financial income	(7)	68.7	69.2
Other financial expenses	(7)	(131.4)	(133.0)
Income taxes	(8)	(576.4)	(566.0)
Share of profit of associates	(15)	32.8	20.0
Profit for the period		**1,594.7**	**1,675.5**
■ Minority interests		59.8	66.1
■ Net profit (Group share)		1,534.9	1,609.4
Basic earnings per share *(in euros)*	**(9)**	**4.93**	**5.17**
Diluted earnings per share *(in euros)*	**(9)**	**4.91**	**5.15**

Accounting principles and notes to the consolidated financial statements begin on page 184.

Statement of net income and gains and losses recognized directly in equity

For the year ended December 31

(in millions of euros)	2011	2012
Profit for the period	**1,594.7**	**1,675.5**
Items recognized in equity [(a)]		
Change in fair value of financial instruments	(6.1)	27.9
Change in foreign currency translation reserve	114.0	(83.2)
Actuarial gains/ (losses)	(76.7)	(332.1)
Items recognized in equity, net of taxes	**31.2**	**(387.4)**
Net income and gains and losses recognized directly in equity	**1,625.9**	**1,288.1**
■ Attributable to minority interests	63.5	61.1
■ Attributable to equity holders of the parent	1,562.4	1,227.0

(a) With the exception of actuarial gains and losses, the other items recognized in equity will be subsequently transferred in the consolidated income statement.

Consolidated balance sheet

For the year ended December 31

ASSETS *(in millions of euros)*	Notes	December 31, 2011	December 31, 2012
Goodwill	(11)	4,558.5	5,132.7
Other intangible assets	(12)	638.2	726.5
Property, plant and equipment	(13)	12,096.9	12,784.7
Non-current assets		**17,293.6**	**18,643.9**
Non-current financial assets	(14)	398.3	435.8
Investments in associates	(15)	211.1	221.7
Deferred tax assets	(16)	290.3	365.5
Fair value of non-current derivatives (assets)	(28)	63.6	53.8
Other non-current assets		**963.3**	**1,076.8**
TOTAL NON-CURRENT ASSETS		**18,256.9**	**19,720.7**
Inventories and work-in-progress	(17)	784.1	775.8
Trade receivables	(18)	2,779.3	2,826.5
Other current assets	(20)	444.8	422.3
Current tax assets		52.0	71.3
Fair value of current derivatives (assets)	(28)	45.2	33.2
Cash and cash equivalents	(21)	1,761.1	1,154.2
TOTAL CURRENT ASSETS		**5,866.5**	**5,283.3**
TOTAL ASSETS		**24,123.4**	**25,004.0**

EQUITY AND LIABILITIES *(in millions of euros)*	Notes	December 31, 2011	December 31, 2012
Share capital		1,561.0	1,717.5
Additional paid-in capital		122.6	20.8
Retained earnings		6,631.7	6,939.0
Treasury shares		(91.6)	(75.0)
Net profit (Group share)		1,534.9	1,609.4
Shareholders' equity		**9,758.6**	**10,211.7**
Minority interests		**237.1**	**232.6**
TOTAL EQUITY [(a)]	**(22)**	**9,995.7**	**10,444.3**
Provisions, pensions and other employee benefits	(23, 24)	1,897.0	2,216.1
Deferred tax liabilities	(16)	1,204.9	1,134.8
Non-current borrowings	(25)	5,662.5	5,789.0
Other non-current liabilities	(26)	190.4	195.6
Fair value of non-current derivatives (liabilities)	(28)	126.1	85.1
TOTAL NON-CURRENT LIABILITIES		**9,080.9**	**9,420.6**
Provisions, pensions and other employee benefits	(23, 24)	190.6	243.2
Trade payables	(27)	1,992.5	1,896.1
Other current liabilities	(26)	1,244.4	1,325.6
Current tax payables		162.3	176.6
Current borrowings	(25)	1,373.5	1,484.7
Fair value of current derivatives (liabilities)	(28)	83.5	12.9
TOTAL CURRENT LIABILITIES		**5,046.8**	**5,139.1**
TOTAL EQUITY AND LIABILITIES		**24,123.4**	**25,004.0**

(a) A breakdown of changes in equity and minority interests is presented on pages 182 and 183.

Consolidated cash flow statement

For the year ended December 31

(in millions of euros)	Notes	2011	2012
Operating activities			
Net profit (Group share)	**(9)**	**1,534.9**	**1,609.4**
Minority interests		**59.8**	**66.1**
Adjustments:			
■ Depreciation and amortization	(5)	1,154.9	1,231.8
■ Changes in deferred taxes [a]	(8)	99.6	52.0
■ Increase (decrease) in provisions		5.1	(19.7)
■ Share of profit of associates (less dividends received)	(15)	(17.9)	(6.1)
■ Profit/loss on disposal of assets		(108.3)	(20.9)
Cash flows from operating activities before changes in working capital		**2,728.1**	**2,912.6**
Changes in working capital	(19)	(192.8)	(67.3)
Others		(109.5)	(136.8)
Net cash flows from operating activities		**2,425.8**	**2,708.5**
Investing activities			
Purchase of property, plant and equipment and intangible assets	(12, 13)	(1,755.0)	(2,007.9)
Acquisition of subsidiaries and financial assets	(2)	(99.5)	(879.4)
Proceeds from sale of property, plant and equipment and intangible assets		180.9	49.1
Proceeds from sale of financial assets		1.3	1.2
Net cash flows used in investing activities		**(1,672.3)**	**(2,837.0)**
Financing activities			
Dividends paid [b]			
■ L'Air Liquide S.A.		(679.2)	(722.6)
■ Minority interests		(42.2)	(58.0)
Proceeds from issues of share capital [b]		51.5	37.3
Purchase of treasury shares [b]		(93.8)	(104.2)
Increase (decrease) in borrowings		237.2	373.5
Transactions with minority shareholders		(3.3)	(10.5)
Net cash flows from (used in) financing activities		**(529.8)**	**(484.5)**
Effect of exchange rate changes and change in scope of consolidation		6.5	(12.9)
Net increase (decrease) in net cash and cash equivalents		**230.2**	**(625.9)**
NET CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE PERIOD		**1,482.2**	**1,712.4**
NET CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD		**1,712.4**	**1,086.5**

(a) The changes in deferred taxes shown in the consolidated cash flow statement do not include the changes in deferred taxes relating to disposals of assets.
(b) A breakdown of dividends paid, share capital increase and treasury share purchase is provided on pages 182 and 183.

The analysis of net cash and cash equivalents at the end of the period is as follows:

(in millions of euros)	Notes	2011	2012
Cash and cash equivalents	(21)	1,761.1	1,154.2
Bank overdrafts (included in current borrowings)		(48.7)	(67.7)
NET CASH AND CASH EQUIVALENTS		**1,712.4**	**1,086.5**

NET INDEBTEDNESS CALCULATION

(in millions of euros)	Notes	2011	2012
Non-current borrowings (long-term debt)	(25)	(5,662.5)	(5,789.0)
Current borrowings (short-term debt)	(25)	(1,373.5)	(1,484.7)
TOTAL GROSS INDEBTEDNESS		**(7,036.0)**	**(7,273.7)**
Cash and cash equivalents	**(25)**	**1,761.1**	**1,154.2**
Derivative instruments (assets) - fair value hedge of borrowings	(25)	26.8	17.0
TOTAL NET INDEBTEDNESS AT THE END OF THE PERIOD		**(5,248.1)**	**(6,102.5)**

STATEMENT OF CHANGES IN NET INDEBTEDNESS

(in millions of euros)	Notes	2011	2012
Net indebtedness at the beginning of the period		**(5,039.3)**	**(5,248.1)**
Net cash flows from operating activities		2,425.8	2,708.5
Net cash flows used in investing activities		(1,672.3)	(2,837.0)
Net cash flows used in financing activities excluding increase (decrease) in borrowings		(767.0)	(858.0)
Total net cash flows		**(13.5)**	**(986.5)**
Effect of exchange rate changes, opening net indebtedness of newly acquired companies and others		(195.3)	132.1
Change in net indebtedness		**(208.8)**	**(854.4)**
NET INDEBTEDNESS AT THE END OF THE PERIOD	**(25)**	**(5,248.1)**	**(6,102.5)**

Consolidated statement of changes in equity

(in millions of euros)	Share capital	Additional paid-in capital	Retained earnings (including net profit)	Net income recognized directly in equity		Treasury shares	Shareholders' equity	Minority interests	Total equity
				Fair value of financial instruments	Translation reserves				
Equity and minority interests as of January 1, 2012	**1,561.0**	**122.6**	**8,329.4**	**(31.2)**	**(131.6)**	**(91.6)**	**9,758.6**	**237.1**	**9,995.7**
Profit for the period			**1,609.4**				**1,609.4**	**66.1**	**1,675.5**
Items recognized in equity			(332.1)	27.9	(78.2)		(382.4)	(5.0)	(387.4)
Net income and gains and losses recognized directly in equity [e]			**1,277.3**	**27.9**	**(78.2)**		**1,227.0**	**61.1**	**1,288.1**
Increase (decrease) in share capital	3.6	34.8					38.4	(1.5)	36.9
Free share attribution	159.5	(27.2)	(132.3)						
Distribution			(722.6)				(722.6)	(58.0)	(780.6)
Cancellation of treasury shares [c]	(6.6)	(109.4)				116.0			
Purchase of treasury shares [c]						(105.1)	(105.1)		(105.1)
Share-based payments			10.8			5.7	16.5		16.5
Put options granted to minority shareholders			0.7				0.7	(3.4)	(2.7)
Transactions with minority shareholders recognized directly in equity			(5.1)				(5.1)	(2.7)	(7.8)
Others			3.3 [d]				3.3		3.3
EQUITY AND MINORITY INTERESTS AS OF DECEMBER 31, 2012	**1,717.5 [a]**	**20.8 [b]**	**8,761.5**	**(3.3)**	**(209.8)**	**(75.0)**	**10,211.7**	**232.6**	**10,444.3**

(a) Share capital as of December 31, 2012 comprised 312,281,159 shares with a par value of 5.50 euros. During the fiscal year, movements affecting share capital were as follows:

- *on May 31, 2012, share capital increase by incorporating additional paid-in capital resulting from the attribution of 29,003,797 free shares at the rate of one new share for 10 former shares and one new share for 100 former shares for shares held in registered form continuously from December 31, 2009 to May 30, 2012 inclusive. The share capital increase was realized by transfer of 27.2 million euros from "Additional paid-in capital" and 132.3 million euros from "Retained earnings";*
- *issuance of 245,020 shares in cash at a par value of 5.50 euros resulting from the exercise of options before free share attribution;*
- *issuance of 419,401 shares in cash at a par value of 5.50 euros resulting from the exercise of options after free share attribution;*
- *share capital decrease resulting from the cancellation of 1,200,000 treasury shares before free share attribution.*

(b) "Additional paid-in capital" was increased by the amount of share premiums relating to the share capital increase in the amount of 34.8 million euros and was reduced by the amount of share premiums incorporated to share capital in the amount of -109.4 million euros.

(c) The number of treasury shares as of December 31, 2012 totaled 1,003,394 (including 916,772 held by L'Air Liquide S.A.). During the fiscal year, movements affecting treasury shares were as follows:

- *acquisitions, net of disposals, of 1,051,224 shares at an average price of 99.95 euros including 1,144,724 shares at an average price of 98.76 euros before free share attribution and -93,500 shares at an average price of 85.36 euros after free share attribution;*
- *cancellation of 1,200,000 shares before the free share attribution;*
- *issuance of 110,935 shares as part of the free share attribution;*
- *allocation of -78,441, shares as conditional grants of shares.*

(d) The changes in "Retained earnings" primarily result from the impact of the cancellation of gains or losses arising from disposals of treasury shares and from the tax impact related to the items recognized directly in equity.

(e) The statement of net income and gains and losses recognized directly in equity is presented on page 178.

(in millions of euros)	Share capital	Additional paid-in capital	Retained earnings (including net profit)	Net income recognized directly in equity		Treasury shares	Shareholders' equity	Minority interests	Total equity
				Fair value of financial instruments	Translation reserves				
Equity and minority interests as of January 1, 2011	**1,562.5**	**170.3**	**7,538.5**	**(25.1)**	**(241.6)**	**(101.1)**	**8,903.5**	**209.0**	**9,112.5**
Profit for the period			**1,534.9**				**1,534.9**	**59.8**	**1,594.7**
Items recognized in equity			(76.4)	(6.1)	110.0		27.5	3.7	31.2
Net income and gains and losses recognized directly in equity [(a)]			**1,458.5**	**(6.1)**	**110.0**		**1,562.4**	**63.5**	**1,625.9**
Increase (decrease) in share capital	5.1	46.3					51.4	0.1	51.5
Distribution			(679.2)				(679.2)	(42.2)	(721.4)
Cancellation of treasury shares	(6.6)	(94.0)				100.6			
Purchase of treasury shares						(91.1)	(91.1)		(91.1)
Share-based payments			14.6				14.6		14.6
Put options granted to minority shareholders			0.1				0.1	(3.3)	(3.2)
Transactions with minority shareholders recognized directly in equity			(0.6)				(0.6)	(0.8)	(1.4)
Others			(2.5)				(2.5)	10.8	8.3
EQUITY AND MINORITY INTERESTS AS OF DECEMBER 31, 2011	**1,561.0**	**122.6**	**8,329.4**	**(31.2)**	**(131.6)**	**(91.6)**	**9,758.6**	**237.1**	**9,995.7**

(a) The statement of net income and gains and losses recognized directly in equity is presented on page 178.

Accounting principles

BASIS FOR PREPARATION OF THE CONSOLIDATED FINANCIAL STATEMENTS

Due to its listing on the Paris Stock Exchange and pursuant to EC Regulation no. 1606/2002 of July 19, 2002, the consolidated financial statements of the Air Liquide Group for the year ended December 31, 2012 have been prepared in accordance with International Financial Reporting Standards (IFRS), as endorsed by the European Union as of December 31, 2012 and in accordance with IFRSs without use of the carve-out option, as published by the International Accounting Standards Board (IASB). The IFRS standards and interpretations as adopted by the European Union are available at the following website:

http://ec.europa.eu/internal_market/accounting/ias/index_en.htm

The Group has not anticipated any new standards, amendments to existing standards or new interpretations published by the IASB but not yet approved or not yet mandatory in the European Union, as of December 31, 2012.

The financial statements are presented in millions of euros. They were approved by the Board of Directors on February 13, 2013 and will be submitted for approval to the Annual General Meeting on May 7, 2013.

NEW IFRS AND INTERPRETATIONS

1. Standards, interpretations and amendments whose application is mandatory as of January 1, 2012

Amendment to IFRS7 “Financial Instruments: Disclosures – Transfers of financial assets” had no impact on the Air Liquide Group financial statements.

2. Standards, interpretations and amendments endorsed by the European Union whose application is optional in 2012

The Group financial statements for the year ended December 31, 2012 do not include any potential impacts from the standards, interpretations and amendments endorsed by the European Union as of December 31, 2012 for which adoption is only mandatory as of fiscal years beginning after December 31, 2012.

The following texts will not have a material impact on the Group financial statements:

- amendment to IAS12 “Deferred Tax: Recovery of Underlying Assets”, published on December 20, 2010;
- IAS27 revised “Separate Financial Statements”, published on May 12, 2011;
- IAS28 revised “Investments in Associates and Joint Ventures”, published on May 12, 2011;
- IFRS10 “Consolidated Financial Statements”, published on May 12, 2011;
- IFRS11 “Joint Arrangements”, published on May 12, 2011;
- IFRS12 “Disclosure of Interests in Other entities”, published on May 12, 2011;
- IFRS13 “Fair Value Measurement”, published on May 12, 2011;
- IAS19 revised “Employee Benefits”, published on June 16, 2011.

The following texts will not have impact on the Group financial statements:

- amendment to IFRS1 “First-time Adoption of International Financial Reporting Standards”, published on December 20, 2010;
- amendment to IAS1 “Presentation of Items of Other Comprehensive Income”, published on June 16, 2011;
- IFRIC20 “Stripping Cost in the Production Phase of a Surface Mine”, published on October 19, 2011;
- amendment to IAS32 “Offsetting Financial Assets and Financial Liabilities”, published December 16, 2011;
- amendment to IFRS7 “Offsetting Financial Assets and Financial Liabilities”, published December 16, 2011.

3. Standards, interpretations and amendments not yet endorsed by the European Union

The following texts published by the IASB as of December 31, 2012 and not yet endorsed by the European Union should not have a significant impact on the Group financial statements:

- IFRS9 “Financial Instruments: Classification and Measurement”, published on November 12, 2009;
- amendments to IFRS9 and to IFRS7 “Application date”, published on December 16, 2011;
- amendments to IFRS1 “Government Loans”, published on March 13, 2012;
- improvements to IFRSs (2009-2011), published on May 17, 2012;
- amendments to the transition guidance for IFRSs 10, 11 and 12, published on June 28, 2012;
- amendments to IFRS10, IFRS12 and IAS27 “Investment Entities”, published on October 31, 2012.

USE OF ESTIMATES AND ASSUMPTIONS

The preparation of the financial statements requires Group or subsidiary Management to make estimates and use certain assumptions which have a significant impact on the carrying amounts of assets and liabilities recorded in the consolidated balance sheet, the notes related to these assets and liabilities, the profit and expense items in the income statement and the commitments relating to the period-end. Balance sheet, income statement and cash flow statement line items could differ should the subsequent actual results differ from the estimates. The most significant estimates and assumptions concern the following:

- the estimated useful life of property, plant and equipment used for calculation of depreciation and amortization: these estimates are described in section 5.e. of the Accounting policies;
- the assumptions used to determine provisions for employee retirement benefit obligations: the actuarial assumptions used (turnover, mortality, retirement age, salary increase, etc.), and the discount rates used to determine the present value of obligations and the expected return on long-term assets, as described in Notes 24.2 and 24.4;
- the estimates and assumptions concerning asset impairment tests, as described in section 5.f. and in note 11.2;
- the methods used to recover deferred tax assets on the balance sheet;
- the risk assessment to determine the amount of provisions for contingencies and losses.

ACCOUNTING POLICIES

The consolidated financial statements were prepared under the historical cost convention, except for available-for-sale financial assets and financial assets and liabilities measured at fair value through profit or loss in accordance with IAS32/39. The carrying amount of other assets and liabilities hedged against fair value risk is adjusted to take into account the changes in fair value attributable to the hedged risks. In addition, the principles of fairness, going concern, and consistency were applied.

1. CONSOLIDATION METHODS

The consolidation methods used are:

- full consolidation method for subsidiaries;
- proportionate method for joint ventures.

Investments in associates are accounted for using the equity method.

a. Subsidiaries

All the subsidiaries or companies in which the Air Liquide Group exercises control are fully consolidated. Control exists when the Group has the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities. Control is presumed to exist when the Group owns, directly or indirectly, more than 50% of the voting rights. Companies are fully consolidated until the date on which control is transferred outside the Group.

b. Joint ventures

Joint ventures are proportionately consolidated. Joint ventures are entities in which the Group has joint control with one or several partners through a contractual arrangement. Under this consolidation method, assets and liabilities and profits and expenses are shared between the partners in proportion to their percentage of control in the consolidated financial statements. These amounts are recorded on each line of the financial statements as for the consolidated entities.

c. Associates

The equity method applies to investments in associates over which the Air Liquide Group has significant influence (generally when the Group has more than a 20% interest), but no control. Under the equity method, the net assets and net profit of a company are recognized *prorata* to the interest held by the parent in the share capital.

On acquisition of an investment in an associate, the goodwill relating to the associate is included in the carrying amount of the investment.

The financial statements of subsidiaries, joint ventures and associates included in the consolidated financial statements are prepared as of December 31.

2. ADJUSTMENTS ARISING FROM CONSOLIDATION

a. Inter-company transactions

All inter-company receivables and payables, income and expenses and profits or losses are eliminated.

b. Tax-driven provisions

Movements in the provisions, which have been established in compliance with tax regulations or which are similar to reserves, are eliminated in the determination of consolidated net profit.

c. Deferred taxes

Deferred taxes are recognized for all temporary differences between the carrying amount of assets and liabilities and their tax base, excluding non-deductible goodwill and the other exceptions provided in IAS12. Deferred tax assets are recognized on all deductible temporary differences provided that it is highly probable that the tax benefits will be realized in future years.

Deferred taxes are calculated at the tax rate applicable when the temporary difference is reversed and allowed under local regulations at the period-end date. The liability method is applied and any changes to the tax rates are recognized in the income statement, except those related to items directly recognized in equity.

Deferred tax assets and liabilities are offset if the entities have a legally enforceable right to offset and if they relate to income tax levied by the same taxation authority. Deferred taxes are not discounted.

3. TRANSLATION OF THE FINANCIAL STATEMENTS OF FOREIGN SUBSIDIARIES

At the balance sheet date, the financial statements of foreign subsidiaries are translated into euros as follows:

- balance sheet items, at the official year-end exchange rates;
- income statement and cash flow statement items, using the average exchange rate over the period for each currency.

Exchange differences are recognized under a separate item “translation reserves” in gains and losses recognized directly in equity.

Cumulative foreign exchange gains and losses as of January 1, 2004 arising from the translation into euros of the financial statements of foreign subsidiaries located outside the Euro zone have been maintained as a separate component of equity.

On removal from the scope of consolidation, the cumulative exchange differences of a company whose functional currency is not the euro are recognized in the income statement.

4. REVENUE RECOGNITION

a. Revenue from the sales of goods and services

Revenue from the sale of goods is recognized when the significant risks and rewards of ownership have been transferred to the buyer, net of sales taxes, rebates and discounts and after eliminating sales within the Group.

Revenue associated with service delivery is recognized in reference to the stage of completion of the transaction when it can be reliably measured.

b. Engineering and construction Contracts

Contract revenue and costs associated with construction contracts are recognized as revenue and expenses respectively, based on the stage of completion of the contracts at the balance sheet date.

The margin realized at the stage of completion is recognized only when it can be reliably measured. When it is probable that total contract costs will exceed total contract revenue, the expected loss is immediately recognized as an expense.

The stage of completion is assessed by using the ratio of contract costs incurred at the balance sheet date versus total estimated contract costs.

5. NON-CURRENT ASSETS

a. Goodwill and business combinations

Business combinations as of January 1, 2010

The Group has prospectively applied IFRS3 revised and IAS27 revised since January 1, 2010.

When the Group obtains control of an acquiree, the business combination is accounted for by applying the acquisition method on the acquisition date, in accordance with IFRS3 revised :

- the identifiable assets acquired and the liabilities and contingent liabilities assumed are measured at fair value;
- any minority interests in an acquiree are measured as the minority interest’s proportionate share of the acquiree’s net identifiable assets or at fair value. This option is applied on a case-by-case basis;
- the consideration transferred and any contingent consideration are measured at fair value;
- acquisition-related costs are recorded as expenses in the periods in which they are incurred.

For a business combination achieved in stages, any previously held equity interests in the acquiree are measured at the acquisition-date fair value. Any resulting gains or losses are recognized in profit or loss.

The measurement period of a business combination shall not exceed 12 months as of the acquisition date. Any adjustments to the consideration transferred after the measurement period are recognized in the income statement.

On the acquisition date, goodwill is recognized in the consolidated balance sheet as the difference between:

- the consideration transferred plus the amount of minority interests in the acquiree and the fair value of the previously held equity interest;
- the fair value of the identifiable assets acquired and the liabilities and contingent liabilities assumed.

Negative goodwill is recognized immediately through profit or loss.

Business combinations prior to January 1, 2010

Business combinations achieved prior to January 1, 2010 have been accounted for in accordance with the former versions of IFRS3 and IAS27. These standards had already adopted the acquisition method in the version published by the IASB in March 2004. The main provisions which differ from the revised standards are as follows:

- minority interests were measured based on their share of the net identifiable assets of the acquiree and the fair value measurement option did not exist;
- earn-outs were included in the acquisition cost, without time limits, when the payment was deemed probable and the amount could be reliably measured;
- acquisition-related costs were recorded in the cost of the business combination.

For an acquisition achieved in stages, the fair value remeasurement of any previously held net asset was recognized in equity.

For an acquisition of minority interests in a previously held company, the difference between the acquisition cost and the net carrying amount of the minority interests was recorded in goodwill.

At the time of the transition to IFRS and in accordance with the exemption offered by IFRS1, the Group decided not to apply IFRS3 "Business combinations" retrospectively for acquisitions that took place prior to January 1, 2004.

Goodwill is allocated to cash-generating units (CGU) or groups of cash-generating units. Subsequently, goodwill is not amortized but is tested for impairment annually or more frequently if there are any indications of impairment, in accordance with the method described in section 5.f.

b. Research & Development expenditures

Research & Development expenditures include all costs related to the scientific and technical activities, patent work, education and training necessary to ensure the development, manufacturing, start-up, and commercialization of new or improved products or processes.

According to IAS38, development costs shall be capitalized if, and only if, the Group can meet all of the following criteria:

- the intangible asset is clearly identified and the related costs are itemized and reliably monitored;
- the technical and industrial feasibility of completing the intangible asset;
- there is a clear intention to complete the intangible asset and use or sell it;
- its ability to use or sell the intangible asset arising from the project;
- how the intangible asset will generate probable future economic benefits;
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset.

Research expenditure is recognized as an expense when incurred.

c. Internally generated intangible assets

Internally generated intangible assets primarily include the development costs of information management systems. These costs are capitalized only if they satisfy the criteria as defined by IAS38 and described above.

Internal and external development costs on management information systems arising from the development phase are capitalized. Significant maintenance and improvement costs are added to the initial cost of assets if they specifically meet the capitalization criteria.

Internally generated intangible assets are amortized over their useful lives.

d. Other intangible assets

Other intangible assets include separately acquired intangible assets such as software, licenses, and intellectual property rights. They also include the technology, brands and customer contracts valued upon the acquisition of companies in accordance with IFRS3 "Business Combinations".

With the exception of brands, intangible assets are amortized using the straight-line method over their useful lives. Information management systems are generally amortized over five and seven years and customer contracts over a maximum period of 25 years, considering the probabilities of renewal.

e. Property, plant and equipment

Land, buildings and equipment are carried at cost less any accumulated depreciation and any accumulated impairment losses.

In the event of mandatory dismantling or asset removals, related costs are added to the initial cost of the relevant assets and provisions are recognized to cover these costs.

Interest costs on borrowings to finance the construction of property, plant, and equipment are capitalized during the period of construction when they relate to the financing of industrial projects over a twelve-month construction period, or longer.

When parts of an item of property, plant and equipment have different useful lives, they are accounted for separately and depreciated over their own useful lives.

Repair and maintenance costs are recognized as expenses when incurred. The costs of major inspections and overhauls of cogeneration plants are recognized as a separate component of the asset and are depreciated over the period between two major overhauls.

Depreciation is calculated according to the straight-line method over the estimated useful lives as follows:

- buildings: 20 years;
- cylinders: 10 to 20 years;
- production units: 15 to 20 years;
- pipelines: 15 to 35 years;
- other equipment: 5 to 15 years.

Land is not depreciated.

f. Impairment of assets

In accordance with IAS36, the Group regularly assesses whether there are any indications of asset impairment. If such indications exist, an impairment test is performed to assess whether the carrying amount of the asset is greater than its recoverable amount, defined as the higher of the fair value less costs to sell (net fair value) and the value in use.

Impairment tests are performed systematically once a year for goodwill and intangible assets with indefinite useful lives.

Assets that do not generate largely independent cash flows are grouped according to the cash-generating units (CGU) to which they belong. A cash-generating unit is an identifiable group of assets that generates cash inflows that are largely independent of the cash inflows of other assets or groups of assets. They are mainly determined on a geographical basis and by reference to the markets in which the Group operates.

In practice, the Group performs impairment tests at various levels pursuant to these principles and in accordance with IAS36:

- dedicated and on-site plants are tested individually;
- pipelines and plants that provide these pipelines are tested at the network level;
- liquid gas and hydrogen/CO plants are grouped together according to the plants' customer market;
- other assets are allocated to cash-generating units or groups of cash-generating units.

The cash-generating units of the Gas & Services activity are determined on a geographical basis. The Other activities are managed at the European (Welding) or worldwide (Engineering & Construction) levels.

Goodwill is allocated to cash-generating units or groups of cash-generating units that benefit from business combination synergies and which represent the levels at which goodwill is monitored by the Group.

When performing impairment tests on cash-generating units or groups of cash-generating units comprising goodwill, the Group uses the market multiples approach to determine if the goodwill is subject to impairment. Insofar as the fair value is not significantly greater than the net carrying amount of the cash-generating unit or group of cash-generating units, the Group confirms the recoverable amount of the cash-generating unit or group of cash-generating units using the estimated cash flow approach (value in use).

For other cash-generating units or groups of cash-generating units, and assets whose value is tested on an individual basis, the Group determines the recoverable amount using the estimated cash flow approach (value in use).

The market multiples used are determined based on the market value of the Air Liquide Group.

The growth rates, taken into account with respect to the cash flow estimates for cash-generating units or groups of cash-generating units, are determined based on the activity and geographical location of the CGU considered.

In assessing value in use for property, plant and equipment, the estimated future cash flows are discounted to their present value. Cash flows are measured over the asset's estimated period of use, taking into account customer contract terms and technical obsolescence.

The discount rate depends on the nature, the location of the asset and the customer market. It is determined according to the minimum level of profitability expected from the investment considering industrial and commercial risks and credit terms.

When the recoverable amount of an asset, a cash-generating unit or a group of cash-generating units is lower than its carrying amount, an impairment loss is recognized immediately through profit and loss. An impairment loss of a cash-generating unit is first allocated to goodwill.

When the recoverable amount exceeds the carrying amount again, the previously recognized impairment loss is reversed to the income statement, with the exception of impairment losses on goodwill, which cannot be reversed.

g. Leases

Finance leases

Leases of property, plant and equipment that transfer virtually all the risks and rewards of ownership to the Group are classified as finance leases. Items of property, plant and equipment acquired under finance leases are depreciated over the shorter of the asset's useful life or the lease term.

Operating leases

Leases where the lessor does not retain substantially all the risks and rewards incidental to ownership are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to the income statement on a straight-line basis over the lease term.

IFRIC4 "Determining Whether an Arrangement Contains a Lease" has no impact on the Group consolidated financial statements. In fact, the risks and rewards arising from the use of assets potentially affected by this interpretation are not transferred to the Group's customers. Consequently, the gas supply contracts related to these assets are not classified as finance leases.

6. FINANCIAL INSTRUMENTS

a. Non-current financial instruments

Non-consolidated investments

According to IAS39, investments in non-consolidated companies that are not accounted for using the equity method are classified as available for sale assets.

The fair value of investments in listed companies is recognized at their quoted market price at year-end. Investments whose fair value cannot be reliably measured are recognized at cost less any accumulated impairment losses. For this purpose, the recoverable amount is based on the Group's share of net assets, expected future profitability and the business plan of the entity representing the investment.

Changes in fair value are recognized in a separate equity line item until the investment is effectively sold. However, unrealized capital losses are immediately recognized in the income statement when the impairment loss is permanent.

Unrealized gains or losses previously recognized in equity are recorded in profit or loss on sale of the investments.

Loans and other financial assets

Loans and other financial assets are initially recognized at their fair value and subsequently carried at amortized cost. Impairment tests are performed at each closing date. Any impairment losses are recognized immediately in the income statement.

b. Trade and other receivables

Trade and other receivables are carried at fair value upon initial recognition and then at amortized cost less any impairment losses.

Impairment losses are recognized when it becomes probable that the amount due will not be collected and the loss can be reasonably estimated. Impairment losses are estimated by taking into account historical losses, age and a detailed risk estimate.

c. Cash and cash equivalents

Cash and cash equivalents include cash balances, current bank accounts, and short-term highly liquid investments that are readily convertible into cash and do not present a material risk of a change in value.

As cash investments maturing in less than three months are exposed to a negligible risk of a change in value, they are recognized at historical cost (including accrued interest) which is considered to approximate fair value.

d. Current and non-current borrowings

Borrowings include bond debentures and other bank borrowings (including borrowings arising from finance leases and the put options granted to minority shareholders).

At inception, borrowings are recognized at fair value corresponding to the net proceeds collected. At each balance sheet date, except for put options granted to minority shareholders, they are measured at amortized cost using the effective interest rate (EIR) method. Under this method, the borrowing cost includes the redemption premiums and issuance costs initially deducted from the nominal amount of the borrowing in liabilities.

Borrowings maturing in less than one year are classified as current borrowings.

Borrowings hedged by interest rate swaps are recognized on a hedge accounting basis.

e. Derivative assets and liabilities

Derivative financial instruments are mainly used to manage exposures to foreign exchange, interest rate and commodity risks relating to the Group's financial and operating activity. For all these transactions, the Group applies hedge accounting and documents, at the inception of the transaction, the type of hedging relationship, the hedging instruments, and the nature and term of the hedged item.

However, in very limited circumstances, some derivatives do not qualify for hedge accounting.

Applying hedge accounting has the following consequences:

- fair value hedges for existing assets and liabilities: the hedged portion of the item is carried at fair value in the balance sheet. Any changes in fair value are recognized in the income statement, where it is offset by the corresponding changes in fair value of the hedging instruments (except for the impact of premiums/discounts);
- future cash flow hedges: the effective portion of the change in fair value of the hedging instrument is recorded directly in equity (other comprehensive income), while the change in the fair value of the hedged item is not recognized in the balance sheet. The change in fair value of the ineffective portion is recognized in other financial income or expenses. Amounts recorded in other comprehensive income are reclassified in the income statement when the hedged transactions occur and are recorded;
- hedges of net investments in a foreign entity: the effective portion of the changes in fair value of the derivative instrument is recognized in gains and losses recognized directly in equity under translation reserves. The ineffective portion of the changes in fair value is recognized in the income statement. Once the foreign entity subject to the net investment hedge is sold, the loss or profit initially recognized in translation reserves is recognized in profit or loss. This method also applies for foreign exchange hedging on dividends payable by subsidiaries.

Derivative financial instruments which do not qualify for hedge accounting are carried at fair value through profit or loss with an offsetting entry in financial assets and financial liabilities.

The fair value of assets, liabilities and derivatives is based on the market price at the balance sheet date.

7. ASSETS CLASSIFIED AS HELD FOR SALE

Non-current assets or disposal groups are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. Assets classified as held for sale are no longer depreciated (amortized) as of the date they are classified as assets or disposal groups held for sale.

Assets or disposal groups are measured at the lower of their carrying amount or fair value less costs to sell.

8. INVENTORIES AND WORK-IN-PROGRESS

Inventories are measured at the lower of cost or net realizable value. Cost includes direct raw materials, direct and indirect labor costs and other costs incurred in bringing the inventories to their present location and condition.

Net realizable value is the estimated selling price in the normal course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

9. SHARE CAPITAL, RESERVES AND TREASURY SHARES

Air Liquide's share capital is composed of ordinary shares.

Retained earnings include the following items:

- **translation reserves:** Exchange differences arising from the translation into euros of financial statements prepared by foreign subsidiaries whose functional currency is not the euro are recorded in translation reserves. Fair value changes in net investment hedges of these foreign subsidiaries are also recorded in this reserve;
- **fair value of financial instruments:** This item records accumulated fair value changes in the effective portion of cash flow hedge derivatives (transactions not yet recognized in the accounts);
- **actuarial gains and losses:** Pursuant to the option offered by IAS19 revised, all actuarial gains and losses and adjustments arising from the asset ceiling, net of deferred taxes, are recognized in consolidated reserves in the period in which they occur.

When the Group buys back its own shares, they are classified as treasury shares at the purchase price and presented as a deduction from equity for the consideration paid. The profit or loss from the sale of treasury shares is recognized directly in equity, net of tax.

Furthermore, IAS27 revised, applicable as of January 1, 2010, introduced several changes, in particular:

- acquisitions or disposals of minority interests, without change in control, are considered as transactions with Group shareholders. Thus, the difference between the price paid to increase the percentage of interest in entities that are already controlled and the additional share of equity thus acquired is recognized in shareholders' equity. Similarly, a decrease in the Group's percentage interest in a controlled entity is accounted for as an equity transaction with no impact on profit or loss;
- disposals of shares with loss of control give rise to the recognition in disposal gains or losses of the change in fair value calculated for the total investment at the date of disposal. Any investments retained, where applicable, will be measured at fair value at the date when control is lost.

10. MINORITY INTERESTS

In accordance with IAS32, put options granted to minority shareholders are recorded as borrowings at the option's estimated strike price.

The share in the net assets of subsidiaries is reclassified from minority interests to borrowings.

Due to the absence of any specific IFRS guidances, the Group has elected to recognize the consideration for the difference between the strike price of the option granted and the value of the minority interests reclassified as borrowings as follows:

- for options granted prior to January 1, 2010, in goodwill;
- for options granted after January 1, 2010, in shareholders' equity.

Minority interests in profit and loss do not change and still reflect present ownership interests.

11. PROVISIONS

a. Provisions

Provisions are recognized when:

- the Group has a present obligation as a result of a past event;
- it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation;
- a reliable estimate can be made of the amount of the obligation.

Restructuring provisions include only the direct costs arising from the restructuring and are recognized in the period in which the Group has approved a detailed and formal restructuring plan and the restructuring has either begun or been announced.

A provision for losses on contracts is recognized when the expected benefits from the contract are lower than the cost of satisfying the obligations under the contract.

b. Pensions and employee benefits

The Group provides its employees with various pension plans, termination benefits, jubilees and other post-employment benefits for both active employees and retirees. These plans vary according to the laws and regulations applicable in each country as well as the specific rules in each subsidiary.

These benefits are covered in two ways:

- by so-called defined contribution plans;
- by so-called defined benefit plans.

Defined contribution plans are plans under which the employer is committed to pay regular contributions. The employer's obligation is limited to payment of the planned contributions. The employer does not grant any guarantees on the future level of benefits paid to the employee or retiree (means-based obligation). The annual pension expense is equal to the contribution paid during the fiscal year which relieves the employer from any further obligations.

Defined benefit plans are plans under which the employer guarantees the future level of benefits defined in the agreement, most often depending on the employee's salary and seniority (result-based obligation). Defined benefit plans can be:

- either financed by contributions to specialized funds that manage the amounts received;
- or managed internally.

The Group grants both defined benefit and defined contribution plans.

For defined benefit plans, retirement and similar commitments are measured by independent actuaries, based on the projected unit credit method in accordance with IAS19. The actuarial calculations mainly take into account the following assumptions: salary increases, employee turnover, retirement date, expected salary trends, mortality, inflation and appropriate discount rates for each country.

Defined benefit plans are covered by external pension funds in certain cases. The assets of these plans are mostly invested in bonds or equities carried at their fair value.

In accordance with IFRS1, the Group opted to recognize in equity all cumulative deferred actuarial gains and losses relating to employee benefits recorded in the balance sheet as of January 1, 2004, the transition date.

All actuarial gains and losses subsequent to January 1, 2004 and adjustments arising from the asset ceiling are recognized immediately in the gains and losses recognized directly in equity in the period in which they occur.

Valuations are carried out annually by independent actuaries for significant plans and every three years for other plans unless there are material changes in circumstances that necessitate a new calculation.

12. FOREIGN CURRENCY TRANSACTIONS AND BALANCES

Foreign currency transactions are recognized according to the following principles:

- foreign currency transactions are translated by each company into its functional currency at the exchange rate prevailing on the date of the transaction;
- at year-end, monetary assets and liabilities denominated in foreign currencies are translated into the functional currency at the closing exchange rate.

Exchange differences relating to commercial transactions are recognized in operating profit. For financial transactions, exchange differences are recognized in financial income and expenses except for differences resulting from the hedge of a net investment that are directly recognized in equity until the net investment is removed from the consolidation scope.

13. CONTINGENT ASSETS AND LIABILITIES

Contingent assets and liabilities arise from past events, the outcome of which depends on future uncertain events.

Contingent liabilities represent:

- possible obligations arising from past events whose existence will be confirmed only by the occurrence of uncertain future events not wholly within the control of the entity; or,
- present obligations that arise from past events but that are not recognized because it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation or because the amount of the obligation cannot be measured with sufficient reliability.

Contingent assets and liabilities that are material are disclosed in the notes to the consolidated financial statements, except for contingent liabilities assumed in a business combination, which are recognized in accordance with IFRS3 revised.

14. DISCONTINUED OPERATIONS

A discontinued operation is a clearly distinguishable Group component that:

- either has been separated, or is classified as held for sale;
- represents a separate major line of business or geographical area of operations;
- is part of a single coordinated plan to dispose of a separate major line of business or geographical area of operations;
- is a subsidiary acquired exclusively with a view to resale.

The results of discontinued operations are presented separately in the income statement.

15. GOVERNMENT GRANTS

Government grants received are recognized in other non-current liabilities. They are then recognized as income in the income statement for the period on the same basis as the subsidized assets are depreciated.

16. SHARE-BASED PAYMENTS

The Group grants stock options to management and some employees. Employees also benefit from conditional share allocations. In accordance with IFRS2, stock options and conditional share allocations are measured at fair value on the grant date. The valuation model used is the binomial mathematical model. Any changes in value subsequent to the grant date do not call into question the initial measurement.

In accordance with IFRS2, performance conditions, other than market conditions, have no impact on the fair value measurement of goods and services received but adjust the expense that is recognized according to the number of equity instruments actually granted.

In accordance with IFRS2, the fair value of options granted and conditional share allocations is recognized as an employee expense in the income statement with a corresponding increase in equity, and amortized on a straight-line basis over the vesting period.

In accordance with the option available under IFRS1, IFRS2 has only been applied to stock option plans granted after November 7, 2002 and not vested as of January 1, 2004.

The dilution effect of non-vested stock option plans and conditional share allocations is reflected in the calculation of diluted earnings per share.

For employee savings plans, the capital increases reserved for employees and performed under conditions that differ from market conditions result in the recognition of an expense. This expense corresponds to the contribution paid by the Company and the discount on the share price less the cost of non-transferability for the employees.

17. GREENHOUSE GAS EMISSION RIGHTS

In certain countries, the Air Liquide Group receives greenhouse gas emission rights free of charge. These allowances are allocated on a yearly basis for a compliance period of three years.

In return, the Group has to deliver allowances equal to its actual emissions.

In the absence of any specific IFRS guidance, the Group has elected the following accounting approach: at each balance sheet date, the Group assesses if it has sufficient emission rights to cover its actual emissions. If the rights allocated exceed actual emissions, no asset is recognized and the rights sold are recognized in profit or loss. Conversely, the Group shall recognize a net liability.

Basis for presentation of financial information

1. SEGMENT INFORMATION

The Group is structured according to the following activities: Gas & Services, Engineering & Construction, and Other activities (Welding and Diving).

In 2012 and following its decision to refocus on healthcare specialty ingredients, Air Liquide integrated the activities of Seppic and its subsidiaries in its Healthcare world business line.

The integration of the Seppic group within the Gas & Services activities gives rise to a change in the Group's segment information. Subsequent to this change, the activities presented in Other activities are Welding and Diving.

The 2011 revenue and operating income of the Gas & Services and Other activities were restated and are presented in note 3.

The Group's main operational decision-making body is the Executive Management assisted by the Executive Committee.

The Gas & Services activity is organized by geographical area, which is the responsible level for operations management and performance monitoring. These geographical areas are as follows:

- Europe;
- Americas;
- Asia-Pacific;
- Middle-East and Africa.

Within the Gas & Services segment, the geographical areas determine sales policies and development projects in liaison with the four business lines (Large Industries, Industrial Merchant, Healthcare and Electronics).

The Engineering & Construction segment is managed separately at the international level. The segment designs, develops and builds industrial gas production plants for the Group and third parties. It also designs and manufactures plants in the traditional, renewable and alternative energy sectors.

Information on the Welding and Diving segments is presented in "Other activities".

Research & Development and corporate activities do not meet the Operating segments definition and are thus presented within reconciliation.

The information communicated in the tables covering segment information is presented according to the same accounting principles as those used for the Group Consolidated financial statements.

Revenue is analyzed by geographical area of production (country of origin).

Inter-segment revenue for the Gas & Services activity is not material and therefore not specifically presented. The Engineering & Construction inter-segment revenue corresponds to the sales involving the Gas & Services operating segments.

The Group operating performance is assessed on the basis of each segment's recurring operating income.

Segment assets include non-current assets, with the exception of “Deferred tax assets”, “Investments in associates”, “Fair value of non-current derivatives (assets)”, as well as “Inventories and work-in-progress”, “Trade receivables” and “Other current assets”.

Segment liabilities correspond to “Provisions, pensions and other employee benefits”, “Trade payables”, “Other current liabilities” and “Other non-current liabilities”.

Segment profits, assets and liabilities consist of amounts directly attributable to each segment, provided they can be allocated to the segment on a reasonable basis.

2. NET INDEBTEDNESS

Net indebtedness includes:

- current and non-current borrowings minus the fair value of hedging derivative assets to cover borrowings;

reduced by:

- cash and cash equivalents, as defined in Note 6.c., minus the fair value of hedging derivative liabilities to cover loans.

3. OPERATING INCOME OR LOSS RECURRING

The Group’s operating performance is measured based on operating income or loss recurring determined in accordance with CNC recommendation 2009-R.03.

4. OTHER NON-RECURRING OPERATING INCOME AND EXPENSES

Material non-recurring transactions that could affect operating performance readability are classified under “Other non-recurring operating income” and “Other non-recurring operating expenses”. They mainly include:

- gains or losses on the disposal of activities;
- restructuring costs resulting from plans whose unusual and material nature distort the readability of the operating income recurring;
- very significant charges to provisions and impairment losses for property, plant and equipment and intangible assets;
- acquisition-related costs accounted for as expenses following adoption of IFRS3 revised “Business combinations”.

Notes to the consolidated financial statements for the year ended December 31, 2012

Note 1 – Major events

- On August 31, 2012, Air Liquide acquired 70.49% of LVL Médical Groupe S.A.'s share capital at a price of 30.89 euros per share. LVL Médical's activities in Germany had been previously divested. Air Liquide then initiated a simplified public tender offer on the remaining shares, which ran from September 21, 2012 to October 11, 2012 inclusive. As of October 12, 2012, Air Liquide held more than 95% of LVL Médical Groupe S.A.'s share capital. Air Liquide then implemented a squeeze-out on the remaining shares and subscription warrants (*BSAAR*). The squeeze-out and simplified public tender offer were carried out under the same price terms as the initial offer, *i.e.*, 30.89 euros per share and 13.20 euros per warrant. LVL Médical Groupe S.A. was 100% held by Air Liquide as of December 31, 2012.
- On September 21, 2012, Air Liquide acquired 100% shares of Grupo Gasmedi S.L., a major player in the Spanish home healthcare sector.

The impact of these two acquisitions on the financial statements is shown in note 2.

Note 2 – Impact of the main business combinations on the 2012 financial statements

2.1. GOODWILL AS OF DECEMBER 31, 2012

(in millions of euros)	**LVL Médical Group**	**Gasmedi Group**
Financial investments	316.5	264.7
Share of net equity acquired	32.6	(13.6)
Goodwill before allocation	**283.9**	**278.3**
Allocation to intangible assets		62.5
Allocation to property, plant and equipment	(3.7)	(2.7)
Tax-related impact of these allocations	1.3	(17.6)
Goodwill after allocation	**286.3**	**236.1**
GOODWILL AS OF DECEMBER 31, 2012 (a)	**286.3**	**236.1**

(a) In accordance with IFRS3 Revised, the final measurement of provisional goodwill shall be finalized in the twelve months following each acquisition.

The residual goodwill primarily corresponds to the valuation of synergies and market shares.

2.2. MAIN BALANCE SHEET IMPACTS AS OF DECEMBER 31, 2012

(in millions of euros)	**LVL Médical Group**	**Gasmedi Group**
Assets		
Goodwill	286.3	236.1
Intangible assets, net	2.3	60.3
Property, plant and equipment, net	30.3	46.4
Deferred tax assets	3.9	
Cash and cash equivalents	12.2	9.6
Liabilities		
Provisions and employee benefit commitments	7.3	2.1
Deferred tax liabilities	3.7	12.5
Gross debt		90.0

2.3. MAIN IMPACTS ON THE 2012 INCOME STATEMENT [a]

(in millions of euros)	**LVL Médical Group**	**Gasmedi Group**
Revenue	37.3	26.1
Operating income recurring before depreciation and amortization	9.4	14.4
Depreciation and amortization expense	(4.2)	(5.6)
Operation income recurring	5.2	8.8
Other non-recurring operating expenses [b]	(4.7)	(4.0)
Operating income	0.5	4.8
Net finance costs		(1.0)
Income taxes	(0.1)	(0.9)
Profit for the period	0.4	2.9
Net profit (Group share)	0.4	2.9

(a) Period between the acquisition date and December 31, 2012.
(b) This item includes acquisition costs recognized as expenses were expensed following the application of IFRS3 Revised “Business Combinations”.

2.4. MAIN IMPACTS ON THE 2012 CASH FLOW STATEMENT

(in millions of euros)	**LVL Médical Group**	**Gasmedi Group**
Acquisition of subsidiaries and financial assets	302.3	329.9

Note 3 – Segment information

3.1. INCOME STATEMENT FOR THE YEAR ENDED DECEMBER 31, 2012

	Gas & Services								
(in millions of euros)	Europe	Americas	Asia-Pacific	Middle-East and Africa	Sub-total	Engineering & Construction	Other activities	Reconciliation	Total
Revenue	**7,025.5**	**3,108.2**	**3,415.6**	**362.7**	**13,912.0**	**784.6**	**629.7**		**15,326.3**
Inter-segment revenue						*643.3*		*(643.3)*	
Operating income recurring	**1,285.1**	**744.6**	**515.6**	**76.8**	**2,622.1**	**78.7**	**36.7**	**(177.0)**	**2,560.5**
incl. depreciation and amortization	*(565.3)*	*(300.8)*	*(284.2)*	*(35.0)*	*(1,185.3)*	*(25.9)*	*(15.5)*	*(5.1)*	*(1,231.8)*
Other non-recurring operating income									13.4
Other non-recurring operating expenses									(40.5)
Net finance costs									(248.1)
Other financial income									69.2
Other financial expenses									(133.0)
Income taxes									(566.0)
Share of profit of associates									20.0
Profit for the period									**1,675.5**
Purchase of intangible assets and property, plant and equipment	(690.9)	(466.6)	(570.5)	(223.8)	(1,951.8)	(23.6)	(16.5)	(16.0)	(2,007.9)

3.2. REVISED INCOME STATEMENT FOR THE YEAR ENDED DECEMBER 31, 2011 [(a)]

	Gas & Services								
(in millions of euros)	Europe	Americas	Asia-Pacific	Middle-East and Africa	Sub-total	Engineering & Construction	Other activities	Reconciliation	Total
Revenue	**6,810.3**	**2,859.0**	**3,083.2**	**311.5**	**13,064.0**	**705.1**	**687.8**		**14,456.9**
Inter-segment revenue						*542.8*		*(542.8)*	
Operating income recurring	**1,278.0**	**627.8**	**501.8**	**64.9**	**2,472.5**	**74.7**	**55.2**	**(193.7)**	**2,408.7**
incl. depreciation and amortization	*(550.8)*	*(277.3)*	*(246.9)*	*(30.4)*	*(1,105.4)*	*(26.3)*	*(19.4)*	*(3.8)*	*(1,154.9)*
Other non-recurring operating income									123.1
Other non-recurring operating expenses									(95.3)
Net finance costs									(235.5)
Other financial income									68.7
Other financial expenses									(131.4)
Income taxes									(576.4)
Share of profit of associates									32.8
Profit for the period									**1,594.7**
Purchase of intangible assets and property, plant and equipment	(695.4)	(387.0)	(509.5)	(137.2)	(1,729.1)	(15.0)	(19.1)	8.2	(1,755.0)

(a) The specialty ingredients activities of Seppic and its subsidiaries were reclassified from "Other activities" to "Gas & Services" in Europe.

3.3. PUBLISHED INCOME STATEMENT FOR THE YEAR ENDED DECEMBER 31, 2011

	Gas & Services								
(in millions of euros)	Europe	Americas	Asia-Pacific	Middle-East and Africa	Sub-total	Engineering & Construction	Other activities	Reconciliation	Total
Revenue	**6,584.9**	**2,859.0**	**3,083.2**	**311.5**	**12,838.6**	**705.1**	**913.2**		**14,456.9**
Inter-segment revenue						*542.8*		*(542.8)*	
Operating income recurring	**1,226.9**	**627.8**	**501.8**	**64.9**	**2,421.4**	**74.7**	**106.3**	**(193.7)**	**2,408.7**
incl. depreciation and amortization	*(547.5)*	*(277.3)*	*(246.9)*	*(30.4)*	*(1,102.1)*	*(26.3)*	*(22.7)*	*(3.8)*	*(1,154.9)*
Other non-recurring operating income									123.1
Other non-recurring operating expenses									(95.3)
Net finance costs									(235.5)
Other financial income									68.7
Other financial expenses									(131.4)
Income taxes									(576.4)
Share of profit of associates									32.8
Profit for the period									**1,594.7**
Purchase of intangible assets and property, plant and equipment	(690.7)	(387.0)	(509.5)	(137.2)	(1,724.4)	(15.0)	(23.8)	8.2	(1,755.0)

3.4. BALANCE SHEET AS OF DECEMBER 31, 2012

	Gas & Services								
(in millions of euros)	Europe	Americas	Asia-Pacific	Middle-East and Africa	Sub-total	Engineering & Construction	Other activities	Reconciliation	Total
Segment assets	**10,119.4**	**4,551.3**	**6,010.0**	**941.1**	**21,621.8**	**833.9**	**474.4**	**174.2**	**23,104.3**
Goodwill	2,825.8	607.6	1,267.6	115.5	4,816.5	208.4	107.8		5,132.7
Intangible assets and property, plant and equipment, net	5,366.1	3,326.5	3,849.4	610.7	13,152.7	234.9	93.8	29.8	13,511.2
Other segment assets	1,927.5	617.2	893.0	214.9	3,652.6	390.6	272.8	144.4	4,460.4
Non-segment assets									1,899.7
Total assets									**25,004.0**
Segment liabilities	**2,696.6**	**752.1**	**702.4**	**116.2**	**4,267.3**	**1,166.1**	**189.5**	**253.7**	**5,876.6**
Non-segment liabilities									8,683.1
Equity including minority interests									10,444.3
Total equity and liabilities									**25,004.0**

3.5. REVISED BALANCE SHEET AS OF DECEMBER 31, 2011 [a]

	Gas & Services								
(in millions of euros)	Europe	Americas	Asia-Pacific	Middle-East and Africa	Sub-total	Engineering & Construction	Other activities	Reconciliation	Total
Segment assets	**9,102.0**	**4,351.9**	**5,987.5**	**813.4**	**20,254.8**	**794.3**	**502.8**	**148.2**	**21,700.1**
Goodwill	2,197.4	568.6	1,343.4	117.3	4,226.7	224.1	107.7		4,558.5
Intangible assets and property, plant and equipment, net	4,991.8	3,212.7	3,679.9	504.9	12,389.3	238.6	94.0	13.2	12,735.1
Other segment assets	1,912.8	570.6	964.2	191.2	3,638.8	331.6	301.1	135.0	4,406.5
Non-segment assets									2,423.3
Total assets									**24,123.4**
Segment liabilities	**2,397.5**	**744.1**	**805.7**	**111.7**	**4,059.0**	**984.1**	**174.3**	**297.5**	**5,514.9**
Non-segment liabilities									8,612.8
Equity including minority interests									9,995.7
Total equity and liabilities									**24,123.4**

(a) The specialty ingredients activities of Seppic and its subsidiaries were reclassified from "Other activities" to "Gas & Services" in Europe.

3.6. PUBLISHED BALANCE SHEET AS OF DECEMBER 31, 2011

	Gas & Services								
(in millions of euros)	Europe	Americas	Asia-Pacific	Middle-East and Africa	Sub-total	Engineering & Construction	Other activities	Reconciliation	Total
Segment assets	**8,995.2**	**4,351.9**	**5,987.5**	**813.4**	**20,148.0**	**794.3**	**609.6**	**148.2**	**21,700.1**
Goodwill	2,196.8	568.6	1,343.4	117.3	4,226.1	224.1	108.3		4,558.5
Intangible assets and property, plant and equipment, net	4,967.6	3,212.7	3,679.9	504.9	12,365.1	238.6	118.2	13.2	12,735.1
Other segment assets	1,830.8	570.6	964.2	191.2	3,556.8	331.6	383.1	135.0	4,406.5
Non-segment assets									2,423.3
Total assets									**24,123.4**
Segment liabilities	**2,345.6**	**744.1**	**805.7**	**111.7**	**4,007.1**	**984.1**	**226.2**	**297.5**	**5,514.9**
Non-segment liabilities									8,612.8
Equity including minority interests									9,995.7
Total equity and liabilities									**24,123.4**

The Research & Development and Corporate activities are presented in the "Reconciliation" column. The operating income recurring of the Engineering & Construction activity includes financial income generated by advances received from customers. It is presented in net finance costs in the consolidated income statement. The adjustment arising from the presentation difference is included in the "Reconciliation" column.

3.7. OTHER INFORMATION ON GEOGRAPHICAL AREAS

2012 *(in millions of euros)*	France	Europe excl. France	Americas	Asia-Pacific	Middle-East and Africa	Total
Revenue	**2,792.7**	**5,361.3**	**3,245.8**	**3,563.8**	**362.7**	**15,326.3**
Non-current assets [(a)]	**1,692.3**	**6,878.0**	**4,136.5**	**5,390.7**	**768.1**	**18,865.6**
incl. Investments in associates	*10.7*	*14.8*	*5.6*	*148.6*	*42.0*	*221.7*

(a) Excluding non-current financial assets, deferred taxes and non-current derivative assets.

2011 *(in millions of euros)*	France	Europe excl. France	Americas	Asia-Pacific	Middle-East and Africa	Total
Revenue	**2,754.2**	**5,215.8**	**2,960.2**	**3,215.2**	**311.5**	**14,456.9**
Non-current assets [(a)]	**1,288.0**	**6,269.1**	**3,992.2**	**5,292.7**	**662.7**	**17,504.7**
incl. Investments in associates	*3.3*	*13.8*	*6.5*	*147.1*	*40.4*	*211.1*

(a) Excluding non-current financial assets, deferred taxes and non-current derivative assets.

Due to the substantial number of customers served by the Group (over one million worldwide), their significant diversity in multiple sectors and their wide geographical dispersion, the Group's top external customer represents about 2.0% of Air Liquide revenue.

Note 4 – Revenue

(in millions of euros)	2011	%	2012	%
Gas & Services	12,838.6	89%	13,912.0	91%
Engineering & Construction	705.1	5%	784.6	5%
Other activities	913.2	6%	629.7	4%
TOTAL	**14,456.9**	**100%**	**15,326.3**	**100%**

Consolidated revenue in 2012 totaled 15,326.3 million euros, up +6.0% compared to 2011. The increase amounted to +2.7% after adjustment for the cumulative impact of foreign exchange fluctuations and natural gas prices:

- foreign exchange rate fluctuations represented +464 million euros in 2012 for an impact of +3.2% on consolidated revenue. The impact was primarily due to the appreciation of the US dollar, the Japanese yen and the Chinese renminbi compared to the euro;
- natural gas prices had an impact of +17 million euros excluding foreign exchange fluctuations, for a contribution of +0.1% to Group revenue.

Note 5 – Operating income recurring and expenses

Operating income recurring and expenses include purchases, personnel expenses, depreciation and amortization, other recurring income and other recurring expenses.

The Group purchases mainly consist of electricity, natural gas and industrial and medical products.

5.1. PERSONNEL EXPENSES

(in millions of euros)	2011	2012
Wages and social security charges	(2,429.6)	(2,632.3)
Defined contribution pension plans	(23.7)	(29.1)
Defined benefit pension plans [a]	(13.6)	11.2
Share-based payments	(14.6)	(16.5)
TOTAL	**(2,481.5)**	**(2,666.7)**

(a) In 2012, the expense relating to defined benefit plans included the impact of settlements, plan amendments and past service cost amounting to 55.3 million euros in 2012 and to 28.3 million euros in 2011 (see note 24.3 on employee benefit obligations on page 222)

Fully and proportionately consolidated companies employed 49,500 individuals as of December 31, 2012 (46,200 individuals as of December 31, 2011). Furthermore, the number of employees from acquired or newly consolidated companies, net of entities sold, totaled 2,200 in 2012.

5.2. OTHER RECURRING EXPENSES

Other recurring expenses primarily include transport and distribution costs, sub-contracting costs, operating leases and insurance premiums.

5.3. RESEARCH & DEVELOPMENT EXPENDITURES

In 2012, innovation costs amounted to 256.8 million euros (251.9 million euros in 2011) including Research & Development costs of 187.8 million euros (186.1 million euros in 2011).

Development costs incurred by the Group in the course of its Research & Development projects were expensed. The conditions required in IFRS for the capitalization of development costs were not met, since expenditures did not systematically result in the completion of an intangible asset that will be available for use or sale.

5.4. DEPRECIATION AND AMORTIZATION EXPENSE

(in millions of euros)	2011	2012
Intangible assets	(78.4)	(82.3)
Property, plant and equipment (PP&E) [a]	(1,076.5)	(1,149.5)
TOTAL	**(1,154.9)**	**(1,231.8)**

(a) Including the depreciation expense after deduction of investment grants released to profit.

Note 6 – Other non-recurring operating income and expenses

(in millions of euros)	2011	2012
Expenses		
Reorganization, restructuring and integration costs	(26.7)	(29.4)
Acquisition costs	(3.8)	(19.8)
Others [(a)]	(64.8)	8.7
TOTAL OTHER NON-RECURRING OPERATING EXPENSES	**(95.3)**	**(40.5)**
Income		
Gain on the disposals of assets and financial investments	122.3	9.7
Others	0.8	3.7
TOTAL OTHER NON-RECURRING OPERATING INCOME	**123.1**	**13.4**
TOTAL	**27.8**	**(27.1)**

(a) Mainly related to increase in provisions net of reversals.

In 2012:

- in May 2012, the Group sold its interest in the Esqal and Gaz de Polynésie subsidiaries. The capital gain on these disposals calculated in accordance with IAS27 section 34 totaled 12.2 million euros.

In 2011:

- the Group recognized capital gains on the disposal of subsidiaries in the amount of 122 million euros, calculated in accordance with IAS27 section 34 and IAS36 section 86, and relating to:
  - the sale of its interest in its subsidiary Lamers High Tech Systems B.B. (Netherlands) on June 22, 2011,
  - the sale of its interest in its subsidiary A –TEC Co., Ltd (Japan) on July 1, 2011,
  - the sale of its interests in its subsidiaries Givaudan-Lavirotte (France) on December 13, 2011 and Seppic Belgium (Belgium) on December 31, 2011;
- the Group recognized in "Other non-recurring operating expenses" a provision of 40 million euros to cover risks related to litigations and an amount of 9 million euros to cover risks relating to the recoverability of receivables from public sector customers in Southern Europe.

Note 7 – Net finance costs and other financial income and expenses

7.1. NET FINANCE COSTS

(in millions of euros)	2011	2012
Finance cost	(254.5)	(274.1)
Financial income from short-term investments and loans	19.0	26.0
TOTAL	**(235.5)**	**(248.1)**

The average cost of debt stood at 4.6% in 2012 (4.8% in 2011) and is broken down in note 25.4.

Capitalized finance costs totaled 26.8 million euros in 2012 (25.4 million euros in 2011).

7.2. OTHER FINANCIAL INCOME AND EXPENSES

(in millions of euros)	2011	2012
Financial income related to employee benefits	56.6	59.0
Other financial income	12.1	10.2
TOTAL OTHER FINANCIAL INCOME	**68.7**	**69.2**
Financial expenses related to employee benefits	(112.1)	(109.7)
Other financial expenses	(19.3)	(23.3)
TOTAL OTHER FINANCIAL EXPENSES	**(131.4)**	**(133.0)**

The impact of the revaluation of derivative instruments was included in “Other financial expenses” in 2012 and in “Other financial income” in 2011, in accordance with accounting principles described in paragraph 6.e.

Note 8 – Income taxes

8.1. INCOME TAX EXPENSE

(in millions of euros)	2011	2012
Current tax		
Income tax expense payable	(478.3)	(514.0)
TOTAL	**(478.3)**	**(514.0)**
Deferred tax		
Temporary differences	(106.0)	(61.4)
Impact of tax rate changes	7.9	9.4
TOTAL	**(98.1)**	**(52.0)**

In 2012, a gain of 48.8 million euros, arising from deferred tax liability reversed following favorable evolution of tax audits, was included in the temporary differences.

8.2. RECONCILIATION BETWEEN THE STANDARD TAX RATE AND THE GROUP EFFECTIVE TAX RATE

(in %)	2011	2012
Standard tax rate	**31.5**	**31.3**
Impact of transactions taxed at reduced rates	(4.1)	(3.0)
Impact of tax rate changes	(0.4)	(0.4)
Impact of tax exemptions and others		(2.4)
Group effective tax rate	**27.0**	**25.5**

The standard tax rate is the average rate obtained by applying the statutory tax rate for each country to their related earnings before tax.

The average effective tax rate is determined as follows: (current and deferred income tax expense) / (net profit before tax less share of profit of associates and net profit from discontinued operations).

In France, L’Air Liquide S.A. has elected to determine French income taxes on a consolidated basis, including all French subsidiaries complying with the requirements.

Foreign subsidiaries have elected to apply for similar rules wherever this is allowed under local regulations.

With the exception of the point mentioned in note 8.1. on income taxes, the 2012 average effective tax rate remained relatively unchanged compared to fiscal year 2011.

Note 9 – Net earnings per share

9.1. BASIC EARNINGS PER SHARE

	2011	2012
Net profit (Group share) attributable to ordinary shareholders of the parent *(in millions of euros)*	1,534.9	1,609.4
Weighted average number of ordinary shares outstanding	311,594,600	311,147,191
Basic earnings per share *(in euros)*	**4.93**	**5.17**

Basic earnings per share are calculated by dividing net profit (Group share) attributable to ordinary shareholders of Air Liquide by the weighted average number of shares outstanding during the year, excluding ordinary shares purchased by Air Liquide and recognized in equity.

The average number of outstanding shares and net earnings per share for 2011 fiscal year included the impact of the L'Air Liquide S.A. free share attribution performed on May 31, 2012.

9.2. DILUTED EARNINGS PER SHARE

	2011	2012
Net profit used to calculate diluted earnings per share *(in millions of euros)*	**1,534.9**	**1,609.4**
Weighted average number of ordinary shares outstanding	311,594,600	311,147,191
Adjustment for dilutive impact of share subscription options	979,789	963,942
Adjustment for dilutive impact of conditional grant of shares	287,036	359,201
Adjusted weighted average number of shares outstanding used to calculate diluted earnings per share	**312,861,425**	**312,470,334**
Diluted earnings per share *(in euros)*	**4.91**	**5.15**

Diluted earnings per share take into account the share subscription options and conditional share grants allocated to employees if:

- the issue price, adjusted for expenses not recognized at the year-end pursuant to IFRS2, is lower than the Air Liquide annual average share price;
- the performance requirements meet the criteria of section 52 of IAS33.

Diluted earnings per share for 2011 fiscal year and the average number of outstanding shares include the impact of the L'Air Liquide S.A. free share attribution performed on May 31, 2012.

Instruments that could dilute net profit (Group share) attributable to ordinary shareholders of the parent and not included in the diluted earnings per share calculation, insofar as they are undiluted over the year, are as follows:

- in 2012, the 2011 and 2012 share subscription option plans;
- in 2011, the 2011 share subscription option plan.

The Group has not issued any other financial instruments that may generate further dilution of net earnings per share.

Note 10 – Dividend per share

The 2011 dividend on ordinary shares declared and paid on May 16, 2012 was 728.8 million euros (including treasury shares), for a dividend of 2.50 euros per share, prior to the impact of free share attribution performed on May 31, 2012, as described in note 22. Dividends paid represent a distribution rate of 47.5% of profit for the period attributable to shareholders of the parent.

A dividend distribution of 803.4 million euros on ordinary shares (including treasury shares), for a dividend of 2.50 euros per share, will be proposed to the Annual General Meeting in respect of 2012. These dividends represent a distribution rate of 49.9% of the profit for the period attributable to shareholders of the parent.

Note 11 – Goodwill

11.1. MOVEMENTS DURING THE PERIOD

(in millions of euros)	As of January 1	Goodwill recognized during the period	Goodwill removed during the period	Foreign exchange differences	Other movements (a)	As of December 31
2011	4,390.8	75.1	(2.6)	91.1	4.1	4,558.5
2012	**4,558.5**	**677.4**	**(0.7)**	**(102.5)**		**5,132.7**

(a) Other movements mainly include the increase in the fair value of put options granted to minority shareholders.

Goodwill recognized mainly included the following acquisitions:

- in 2012, goodwill related to acquisition detailed in note 2, as well as the goodwill related to the acquisition of 100% of the capital of Energas Ltd & Engineering and Welding Supplies Ltd, suppliers of packaged gases in the United Kingdom;
- in 2011, acquisitions of ADEP Assistance (France) in January, Licher MT GmbH (Germany) in March 2011 and the business of an industrial gases distributor located in Ontario (Canada) in October 2011.

11.2. SIGNIFICANT GOODWILL

	2011	2012		
(in millions of euros)	Net carrying amount	Gross carrying amount	Impairment losses	Net carrying amount
Germany (a)	1,393.4	1,393.4		1,393.4
Japan (b)	765.0	674.8		674.8
SOAEO (b)	470.7	482.4		482.4
Engineering & Construction	221.1	205.5		205.5
France (a) (c)	108.4	396.4		396.4
Iberian Peninsula (c)	8.7	244.6		244.6
United States (b)	358.3	387.6		387.6
AL Welding	90.6	90.6		90.6
Others	1,142.3	1,258.8	(1.4)	1,257.4
TOTAL GOODWILL	**4,558.5**	**5,134.1**	**(1.4)**	**5,132.7**

(a) Goodwill allocated to groups of cash-generating units of Gas & Services activities except for Hygiene products sector of WBL Healthcare.

(b) The variation between 2011 and 2012 was mainly due to the foreign exchange impact.

(c) The variation between 2011 and 2012 was mainly due to the impact of the acquisitions as described in note 2.

In the last two fiscal years, the Group did not record any goodwill impairment losses.

Impairment tests were carried out using the same methods as those applied in previous years. The key model assumptions used, such as market multiples and the discount rate, took into account the stock market and world economic context.

The growth rates taken into account in the cash flow estimates for cash-generating units or groups of cash-generating units were significantly lower than the Group's historical average growth rates. They were comprised of between 2% and 3% for cash-generating units or groups of cash-generating units operating in mature markets, and a maximum of 5% for cash-generating units or groups of cash-generating units operating in emerging markets.

The market multiples used were determined using the Air Liquide Group market value as of December 31, 2012.

The weighted average cost of capital used for these calculations was 7.0% as of December 31, 2012 (7.4% as of December 31, 2011).

The weighted average cost of capital and market multiples are adjusted according to the activity and the geographical location of the tested cash-generating units.

As of December 31, 2012 and 2011, the recoverable amounts of cash-generating units or groups of cash-generating units significantly exceeded their net carrying amounts.

Note 12 – Other intangible assets

12.1. GROSS CARRYING AMOUNTS

(in millions of euros)	As of January 1	Additions	Disposals	Foreign exchange differences	Acquisitions related to business combinations [(a)]	Other movements [(b)]	As of December 31
2012							
Internally generated intangible assets	278.4	16.1	(4.0)	0.6	1.0	(2.9)	289.2
Other intangible assets	1,019.6	81.9	(18.4)	(0.7)	64.2	10.1	1,156.7
TOTAL GROSS INTANGIBLE ASSETS	**1,298.0**	**98.0**	**(22.4)**	**(0.1)**	**65.2**	**7.2**	**1,445.9**

(a) See note 2.
(b) Other movements primarily include account reclassifications and changes in consolidation scope.

(in millions of euros)	As of January 1	Additions	Disposals	Foreign exchange differences	Acquisitions related to business combinations [(a)]	Other movements [(b)]	As of December 31
2011							
Internally generated intangible assets	263.6	15.4	(0.6)	0.3		(0.3)	278.4
Other intangible assets	998.6	27.7	(12.9)	12.0	(0.3)	(5.5)	1,019.6
TOTAL GROSS INTANGIBLE ASSETS	**1,262.2**	**43.1**	**(13.5)**	**12.3**	**(0.3)**	**(5.8)**	**1,298.0**

(a) See note 2.
(b) Other movements primarily include account reclassifications and changes in consolidation scope.

12.2. AMORTIZATION AND IMPAIRMENT LOSSES

(in millions of euros)	As of January 1	Charge for the period	Impairment losses	Disposals	Foreign exchange differences	Acquisitions related to business combinations	Other movements [(a)]	As of December 31
2012								
Internally generated intangible assets	(197.6)	(18.2)		3.9	(0.3)			(212.2)
Other intangible assets	(462.2)	(64.1)	(1.4)	17.9	2.4		0.2	(507.2)
TOTAL INTANGIBLE ASSET AMORTIZATION	**(659.8)**	**(82.3)**	**(1.4)**	**21.8**	**2.1**		**0.2**	**(719.4)**
TOTAL NET INTANGIBLE ASSETS	**638.2**	**15.7**	**(1.4)**	**(0.6)**	**2.0**	**65.2**	**7.4**	**726.5**

(a) Other movements primarily include account reclassifications and changes in consolidation scope.

(in millions of euros)	As of January 1	Charge for the period	Impairment losses	Disposals	Foreign exchange differences	Acquisitions related to business combinations	Other movements (a)	As of December 31
2011								
Internally generated intangible assets	(179.5)	(18.5)		0.6	(0.2)			(197.6)
Other intangible assets	(412.6)	(59.9)		11.3	(4.6)		3.6	(462.2)
TOTAL INTANGIBLE ASSET AMORTIZATION	**(592.1)**	**(78.4)**		**11.9**	**(4.8)**		**3.6**	**(659.8)**
TOTAL NET INTANGIBLE ASSETS	**670.1**	**(35.3)**		**(1.6)**	**7.5**	**(0.3)**	**(2.2)**	**638.2**

(a) Other movements primarily include account reclassifications and changes in consolidation scope.

At year-end, the Group had no significant commitment for the purchase of intangible assets and was not subject to any restrictions over the use of existing intangible assets.

Note 13 – Property, plant and equipment

13.1. GROSS CARRYING AMOUNTS

(in millions of euros)	As of January 1	Additions	Disposals	Foreign exchange differences	Acquisitions related to business combinations (a)	Other movements (b)	As of December 31
2012							
Land	311.9	1.7	(2.3)	(16.0)	4.3	8.6	308.2
Buildings	1,331.2	29.4	(11.6)	(33.0)	8.0	31.6	1,355.6
Equipment, cylinders, installations	22,995.3	449.7	(275.0)	(400.7)	117.9	1,324.3	24,211.5
TOTAL PROPERTY, PLANT AND EQUIPMENT IN SERVICE	**24,638.4**	**480.8**	**(288.9)**	**(449.7)**	**130.2**	**1,364.5**	**25,875.3**
Construction in progress	2,090.7	1,437.3		(17.3)	1.3	(1,378.9)	2,133.1
TOTAL PROPERTY, PLANT AND EQUIPMENT	**26,729.1**	**1,918.1**	**(288.9)**	**(467.0)**	**131.5**	**(14.4)**	**28,008.4**

(a) See note 2.
(b) Other movements primarily include changes in consolidation scope.

(in millions of euros)	As of January 1	Additions	Disposals	Foreign exchange differences	Acquisitions related to business combinations [a]	Other movements [b]	As of December 31
2011							
Land	298.7	3.4	(2.6)	11.4	2.3	(1.3)	311.9
Buildings	1,290.8	21.3	(4.1)	26.2	1.6	(4.6)	1,331.2
Equipment, cylinders, installations	21,550.2	631.3	(239.0)	321.1	29.5	702.2	22,995.3
TOTAL PROPERTY, PLANT AND EQUIPMENT IN SERVICE	**23,139.7**	**656.0**	**(245.7)**	**358.7**	**33.4**	**696.3**	**24,638.4**
Construction in progress	1,505.8	1,172.4		73.3	0.1	(660.9)	2,090.7
TOTAL PROPERTY, PLANT AND EQUIPMENT	**24,645.5**	**1,828.4**	**(245.7)**	**432.0**	**33.5**	**35.4**	**26,729.1**

(a) *See note 2.*

(b) *Other movements primarily include changes in consolidation scope.*

Purchases of property, plant and equipment and intangible assets in the consolidated statement of cash flows correspond to the increase in property, plant and equipment and intangible assets adjusted for the change in the fixed asset suppliers' balance during the fiscal year.

13.2. DEPRECIATION AND IMPAIRMENT LOSSES

(in millions of euros)	As of January 1	Charge for the period	Impairment losses	Impairment losses removed	Disposals	Foreign exchange differences	Acquisitions related to business combinations	Other movements [a]	As of December 31
2012									
Buildings	(817.9)	(51.9)			8.9	22.9		1.0	(837.0)
Equipment, cylinders, installations	(13,814.3)	(1,108.5)	(1.4)	9.8	242.0	273.7		12.0	(14,386.7)
TOTAL PROPERTY, PLANT AND EQUIPMENT AMORTIZATION	**(14,632.2)**	**(1,160.4)**	**(1.4)**	**9.8**	**250.9**	**296.6**		**13.0**	**(15,223.7)**
TOTAL PROPERTY, PLANT AND EQUIPMENT, NET	**12,096.9**	**757.7**	**(1.4)**	**9.8**	**(38.0)**	**(170.4)**	**131.5**	**(1.4)**	**12,784.7**

(a) *Other movements primarily include changes in consolidation scope.*

(in millions of euros)	As of January 1	Charge for the period	Impairment losses	Impairment losses removed	Disposals	Foreign exchange differences	Acquisitions related to business combinations	Other movements [(a)]	As of December 31
2011									
Buildings	(769.5)	(47.9)			5.8	(16.6)		10.3	(817.9)
Equipment, cylinders, installations	(12,839.3)	(1,038.4)	(3.4)	9.8	209.2	(204.6)		52.4	(13,814.3)
TOTAL PROPERTY, PLANT AND EQUIPMENT AMORTIZATION	**(13,608.8)**	**(1,086.3)**	**(3.4)**	**9.8**	**215.0**	**(221.2)**		**62.7**	**(14,632.2)**
TOTAL PROPERTY, PLANT AND EQUIPMENT, NET	**11,036.7**	**742.1**	**(3.4)**	**9.8**	**(30.7)**	**210.8**	**33.5**	**98.1**	**12,096.9**

(a) Other movements primarily include changes in consolidation scope.

The charge for the period corresponds to the increase in depreciation, net of the investment grants released to the income statement.

13.3. FINANCE LEASES

Air Liquide enters into lease agreements for the use of certain industrial assets. The substance of a number of these agreements satisfies the definition of a finance lease.

These agreements primarily include office or industrial buildings, vehicle trailers and other industrial equipment as well as information technology hardware.

The present value of minimum lease payments for leased assets is recorded in the balance sheet under "Property, plant and equipment". The breakdown is as follows:

	2011		2012	
(in millions of euros)	Minimum lease payments	Present value of minimum lease payments	Minimum lease payments	Present value of minimum lease payments
Less than 1 year	6	5	7	6
1 to 5 years	16	14	16	13
More than 5 years	4	3	4	3
Total minimum lease payments	**26**	**22**	**27**	**22**
Less impact of discounting (finance charge)	(4)		(5)	
Present value of minimum lease payments	**22**		**22**	

Note 14 – Non-current financial assets

(in millions of euros)	2011	2012
Available-for-sale financial assets	77.9	97.0
Loans	49.1	47.1
Other long-term receivables	269.3	290.5
Employee benefits - prepaid expenses	2.0	1.2
NON-CURRENT FINANCIAL ASSETS	**398.3**	**435.8**

Available-for-sale financial assets primarily consist of unlisted and non-consolidated investments, in particular the capital contribution to Exeltium S.A.S. (13% interest held by the Air Liquide Group).

Other long-term receivables comprise the receivable related to the equalization charge refund claim paid for the 2000 to 2004 period in the amount of 71.7 million euros before interests on arrears, which amounted to 29.9 million euros as of December 31, 2012. In 2012, no event affected the recoverability of this receivable.

Note 15 – Investments in associates

15.1. FINANCIAL INFORMATION RELATED TO ASSOCIATES

Group share of associates as of December 31, 2012 *(in millions of euros)*	Share of profit for the period	Share of equity [(a)]
Europe	0.7	25.5
Americas	2.4	5.6
Asia-Pacific	13.3	148.6
Middle East and Africa	3.6	42.0
TOTAL	**20.0**	**221.7**

(a) The goodwill related to associates is included in the carrying amount of the investment.

Group share of associates as of December 31,2011 *(in millions of euros)*	Share of profit for the period	Share of equity [(a)]
Europe	(0.3)	17.1
Americas	2.7	6.5
Asia-Pacific	25.3	147.1
Middle East and Africa	5.1	40.4
TOTAL	**32.8**	**211.1**

(a) The goodwill related to associates is included in the carrying amount of the investment.

15.2. MOVEMENTS DURING THE YEAR

(in millions of euros)	As of January 1	Share of profit for the period	Dividend distribution	Foreign exchange differences	Other movements	As of December 31
2011	196.4	32.8	(14.9)	2.4	(5.6)	211.1
2012	**211.1**	**20.0**	**(13.9)**	**5.2**	**(0.7)**	**221.7**

15.3. FINANCIAL INDICATORS OF ASSOCIATES (100%)

Balance sheet

(in millions of euros)	2011	2012
Total assets	923.9	1,025.0
Equity	488.8	515.9
Net indebtedness	132.9	253.3

Income statement

(in millions of euros)	2011	2012
Revenue	613.4	590.3
Profit for the period	51.2	42.7

Net indebtedness (Group share)

(in millions of euros)	2011	2012
Net indebtedness	59.2	110.9

Note 16 – Deferred taxes

Movements in deferred tax assets and liabilities during the period were as follows:

16.1. DEFERRED TAX ASSETS

(in millions of euros)	2011	2012
AS OF JANUARY 1	**306.3**	**290.3**
Income (charge) to the income statement	(24.3)	(5.6)
Income (charge) to equity for the period	0.3	71.6 [(a)]
Acquisitions/Disposals	3.9	5.8
Foreign exchange differences	0.6	(1.4)
Others [(b)]	3.5	4.8
AS OF DECEMBER 31	**290.3**	**365.5**

(a) Corresponds to the deferred taxes recognized in other items in the statement of net income and gains and losses directly recognized in equity: -16.4 million euros relating to the change in fair value of derivatives and 88.0 million euros relating to actuarial gains and losses. In 2011, the respective impacts amounted to 3.3 million euros relating to the change in fair value of derivatives and -3.0 million euros relating to actuarial gains and losses.

(b) Other movements result from reclassifications between current and deferred taxes.

16.2. DEFERRED TAX LIABILITIES

(in millions of euros)	2011	2012
AS OF JANUARY 1	**1,126.4**	**1,204.9**
Charge (income) to the income statement	73.8	46.4
Charge (income) to equity for the period	(45.0)	(75.7) [a]
Acquisitions/Disposals	(2.2)	7.6
Foreign exchange differences	18.2	(15.6)
Others [b]	33.7	(32.8)
AS OF DECEMBER 31	**1,204.9**	**1,134.8**

(a) Corresponds to the deferred taxes recognized in other items in the statement of net income and gains and losses directly recognized in equity: -2.4 million euros relating to the change in fair value of derivatives and -73.3 million euros relating to actuarial gains and losses. In 2011, the respective impacts amounted to -0.3 million euros relating to the change in fair value of derivatives and -44.7 million euros relating to actuarial gains and losses.

(b) Other movements result from reclassifications between current and deferred taxes.

As of December 31, 2012, unrecognized deferred tax assets totaled 28.4 million euros, compared to 14.6 million euros as of December 31, 2011.

Deferred taxes are mainly generated by differences between the tax and economic depreciation of assets, tax loss carryforwards and provisions not immediately deductible for tax purposes, in particular employee benefit provisions.

Note 17 – Inventories

(in millions of euros)	2011	2012
Raw materials and supplies	220.1	236.4
Finished and semi-finished goods	490.1	479.1
Work-in-progress	73.9	60.3
NET INVENTORIES	**784.1**	**775.8**

(in millions of euros)	2011	2012
Write-down of inventories	(22.3)	(18.1)
Reversals of write-down	27.0	16.9
NET WRITE-DOWN RECOGNIZED IN THE INCOME STATEMENT	**4.7**	**(1.2)**

Note 18 – Trade receivables

(in millions of euros)	2011	2012
Trade and other operating receivables	2,916.1	2,978.2
Allowance for doubtful receivables	(136.8)	(151.7)
TRADE RECEIVABLES	**2,779.3**	**2,826.5**

Trade and other operating receivables included the gross amounts from Engineering & Construction customers for 150.5 million euros (147.0 million euros as of December 31, 2011).

For all Engineering & Construction contracts in progress at the year-end, the gross amounts payable from and to customers correspond to the sum of costs incurred and profits recognized using the percentage of completion method, equivalent to revenue recorded using the percentage of completion method, less any advances received.

Amounts due to customers are presented under other current liabilities (see note 26).

As of December 31, 2012, cumulative revenue recognized using the percentage of completion method and advances received amounted to 1,630.6 million euros and 1,671.1 million euros, respectively.

As of December 31, 2011, cumulative revenue recognized using the percentage of completion method and advances received amounted to 1,550.4 million euros and 1,586.3 million euros, respectively.

18.1. BREAKDOWN OF TRADE AND OTHER OPERATING RECEIVABLES

(in millions of euros)	Gross carrying amount	Not yet due	Impaired and overdue	Not impaired and overdue
2011	2,916.1	2,189.1	116.4	610.6
2012	**2,978.2**	**2,176.4**	**129.4**	**672.4**

Outstanding trade receivables overdue and not impaired mainly comprised receivables due in less than three months (70.7% in 2012, 67.0% in 2011). Their non-impairment arises from a detailed analysis of the related risks.

Trade receivables overdue by more than three months and not impaired mainly concerns public sector customers in the Healthcare segment for which the credit risk is very low.

18.2. ALLOWANCE FOR DOUBTFUL RECEIVABLES

(in millions of euros)	As of January 1	Charges	Reversals	Foreign exchange differences	Other movements	As of December 31
2011	(137.5)	(52.1)	52.5	(0.2)	0.5	(136.8)
2012	**(136.8)**	**(59.2)**	**43.9**	**1.6**	**(1.2)**	**(151.7)**

Note 19 – Working capital requirement

The increase in the working capital requirement for 67.3 million euros, presented in the consolidated cash flow statement, mainly breaks down as follows:

- increase in the working capital requirement of Gas & Services and Other activities in the amount of 22.8 million euros;
- decrease in working capital resources of the Engineering & Construction activity in the amount of 30.0 million euros;
- decrease in net tax payables in the amount of 18.4 million euros.

Note 20 – Other current assets

(in millions of euros)	2011	2012
Advances and down-payments made	86.0	84.6
Prepaid expenses	77.3	81.7
Other sundry current assets	281.5	256.0
OTHER CURRENT ASSETS	**444.8**	**422.3**

Note 21 – Cash and cash equivalents

(in millions of euros)	2011	2012
Short-term loans	53.8	46.4
Short-term investments	992.5	472.6
Cash in bank	714.8	635.2
CASH AND CASH EQUIVALENTS	**1,761.1**	**1,154.2**

Short-term investments include temporary cash investments maturing in less than three months (cash notes and certificates of deposit) towards banks or counterparties with a minimum long-term rating of A and a minimum short-term rating of A1 (S&P).

As of December 31, 2011, cash in bank comprised the 130 million euro unused portion of the 2,600 million renminbi bond (equivalent to 319 million euros) intended to finance the Group's development in China. In 2012, this amount was used to finance the industrial projects.

Note 22 – Shareholders' equity

22.1. SHARES

Number of shares

	2011	2012
NUMBER OF SHARES OUTSTANDING AS OF JANUARY 1	**284,095,093**	**283,812,941**
Free share attribution		29,003,797
Options exercised during the period	917,848	664,421
Cancellation of treasury shares	(1,200,000)	(1,200,000)
NUMBER OF SHARES AS OF DECEMBER 31	**283,812,941**	**312,281,159**

The shares have a par value of 5.50 euros each and are all issued and fully paid-up.

The Board of Directors' meeting of May 9, 2012 decided to create 28,285,796 new shares with a par value of 5.50 euros. On May 31, 2012, these shares were attributed as free shares to shareholders, at the rate of one new share for ten former shares, by capitalizing additional paid-in capital to share capital and retained earnings.

Furthermore, in accordance with Article 21 of the Bylaws, 718,001 new shares were created with a par value of 5.50 euros. On May 31, 2012, these shares were attributed as free shares to shareholders, at the rate of one new share for one hundred former shares, by capitalizing additional paid-in capital and retained earnings. The shares affected by this additional attribution are those shares held in registered form continuously from December 31, 2009 to May 30, 2012 inclusive.

In 2012, Air Liquide continued with its dividend distribution policy. In 2012, a total of 1,051,224 shares were purchased (net of disposals), of which 1,144,724 shares before free share attribution and -93,500 shares after free share attribution.

22.2. TREASURY SHARES

Treasury shares consist of Air Liquide shares held by the Group, including the shares forming part of the liquidity contract in accordance with an Ethics Charter recognized by the French financial markets authority (*Autorité des marchés financiers*). As of December 31, 2012, the Group held 1,003,394 treasury shares (1,119,676 as of December 31, 2011). These movements in the number of treasury shares are explained on pages 182 and 183 (consolidated statement of changes in equity).

As of December 31, 2012, the Group held no treasury share under a liquidity contract.

22.3. SHARE-BASED PAYMENTS

Share subscription option plans

Following the authorizations by the Annual General Meetings, the decisions of the Board of Directors, the Supervisory Board and the Management Board and based on the recommendations of the Remuneration Committee, the Group adopted share subscription plans for certain senior executives of the Company and its worldwide subsidiaries, including corporate officers.

The purpose of these options is to motivate key Group executives, reward the loyalty of high-performing executives for their conduct in exceptional situations and associate them with the long-term interests of shareholders.

Stock options are granted for a minimum amount which cannot be lower than the average market price during the 20 trade days prior to the date of grant. The maximum exercise period is eight years for options granted between March 21, 2005 and June 28, 2010 inclusive and 10 years for the October 14, 2011 and September 27, 2012 stock option plans.

Stock options granted since May 12, 1999 can only be exercised after a four-year minimum term from the date they were granted.

At its September 27, 2012 meeting, the Board of Directors granted 704,791 stock options (672 beneficiaries), at a subscription price of 96.61 euros, available for exercise from September 27, 2016 and September 26, 2022.

The total number of stock options, granted by the Board of Directors, the Supervisory Board, and the Management Board under the plans authorized by Annual General Meetings, but not exercised as of December 31, 2012 amounted to, after adjustment, 4,854,395 options (average price of 71.93 euros), or 1.55% of the share capital, of which 916,280 options (average price of 73.32 euros) were granted to members of Executive Management, present within the Company as of December 31, 2012.

Out of the total number of options issued pursuant to the authorization of the Annual General Meeting of May 5, 2010, 4,326,392 options were retained for possible allotment by the Board of Directors as of December 31, 2012.

Conditional grant of shares to employees

In order to retain and further motivate talented employees and compensate their medium-term performance, an additional compensation system was set up in 2008 involving the Conditional Grant of Shares to Employees.

The seventeenth resolution adopted by the Extraordinary Annual General Meeting of May 5, 2010 authorized the Board of Directors to attribute free shares to Group employees (with the exception of the Group's senior corporate officers), up to a maximum of 0.5% of the Company's share capital on the date the Board decides to grant such shares.

Under this authorization, the Board of Directors adopted two different regulations on September 27, 2012 ("France" Plan and "World" Plan) governing the conditional grant of Company shares to employee beneficiaries determined by the Board. The beneficiaries or beneficiary categories are designated by the Company's Board of Directors, according to the allocation criteria relating to their contribution to the Group's performance.

The differences between the "France" and "World" Plans are mainly the number of years of service required and the correlative absence of any holding requirement for the "World" Plan, as described below.

Conditional employee share grants are subject to:

- a continued service requirement: shares granted to a beneficiary shall only be definitively vested if he or she has been a salaried employee or corporate officer of a Group company during a vesting period, calculated as from the grant date, of two years for "France" Plan beneficiaries and four years for "World" Plan beneficiaries. In the event of retirement, the beneficiary retains his rights, because he is no longer required to satisfy the continued service requirement;
- a performance requirement: for 2012, this requirement is identical for both Plans: it corresponds to the achievement rate of the average growth target set for the Group's undiluted net earnings per share, excluding the foreign exchange impact and exceptional items (recurring net earnings per share), for fiscal year 2013, compared to the recurring net earnings per share for fiscal year 2011;
- a holding requirement: as from the final grant date, the beneficiaries of the "France" Plan are required to hold their shares for two additional years during which such shares may not be transferred (except in the event of disability or death).

The granted shares shall be either shares issued through a capital increase performed by the Company by no later than the definitive vesting date or shares bought back by the Company in the market prior to such date. The granted shares shall be of the same nature and category as those making up the Company's share capital at the date on which the plans are approved by the Board of Directors.

At its September 27, 2012 meeting, the Board of Directors decided to grant 117,285 conditional shares to employees (1,022 beneficiaries).

Options granted to the ten employees of the Company and its subsidiaries (excluding corporate officers) who were granted the highest number of options

In 2012, no option was granted prior to free share attribution and 183,000 options were granted after free share attribution to the ten employees of the Company and its subsidiaries (excluding corporate officers) who were granted the highest number of options.

Options exercised in 2012 by the ten employees of the Company and its subsidiaries (excluding corporate officers) with the highest number of options exercised

Year of grant	Number of options exercised	Average price *(in euros)* (a)
2005	43,239	51.92
2006	37,374	61.89
2007	10,943	75.28
2008	13,737	71.31
TOTAL	**105,293**	**60.42**

(a) The average prices were impacted by the breakdown in the number of options exercised before or after free share attribution of May 31, 2012.

Options exercised in 2011 by the ten employees of the company and its subsidiaries (excluding corporate officers) with the highest number of options exercised

Year of grant	Number of options exercised	Average price *(in euros)* (a)
2004	56,948	48.86
2005	22,533	53.36
2006	39,572	64.97
2007	5,879	77.86
TOTAL	**124,932**	**56.14**

(a) Historical data.

Number of share subscription options and weighted average strike price

	2011		2012	
	Options	Weighted average strike price (in euros)	Options	Weighted average strike price (in euros)
Total number of options outstanding as of January 1 (at the historical rate)	**4,699,547**	**67.66**	**4,428,274**	**73.03**
Options granted during the period (at the historical rate as of the date the plan was set up)	675,680	87.00	710,791	96.61
Options exercized during the period (at the historical rate in effect on each exercize date)	917,848	56.08	664,421	59.48
Options cancelled during the period (at the historical rate in effect on each cancellation date)	29,105		47,010	
Total number of options as of December 31 (at the historical rate) [(a)]	**4,428,274**	**73.03**	**4,427,634**	**78.29**
Of which total number of options eligible for exercize	***2,177,005***	***67.77***	***2,029,308***	***72.27***
Total adjusted number of options as of December 31 [(b)]	**4,882,832**	**66.25**	**4,854,395**	**71.93**
Of which total number of options eligible for exercize after adjustment	***2,400,551***	***61.50***	***2,281,441***	***65.39***

(a) In 2012, the difference between the number of options not exercised as of December 31 and the number as of January 1 (the latter adjusted for the movements indicated in the table) corresponds to the expired options and the overall impact, on the date of completion, of a free share attribution on the number of options not exercised in 2012.

(b) Corresponds to the overall restatement consisting of an increase in the total number of options remaining at the end of fiscal year 2011 for free share attribution of May 31, 2012.

Information on the fair value of share subscription options and conditional grants of shares

The Group grants stock options to senior management and certain employees. Employees are also entitled to conditional grants of shares.

Share subscription options

In accordance with IFRS2, stock options are measured at fair value at the grant date. The fair value is estimated using the binomial mathematical valuation model.

Valuations are based on the following main underlying assumptions:

- volatility: implicit;
- risk-free interest rate: six-year-zero-coupon benchmark rate on the plan issue date;
- dividend growth rate: based on the average annual growth rate observed in the past;
- employee resignation rate: that of individuals belonging to the same age group as the plan beneficiaries. This resignation rate is used to reflect theoretically the options which will not be exercised due to the resignation of the beneficiaries.

	2011 [a]		2012			
	Plan 1		Plan 1		Plan 1	
	October 14, 2011		May 11, 2012		September 27, 2012	
Duration of the option	6 years		6 years		6 years	
Fair value of the option *(in euros)*	18.59 [b]	12.88 [c]	17.53 [b]	14.32 [c]	19.56 [b]	17.58 [c]

(a) Adjusted for the 2012 free share attribution.

(b) Fair value of options not subject to performance requirements, and options subject to performance requirements linked to the Group's results.

(c) Fair value of options subject to performance requirements linked to the share price trend.

Conditional grants of shares

Conditional grants of shares are measured at fair value, taking into account a discount on non-transferable shares. The cost of non-transferability is measured as the cost of a strategy in two phases consisting of the forward sale of shares that cannot be transferred over a period of four years and the purchase on the spot market of the same number of shares financed by an amortizable loan with an *in fine* capital refund.

Valuations are based on the following main underlying assumptions:

- risk-free interest rate: four-year zero-coupon benchmark rate on the plan issue date, to which a credit margin is applied in the same way as for an employee;
- dividend growth rate: based on the average annual growth rate observed in the past;
- employee resignation rate: that of individuals belonging to the same age group as the plan beneficiaries. This resignation rate is used to reflect theoretically the shares which will not be allocated due to the resignation of the beneficiaries;
- the Group's performance requirement is not considered as an underlying assumption and was deemed to have been fully achieved on the valuation date.

	2011 [a]		2012	
	Plan 1		Plan 1	
	October 14, 2011		September 27, 2012	
Duration of the conditional grant	4 years		4 years	
Fair value of the conditional grant *(in euros)*	82,98 [b]	77,37 [c]	96.59 [b]	90.41 [c]

(a) Adjusted for the 2012 free share attribution.

(b) Conditional Grant of Shares to Employees for beneficiaries located in France.

(c) Conditional Grant of Shares to Employees for beneficiaries located outside France.

An expense of 16.5 million euros (excluding tax) was recognized for share subscription options and Conditional Grants of Shares to Employees in the income statement in 2012 (14.6 million euros in 2011) with a corresponding entry offset in equity.

Note 23 – Provisions, pensions and other employee benefits

(in millions of euros)	As of January 1	Increase	Utilized	Other reversals	Discounting	Foreign exchange differences	Acquisitions related to business combinations	Other movements [(a)]	As of December 31
2012									
Pensions and other employee benefits	1,581.1	(11.2)	(162.4)		544.1	(10.6)	2.1	(2.4)	1,940.7
Restructuring plans	22.0	7.6	(3.4)	(0.2)		(0.4)	1.1	(3.2)	23.5
Guarantees and other provisions of Engineering & Construction activity	126.4	83.1	(44.8)	(45.3)		(0.9)		5.4	123.9
Dismantling	165.8		(2.4)	(1.2)	6.5	(5.4)	2.1	12.6	178.0
Other provisions	192.3	25.9	(21.1)	(19.5)		(1.4)	4.8	12.2	193.2
TOTAL PROVISIONS	**2,087.6**	**105.4**	**(234.1)**	**(66.2)**	**550.6**	**(18.7)**	**10.1**	**24.6**	**2,459.3**

(a) Other movements correspond to account reclassifications and provisions for dismantling, with no impact on the consolidated statement of cash flows.

(in millions of euros)	As of January 1	Increase	Utilized	Other reversals	Discounting	Foreign exchange differences	Acquisitions related to business combinations	Other movements [(a)]	As of December 31
2011									
Pensions and other employee benefits	1,545.4	13.6	(160.2)		173.2	13.6	0.6	(5.1)	1,581.1
Restructuring plans	18.1	6.1	(5.8)	(0.5)		0.2	0.5	3.4	22.0
Guarantees and other provisions of Engineering & Construction activity	113.1	74.4	(22.4)	(44.2)		1.5		4.0	126.4
Dismantling	147.8		(2.7)		5.5	0.7		14.5	165.8
Other provisions	195.6	82.3	(60.3)	(24.9)		(0.5)	3.9	(3.8)	192.3
TOTAL PROVISIONS	**2,020.0**	**176.4**	**(251.4)**	**(69.6)**	**178.7**	**15.5**	**5.0**	**13.0**	**2,087.6**

(a) Other movements correspond to account reclassifications and provisions for dismantling, with no impact on the consolidated statement of cash flows.

In the normal course of its operations, the Group is party to arbitration, judicial or administrative proceedings. The potential costs of such proceedings are provided for, when they are probable, only if the amount can be quantified or estimated within a reasonable range. In the latter case, the amount provisioned represents the best estimate of the Group's management. Provisions are determined based on a case-by-case risk assessment and events occurring during proceedings may result in a risk reappraisal at any time. These litigations are by nature diverse and involve various Group subsidiaries. Contingency provisions recorded with respect to all Group litigations amounted to 65 million euros as of December 31, 2012 (76 million euros as of December 31, 2011) and are presented in "Other provisions".

The Group has not provided a breakdown, considering that the disclosure of the amount of the provisions for individual litigations is likely to seriously harm the Group.

On May 26, 2011, Air Liquide Japan Ltd and three other competitors received a fine payment order from the Japanese Fair Trade Commission (JFTC), regarding unfair practices in sales of liquid oxygen, liquid nitrogen and liquid argon (excluding medical use) in Japan between April 2008 and January 2010.

The JFTC required Air Liquide Japan Ltd to take corrective actions and a fine amounting to 4.8 billion Japanese Yen (equivalent to 42 million euros) was paid on August 29, 2011. Air Liquide Japan Ltd initiated administrative proceedings following the JFTC's decision. An expense was booked representing the best estimate of the risk related to this dispute.

In 2012, the appeal proceedings were still ongoing and there was no new development likely to call into question the provision recorded in 2011.

No single litigation is likely to have a material impact on the Group's financial position or profitability.

Note 24 – Employee benefit obligations

24.1. PENSION PLANS

The Group provides its employees with various pension plans, termination benefits, jubilees and other post-employment benefits for both active employees and retirees. The features of these plans vary according to laws and regulations applicable in each country as well as each subsidiary policy.

These benefits are covered in two ways:

- by so-called defined contribution plans;
- by so-called defined benefit plans.

Air Liquide and some of its French subsidiaries grant retirees and certain active employees' additional benefits beyond the normal pension plans. Those benefits and plans are all based on the employee's final salary. The supplementary plans are now closed. The annual amount paid with respect to these plans cannot exceed a percentage of payroll or, in certain cases, of the pre-tax profit for the relevant companies.

IAS19 "Employee Benefits" characterizes defined contribution plans very precisely and restrictively and indicates that any plans not complying fully with the conditions required are defined benefit plans by default.

The restricted definition given to defined contribution plan requires Air Liquide to state the retirement supplement as a defined benefit plan, despite the existence of certain limits that restrict the Company's obligations and the fact that the obligations are not of a stable and continuous nature.

This qualification, as a defined benefit plan, results in the recognition of a provision against future obligations.

The existence of limits on these obligations creates uncertainty in the valuation of amounts that will actually be paid to retirees. Considering the difficulty in quantifying the impact of the limits, the provision recorded corresponds to the actuarial value of the amounts to be paid out to retirees until the plan disappears, excluding the impact of these limits.

24.2. DETERMINATION OF ASSUMPTIONS AND ACTUARIAL METHODS

Benefit obligations are regularly valued by actuaries. These valuations are performed individually for each plan in accordance with IFRS.

The actuarial method used is the "projected unit credit method", taking into account final salary.

In accordance with the option offered by revised IAS19, all actuarial gains and losses and adjustments arising from the asset ceiling are immediately recognized in the period in which they occur.

The actuarial assumptions (turnover, mortality, retirement age, salary increase…) vary according to demographic and economic conditions in each country in which the plans are in place.

The discount rates used to determine the present value of the obligations are based on Government bonds or High-Quality corporate bonds, when the financial markets are sufficiently liquid, with the same duration as the obligations at the valuation date. Hence, in the Euro zone, the United States, the United Kingdom and Canada, the rates were determined using tools developed by independent actuaries. These tools comprise several hundred minimum AA-rated private borrowings, with maturities ranging from one to around 30 years. The expected benefit flows are then discounted using a single rate equal to the weighted average rate corresponding to each maturity. Finally, the tool generates a single rate which, when applied to all expected cash flows, gives the same present value of these future cash flows.

The expected return on long-term assets is determined by taking into account, in each country, the asset allocation in the portfolio.

24.3. OBLIGATIONS

Group obligations with respect to pension plans and similar benefits are shown below as of December 31, 2012:

(in millions of euros)	Defined benefit plans	Retirement termination payments	Other long term benefits	Medical Plans	Total
A. Change in net liabilities					
Net liabilities at the beginning of the period	(1,392.6)	(101.8)	(26.1)	(58.6)	(1,579.1)
Acquisition / transfer	(1.2)	0.7			(0.5)
Expense (income) recognized	(18.8)	(12.6)	(4.5)	(3.6)	(39.5)
Employer contributions	147.6	5.1	5.4	4.4	162.5
Gains (losses) for the period	(461.5)	(23.5)		(8.4)	(493.4)
Exchange rate movements	8.7	1.2		0.6	10.5
Net liabilities at the end of the period	**(1,717.8)**	**(130.9)**	**(25.2)**	**(65.6)**	**(1,939.5)**
B. Expense recorded in 2012					
Service cost	33.9	5.9	1.8	0.9	42.5
Interest cost	99.8	5.9	1.2	2.8	109.7
Expected return on plan assets	(58.8)	(0.1)	(0.1)		(59.0)
Past service cost	(30.0)	0.9		(0.1)	(29.2) (a)
Actuarial gains / losses			1.6		1.6
Curtailment / settlement	(26.1)				(26.1) (a)
Expense (income) recognized	**18.8**	**12.6**	**4.5**	**3.6**	**39.5**
C. Change in present value of obligations in 2012					
DBO at the beginning of the period	2,319.2	123.5	28.3	58.3	2,529.3
Service cost	33.9	5.9	1.8	0.9	42.5
Interest cost	99.8	5.9	1.2	2.8	109.7
Employee contributions	3.3				3.3
Plan amendments	(21.7)				(21.7) (a)
Curtailment / settlement	(26.1)				(26.1) (a)
Acquisition / divestiture	1.2	(0.7)			0.5
Benefit payments	(133.8)	(5.1)	(6.1)	(4.4)	(149.4)
Actuarial gains / losses	515.1	23.4	1.6	8.4	548.5
Exchange rate movements	(24.2)	(1.3)		(0.6)	(26.1)
Obligations at the end of the period	**2,766.7**	**151.6**	**26.8**	**65.4**	**3,010.5**
D. Change in plan assets in 2012					
Fair value of assets at the beginning of the period	922.3	2.4	2.2		926.9
Actual return on plan assets	112.4		0.1		112.5
Employer contributions	134.7	4.6	4.4	4.4	148.1
Employee contributions	3.3				3.3
Benefit payments	(120.9)	(4.6)	(5.1)	(4.4)	(135.0)
Exchange rate movements	(15.5)	(0.1)			(15.6)
Fair value of assets at the end of the period	**1,036.3**	**2.3**	**1.6**		**1,040.2**
E. Funded status at the end of 2012					
Present value of obligations	(2,766.7)	(151.6)	(26.8)	(65.4)	(3,010.5)
Fair value of plan assets	1,036.3	2.3	1.6		1,040.2
Loss / surplus	(1,730.4)	(149.3)	(25.2)	(65.4)	(1,970.3)
Unrecognized past service cost – benefits not vested	12.6	18.4		(0.2)	30.8
Net liabilities	**(1,717.8)**	**(130.9)**	**(25.2)**	**(65.6)**	**(1,939.5)**
F. Actuarial (gains) and losses recognized directly in equity					
(Gains) and losses at the beginning of the period	443.8	3.5		(8.2)	439.1
(Gains) and losses on obligations	515.1	23.4		8.4	546.9
(Gains) and losses on plan assets	(53.6)	0.1			(53.5)
Exchange rate movements	(10.6)	(0.2)		0.1	(10.7)
(Gains) and losses at the end of the period (b)	**894.7**	**26.8**		**0.3**	**921.8**

(a) Settlement, plan amendments and past service cost mainly related to the pension plans in US and in Switzerland.

(b) Losses (gains), net of tax, recognized in equity, amounted to 613 million euros as of December 31, 2012.

Group obligations with respect to pension plans and similar benefits are shown below as of December 31, 2011:

(in millions of euros)	Defined benefit plans	Retirement termination payments	Other long term benefits	Medical Plans	Total
A. Change in net liabilities					
Net liabilities at the beginning of the period	(1,360.3)	(92.5)	(28.4)	(60.1)	(1,541.3)
Acquisition / transfer	2.9	(0.1)	0.4		3.2
Expense (income) recognized	(54.4)	(12.0)	(4.6)	1.9	(69.1)
Employer contributions	143.2	6.2	6.3	4.5	160.2
Gains (losses) for the period	(110.7)	(3.3)		(4.5)	(118.5)
Exchange rate movements	(13.3)	(0.1)	0.2	(0.4)	(13.6)
Net liabilities at the end of the period	**(1,392.6)**	**(101.8)**	**(26.1)**	**(58.6)**	**(1,579.1)**
B. Expense recorded in 2011					
Service cost	32.2	5.7	3.0	0.8	41.7
Interest cost	102.5	5.6	1.3	2.7	112.1
Expected return on plan assets	(56.4)	(0.1)	(0.1)		(56.6)
Past service cost	(9.5)	0.9	0.2		(8.4)
Actuarial gains / losses			0.2		0.2
Curtailment / settlement	(14.4)	(0.1)		(5.4)	(19.9)
Expense (income) recognized	**54.4**	**12.0**	**4.6**	**(1.9)**	**69.1**
C. Change in present value of obligations in 2011					
DBO at the beginning of the period	2,277.0	115.7	30.3	59.7	2,482.7
Service cost	32.2	5.7	3.0	0.8	41.7
Interest cost	102.5	5.6	1.3	2.7	112.1
Employee contributions	3.3				3.3
Plan amendments	(9.4)	(0.3)	0.2	0.1	(9.4)
Curtailment / settlement	(68.5)	(0.1)		(5.4)	(74.0)
Acquisition / divestiture	(3.2)	(0.1)	(0.4)		(3.7)
Benefit payments	(129.7)	(5.8)	(5.9)	(4.5)	(145.9)
Actuarial gains / losses	77.2	2.7		4.5	84.4
Exchange rate movements	37.8	0.1	(0.2)	0.4	38.1
Obligations at the end of the period	**2,319.2**	**123.5**	**28.3**	**58.3**	**2,529.3**
D. Change in plan assets in 2011					
Fair value of assets at the beginning of the period	913.7	2.7	1.9		918.3
Acquisitions / divestitures	(0.3)	(0.2)			(0.5)
Actual return on plan assets	21.7	(0.5)	(0.1)		21.1
Employer contributions	128.2	6.0	4.8	4.5	143.5
Employee contributions	3.3				3.3
Benefit payments	(114.7)	(5.6)	(4.4)	(4.5)	(129.2)
Settlement	(54.1)				(54.1)
Exchange rate movements	24.5				24.5
Fair value of assets at the end of the period	**922.3**	**2.4**	**2.2**		**926.9**
E. Funded status at the end of 2011					
Present value of obligations	(2,319.2)	(123.5)	(28.3)	(58.3)	(2,529.3)
Fair value of plan assets	922.3	2.4	2.2		926.9
Loss / surplus	(1,396.9)	(121.1)	(26.1)	(58.3)	(1,602.4)
Unrecognized past service cost – benefits not vested	4.3	19.3		(0.3)	23.3
Surplus management reserve					
Net liabilities	**(1,392.6)**	**(101.8)**	**(26.1)**	**(58.6)**	**(1,579.1)**
F. Actuarial (gains) and losses recognized directly in equity					
(Gains) and losses at the beginning of the period	317.3	0.2		(13.0)	304.5
(Gains) and losses on obligations	77.2	2.7		4.5	84.4
(Gains) and losses on plan assets	34.7	0.6			35.3
Change in surplus management reserve	(1.2)				(1.2)
Exchange rate movements	15.8			0.3	16.1
(Gains) and losses at the end of the period [(a)]	**443.8**	**3.5**		**(8.2)**	**439.1**

(a) Losses (gains), net of tax, recognized in equity, amounted to 287.3 million euros as of December 31, 2011.

The above amounts break down as follows by geographical area as of December 31, 2012:

2012 *(in millions of euros)*	Obligations	Plan assets	Provisions in the balance sheet	Over (Under) funding
Europe / Africa	(2,004)	377	(1,599)	(28)
Americas	(877)	592	(284)	(1)
Asia-Pacific	(129)	71	(57)	(1)
TOTAL	**(3,010)**	**1,040**	**(1,940)**	**(30)**

The above amounts break down as follows by geographical area as of December 31, 2011:

2011 *(in millions of euros)*	Obligations	Plan assets	Provisions in the balance sheet	Over (Under) funding
Europe / Africa	(1,613)	340	(1,251)	(22)
Americas	(774)	508	(266)	
Asia-Pacific	(142)	79	(62)	(1)
TOTAL	**(2,529)**	**927**	**(1,579)**	**(23)**

24.4. MAIN ASSUMPTIONS

The main discount rates used are as follows:

	2011	2012
Euro zone	4.9%	3.2%
Canada	5.0%	4.3%
Japan	1.5%	1.3%
Switzerland	2.5%	1.7%
United States	4.5%	3.8%
United Kingdom	4.9%	4.4%
Australia	3.8%	3.5%

Expected returns on plan assets are as follows:

	2011	2012
Euro zone	4.4%	4.4%
Canada	6.7%	6.7%
Japan	3.0%	3.0%
Switzerland	4.2%	4.2%
United States	8.0%	8.0%
United Kingdom	6.2%	6.2%
Australia	6.4%	6.4%

The different expected returns on plan assets per category of investment are as follows:

2012	Shares	Bonds	Others
Euro zone	8.0%	3.7%	3.7%
Canada	8.8%	4.3%	8.5%
Japan	4.0%	2.0%	
Switzerland	4.7%	1.8%	3.6%
United States	10.1%	5.5%	7.3%
United Kingdom	7.2%	3.3%	4.7%
Australia	6.4%	3.1%	5.3%

2011	Shares	Bonds	Others
Euro zone	8.0%	4.0%	3.8%
Canada	8.9%	4.3%	6.1%
Japan	4.0%	2.0%	
Switzerland	6.0%	2.8%	3.5%
United States	10.1%	5.5%	6.7%
United Kingdom	7.3%	3.5%	5.0%
Australia	7.7%	4.4%	6.5%

Financial asset allocation breaks down as follows *(in millions of euros)*:

	Shares		Bonds		Real estate		Cash		Others		Total	
2012	**Amounts**	**%**	**Amounts**	**%**	**Amounts**	**%**	**Amounts**	**%**	**Amounts**	**%**	**Amounts**	**%**
Europe / Africa	110	29.2%	144	38.2%	69	18.3%	6	1.6%	48	12.7%	377	100.0%
Americas	313	52.9%	245	41.4%	30	5.0%			4	0.7%	592	100.0%
Asia-Pacific	35	49.3%	33	46.5%			3	4.2%			71	100.0%
TOTAL	**458**		**422**		**99**		**9**		**52**		**1,040**	

	Shares		Bonds		Real estate		Cash		Others		Total	
2011	**Amounts**	**%**	**Amounts**	**%**	**Amounts**	**%**	**Amounts**	**%**	**Amounts**	**%**	**Amounts**	**%**
Europe / Africa	96	28.2%	134	39.3%	62	18.2%	4	1.2%	45	13.2%	341	100.0%
Americas	263	51.8%	215	42.3%	20	3.9%	5	1.0%	5	1.0%	508	100.0%
Asia-Pacific	40	51.3%	36	46.2%			2	2.6%			78	100.0%
TOTAL	**399**		**385**		**82**		**11**		**50**		**927**	

24.5. BREAKDOWN OF GAINS AND LOSSES FOR THE PERIOD

(in millions of euros)	2011	2012
Experience gains and losses on present value of the obligation	10	19
Gains and losses on present value of the defined obligation related to changes in assumptions	(94)	(566)
Experience gains and losses on fair value of assets	(35)	54

24.6. BREAKDOWN OF EXPERIENCE GAINS AND LOSSES ON FINANCIAL ASSETS

2012 *(in millions of euros)*	Expected return on assets	Actual return on assets	Gains and losses on assets
Europe / Africa	16.0	42.1	26.1
Americas	40.7	68.9	28.2
Asia-Pacific	2.3	1.5	(0.8)
TOTAL	**59.0**	**112.5**	**53.5**

2011 *(in millions of euros)*	Expected return on assets	Actual return on assets	Gains and losses on assets
Europe / Africa	16.0	3.6	(12.4)
Americas	38.4	17.9	(20.5)
Asia-Pacific	2.2	(0.4)	(2.6)
TOTAL	**56.6**	**21.1**	**(35.5)**

24.7. IMPACT OF A 1% FLUCTUATION IN THE INFLATION RATE WITH REGARD TO HEALTH COVERAGE PLANS

	Obligation as of December 31,2012 *(in millions of euros)*	Inflation +1%	Inflation -1%
Europe / Africa	36	12.0%	-10.1%
North America	30	3.2%	-2.7%
Asia-Pacific			

	Obligation as of December 31,2011 *(in millions of euros)*	Inflation +1%	Inflation -1%
Europe / Africa	33	11.1%	-9.3%
North America	26	3.0%	-2.6%
Asia-Pacific			

24.8. IMPACT OF A -0.25% DECREASE IN DISCOUNT RATES

	Impact on obligations as of December 31, 2012 *(in millions of euros)*	% of total obligations as of December 31, 2012
Europe / Africa	59	2.9%
Americas	30	3.4%
Asia-Pacific	3	2.3%
TOTAL	**92**	**3.1%**

	Impact on obligations as of December 31, 2011 *(in millions of euros)*	% of total obligations as of December 31, 2011
Europe / Africa	42	2.6%
Americas	28	3.6%
Asia-Pacific	4	2.8%
TOTAL	**74**	**2.9%**

24.9. IMPACT OF A +0.25% INCREASE IN DISCOUNT RATES

	Impact on obligations as of December 31, 2012 *(in millions of euros)*	% of total obligations as of December 31, 2012
Europe / Africa	(56)	-2.8%
Americas	(29)	-3.3%
Asia-Pacific	(4)	-2.2%
TOTAL	**(89)**	**-3.0%**

	Impact on obligations as of December 31, 2011 *(in millions of euros)*	% of total obligations as of December 31, 2011
Europe / Africa	(41)	-2.5%
Americas	(27)	-3.5%
Asia-Pacific	(4)	-2.8%
TOTAL	**(72)**	**-2.8%**

Note 25 – Borrowings

This note provides information on the breakdown of the Group's borrowings by instrument. For further information on financial instruments and foreign exchange and interest rate risk exposure, please see note 28.

The Air Liquide Group net indebtedness breaks down as follows:

	2011			2012		
	Carrying amount			Carrying amount		
(in millions of euros)	Non-current	Current	Total	Non-current	Current	Total
Bonds & Private placements	3,518.1	724.7	4,242.8	4,176.2	657.0	4,833.2
Commercial paper programs	434.9		434.9	420.1		420.1
Bank debt and other financial debt	1,569.9	643.4	2,213.3	1,052.3	821.9	1,874.2
Finance leases [(a)]	16.7	5.4	22.1	16.1	5.8	21.9
Put options granted to minority shareholders	122.9		122.9	124.3		124.3
TOTAL BORROWINGS (A)	**5,662.5**	**1,373.5**	**7,036.0**	**5,789.0**	**1,484.7**	**7,273.7**
Loans maturing in less than one year		53.8	53.8		46.4	46.4
Short-term marketable securities		992.5	992.5		472.6	472.6
Cash in bank		714.8	714.8		635.2	635.2
TOTAL CASH AND CASH EQUIVALENTS (B)		**1,761.1**	**1,761.1**		**1,154.2**	**1,154.2**
Fair value of derivatives (assets) [(b)]	(26.4)	(0.4)	(26.8)	(5.2)	(11.8)	(17.0)
TOTAL DERIVATIVE INSTRUMENTS RELATING TO BORROWINGS (C)	**(26.4)**	**(0.4)**	**(26.8)**	**(5.2)**	**(11.8)**	**(17.0)**
NET INDEBTEDNESS (A) – (B) + (C)	**5,636.1**	**(388.0)**	**5,248.1**	**5,783.8**	**318.7**	**6,102.5**

(a) See note 13.3.

(b) Fair market value of derivative instruments hedging fixed-rate debt.

In accordance with the Group's policy to diversify funding sources, debt is divided into several types of instruments (capital markets and bank debts). Long-term bonds in the form of Euro Medium Term Notes (EMTNs) and private placements are the primary funding sources and represent 67% of gross debt as of December 31, 2012. At the end of 2012, outstanding notes under this program amounted to 4.8 billion euros (nominal amount), of which 1.3 billion euros (nominal amount) was issued in 2012 to finance Group growth and benefit from attractive market conditions.

Outstanding commercial paper, which decreased compared to the end of 2011, amounted to 420.1 million euros as of December 31, 2012 versus 434.9 million euros as of December 31, 2011. In accordance with the Group's policy, the outstanding commercial paper programs are backed by committed long-term credit lines, which amounted to 2.1 billion euros as of December 31, 2012.

Gross indebtedness increased by 237.7 million euros, particularly due to the acquisitions achieved during the year, resulting in long-term issues exceeding repayments, despite the decrease in bank borrowings (mainly Japan and China).

Bond issues and private placements in 2012 were as follows:

- on January 27, 2012, a private placement of 200 million dollars maturing on March 1, 2019, issued at a fixed rate of 3.3% under the EMTN program. It is used to refinance a portion of the debt of US entities;
- on August 1, 2012, a private placement of 13.5 billion yen maturing on August 1, 2016, issued at a fixed rate of 0.625% under the EMTN program, in order to rebalance bank and capital market debt in Japan;
- on September 13, 2012, a US private placement of 700 million dollars comprising three series of 400 million dollars, 200 million dollars and 100 million dollars, maturing respectively in 10, 12 and 15 years, with respective fixed rates of 3.11%, 3.26% and 3.46%. It is also used to finance the US debt;
- on October 15, 2012, a public Socially Responsible Investment bond of 500 million euros maturing on October 15, 2021, issued at a fixed rate of 2.125%, in order to finance the acquisitions in the Healthcare WBL (LVL Médical Group, Gasmedi Group).

All these issues were performed by Air Liquide Finance S.A..

In consideration thereof:

- the private placement of 100 million dollars, issued on August 30, 2004 by American Air Liquide, at a fixed rate of 5%, was repaid on August 30, 2012;
- the Air Liquide Finance S.A. bond of 469 million euros, issued at a rate of 6.125% on November 28, 2008, and maturing on November 28, 2012, was repaid;
- the Air Liquide S.A. private placement of 130 million euros issued on September 3, 2004, in two series of 57.5 and 72.5 million respectively at a fixed rate of 4.56% and a Euribor rate +38 bps capped at 6.03%, and maturing on March 3, 2012, was not renewed.

The carrying amount of borrowings in the balance sheet breaks down into the issue amount, the amortized cost and fair value adjustments, as follows:

	2011	2012			
(in millions of euros)	Carrying amount	Issuance amount (a)	Amortized cost adjustments (b)	Fair value adjustments (c)	Carrying amount (a) + (b) + (c)
Air Liquide Bonds (employee savings)	82.4	90.8	0.3		91.1
Bonds issued under the EMTN program	3,625.3	3,343.9	(12.3)	16.2	3,347.8
Bonds not issued under the EMTN program	321.7	316.3	1.7		318.0
Private placements issued under the EMTN program		538.8	3.3		542.1
Private placements not issued under the EMTN program	213.4	530.6	3.6		534.2
TOTAL BONDS AND PRIVATE PLACEMENTS	**4,242.8**	**4,820.4**	**(3.4)**	**16.2**	**4,833.2**
Commercial paper programs	434.9	423.2	(3.1)		420.1
Bank debt and other financial debt	2,213.3	1,857.1	16.3	0.8	1,874.2
Finance leases *	22.1	21.9			21.9
Put options granted to minority shareholders	122.9	124.3			124.3
LONG-TERM BORROWINGS	**7,036.0**	**7,246.9**	**9.8**	**17.0**	**7,273.7**

* *See note 13.3.*
(a) *Nominal amount.*
(b) *Amortized cost including accrued interest.*
(c) *Fair market value of the fixed-rate debt hedged.*

25.1. MATURITY OF BORROWINGS

2012 *(in millions of euros)*	**Nominal amount**	**Carrying amount**	**Maturity** On demand	**< 1 year**	**≥ 1 year and ≤ 5 years** 2014	**2015**	**2016**	**2017**	**> 5 years** 2018	**2019**	**2020**	**> 2020**
Bonds	3,751.0	3,756.9		657.0	564.2	275.9	227.2	525.6	525.6		484.0	497.4
Private placements	1,069.4	1,076.3					119.1			289.3		667.9
Commercial paper programs [a]	423.2	420.1							420.1			
Bank debt and other financial debt	1,857.1	1,874.2		821.9	377.9	269.8	173.5	84.7	68.3	28.0	15.3	34.8
Finance leases [b]	21.9	21.9		5.8	5.7	2.6	4.0	0.8	0.6	1.1	0.5	0.8
Put options granted to minority shareholders	124.3	124.3	124.3									
TOTAL BORROWINGS	**7,246.9**	**7,273.7**	**124.3**	**1,484.7**	**947.8**	**548.3**	**523.8**	**611.1**	**1,014.6**	**318.4**	**499.8**	**1,200.9**

(a) The maturity date for outstanding commercial paper corresponds to that of the confirmed credit lines.
(b) See note 13.3.

2011 *(in millions of euros)*	**Nominal amount**	**Carrying amount**	**Maturity** On demand	**< 1 year**	**≥ 1 year and ≤ 5 years** 2013	**2014**	**2015**	**2016**	**> 5 years** 2017	**2018**	**2019**	**>2019**
Bonds	4,017.7	4,029.4		511.3	621.3	572.2	273.8	228.7	512.0	525.3	154.8	630.0
Private placements	207.3	213.4		213.4								
Commercial paper programs [a]	435.3	434.9								434.9		
Bank debt and other financial debt	2,190.4	2,213.3		643.4	486.8	551.7	182.7	187.5	63.7	24.7	12.7	60.1
Finance leases [b]	22.1	22.1		5.4	4.1	4.6	3.6	1.4	0.6	1.3	0.5	0.6
Put options granted to minority shareholders	122.9	122.9	122.9									
TOTAL BORROWINGS	**6,995.7**	**7,036.0**	**122.9**	**1,373.5**	**1,112.2**	**1,128.5**	**460.1**	**417.6**	**576.3**	**986.2**	**168.0**	**690.7**

(a) The maturity date for outstanding commercial paper corresponds to that of the confirmed credit lines.
(b) See note 13.3.

It is Group policy to spread over time the maturity of long-term debt (bonds, private placements and bank debt) in order to limit the annual refinancing needs. In the tables above, the maturity date of outstanding commercial paper corresponds to that of the confirmed credit lines backing up the short-term commercial paper program.

25.2. NET INDEBTEDNESS BY CURRENCY

The Group provides a natural hedge and reduces its exposure to currency fluctuations by raising debt mainly in the currency of the cash flows that are generated to repay the debt. In countries outside the euro, US dollar and Japanese yen zones, financing is raised in either local or foreign currency (EUR or USD) when sales contracts are indexed in foreign currency. Debt in other foreign currency is mainly denominated in Chinese renminbi, Singapore dollar, Brazilian real and sterling pound.

As part of intra-group multi-currency financing, the Central Treasury Department converts the debt raised in financial markets into various currencies to refinance subsidiaries in their functional currencies or their cash flow currencies. The breakdown of this hedging portfolio is shown in the table below.

In particular, a portion of the euro debt raised (1,400.6 million euros) was converted to other currencies to refinance foreign subsidiaries. Of the Group's US dollar gross debt of 1,805.5 million euros, 1,008.3 million euros was raised directly in US dollars and 797.2 million euros was raised in euros and converted to US dollars using currency swap contracts.

2012 *(in millions of euros)*	Gross debt – original issue	Cash and cash equivalents	Currency swaps	Ajusted net indebtedness	Non-current assets
EUR	4,080.6	(564.0)	(1,400.6)	2,116.0	7,981.3
USD	1,008.3	(171.5)	797.2	1,634.0	3,710.6
JPY	797.9	(26.5)	205.9	977.3	1,440.6
CNY	817.5	(101.2)	43.2	759.5	1,697.0
Other currencies	552.4	(291.0)	354.3	615.7	4,891.2
TOTAL	**7,256.7**	**(1,154.2)**		**6,102.5**	**19,720.7**

2011 *(in millions of euros)*	Gross debt – original issue	Cash and cash equivalents	Currency swaps	Ajusted net indebtedness	Non-current assets
EUR	4,867.1	(1,013.1)	(2,664.0)	1,190.0	7,210.0
USD	234.2	(199.0)	1,553.3	1,588.5	3,432.1
JPY	770.7	(50.1)	474.1	1,194.7	1,692.1
CNY	570.8	(260.4)	318.7	629.1	1,589.9
Other currencies	566.4	(238.5)	317.9	645.8	4,332.8
TOTAL	**7,009.2**	**(1,761.1)**		**5,248.1**	**18,256.9**

25.3. FIXED-RATE PORTION OF TOTAL DEBT

(as % of total debt)		2011	2012
EUR debt	Portion of fixed-rate debt	89%	90%
	Additional optional hedges [(a)]	11%	7%
USD debt	Portion of fixed-rate debt	42%	54%
	Additional optional hedges [(a)]	9%	
JPY debt	Portion of fixed-rate debt	83%	86%
	Additional optional hedges [(a)]		
Total debt	Portion of fixed-rate debt	70%	71%
	Additional optional hedges [(a)]	6%	3%

(a) Additional optional hedges consist of caps, which enable a maximum interest rate to be set in advance, while profiting from short-term interest rates, in return for a premium payment.

As of December 31, 2012, fixed-rate debt represented 71% of the gross debt. Including all optional hedges as of December 31, 2012 up to the total amount of gross debt in each currency, the average debt hedging ratio (fixed rate + hedging options) was 74%.

The euro hedging fixed rate declined, optional hedges included; the total debt in euro increased (in order to finance the acquisitions in Europe) whereas the fixed-rate part remained stable. US subsidiaries are now financed directly in US dollars and no longer through a currency swap.

The US dollar hedging fixed rate remained stable, optional hedges included, following the issue of the US private placement of 700 million US dollars to replace an intra-group loan swapped from euro into US dollars and the repayment of the last series of the 2004 private placement totaling 100 million US dollars.

The Japanese yen hedging fixed rate was also stable following the August 2012 issue of the fixed-rate private placement of 13.5 billion Japanese yen (equivalent to almost 119 million euros), in replacement of a local floating rate debt.

25.4. BREAKDOWN OF NET FINANCE COSTS

	2011			2012		
(in millions of euros)	Average outstanding debt	Net interests	Net finance cost	Average outstanding debt	Net interests	Net finance cost
EUR	1,702.5	102.0	6.0%	1,661.4	103.9	6.3%
USD	1,352.7	54.0	4.0%	1,744.7	57.4	3.3%
JPY	1,186.9	21.7	1.8%	1,158.1	18.6	1.6%
CNY	551.8	37.3	6.8%	809.6	47.9	5.9%
Other currencies	607.2	45.9	7.6%	605.2	47.1	7.8%
Capitalized interest [a]		(25.4)			(26.8)	
TOTAL	**5,401.1**	**235.5**	**4.8%**	**5,979.0**	**248.1**	**4.6%**

(a) Excluded from cost of debt by currency.

Average net finance costs amounted to 4.6% in 2012, compared to 4.8% in 2011. This average cost decrease was due to the reduction in the financing cost of the main currencies: USD, CNY and JPY arising from the rate decline on the variable part of debt and the new fixed-rate issues whose rate was lower than those maturing on 2012.

Two financing arrangements exceeding 50 million euros include financial covenants:

- a confirmed long-term line of credit used by Air Liquide China in the amount of 1.1 billion renminbi (equivalent to 129.2 million euros) as of December 31, 2012. These financial covenants were complied with as of December 31, 2012;
- a long-term borrowing used by Air Liquide Arabia (Saudi Arabia) in the amount of 131.5 million dollars (equivalent to 99.7 million euros) as of December 31, 2012. These financial covenants were complied with as of December 31, 2012.

There was a decrease in bank financing arrangements with financial covenants, which accounted for approximately 11.5% of the Group's gross debt as of December 31, 2012.

All new bond issues carried out by L'Air Liquide S.A. and Air Liquide Finance S.A constituting the bonds as of December 31, 2012 include a change of control clause, except the 535 million euros bond carried out by L'Air Liquide S.A. maturing June 2014 and the 300 million euros bond carried out by Air Liquide Finance S.A. maturing June 2013.

25.5. PUT OPTIONS GRANTED TO MINORITY SHAREHOLDERS

(in millions of euros)	2011	2012
Put options granted to minority shareholders	122.9	124.3

25.6. OTHER INFORMATION

As indicated in note 15.3. Air Liquide's share in the debt of associates as of December 31, 2012 contracted in the normal course of business was 110.9 million euros compared to 59.2 million euros as of December 31, 2011.

Furthermore, non-recourse factoring of receivables represented 52.9 million euros as of December 31, 2012 compared to 72.0 million euros in 2011. These items do not represent risk or financial commitments for the Group.

In addition, as of December 31, 2012, a portion of borrowings was guaranteed by assets valued at 168.2 million euros (222.4 million euros as of December 31, 2011).

Note 26 – Other liabilities (non-current/current)

26.1. OTHER NON-CURRENT LIABILITIES

(in millions of euros)	2011	2012
Investment grants	85.3	77.5
Advances and deposits received from customers	90.0	83.6
Other non-current liabilities	15.1	34.5
TOTAL OTHER NON-CURRENT LIABILITIES	**190.4**	**195.6**

26.2. OTHER CURRENT LIABILITIES

(in millions of euros)	2011	2012
Advances received	263.5	298.8
Advances and deposits received from customers	97.2	90.0
Other payables	565.9	625.8
Accruals and deferred income	317.8	311.0
TOTAL OTHER CURRENT LIABILITIES	**1,244.4**	**1,325.6**

As mentioned in note 18, amounts payable to customers under engineering contracts in the amount of 190.9 million euros were included in other current liabilities as of December 31, 2012 (182.9 million euros in 2011).

Note 27 – Trade payables

(in millions of euros)	2011	2012
Operating suppliers	1,741,2	1,673.5
Property, plant and equipment and intangible assets suppliers	251,3	222.6
TOTAL TRADE PAYABLES	**1,992,5**	**1,896.1**

Note 28 – Financial instruments

28.1. CARRYING AMOUNT AND FAIR VALUE OF FINANCIAL ASSETS AND LIABILITIES

The financial assets or liabilities whose carrying amount is different from their fair value are fixed-rate borrowings that are not hedged. This difference is not material.

	2011		2012	
(in millions of euros)	Carrying amount	Fair value	Carrying amount	Fair value
FINANCIAL LIABILITIES				
Non-current borrowings	5,662.5	5,930.4	5,789.0	5,881.2

The Group's financial instruments are measured at fair value to the extent that available financial market data enables a relevant estimate of market value assuming the absence of any intentions or needs to liquidate.

Group policy consists in using financial derivatives only when hedging effective financial flows. As a result, most derivatives used benefit from hedge accounting. Derivatives that do not benefit from hedge accounting do not represent material amounts and are not speculative.

28.2. FINANCIAL POLICY AND RISK MANAGEMENT

a. Financial risk management

Risk management is a priority for the Group. Hence, the Finance and Operations Control Department redefined its governance with regard to financial decision-making at two levels:

Strategic Finance Committee, involving members of the Executive Management and of the Finance and Operations Control Department, whose purpose is to verify the effective application of the Group's financial policy, approve proposals and suggestions that have been submitted and review on a regular basis the rules governing the Group's financial policy. The Committee meets at least three times a year and upon request if necessary. It includes the Group Finance and Operations Control Director, the Corporate Finance and M&A Director and the Group Treasury and Financing Director, under the authority of the Chairman and Chief Executive Officer.

An Operating Finance Committee, internal to the Finance and Operations Control Department, whose purpose is to decide on the Group's day-to-day financial management, submit significant operations to the Strategic Finance Committee, and ensure their implementation once approved. The Committee meets every four to six weeks. It includes the Group Finance and Operations Control Director, the Corporate Finance and M&A Director and the Group Treasury and Financing Director, who are assisted by a Committee Secretary.

The Finance and Operations Control Department manages the main financial risks centrally, based on the decisions of the Strategic Finance Committee to which it reports on a regular basis. The Finance and Operations Control Department also analyzes country and customer risks and provides input on these risks at Investment Committee meetings.

The financial policy adopted by Air Liquide, the purpose of which is to minimize the risks incurred by the Group and its subsidiaries, enabled the Group to safeguard its financing in 2012. To minimize the refinancing risk relating to debt repayment schedules, the Group diversifies funding sources and spreads maturity dates over several years. In 2012, the issue of a US private placement comprising three series maturing in 10, 12 and 15 years, two private placements issued as part of the EMTN program in US dollars (maturity of seven years) and yen (maturity of four years), and the nine-year SRI bond issue of 500 million euros enabled the Group to extend its average maturity of debt from four to five years. At the 2012 year-end, the long-term debt ratio (gross debt maturing in more than one year / total gross debt) represented 74% of the total Group debt.

The interest rate and foreign currency hedging strategies validated by the Operating Finance Committee are set up according to market opportunities with a concern for optimization, while complying with the prudence and risk limitation principles.

The Group also maintains an enhanced and regular vigilance regarding its bank and customer counterparty risk, with a regular monitoring of ratings and level of risk of these counterparties.

Foreign exchange risk

Principles

Financial instruments are only used to hedge transaction-based foreign exchange risk. This risk includes financial cash flows arising from patent royalties, technical support, dividends, intra-group loans and borrowings in foreign currencies and foreign currency commercial cash flows from operating entities. These commercial cash flows in foreign currencies are not significant compared to consolidated revenue on an annual basis.

Foreign exchange risk on patent royalty, technical support, dividend flows and intra-group loans and borrowings in foreign currencies is hedged on an annual basis by the Central Treasury Department using currency forwards or options with a maximum term of 18 months.

Foreign currency commercial flows of operating units are hedged by the subsidiaries for regular flows in foreign currencies either as part of the annual budget process, or at the moment of signature of sales contracts or purchase contracts for non regular flows. Approximately forty subsidiaries are exposed to foreign exchange risk. These subsidiaries mainly hedge, using currency forwards. These operations are contracted with the internal counterparty Air Liquide Finance S.A., except for countries which cannot because of tax regulations. The majority of these contracts have short maturities (three to twelve months).

When preparing their budget at the year-end, the subsidiaries report their foreign exchange risk exposure to the Central Treasury Department in order to hedge the commercial cash flows forecasted for the following year.

In each case, the Central Treasury Department monitors the adequacy of the hedges with the identified risks and performs a full revaluation of all hedges, every six months.

Impact of foreign currency fluctuations on income statement and balance sheet items

The table below shows the impact of a 1% increase in the foreign exchange rate on the following items:

(in millions of euros)	Revenue	% Total Group	Operating income recurring	% Total Group	Net profit	% Total Group	Equity	% Total Group
USD	20.1	0.1%	4.6	0.2%	2.1	0.1%	16.4	0.2%
JPY	11.6	0.1%	1.5	0.1%	0.6	0.0%	3.6	0.0%

The foreign currency risk sensitivity analysis shows that a 1% increase in the US dollar and the Japanese yen as of December 31, 2012 would result in changes to operating income recurring, net profit and equity as indicated above.

A 1% decrease in the above currencies as of December 31, 2012 would have the same but opposite impacts as those presented above, assuming that all other variables remained constant.

Impact of foreign currency fluctuations on derivatives and on their underlying hedged items

The table below shows the impact of a 1% fluctuation in hedging currency exchange rates on the recognition as of December 31, 2012 of the portfolio of foreign exchange derivatives in the Group's net profit and equity. The sensitivity of net profit and equity primarily reflects the impact of the foreign exchange swaps relating to the intra-group financing activity of the subsidiary Air Liquide Finance, and Japanese yen forward currency hedges contracted at head office in order to hedge the royalties in this currency.

	Foreign exchange risk			
	+1%		-1%	
(in millions of euros)	P&L impact	Equity impact	P&L impact	Equity impact
Foreign exchange derivatives and their underlying hedged items	(0.1)	(0.3)	0.1	0.3

Interest rate risk

Principles

Air Liquide's interest rate risk management on its main currencies – euro, US dollar, and Japanese yen – is centralized. These currencies represent 77% of total net debt at the end of 2012. For other currencies, the Finance and Operations Control Department advises the subsidiaries on types of bank loans and/or hedging their foreign currency exposure in accordance with local financial market features.

Group policy is to maintain the majority portion of total debt at fixed rates and to protect the residual balance using optional hedges. This approach enables the Group to limit the impact of interest rate fluctuations on financial expenses.

Thus, at the 2012 year-end, 71% of the gross debt was maintained at a fixed rate and 3% was protected using optional hedges. The fixed-rate/floating-rate breakdown of the debt is reviewed regularly by the Strategic Finance Committee, taking into account changes in interest rates and the level of Group debt.

Impact of interest rate fluctuations on floating-rate debt

Group net indebtedness exposed to interest rate fluctuations amounted to around 688 million euros as of December 31, 2012 (gross debt adjusted for interest rate hedge short-term securities), compared with 704 million euros as of December 31, 2011.

The slight increase in the portion of debt exposed to interest rate fluctuations was mainly due to the non-renewal of fixed-rate US dollar and Japanese yen hedges, which matured in 2012.

An increase or decrease in interest rates by 100 basis points (±1%) on all yield curves would have an impact of approximately ±7 million euros on the Group's annual financial charges before tax, assuming outstanding debt remains constant.

All hedging instruments used to manage interest rate and foreign exchange risk relate to identified risks.

Impact of interest rate fluctuations on derivatives and on their underlying hedged items

The table below shows the impact of the recognition of a 0.5% fluctuation of interest rates in all foreign currencies on the portfolio of interest rate derivatives in the Group's net profit and equity, as of December 31, 2012.

	Interest rate risk			
	+0.5%		-0.5%	
(in millions of euros)	P&L impact	Equity impact	P&L impact	Equity impact
Interest rate derivatives and their underlying hedged items	0.7	16.8	(0.7)	(17.4)

All hedging instruments used to manage interest rate or foreign exchange risk relate to identified risks and were set up to comply with the Group's financial policy. The impact on equity primarily stems from the fixed-rate hedging instruments contracted by the Air Liquide Finance subsidiary.

Counterparty risk

Counterparty risks for Air Liquide potentially include customers and bank counterparties.

The Group's subsidiaries serve a very significant number of customers (around 1 million worldwide) present in extremely varied markets: chemicals, steel, refining, food, pharmaceuticals, metals, automotive, manufacturing, healthcare, research laboratories, photovoltaic, etc. The Group's leading customer represents around 2% of revenue, the Group's 10 leading customers represent approximately 13% of sales, and the Group's 50 leading customers represent about 29% of sales. The geographical risk is limited by the Group's permanent coverage in 80 countries on all continents. This diversity reduces customer and market risk.

To better assess its exposure, the Group has adopted procedures to regularly monitor the financial situation of its major customers and has set up monthly reporting for its 120 leading customers in order to monitor the related consolidated risk.

Moreover, customer risk assessment, especially customer site quality, is an important component of the investment decision process.

Bank counterparty risk relates to the outstanding amounts of financial instruments (deposits and derivatives) and to the lines of credit contracted with each bank. Based on its financial policy, the Group requires a long-term Standard & Poor's "A" rating or a Moody's "A2" rating from its counterparties. The Group's lines of credit are also spread among several banks to avoid risk of concentration. The Operating Finance Committee regularly checks and approves the list of financial instruments and bank counterparties related to the placements. The outstanding investments are subject to strict limits per counterparty.

Liquidity risk

It is Group financial policy to spread over time the maturity of long-term debt in order to avoid concentration of annual refinancing needs. This liquidity risk is also reduced by the steady cash flow generation from operations as well as the setting-up of committed credit lines. The financial covenants governing the financing arrangements described in note 25.4 do not have an impact on the Group's access to liquidity.

Outstanding commercial paper amounted to 420.1 million euros as of December 31, 2012, a decrease of 14.8 million euros compared to the end of 2011. Group policy requires that commercial paper programs be backed by confirmed long-term credit lines. In 2012, this requirement was largely met throughout the year: the amount of confirmed credit lines has always exceeded outstanding commercial paper.

When the Group makes short-term financial investments other than bank deposits, it systematically favors monetary instruments, mainly short-term, in order to limit the risk of non-liquidity or high volatility.

2012 *(in millions of euros)*	Book value as of 12/31/2012	Cash flow < 1 year		Cash flow ≥ 1 year and ≤ 5 years		Cash Flow > 5 year	
		Interest	Capital refund	Interest	Capital refund	Interest	Capital refund
Derivative instruments							
Assets							
Fair value of derivatives (assets)	87.0	49.7	63.6	97.6	340.0	36.0	348.0
Liabilities							
Fair value of derivatives (liabilities)	(98.0)	(46.6)	(44.7)	(125.3)	(385.6)	(44.9)	(333.0)
SUB-TOTAL DERIVATIVE INSTRUMENTS		**3.1**	**18.9**	**(27.7)**	**(45.6)**	**(8.9)**	**15.0**
Assets							
Loans and other non-current receivables	337.6				337.6		
Trade receivables	2,826.5		2,712.1		114.4		
Cash and cash equivalents	1,154.2	0.7	1,153.6				
SUB-TOTAL ASSETS		**0.7**	**3,865.7**		**452.0**		
Liabilities							
Non current borrowings	(5,789.0)	(182.5)		(583.2)	(2,598.7) [a]	(366.6)	(3,074.1)
Other non-current liabilities	(195.6)				(195.6)		
Trade and other payables	(1,896.1)		(1,892.9)		(3.2)		
Current borrowings	(1,484.7)	(58.6)	(1,460.2)				
SUB-TOTAL LIABILITIES		**(241.1)**	**(3,353.1)**	**(583.2)**	**(2,797.5)**	**(366.6)**	**(3,074.1)**

(a) Non-current borrowings included outstanding commercial paper. The maturity date for outstanding commercial paper is the same as that of confirmed lines of credit. See note 25.1.

2011 *(in millions of euros)*	Book value as of 12/31/2011	Cash flow < 1 year		Cash flow ≥ 1 year and ≤ 5 years		Cash Flow > 5 year	
		Interest	Capital refund	Interest	Capital refund	Interest	Capital refund
Derivative instruments							
Assets							
Fair value of derivatives (assets)	108.8	88.4	560.8	108.7	24.4	43.3	420.3
Liabilities							
Fair value of derivatives (liabilities)	(209.6)	(89.8)	(600.0)	(119.1)	(23.5)	(52.0)	(420.3)
SUB-TOTAL DERIVATIVE INSTRUMENTS		**(1.4)**	**(39.2)**	**(10.4)**	**0.9**	**(8.7)**	
Assets							
Loans and other non-current receivables	318.4				318.4		
Trade receivables	2,779.3		2,682.6		96.7		
Cash and cash equivalents	1,761.1	0.8	1,760.7				
SUB-TOTAL ASSETS		**0.8**	**4,443.3**		**415.1**		
Liabilities							
Non current borrowings	(5,662.5)	(173.5)		(562.3)	(3,049.3) [a]	(266.6)	(2,463.9)
Other non-current liabilities	(190.4)				(190.4)		
Trade and other payables	(1,992.5)		(1,983.3)		(9.2)		
Current borrowings	(1,373.5)	(69.3)	(1,359.6)				
SUB-TOTAL LIABILITIES		**(242.8)**	**(3,342.9)**	**(562.3)**	**(3,248.9)**	**(266.6)**	**(2,463.9)**

(a) Non-current borrowings included outstanding commercial paper. The maturity date for outstanding commercial paper is the same as that of confirmed lines of credit. See note 25.1.

The tables above show the future cash flows related to the main balance sheet items and financial derivatives at the two previous year-ends. The interest flows are calculated in accordance with IFRS7 and represent the interest payable for each period concerned. The interest flows relating to floating interest rate or foreign currency instruments were calculated using the closing interest and exchange rates as of December 31, 2012 and 2011. The flows relating to debt repayment obligations differ from the amounts recognized in the Group's balance sheet due to the accounting treatment applied to borrowings and without taking into account hedging instruments.

Outstanding cash and cash equivalents decreased at the end of 2012. The variation between outstanding non-current borrowings and outstanding current borrowings primarily reflects the switch of category for a portion of the debt to less than one year (mainly the EMTN bond issues of 300 million euros maturing in March and June 2013). Outstanding borrowings exceeding 5 years increased mainly due to US private placement of 700 million US dollars (equivalent to 531 million euros, maturity 10, 12 and 15 years), private placement of 200 million US dollars (equivalent to 152 million euros, maturity 7 years) and the EMTN SRI bond of 500 million euros maturing in 2021.

2012 *(in millions of euros)*	Cash flow < 1 year			
	< 3 months		≥ 3 months and < 1 year	
	Interest	Capital refund	Interest	Capital refund
Derivative instruments				
Assets				
Fair value of derivatives (assets)	0.7	23.1	49.0	40.5
Liabilities				
Fair value of derivatives (liabilities)	(8.6)	(6.7)	(38.0)	(38.0)
SUB-TOTAL DERIVATIVE INSTRUMENTS	**(7.9)**	**16.4**	**11.0**	**2.5**
Liabilities				
Non-current borrowings	(26.3)		(156.2)	
Trade payables		(1,728.7)		(164.2)
Current borrowings	(22.1)	(579.7)	(36.5)	(880.5)
SUB-TOTAL LIABILITIES	**(48.4)**	**(2,308.4)**	**(192.7)**	**(1,044.7)**

2011 *(in millions of euros)*	Cash flow < 1 year			
	< 3 months		≥ 3 months and < 1 year	
	Interest	Capital refund	Interest	Capital refund
Derivative instruments				
Assets				
Fair value of derivatives (assets)	9.8	73.8	78.6	487.0
Liabilities				
Fair value of derivatives (liabilities)	(20.5)	(98.5)	(69.3)	(501.5)
SUB-TOTAL DERIVATIVE INSTRUMENTS	**(10.7)**	**(24.7)**	**9.3**	**(14.5)**
Liabilities				
Non-current borrowings	(30.1)		(143.4)	
Trade payables		(1,759.8)		(223.5)
Current borrowings	(9.6)	(332.2)	(59.7)	(1,027.4)
SUB-TOTAL LIABILITIES	**(39.7)**	**(2,092.0)**	**(203.1)**	**(1,250.9)**

The tables above show the future cash flows maturing in less than one year relating to the main balance sheet items and derivative instruments. The interest and repayment flows relating to current borrowings maturing in less than three months correspond to bank overdrafts and a portion of the short-term borrowings recorded at the 2012 year-end. The interest and repayment flows relating to current borrowings maturing in more than three months and less than one year include short-term debt and the portion of the Group's long-term debt that matures in less than one year.

Hierarchy of financial instruments fair value

(in millions of euros)	2011	2012
Level 1	**8.6**	**7.9**
Available-for-sale financial assets (listed shares)	8.6	7.9
Level 2	**(100.8)**	**(11.0)**
Derivatives	(100.8)	(11.0)
Level 3	**122.9**	**124.3**
Put options granted to minority shareholders	122.9	124.3

Commodity risk (energy contracts)

Most of Air Liquide's energy supplies are obtained through forward purchase contracts at a fixed or indexed price.

IAS39 provides for the inclusion within its scope of forward purchases and sales of non-financial assets, once these transactions are deemed similar to derivative instruments.

However, IAS39 considers that forward contracts for non-financial assets should not be considered as derivatives when they have been entered into to meet the Company's "normal" business requirements, resulting in the delivery upon maturity of the underlying for use in the Company's industrial process. As Air Liquide does not purchase electricity or natural gas for the purposes of speculation or arbitrage on commodity price trends, no forward contracts relating to energy meet the definition of a derivative instrument. These contracts were entered into as part of the Company's normal business for use in the industrial process.

Furthermore, in a global context of highly volatile electricity and natural gas market prices, Air Liquide continues to index long-term customer contracts to hedge these risks. For natural gas and electricity prices, the opening of some markets led the Group, under these circumstances, to replace the price indices used during the regulated period by indices relevant to each local market.

There nonetheless remain certain isolated contracts, for which price indexation alone cannot guarantee a total and effective hedge of energy price fluctuation risks. These risks are, therefore, hedged by Air Liquide using appropriate commodity derivatives, mainly swaps.

The fair value recognition of these derivative instruments had no material impact on Group equity or profits as of December 31, 2012.

b. Information on derivative instruments

Impact of the fair value recognition of derivative instruments on the balance sheet:

2012 *(in millions of euros)*	IFRS classi-fication	Assets					Equity and liabilities							
				Fair value of derivatives								Fair value of derivatives		
		Deferred tax assets	Trade recei-vables	Assets – non current	Assets – current	Total	Net income recognized in equity	Profit for the period	Deferred tax liabilities	Borro-wings	Trade payables	Liabi-lities – non current	Liabi-lities current	Total
Foreign exchange risk														
Currency forwards hedging future cash flows	CFH [a]	3.1			10.7	13.8	2.2	(1.7)	3.3				10.0	13.8
Currency forwards hedging transactions recorded in the accounts and Cross Currency Swaps	FVH [b]	8.7	0.5	40.6	0.7	50.5		(0.8)	8.4	35.6	1.6	4.9	0.8	50.5
Other derivatives	[c]	3.0			8.7	11.7		0.1	3.0	8.6 [e]				11.7
Currency embedded derivatives and Cross Currency Swaps	NIH [d]	19.6		6.3	1.3	27.2	(31.5)		1.7			57.0		27.2
Interest rate risk														
Interest rate swaps	FVH [b]			5.2	11.8	17.0		0.5	0.2	16.3				17.0
Swaps, options and Cross Currency Swaps	CFH [a] and NIH [d]	8.7		1.7		10.4	(14.8)		0.7			23.2	1.3	10.4
Other derivatives	[c]	0.1				0.1		(0.2)					0.3	0.1
Commodity risk (Energy)														
Forwards hedging future cash flows	CFH [a]	0.2				0.2	(0.3)						0.5	0.2
TOTAL		**43.4**	**0.5**	**53.8**	**33.2**	**130.9**	**(44.4)**	**(2.1)**	**17.3**	**60.5**	**1.6**	**85.1**	**12.9**	**130.9**

(a) CFH: Cash Flow Hedge.
(b) FVH: Fair Value Hedge.
(c) Derivative instruments not benefiting from hedge accounting.
(d) NIH: Net Investment Hedge.
(e) Financial instrument not recognized as a hedging instrument under IAS39.

		Assets					Equity and liabilities							
				Fair value of derivatives								Fair value of derivatives		
2011 *(in millions of euros)*	IFRS classi-fication	Deferred tax assets	Trade recei-vables	Assets – non current	Assets – current	Total	Net income recognized in equity	Profit for the period	Deferred tax liabilities	Borro-wings	Trade payables	Liabi-lities – non current	Liabi-lities current	Total
Foreign exchange risk														
Currency forwards hedging future cash flows	CFH [a]	6.6			16.6	23.2	(4.4)	(0.3)	4.6				23.3	23.2
Currency forwards hedging transactions recorded in the accounts and Cross Currency Swaps	FVH [b]	10.7	5.3	14.7	12.1	42.8		0.1	10.8	(9.5)	0.2	2.5	38.7	42.8
Other derivatives	[c]	4.1			12.0	16.1		0.1	4.1	11.1 [e]			0.8	16.1
Currency embedded derivatives and Cross Currency Swaps	NIH [d]	28.2		22.2	2.0	52.4	(32.2)		2.4			80.6	1.6	52.4
Interest rate risk														
Interest rate swaps and Cross Currency Swaps	FVH [b]			26.4	0.4	26.8		1.8	0.9	24.1				26.8
Swaps and options	NIH [d]	2.7				2.7	(5.1)					7.8		2.7
Swaps and options	CFH [a]	16.4		0.3		16.7	(30.1)	(1.0)	0.1			35.2	12.5	16.7
Other derivatives	[c]	0.7			2.1	2.8		0.2	0.7				1.9	2.8
Commodity risk (Energy)														
Forwards hedging future cash flows	CFH [a]	1.6				1.6	(3.1)						4.7	1.6
TOTAL		**71.0**	**5.3**	**63.6**	**45.2**	**185.1**	**(74.9)**	**0.9**	**23.6**	**25.7**	**0.2**	**126.1**	**83.5**	**185.1**

(a) CFH: Cash Flow Hedge.
(b) FVH: Fair Value Hedge.
(c) Derivative instruments not benefiting from hedge accounting.
(d) NIH: Net Investment Hedge.
(e) Financial instrument not recognized as a hedging instrument under IAS39.

The Group records the accounting impacts arising from derivative hedging of highly probable future cash flows as CFH (Cash Flow Hedge). The accounting impacts recorded as FVH (Fair Value Hedge) correspond to the derivative hedging of items that have already been recognized.

The impacts recognized as NIH (Net Investment Hedge) correspond to foreign exchange transactions performed by the Group in connection with its dividend hedging policy and the hedges of net investments in a foreign entity.

Interest-rate repricing schedule for fixed-rate debt and interest-rate risk hedging instruments

2012 *(in millions of euros)*	Currency of issue	Carrying amount	Nominal amount outstanding	Interest rates repricing dates < 1 year	≥1 and ≤ 5 years	> 5 years
Original issue – left at fixed rate	EUR	2,165.2	2,165.2	301.0	829.2	1,035.0
Interest rate swaps hedges	EUR		164.9	50.0	114.9	
Caps hedges	EUR		175.0	50.0	125.0	
Original issue – left at fixed rate	USD	927.0	927.0			927.0
Interest rate swaps hedges	USD		49.5	4.2	15.6	29.7
Caps hedges	USD					
Original issue – left at fixed rate	JPY	603.9	603.9		335.4	268.5
Interest rate swaps hedges	JPY		264.0	132.0	132.0	

2011 *(in millions of euros)*	Currency of issue	Carrying amount	Nominal amount outstanding	Interest rates repricing dates < 1 year	≥1 and ≤ 5 years	> 5 years
Original issue – left at fixed rate	EUR	1,942.5	1,942.5	54.8	870.2	1,017.5
Interest rate swaps hedges	EUR		292.4	122.5	169.9	
Caps hedges	EUR		225.0	50.0	175.0	
Original issue – left at fixed rate	USD	350.4	350.4	95.3	21.9	233.2
Interest rate swaps hedges	USD		476.0	430.0	28.3	17.7
Caps hedges	USD		154.6	154.6		
Original issue – left at fixed rate	JPY	527.9	527.9		104.5	423.4
Interest rate swaps hedges	JPY		499.1	199.6	299.5	

Note 29 – Related party information

29.1. TRANSACTIONS WITH COMPANIES INCLUDED IN THE SCOPE OF CONSOLIDATION

The consolidated financial statements include the financial statements of L'Air Liquide S.A. and all the subsidiaries listed on pages 247 to 249. L'Air Liquide S.A. is the Group's parent.

Due to the activities and legal organization of the Group, only transactions with executives, associates and proportionately consolidated companies are considered to be related party transactions. Transactions performed between these natural persons or these companies and Group subsidiaries are not material.

Information on associates is disclosed in note 15 to the consolidated financial statements.

Contribution to the consolidated balance sheet and income statement of proportionately consolidated companies (100%)

(in millions of euros)	2011	2012
Non-current assets	323	400
Current assets	92	237
TOTAL ASSETS	**415**	**637**
Equity	274	341
Non-current liabilities	85	120
Current liabilities	56	176
TOTAL EQUITY AND LIABILITIES	**415**	**637**
Revenues	288	459
Operating expenses	(210)	(365)
Net finance costs	(4)	(4)
Profit before tax	74	90
Income taxes	(15)	(21)
PROFIT FOR THE PERIOD	**59**	**69**

29.2. REMUNERATIONS ALLOCATED TO MEMBERS OF THE BOARD OF DIRECTORS AND MANAGEMENT BODIES

The remuneration of Group executives includes the remuneration allocated to the Board of Directors and the Company's management bodies as compensation for their duties within the entire Group as employees and corporate officers for the respective fiscal years. The Company's management bodies include all the members of Executive Management and the Executive Committee. The expenses recognized in this respect are as follows:

(in thousands of euros)	2011	2012
Short-term benefits	13,653	12,373
Post-employment benefits: pension and health coverage	1,874	2,015
Termination benefits	129	
Share-based payments	3,830	4,238
TOTAL	**19,486**	**18,626**

Short-term benefits

Short-term benefits include fixed remuneration, variable remuneration, benefits in-kind and Directors' fees. The entire variable portion of remuneration due for any given year is paid the following year after the financial statements are approved.

The remuneration policy for members of the executive team takes into account market practices. It includes a substantial variable portion based on earnings and individual performance objectives.

Post-employment benefits

Post-employment benefits include the contributions paid to external pension funds for members of Executive Management and the Executive Committee. Retirement commitments for executives and former executives of the Board of Directors totaled 44,457 thousand euros in 2012 and 31,666 thousand euros in 2011.

Share-Based payments

The stock options held by members of Executive Management and the Executive Committee have the following expiry dates and strike prices:

Year	Expiry date	Strike price *(in euros)*	Number 2011	Number 2012
2005	03/20/13	48.39	73,439	35,257
2006	03/19/14	58.92	187,170	140,346
2007 (May 09)	05/08/15	70.61	239,746	225,496
2008 (July 09)	07/08/16	71.31	254,751	228,545
2009 (June 15)	06/14/17	55.18	300,387	286,255
2010	06/27/18	75.28	343,996	330,771
2011 (October 14)	10/13/21	78.90	341,826	341,791
2012 (May 11)	05/10/22	87.97		6,616
2012 (September 27)	09/26/22	96.61		321,000

The fair value of options granted in May 2012 and determined according to IFRS2 amounted to:

- 17.53 euros per option for options not subject to performance conditions, and for options subject to performance conditions linked to the Group's results (18.59 euros per option in October 2011);
- 14.32 euros per option for options subject to performance conditions linked to the share price trend (12.88 euros per option in October 2011).

The fair value of options granted in September 2012 and determined according to IFRS2 amounted to:

- 19.56 euros per option for options not subject to performance conditions, and for options subject to performance conditions linked to the Group's results (18.59 euros per option in October 2011);
- 17.58 euros per option for options subject to performance conditions linked to the share price trend (12.88 euros per option in October 2011).

These amounts are expensed over the option's vesting period. The amounts that will be recognized in future periods in respect of the granted options totaled 11,823 thousand euros as of December 31, 2012 (9,949 thousand euros as of December 31, 2011).

The 2012 plan options granted to corporate officers and Executive Committee members cannot be exercised unless the Company meets certain performance conditions.

No options were granted to other non-executive directors under these plans.

Note 30 – Commitments

Commitments are given in the normal course of the Group's business.

(in millions of euros)	2011	2012
Firm purchase orders for fixed assets	924.9	977.6
Lease commitments which cannot be terminated	481.6	532.9
Other commitments related to operating activities	303.8	356.6
Commitments relating to operating activities	**1,710.3**	**1,867.1**
Commitments relating to financing operations and consolidation scope	**71.4**	**122.8**
TOTAL	**1,781.7**	**1,989.9**

Air Liquide owned a 13% share of Exeltium S.A.S. for 23.8 million euros.

Exeltium and EDF entered into an industrial partnership agreement under which Exeltium can acquire rights to a portion of EDF's electronuclear production. In consideration, Exeltium and its shareholder clients signed long-term electricity supply contracts. The contract signed by Air Liquide has a 20-year term and can be suspended after 10 years. This contract provides a long-term view over the price of the electricity to be supplied. This project received the European Commission's approval.

The Group's energy purchase commitments amounted to 2,192 million euros as of December 31, 2012 (2,137 million euros as of December 31, 2011). These amounts comprise the energy purchase commitments relating to the Exeltium contract.

Almost all of these commitments are covered by mutual commitments received from clients in connection with long-term gas supply contracts.

Confirmed credit lines and the amount of asset-backed loans are shown in note 25.

Operating leases

Assets used in industrial activities are leased under an operating lease when the acquisition of such assets does not present any economic benefits. The primary assets included are utility vehicles and transport equipment.

The Group has neither contingent rental commitments, nor sub-lease contracts.

Future minimum lease payments payable as of December 31, 2012 under operating leases which cannot be terminated are as follows:

(in millions of euros)	2011	2012
Due within 1 year	139	151
Due in 1 to 5 years	249	249
Due after 5 years	94	133
TOTAL	**482**	**533**

Note 31 – Contingent liabilities

To the best of the Group's knowledge, there is no exceptional event or litigation that has impacted in the recent past, or is likely to substantially impact, its financial situation or profitability.

In September 2010, the Brazilian competition authority (CADE) fined the major industrial gas companies operating in Brazil, including Air Liquide Brazil, for unfair trade practices prior to 2004. Air Liquide Brazil was fined 197.6 million Brazilian reals before interest on arrears amounting to 44.4 millions of Brazilian reals as of December 31, 2012 (equivalent to 73 million euros regarding the fine and 16 million euros retarding the interests on arrears at the rate prevailing as of December 31, 2012).

Air Liquide Brazil is vigorously contesting this decision, and consequently has filed an application to annul the fine before the Brasilia Federal Court. At this stage, the Group considers that Air Liquide Brazil's position will probably legally prevail and consequently no provision has been recognized.

Note 32 – Greenhouse gas emission rights

As with the Kyoto Protocol, the European directive establishing a quota system for greenhouse gas emissions in the European Union is intended to reduce the emissions of these gases. Implementation for CO_2 in the industrial sector began on January 1, 2005. In 2004, each country incorporated the directive into its legislation and set quotas for the facilities concerned. The annual quotas allocated to Air Liquide (approximately 1.2 million tons of CO_2 per year for the period from 2005 to 2007) had covered the emissions of 2007.

For the second period (2008 to 2012) of this directive, the allowances allocated to Air Liquide (around 3.3 million tons of CO_2 per year) covered the emissions of 2009, 2010, 2011 and 2012.

No asset or liability was recognized as of December 31, 2012.

Note 33 – Post-balance sheet events

There were no significant post-balance sheet events.

Main consolidated companies and foreign exchange rates

L'Air Liquide S.A. owns directly or indirectly financial investments in its subsidiaries and mainly receives from its subsidiaries dividends, technology royalties and service fees. L'Air Liquide S.A assumes treasury centralization for some French subsidiaries.

(in millions of euros)	Impact on 2012 revenue
Total scope impact	51.9
A) Acquisitions and disposals	
Change in scope impacts in 2012	
Acquisitions :	
■ LVL Médical Groupe S.A. acquired by Air Liquide Santé International S.A. (France)	37.3
■ Grupo Gasmedi S.L. acquired by Air Liquide Ibérica de Gases S.A. (Spain)	26.1
■ Energas Ltd & Engineering and Welding Supplies Ltd acquired by Air Liquide UK Ltd (United Kingdom)	22.6
■ Others	27.1
Disposals :	
■ Esqal S.A. (New Caledonia) by Air Liquide International S.A. (France)	(3.6)
■ Gaz de Polynésie S.A. (French Polynesia) by Air Liquide International S.A. (France)	(2.1)
■ Others	(6.6)
Change in scope impacts in 2011	
Acquisitions :	
■ Others	23.5
Disposals :	
■ Givaudan-Lavirotte S.A. (France) and Seppic Belgium S.A. (Belgium) by Société d'Exploitation de Produits pour les Industries Chimiques S.A. (France)	(53.1)
■ Lamers High Tech Systems B.V (Netherlands) by Air Liquide B.V (Netherlands) and Air Liquide Electronics System S.A. (France)	(38.0)
■ A-TEC Co., Ltd K.K. (Japan) by Air Liquide Japon Ltd (Japan)	(12.2)
■ Others	(1.3)
B) Changes in consolidation method	
Gas & Services	
■ Société Burkinabe des Gaz Industriels S.A. (Burkina Faso): from equity method to full consolidation	3.9
■ Others	0.2
Engineering & Construction	
■ JJ-Lurgi Engineering Sdn Bhd: from equity method to proportionate method	29.3
■ Others	(1.2)
C) Companies created and newly consolidated in the scope without scope impact on revenue	
Gas & Services	
■ Air Liquide Angola LDA (Angola)	
D) Mergers, acquisitions and disposals without scope impact on revenue	
Gas & Services	
■ Merger of Lavera Utilités SNC (France) in Lavera Energies SNC (France)	

CURRENCY RATES

Primary currency rates used

Average rates

Euros for 1 currency	2011	2012
USD	0.72	0.78
CAD	0.73	0.78
Yen (1,000)	9.03	9.76

Closing rates

Euros for 1 currency	2011	2012
USD	0.77	0.76
CAD	0.76	0.76
Yen (1,000)	9.98	8.80

Main consolidated companies

Companies marked with P are consolidated by proportionate method and those marked with E by the equity method. Other companies are fully consolidated.

The total Group interest is given after the name of each company.

Main consolidated companies	Country	Integ-ration	% interest
GAS AND SERVICES			
EUROPE			
Air Liquide Austria GmbH	AUT		100.00%
Air Liquide Belge S.A.	BEL		99.95%
Air Liquide Industries Belgium S.A.	BEL		100.00%
Air Liquide Large Industry S.A.	BEL		100.00%
Air Liquide Medical S.A.	BEL		99.95%
Air Liquide Bulgaria EOOD	BGR		100.00%
Carbagas S.A.	CHE		100.00%
Unident S.A.	CHE		66.00%
Air Liquide CZ, s.r.o.	CZE		100.00%
Air Liquide Deutschland GmbH	DEU		100.00%
Air Liquide Electronics GmbH	DEU		100.00%
Air Liquide Industriegase GmbH & Co. KG	DEU		100.00%
EVC Dresden-Wilschdorf GmbH & Co. KG	DEU		40.00%
Fabig-Peters Medizintechnik GmbH & Co. KG	DEU		100.00%
Schülke & Mayr GmbH	DEU		100.00%
VitalAire GmbH	DEU		100.00%
Zweite EVC Dresden-Wilschdorf GmbH & Co. KG	DEU		50.00%
Air Liquide Danemark A.S.	DNK		100.00%
Air Liquide España S.A.	ESP		99.89%
Air Liquide Ibérica de Gases S.L.	ESP		100.00%
AL Air Liquide Medicinal S.L.	ESP		99.89%
Grupo Gasmedi S.L.	ESP		100.00%
Oy Polargas A.B.	FIN		100.00%
Air Liquide Eastern Europe S.A.	FRA		100.00%
Air Liquide Electronics Materials S.A.	FRA		100.00%
Air Liquide Electronics Systems S.A.	FRA		100.00%
Air Liquide Eurotonnage S.A.	FRA		100.00%
Air Liquide France Industrie S.A	FRA		99.99%
Air Liquide Medical Systems S.A.	FRA		100.00%
Air Liquide Russie S.A.	FRA		100.00%
Air Liquide Santé (International)	FRA		100.00%
Air Liquide Santé France S.A.	FRA		100.00%
Air Liquide Ukraine S.A.	FRA		100.00%
Cogenal SNC	FRA		99.99%
Hélium Services S.A.	FRA		100.00%
Laboratoires Anios S.A.	FRA		66.00%

Main consolidated companies	Country	Integ-ration	% interest
Lavéra Energies SNC	FRA	P	50.00%
LVL Médical Groupe S.A.	FRA		100.00%
Pharmadom (Orkyn') S.A.	FRA		100.00%
Société d'Exploitation de Produits pour les Industries Chimiques S.A.	FRA		99.98%
VitalAire S.A.	FRA		100.00%
Air Liquide Ltd	GBR		100.00%
Air Liquide South East Ltd	GBR		100.00%
Air Liquide UK Ltd	GBR		100.00%
Energas Ltd	GBR		100.00%
Engineering & Welding Supplies Ltd	GBR		100.00%
Air Liquide Hellas S.A.G.I.	GRC		99.78%
Air Liquide Ipari Gaztermelo Kft	HUN		100.00%
Air Liquide Italia S.p.A.	ITA		99.77%
Air Liquide Italia Service S.r.l	ITA		99.77%
Air Liquide Sanità Service S.p.A.	ITA		99.77%
Air Liquide Produzione S.r.l	ITA		100.00%
VitalAire Italia S.p.A.	ITA		99.77%
Air Liquide Luxembourg S.A.	LUX		99.97%
Air Liquide Acetylene B.V.	NLD		100.00%
Air Liquide B.V.	NLD		100.00%
Air Liquide Industrie B.V.	NLD		100.00%
Air Liquide Nederland B.V.	NLD		100.00%
Scott Specialty Gases Netherlands B.V.	NLD		100.00%
Air Liquide Norway A.S.	NOR		100.00%
Air Liquide Katowice Sp	POL		79.25%
Air Liquide Polska Sp	POL		100.00%
Air Liquide Medicinal S.A.	PRT		99.85%
Sociedade Portuguesa do Ar Liquido Lda	PRT		99.93%
Air Liquide Romania S.r.l	ROM		100.00%
Air Liquide OOO	RUS		100.00%
Sever Liquide Gas OOO	RUS		100.00%
Air Liquide Slovakia, s.r.o.	SVK		100.00%
Air Liquide Gas A.B.	SWE		100.00%
Air Liquide Gaz Sanayi Ve Ticaret A.S.	TUR		100.00%
AMERICAS			
Air Liquide Argentina S.A.	ARG		100.00%
Air Liquide Brasil Ltda	BRA		100.00%

Main consolidated companies	Country	Integ-ration	% interest
Arliquido Comercial Ltda	BRA		100.00%
Air Liquide Canada, Inc.	CAN		100.00%
Vitalaire Canada, Inc.	CAN		100.00%
Air Liquide Chile S.A.	CHL		100.00%
Air Liquide Dominicana S.A.	DOM		100.00%
Société des Gaz Industriels de la Guadeloupe S.A.	GLP		95.88%
Air Liquide Spatial S.A.	GUY		98.80%
Société Guyanaise de L'Air Liquide S.A.	GUY		97.04%
Air Liquide Mexico, S. de RL de CV	MEX		100.00%
Société Martiniquaise de L'Air Liquide S.A.	MTQ		95.87%
Cryogas de Centroamérica, S.A.	PAN		100.00%
La Oxigena Paraguaya S.A.	PRY		87.89%
Air Liquide Trinidad and Tobago Ltd	TTO		100.00%
Neal & Massy Gas Products Ltd	TTO	E	42.71%
Air Liquide Uruguay S.A.	URY		93.70%
Air Liquide America Specialty Gases LLC	USA		100.00%
Air Liquide Electronics U.S. LP	USA		100.00%
Air Liquide Healthcare America Corporation	USA		100.00%
Air Liquide Industrial U.S. LP	USA		100.00%
Air Liquide Large Industries U.S. LP	USA		100.00%
MIDDLE-EAST AND AFRICA			
Air Liquide Angola LDA	AGO	E	73.99%
Air Liquide Middle East & North Africa FZCO	ARE		100.00%
Pure Helium Gulf FZE	ARE		100.00%
Air Liquide Bénin S.A. (1)	BEN	E	99.99%
Air Liquide Burkina Faso S.A. (2)	BFA		64.88%
Air Liquide Botswana Proprietary Ltd	BWA		99.91%
Air Liquide Côte d'Ivoire S.A. (3)	CIV		72.08%
Air Liquide Cameroun S.A. (4)	CMR	E	100.00%
Air Liquide Congo S.A. (5)	COG		100.00%
Société d'Installations et de Diffusion de Matériel Technique S.P.A.	DZA	E	100.00%
Air Liquide Alexandria for Medical & Industrial Gases S.A.E.	EGY		100.00%
Air Liquide El Soukhna for Industrial Gases S.A.E.	EGY		100.00%
Air Liquide Misr S.A.E.	EGY		100.00%
Air Liquide Middle East S.A.	FRA		100.00%
Air Liquide Gabon S.A. (6)	GAB		87.14%
L'Air Liquide Ghana Ltd	GHA		100.00%
Shuaiba Oxygen Company K.S.C.C.	KWT		49.62%
Société d'Oxygène et d'Acétylène du Liban S.A.L.	LBN	E	49.93%
Air Liquide Maroc S.A.	MAR		74.80%
Air Liquide Madagascar S.A. (7)	MDG	E	73.73%
Air Liquide Mali S.A. (8)	MLI		99.97%

Main consolidated companies	Country	Integ-ration	% interest
Air Liquide Namibia Proprietary Ltd	NAM		100.00%
Air Liquide Nigeria plc	NGA	E	61.11%
Air Liquide Sohar Industrial Gases LLC	OMN		50.11%
Gasal Q.S.C.	QAT	E	40.00%
Air Liquide Al-Khafrah Industrial Gases LLC	SAU		75.00%
Air Liquide Arabia LLC	SAU		65.00%
Air Liquide Sénégal S.A. (9)	SEN	E	80.18%
Air Liquide Syria LLC	SYR		100.00%
Air Liquide Togo S.A. (10)	TGO	E	70.58%
Air Liquide Tunisie A.S.	TUN		59.17%
Air Liquide Proprietary Ltd	ZAF		99.91%
Fedgas Proprietary Ltd	ZAF		99.91%
ASIA-PACIFIC			
Air Liquide Australia Ltd	AUS		100.00%
Air Liquide Healthcare P/L	AUS		100.00%
Air Liquide W.A. Pty Ltd	AUS		60.00%
Brunei Oxygen Ltd	BRN	E	50.00%
Air Liquide Cangzhou Co., Ltd	CHN		100.00%
Air Liquide China Holding Co., Ltd	CHN		100.00%
Air Liquide Shanghai Co., Ltd	CHN		100.00%
Air Liquide Tianjin Co., Ltd	CHN		100.00%
Air Liquide Tianjin Yongli Co., Ltd	CHN		55.00%
Air Liquide Zhangjiagang Industry Gas Co., Ltd	CHN		100.00%
Shanghai Chemical Industry Park Industrial Gases Co., Ltd	CHN	P	50.00%
Société d'Oxygène et d'Acétylène d'Extrême-Orient S.A.	FRA		100.00%
Celki International Ltd	HKG		100.00%
P.T. Air Liquide Indonesia	IDN		100.00%
Air Liquide India Holding Pvt. Ltd.	IND		100.00%
Pure Helium India Pvt. Ltd.	IND		97.50%
Air Liquide Pacific Co. Ltd	JPN		100.00%
Air Liquide Japan Ltd	JPN		100.00%
Toshiba Nano Analysis K.K.	JPN		51.00%
Vital Air Japan K.K.	JPN		100.00%
Air Liquide Korea	KOR		100.00%
Daesung Industrial Gases Co., Ltd	KOR	E	40.00%
VitalAire Korea Co., Ltd (11)	KOR		100.00%
Air Liquide Malaysia Sdn Bhd	MYS		100.00%
Air Liquide New Zealand Ltd	NZL		100.00%
Air Liquide Philippines Inc.	PHL		100.00%
Air Liquide Réunion S.A.	REU		95.01%
Singapore Oxygen Air Liquide Pte Ltd	SGP		100.00%
Air Liquide Thailand Ltd	THA		100.00%

Main consolidated companies	Country	Integ-ration	% interest
Air Liquide Electronics Systems Asia Ltd	TWN		100.00%
Air Liquide Far Eastern Ltd	TWN		65.00%
Air Liquide Vietnam Co., Ltd	VNM		100.00%
ENGINEERING & CONSTRUCTION			
Air Liquide E&C Canada LP	CAN		100.00%
Air Liquide Hangzhou Co., Ltd	CHN		100.00%
Lurgi GmbH	DEU		100.00%
Air Liquide Services S.A.	FRA		100.00%
Air Liquide Advanced Technologies S.A.	FRA		100.00%
Air Liquide Engineering S.A.	FRA		100.00%
Cryolor S.A.	FRA		100.00%
GIE Cryospace	FRA		55.00%
Air Liquide Engineering India Pvt. Ltd.	IND		100.00%
JJ-Lurgi Engineering Sdn Bhd	MYS	P	50.00%
Air Liquide Engineering South Asia Pte. Ltd	SGP		100.00%
Air Liquide Process & Construction, Inc.	USA		100.00%
Lurgi, Inc.	USA		100.00%
Air Liquide Engineering Southern Africa Ltd	ZAF	E	100.00%

Main consolidated companies	Country	Integ-ration	% interest
OTHER ACTIVITIES			
Oerlikon Schweisstechnik GmbH	DEU		100.00%
Air Liquide Welding France S.A.	FRA		100.00%
Air Liquide Welding S.A.	FRA		100.00%
Aqualung International S.A.	FRA		98.36%
L a Spirotechnique I.C. S.A.	FRA		98.36%
Fro S.r.l.	ITA		100.00%
HOLDING COMPANIES AND R&D ACTIVITIES			
Carba Holding AG	CHE		100.00%
Air Liquide Afrique S.A.	FRA		100.00%
Air Liquide Finance S.A.	FRA		100.00%
Air Liquide International S.A.	FRA		100.00%
Air Liquide Participations S.A.	FRA		100.00%
AL-RE S.A.	FRA		100.00%
L' Air Liquide S.A.	FRA		100.00%
Air Liquide International Corp.	USA		100.00%
American Air Liquide, Inc.	USA		100.00%
American Air Liquide Holdings, Inc	USA		100.00%

Companies newly consolidated in the 2012 scope are shown in blue.

(1) Formerly Société Béninoise des Gaz Industriels S.A.

(2) Formerly Société Burkinabe des Gaz Industriels S.A.

(3) Formerly Société Ivoirienne d'Oxygène et d'Acétylène S.A.

(4) Formerly Société Camerounaise d'Oxygène et d'Acétylène S.A.

(5) Formerly Société Congolaise des Gaz Industriels S.A.

(6) Formerly Société Gabonaise d'Oxygène et d'Acétylène S.A.

(7) Formerly Société d'Oxygène et d'Acétylène de Madagascar S.A.

(8) Formerly Société Malienne des Gaz Industriels S.A.

(9) Formerly Société Sénégalaise d'Oxygène et d'Acétylène S.A.

(10) Formerly Société Togolaise des Gaz Industriels S.A.

(11) Formerly Medions Homecare Inc.

Remuneration of Statutory Auditors and their network

Fees reported in 2011 and 2012 by the Air Liquide Group for engagements awarded to the Statutory Auditors related to audit services were as follows:

	2012							
(in thousands of euros)	Ernst & Young		Mazars		Others		Total	
Statutory audit, certification, review of individual and consolidated financial statements	5,606	69.1%	4,468	90.6%	815	69.3%	10,889	76.6%
Issuer	723		574				1,297	
Fully consolidated subsidiaries	4,883		3,894		815		9,592	
Other statutory audit engagements	1,005	12.4%	387	7.8%	18	1.5%	1,410	9.9%
Issuer	298		169				467	
Fully consolidated subsidiaries	707		218		18		943	
TOTAL OF AUDIT SERVICES	**6,611**	**81.5%**	**4,855**	**98.4%**	**833**	**70.8%**	**12,299**	**86.5%**

	2011							
(in thousands of euros)	Ernst & Young		Mazars		Others		Total	
Statutory audit, certification, review of individual and consolidated financial statements	5,203	75.9%	4,180	90.8%	625	35.8%	10,008	75.8%
Issuer	752		497				1,249	
Fully consolidated subsidiaries	4,451		3,683		625		8,759	
Other statutory audit engagements	814	11.9%	378	8.2%	149	8.5%	1,341	10.2%
Issuer	403		289				692	
Fully consolidated subsidiaries	411		88		149		649	
TOTAL OF AUDIT SERVICES	**6,017**	**87.8%**	**4,558**	**99.0%**	**774**	**44.3%**	**11,349**	**85.9%**

Statutory Auditors' Report on the consolidated financial statements

This is a free translation into English of the Statutory Auditors' report on the consolidated financial statements issued in French and it is provided solely for the convenience of English speaking users.

The Statutory Auditors' Report includes information specifically required by French law in such reports, whether qualified or not. This information is presented below the audit opinion on the consolidated financial statements and includes an explanatory paragraph discussing the auditors' assessment of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the consolidated financial statements taken as a whole and not to provide separate assurance on individual account balances, transactions, or disclosures.

This report also includes information relating to the specific verification of information given in the Group's management report.

This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

To the Shareholders,

In compliance with the assignment entrusted to us by your annual shareholders' meeting, we hereby report to you, for the year ended December 31, 2012, on:

- the audit of the accompanying consolidated financial statements of L'Air Liquide;
- the justification of our assessments;
- the specific verification required by French law.

These consolidated financial statements have been approved by the Board of Directors. Our role is to express an opinion on these financial statements based on our audit.

I. OPINION ON THE CONSOLIDATED FINANCIAL STATEMENTS

We conducted our audit in accordance with professional standards applicable in France; those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes verifying, by audit sampling and other selective testing procedures, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used, the significant estimates made by the management, and the overall financial statements presentation. We believe that the evidence we have gathered in order to form our opinion is adequate and relevant.

In our opinion, the consolidated financial statements present a true and fair view of the assets and liabilities, the financial position of the Group as of December 31, 2012 and of the results of its operations for the year then ended in accordance with International Financial Reporting Standards, as adopted by the European Union.

II. JUSTIFICATION OF ASSESSMENTS

In accordance with the requirements of article L. 823-9 of French Commercial Code *(Code de commerce)* relating to the justification of our assessments, we bring to your attention the following matters:

- Goodwill is subject to impairment tests performed in accordance with the principles set out in paragraph 5.f. of the consolidated financial statements relating to "Accounting principles". We have reviewed the soundness of the chosen approach and the assumptions used for these impairment tests and we carried out the assessment of the reasonableness of these estimates, and have ensured that the information given in the note 11.2 to the consolidated financial statements is appropriate.

- We have reviewed the methodology used to recognize “Provisions, pensions and other employee benefits”, as well as the assumptions used for their estimation. We ensured that such provisions were recognized in accordance with the principles set out in paragraphs 11.a and 11.b of the consolidated financial statements relating to “Accounting principles” and that the information given in the notes 23 and 24 to the consolidated financial statements is appropriate.

These assessments were made as part of our audit of the consolidated financial statements taken as a whole and therefore contributed to the formation our audit opinion expressed in the first part of this report.

III. SPECIFIC VERIFICATION

As required by law we have also verified in accordance with professional standards applicable in France the information presented in the Directors’ Report.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

Paris-La Défense, March 1, 2013

The Statutory Auditors

Mazars		Ernst & Young et Autres	
Lionel Gotlib	Daniel Escudeiro	Jean-Yves Jégourel	Emmanuelle Mossé

> STATUTORY ACCOUNTS OF THE PARENT COMPANY

Income statement

For the year ended December 31

(in millions of euros)	Notes	2011	2012
Revenue	(1)	258.8	256.2
Royalties and other operating income	(2)	433.5	458.1
Total operating income (I)		**692.3**	**714.3**
Purchases		(130.0)	(113.3)
Duties and taxes other than corporate income tax		(22.3)	(20.7)
Personnel expenses		(244.4)	(227.6)
Depreciation, amortization and impairment losses		(25.9)	(26.8)
Other operating expenses	(3)	(185.5)	(214.7)
Total operating expenses (II)		**(608.1)**	**(603.1)**
Net operating profit (loss) (I + II)		**84.2**	**111.2**
Financial income from equity affiliates		909.0	953.4
Interests, similar income and expenses	(4)	(149.1)	(137.3)
Other financial income and expenses	(4)	(9.8)	(9.4)
Financial income and expenses (III)		**750.1**	**806.7**
Net profit / (loss) from ordinary activities before tax (I + II + III)		**834.3**	**917.9**
Exceptional income and expenses	**(5)**	**467.4**	**153.1**
Statutory employee profit-sharing		(3.6)	(3.6)
Corporate income tax	(6)	(24.8)	(27.5)
NET PROFIT FOR THE YEAR		**1,273.3**	**1,039.9**

Balance sheet

For the year ended December 31

(in millions of euros)	Notes	December 31, 2011 Net	December 31, 2012 Gross carrying amounts	December 31, 2012 Amortization, depreciation and provisions	December 31, 2012 Net
ASSETS					
Intangible assets	(7)	44.1	246.8	191.0	55.8
Tangible assets	(7)	43.5	138.9	94.4	44.5
Financial assets	(8) & (9)	9,742.1	10,219.2	36.1	10,183.1
TOTAL NON-CURRENT ASSETS		**9,829.7**	**10,604.9**	**321.5**	**10,283.4**
Inventories and work-in-progress	(9)	33.1	20.4	1.7	18.7
Operating receivables	(9) & (12)	270.9	351.7	3.0	348.7
Current account loans with subsidiaries	(9) & (12)	350.5	379.9	10.5	369.4
Short-term financial investments	(10)	56.4	73.7		73.7
Cash		0.1	0.3		0.3
Prepaid expenses		3.5	2.9		2.9
TOTAL CURRENT ASSETS		**714.5**	**828.9**	**15.2**	**813.7**
Loan issue premiums	(13)	2.8	2.2		2.2
Bond redemption premiums	(13)	37.8	32.1		32.1
Unrealized foreign exchange losses		0.6	2.3		2.3
TOTAL ASSETS		**10,585.4**	**11,470.4**	**336.7**	**11,133.7**
EQUITY AND LIABILITIES					
Share capital		1,561.0			1,717.5
Additional paid-in capital		122.6			20.8
Revaluation reserve		25.4			25.4
Legal reserve		156.2			156.2
Other reserves		388.5			388.5
Retained earnings		719.6			1,137.9
Net profit for the year		1,273.3			1,039.9
Tax-driven provisions		11.2			8.1
TOTAL SHAREHOLDERS' EQUITY	**(11)**	**4,257.8**			**4,494.3**
PROVISIONS	**(9)**	**24.2**			**22.7**
Other bonds	(12)	1,577.9			1,578.0
Bank borrowings	(12)	447.1			351.4
Other borrowings	(12)	1,483.2			1,491.4
Operating payables	(12)	285.7			344.9
Current account borrowings with subsidiaries	(12)	2,486.6			2,849.8
Deferred income		21.3			
		6,301.8			**6,615.5**
Unrealized foreign exchange gains		1.6			1.2
TOTAL EQUITY AND LIABILITIES		**10,585.4**			**11,133.7**

Notes to the statutory accounts

ACCOUNTING POLICIES

1. General principles

The year-end financial statements of L'Air Liquide S.A. have been prepared in accordance with general accounting principles applicable in France and in particular those of the French Chart of Accounts (*Plan Comptable Général*) and the French Commercial Code.

2. Non-current assets

A. Intangible assets

Internally generated intangible assets primarily include the development costs of information management systems. They are capitalized only if they generate probable future economic benefits. Internal and external costs corresponding to detailed application design, programming, the performance of tests and the drafting of technical documentation intended for internal or external use are capitalized.

Significant upgrade and improvement costs are added to the initial cost of assets if they specifically meet the capitalization criteria.

Other intangible assets include separately acquired intangible assets such as software, licenses, certain businesses and intellectual property rights and are measured at acquisition cost.

Intangible assets are amortized according to the straight-line method over their estimated useful lives.

B. Tangible assets

Land, buildings and equipment are recognized at historical cost. Interim interest expense is not included in the cost.

Where components of a tangible asset have different useful lives, they are accounted for separately and depreciated over their own useful lives.

Depreciation is computed according to the straight-line method over their estimated useful lives as follows:

- buildings: 20 years;
- other equipment: 5 to 15 years.

Land is not depreciated.

C. Impairment of intangible and tangible assets

The Company assesses at each closing date whether there is any indication of impairment loss of intangible and tangible assets. If such indications exist, an impairment test is performed to assess whether the carrying amount of the asset exceeds its present value, which is defined as the greater of its fair value less costs to sell and its value in use.

In assessing value in use, the estimated future cash flows are discounted to their present value as this would be done for an investment decision.

When the present amount of an asset is lower than its net carrying amount, an impairment loss is recognized in the income statement. When the present value exceeds the carrying amount, the previously recognized impairment is reversed to the income statement.

D. Equity investments

Equity investments are recognized at their initial amount on the entry date, with the exception of those subject to a revaluation as provided by Law 76-1232 of December 29, 1976. Acquisition costs that are not representative of market value are expensed.

When the carrying amount, determined using the criteria normally adopted for the measurement of equity investments (capital value, net asset value), is lower than the gross amount, an impairment loss is recognized for the difference.

E. Treasury shares

When the Company purchases its own shares, they are recognized at cost as treasury shares in other long-term investment securities. The gains or losses on disposals of treasury shares contribute to the net profit for the year.

However, shares allocated for the purpose of implementing plans for free grants of shares are reclassified to a "Short-term financial investments – Company treasury shares" caption at the balance sheet value on the date of allotment.

A provision is recorded over the rights vesting period to cover the future charge relating to the remittance of current shares when the performance criteria can be determined with certainty. Conversely, the amount corresponding to the maximum performance level is presented in off-balance sheet commitments.

When the purchase cost of shares is higher than their valuation based on the average share price during the last month of the fiscal year, treasury shares earmarked for cancellation or allocated for the purpose of implementing plans for free grants of shares are not impaired.

3. Inventories and work-in-progress

Raw materials, supplies and goods are primarily measured at weighted average cost.

Costs related to construction contracts in progress at the year-end are recognized as work-in-progress.

An impairment loss is recognized for inventories and work-in-progress when the estimated realizable amount is lower than cost.

4. Trade receivables and other operating assets

Trade receivables and other operating assets are measured at historical cost.

An impairment loss for doubtful receivables is recognized when it becomes probable that the amount due will not be collected and the loss can be reasonably estimated.

5. Foreign currency transactions

Foreign currency transactions are translated at the exchange rate prevailing on the transaction date, with the exception of forward hedging transactions that are translated at the hedging rate.

At year-end, the difference arising from the translation of receivables and payables, not subject to a forward hedge and denominated in a foreign currency, are recognized in suspense accounts in assets and liabilities ("Unrealized foreign currency gains or losses").

When the forecasted date for settlement of hedged transactions is brought forward or deferred, changes in fair value of the hedging instruments (difference between the initial forward price and the adjustment forward price) are recognized in suspense accounts in the balance sheet ("differences offset by foreign exchange hedges") until the hedges are fully settled.

Unrealized foreign exchange losses are subject to a contingency provision.

6. Provisions

Provisions are recognized when:

- the Company has a present obligation as a result of a past event;
- it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation;
- a reliable estimate can be made of the amount of the obligation.

A provision for onerous contracts is recognized when the expected benefits from the contract are lower than the cost of meeting the obligations under the contract.

7. Financial instruments

Gains or losses relating to financial instruments used in hedging transactions are determined and recognized in line with the recording of income and expenses on the hedged items.

When the financial instruments used do not constitute hedging transactions, the losses resulting from their year-end fair value measurement are recognized in the income statement. Pursuant to the prudence principle, unrealized gains are not recognized in the income statement.

8. Post-employment benefits

The Company applies CNC recommendation 2003-R01 related to the recognition and measurement of retirement benefits and similar obligations.

The Company provides its employees with various pension plans, termination benefits, jubilees (awards based on years of service) and other post-employment benefits for both active employees and retirees. These benefits are covered in two ways:

- by so-called defined contribution plans;
- by so-called defined benefit plans.

Defined contribution plans are plans under which the employer's sole obligation is to pay regular contributions. The employer does not grant any guarantee on the future level of benefits paid to the employee or retiree ("means-based obligation"). The annual pension expense is equal to the contribution paid during the fiscal year which relieves the employer from any further obligation.

Defined benefit plans are those by which the employer guarantees the future level of benefits defined in the agreement, most often depending on the employee's salary and seniority ("result-based obligation"). Defined benefit plans can be:

- either financed by contributions to a fund specialized in managing the contributions paid;
- or managed internally.

The Company grants both defined benefit and defined contribution plans.

In the case of defined benefit plans, retirement and similar obligations are measured by independent actuaries, according to the projected unit credit method. The actuarial calculations mainly take into account the following assumptions: salary increases, employee turnover, retirement date, expected salary trends, mortality, inflation and appropriate discount rates.

Actuarial gains and losses exceeding the greater of 10% of the obligations or 10% of the fair value of plan assets at the beginning of the reporting period are amortized over the expected average working lives of the plan participants.

In accordance with the option offered by CRC recommendation 2003-R01, the Company maintained its previous practices: obligations related to retirement termination payments and jubilees are provided whereas retirement obligations related to defined benefit plans are not provided but are disclosed in the notes.

9. Revenue recognition

A. Revenue from the sale of goods and services

Revenue from the sale of goods is recognized when the risks and rewards of ownership have been transferred to the buyer.

Revenue associated with delivery of services is recognized depending on the stage of completion of the transaction at the balance sheet date, when this can be reliably measured.

B. Engineering and Construction contracts

Revenue from construction contracts, and their related costs and margin are recognized using the completed contract method.

When it is probable that total contract costs will exceed total contract revenue, the expected loss is immediately expensed.

10. Tax consolidation

L'Air Liquide S.A. has set up a tax consolidation group with the French subsidiaries in which it holds a direct or indirect interest exceeding 95%, as defined by article 223 A of the French General Tax Code.

Each company calculates its tax provision as if it was taxed separately. L'Air Liquide S.A., as head of the tax consolidation group, recognizes as an expense the tax corresponding to its own profits and recognizes in a balance sheet current tax account the impact of restatements and eliminations when determining taxable profit as a whole and the tax deferrals of subsidiaries with losses.

11. Research and Development expenditures

Development costs shall be recognized as assets if and only if the Company can demonstrate all of the following:

- the project is clearly identified and the related costs are individualized and reliably monitored;
- the technical and industrial feasibility of the project is demonstrated;
- there is a clear intention to complete the project and use or sell the products arising from it;
- it is probable that the project will generate future economic benefits for the Company.

The conditions required by accounting standards for the capitalization of development costs are deemed not to have been met, since the work carried out does not systematically result in the completion of an intangible asset that will be available for use or sale.

As a result, the development costs incurred by the Company in the course of its research and innovation development projects are expensed as incurred.

ADDITIONAL NOTES ON THE BALANCE SHEET AND INCOME STATEMENT

1. Revenue breakdown by geographical area

(in millions of euros)	2011	2012
France	244.7	220.6
Abroad	14.1	35.6
REVENUE	**258.8**	**256.2**

By the nature of its activities, the revenue of L'Air Liquide S.A. mainly corresponds to services and pension expenses recharged to its subsidiaries (see note 15.A).

2. Royalties and other operating income

Other operating income mainly includes change in inventories of goods and services, production of assets capitalized, operating subsidies, operating expense reclassifications, as well as operating provisions and impairment reversals.

3. Other operating expenses

Other operating expenses primarily consist of research and development costs and other external expenses such as subcontracting and maintenance costs, fees, travel expenses, telecommunication costs and rental expenses.

4. Financial income and expenses

Interests, similar income and expenses break down as follows:

(in millions of euros)	2011	2012
Revenues from other marketable securities and long-term loans	15.7	9.4
Other interest and similar income	(164.8)	(146.7)
INTERESTS, SIMILAR INCOME AND EXPENSES	**(149.1)**	**(137.3)**

Other financial income and expenses break down as follows:

(in millions of euros)	2011	2012
Amortization, impairment and provisions net of reversals	(10.4)	(11.3)
Foreign exchange gains / losses (net)	0.4	1.7
Capital gains on short-term financial investments	0.2	0.2
OTHER FINANCIAL INCOME AND EXPENSES	**(9.8)**	**(9.4)**

5. Exceptional income and expenses

As part of the tax consolidation of L'Air Liquide S.A. and its consolidated French subsidiaries, exceptional income in the amount of 122.3 million euros was booked in 2012. The 424.4 million euros booked in 2011 also included the impact of the organizational evolution at L'Air Liquide S.A. in 2011 and its accounting impacts in connection with the tax consolidation of L'Air Liquide S.A. and its consolidated French subsidiaries. This income had no impact on the Group's consolidated tax position or the profit or loss of the relevant subsidiaries.

Exceptional income and expenses also include the impact of eliminations related to the tax consolidation regime in the amount of 25.6 million euros in 2012 and 19.9 million euros in 2011.

In 2011, exceptional income and expenses also included the reversal of accelerated depreciation, which was no longer required following the contributions of May 6, 2011 in the amount of 34.4 million euros.

6. Corporate income tax

Corporate income tax totaled -27.5 million euros, compared to -24.8 million euros in 2011.

It breaks down as follows, after allocation of add-backs, deductions and tax credits relating to profits:

(in millions of euros)	2011	2012
Net profit from ordinary activities before tax	(21.3)	(23.6)
Additional contributions [a]	(3.5)	(3.9)
TOTAL	**(24.8)**	**(27.5)**

(a) 3.3% social security contribution on earnings and a 5% exceptional contribution.

The Company adopted the tax consolidation regime to determine corporate income tax.

7. Intangible and tangible assets

Changes in gross value break down as follows:

(in millions of euros)	Gross value as of January 1, 2012	Additions	Disposals	Gross value as of December 31, 2012
Concessions, patents, licenses	88.7	7.7	(0.3)	96.1
Other intangible assets	134.2	18.3	(1.8)	150.7
INTANGIBLE ASSETS	**222.9**	**26.0**	**(2.1)**	**246.8**
Land and buildings	37.0	1.0		38.0
Plant, machinery and equipment	31.7	12.6	(0.5)	43.8
Other tangible assets	58.3	4.1	(6.3)	56.1
Tangible assets under construction and payments on account – tangible assets	6.0	0.7	(5.7)	1.0
TANGIBLE ASSETS	**133.0**	**18.4**	**(12.5)**	**138.9**

Changes in amortization, depreciation and impairment losses break down as follows:

(in millions of euros)	Amortization, depreciation, and impairment losses as of January 1, 2012	Amortization and depreciation	Decreases, disposals, scrappings	Amortization, depreciation and impairment losses as of December 31, 2012
Intangible assets	178.8	12.6	(0.4)	191.0
Tangible assets	89.5	11.3	(6.4)	94.4
TOTAL	**268.3**	**23.9**	**(6.8)**	**285.4**

8. Financial assets

Changes in gross value break down as follows:

(in millions of euros)	Gross value as of January 1, 2012	Increases	Decreases	Gross value as of December 31, 2012
Equity investments	9,577.6	466.3 [(a)]		10,043.9
Other long-term investment securities [(b)]	69.7	359.1	(388.7)	40.1 [(c)]
Loans	30.7	0.1	(0.1)	30.7
Other long-term financial assets	101.1	3.4		104.5 [(d)]
FINANCIAL ASSETS	**9,779.1**	**828.9**	**(388.8)**	**10,219.2**

(a) The increase in equity investments mainly corresponds to the capital increase of the subsidiaries Air Liquide International for 455.0 million euros and Air Liquide Investissements d'Avenir et de Démonstration for 10.0 million euros.

(b) The change in other long-term investment securities mainly corresponds to:

- *the acquisition and sale of Company treasury shares under the liquidity contract for 240.8 million euros and -253.6 million euros respectively;*
- *the acquisition of Company treasury shares for 117.9 million euros;*
- *the cancellation of 1,200,000 shares in the amount of -116.0 million euros;*
- *the reclassification of 200,000 Company treasury shares in "Short-term financial investments – Company treasury shares" caption in the amount of -18.0 million euros. This operation followed the Board of Directors' decision to allocate the shares for the implementation of any Conditional Grant of Shares to Employees plans.*

At the 2012 year-end:

(c) the "Other long-term investment securities" caption includes a total of 355,602 treasury shares valued at an average price of 89.19 euros, i.e. a total amount of 31.7 million euros. All shares were allocated for the purpose of share exchanges or as payment in connection with possible external growth transactions;

(d) the "Other long-term investments" caption mainly includes the receivable linked to the refund claim on the equalization charge paid for the years 2000 to 2004 for 71.7 million euros and the interest on arrears for 29.9 million euros.

9. Impairment, allowances and provisions

A. Impairment and allowances

Impairment and allowances are recognized when the asset's carrying amount is lower than its entry value.

They break down as follows:

(in millions of euros)	2011	Charges	Reversals	2012
Equity investments	27.3	0.1		27.4
Other long-term investment securities	9.7		(1.4)	8.3
Other long-term investments		0.4		0.4
Inventories and work-in-progress	1.6	0.3	(0.2)	1.7
Operating receivables	3.0			3.0
Current account loans with subsidiaries	7.3	3.4	(0.2)	10.5
IMPAIRMENT AND ALLOWANCES	**48.9**	**4.2**	**(1.8)**	**51.3**

Charges and reversals mainly impact financial income respectively for 3.9 million euros and -1.6 million euros.

B. Provisions

Provisions mainly include:

- third party or employee contingency and litigation provisions;
- jubilee awards and vested rights with regard to retirement termination payments (15.7 million euros in 2012 and 13.7 million euros in 2011).

(in millions of euros)	2011	Charges	Reversals	2012
Provisions for contingencies	10.4	3.0	(6.7)	6.7
Provisions for losses	13.8	2.6	(0.4)	16.0
PROVISIONS	**24.2**	**5.6**	**(7.1)**	**22.7**

Charges mainly relate to provisions for jubilee awards and vested rights with regard to retirement termination payments for 2.3 million euros and foreign exchange risks for 1.9 million euros.

Reversals primarily stem from the utilization of third party contingency provisions for -6.0 million euros.

10. Short-term financial investments

The item breaks down as follows:

(in millions of euros)	Gross value as of December 31, 2011	Gross value as of December 31, 2012
Company treasury shares	31.3	43.6
Other short-term financial investments	25.1	30.1
SHORT-TERM FINANCIAL INVESTMENTS	**56.4**	**73.7**

At the 2012 year-end, the “Company treasury shares” caption consisted of 561,170 shares (396,048 shares in 2011) allocated for the implementation of any Conditional Grants of Shares to Employees plans.

11. Shareholders' equity

As of December 31, 2012, the share capital comprised 312,281,159 shares with a par value of 5.50 euros.

The portion of share capital arising from the special revaluation reserve totals 71.4 million euros.

(in millions of euros)	As of December 31, 2011 (before appropriation of earnings)	Appropriation of 2011 net profit [(a)]	Capital increases	Capital decreases	Other changes	As of December 31, 2012 (before appropriation of earnings)
Share capital [(b)]	1,561.0		163.1	(6.6)		1,717.5
Additional paid-in capital [(b)]	122.6		8.7	(109.4)	(1.1)	20.8
Revaluation reserve	25.4					25.4
Reserves:						
■ Legal reserve	156.2					156.2
■ Tax-driven reserves	307.8					307.8
■ Translation reserve	7.7					7.7
■ Other reserves	73.0					73.0
Retained earnings [(b)] [(c)]	719.6	544.2	(132.3)		6.4	1,137.9
Net profit for the year	1,273.3	(1,273.3)			1,039.9	1,039.9
Accelerated depreciation [(e)]	11.2				(3.1)	8.1
SHAREHOLDERS' EQUITY	**4,257.8**	**(729.1)** [(d)]	**39.5**	**(116.0)**	**1,042.1**	**4,494.3**

(a) Following the decision of the Combined Annual Shareholders' Meeting of May 9, 2012.

(b) The change in the "Share capital", "Additional paid-in capital" and "Retained earnings" captions results from the following transactions:

- *Capital increase of 159.5 million euros, noted by the Chairman and Chief Executive Officer, as delegated by the Board of Directors on May 9, 2012, resulting from the granting of one free share for 10 existing shares (creation of 28,285,796 new shares) and one free share for 100 existing shares as part of a 10% bonus allotment (creation of 718,001 new shares) by deducting -27.2 million euros from «Additional paid-in-capital» and -132.3 million euros from «Retained earnings».*
- *Capital increases of 3.6 million euros resulting from the exercise of 245,020 subscription options before the free share attribution and 419,401 subscription options after the free share attribution. The "Additional paid-in capital" caption was increased by the amounts of premiums related to these share capital increases, i.e. 35.9 million euros.*

The "Additional paid-in capital" caption was reduced by the capital increase costs, i.e. -1.1 million euros.

- *Capital decrease in the amount of -6.6 million euros by canceling 1,200,000 treasury shares, as decided by the Board of Directors on May 9, 2012. The "Additional paid-in capital" caption was reduced by the amount of premiums related to these shares, i.e. -109.4 million euros.*

(c) The change in "Retained earnings" also includes the difference between the estimated loyalty dividend and the loyalty dividend actually paid and the cancellation of the dividend pertaining to treasury shares.

(d) Amount distributed.

(e) The change in the "Accelerated depreciation" caption results from the reversal of accelerated depreciation performed under normal depreciation and amortization policies.

12. Debt maturity analysis

	December 31, 2012		
(in millions of euros)	Gross	≤ 1 year	> 1 year
Loans	30.7	0.7	30.0
Other long-term investments	104.5	1.4	103.1
Operating receivables	351.7	344.3	7.4
Current account loans with subsidiaries [(a)]	379.9	379.9	
ASSETS	**866.8**	**726.3**	**140.5**

(a) Current account loans agreements are concluded for an indefinite period.

(in millions of euros)	December 31, 2012 Gross	≤ 1 year	> 1 to ≤ 5 years	> 5 years
Other bonds [a]	1,578.0	329.9	791.3	456.8
Bank borrowings [b]	351.4	0.2		351.2
Other borrowings	1,491.4	43.9	747.5	700.0
Operating payables	344.9	336.5	8.4	
Current account borrowings with subsidiaries [c]	2,849.8	2,849.8		
DEBTS	**6,615.5**	**3,560.3**	**1,547.2**	**1,508.0**

(a) Since 2008, bonds issued as part of the EMTN program include a change of control clause.

(b) Including commercial papers in an amount of 351.2 million euros. The maturity date indicated is the date of the confirmed credit lines.

(c) Current account borrowings agreements are concluded for an indefinite period.

13. Loan issue and bond redemption premiums

The change in the item breaks down as follows:

(in millions of euros)	Net value as of January 1, 2012	Increases	Charges	Net value as of December 31, 2012
Loan issue premiums	2.8		(0.6)	2.2
Bond redemption premiums	37.8		(5.7)	32.1
TOTAL	**40.6**		**(6.3)**	**34.3**

The change in bond redemption premiums corresponds to the amortization of a 43.8 million euro premium related to the 2010 bond exchange over the term of the new bond, *i.e.* until October 2018.

14. Financial instruments

Unsettled derivatives as of December 31, 2012 break down as follows:

	December 31, 2011		December 31, 2012	
(in millions of euros)	Carrying value	Fair value difference	Carrying value	Fair value difference
Currency forwards	47.7	(1.8)	29.8	1.0
Foreign exchange risk	**47.7**	**(1.8)**	**29.8**	**1.0**
Interest rate swaps	72.5	(0.3)		
Interest rate risk	**72.5**	**(0.3)**		

The fair value difference represents the difference between the derivative's valuation and the value of the contract determined at the closing year-end exchange rate.

Insofar as these instruments are all allocated to hedging transactions, the fair value differences had no impact on the financial statements for the 2012 and 2011 year-ends.

15. Retirement and similar plans

The Company and a number of subsidiaries in France under the same Group agreement grant:

A. Group retirement benefit guarantee agreement

Additional benefits to retirees (4,460 retirees as of December 31, 2012) and to employees over 45, or with more than 20 years of service as of January 1, 1996 (138 employees as of December 31, 2012). These benefits provide a supplemental retirement income based on final pay, which is paid in addition to other normal retirement benefits. This plan was terminated on December 31, 1995. The annual amount paid with respect to this plan cannot exceed 12% of total payrolls or 12% of total pre-tax profits for the companies involved. As from 2011, these 12% fractions are reduced in proportion to the number of plan beneficiaries for the year compared with the number of plan beneficiaries of the previous year. The contributions amounted to 15.0 million euros in 2012 (13.2 million euros in 2011) after reinvoicing subsidiaries. Excluding the impact of timelines, and until the plan ends, the actuarial value of obligations vis-à-vis retirees and those eligible as of December 31, 2012 amounts to 809.4 million euros (752.3 million euros for retirees and 57.1 million euros for active employees).

Based on the assumptions used for the valuation of the retirement obligations, an estimated 541.8 million euros will be recharged to the subsidiaries of L'Air Liquide S.A. included within the scope of the Group agreement as and when benefits are paid to the retirees.

B. Externally funded plan

Employees not covered by the preceding plan (1,120 employees as of December 31, 2012) and with at least one year of service benefit from an externally funded defined contribution plan. Contributions to this plan are jointly paid by the employer and employee. For 2012, employer contributions (net of reinvoicing to subsidiaries) amounted to 6.1 million euros (6.0 million euros in 2011).

C. Retirement termination payments and jubilees

The corresponding obligations are provided for in the amount of 14.8 million euros (net of tax) and 0.9 million euros, respectively.

D. Calculation of actuarial assumptions and methods

The calculations with respect to the Group's retirement benefit guarantee agreement, retirement termination payments and jubilees are performed by independent actuaries using the projected unit credit method.

Actuarial gains and losses exceeding the greater of 10% of the obligations related to retirement termination payments and unrecognized past service costs are amortized over the expected average working lives of the plan participants. As of December 31, 2012, the amounts stand at 14.4 million euros (9.2 million euros in 2011).

The actuarial assumptions (turnover, mortality, retirement age, salary increase) vary according to demographic and economic conditions.

The discount rates used to determine the present value of obligations are based on Government bonds or High-quality Corporate bonds, with the same duration as the obligations at the valuation date (3.20% as of December 31, 2012).

E. Change in retirement obligations and similar benefits

Company obligations with respect to pension plans and similar benefits break down as follows:

(in millions of euros)	Defined benefit plan	Retirement indemnities	Jubilees	Total
OBLIGATIONS AS OF JANUARY 1, 2012	**609.3**	**29.0**	**0.7**	**639.0**
Service cost	1.6	1.5	0.1	3.2
Interest cost	28.8	1.4		30.2
Employee contributions				
Plan amendments	2.0			2.0
Curtailment / Settlement				
Transfers	(0.1)			(0.1)
Acquisition / (Divestiture) / Merger				
Benefit payments	(46.4)	(0.4)		(46.8)
Actuarial (gains) / losses [(a)]	214.2	5.6	0.1	219.9
OBLIGATIONS AS OF DECEMBER 31, 2012	**809.4**	**37.1**	**0.9**	**847.4**

(a) The amounts recognized in "Actuarial (gains) / losses" mainly arise from the difference between the December 31, 2012 discount rate (3.20%) and the December 31, 2011 rate (4.90%).

16. Accrued income and accrued expenses

(in millions of euros)	December 31, 2012
Accrued income:	
Other long-term financial assets	101.8
Operating receivables	16.6
ACCRUED INCOME	**118.4**
Accrued expenses:	
Other bonds	34.1
Other borrowings	0.5
Operating payables	109.6
ACCRUED EXPENSES	**144.2**

17. Deferred taxes

Deferred taxes arise from timing differences between the tax regime and the accounting treatment of income and expenses. According to the nature of the differences, these deferred taxes will increase or decrease the future tax expense and are not recorded pursuant to the provisions of the chart of accounts.

Deferred taxes as of December 31, 2012 are estimated as follows:

(in millions of euros)	December 31, 2011	December 31, 2012
Deferred tax assets (decrease in future tax expense)	6.5	5.1
Deferred tax liabilities (increase in future tax expense)	13.9	11.8

Deferred taxes were calculated taking into account the 3.3% social security contribution on earnings and a 5% exceptional contribution *i.e.* a general rate of 36.10%.

OTHER INFORMATIONS

1. Items concerning related undertakings

The Company conducted related party transactions with its wholly-owned subsidiaries or subsidiaries that were directly or indirectly controlled.

(in millions of euros)	December 31, 2012 Gross	December 31, 2012 Including related undertakings
Balance sheet		
Loans	30.7	30.2
Other long-term financial assets	104.5	1.2
Operating receivables	351.7	315.3
Current account loans with subsidiaries	379.9	379.9
Other borrowings	1,491.4	1,400.2
Operating payables	344.9	95.9
Current account borrowings with subsidiaries	2,849.8	2,849.8
Income statement		
Financial income from equity affiliates	953.4	953.0
Interests, similar income and expenses	(137.3)	(70.9)
Other financial income and expenses	(9.4)	(3.2)

2. Off-balance sheet commitments

Off-balance sheet commitments break down as follows:

(in millions of euros)	December 31, 2011	December 31, 2012
Commitments given		
Endorsements, securities and guarantees given (a)	798.4	813.4
To Air Liquide Finance and Air Liquide US LLC on transactions performed (b)	2,636.9	3,416.7
COMMITMENTS GIVEN	**3,435.3**	**4,230.1**

(a) Guarantees given mainly concerned the joint and several liability guarantee of the subsidiary Air Liquide France Industrie in connection with energy purchase, and a guarantee covering the obligations of the Air Liquide Arabia and Air Liquide Engineering subsidiaries under Middle Eastern projects.

(b) L'Air Liquide S.A. holds 100% of the French subsidiary Air Liquide Finance, which manages the Group's cash position and interest rate risk, as well as financing.

In addition, Air Liquide Finance holds 100% of Air Liquide US LLC, in order to borrow on the US market.

Insofar as the sole activity of Air Liquide Finance and Air Liquide US LLC is the Group's financing, L'Air Liquide S.A. is required to guarantee any issuances performed by these companies.

3. Remuneration paid to members of Executive Management and the Board of Directors

The remuneration (short-term benefits: fixed and variable portions, benefits in kind, retirement termination payments, Directors' fees) paid by the Company to members of Executive Management and the Board of Directors respectively, amounts to:

(in millions of euros)	2012
Remuneration of the Board of Directors	0.7
Remuneration of Executive Management	4.1
TOTAL	**4.8**

During 2012, the Company paid to third parties the total amount of 488,971 euros.

For Benoît Potier and Pierre Dufour: with respect to supplementary defined contribution pension plans: 84,570 euros for each one, with respect to the collective life insurance contract: 113,126 euros for each one and with respect to the supplementary death and disability benefits plan: 65,099 euros and 28,480 euros respectively.

4. Average number of employees

The monthly average number of employees was:

	2011	2012
Engineers and executives	1,083	968
Supervisory staff	370	286
Employees	12	11
Laborers	60	25
TOTAL	**1,525** [(a)]	**1,290**

(a) Mainly impact of employee transfers on May 7, 2011 following the evolution of the organization of operating activities in France.

5. Subsidiaries and affiliates information

(in thousands of euros)	Share capital as of December 31, 2012	Other equity as of December 31, 2012	% share holding
A. Detailed information on affiliates whose carrying amounts exceed 1% of the capital of the Company required to publish its financial statements			
a) Companies operating in France			
Air Liquide International [a] – 75, quai d'Orsay – 75007 Paris	2,880,780	5,430,413 [b]	99.99
Air Liquide France Industrie – 6, rue Cognacq-Jay – 75007 Paris	72,268	397,547	99.99
Air Liquide Finance – 6, rue Cognacq-Jay – 75007 Paris	72,000	7,837	99.99
Air Liquide Santé (International) – 75, quai d'Orsay – 75007 Paris	33,347	21,470	99.99
Chemoxal [a] – 75, quai d'Orsay – 75007 Paris	30,036	3,337	99.99
Air Liquide Santé France – 6, rue Cognacq-Jay – 75007 Paris	10,403	17,903	10.12
b) Companies operating outside of France			
Air Liquide Industriegase GmbH & Co. KG – Hans-Günther-Sohl-Strasse 5 – 40235 Düsseldorf – Germany	10	2,674,692	100.00
B. General information on other subsidiaries and affiliates			
a) French companies (together)			
b) Foreign companies (together)			

(a) Holding company.

(b) Air Liquide International pays a portion of its dividend in the form of an interim dividend.

(c) Net amount: 18,632 thousands of euros.

Carrying amount of shares held after the revaluations of 1976, 1978 and 1979							
Gross	Net	Including revaluation difference	Loans and advances granted by the Company and not repaid	Guarantees and endorsements given by the Company	2012 net revenue	Net profit (or loss) for 2012	Dividends collected by the Company during 2012
7,333,883	7,333,883	21,186			563	568,446	598,155 (b)
285,126	285,126		39,561		1,139,893	97,270	101,174
72,901	72,901			3,344,692		41,384	29,160
110,808	110,808	6,301	70,724		18,697	77,980	75,821
30,326	30,326					71,965	28,362
20,388	20,388		62,916		202,041	23,035	2,551
2,106,474	2,106,474				61,482	188,890	90,000
73,525	46,856	18,335	29,166 (c)	2,525			21,760
9,075	8,318		30,226				6,111

Statutory Auditors' Report on the annual financial statements

This is a free translation into English of the Statutory Auditors' Report on the financial statements issued in French and it is provided solely for the convenience of English speaking readers.

The Statutory Auditors' Report includes information specifically required by French law in such reports, whether modified or not. This information is presented below the audit opinion on the financial statements and includes an explanatory paragraph discussing the auditors' assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the financial statements taken as a whole and not to provide separate assurance on individual account balances, transactions, or disclosures.

This report also includes information relating to the specific verification of information given in the management report and in the documents addressed to shareholders.

This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

To the Shareholders,

In compliance with the assignment entrusted to us by your Annual Shareholders' Meeting, we hereby report to you, for the year ended December 31, 2012, on:

- the audit of the accompanying annual financial statements of L'Air Liquide;
- the justification of our assessments;
- the specific verifications and information required by French law.

These annual financial statements have been approved by the Board of Directors. Our role is to express an opinion on these financial statements based on our audit.

I. OPINION ON THE FINANCIAL STATEMENTS

We conducted our audit in accordance with the professional standards applicable in France. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit involves performing procedures, by audit sampling and other selective testing methods, to obtain audit evidence about the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used, the significant estimates made by the management, and the overall financial statements presentation. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2012 and the results of its operations for the year then ended, in accordance with the accounting rules and principles applicable in France.

II. JUSTIFICATION OF ASSESSMENTS

In accordance with the requirements of article L. 823-9 of the French Commercial Code *(Code de commerce)* relating to the justification of our assessments, we bring to your attention the following matters:

- Investments are valued in accordance with the methods set out in paragraph 2.D of the notes to the annual financial statements relating to "Accounting policies". We assessed the approach and the estimates used by the Company were reasonable, and checked the depreciation computation, if any.
- These assessments were thus made in the context of the performance of our audit of the financial statements of the Company taken as a whole and, therefore, contributed to the formation of our audit opinion expressed in the first part of this report.

III. SPECIFIC VERIFICATION AND INFORMATION

We have also performed, in accordance with professional standards applicable in France, the specific verifications required by French law.

We have no matters to report as to the fair presentation and the consistency with the financial statements of the information given in the management report of the Board of Directors and in the documents addressed to shareholders with respect to the financial position and the financial statements.

Concerning the information given in accordance with the requirements of article L. 225-102-1 of French Commercial Code *(Code de commerce)* relating to remunerations and benefits received by the Directors and any other commitments made in their favour, we have verified its consistency with the financial statements, or with the underlying information used to prepare these financial statements and, where applicable, with the information obtained by your Company from companies it controls. Based on this work, we concur with the accuracy and fair presentation of this information.

In accordance with French law, we have ensured that the required information concerning the purchase of investments and controlling interests and the names of the principal shareholders and holders of the voting rights has been properly disclosed in the Directors' Report.

Paris-La Défense, March 1, 2013

The Statutory Auditors

Mazars		Ernst & Young et Autres	
Lionel Gotlib	Daniel Escudeiro	Jean-Yves Jégourel	Emmanuelle Mossé

Five-year summary of Company results

(Articles R. 225-83 and R. 225-102 of the French Commercial Code)

	2008	2009	2010	2011	2012
I - Share capital at the end of the year					
a) Share capital *(in euros)* [(a) (b) (c)]	1,435,072,914	1,453,398,947	1,562,523,012	1,560,971,176	1,717,546,375
b) Number of outstanding ordinary shares	260,922,348	264,254,354	284,095,093	283,812,941	312,281,159
c) Number of shares with loyalty dividend entitlement [(d)]	67,969,494	66,269,428	71,940,478	78,070,815	90,629,532
d) Convertible bonds					
II - Operations and results of the year *(in millions of euros)*					
a) Revenue [(e)]	1,697.5	1,559.8	1,606.3	258.8	256.2
b) Net profit before tax, employee profit-sharing, depreciation, amortization and provisions	819.7	889.5	909.8	1,342.3	1,111.0
c) Corporate income tax	8.9	9.4	14.6	24.8	27.5
d) Employee profit-sharing for the year	3.3	3.1	3.2	3.6	3.6
e) Net profit after tax, employee profit-sharing and depreciation, amortization and provisions	695.1	816.2	822.2	1,273.3	1,039.9
f) Distributed profit	602.0	609.2	684.2	729.1	803.4
III - Per share data *(in euros)*					
a) Net profit after tax, employee profit-sharing, but before depreciation, amortization and provisions					
■ over the number of ordinary shares outstanding	3.10	3.32	3.14	4.63	3.46
■ over the adjusted number of shares [(f)]	2.64	2.85	2.87	4.22	3.15
b) Net profit after tax, employee profit-sharing and depreciation, amortization and provisions					
■ over the number of ordinary shares outstanding	2.66	3.09	2.89	4.49	3.33
■ over the adjusted number of shares [(f)]	2.27	2.65	2.65	4.09	3.03
c) Dividend allocated to each share					
■ over the number of ordinary shares outstanding	2.25	2.25	2.35	2.50	2.50
■ over the adjusted number of shares [(g)]	1.91	1.91	2.13	2.27	2.50
d) Loyalty dividend					
■ over the number of beneficiary shares	0.22	0.22	0.23	0.25	0.25
■ over the adjusted number of shares [(g)]	0.19	0.19	0.21	0.22	0.25
IV - Employees working in France [(e)]					
a) Average number of employees during the year	5,124	5,103	4,888	1,525	1,290
b) Total payroll for the year *(in millions of euros)*	260.4	266.3	259.8	172.9	158.9
c) Amounts paid with respect to employee benefits during the year (social security, staff benefits, etc.) *(in millions of euros)*	211.8	214.1	221.1	72.5	68.7

(a) Using the authorization granted by the 8th resolution of the Combined Annual Shareholders' Meeting of May 9, 2007, the 10th resolution of the Combined Annual Shareholders' Meeting of May 4, 2011 and the 8th resolution of the Combined Annual Shareholders' Meeting of May 9 2012, the Board of Directors made the following decisions:

- *in its meeting of February 14, 2008, capital decrease by cancellation of 2,916,350 treasury shares;*
- *in its meeting of May 4, 2011, capital decrease by cancellation of 1,200,000 treasury shares;*
- *in its meeting of May 9, 2012, capital decrease by cancellation of 1,200,000 treasury shares.*

(b) Using the authorization granted by the 18th resolution of the Combined Annual Shareholders' Meeting of May 7, 2008, the Board of Directors decided in its meeting of May 7, 2008, the granting of one free share for 10 existing shares (ranking for dividends as of 01/01/2008), and the granting of a 10% bonus for shares held in registered form from December 31, 2005 to June 6, 2008 (ranking for dividends as of 01/01/2008).

Using the authorization granted by the 19th resolution of the Combined Annual Shareholders' Meeting of May 5, 2010, the Board of Directors decided in its meeting of May 5, 2010, the granting of one free share for 15 existing shares (ranking for dividends as of 01/01/2010), and the granting of a 10% bonus for shares held in registered form from December 31, 2007 to May 27, 2010 (ranking for dividends as of 01/01/2010).

Using the authorization granted by the 9th resolution of the Combined Annual Shareholders' Meeting of May 9, 2012, the Board of Directors decided in its meeting of May 9, 2012, the granting of one free share for 10 existing shares (ranking for dividends as of 01/01/2012), and the granting of a 10% bonus for shares held in registered form from December 31, 2009 to May 30, 2012 (ranking for dividends as of 01/01/2012).

(c) Using the authorizations granted by the resolutions of the Combined Annual Shareholders' Meeting of May 12, 2004 and the Combined Annual Shareholders' Meeting of May 9, 2007,

- *the Board of Directors noted in its meeting of February 16, 2012 the issuance of 84,598 shares (ranking for dividends as of 01/01/2012) arising from:*
  - *the exercize of 2,525 options subscribed at the price of 50.66 euros,*
  - *the exercize of 58,179 options subscribed at the price of 53.36 euros,*
  - *the exercize of 12,143 options subscribed at the price of 64.97 euros,*
  - *the exercize of 2,591 options subscribed at the price of 66.18 euros,*
  - *the exercize of 9,160 options subscribed at the price of 77.86 euros;*
- *pursuant to the delegation granted by the Board of Directors in its meeting of May 9, 2012, the Chairman and Chief Executive Officer noted on May 29, 2012 the issuance of 160, 422 actions (ranking for dividends as of 01/01/2012) arising from:*
  - *the exercize of 47,482 options subscribed at the price of 53.36 euros,*
  - *the exercize of 62,365 options subscribed at the price of 64.97 euros,*
  - *the exercize of 3,662 options subscribed at the price of 66.18 euros,*
  - *the exercize of 46,913 options subscribed at the price of 77.86 euros;*
- *the Board of Directors noted in its meeting of February 13, 2013 the issuance of 419,401 shares (ranking for dividends as of 01/01/2012) arising from:*
  - *the exercize of 4,104 options subscribed at the price of 45.94 euros,*
  - *the exercize of 155,340 options subscribed at the price of 48.39 euros,*
  - *the exercize of 161,814 options subscribed at the price of 58.92 euros,*
  - *the exercize of 5,781 options subscribed at the price of 60.02 euros,*
  - *the exercize of 55,540 options subscribed at the price of 70.61 euros,*
  - *the exercize of 36,822 options subscribed at the price of 71.31 euros.*

(d) Beginning December 31, 1995, shareholders holding their shares in registered form for at least two years at the period-end, and who will retain these shares in this form until the dividend payment date, will receive a dividend with a 10% bonus compared to the dividend paid to other shares. The difference between the loyalty dividend calculated on the number of shares outstanding as of the period-end and the loyalty dividend actually paid shall be allocated to retaining earnings.

(e) The evolution of the data is impacted by the contribution in 2011 of the operational and technological activities to specialized and wholly-owned subsidiaries:

- *contribution to Air Liquide France Industrie of the Industrial gases business;*
- *contribution to Air Liquide Advanced Technologies of the design and production of equipment for the aerospace, aeronautics and cryogenics fields;*
- *contribution to Cryopal of the production and marketing of cryogenics reservoirs;*
- *contribution to Air Liquide Engineering of the technical assessment activities conducted at the Blanc-Mesnil site;*
- *contribution to Air Liquide Services of the development, installation and operation of industrial information systems.*

These contributions have no impact on the activity and the results of the Group.

(f) Adjusted to take into account, in the weighted average, the capital increases performed via capitalization of reserves or additional paid-in capital, cash subscriptions and treasury shares.

(g) Adjusted to take into account the capital increases performed via capitalization of reserves or additional paid-in capital.

5 Annual General Meeting 2013

> BOARD OF DIRECTORS' REPORT ON THE RESOLUTIONS PRESENTED TO THE 2013 COMBINED SHAREHOLDERS' MEETING

Results for the fiscal year

The financial statements of L'Air Liquide S.A. that have been prepared by applying the methods provided for by law and the standards of the French General Chart of Accounts are attached to this report - pages 253 and 254.

Revenue for the fiscal year ended December 31, 2012 amounted to 256.2 million euros, compared to 258.8 million euros in 2011, down by 1%.

The income from French and foreign equity securities amounted to 953.4 million euros, compared to 909.0 million euros in 2011.

Net profit for the fiscal year ended December 31, 2012 amounted to 1,039.9 million euros, compared to 1,273.3 million euros in 2011.

In 2011 and 2012, L'Air Liquide S.A. net profit is impacted by exceptional items.

Consolidated revenue for 2012 amounted to 15,326.3 million euros, compared to 14,456.9 million euros in 2011, up by 6.0%. After adjustment for the impacts of foreign exchange fluctuations and natural gas prices, the increase is 2.7%.

Consolidated net profit, after deduction of minority interests, amounted to 1,609.4 million euros, compared to 1,534.9 million euros in 2011, an increase of 4.9% (a 2.0% increase excluding the foreign exchange impact).

These results are described in detail in the Management Report and the financial statements.

Information on share capital

AMOUNT OF SHARE CAPITAL HELD BY EMPLOYEES

Please refer to the chapter "Additional Information" of this Reference Document - page 311.

CROSSING OF SHARE CAPITAL AND VOTING RIGHTS THRESHOLDS IN 2012

Please refer to the chapter "Additional Information" of this Reference Document - page 311.

Investments and acquisition of controlling interests

In accordance with the provisions of article L. 233-6 of the French Commercial Code, L'Air Liquide S.A. sold in 2012 the 100%-held company Hypulsion to Axane.

Resolutions within the authority of the Ordinary Shareholders' Meeting

We ask you, after you have reviewed:

- the Report of the Board of Directors on the operation and management of the Company and its Group during the 2012 fiscal year;
- the Company's financial statements, income statement, balance sheet and notes thereto;
- the Group's consolidated financial statements;
- the Reports of the Statutory Auditors;

to approve the Company's financial statements and the consolidated financial statements for the year ended December 31, 2012 as presented, as well as the transactions set out in these financial statements or mentioned in these reports.

Your Company's net profit allows the Board to propose the payment of a dividend of 2.50 euros for each of the shares entitled to a dividend, it being specified that in the event of a change in the number of shares entitled to a dividend compared to the 312,281,159 shares making up the share capital as of December 31, 2012, the overall dividend amount would be adjusted accordingly and the amount appropriated to the retained earnings account would be determined on the basis of the dividend effectively paid.

The proposed dividend amounted to 2.50 euros, up +10.3%, taking into account the attribution of one free share for 10 existing in 2012.

The dividend ex date has been set for May 16, 2013 and the dividend payment date will be set for May 22, 2013.

In accordance with the provisions of article 243 *bis* of the French Tax Code, it is specified that this dividend is in its entirety eligible for the 40% allowance referred to in section 2° of paragraph 3 of article 158 of the French Tax Code.

In addition, shareholders who had held their shares in registered form for at least two years as of December 31, 2012 and who retain such shares in registered form up to the dividend payment date, shall be entitled, for such shares (*i.e.* a total number of 90,629,532 shares at December 31, 2012), to a loyalty dividend of 10% compared with the dividend paid to the other shares, or an additional dividend of 0.25 euro per share. In accordance with the provisions of article 243 *bis* of the French Tax Code, it is specified that this dividend is also in its entirety eligible for the 40% allowance referred to in section 2° of paragraph 3 of article 158 of the French Tax Code.

The difference between the loyalty dividend calculated on the number of shares known to exist at December 31, 2012 and the loyalty dividend actually paid will be allocated to the retained earnings account.

We also ask you to take due note of distributable earnings for the year. Such amount includes profits for 2012 of 1,039,900,267 euros plus available retained earnings at December 31, 2012 of 1,137,911,804 euros, *i.e.* a total of 2,177,812,071 euros.

We propose that you appropriate the distributable earnings for fiscal year 2012, *i.e.* 2,177,812,071 euros, as follows:

Legal reserve	15,502,337 euros
Retained earnings	1,358,949,453 euros
Dividend (including the loyalty dividend)	803,360,281 euros

DIVIDEND DISTRIBUTION

In accordance with French law, we wish to remind you that the distributions made in respect of the last three fiscal years were as follows:

	Total amount distributed [(a)] *(in euros)*	Number of shares concerned [(b)]	Dividend distributed in its entirety eligible for the 40% allowance referred to in article 158.3.2° of the French Tax Code *(in euros)*
2009			
Ordinary dividend	594,572,297	264,254,354	2.25
Loyalty dividend	14,579,274	66,269,428	0.22
2010			
Ordinary dividend	667,623,469	284,095,093	2.35
Loyalty dividend	16,546,310	71,940,478	0.23
2011			
Ordinary dividend	709,532,352	283,812,941	2.50
Loyalty dividend	19,517,704	78,070,815	0.25

(a) Theoretical values calculated based on the number of shares as of December 31 for each fiscal year.

(b) Number of shares expressed historically as of December 31 for each fiscal year.

The amounts effectively paid after adjustment were as follows:

- *2009: 606,804,564 euros for 263,543,383 shares;*
- *2010: 679,501,164 euros for 282,504,369 shares;*
- *2011: 722,672,877 euros for 281,920,112 shares.*

The adjustment arises from the existence of treasury shares, from the final determination of the loyalty dividend taking into account shares sold between January 1 and the dividend ex date, and from the exercise of options and (in 2009 and 2010) the share capital increases reserved for employees, carried out over this same period.

COMPANY SHARE BUYBACKS

A. Information on the completion of the Company's share buyback program (pursuant to article L. 225-211 of the French Commercial Code as amended by regulation no. 2009-105 of January 30, 2009)

The Combined Shareholders' Meeting of May 9, 2012 authorized the Board, for a period of 18 months, in accordance with articles L. 225-209 *et seq.* of the French Commercial Code and the directly applicable provisions of EC regulation no. 2273/2003 of December 22, 2003, to allow the Company to repurchase its own shares in order to:

- cancel them;
- retain them for the purpose of tendering them within the scope of an exchange offer or for payment in external growth transactions, in accordance with recognized market practices and applicable regulations;
- tender them following the exercise of rights attached to marketable securities conferring entitlement to Company shares by redemption, conversion, exchange, presentation of a warrant or any other means;
- implement (i) any share purchase option plans or (ii) plans for the free grant of shares, or (iii) any employee share ownership transactions reserved for members of a company savings plan, performed through the transfer of shares acquired previously by the Company, or providing for a free grant of shares in respect of a contribution in shares by the Company and/or to replace the discount, or (iv) allocation of shares to employees and/or executive corporate officers of the Company and affiliated companies, in accordance with the laws and regulations in force;
- maintain an active market for the Company's shares pursuant to a market liquidity contract in accordance with an Ethics Charter recognized by the French financial markets authority (*Autorité des marchés financiers*).

The maximum purchase price was set at 165 euros per share and the maximum number of shares that can be bought back at 10% of the total number of shares making up the share capital as of December 31, 2011, that is 28,381,294 shares for a maximum total amount of 4,682,913,510 euros, subject to the legal limits.

These shares could be purchased at any time, excluding the periods for takeover bids on the Company's share capital, on one or more occasions and by all available means, either on or off a stock exchange, in private transactions, including the purchase of blocks of shares, or through the use of derivative financial instruments, and, if applicable, by all third parties acting on behalf of the Company, under the conditions stipulated in the provisions of the last paragraph of article L. 225-206 of the French Commercial Code.

Pursuant to this authorization and the previous delegation authorized by the Combined Shareholders' Meeting of May 4, 2011:

- a liquidity contract, which led to the following movements during the 2012 fiscal year, was set up:

- 2,557,263 shares were purchased for a total price of 240,822,959 euros, or an average purchase price of 94.17 euros,
- 2,697,539 shares were sold for a total price of 254,797,373 euros, or an average purchase price of 94.46 euros,
- 85,000 grant entitlements were compensated for a total price of 749,700 euros following the free share attribution of May 2012;

■ from February 22 to April 30, 2012, 1.2 million shares were bought back for a total price of 117,880,982 euros, *i.e.* an average share price of 98.23 euros. No shares were bought back between May 2012 and the year-end.

The total cost of the buybacks was thus limited to 358,703,941 euros;

■ in addition, during the fiscal year the Company also carried out a share tender to certain beneficiaries of plans for the free grant of shares (2010 CGSE France Plan and 2008 CGSE World Plan) in the amount of 59,009 and 19,432 treasury shares, respectively.

The total amount of the transaction fees (exclusive of taxes) was 0.4 million euros.

As of December 31, 2012, the Company directly owned 916,772 shares at an average purchase price of 82.18 euros, *i.e.* a balance sheet value of 75,338,001 euros. These shares, each with a par value of 5.50 euros, represented 0.29% of the Company's share capital. They are allocated for the purpose of share exchanges or as payment in connection with possible external growth transactions (355,602 shares) and for the purpose of the implementation of any conditional grants of shares to employees (561,170 shares).

In addition, it should be noted that no shares were held under the liquidity contract as of December 31, 2012.

B. Proposed resolution

As the authorization granted by the Ordinary Shareholders' Meeting of May 9, 2012 was partially used, the Board proposes to replace it with a new authorization to allow the Company to repurchase its own shares in order to:

■ cancel them, subject to the adoption of the tenth resolution;

■ retain them for the purpose of tendering them within the scope of an exchange offer or for payment in external growth transactions, in accordance with recognized market practices and applicable regulations;

■ tender them following the exercise of rights attached to marketable securities conferring entitlement to Company shares by redemption, conversion, exchange, presentation of a warrant or any other means;

■ implement (i) share purchase option plans or (ii) plans for free grant of shares, or (iii) employee share ownership reserved for members of a company savings plan, performed under the terms and conditions set forth in articles L. 3331-1 *et seq.* of the French Labor Code through the transfer of shares acquired previously by the Company under this resolution, or providing for a free grant of shares in respect of a contribution in shares by the Company and/or to replace the discount, or (iv) allocations of shares to employees and/or executive corporate officers of the Company and its affiliated companies, in accordance with applicable legal and regulatory provisions;

■ maintain an active market for the Company's shares pursuant to a liquidity contract in accordance with an Ethics Charter recognized by the French financial markets authority (*Autorité des marchés financiers*).

The maximum purchase price will be set at 165 euros (excluding acquisition costs) per share with a par value of 5.50 euros per share, and the maximum number of shares that can be bought back at 10% of the total number of shares making up the share capital as of December 31, 2012, or 31,228,116 shares with a par value of 5.50 euros, for a maximum total amount of 5,152,639,140 euros, subject to the legal limits.

These shares may be purchased at any time, excluding the periods for takeover bids on the Company's share capital, on one or more occasions and by all available means, either on or off a stock exchange, in private transactions, including the purchase of blocks of shares, or through the use of derivative financial instruments, and, if applicable, by all third parties acting on behalf of the Company, under the conditions stipulated in the last paragraph of article L. 225-206 of the French Commercial Code.

Shares bought back may be assigned or transferred in any manner on or off a stock exchange or through private transactions, including the sale of blocks of shares, in accordance with the applicable regulations.

Dividends on own shares held by the Company shall be allocated to retained earnings.

This authorization shall be granted for a period of 18 months starting from the date of this Shareholders' Meeting. It supersedes the authorization granted by the Ordinary Shareholders' Meeting of May 9, 2012 in its 4th resolution with respect to its non-utilized portion.

RENEWAL OF THE TERMS OF OFFICE OF THE BOARD OF DIRECTORS

The 5th and 6th resolutions concern the renewal, as members of the Company's Board of Directors, for a period of four years, of the respective terms of office of Mr. Thierry Desmarest and Mr. Thierry Peugeot that expire at the end of this Shareholders' Meeting.

Mr. Alain Joly's mandate will expire at the end of this Shareholders' Meeting. Member of the Board since 1982, Mr. Alain Joly was Chairman and Chief Executive Officer from 1995 to 2001, and then Chairman of the Supervisory Board from 2001 to 2006. The Board expressed its deepest thanks for his enormous contribution to Air Liquide's development over these years.

At the end of this Shareholders' Meeting, the Board of Directors will comprise 11 members, nine of whom will be independent according to internal regulations. In particular, the Board will notably be comprised of three women and five non-French members.

APPROVAL OF REGULATED AGREEMENTS

In the 7th and 8th resolutions, pursuant to the regulated agreements procedure, shareholders are asked to approve the set-up of a collective life-insurance scheme for Mr. Benoît Potier and Mr. Pierre Dufour. This plan follows the partial closure of the defined contribution retirement plan for senior executives, from which Mr. Benoît Potier and Mr. Pierre Dufour no longer benefit. At an unchanged cost for the Company, this choice responds to a concern for good management.

These agreements are defined in the Statutory Auditors' Special Report on regulated agreements and commitments – page 298 and the Company's website.

ISSUE OF BONDS

The Ordinary Shareholders' Meeting of May 7, 2008 had granted to the Board the authorization for a period of five years to issue, on one or more occasions, bonds within a total aggregate maximum limit of 8 billion euros.

The 9th resolution proposes the renewal for a period of five years of the expired 2008 authorization granted to the Board of Directors to issue bonds, on one or more occasions, to finance the investments related to the Group's growth strategy. Considering the increase in the size of the Group, the total aggregate maximum limit (including previous issues not yet redeemed) would be raised from 8 to 12 billion euros.

For information, the aggregate maximum limit at December 31, 2012 (arising from issues carried out under previous authorizations, including that in 2008) totaled 4.8 billion euros.

This authorization supersedes that granted by the Ordinary Shareholders' Meeting of May 7, 2008.

Resolutions within the authority of the Extraordinary Shareholders' Meeting

CANCELLATION OF SHARES PURCHASED BY THE COMPANY *VIA* A REDUCTION IN SHARE CAPITAL

To recap, in 2012, 1,200,000 shares with a total par value of 6,600,000 euros were cancelled by the Board of Directors on May 9, 2012.

You are asked to authorize the Board of Directors to cancel, *via* its decisions alone, on one or more occasions, and within the limit of 10% of the Company's share capital per 24 month period, any or all of the shares bought back by the Company within the scope of the authorization adopted by this Ordinary Shareholders' Meeting in its 4th resolution and of those shares bought back within the scope of the authorizations adopted by the Ordinary Shareholders' Meetings of May 9, 2012 and May 4, 2011, and to reduce the share capital by this amount.

The difference between the carrying amount of the cancelled shares and their par value will be allocated to the reserve or additional paid-in capital accounts.

This authorization shall be granted for a period of 24 months starting from the date hereof and supersedes the authorization granted by the Extraordinary Shareholders' Meeting of May 9, 2012 in its 8th resolution.

GRANT OF SHARE SUBSCRIPTION OPTIONS OR SHARE PURCHASE OPTIONS WITH WAIVER BY SHAREHOLDERS OF THEIR PREFERENTIAL SUBSCRIPTION RIGHTS

The Company's policy for granting options, pursuant to the recommendations of the AFEP-MEDEF Code, is described in detail in this Reference Document – page 152.

The Combined Shareholders' Meeting of May 5, 2010 had authorized the Board, for a period of 38 months, within the scope of articles L. 225-177 *et seq.* of the French Commercial Code to grant on one or more occasions, to employees and/or executive corporate officers of the Company or its subsidiaries within the meaning of article L. 225-180 of the French Commercial Code or some of such employees and/or executive corporate officers, options conferring entitlement to subscribe to new shares of the Company to be issued pursuant to an increase in share capital or options conferring entitlement to the purchase of Air Liquide shares bought back by the Company. The total number of the options thus granted over a period of 38 months may not confer entitlement to a total number of shares exceeding 2% of the Company's share capital on the date the options were allocated by the Board of Directors. The period of validity during which the options may be exercised was set at a maximum of 10 years as from the date of their allocation by the Board of Directors. This authorization was partially used when the Board of Directors implemented stock option plans in 2010, 2011 and 2012, under which a total of 1,919,231[a] share subscription options were granted, representing as of December 31, 2012 around 0.61%[a] of the Company's share capital.

(a) In historical data

In order to allow the Board of Directors to pursue its share subscription and share purchase option allocation program in order to strengthen the loyalty of employees and executive corporate officers and associate them closely with the Group's development and its stock market performance in the long term, we ask in the 11th resolution that you renew the previous authorization, which is due to expire, by authorizing the Board, in accordance with articles L. 225-177 *et seq.* of the French Commercial Code, to grant on one or more occasions, to employees and executive corporate officers of the Company or its French and foreign subsidiaries within the meaning of article L. 225-180 of the French Commercial Code, or some of such employees and executive corporate officers, options conferring entitlement to subscribe to new shares of the Company to be issued pursuant to an increase in share capital or options conferring entitlement to the purchase of Air Liquide shares bought back by the Company.

The Board of Directors thus wishes to pursue the strategy under which the Board decided, on the recommendation of the Remuneration Committee, to impose performance conditions on the exercise of all the options granted to executive corporate officers and members of the Executive Committee (requirements determined with reference to growth objectives for recurring net earnings per share and the shareholder's return from a three-year investment in Air Liquide shares). For executive corporate officers, the grant is subject to strict share holding requirements. The number of options granted in 2012 to executive corporate officers has remained unchanged for five years for Benoît Potier and three years for Pierre Dufour. Furthermore, grants to any other beneficiary of a number of options exceeding a threshold of 1,500 options will be subject to the same performance conditions, for 50% of the options granted in excess of said threshold.

The options are subject to a continued service requirement at the time of exercise and may be exercised within a period of 10 years as from the date of grant. The number of options already granted by the Company under previous resolutions, that can still be exercised, represent as of December 31, 2012, 1.55% of the Company's share capital.

The terms and conditions governing grants of options since 2009, and the grant conditions and limits specific to executive corporate officers, are described in this Reference Document – pages 142 and 152.

The total number of options thus granted may not confer entitlement to a total number of shares exceeding 2% of the Company's share capital on the date the options were allocated by the Board of Directors over 38 months, this limit being unchanged in relation to the previous authorization; it should include the grants for executive corporate officers that do not confer entitlement to a number of shares exceeding 0.3% of the Company's share capital over the same period. The maximum par value amount of share capital increases performed on the basis of this authorization shall be deducted from the overall limit stipulated in paragraph 2 of the 13th resolution subject to the approval of this Extraordinary Shareholders' Meeting (or any resolution which may replace it at a later date). Under this authorization, the period of validity during which the options may be exercised is set at a maximum period of 10 years as from the date of their allocation by the Board of Directors, and full powers are granted to the Board of Directors to set a shorter period. It shall entail an express waiver by the shareholders of their preferential subscription right to the shares that shall be issued as and when the options are exercised in favor of the beneficiaries of the options to subscribe to shares. The grant shall be carried out under the conditions provided for by law and the applicable regulations.

The Board of Directors, within the limits provided for by law, shall set the conditions in which the options will be granted, the list of beneficiaries and the number of the options offered and shall determine the subscription or purchase price of the shares, which may not be lower than the average of the opening trading prices for the twenty trading days prior to the date when the option is granted, rounded down to the nearest euro, nor for share purchase options, the average purchase price of the Company's treasury shares, rounded down to the nearest euro. This price may not be modified unless the Company were to carry out one of the financial or securities transactions provided for by law. In such a case, the Board of Directors would make an adjustment, under the conditions provided for in the regulations, to the number and the price of the shares covered by the options granted, in order to take into account the impact of the transaction; it may furthermore, in such a case, if it were to consider it necessary, temporarily suspend the right to exercise the options during the period of such transaction.

This authorization is granted for a period of 38 months and supersedes the authorization granted by virtue of the 16th resolution of the Extraordinary Shareholders' Meeting of May 5, 2010, for its non-utilized portion.

CONDITIONAL GRANTS OF SHARES TO EMPLOYEES AND EXECUTIVE CORPORATE OFFICERS WITH WAIVER BY SHAREHOLDERS OF THEIR PREFERENTIAL SUBSCRIPTION RIGHTS

The Company's policy for Conditional Grants of Shares to Employees (CGSE) is described in detail in this Reference Document – page 152.

The Extraordinary Shareholders' Meeting of May 5, 2010 authorized the Board, for a period of 38 months, to carry out free grants of shares to employees of the Company and its subsidiaries and the corporate officers of these subsidiaries (excluding the Company's executive corporate officers). The total number of shares thus granted over the period of 38 months may not exceed 0.5% of the Company's share capital on the date the shares were granted by the Board of Directors. This authorization was partially used when the Board of Directors implemented CGSE plans in 2010, 2011 and 2012, under which a total of 367,663 shares were granted (subject to the requirements set by the Board) representing, as of December 31, 2012, 0.12% of the Company's share capital.

Since the initial grant was made in 2008, the Board of Directors has decided, upon the Remuneration Committee's recommendation, that all free shares granted must be subject to a continued service requirement and performance conditions. The performance conditions were determined by reference to a growth target for recurring net earnings per share over a period of two years (the conditions applicable to grants performed since 2008 are described in this Reference Document – page 156).

This share grant policy would be continued within the scope of the authorization, which the shareholders are being asked to renew in the 12th resolution. Providing in this authorization for the possibility that conditional grants of shares could be carried out for the benefit of the executive officers would allow the Company to have at its disposal all the various remuneration tools available to balance cost and competitiveness objectives where applicable, in line with the Group's remuneration policy.

Pursuant to the authorization provided for in this draft resolution, the total number of shares that may be granted is maintained at 0.5% of the share capital over a period of 38 months while the maximum number of shares that may be granted to executive officers is set at 0.15% of the share capital over the same period.

The Board of Directors shall be competent to determine the identity of the beneficiaries of the CGSE plans.

Subject to the achievement of these continued service and performance conditions, the grant shall be definitive at the end of a minimum vesting period of either (i) four years (with no holding requirement after this period) or (ii) two years (in this case with a holding requirement after the minimum two-year period), depending on the Board of Directors' decision.

This authorization is granted for a period of 38 months and supersedes the authorization granted by virtue of the 17th resolution of the Extraordinary Shareholders' Meeting of May 5, 2010, for its non-utilized portion.

INCREASE IN SHARE CAPITAL *VIA* THE ISSUANCE OF ORDINARY SHARES OR MARKETABLE SECURITIES CONFERRING ENTITLEMENT TO THE COMPANY'S SHARE CAPITAL, WITH RETENTION OF SHAREHOLDER PREFERENTIAL SHARE SUBSCRIPTION RIGHTS

The Extraordinary Shareholders' Meeting of May 4, 2011 had delegated to the Board of Directors the authority to decide to increase share capital for a maximum par value amount of 390 million euros corresponding to around 25% of share capital as of December 31, 2010, by issuing, on one or more occasions, shares or marketable securities conferring entitlement, immediately or in the future, to the Company's shares, with retention of shareholders' preferential subscription rights. This authorization, granted for 26 months, is due to expire and was not used.

To finance the Group's growth investments, shareholders are asked in the 13th resolution to renew the delegation granted to the Board of Directors to increase the share capital for a maximum par value amount of 430 million euros corresponding to around 25% of the share capital as of December 31, 2012, the maximum amount of capital increases that may be carried out by the Board of Directors under delegation. This delegation of authority would be valid for a period of 26 months and supersede the delegation granted by the Extraordinary Shareholders' Meeting of May 4, 2011 in its 17th resolution for its non-utilized portion.

The shareholders shall have, in proportion to the amount of shares they own, a preferential subscription right to the shares or marketable securities issued.

The total amount of capital increases reserved for employees that would be carried out pursuant to the 14th resolution and the resolutions enabling employees and executive corporate officers to obtain shares (11th, 12th, 15th and 16th resolutions) shall be deducted from this maximum amount of 430 million euros. Furthermore, the maximum nominal amount of marketable debt securities conferring entitlement to the Company's share capital issued by virtue of the 13th resolution may not exceed a limit of 2.5 billion euros.

The 14th resolution allows for the amount of shares issued to be increased, within the legal limits of 15%, in the event of oversubscription.

These delegations would be valid for a period of 26 months.

SHARE CAPITAL INCREASES RESERVED FOR EMPLOYEES WITH CANCELLATION OF SHAREHOLDER PREFERENTIAL SUBSCRIPTION RIGHTS

The Extraordinary Shareholders' Meeting of May 9, 2012 had authorized the Board of Directors to increase share capital for a maximum of 30.25 million euros in par value, and a maximum of 5.5 million shares, for Group employees belonging to a Group or Company savings plan. This authorization was not used.

In accordance with legal provisions, these resolutions are submitted again for the vote of the shareholders. The two resolutions proposed to the Shareholders' Meeting are identical to those approved on May 9, 2012.

Shareholders, having read the Board of Directors' Report and the Statutory Auditors' Special Report, are therefore asked to authorize the Board of Directors to decide one or more share capital increases, at the time or times and in the proportions that it deems appropriate, *via* the issuance of ordinary shares of the Company, as well as any other marketable securities granting access, immediately or in the future, to the Company's share capital, reserved for:

- under the 15th resolution, the members, from the Company and the French or foreign companies which are affiliated to it within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code, of a Company or Group savings plan (directly or through a Company mutual fund or all other structures or entities permitted by applicable legal or regulatory provisions). The delegation shall be valid for a period of 26 months starting from the date of this Shareholders' Meeting;
- under the 16th resolution, a category of beneficiaries, defined as any financial institution or subsidiary of such an institution mandated by the Company, which would subscribe to shares, or other marketable securities issued by the Company pursuant to the 16th resolution, with the sole intent to enable employees and corporate officers of foreign companies, affiliated to the Company within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code, to benefit from a plan with an economic profile comparable to an employee share ownership scheme that would be set up in connection with a share capital

increase performed in accordance with the 15th resolution of this Shareholders' Meeting, assuming the implementation of an identical employee share ownership scheme for the benefit of the employees and corporate officers of the aforementioned foreign companies would conflict with local legal, regulatory or tax constraints. The delegation shall be valid for a period of 18 months starting from the date of this Shareholders' Meeting.

The Board of Directors shall be competent to determine, within those categories, the identity of the beneficiaries of these share capital increases.

The total amount of share capital increases likely to be performed in accordance with these two resolutions may not exceed a maximum par value of 30.25 million euros, corresponding to the issue of a maximum of 5.5 million shares (amounts identical to those approved in 2012). Furthermore, the total maximum amount of share capital increases likely to be performed on the basis of these two resolutions shall be deducted from the overall limit stipulated in paragraph 2 of the 13th resolution subject to the approval of this Extraordinary Shareholders' Meeting. In the event that they are used, the proposed resolutions will automatically result in the cancellation of the shareholders' preferential subscription rights in favor of the above-mentioned beneficiaries.

The subscription price of the shares that would be issued pursuant to these two resolutions may not exceed the average, determined in accordance with article L. 3332-19 of the French Labor Code, of the opening trading prices for the Company's share during the 20 stock market trading days preceding the date of the decision setting the opening date for the subscription to a share capital increase made on the basis of the 15th resolution, or be more than 20% lower than such average, bearing in mind that the shareholders will officially authorize the Board of Directors, if deemed appropriate, to reduce or cancel the aforementioned discount, within the legal, regulatory and tax limits under the applicable foreign law. In accordance with article L. 3332-21 of the French Labor Code, the Board of Directors may provide for the grant, on a bonus basis, to the beneficiaries referred to in the 15th resolution, of shares to be issued or already issued or other securities granting access to the Company's share capital to be issued or already issued, in respect of (i) the contribution that could be paid in accordance with the regulations governing Company or Group saving plans, and/or (ii) where appropriate, the discount.

Should the beneficiaries referred to in the 15th resolution not subscribe to the entire share capital increase within the allotted deadlines, the share capital increase would only be performed for the amount of the shares subscribed, and the non-subscribed shares may be offered again to the beneficiaries concerned within the scope of a subsequent share capital increase.

Finally, the shareholders shall grant full powers to the Board of Directors, with the option of sub-delegation under the conditions determined by law, to set, within the limits described above, the various terms and conditions governing the implementation of the two proposed resolutions.

> COMBINED SHAREHOLDERS' MEETING – MAY 7, 2013

Ordinary Shareholders' Meeting

Resolutions 1 and 2 Approval of the financial statements for the year

Purpose

Shareholders are asked in the **1st and 2nd resolutions** to approve the Company financial statements and consolidated financial statements of Air Liquide for the year ended December 31, 2012.

FIRST RESOLUTION

(Approval of the Company financial statements for the year ended December 31, 2012)

The shareholders, deliberating according to the *quorum* and majority required for Ordinary Shareholders' Meetings, after having reviewed:

- the Reports of the Board of Directors and the Statutory Auditors;
- the Company's financial statements, income statement, balance sheet and notes thereto,

approve the Company's financial statements for the year ended December 31, 2012 as presented, and approve the transactions reflected in these financial statements or mentioned in these reports.

The shareholders set the amount of net earnings for the year at 1,039,900,267 euros.

SECOND RESOLUTION

(Approval of the consolidated financial statements for the year ended December 31, 2012)

The shareholders, deliberating according to the *quorum* and majority required for Ordinary Shareholders' Meetings, after having reviewed:

- the Reports of the Board of Directors and the Statutory Auditors;
- the Group's consolidated financial statements,

approve the consolidated financial statements for the year ended December 31, 2012 as presented.

Resolution 3 Appropriation of 2012 earnings and setting of the dividend

Purpose

In the **3rd resolution**, shareholders are asked to approve the distribution of a dividend of **2.50 euros per share,** up + 10.3%, taking into account the attribution of one share for 10 existing in 2012.

A loyalty dividend of 10%, *i.e.* **0.25 euro per share**, shall be granted to shares which have been held in registered form since December 31, 2010, and which shall remain held in this form continuously until May 22, 2013, the dividend payment date. As of December 31, 2012, 29% of the shares making up the share capital are likely to benefit from this loyalty dividend.

With a **pay-out ratio of 49.9% of the Group's net profit**, the dividend proposed to shareholders is an integral part of Air Liquide's policy to reward and grow shareholder portfolios in the long term.

The dividend ex date has been set for **May 16, 2013** and the dividend payment date will be set for **May 22, 2013.**

THIRD RESOLUTION

(Appropriation of 2012 earnings and setting of the dividend)

The shareholders, deliberating according to the *quorum* and majority required for Ordinary Shareholders' Meetings, after having noted that, considering the fiscal year 2012 earnings of 1,039,900,267 euros and the retained earnings of 1,137,911,804 euros as of December 31, 2012, distributable earnings for the year total 2,177,812,071 euros, approve the proposals of the Board of Directors regarding the appropriation of earnings. The shareholders hereby decide to appropriate distributable earnings as follows:

Legal reserve	15,502,337 euros
Retained earnings	1,358,949,453 euros
Dividend (including the loyalty dividend)	803,360,281 euros

Hence, a dividend of 2.50 euros shall be paid on each of the shares conferring entitlement to a dividend, it being specified that in the event of a change in the number of shares conferring entitlement to a dividend compared to the 312,281,159 shares making up the share capital as of December 31, 2012, the overall dividend amount would be adjusted accordingly and the amount appropriated to the retained earnings account would be determined on the basis of the dividend effectively paid.

The dividend payment date will be set for May 22, 2013:

- for directly registered shares: directly by the Company, based on the means of payment indicated by the holders;
- for indirectly registered shares, as well as for bearer shares which are registered in shareholder accounts: by the authorized intermediaries to whom the management of these shares has been entrusted.

The dividend distributions made with respect to the last three fiscal years are as follows:

	Total amount distributed [a] *(in euros)*	Number of shares concerned [b]	Dividend distributed in its entirety eligible for the 40% allowance referred to in article 158.3.2° of the French Tax Code *(in euros)*
2009			
Ordinary dividend	594,572,297	264,254,354	2.25
Loyalty dividend	14,579,274	66,269,428	0.22
2010			
Ordinary dividend	667,623,469	284,095,093	2.35
Loyalty dividend	16,546,310	71,940,478	0.23
2011			
Ordinary dividend	709,532,352	283,812,941	2.50
Loyalty dividend	19,517,704	78,070,815	0.25

(a) Theoretical values calculated based on the number of shares as of December 31 for each fiscal year.

(b) Number of shares expressed historically as of December 31 for each fiscal year.

The amounts effectively paid after adjustment were as follows:

- *fiscal year 2009: 606,804,564 euros for 263,543,383 shares;*
- *fiscal year 2010: 679,501,164 euros for 282,504,369 shares;*
- *fiscal year 2011: 722,672,877 euros for 281,920,112 shares.*

The adjustment arises from the existence of treasury shares, from the final determination of the loyalty dividend taking into account shares sold between January 1 and the dividend ex date, and from the exercise of options and (in 2009 and 2010) the share capital increase reserved for employees, carried out over this same period.

Pursuant to the provisions of the articles of association, a loyalty dividend of 10%, *i.e.* 0.25 euro per share with a par value of 5.50 euros, shall be granted to shares which have been held in registered form since December 31, 2010, and which shall remain held in this form continuously until May 22, 2013, the dividend payment date.

In accordance with the provisions of article 243 *bis* of the French Tax Code, it is specified that the ordinary and loyalty dividends are also in their entirety eligible for the 40% allowance referred to in section 2° of paragraph 3 of article 158 of the aforementioned Code.

The amount of the loyalty dividend, for the 90,629,532 shares which have been held in registered form since December 31, 2010, and which remained held in this form continuously until December 31, 2012, totaled 22,657,383 euros.

The total loyalty dividend corresponding to those shares out of the aforementioned 90,629,532 shares that will have no longer been registered between January 1, 2013 and May 22, 2013, the dividend payment date, shall be deducted from such amount.

Resolution 4 Buyback by the Company of its own shares

Purpose

The 4th **resolution** renews the authorization granted to the Board, for a term of 18 months, to allow the Company to buy back its own shares.

The maximum purchase price is set at 165 euros (unchanged amount) per share and the maximum number of shares that can be bought back is limited to 10% of the total number of shares comprising the share capital as of December 31, 2012, *i.e.* 31,228,116 shares for a maximum total amount of 5,152,639,140 euros.

The shares purchased may be cancelled in order to offset in the long term the dilutive impact resulting from diverse capital increases.

In 2012, the buyback program resulted in the purchase and cancellation of 1.2 million shares, representing 0.42% of capital. Furthermore, under the liquidity contract, 2.6 million shares were purchased and 2.7 million were sold. As of December 31, 2012, no shares were held under the liquidity contract.

As of December 31, 2012, the Company held 0.9 million shares for the purpose of exchange or payment in the context of external growth transactions and the implementation of **conditional share grants to employees**. **These shares represent 0.29% of the Company's share capital**. They do not have any voting rights and their related dividends are allocated to retained earnings.

The objectives of the share buyback program are detailed in the **4th resolution** and the program description available on the Company's website www.airliquide.com prior to the Shareholders' Meeting.

FOURTH RESOLUTION

(Authorization granted to the Board of Directors for a period of 18 months to allow the Company to trade in its own shares)

The shareholders, deliberating according to the *quorum* and majority required for Ordinary Shareholders' Meetings, after having reviewed the Report of the Board of Directors, in accordance with articles L. 225-209 *et seq.* of the French Commercial Code and the directly applicable provisions of European Commission regulation no. 2273/2003 of December 22, 2003, authorize the Board of Directors to allow the Company to repurchase its own shares in order to:

- cancel them, subject to the adoption of the tenth resolution;
- retain them for the purpose of tendering them within the scope of an exchange offer or for payment in external growth transactions, in accordance with recognized market practice and applicable regulations;
- tender them following the exercise of rights attached to marketable securities conferring entitlement to Company shares by redemption, conversion, exchange, presentation of a warrant or any other means;
- implement (i) any share purchase option plans or (ii) plans for free grants of shares, or (iii) any employee share ownership transactions reserved for members of a company savings plan, performed under the terms and conditions set forth in articles L. 3331-1 *et seq.* of the French Labor Code through the transfer of shares bought back previously by the Company under this resolution, or providing for a free grant of shares in respect of a contribution in shares by the Company and/or to replace the discount; or (iv) share grants to employees and/or executive corporate officers of the Company or affiliated companies, in accordance with the laws and regulations in force;
- maintain an active market in the Company's shares pursuant to a market liquidity contract in accordance with an Ethics Charter recognized by the French financial markets authority (*Autorité des marchés financiers*).

The shareholders set the maximum purchase price at 165 euros (excluding acquisition costs) per share with a par value of 5.50 euros and the maximum number of shares that can be bought back at 10% of the total number of shares comprising the share capital at December 31, 2012, *i.e.* 31,228,116 shares with a par value of 5.50 euros, for a maximum total amount of 5,152,639,140 euros, subject to the legal limits.

These shares may be purchased at any time, excluding the periods for takeover bids on the Company's share capital, and by all available means, either on or off a stock exchange, in private transactions, including the purchase of blocks of shares, or through the use of option mechanisms, and, if applicable, by all third parties acting on behalf of the Company, under the terms and conditions stipulated in the last paragraph of article L. 225-206 of the French Commercial Code.

Shares bought back may be commuted, assigned or transferred in any manner on or off a stock exchange or through private transactions, including the sale of blocks of shares, in accordance with the applicable regulations.

Dividends on own shares held by the Company shall be allocated to retained earnings.

This authorization is granted for a period of 18 months starting from the date of the Shareholders' Meeting. It supersedes the authorization granted by the fourth resolution of the Ordinary Shareholders' Meeting of May 9, 2012 with respect to the non-utilized portion of such authorization.

The shareholders give full powers to the Board of Directors, with the possibility of delegating such powers, to implement this authorization, place orders for trades, enter into all agreements, perform all formalities and make all declarations with regard to all authorities and, generally, do all that is necessary for the execution of any of the Board's decisions made in connection with this authorization.

The Board of Directors shall inform the shareholders of any transactions performed in accordance with applicable regulations.

Resolutions 5 and 6 Renewal of terms of office of Directors

Purpose

The **5th and 6th resolutions** concern the **renewal**, as members of the Company's Board of Directors, for a period of four years, **of the respective terms of office** of Mr. Thierry Desmarest and Mr. Thierry Peugeot that expire at the end of this Shareholders' Meeting.

Mr. Alain Joly's mandate will expire at the end of this Shareholders' Meeting. Member of the Board since 1982, Mr. Alain Joly was Chairman and Chief Executive Officer from 1995 to 2001, and then Chairman of the Supervisory Board from 2001 to 2006. The Board expressed its deepest thanks for his enormous contribution to Air Liquide's development over these years.

At the end of this Shareholders' Meeting, the Board of Directors will comprise 11 members, nine of whom will be independent according to the internal regulations. In particular, the Board will notably be comprised of three women and five non-French members.

FIFTH RESOLUTION

(Renewal of the term of office of Mr. Thierry Desmarest as Director)

The shareholders, deliberating according to the *quorum* and majority required for Ordinary Shareholders' Meetings, after having reviewed the Report of the Board of Directors, decide to renew the term of office of Mr. Thierry Desmarest as a Director for a term of four years, which will expire at the end of the Ordinary Shareholders' Meeting for 2017, held to approve the financial statements for the fiscal year ending December 31, 2016.

SIXTH RESOLUTION

(Renewal of the term of office of Mr. Thierry Peugeot as Director)

The shareholders, deliberating according to the *quorum* and majority required for Ordinary Shareholders' Meetings, after having reviewed the Report of the Board of Directors, decide to renew the term of office of Mr. Thierry Peugeot as a Director for a term of four years, which will expire at the end of the Ordinary Shareholders' Meeting for 2017, held to approve the financial statements for the fiscal year ending December 31, 2016.

Resolutions 7 and 8 Approval of related party agreements

Purpose

In the **7th and 8th resolutions**, pursuant to the regulated agreements procedure, shareholders are asked to approve the set-up of a collective life-insurance scheme for Mr. Benoît Potier and Mr. Pierre Dufour. This plan follows the partial closure of the defined contribution retirement plan for senior executives, from which Mr. Benoît Potier and Mr. Pierre Dufour no longer benefit. At an unchanged cost for the Company, this choice responds to a concern for good management.

These agreements are defined in the Statutory Auditors' Special Report on regulated agreements and commitments (see 2012 Reference Document and the Company's website).

SEVENTH RESOLUTION

(Approval of the agreements referred to in articles L. 225-38 et seq. of the French Commercial Code and the Statutory Auditors' Special Report, relating to Mr. Benoît Potier)

The shareholders, deliberating according to the *quorum* and majority required for Ordinary Shareholders' Meetings, duly note that the Special Report provided for by the laws and regulations currently in force on the new agreements referred to in articles L. 225-38 *et seq.* of the French Commercial Code undertaken in favor of Mr. Benoît Potier, has been submitted to them.

The shareholders approve the agreements and the report prepared with regard to such agreements pursuant to articles L. 225-38 *et seq.* of the French Commercial Code.

EIGHTH RESOLUTION

(Approval of the agreements referred to in articles L. 225-38 et seq. of the French Commercial Code and the Statutory Auditors' Special Report, relating to Mr. Pierre Dufour)

The shareholders, deliberating according to the *quorum* and majority required for Ordinary Shareholders' Meetings, duly note that the Special Report provided for by the laws and regulations currently in force on the new agreements referred to in articles L. 225-38 *et seq.* of the French Commercial Code undertaken in favor of Mr. Pierre Dufour, has been submitted to them.

The shareholders approve the agreements and the report prepared with regard to such agreements pursuant to articles L. 225-38 *et seq.* of the French Commercial Code.

Resolution 9 Issue of bonds

Purpose

The **9th resolution** proposes the renewal of the expired 2008 authorization granted to the Board of Directors for a period of five years to issue bonds, on one or more occasions, to **finance the investments related to the Group's growth strategy**. Considering the increase in the size of the Group, the total aggregate maximum limit would be raised from 8 to 12 billion euros.

NINTH RESOLUTION

(Authorization granted to the Board of Directors for a period of five years to issue, on one or more occasions, bonds within a total aggregate maximum limit (including previous issues not yet redeemed) of 12 billion euros)

The shareholders, deliberating according to the *quorum* and majority required for Ordinary Shareholders' Meetings, pursuant to article 19 of the articles of association, authorize the Board of Directors for a period of five years to issue, on one or more occasions, at the times and under the conditions that it deems appropriate, one or more fixed-rate or floating-rate bonds, denominated in euros or foreign currencies or monetary units determined with reference to several currencies, with or without collateral, within the total aggregate maximum limit (including previous issues not yet redeemed) of 12 billion euros or its counter-value in the currency used, represented by bonds. This authorization supersedes that granted by the Ordinary Shareholders' Meeting of May 7, 2008 in its thirteenth resolution.

Full powers are granted to the Board of Directors within the aforementioned limits in order to decide on all the necessary measures to perform such issue or issues. The shareholders authorize the Board of Directors to delegate to the Chief Executive Officer, or one or more Senior Executive Vice-Presidents, the necessary powers to perform the bond issue and determine its terms and conditions, within the limits set by this Shareholders' Meeting.

Extraordinary Shareholders' Meeting

Resolution 10 Authorization to reduce the share capital by cancellation of treasury shares

Purpose

As is the case each year, we ask you, in the **10th resolution**, to authorize the Board of Directors to cancel any or all of the shares purchased in the share buyback program and reduce share capital under certain conditions, particularly in order to fully offset, where necessary, any potential dilution resulting from diverse capital increases.

The difference between the carrying amount of the cancelled shares and their par value will be allocated to reserves or additional paid-in capital accounts.

This authorization granted to the Board of Directors will be for a period of 24 months.

TENTH RESOLUTION

(Authorization granted to the Board of Directors for a period of 24 months to reduce the share capital by cancellation of treasury shares)

The shareholders, deliberating according to the *quorum* and majority required for Extraordinary Shareholders' Meetings, after having reviewed the Report of the Board of Directors and the Statutory Auditors' Special Report, authorize the Board of Directors to cancel, *via* its decisions alone, on one or more occasions, and within the limit of 10% of the Company's share capital per 24-month period, any or all of the shares bought back by the Company within the scope of the authorization adopted by this Ordinary Shareholders' Meeting in its fourth resolution and of those shares bought back within the scope of the authorizations adopted by the Ordinary Shareholders' Meetings of May 9, 2012 and May 4, 2011 and to reduce the share capital by this amount.

The difference between the carrying amount of the cancelled shares and their par value will be allocated to any reserve or additional paid-in capital accounts.

This authorization is granted for a period of 24 months starting from the date of this Shareholders' Meeting. It supersedes the authorization granted by the Extraordinary Shareholders' Meeting of May 9, 2012 in its eighth resolution with respect to the non-utilized portion of such authorization.

Full powers are granted to the Board of Directors to implement this authorization, deduct the difference between the carrying amount of the shares cancelled and their par value amount from all reserve and additional paid-in capital accounts and, with the possibility of sub-delegation under the conditions set by law, to carry out the necessary formalities to implement the reduction in capital which shall be decided in accordance with this resolution and amend the articles of association accordingly.

Resolution 11 Grant of share subscription options or share purchase options

Purpose

The purpose of the **11th resolution** is to renew, for a period of 38 months, the authorization granted in 2010 to the Board of Directors to grant share subscription and purchase options to employees and executive corporate officers to strengthen their loyalty and associate them closely with the Group's development and its stock market performance in the long term.

All the options granted to the Company's executive corporate officers, and since 2012 to Executive Committee members, are subject to performance requirements determined with reference to growth objectives for recurring net earnings per share over three years and the shareholder's return from a three-year investment in Air Liquide shares. For executive corporate officers, the grant is subject to strict share holding requirements. The number of options granted in 2012 to executive corporate officers has remained unchanged for five years for Benoît Potier and three years for Pierre Dufour.

The options are subject to a continued service requirement at the time of exercise and may be exercised within a period of 10 years as from the date of grant. The number of options already granted by the Company under previous resolutions, that can still be exercised, represents as of December 31, 2012, 1.55% of the Company's share capital.

This grant policy would be continued under the authorization, which shareholders are asked to renew. The total number of options granted under this resolution may not confer entitlement to a number of shares exceeding 2% (unchanged) of the Company's share capital over 38 months and would include the grants for executive corporate officers that do not confer entitlement to a number of shares exceeding 0.3% of the Company's share capital over the same period.

ELEVENTH RESOLUTION

(Authorization granted to the Board of Directors for a period of 38 months to grant to employees and executive corporate officers of the Group, or some of such employees and executive corporate officers, share subscription options or share purchase options resulting in the waiver by shareholders of their preferential subscription rights to shares to be issued upon exercise of the subscription options)

The shareholders, deliberating according to the *quorum* and majority required for Extraordinary Shareholders' Meetings, after having reviewed the Report of the Board of Directors and the Statutory Auditors' Special Report:

- authorize the Board of Directors within the scope of articles L. 225-177 *et seq.* of the French Commercial Code to grant on one or more occasions, to employees and executive corporate officers of the Company or its French and foreign subsidiaries within the meaning of article L. 225-180 of the French Commercial Code or some of such employees and executive corporate officers, options conferring entitlement to subscribe to new shares of the Company to be issued pursuant to an increase in capital or options conferring entitlement to the purchase of existing Air Liquide shares bought back by the Company;
- decide that the total number of the options thus granted over a period of 38 months may not confer entitlement to a total number of shares exceeding 2% of the Company's share capital on the date the options are granted by the Board of Directors, bearing in mind that the number of options granted to the Company's executive corporate officers, pursuant to this authorization, may not confer entitlement to a total number of shares exceeding 0.3% of the Company's share capital on the date the options are granted by the Board of Directors; the total numbers of shares thus determined do not take into account any adjustments that could be made in accordance with the applicable legal and regulatory provisions in order to preserve the rights of beneficiaries of the share subscription or purchase options;
- decide that the maximum par value amount of share capital increases performed on the basis of this authorization shall be deducted from the overall limit stipulated in paragraph 2 of the thirteenth resolution (or any resolution which may replace it at a later date);
- set the period of validity during which the options may be exercised at a maximum period of 10 years as from the date of their allocation by the Board of Directors, and grant full powers to the Board of Directors to set a shorter period;
- decide that this authorization is granted for a period of 38 months as from the date hereof. It shall entail an express waiver by the shareholders of their preferential subscription right to the shares that shall be issued as and when the options are exercised in favor of the beneficiaries of the options to subscribe to shares;
- decide that the Board of Directors, within the limits provided for by law and this resolution, shall set the conditions in which the options will be granted, the list of beneficiaries and the number of the options offered and shall determine the subscription or purchase price of the shares, which may not be lower than the average of the opening trading prices for the 20 trading days prior to the date when the option is granted, rounded down to the nearest euro, nor for share purchase options, the average purchase price of the Company's treasury shares, rounded down to the nearest euro. This price may not be modified unless the Company were to carry out one of the financial or

securities transactions provided for by law. In such a case, the Board of Directors would make an adjustment, under the conditions provided for in the regulations, to the number and the price of the shares covered by the options granted, in order to take into account the impact of the transaction; it may furthermore, in such a case, if it were to consider it necessary, temporarily suspend the right to exercise the options during the period of such transaction;

- grant full powers to the Board of Directors, with the option of sub-delegation under the conditions set by law, to, where necessary, deduct the share capital increase costs from the amount of additional paid-in capital relating to such increases, complete or have completed all actions and formalities in order to record the share capital increase(s) resulting from the exercise of subscription options and amend the articles of association accordingly.

This authorization supersedes the authorization granted by virtue of the sixteenth resolution of the Extraordinary Shareholders' Meeting of May 5, 2010, for its non-utilized part.

Resolution 12 Conditional grants of shares

Purpose

The purpose of the **12th resolution** is to renew for a period of 38 months, the authorization given to the Board of Directors in 2010 to make free grants of shares of the Company in favor of the Group's employees.

Since the initial grant was made in 2008, the Board of Directors has decided, upon the Remuneration Committee's recommendation that all free shares granted must be subject to a continued service requirement and performance conditions. The performance conditions were determined by reference to a growth target for recurring net earnings per share over a period of two years. The number of shares granted under the 2010 resolution, which is due to expire (subject to fulfilment of the conditions set by the Board), represents as of December 31, 2012, 0.12% of the Company's share capital.

This share grant policy would be continued within the scope of the authorization which the shareholders are being asked to renew. Providing in this authorization for the possibility that conditional grants of shares could be carried out for the benefit of the executive officers would allow the Company to have at its disposal all the various remuneration tools available to balance cost and competitiveness objectives where applicable, in line with the Group's remuneration policy.

Pursuant to the authorization provided for in this draft resolution, the total number of shares that may be granted is maintained at 0.5% of the share capital over a period of 38 months while the maximum number of shares that may be granted to executive officers is set at 0.15% of the share capital over the same period.

TWELFTH RESOLUTION

(Authorization granted to the Board of Directors for a period of 38 months to grant existing or new shares to employees and executive corporate officers of the Group, or some of such employees or executive corporate officers, resulting in the waiver by shareholders of their preferential subscription rights to the shares to be issued)

The shareholders, deliberating according to the *quorum* and majority required for Extraordinary Shareholders' Meetings, after having reviewed the Report of the Board of Directors and the Statutory Auditors' Special Report,

1. authorize the Board of Directors, within the scope of articles L. 225-197-1 *et seq.* of the French Commercial Code, to proceed, on one or more occasions, to free grants of existing or new shares to beneficiaries whom it will determine from among the employees and executive corporate officers of the Company and entities affiliated with the Company within the meaning of article L. 225-197-2 of the aforementioned Code, under the conditions set out below;
2. decide that the existing or new shares that are granted pursuant to this authorization may not represent more than 0.5% of the share capital on the date of the decision by the Board of Directors to grant them, bearing in mind that the shares granted to executive corporate officers pursuant to this authorization may not represent more than 0.15% of the share capital on the date of the decision by the Board of Directors to grant them; the total numbers of shares thus determined do not take into account any adjustments that could be made in the event of a transaction involving the Company's share capital;
3. decide that the maximum par value amount of share capital increases performed on the basis of this authorization shall be deducted from the overall limit stipulated in paragraph 2 of the thirteenth resolution (or any resolution which would replace it at a later date);

4. decide that the grant of such shares to their beneficiaries shall become definitive either:

   i) at the end of a minimum vesting period of two years, it being specified that the beneficiaries shall then be required to hold such shares for a minimum period of two years as from their final grant date, or

   ii) for all or some of the shares granted, at the end of a minimum vesting period of four years, in which case no minimum holding period shall apply,

   it being specified that the Board of Directors shall have the option to choose between these two possibilities and to use them alternatively or concurrently, and that it may, in either case, extend the vesting period, and, in the first case, extend the holding period and, in the second case, provide for a holding period;

5. decide that the grant of such shares to their beneficiaries shall become definitive prior to the end of the above-mentioned vesting periods and that such shares shall be freely transferable in the event of disability of the beneficiary, under the conditions provided for by law;

6. take due note that, in the event of the free grant of new shares, this authorization shall entail, as and when such shares are definitively granted, an increase in capital by capitalization of additional paid-in capital, reserves or profits in favor of the beneficiaries of the shares and the correlative waiver by the shareholders of their preferential subscription rights to such shares in favor of the beneficiaries;

7. grant full powers to the Board of Directors, with the possibility of sub-delegation under the conditions set by law, in order to implement this authorization. The Board of Directors shall have full powers in order to, in particular:

   – determine the identity of the beneficiaries, or the category or categories of beneficiaries, of the granted shares and the number of shares granted to each of them,

   – set the conditions and, where applicable, the criteria for the allotment of shares,

   – provide for the possibility to provisionally suspend the rights to the allotment under the conditions provided for by law and the applicable regulations,

   – enter the granted free shares in a registered account in the name of their holder, mentioning, where applicable, the holding period and the length of such period, and to waive the holding period for the shares in any circumstances in which this resolution or the applicable regulations make it possible to waive such holding period,

   – provide for the possibility, if it deems necessary, to make adjustments to the number of granted free shares in order to preserve the rights of the beneficiaries, depending on any transactions involving the Company's share capital carried out during the vesting period, as referred to in section 2 of article L. 225-181 of the French Commercial Code, and under such conditions as it may determine,

   – in the event of the issue of new shares, to deduct, where applicable, from additional paid-in capital, reserves or profits as it chooses, the amounts required to pay for such shares, record the completion of the capital increases carried out pursuant to this authorization, make the corresponding amendments to the articles of association and, in general, carry out all acts and complete all formalities that may be required.

This authorization is granted for a period of 38 months as from the date hereof and supersedes the authorization granted by virtue of the seventeenth resolution of the Extraordinary Shareholders' Meeting of May 5, 2010, for its non-utilized part.

Resolutions 13 and 14 — Increase in share capital *via* the issuance of ordinary shares or marketable securities conferring entiltment to the share capital with retention of preferential subscription rights

Purpose

To finance the Group's growth investments, shareholders are asked in the **13th resolution** to renew the delegation granted to the Board of Directors to increase the share capital for a maximum par value amount of 430 million euros corresponding to around 25% of the share capital as of December 31, 2012, by issuing, on one or more occasions, ordinary shares or marketable securities conferring entitlement, immediately or in the future, to the Company's share capital.

The shareholders shall have, in proportion to the amount of shares they own, a preferential subscription right to the shares or marketable securities issued.

This delegation of authority would be valid for a period of 26 months.

The total amount of capital increases reserved for employees that would be carried out pursuant to the 14th resolution and the resolutions enabling employees and executive corporate officers to obtain shares (11th, 12th, 15th and 16th resolutions) shall be deducted from this maximum amount of 430 million euros.

In its previous delegation, the Combined Shareholders' Meeting of May 4, 2011 had delegated to the Board of Directors the authority to decide to increase the share capital for a maximum par value amount of 390 million euros corresponding to around 25% of the share capital as of December 31, 2010. This authorization, granted for 26 months, has not been used.

The **14th resolution** allows for the amount of shares issued to be increased, within the legal limits of 15%, in the event of oversubscription.

THIRTEENTH RESOLUTION

(Delegation of authority granted to the Board of Directors for a period of 26 months in order to increase the share capital via the issuance of ordinary shares or marketable securities conferring entitlement, immediately and/or in the future, to the Company's share capital, with retention of shareholder preferential share subscription rights for a maximum par value amount of 430 million euros)

The shareholders, deliberating according to the *quorum* and majority required for Extraordinary Shareholders' Meetings, after having reviewed the Board of Directors' Report and the Statutory Auditors' Special Report and in accordance with articles L. 225-129 to L. 225-129-6 and L. 228-91 to L. 228-93 of the French Commercial Code:

1. delegate to the Board of Directors, with the option of subdelegation, in accordance with the legal provisions, the authority to decide, in the amount and on the dates it will determine, with retention of preferential share subscription rights, one or more capital increases *via* the issue, in France, in euros, foreign currencies or units of account determined according to several currencies, of ordinary shares or marketable securities conferring entitlement, immediately and/or in the future, to the Company's shares, the subscription of which may be completed in cash or by offsetting against liquid and payable debts.

   The delegation thereby granted to the Board of Directors is valid for a period of 26 months starting from the date of this Shareholders' Meeting;

2. decide that the total amount of share capital increases likely to be performed thereby immediately and/or in the future may not exceed 430 million euros in par value, from which shall be deducted (i) the issuance amount of shares or marketable securities in the event of oversubscription, pursuant to the fourteenth resolution (or any resolution which would replace it at a later date), (ii) the issuance amount of shares arising from the options granted under the eleventh resolution (or any resolution which would replace it at a later date), (iii) the issuance amount of shares granted under the twelfth resolution (or any resolution which would replace it at a later date) and (iv) the total amount of share capital increases likely to be performed in accordance with the fifteenth and sixteenth resolutions (or any resolutions which would replace them at a later date), this limit being increased by the number of shares necessary for adjustments likely to be made in accordance with applicable legislative and regulatory provisions and, as the case may be, in accordance with the contractual provisions providing for other cases of adjustment, to preserve the rights of holders of marketable securities conferring entitlement to the Company's shares; the maximum par value (or its counter-value in euros on the issue decision date in the event of an issue in foreign currencies or units of account determined by reference to several currencies) of the marketable debt securities conferring entitlement to the Company's share capital issued by virtue of this delegation may not exceed a limit of 2.5 billion euros from which shall be deducted, as the case may be, the issuance amount, in the event of oversubscription, pursuant to the fourteenth resolution (or any resolution which would replace it at a later date);

3. decide that the shareholders have, proportional to the amount of their shares, a preferential share subscription right to the shares or marketable securities conferring entitlement, immediately and/or in the future, to the Company's shares issued pursuant to this resolution;
4. decide that if the subscriptions made by the shareholders *prorata* to their existing shareholding and, as the case may be, over and above their existing shareholding if allowed by the Board of Directors, have not resulted in the purchase of all of the shares or marketable securities defined above, the Board of Directors may use, in the order it shall deem appropriate, each or some of the options set forth in article L. 225-134 of the French Commercial Code;
5. acknowledge and decide, as necessary, that this delegation shall automatically waive, in favor of the holders of marketable securities conferring entitlement to Company shares likely to be issued under this resolution, the shareholder preferential subscription rights to the new shares to which such securities entitle;
6. take due note that this delegation supersedes the delegation granted by the Extraordinary Shareholders' Meeting of May 4, 2011 in its seventeenth resolution;
7. grant full powers to the Board of Directors, with the option of sub-delegation under the conditions set by law, to implement this delegation and specifically:
   - determine the price, the terms and conditions and dates of issues, and the form and characteristics of the marketable securities to be created,
   - set the amounts to be issued, suspend, where necessary, the exercise of Company share allotment rights attached to marketable securities to be issued within a period not exceeding three months, determine the terms and conditions ensuring, as the case may be, the preservation of rights of holders of marketable securities conferring future entitlement to Company shares, in accordance with the legal, regulatory and, as the case may be, contractual provisions, proceed, where necessary, with any deductions from any issue premiums and specifically deductions of costs arising from issues,
   - list, where necessary, the marketable securities to be issued for trading in a regulated market, make all necessary arrangements and enter into any agreements in order to successfully conclude the issues contemplated, duly record the share capital increases arising from any issue carried out *via* this delegation and amend the articles of association accordingly.

FOURTEENTH RESOLUTION

(Authorization granted to the Board of Directors for a period of 26 months to increase the issuance amount of shares or marketable securities in the event of oversubscription)

The shareholders, deliberating according to the *quorum* and majority required for Extraordinary Shareholders' Meetings, after having reviewed the Board of Directors' Report and the Statutory Auditors' Special Report, and pursuant to the provisions of article L. 225-135-1 of the French Commercial Code, in the event of an issue of shares or marketable securities with retention of preferential subscription rights as provided by the thirteenth resolution:

- authorize the Board of Directors, with the option of subdelegation, to increase, under the conditions set by the law, the number of shares or marketable securities to be issued with shareholders preferential subscription rights, at the same price as set for the initial issue, within the deadlines and limits set by the applicable regulations;
- decide that the par value amount of the increase in the issue determined in accordance with this resolution shall be deducted from the initial limit and, in the event of an issue of debt securities, from the limit stipulated in the second limit stated in the thirteenth resolution;
- decide that the authorization thereby granted to the Board of Directors is valid for a period of 26 months starting from the date of this Shareholders' Meeting.

Resolutions 15 and 16 Share capital increases reserved for employees

Purpose

The Group wishes to continue increasing the involvement of employees in its development. These employee share ownership transactions contribute significantly to increasing employee motivation and sense of belonging to the Group.

Shareholders are therefore asked in the **15th resolution** to renew the authorization to increase share capital for employees who contribute to a Company or Group savings plan under the same terms and conditions as those approved at the Shareholders Meeting of May 9, 2012; this resolution is supplemented in the **16th resolution** by a comparable scheme for the employees and corporate officers of the Group's foreign companies who could not take advantage of the share ownership scheme set up in accordance with the **15th resolution**. The total amount of share capital increases likely to be performed under these resolutions remains unchanged at 30.25 million euros, corresponding to the issue of a maximum of 5.5 million shares, or 1.76% of share capital as of December 31, 2012. This amount shall be deducted from the maximum par value amount of 25% of the share capital, as stipulated in the 13th resolution relating to the overall limit for share capital increases likely to be performed with delegation to the Board of Directors. The subscription price of the shares to be issued pursuant to the two proposed resolutions shall be defined in accordance with the French Labor Code and may hence be subject to a maximum discount of 20%.

Both these resolutions shall result with cancellation of the preferential subscription rights of shareholders in favor of the beneficiaries.

At the end of 2012, the share capital held by employees and former employees of the Group is estimated at 2.1%, of which 1.5% corresponds to shares subscribed by employees during reserved capital increases for employees or held through dedicated mutual funds.

FIFTEENTH RESOLUTION

(Delegation of authority granted to the Board of Directors for a period of 26 months to perform share capital increases, with cancellation of preferential subscription rights, reserved for members of a company or Group savings plan)

The shareholders, deliberating according to the *quorum* and majority required for Extraordinary Shareholders' Meetings, after having reviewed the Report of the Board of Directors and the Statutory Auditors' Special Report, deliberating pursuant to articles L. 225-129-6 and L. 225-138-1 of the French Commercial Code and articles L. 3331-1 *et seq.* of the French Labor Code:

1. delegate to the Board of Directors the authority to decide to increase share capital, on one or more occasions, at the time or times and in the proportions that it deems appropriate, *via* the issuance of ordinary shares of the Company as well as any other marketable securities granting access, immediately or in the future, to the Company's share capital, reserved for employees who contribute to a Company or Group savings plan;
2. decide that the total amount of share capital increases likely to be performed under this resolution may not exceed a maximum par value amount of 30.25 million euros, corresponding to the issue of a maximum of 5.5 million shares, it being specified that this amount does not include additional shares to be issued, in accordance with applicable legal and regulatory provisions, and when relevant, contractual stipulations providing for other adjustments, to preserve the rights of holders of marketable securities or other rights conferring access to share capital and that the total amount of share capital increases likely to be performed under this resolution and the sixteenth resolution may not exceed the aforementioned par value amount of 30.25 million euros;
3. decide that the maximum par value amount of share capital increases likely to be performed on the basis of this delegation shall be deducted from the overall limit stipulated in paragraph 2 of the thirteenth resolution (or any resolution which would replace it at a later date);
4. decide that the beneficiaries of these capital increases will be, directly or through a Company mutual fund or all other structures or entities permitted by applicable legal or regulatory provisions, the members, within the Company and the French or foreign companies which are affiliated to it within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code, of a Company or Group savings plan;
5. decide to cancel the preferential subscription rights of shareholders to the new shares or other marketable securities granting access to capital and to the marketable securities to which the latter would confer entitlement, which shall be issued in favor of the members of a Company or Group savings plan in accordance with this resolution;

6. decide that the subscription price may not exceed the average, determined in accordance with article L. 3332-19 of the French Labor Code, of the opening trading prices for the Company's share during the 20 trading days preceding the date of the decision setting the opening date for the subscription period, or be more than 20% lower than such average, bearing in mind that the shareholders officially authorize the Board of Directors, if deemed appropriate, to reduce or cancel the aforementioned discount, in view of the legal, regulatory and tax constraints under the applicable foreign law, where applicable;
7. decide, in accordance with article L. 3332-21 of the French Labor Code, that the Board of Directors may provide for the allotment for no consideration, to the aforementioned beneficiaries, of shares to be issued or already issued or other securities granting access to the Company's capital to be issued or already issued, in respect of (i) the contribution that could be paid in accordance with the regulations governing Company or Group saving plans, and/or (ii) where appropriate, the discount;
8. also decide that, should the beneficiaries not subscribe to the entire capital increase within the allotted deadlines, the capital increase would only be performed for the amount of the shares subscribed, and that the non-subscribed shares may be offered again to the beneficiaries concerned within the scope of a subsequent capital increase;
9. grant full powers to the Board of Directors with the option of sub-delegation under the conditions set by law, to determine, within the limits described above, the various terms and conditions of the transaction and particularly:
   - define the criteria which the companies must meet in order for their employees to be entitled to benefit from the capital increases,
   - determine a list of these companies,
   - set the terms and conditions of the share issue, the characteristics of the shares, and, where appropriate, the other marketable securities, determine the subscription price calculated based on the method defined above, set the terms and conditions and deadline for fully paying up the subscribed shares, deduct from the "Additional paid-in capital" account all costs relating to these capital increases and, if deemed appropriate, all sums necessary to bring the legal reserve up to one tenth of the new share capital after each share issue, and generally complete, directly or through an authorized representative, all the transactions and formalities relating to the share capital increases performed under this resolution and, specifically, perform all the necessary formalities, and where appropriate, take any measures with a view to listing the shares issued pursuant to this resolution for trading on the Euronext Paris exchange,
   - set the opening and closing dates for the subscription period, record the completion of the corresponding capital increase and amend the articles of association accordingly;
10. decide that the delegation granted to the Board of Directors by this resolution is valid for a period of 26 months starting from the date of this Shareholders' Meeting and strips of all legal effect the delegation granted to the Board of Directors pursuant to the tenth resolution of the Extraordinary Shareholders' Meeting of May 9, 2012, for the amount of the non-utilized portion of such delegation.

SIXTEENTH RESOLUTION

(Delegation of authority granted to the Board of Directors for a period of 18 months to perform share capital increases, with cancellation of preferential subscription rights, reserved for a category of beneficiaries)

The shareholders, deliberating according to the *quorum* and majority required for Extraordinary Shareholders' Meetings, after having reviewed the Report of the Board of Directors and the Statutory Auditors' Special Report, pursuant to articles L. 225-129 to L. 225-129-2 and article L. 225-138 of the French Commercial Code:

1. delegate to the Board of Directors, the authority to decide to increase share capital, on one or more occasions, at the time or times and in the proportions it shall deem fit, *via* the issuance of ordinary shares of the Company as well as any other marketable securities conferring entitlement, immediately or in the future, to the Company's share capital, reserved for the category of beneficiaries defined hereafter;
2. decide that the total amount of share capital increases likely to be performed under this resolution may not exceed a maximum par value amount of 30.25 million euros, corresponding to the issue of a maximum of 5.5 million shares, it being specified that this amount does not include additional shares to be issued, in accordance with applicable legal and regulatory provisions, and when relevant, contractual stipulations providing for other adjustments, to preserve the rights of holders of marketable securities or other rights conferring access to share capital and that the total amount of share capital increases likely to be performed under this resolution and the fifteenth resolution may not exceed the aforementioned par value amount of 30.25 million euros;
3. decide that the maximum par value amount of share capital increases likely to be performed on the basis of this delegation shall be deducted from the overall limit stipulated in paragraph 2 of the thirteenth resolution (or any resolution which would replace it at a later date);
4. decide to cancel the preferential subscription rights of shareholders to the shares or marketable securities and to the marketable securities to which the latter would confer entitlement, which shall be issued pursuant to this resolution and to reserve the right to subscribe them to the category of beneficiaries meeting the following characteristics: any financial institution or subsidiary of such an institution mandated by the Company and which would subscribe to shares, or other marketable securities issued by the Company pursuant to this resolution, with the sole intent to enable employees and corporate officers of foreign

companies, affiliated to the Company within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code, to benefit from a plan with an economic profile comparable to an employee share ownership scheme that would be set up in connection with a share capital increase performed in accordance with the fifteenth resolution submitted to the vote of this Shareholders' Meeting, assuming the implementation of an identical employee share ownership scheme for the benefit of the employees and corporate officers of the aforementioned foreign companies would conflict with local legal, regulatory or tax constraints;

5. decide that the unit price for the issue of the shares to be issued pursuant to this resolution shall be determined by the Board of Directors based on the Company's share price; this issue price shall be equal to the average of the opening trading prices for the share during the 20 trading days preceding the date of the Board of Directors' decision setting the opening date for the period of subscription to a share capital increase performed on the basis of the fifteenth resolution, with the possibility of reducing this average by a maximum discount of 20%; the amount of this discount shall be determined by the Board of Directors within the aforementioned limit;

6. decide that the Board of Directors shall have full powers, under the terms and conditions set forth by law and within the limits defined above, with the option of sub-delegation, so as to implement this delegation and particularly in order to:

   - set the date and price for the issue of shares to be issued in accordance with this resolution as well as the other terms and conditions governing the issue,
   - determine the beneficiary (or list of beneficiaries) for the cancellation of the preferential subscription right within the above-defined category, as well as the number of shares to be subscribed by such beneficiary (or each beneficiary),
   - where appropriate, determine the characteristics of the other marketable securities granting access to the Company's share capital under the applicable legal and regulatory conditions,
   - record the completion of the share capital increase, complete, directly or through an authorized representative, all the transactions and formalities involving the share capital increases and on its sole decision and if it deems appropriate, deduct the share capital increase costs from the amount of additional paid-in capital relating to such increases, amend the articles of association accordingly and perform all the necessary formalities, and where appropriate, take any measures with a view to listing the shares issued pursuant to this resolution for trading on the Euronext Paris exchange;

7. decide that the delegation granted to the Board of Directors is valid for a period of 18 months starting from the date of this Shareholders' Meeting and strips of all legal effect the delegation granted to the Board of Directors pursuant to the eleventh resolution of the Extraordinary Shareholders' Meeting of May 9, 2012, for the amount of the non-utilized portion of such delegation.

Ordinary Shareholders' Meeting

Resolution 17 Powers

Purpose

The **17th resolution** is a standard resolution required for the completion of publications and legal formalities.

SEVENTEENTH RESOLUTION

(Powers for formalities)

Full powers are granted to a holder of a copy or extract of the minutes of this Shareholders' Meeting to perform all official publications and other formalities required by law and the regulations.

> STATUTORY AUDITORS' REPORTS

Statutory Auditors' Special Report on related-party agreements and commitments

This is an unofficial translation into English of the Statutory Auditors' Special Report on related-party agreements and commitments that is issued in French and provided solely for the convenience of English-speaking readers.

This report should be read in conjunction with, and construed in accordance with French law and professional auditing standards applicable in France.

It should be understood that the agreements and commitments reported on are only those provided for by the French Commercial Code and that the report does not apply to those related-party transactions described in IAS 24 or other equivalent accounting standards.

To the Shareholders,

In our capacity as Statutory Auditors of your Company, we hereby report on the agreements and commitments with related parties.

We are required to inform you, based on the information provided to us, of the characteristics and main terms and conditions of those agreements and commitments of which we have been informed or which we discovered at the performance of our engagement, without expressing an opinion on their usefulness and appropriateness or ascertaining the existence of any other such agreements or commitments. It is your responsibility, pursuant to Article R. 225-31 of the French Commercial Code *(Code de commerce),* to assess the benefits resulting from the conclusion of these agreements and commitments prior to their approval.

Furthermore, we are required, where applicable, to inform you in accordance with Article R. 225-31 of the French Commercial Code *(Code de commerce)* relating to the implementation, during the past fiscal year, of the agreements and commitments already approved by the Annual Shareholders' Meeting.

We performed those procedures which we considered necessary to comply with professional guidance issued by the French auditing body *(Compagnie nationale des commissaires aux comptes)* relating to this type of engagement. These procedures consisted in verifying that information provided to us is consistent with the documentation from which it has been extracted.

AGREEMENTS AND COMMITMENTS SUBMITTED FOR APPROVAL OF THE ANNUAL SHAREHOLDERS' MEETING

Agreements and commitments authorized during the year and after closing

In accordance with Article L. 225-40 of the French Commercial Code *(Code de commerce),* we have been advised of the following agreements and commitments which received prior authorization of the Board of Directors.

With Mr. Potier, Chairman and Chief Executive Officer and Mr. Pierre Dufour, Senior Executive Vice-President

Life insurance

In its meetings held on November 20, 2012 and February 13, 2013, following the decrease in the compensation ceiling considered for the defined contribution plan applicable to senior managers and executives, the Board of Directors authorized the implementation of an optional life-insurance scheme for the benefits of the Executive Officers, Mr. Potier and Mr. Dufour. The Company finances the new scheme under the same conditions as the former defined contribution plan for the total remuneration comprised between eight and twenty-four times the Social yearly French security ceiling. The reference compensation includes the fixed remuneration and the variable part of remuneration; the variable part taken into consideration may however not exceed 100% of the fixed part of remuneration.

Rights resulting from the contributions paid are definitively acquired to Mr. Potier and Mr. Dufour and constitute a saving, the availability of which is not linked with the termination of the professional activity.

The contributions paid in 2012 under the life-insurance scheme totaled respectively €113,126 for Mr. Potier and €113,126 for Mr Dufour.

AGREEMENTS AND COMMITMENTS ALREADY APPROVED BY AN ANNUAL SHAREHOLDERS' MEETING

Agreements and commitments approved during prior years

a) the performance of which continued during the past year

Pursuant to Article R. 225-30 of the French Commercial Code, we have been informed that the performance of the following agreements and commitments, already approved by the Annual Shareholders' Meeting during prior fiscal years, continued during the last fiscal year.

1. With Mr. Benoît Potier, Chairman and Chief Executive Officer

Pension plan

Mr. Potier benefits from the pension schemes applicable to senior managers and executives consisting of defined-contribution plans for the part of the remuneration which amounts to less than eight times the yearly French social security ceiling and a supplementary defined-benefit scheme for the portion of remuneration exceeding twenty-four times the French social security ceiling.

The compensation ceiling considered for the calculation of the defined-contribution plan applicable to senior managers and executives has been progressively reduced from twenty-four to eight times the French social security ceiling at the beginning of 2013. At the same time, the Company has implemented a life-insurance system which benefits to Mr. Potier in accordance with the terms and conditions disclosed in the first section of this report.

The contributions paid by the Company in 2012 under the defined-contribution plans totaled €84,570.

Pursuant to the defined benefit plan, the total pension benefits, for all types of pension schemes combined, may not exceed 45% of the average of the three highest total amounts of annual remuneration for each of the last five years. For this calculation, the average of the variable parts of remuneration taken into account may not exceed 100% of the average of the fixed remuneration amounts. In the event that this limit is reached, the amount paid under the defined benefit scheme would be reduced accordingly.

Death, disability and related benefits scheme

As a corporate officer, Mr. Potier benefits from the death, disability and related benefits scheme for senior managers and executives whose total remuneration exceeds eight times the French social security ceiling. This scheme guarantees payment of a lump-sum amount in the event of death or permanent total disability.

The contributions paid by the Company in this respect in 2012 totaled €65,099.

Unemployment insurance

As a corporate officer, Mr. Potier benefits from the guarantee covering corporate officers subscribed by the Company.

The contributions paid by the Company in this respect in 2012 totaled €7,547.

2. With Mr. Pierre Dufour, Senior Executive Vice-President

Pension plan

Mr. Dufour benefits from the pension schemes applicable to senior managers and executives consisting of defined-contribution plans for the part of the remuneration which amounts to less than eight times the yearly French social security ceiling and a supplementary defined-benefit scheme for the portion of remuneration exceeding twenty-four times the French social security ceiling.

The compensation ceiling considered for the calculation of the defined-contribution plan applicable to senior managers and executives has been progressively reduced from twenty-four to eight times the French social security ceiling at the beginning of 2013. At the same time, the Company has implemented a life-insurance system which benefits to Mr. Dufour in accordance with the terms and conditions disclosed in the first section of this report.

The contributions paid by the Company in 2012 under the defined-contribution plans totaled €84,570.

Pursuant to the defined benefit plan, the total pension benefits, for all types of pension schemes combined, may not exceed 45% of the average of the three highest total amounts of annual remuneration for each of the last five years. For this calculation, the average of the variable parts of remuneration taken into account may not exceed 100% of the average of the fixed remuneration amounts. In the event that this limit is reached, the amount paid under the defined benefit scheme would be reduced accordingly.

Death, disability and related benefits scheme

As a corporate officer, Mr. Dufour benefits from the death, disability and related benefits scheme for senior managers and executives whose total remuneration exceeds eight times the French social security ceiling. This scheme guarantees payment of a lump-sum amount in the event of death or permanent total disability.

The contributions paid by the Company in this respect in 2012 totaled €28,480.

b) which were not implemented during the past year

Furthermore, we have been informed of the continuance in effect of the following agreements and commitments, already approved by the Annual Shareholders' Meeting during prior fiscal years, which have not been implemented during the last fiscal year.

1. With Mr. Benoît Potier, Chairman and Chief Executive Officer

Termination indemnities

In the event of the forced departure of Mr. Potier (removal from office, non-renewal of his duties, request for resignation) from his corporate offices as Chairman and Chief Executive Officer related to a change of strategy or a change in control, the Company undertook to pay Mr. Potier an indemnity equal to twenty-four months' gross fixed and variable remuneration, the payment of which is subject to compliance with performance conditions assessed in the light of the Company's performance.

If the forced departure occurs during the twenty-four months prior to the date when Mr. Potier's term of office as Chairman and Chief Executive Officer expires as a result of the statutory age limit, the amount of the indemnity will be capped at the number of months' gross remuneration between the date of forced departure and the date on which the statutory age limit will be reached. No indemnity will be paid if, on the date of forced departure, the beneficiary asks for the payment of his pension rights.

This commitment did not have any effect during the fiscal year.

Indemnity to compensate for the loss of pension rights in respect of the corporate office

In the event of termination of his corporate office on the Company's initiative before he reaches fifty-five years of age and except in the event of gross misconduct or gross negligence, the Board of Directors has awarded Mr. Potier an indemnity to compensate for the loss of his rights under the supplementary defined-benefit pension plan applicable to senior managers and executives of the Company. Payment of this indemnity is subject to compliance with conditions related to Mr. Potier's performance assessed in light of the Company's own performance.

This commitment did not have any effect during the fiscal year.

This undertaking lapsed in 2012 on Mr. Potier's fifty-fifth birthday.

2. With Mr. Pierre Dufour, Senior Executive Vice-President

Amendment to the employment contract

Following his appointment as Senior Executive Vice-President, the Board of Directors authorized the signature of an amendment to Mr. Dufour's employment contract in order to adjust the duties and terms and conditions of remuneration applicable to Mr. Dufour, as an employee. It is stipulated in this amendment that should Mr. Dufour cease to be a corporate officer, he shall be reinstated in full in his position as an employee. In consideration thereof, the fixed and variable portions of his remuneration shall be reinstated in the same proportions as those existing before he assumed the duties of corporate officer.

This commitment did not have any effect during the fiscal year.

Termination indemnities

In the event of the forced departure of Mr. Dufour (removal from office, non-renewal of his duties, request for resignation) from his corporate offices as Senior Executive Vice-President related to a change of strategy or a change in control, the Company undertook to pay Mr. Dufour an indemnity equal to twenty-four months' gross fixed and variable remuneration, the payment of which is subject to compliance with performance conditions assessed in the light of the Company's performance.

Any statutory indemnity or indemnity provided for by the collective bargaining agreement that may be paid, where applicable, to Mr. Dufour on account of termination of his employment contract, and any non-competition indemnity due in respect of such termination, shall not be subject to the above-mentioned conditions. The sum of any indemnity paid in respect of termination of his employment contract and the indemnity payable to him in the event of forced departure many not exceed 24 months' remuneration. No indemnity will be paid if the beneficiary has the possibility to apply for a full-rate pension within a short time of the date of forced departure.

This commitment did not have any effect during the fiscal year.

Paris-La Défense, March 1, 2013

The Statutory Auditors

Mazars		Ernst & Young et Autres	
Lionel Gotlib	Daniel Escudeiro	Jean-Yves Jégourel	Emmanuelle Mossé

Statutory Auditors' Report on the reduction in capital

This is a free translation into English of a report issued in French language and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.

To the Shareholders,

In our capacity as Statutory Auditors of your Company and in compliance with article L. 225-209 of the French Commercial Code (*Code de commerce*) in respect of the reduction in capital by the cancellation of repurchased shares, we hereby report on our assessment of the terms and conditions for the proposed reduction in capital.

Your Board of Directors requests that it be authorised, for a period of 24 months starting from the date of this Shareholders' Meeting, to proceed with the cancellation of shares the Company was authorised to repurchase, representing an amount not exceeding 10% of its total share capital, by periods of 24 months in compliance with the article mentioned above.

We have performed those procedures which we considered necessary in accordance with professional guidance issued by the French auditing body (*Compagnie nationale des Commissaires aux comptes*) for this type of engagement. These procedures consisted in verifying that the terms and conditions for the proposed reduction in capital, which should not compromise equality among the shareholders, are fair.

We have no matters to report as to the terms and conditions of the proposed reduction in capital.

Paris-La Défense, March 1, 2013

The Statutory Auditors

Mazars		Ernst & Young et Autres	
Lionel Gotlib	Daniel Escudeiro	Jean-Yves Jégourel	Emmanuelle Mossé

Statutory Auditors' Report on the authorization to grant share subscription options or share purchase options

This is a free translation into English of a report issued in French language and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.

To the Shareholders,

In our capacity as Statutory Auditors of your Company and in compliance with articles L. 225-177 and R. 225-144 of the French Commercial Code *(Code de commerce),* we hereby report on the authorization to grant share subscription options or share purchase options to some employees and some officers of the Company and its French or foreign subsidiaries as defined by article L. 225-180 of the French Commercial Code *(Code de commerce),* an operation upon which you are called to vote.

Total number of options that are granted pursuant to this authorization may not give right to a number of shares exceeding 2% of the share capital on the date of the decision by the Board of Directors to grant them, bearing in mind that the number of options granted to officers pursuant to this authorization may not give right to a number of shares exceeding 0.3% of the share capital on the date of the decision by the Board of Directors to grant them.

The par value amount of share capital increases likely to be performed on the basis of the present resolution shall be deducted from the €430 million overall limit stipulated in the thirteenth resolution to the present Shareholders' Meeting.

Your Board of Directors proposes that, on the basis of its report, it be authorized, for a period of 38 months starting from the date of this Shareholders' Meeting, to grant share subscription options or share purchase options.

It is the Board's responsibility to prepare a report on the reasons for the share subscription options or share purchase options and on the proposed methods used for determining the subscription or purchase price. It is our responsibility, if necessary, to report our observations on the information provided to you in respect of the proposed operation.

We have performed those procedures which we considered necessary in accordance with professional guidance issued by the French auditing body *(Compagnie nationale des commissaires aux comptes)* relating to this operation. These procedures consisted in verifying that the methods proposed for determining the subscription or purchase price are included in the Board of Directors' Report and are in accordance with legal requirements.

We have nothing to report on the methods proposed for determining the subscription or purchase price.

Paris-La Défense, March 1, 2013

The Statutory Auditors

Mazars		Ernst & Young et Autres	
Lionel Gotlib	Daniel Escudeiro	Jean-Yves Jégourel	Emmanuelle Mossé

Statutory Auditors' Report on the authorization to grant free existing shares or shares to be issued

This is a free translation into English of a report issued in French language and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.

To the Shareholders,

In our capacity as Statutory Auditors of your Company and in compliance with article L. 225-197-1 of the French Commercial Code *(Code de commerce),* we hereby report on the proposed authorization to allot free existing shares or shares to be issued to some employees and some officers of the Company and affiliated companies as defined by article L. 225-197-2 of the French Commercial Code *(Code de commerce),* an operation upon which you are called to vote.

The existing or new shares that are granted pursuant to this authorization may not represent more than 0.5% of the share capital on the date of the decision by the Board of Directors to grant them, bearing in mind that the number of shares granted to officers pursuant to this authorization may not represent more than 0.15% of the share capital on the date of the decision by the Board of Directors to grant them.

The par value amount of share capital increases likely to be performed on the basis of the present resolution shall be deducted from the €430 million overall limit stipulated in the thirteenth resolution to the present Shareholders' Meeting.

Your Board of Directors proposes that, on the basis of its report, it be authorized, for a period of 38 months starting from the date of this Shareholders' Meeting, to allot free existing shares or shares to be issued.

It is the Board's responsibility to prepare a report on the operation that it wishes to implement. It is our responsibility, if necessary, to report our observations on the information provided to you in respect of the proposed operation.

We have performed those procedures which we considered necessary in accordance with professional guidance issued by the French auditing body *(Compagnie nationale des commissaires aux comptes)* relating to this operation. These procedures consisted in verifying in particular the information provided in the Board of Directors' Report is in accordance with legal requirements.

We have nothing to report on the information contained in the Board of Directors' Report in connection with the proposed allotting of free shares.

Paris-La Défense, March 1, 2013

The Statutory Auditors

Mazars		Ernst & Young et Autres	
Lionel Gotlib	Daniel Escudeiro	Jean-Yves Jégourel	Emmanuelle Mossé

Statutory Auditors' Report on the issue of ordinary shares or marketable securities conferring entitlement to the share capital, with retention of preferential subscription rights

This is a free translation into English of a report issued in French language and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.

To the Shareholders,

In our capacity as Statutory Auditors of your Company and in compliance with article L. 228-92 of the French Commercial Code *(Code de commerce),* we hereby report on the proposal to grant your Board of Directors the ability to decide on the issue of ordinary shares or marketable securities, conferring entitlement to the Company's share capital, an operation upon which you are called to vote.

The total increase in capital that can be implemented immediately and/or at a future date under this resolution may not exceed €430 million, which also includes the total increase in capital to be implemented immediately and/or in the future under the eleventh, twelfth, fifteenth and sixteenth resolutions.

The maximum nominal amount of marketable securities conferring entitlement to the share capital that may be issued under the present authorization may not exceed €2.5 billion.

These limits take into account the additional shares or marketable securities to be issued in accordance with article L. 225-135-1 of the French Commercial Code *(Code de commerce)* if the fourteenth resolution is adopted.

Your Board of Directors proposes, on the basis of its report, that it be granted the ability, and to sub-delegate it, for a period of twenty-six months starting from the date of this Shareholders' Meeting, to decide on whether to proceed with one increase in capital. If necessary, it will determine the final conditions of this operation.

It is the responsibility of your Board of Directors to prepare a report in accordance with articles R. 225-113 and following of the French Commercial Code *(Code de commerce).* It is our responsibility to report on the fairness of the financial information taken from the financial statements, on the proposed issue and on other information relating to the share issue, provided in this report.

We have performed the procedures which we considered necessary in accordance with the professional guidance issued by the French auditing body *(Compagnie nationale des commissaires aux comptes)* relating to this operation. These procedures consisted in verifying the contents of the Board of Directors' Report relating to this operation and the methods used to determine the issue price of the ordinary shares and of the marketable securities conferring entitlement to the Company's share capital, to be issued.

As this report does not specify the methods used to determine the issue price, we cannot report on the choice of constituent elements used to calculate the issue price.

In addition, as the final conditions in which the issue would be performed have not yet been determined, we cannot report on this.

In accordance with article R. 225-116 of the French Commercial Code *(Code de commerce),* we will issue an additional report, if necessary, when your Board of Directors exercises this authorization and marketable securities conferring entitlement to the Company's share are issued.

Paris-La Défense, March 1, 2013

The Statutory Auditors

Mazars		Ernst & Young et Autres	
Lionel Gotlib	Daniel Escudeiro	Jean-Yves Jégourel	Emmanuelle Mossé

Statutory Auditors' Report on the issue of ordinary shares or marketable securities conferring entitlement to the share capital, reserved for employees members of the Company's or Group's savings plan

This is a free translation into English of a report issued in French language and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.

To the Shareholders,

In our capacity as Statutory Auditors of your Company and in compliance with articles L. 228-92 and L. 225-135 and following of the French Commercial Code *(Code de commerce),* we hereby report on the proposal to grant your Board of Directors the ability to decide on the issue of ordinary shares and marketable securities, conferring entitlement to the Company's share capital, with cancellation of preferential subscription rights. These increases are reserved to the employees who contribute to a savings plan set up by the Company or affiliated French and foreign companies as defined by articles L. 225-180 of the French Commercial Code *(Code de commerce)* and L. 3344-1 of the French Labour Code *(Code du travail),* an operation upon which you are called to vote.

The maximum par value of the capital increase that may result from this issue amounts to €30,250,000, corresponding to the issue of a maximum of 5,500,000 shares, provided that:

- the total amount of share capital increases likely to be performed under the fifteenth resolution and the sixteenth may not exceed the aforementioned par value amount of €30.25 million;
- the maximum par value amount of share capital increases likely to be performed immediately and/or in the future on the basis of the fifteenth and sixteenth resolutions shall be deducted from the overall limit stipulated in the thirteenth resolution to the present Shareholders' Meeting that is to say €430 million.

This operation is submitted for your approval in accordance with articles L. 225-129-6 of the French Commercial Code *(Code de commerce)* and L. 3332-18 and following of the French Labour Code *(Code du travail).*

Your Board of Directors proposes that, on the basis of its report, it be authorized for a period of twenty-six months starting from the date of this Shareholders' Meeting, with the option of sub delegation, to decide on whether to proceed with one or several increases in capital and proposes to cancel your preferential subscription rights to the ordinary shares and marketable securities conferring entitlement to the Company's share capital. If necessary, it will determine the final conditions for these operations.

It is the responsibility of the Board of Directors to prepare a report in accordance with articles R. 225-113 and following of the French Commercial Code *(Code de commerce).* It is our responsibility to report on the fairness of the financial information taken from the financial statements, on the proposed cancellation of preferential subscription rights and on other information relating to the share issue, provided in this report.

We have performed the procedures which we considered necessary in accordance with the professional guidance issued by the French auditing body *(Compagnie nationale des commissaires aux comptes)* relating to this operation. These procedures require that we perform the necessary procedures to verify the contents of the Board of Directors' Report relating to this operation and on the methods for determining the issue price of the ordinary shares and of the marketable securities conferring entitlement to the Company's share capital, to be issued.

Subject to a subsequent examination of the conditions for the issue that may be decided, we have nothing to report on the methods for determining the issue price of the ordinary shares and of the marketable securities conferring entitlement to the Company's share capital, to be issued, provided in the Board of Directors' Report.

As the final conditions for the increase in capital have not yet been determined, we cannot report on these conditions and, consequently, on the proposed cancellation of preferential subscription rights.

In accordance with article R. 225-116 of the French Company Code *(Code de commerce),* we will prepare an additional report, if necessary, when your Board of Directors will exercise this delegation.

Paris-La Défense, March 1, 2013

The Statutory Auditors

Mazars		Ernst & Young et Autres	
Lionel Gotlib	Daniel Escudeiro	Jean-Yves Jégourel	Emmanuelle Mossé

Statutory Auditors' Report on the issue of ordinary shares or marketable securities reserved for a category of beneficiaries

This is a free translation into English of a report issued in French language and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.

To the Shareholders,

In our capacity as Statutory Auditors of your Company and in compliance with articles L. 228-92 and L. 225-135 and following of the French Commercial Code *(Code de commerce),* we hereby report on the proposal to grant your Board of Directors the ability to decide, on the issue of ordinary shares and marketable securities, conferring entitlement to the Company's share capital, with cancellation of preferential subscription rights, reserved for a category of beneficiaries as defined hereafter, an operation upon which you are called to vote.

This operation is reserved to any financial institution or subsidiary of such an institution mandated by your Company for the exclusive purpose of allowing employees and executives of foreign companies, related to the Company as defined in articles L. 225-180 of the French Company Code *(Code de commerce)* and L. 3344-1 of the French Labour Code *(Code du travail),* to benefit from an economical device comparable to a share ownership scheme that would be implemented under the fifteenth resolution of this Shareholders' Meeting, when implementing such a scheme would run into local legal, regulatory or tax constraints.

The maximum par value of the capital increase that may result from this issue amounts to €30,250 million, (corresponding to the issue of a maximum of 5.5 million shares), provided that:

- the total amount of share capital increases likely to be performed under the fifteenth and the sixteenth resolutions may not exceed the aforementioned par value amount of €30,250 million;
- the maximum par value amount of share capital increases likely to be performed immediately and/or in the future on the basis of the fifteenth and the sixteenth resolutions shall be deducted from the €430 million overall limit stipulated in the thirteenth resolution to the present Shareholders' Meeting.

Your Board of Directors proposes, on the basis of its report, that it be granted the ability, and to sub-delegate it, for a period of eighteen months starting from the date of the Shareholders' Meeting, to decide on one increase in capital and to cancel your preferential subscription rights to the ordinary shares and marketable securities. If necessary, it will determine the final conditions for this operation.

It is the responsibility of the Board of Directors to prepare a report in accordance with articles R. 225-113 and following of the French Commercial Code *(Code de commerce).* It is our responsibility to report on the fairness of the financial information taken from the financial statements, on the proposed cancellation of preferential subscription rights and on other information relating to the share issue, provided in this report.

We have performed the procedures which we considered necessary in accordance with the professional guidance issued by the French auditing body *(Compagnie nationale des commissaires aux comptes)* relating to this operation. These procedures consisted in verifying the contents of the Board of Director's Report relating to this operation and the methods for determining the issue price of the ordinary shares and of the marketable securities conferring entitlement to the Company's share capital, to be issued.

Subject to a subsequent examination of the conditions for the operation that may be decided, we have nothing to report on the methods for determining the issue price of the ordinary shares and of the marketable securities conferring entitlement to the Company's share capital, to be issued, provided in the Board of Directors' Report.

As the final conditions for the increase in capital have not yet been determined, we cannot report on these conditions and, consequently, on the proposed cancellation of preferential subscription rights.

In accordance with article R. 225-116 of the French Commercial Code *(Code de commerce),* we will prepare an additional report, if necessary, when your Board of Directors uses this delegation.

Paris-La Défense, March 1, 2013

The Statutory Auditors

Mazars		Ernst & Young et Autres	
Lionel Gotlib	Daniel Escudeiro	Jean-Yves Jégourel	Emmanuelle Mossé

6 Additional information

> SHARE CAPITAL

Trends in share capital over the past three years

Issue date	Type of transaction	Number of shares issued	Aggregate number of shares	Capital increase	Issue premiums and reserves	Share capital
(in euros, except for shares)						
February 12, 2010	Exercise of share subscription options	142,557	264,282,845	784,063.50	6,924,704.50	1,453,555,647.50
May 25, 2010	Exercise of share subscription options	484,866	264,767,711	2,666,763.00	23,696,699.54	1,456,222,410.50
May 25, 2010	Free share attribution (1 for 15)	17,651,181	282,418,892	97,081,495.50	(97,081,495.50)	1,553,303,906.00
May 25, 2010	Free share attribution loyalty bonus (1 for 150)	427,259	282,846,151	2,349,924.50	(2,349,924.50)	1,555,653,830.50
December 9, 2010	Exercise of share subscription options	426,941	283,273,092	2,348,175.50	20,201,739.90	1,558,002,006.00
December 9, 2010	Share capital increase reserved for employees	712,958	283,986,050	3,921,269.00	49,340,211.86	1,561,923,275.00
February 14, 2011	Exercise of share subscription options	173,741	284,159,791	955,575.50	8,037,099.31	1,562,878,850.50
May 4, 2011	Exercise of share subscription options	498,167	284,657,958	2,739,918.50	22,828,176.20	1,565,618,769.00
May 4, 2011	Cancellation of shares	(1,200,000)	283,457,958	(6,600,000.00)	(94,044,685.22)	1,559,018,769.00
February 16, 2012	Exercise of share subscription options	439,581	283,897,539	2,417,695.50	24,970,558.76	1,561,436,464.50
May 9, 2012	Cancellation of shares	(1,200,000)	282,697,539	(6,600,000.00)	(109,415,825.60)	1,554,836,464.50
May 29, 2012	Exercise of share subscription options	160,422	282,857,961	882,321.00	9,598,169.91	1,555,718,785.50
May 29, 2012	Free share attribution (1 for 10)	28,285,796	311,143,757	155,571,878.00	(155,571,878.00)	1,711,290,663.50
May 29, 2012	Free share attribution loyalty bonus (1 for 100)	718,001	311,861,758	3,949,005.50	(3,949,005.50)	1,715,239,669.00

Note: Between May 29 and December 31, 2012, 419,401 options were exercised, giving rise to an outstanding capital as at December 31, 2012 of 1,717,546,374.50 euros, divided up into 312,281,159 shares.

Changes in share capital ownership over the last three years

	2010	2011	2012
Individual shareholders	36%	37%	37%
French institutional investors	23%	21%	19%
Foreign institutional investors	40%	42%	44%
Own shares held by the Company (directly and indirectly)	< 1%	> 0%	> 0%

THRESHOLD NOTIFICATIONS IN 2012

- On February 27, 2012, Natixis Asset Management reported that it had breached the 2% threshold as fixed under the Company's articles of association and held 2.18% of the capital of the Company as of this date.
- On July 5, 2012, Norges Bank Investment Management reported that it had breached the 2% threshold and held 2.00% of the capital of the Company as of this date.
- On December 13, 2012, Natixis Asset Management reported that it had come back below the 2% threshold, as fixed by the Company's articles of association, and held 1.92% of the capital of the Company as of this date.
- On December 31, 2012, no shareholder had notified holding 5% or more of the capital and voting rights.

Share capital and voting rights for the last three years

	Number of shares comprising share capital	Theoretical number of voting rights (including treasury shares)	Actual number of voting rights (excluding treasury shares)
2010	284,095,093	284,095,093	282,755,469
2011	283,812,941	283,812,941	282,693,265
2012	**312,281,159**	**312,281,159**	**311,277,765**

There are no double voting rights.

To the best of the Company's knowledge, there are no shareholders' agreements or joint or concerted action agreements.

The portion of the L'Air Liquide S.A. share capital comprising the direct registered shares owned by the main shareholders and pledged is not material.

Amount of share capital held by employees

Since 1986, L'Air Liquide S.A. has given the employees of certain Group companies the possibility to subscribe to capital increases reserved for them. At the end of 2012, the share of capital held by employees and former employees of the Group is estimated at 2.1%, of which 1.5%, that is 4,584,068 shares, (within the meaning of Article L. 225-102 of the French Commercial Code) correspond to shares subscribed by employees during employee reserved capital increase operations or held through mutual funds.

Delegations of authority granted at the Shareholders' Meeting

Type of authorization	Purpose of the authorization	Validity of the delegation	Maximum amount	Utilization in 2012
Share buyback	Purchase own shares for the purpose of: ■ cancelling them; ■ retaining them for the purpose of a share exchange or payment as part of an external growth strategy, in accordance with applicable regulations; ■ tendering them following the exercise of rights attached to marketable securities conferring entitlement to Company shares by redemption, conversion, exchange, presentation of a warrant or any other means; ■ implementing (i) share purchase option plans, or (ii) plans for free grants of shares, or (iii) any employee share ownership transactions in favor of its employees or those of its subsidiaries, or (iv) allocations of shares to employees and/or corporate officers of the Company and affiliated companies, in accordance with applicable legal and regulatory provisions the laws and regulations in force; ■ maintaining an active market in the Company's shares pursuant to a liquidity contract in accordance with an Ethics Charter recognized by the French financial markets authority (*Autorité des marchés financiers*).	Granted during the Shareholders' Meeting on May 9, 2012 * For a period of 18 months Maximum price: 165 euros (Balo [(a)] of March 21, 2012)	10% of share capital, or 28,381,294 shares, for a maximum par value amount of 4,682,913,510 euros	**Treasury shares:** 59,009 Company treasury shares were tendered in connection with the 2010 CGSE Plan ("France" Plan) and 19,432 Company treasury shares were tendered in connection with the 2008 CGSE Plan («World» Plan). 94,072 shares were received under the free share attribution of May 31, 2012. During the opening months of 2012, pursuant to the preceding delegation authorized by the Shareholders' Meeting of May 4, 2011, 1.2 million treasury shares were purchased at an average price of 98.23 euros. No treasury shares were purchased between May 2012 and December 31, 2012 pursuant to the delegation granted by the Shareholders' Meeting of May 9, 2012. Considering these transactions, as of December 31, 2012, the Company owned 916,772 shares at an average price of 82.18 euros, *i.e.* a balance sheet value of 75,338,001 euros. **Liquidity contract changes:** 2,557,263 shares purchased at an average price of 94.17 euros and 2,697,539 shares sold at an average price of 94.46 euros. Pursuant to the May 2012 free share attribution and in order to reduce the liquidity contract share position, Exane BNP Paribas elected for the payment of its grant entitlement in the amount of 749,700 euros for the 85,000 shares held at the time of attribution. As of December 31, 2012, under the liquidity contract, no shares are recorded in the balance sheet (see Information on the completion of the Company's share buyback program page 278).
Cancellation of shares purchased by the Company	Reduce the number of outstanding shares and improve basic earnings per share.	Granted during the Shareholders' Meeting of May 9, 2012 * For a period of 24 months (Balo of March 21, 2012)	10% of share capital	1.2 million shares were cancelled in May 2012 for a total carrying amount of 116,015,826 euros (or an average price of 96.68 euros). (see Information on the completion of the Company's share buyback program on page 278).

(a) BALO (Bulletin des annonces légales obligatoires): French official bulletin of legal notices.

Type of authorization	Purpose of the authorization	Validity of the delegation	Maximum amount	Utilization in 2012
Share capital increase	Increase share capital by the issuance of shares or marketable securities conferring entitlement, immediately or in the future, to the Company's capital, with retention of the shareholders' preferential share subscription rights.	Granted during the Shareholders' Meeting of May 4, 2011 * For a period of 26 months (Balo of March 18, 2011)	■ Share capital increase: for a maximum par value amount of 390 million euros (overall limit) ■ Maximum nominal amount of marketable debt securities: 2 billion euros	This authorization was not used in 2012.
Share capital increase	To be able to increase the amount of shares or marketable securities issued with retention of the shareholders' preferential share subscription rights in the event of over-subscription.	Granted during the Shareholders' Meeting of May 4, 2011 * For a period of 26 months (Balo of March 18, 2011)	To be deducted from the aforementioned overall limit of 390 million euros (share capital increase) and 2 billion euros (maximum nominal amount of marketable debt securities)	This authorization was not used in 2012.
Share capital increase	Increase share capital by capitalization of additional paid-in capital, reserves, profits, or other items in view of the attribution of free shares and/or an increase in the par value of existing shares.	Granted during the Shareholders' Meeting of May 9, 2012 For a period of 26 months (Balo of March 21, 2012)	For a maximum par value amount of 250 million euros	Capitalization in 2012 of 159.5 million euros deducted from «additional paid-in capital» and «retained earnings» through the creation of 28,285,796 new shares attributed as free shares to shareholders at a rate of one new share for 10 former shares and 718,001 new shares attributed as free shares to shareholders in respect of the 10% bonus attribution.
Share capital increase	Increase share capital by the issuance of shares intended to be subscribed by employees of the Company and affiliated companies, members of a company or group savings plan, by cancelling the shareholders' preferential share subscription rights to the issued shares. Increase share capital by the issuance of shares intended to be subscribed by employees and corporate officers of Group companies abroad, by cancelling the shareholders' preferential share subscription rights to the issued shares.	Granted during the Shareholders' Meeting of May 9, 2012 * For a period of 26 months (Balo of March 21, 2012) Granted during the Shareholders' Meeting of May 9, 2012 * For a period of 18 months (Balo of March 21, 2012)	A par value amount of 30.25 million euros and a maximum of 5.5 million shares. To be deducted from the aforementioned overall limit of 390 million euros	These authorizations were not used in 2012.

Type of authorization	Purpose of the authorization	Validity of the delegation	Maximum amount	Utilization in 2012
Bond issuance	Issue one or more bonds.	Granted during the Shareholders' Meeting of May 7, 2008 * For a period of 5 years (Balo of March 17, 2008)	8 billion euros	As of December 31, 2012, the outstanding amount of L'Air Liquide S.A. bond issues totaled 1.6 billion euros and 4.8 billion euros for the Air Liquide Group.
Issuance of share subscription warrants	Issue free share subscription warrants in the event of a takeover bid for the Company.	Granted during the Shareholders' Meeting of May 4, 2011 For a period of 18 months (Balo of March 18, 2011) **The renewal of this authorization was not requested.**	A par value amount of 515.4 million euros	This authorization was not used in 2012.
Allotment of share subscription options	Grant to employees and/ or corporate officers of the Company or of French and foreign subsidiaries, or some of them, options conferring entitlement to subscribe to shares of the Company to be issued to increase the share capital or options conferring entitlement to purchase the Air Liquide shares bought back by the Company.	Granted during the Shareholders' Meeting of May 5, 2010 * For a period of 38 months (Balo of March 17, 2010)	2% of the Company's capital on the date the options are granted	6,000 Air Liquide share subscription options were allotted by decision of the Board of Directors on May 9, 2012. 704,791 Air Liquide share subscription options were allotted by the Board of Directors on September 27, 2012.
Conditional grant of shares to employees (CGSE)	Subject to certain requirements, allot free shares to employees and corporate officers of the Group (but excluding corporate officers of the Company) either from existing shares or via new issues	Granted during the Shareholders' Meeting of May 5, 2010 * For a period of 38 months (Balo of March 17, 2010)	0.5% of the Company's capital on the date of the decision to allot free shares	117,285 free shares subject to performance requirements were allotted by the Board of Directors on September 27, 2012.

* *Renewal proposed at the Combined Shareholders' Meeting of May 7, 2013.*

> GENERAL INFORMATION

General information

Law applicable to L'Air Liquide S.A.

French law.

Incorporation and expiration dates

The Company was incorporated on November 8, 1902, for a set term expiring on February 17, 2028.

Business and Company register

552 096 281 RCS Paris

APE Code: 2011Z

Consulting legal documents

The articles of association, Minutes of Shareholders' Meetings and other Company documents may be consulted at Company headquarters.

Fiscal year

The Company's fiscal year starts on January 1, and ends on December 31, of the same year.

Address and phone number of the head office

75, quai d'Orsay, 75007 Paris – +33 (0)1 40 62 55 55

Articles of association

SECTION I

NAME – PURPOSE – HEAD OFFICE – TERM

Article 1: Form and name

The Company is a joint stock company, with a Board of Directors. This company will be governed by the laws and regulations in force and these articles of association.

The Company's name is "*L'Air Liquide, société anonyme pour l'Étude et l'Exploitation des procédés Georges Claude*".

Article 2: Purpose

The Company's corporate purpose includes:

- the study, exploitation, sale of the patents or inventions of Messrs. Georges and Eugène Claude pertaining to the liquefaction of gases, the industrial production of refrigeration, liquid air and oxygen, and the applications or utilizations thereof;
- the industrial production of refrigeration, of liquid air, the applications or uses thereof, the production and liquefaction of gases, and in particular oxygen, nitrogen, helium and hydrogen, the applications and uses thereof in all forms, pure, in blends and combinations, without any distinction as to state or origin, in all areas of application of their physical, thermodynamic, chemical, thermochemical and biological properties, and, in particular, in the domains of propulsion, the sea, health, agri-business and pollution;
- the purchase, manufacturing, sale, use of all products pertaining directly or indirectly to the aforementioned corporate purpose, as well as all sub-products resulting from their manufacturing or their use, of all machines or devices used for the utilization or application thereof and, more specifically, the purchase, manufacturing, sale, use of all products, metals or alloys, derived or resulting from a use of oxygen, nitrogen and hydrogen, pure, blended or combined, in particular of all oxygenated or nitrogenous products;
- the study, acquisition, direct or indirect exploitation or sale of all patents, inventions or methods pertaining to the same corporate purposes;
- the exploitation, directly or through the incorporation of companies, of all elements connected, directly or indirectly, with the Company's purpose or likely to contribute to the development of its industry;
- the supply of all services, or the supply of all products likely to develop its clientele in the industry or health sectors.

The Company may request or acquire all franchises, perform all constructions, acquire or lease all quarries, mines and all real property, and take over all operations connected with its corporate purpose, sell or lease these franchises, merge or create partnerships with other companies by acquiring company shares or rights, through advances or in any appropriate manner. It may undertake these operations either alone or jointly.

Lastly, and more generally, it may carry out all industrial, commercial, real estate, personal or financial operations pertaining directly or indirectly to the corporate purposes specified above.

Article 3: Head office

The Company's head office is located at 75, quai d'Orsay, Paris.

It may be transferred upon a Board of Directors' decision to any other location in Paris or a neighboring department, subject to the ratification of such decision by the next Ordinary General Shareholders' Meeting, and anywhere else by virtue of a decision by an Extraordinary Shareholders' Meeting.

Article 4: Term

The Company's term has been fixed at 99 years beginning on February 18, 1929, except in the event of early dissolution or extension.

SECTION II

SHARE CAPITAL – SHARES – IDENTIFICATION OF SHAREHOLDERS

Article 5: Share capital

The share capital has been set at 1,717,874,856.50 euros divided into 312,340,883 fully paid-up shares of a par value of 5.50 euros each.

Share capital is increased under the conditions stipulated by law either by issuing ordinary or preferred shares, or by raising the par value of existing shares. It may also be increased by exercising the rights attached to marketable securities granting access to share capital, under the conditions stipulated by law.

In accordance with prevailing legal provisions, unless otherwise decided by the Shareholders' Meeting, the shareholders have, in proportion to the amount of shares they own, a preferential subscription right to the shares issued in cash in order to increase share capital.

The share capital may also be reduced under the conditions stipulated by law, in particular, by reducing the par value of the shares, or by reimbursing or redeeming shares on the stock exchange and by canceling shares, or by exchanging existing shares for new shares, in an equivalent or lesser number, with or without the same par value, and with or without a cash balance to be paid or received. The Shareholders' Meeting may always compel the shareholders to sell or purchase existing shares to permit the exchange of existing shares for new shares, with or without a cash balance to be paid or received, even if such reduction is not a result of losses.

Article 6: Shares

If the new shares are not fully paid up upon issuance, calls for payment shall be performed, on dates set by the Board of Directors, by means of announcements posted one month in advance in one of the Paris official legal publications chosen for the legal publication of the Company's deeds.

Shares not fully paid up shall be held as registered shares until they are fully paid up.

Each payment on any subscribed shares will be registered in an account opened in the name of the subscriber.

All late payments shall automatically bear interest, for the benefit of the Company, as of the due date, without any formal notice or legal action, at the legal interest rate, subject to any personal action that the Company may take against any defaulting shareholder and the compulsory execution measures provided by law.

Article 7: Type of shares

Paid-up shares are registered as registered shares or bearer shares depending on the choice of the shareholder.

The provisions of the aforementioned paragraph also apply to other securities of any nature issued by the Company.

Article 8: Rights and obligations governing shares

Shareholders shall not be liable above the amount of their subscription.

Share ownership automatically binds shareholders to the articles of association and the decisions of the Shareholders' Meetings.

Any share grants entitlement, during the Company's term, as in the event of liquidation, to the payment of an identical net amount for any distribution or redemption.

Shares are freely transferable under the conditions provided by law.

Article 9: Identification of shareholders

The Company may avail itself at any time of the legal and statutory provisions in force permitting the identification of the owners of shares conferring immediately or in the future the right to vote in shareholders' meetings, as well as the number of shares they own.

In addition to the legal obligations to notify the Company, any person, acting alone or jointly, coming in direct or indirect possession of a fraction of the Company's capital or voting rights equal to or greater than 2%, or a multiple of 2% of capital or voting rights (including above the 5% threshold), is required to inform the Company within fifteen days as of the date on which the threshold is exceeded and, as the case may be, independently of the effective transfer date of share ownership. The person shall state the number of shares and marketable securities granting entitlement to capital that he or she owns on the date of notification. Any decrease below the 2% threshold or a multiple of 2% of capital or voting rights shall be notified in the same manner.

In the event of a failure to meet this additional notification obligation, one or several shareholders, owning a fraction of the Company's capital or voting rights amounting to at least 2%, may, at a Shareholders' Meeting, request that the shares exceeding the fraction which should have been reported, be stripped of their voting rights for any Shareholders' Meeting held until the end of a two-year period following the date on which the notice is rectified. The request is recorded in the minutes of the Shareholders' Meeting.

Article 10: Co-ownership and usufruct

As all shares are indivisible from the point of view of the Company, all joint owners of shares are required to be represented vis-à-vis the Company by a single owner selected from among them or proxy under the conditions provided by law.

The voting right attached to the share is exercised by the beneficial owner at both Ordinary and Extraordinary Shareholders' Meetings. However, the bare-owner shall be entitled to attend all Shareholders' Meetings. He or she may also represent the beneficial owner at Shareholders' Meetings.

The heirs, creditors, trustees or successors of a shareholder may not, on any grounds whatsoever, call for the affixing of seals on the Company's assets and securities, request the distribution thereof, or interfere in any manner whatsoever in its administration.

In order to exercise their rights, they must consult the Company's records and decisions of the Shareholders' Meetings.

SECTION III

MANAGEMENT OF THE COMPANY

Article 11: Composition of the Board of Directors

The Company is managed by a Board of Directors, comprising a minimum of three members and a maximum of fourteen members (unless temporarily waived in the event of a merger), physical persons or legal entities.

The members of the Board of Directors are appointed by the Ordinary Shareholders' Meeting for a term of four years expiring at the close of the Shareholders' Meeting held to approve the financial statements for the previous year and which is held in the year during which the mandate expires. As an exception to this rule, the members of the first Board of Directors who exercised functions as members of the Supervisory Board in the Company under its former mode of administration shall be appointed for a period equal to the remaining term of their mandate as members of the Supervisory Board.

The members of the Board of Directors may be re-elected.

Each Director must own at least 500 registered shares in the Company during the term of his functions. If, on the date of his appointment, a Director does not own the required number of shares or if, during his term, he ceases to own them, he is deemed to have resigned with immediate effect if he has not rectified the situation within a period of three months.

In the event of a vacancy of one or more seats due to death or resignation, the Board of Directors may, between two Shareholders' Meetings, make temporary appointments. Provisional appointments made by the Board of Directors are subject to the approval of the next Ordinary Shareholders' Meeting. If the number of Directors falls below the legal minimum, the remaining Directors must immediately convene an Ordinary Shareholders' Meeting in order to make up the numbers of the Board.

No individual over the age of 70 shall be appointed as a member of the Board of Directors if his appointment increases the number of the members of the Board of Directors who have passed this age to over one third. If during their term, the number of the members of the Board of Directors who have passed 70 years of age exceeds one third of the Board's members, the oldest member of the Board of Directors who has not carried out management functions in the Company is deemed to have resigned at the end of the Annual Shareholders' Meeting held following the occurrence of this event.

During the Company's term, Directors are appointed and their mandates renewed under the conditions provided by law.

They may be dismissed by the Ordinary Shareholders' Meeting at any time.

Article 12: Organization and management of the Board of Directors

The Board of Directors elects from among its members who are individuals, a Chairman. It determines his remuneration and sets his term of office which may not exceed his term of office as Director. The Chairman may be re-elected.

The Chairman of the Board of Directors performs the duties entrusted to him by law. He chairs the Board of Directors, organizes and manages its work and reports on such work to the Shareholders' Meeting. He ensures that the Company's bodies operate properly and, in particular, that the Directors are able to fulfill their assignments.

The Board may also appoint from among its members one or more Vice-Chairmen, whose term of office shall be determined within the limit of their term as Director and whose role it is, subject to the legal provisions applicable in the event of the temporary impediment or death of the Chairman, to convene and chair Board meetings or chair Shareholders' Meetings in accordance with these articles of association when the Chairman is impeded.

No Director who does not also assume the role of Chief Executive Officer may be appointed as Chairman of the Board of Directors after the age of 68. If, during the term of office, this age limit is reached, the Chairman's mandate shall terminate at the close of the Shareholders' Meeting held to approve the financial statements for the year during which he has reached the age of 68. If the Chairman of the Board of Directors also assumes the role of Chief Executive Officer, the applicable age limit is that applicable to the Chief Executive Officer.

The Chairman and each Vice-Chairman may be dismissed by the Board of Directors at any time. They may also be re-elected.

The Board may appoint a secretary who need not be a shareholder or one of its members.

Article 13: General Management

Management organization

In accordance with the law, the Company's General Management is assumed either by the Chairman of the Board of Directors or by any other physical person, Director or not, appointed by the Board of Directors and who assumes the role of Chief Executive Officer.

The choice between either of the two General Management organizations described above is made by the Board of Directors. The Board of Directors makes its decision relating to the choice of General Management organization under the *quorum* and majority conditions stipulated in Article 14 of these articles of association. The shareholders and third parties are informed of the Board of Directors' decision under the conditions stipulated by the regulations in force.

The choice made by the Board of Directors remains valid until it decides otherwise.

The Board of Directors will review, as necessary, the choice made each time the mandate of the Chairman of the Board of Directors or the Chief Executive Officer comes up for renewal.

Chief Executive Officer

If the Company's Chief Executive Officer is assumed by the Chairman of the Board of Directors, the following provisions relating to the Chief Executive Officer are applicable.

The Board of Directors sets the term of office and determines the remuneration of the Chief Executive Officer.

No individual over the age of 63 may be appointed as Chief Executive Officer. If, during the term of office, this age limit is reached, the Chief Executive Officer's mandate shall terminate at the close of the Shareholders' Meeting held to approve the financial statements for the year during which he has reached the age of 63.

The Chief Executive Officer may be dismissed at any time by the Board of Directors. The discharge of a Chief Executive Officer who does not assume the role of Chairman may give rise to damages if decided without reasonable cause.

The Chief Executive Officer may always be re-elected.

Powers of the Chief Executive Officer

The Chief Executive Officer is vested with the broadest powers to act in all circumstances on behalf of the Company within the limit of the Company's corporate purpose, the articles of association, and subject to the powers expressly granted by law to Shareholders' Meetings and the Board of Directors.

The Board of Directors is responsible for defining the decisions of the Chief Executive Officer that require its prior approval. The Board of Directors' prior approval should be sought particularly for external acquisitions or sales of interests or assets, and for investment commitments, in each case under the conditions and exceeding the amounts corresponding to an efficient operation of the Company as set by the Board of Directors. It should also be sought for financing operations of any amount likely to substantially alter the Company's financial structure and for any decision likely to substantially alter the Company's strategic orientations determined by the Board of Directors.

Senior Executive Vice-Presidents

On the Chief Executive Officer's proposal, whether he be Chairman of the Board of Directors or any other person, the Board of Directors may appoint one or more physical persons as Senior Executive Vice-Presidents to assist the Chief Executive Officer.

The maximum number of Senior Executive Vice-Presidents is set at three.

In accordance with the Chief Executive Officer, the Board of Directors determines the scope and term of the powers granted to the Senior Executive Vice-Presidents and sets their remuneration.

The Senior Executive Vice-Presidents have the same powers as the Chief Executive Officer *vis-à-vis* third parties.

In the event of impediment of the Chief Executive Officer or the cessation of his functions, the Senior Executive Vice-Presidents shall maintain, unless decided otherwise by the Board of Directors, their functions and powers until a new Chief Executive Officer is appointed.

The Senior Executive Vice-Presidents may be dismissed at any time by the Board of Directors, at the Chief Executive Officer's proposal. They are subject to the age limit provided by law.

Senior Executive Vice-Presidents may be re-elected.

Article 14: Board of Directors' Meetings and deliberations

The Board of Directors meets as often as the interest of the Company so requires, by notice from its Chairman or in the case of impediment, from the oldest Vice-Chairman, if one or more Vice-Chairmen have been appointed, at the head office or in any other location indicated in the Notice of Meeting.

The agenda is set by the Chairman and may only be finalized at the time of the Meeting.

Directors representing at least one third of members of the Board of Directors may, while specifying the meeting's agenda, ask the Chairman to summon the Board if it has not met for more than two months.

Likewise, the Chief Executive Officer, if he does not chair the Board of Directors, may ask the Chairman to summon the Board of Directors on any specified agenda.

The Chairman is bound to the requests made to him.

In the event that the Chairman is impeded or fails in performing the aforementioned tasks, the oldest Vice-Chairman, if one or more Vice-Chairmen have been appointed, shall have the authority to call the Board and set the meeting's agenda at the request of at least one third of members of the Board of Directors or the Chief Executive Officer, as the case may be. In the absence of a Vice-Chairman, the minimum of one third of members of the Board of Directors or the Chief Executive Officer, depending on the case, shall have the authority to call the Board and set the meeting's agenda.

Notices may be made by all means, including verbally.

The presence of one half of the members of the Board of Directors is required for the validity of the Board's decisions.

Decisions are made by a simple majority of the votes of the members present or represented. In the event of a tie, the Chairman shall have the casting vote.

The Board of Directors will set its internal rules that it may amend by simple resolution.

The Board of Directors may stipulate in its internal rules that the members of the Board of Directors who take part in the Board's meeting by videoconference or telecommunications in accordance with the conditions provided by the regulations in force shall be considered as present for calculating the *quorum* and voting majority of the members, for all decisions in which the law does not exclude such possibility.

Article 15: Powers of the Board of Directors

The Board of Directors determines the orientations of the Company's activities and ensures their implementation.

Subject to the powers expressly attributed to Shareholders' Meetings by law and these articles of association and in accordance with the corporate purpose, the Board deals with any issues concerning the smooth running of the Company and manages corporate business pursuant to its decisions.

The Board of Directors may conduct controls and verifications as it deems appropriate.

The Board is authorized to issue bonds pursuant to a delegation granted by the Ordinary Shareholders' Meeting.

It may also decide to create committees of its members responsible for analyzing issues which it itself or its Chairman submits thereto for review. The Board determines the composition and powers of the committees which conduct their activities under its responsibility.

Issues related to the performance, remuneration and, where appropriate, the renewal of the term of office of the Chairman and Chief Executive Officer, or the Chief Executive Officer, shall be decided by the Board of Directors as and when required, and at least once a year, after analysis by the committee(s) of the Board of Directors that deal with appointment and remuneration issues.

Article 16: Remuneration

The Ordinary Shareholders' Meeting may allocate to the members of the Board of Directors, as remuneration for their activity, a fixed annual amount in Directors' fees. The Board of Directors is free to distribute the overall sum thus allocated among its members. It may also allocate a greater amount to the Directors who are members of committees set up within the Board than that allocated to the other Directors.

The Board may allocate exceptional sums to remunerate assignments or mandates entrusted to the members of the Board.

SECTION IV

STATUTORY AUDITORS

Article 17: Audit of the Company

At the Ordinary Shareholders' Meeting, the shareholders appoint, under the conditions and with the assignments set by law, the principal and deputy Statutory Auditors.

SECTION V

SHAREHOLDERS' MEETINGS

Article 18: Shareholders' Meetings

The Shareholders' Meeting is comprised of all the shareholders, regardless of the number of shares they own, provided that all shares are fully paid up and that they are not stripped of voting rights.

The right to attend Shareholders' Meetings of the Company shall be justified by the registration of the shares in the name of the shareholder or of the intermediary registered on behalf of the shareholder (pursuant to legal provisions) at 00:00, Paris time, on the third business day preceding the Shareholders' Meeting:

- for owners of registered shares: in the registered share accounts kept by the Company;
- for owners of bearer shares: in the bearer share accounts kept by the duly empowered intermediary, in accordance with prevailing regulations.

The owners of registered shares or bearer shares must furthermore have filed a proxy or absentee ballot form, or a single document presented in lieu thereof, or if the Board of Directors has so decided, a request for an admission card, at least three days prior to the meeting. The Board of Directors may however reduce this time period if it deems appropriate. It may also authorize the submission to the Company of the proxy or absentee ballot forms by teletransmission (including electronically) in accordance with prevailing regulatory and legal provisions.

The electronic signature can, when used, take the form of a process that satisfies the conditions defined in the first sentence of section 2 of Article 1316-4 of the French Civil Code.

The Shareholders' Meeting, duly constituted, represents all of the shareholders.

Ordinary and Extraordinary Shareholders' Meetings, and where necessary, Special Shareholders' Meetings are convened, meet and deliberate under the conditions provided by law and these articles of association.

Meetings take place at the head office or at any other place designated by the author of the notice, even outside of the head office or the head office's department.

Shareholders' Meetings are chaired by the Chairman of the Board of Directors or, in his absence, by the Vice-Chairman or the oldest Vice-Chairman of the Board, if one or more Vice-Chairmen have been appointed, or otherwise by a Director specifically appointed for this purpose by the Board. In the event of impediment of the Vice-Chairman or Vice-Chairmen when Vice-Chairmen have been appointed or if the Board has not appointed a Director, the shareholders shall themselves appoint the Chairman.

The two members of the Shareholders' Meeting with the highest number of votes and having accepted the position act as ballot inspectors for the Shareholders' Meeting. The officers of the meeting appoint a secretary who need not be a shareholder.

In the event that the meeting is convened by a Statutory Auditor or by a judicial representative, the Shareholders' Meeting is chaired by the author of the notice.

Upon the decision of the Board of Directors published in the Notice of Meeting or notice of convocation to rely on means of telecommunication, the shareholders who take part in the Shareholders' Meeting by videoconference or using telecommunications means permitting their identification in accordance with the conditions provided by prevailing law, shall be considered as present for calculating the *quorum* and voting majority.

Article 19: Powers of Shareholders' Meetings

Ordinary and Extraordinary Shareholders' Meetings, and where necessary, Special Shareholders' Meetings allow shareholders to exercise the powers defined by law and these articles of association.

During the Ordinary Shareholders' Meeting, shareholders decide or authorize the issue of bonds secured, where necessary, by specific collateral in accordance with prevailing laws and regulations and authorizes the Chairman to grant such collateral. This may delegate to the Board of Directors the competence and powers necessary to issue such bonds, in one or more installments, within a period set by it, and to determine the terms and conditions of the issuance of such bonds. The guarantees set up subsequent to the issue of the bonds are granted by the Chairman of the Board of Directors upon the Board's authorization.

SECTION VI

INVENTORY – RESERVES – DISTRIBUTION OF PROFITS

Article 20: Fiscal year

The fiscal year begins on January 1 and ends on December 31.

Article 21: Inventory, distribution of profits

The Company's net proceeds, established in the annual inventory, after deducting overheads and other costs, including all amortization, depreciation and provisions, constitute the net profits.

From these profits, less, as the case may be, previous losses, a deduction of at least 5% is first of all made to create the reserve required by law. This deduction ceases to be mandatory when the reserve amounts to 10% of the share capital. It is resumed if this reserve is ever used.

The distributable profits are made up of the annual net profits, less previous losses, as well as the sums to be placed on reserve pursuant to law, plus the profit carried forward.

From these profits, a deduction is made of the amount necessary to pay the shareholders, as a first dividend, 5% of the sums paid-up on their shares, and not amortized, and 5% of the sums from premiums on shares issued in cash, and appearing in a "share premium" account, without it being possible, if the profits of a given year do not permit this payment, for the shareholders to claim such amounts from the profits of subsequent years.

The Shareholders' Meeting may decide to earmark any portion of the available surplus of said profits it wishes for the creation of general or special providence or reserve funds, under any name whatsoever or even simply as an amount carried forward.

The balance constitutes a surplus fund which is intended for the distribution of the second dividend as well as the amount provisionally assessed as necessary to pay a 10% increase to the registered shares satisfying the following conditions.

Starting on January 1, 1996, the shares registered at December 31 of each year in registered form for at least two years, and which remain registered until the date of the payment of the dividend, will entitle their owners to collect a dividend per share which is 10% higher, rounded down if necessary to the lower centime, than the dividend per share distributed in respect of other shares, provided that the amount of the dividend per share prior to any increase is at least equal to the amount of the dividend per share prior to any increase distributed in the preceding year, adjusted to take into account the change in the number of shares from one year to the next resulting in a capital increase by capitalizing premiums, reserves or profits or a share split.

In the event that, starting on January 1, 1996, the Board of Directors, with the approval of the shareholders decide to increase the capital by capitalizing reserves, profits or premiums, the registered shares held for at least two years on the date on which the attribution process begins will entitle their owners to an attribution of shares which is 10% higher than the attribution made in favor of other shares, and according to the same procedure.

The new shares created in this manner will be comparable in all respects to the existing shares from which they are issued, for calculating the entitlement to the higher dividends and the higher attributions.

The increases defined in each of the two preceding paragraphs may be modified or eliminated by simple decision during the Extraordinary Shareholders' Meeting, according to the procedures it determines.

Pursuant to law, the number of shares eligible for these increases shall not for any given shareholder exceed 0.5% of the Company's share capital.

The Shareholders' Meeting held to approve the financial statements for the year shall have the possibility of granting to each shareholder, for all or part of the dividend or interim dividends, an option for payment of the dividend or interim dividends in either cash or shares.

SECTION VII

LIQUIDATION

Article 22: Liquidation

At the expiration of the Company's term, or in the event of early dissolution, the shareholders determine the method of liquidation, in accordance with the conditions stipulated by law. It appoints and determines the powers of one or more liquidators.

The liquidators may, pursuant to a decision of the shareholders transfer to another company or sell to a company or to any other entity or person, all or part of the assets, rights and obligations of the dissolved company.

The duly constituted Shareholders' Meeting retains the same prerogatives during the liquidation as during the Company's term. In particular, it has the power to approve the accounts of the liquidation and to grant a discharge thereof.

After the Company's commitments have been settled, the net proceeds from the liquidation are used first to fully redeem the shares, and the surplus is then distributed equally among them.

SECTION VIII

DISPUTES

Article 23: Disputes

All disputes which may arise during the Company's term or liquidation, either between the shareholders and the Company or among the shareholders themselves, regarding Company affairs, are settled in accordance with law and submitted to the jurisdiction of the competent Paris courts.

For this purpose, in the event of disputes, all shareholders shall elect domicile in Paris, and all summonses and notices are duly served at this domicile.

Failing election of domicile, summonses and notices are validly served at the Office of Public Prosecution of the French Republic at the High Court of Paris.

Dividends

Year	Paid	Ordinary dividend [a] Loyalty dividend [b]	Number of shares	Distribution *(in euros)*
2010 [e]	May 16, 2011	2.35 [a]	282,504,369	663,885,267
		0.23 [b]	67,895,204	15,615,897
				679,501,164
2011 [e]	May 16, 2012	2.50 [a]	281,920,112	704,800,280
		0.25 [b]	71,490,388	17,872,597
				722,672,877
2012 [c] [d]	May 22, 2013	2.50 [a]	312,281,159	780,702,897
		0.25 [b]	90,629,532	22,657,383
				803,360,280

(a) Ordinary dividend paid on all shares.
(b) Loyalty dividend paid only on registered shares held continuously for two full calendar years.
(c) Subject to the approval at the General Shareholders' Meeting on May 7, 2013.
(d) For 2012, amounts distributed are theoretical values calculated based on the number of shares as of December 31, 2012.
(e) For 2010 and 2011, amounts actually paid.

Management of the Company

Pursuant to the statements made to the Company by each corporate officer, the Company confirms that corporate officers do not have any family ties with another corporate officer and have not been convicted of fraud at least during the last five years.

No incrimination and/or official public sanction has been pronounced against them by statutory or regulatory authorities (including professional organizations) and they have not been prevented by a court from acting in their capacity as a member of an administration, management or supervisory body or interfering in the management or carrying out of business of an issuer during at least the last five years. They have no potential conflicts of interest with L'Air Liquide S.A. No arrangements or agreements have been made with the significant shareholders, customers, suppliers or others, pursuant to which the persons mentioned above have been chosen as corporate officers.

There exist no restrictions accepted by these persons as to the transfer, within a certain lapse of time, of their interest in the capital of L'Air Liquide S.A. except for the rules on preventing insider trading and the obligation set forth in the Articles of Association requiring the members of the Board of Directors to own at least 500 registered shares of the Company during the term of their office and the obligation to hold shares imposed on corporate executive officers. Corporate officers have not been associated with any bankruptcy, any receivership or liquidation during the last five years.

COMPLIANCE WITH CORPORATE GOVERNANCE

The Company complies with all aspects of the recommendations set forth in the AFEP/MEDEF Code of corporate governance (see Report from the Chairman of the Board of Directors page 120), except for the points described in the Chairman's Report (see pages 120 *et seq.*) and the section on remunerations (see pages 137 *et seq.*) summarized in the table on page 149.

Property, plant and equipment

The Group's facilities and establishments are located in 80 countries around the world, with extremely diversified production capacities and characteristics.

No material tangible fixed asset exists at Group level.

The number of main plants by unit types is detailed in the 2012 Corporate Social Responsability and Sustainable Development Report - pages 94 to 98.

Documents accessible to the public

In accordance with Annex I of the European Regulation (EC) 809/2004, documents, or copies of the documents listed below may be consulted during the period of the Reference Document's validity at Shareholders Services located at the head office of Air Liquide (75, quai d'Orsay, 75007 Paris) and, if applicable, on the Company's Internet website (www.airliquide.com), subject to the documents made available at the Company's head office or Internet site under the applicable laws and regulations:

- the Company's Articles of Association;
- all reports, letters and other documents, historical financial information, evaluations and official assertions and declarations prepared by an expert at the Company's request, some of which are included or referred to in this Reference Document;
- historical financial information of the Group, for each of the two fiscal years preceding publication of this Reference Document.

Incorporation by reference

Pursuant to article 28 of EC Regulation no. 809/2004, the following information is included in this Reference Document:

- the consolidated and parent company financial statements for the year ended December 31, 2010, accompanied by the Statutory Auditor's Reports which appear on pages 213 and 232, respectively, of the 2010 Reference Document filed on March 24, 2011 with the French financial markets authority (AMF) under number D. 11-0176;
- the financial information shown on pages 4 to 43 of the 2010 Reference Document filed on March 24, 2011 with the French financial markets authority (AMF) under number D.11-0176;
- the consolidated and parent company financial statements for the year ended December 31, 2011, accompanied by the Statutory Auditor's Reports which appear on pages 232 and 233, and on pages 256 and 257, respectively, of the 2011 Reference Document filed on March 20, 2012 with the French financial markets authority (AMF) under number D. 12-0180;
- the financial information shown on pages 4 to 50 of the 2011 Reference Document filed on March 20, 2012 with the French financial markets authority (AMF) under number D.12-0180.

The sections not included in these documents serve no useful purpose to investors or are already covered in this Reference Document.

> TRADE PAYABLES

Pursuant to article D. 441-4 of the French Commercial Code, a breakdown by maturity date of the trade payables balance of L'Air Liquide S.A. as of December 31, 2011 and December 31, 2012 is provided below.

		Maturity				
(in millions of euros)	**Balance**	**Past due**	**of which ≤ 30 days**	**of which > 30 days and ≤ 45 days**	**of which > 45 days and ≤ 60 days**	**of which > 60 days**
2011						
Trade payables and related accounts	91.6	6.1	35.6	35.0	14.4	0.5
Amounts payable in respect of fixed assets and related accounts	2.3	0.3	1.6	0.3	0.1	
TOTAL	**93.9**	**6.4**	**37.2**	**35.3**	**14.5**	**0.5**
2012						
Trade payables and related accounts	100.6	5.1	23.8	52.6	16.7	2.4
Amounts payable in respect of fixed assets and related accounts	8.0	0.1	2.7	0.1	0.1	5.0
TOTAL	**108.6**	**5.2**	**26.5**	**52.7**	**16.8**	**7.4**

FACTORS THAT MAY HAVE AN IMPACT IN THE EVENT OF A TAKEOVER BID

Pursuant to Article L. 225-100-3 of the French Commercial Code, the factors that may have an impact in the event of a takeover bid are set forth below.

Board of Directors' powers

The 18-month delegation of authority to issue free share subscription warrants in the event of a takeover bid on the Company, granted to the Board of Directors by the Extraordinary Shareholders' Meeting of May 4, 2011, expired in November 2012. At the request of a number of shareholders, its renewal was not requested.

It is furthermore specified that the share buyback authorization currently granted to the Company excludes any buybacks during a period of bidding on the Company's shares.

Some provisions relating to the stock options plans regulations are also applicable in the event of a takeover bid launched on the Company's shares (see page 153).

Agreements that may be modified or terminated in the event of a change of control of the Company

Several bond issues under the Group's EMTN program include a clause providing that, under certain circumstances, the early repayment of such bonds may be requested in the event of a change of control of the Company:

- bond issued in July 2007 maturing in July 2017 (500 million euros);
- bond issued in October 2007 maturing in March 2013 (295.75 million euros);
- private placement issued in January 2008 maturing in January 2038 (15 billion yen, or 132.0 million euros equivalent[a]);
- bond issued in June 2009 maturing in June 2015 (255.85 million euros);
- bond issued in June 2010 maturing in June 2020 (500 million euros);
- bond issued in October 2010 maturing in October 2018 (456.75 million euros);
- private placement issued in December 2011 maturing in December 2019 (15.5 billion yen, or 136.4 million euros equivalent [a]);
- private placement issued in January 2012 maturing in March 2019 (200 million US Dollars, or 151.6 million euros equivalent [a]);
- private placement issued in August 2012 maturing in August 2016 (13.5 billion yen, or 118.8 million euros equivalent [a]);
- bond issued in October 2012 maturing in October 2021 (500 million euros).

Three bonds (or private placements) issued outside of the Group's EMTN program include a clause providing that, under certain circumstances, the early repayment of such bonds may be requested in the event of a change of control of the Company:

- bond issued in September 2011 maturing in September 2016 (1,750 million renminbis, or 212.9 million euros equivalent [a]);
- bond issued in September 2011 maturing in September 2018 (850 million renminbis, or 103.4 million euros equivalent [a]);
- US Private Placement issued in September 2012, maturing in September 2022 (400 million US dollars, or 303.2 million euros equivalent[a]), September 2024 (200 million US dollars, or 151.6 million euros equivalent[a]) and September 2027 (100 million US dollars, or 75.8 million euros equivalent[a]).

Some credit agreements of the Group include a clause providing that, under certain circumstances, the early repayment of the advances made under those credit agreements may be requested in the event of a change of control of the Company:

(a) Converted at closing rates as of December 31, 2012, with 1 EUR = 113.61 JPY, 1 EUR = 1.3194 USD, 1 EUR = 8.2207 CNY.

Agreements providing indemnities for Board members or employees if they resign or are dismissed without good and sufficient cause or if their employment ends due to a takeover bid

The indemnities granted to the Company's corporate officers in the event of a termination of their office are detailed on pages 146 *et seq.* of this Reference Document.

> PERSON RESPONSIBLE FOR THE REFERENCE DOCUMENT

Person responsible for the Reference Document

Benoît Potier, Chairman and CEO of L'Air Liquide S.A.

Certification by the person responsible for the Reference Document

I hereby attest, after having taken all reasonable measures for such purpose, that the information contained in this Reference Document reflects, to the best of my knowledge, the current situation and does not omit any information that could alter its scope.

I certify that, to the best of my knowledge, the financial statements have been prepared in accordance with applicable accounting standards and give a true and fair view of the assets and liabilities, and of the financial position and results of the Company and of its consolidated subsidiaries, and that the Management Report of the Annual Financial Report defined on pages 1 to 7, 10 to 56, 58 to 111, 118 to 149, 151 to 173, 276 to 283, 310 to 314, 325 to 327, 338 and 339 provide a true and fair view of the evolution of the business, results and financial condition of the Company and of its consolidated subsidiaries, and a description of the main risks and uncertainties the Company and its consolidated subsidiaries are subject to.

I have obtained a work completion letter from the Statutory Auditors indicating that they have, in accordance with French professional standards, verified the information on the financial position and the financial statements and have reviewed all of the information presented in the Reference Document.

Paris, March 14, 2013

Benoît Potier

Chairman and CEO

> CROSS-REFERENCE TABLE

The cross-reference table identify the main information required by Regulation n° 809/2004 of the European Commission dated April 29, 2004 (the "Regulation"). The table indicates the pages of this Reference Document where is presented the information related to each item. The table indicates, when required by the Regulation, the pages of the Reference Document related to the year ended December 2011, filed on March 20, 2012 under the number D. 12-0180 (the "DDR 2011"), and the pages of the Reference Document related to the year ended December 2010, filed on March 24, 2011 under the number D. 11-0176 (the "DDR 2010"), which are incorporated by reference in this document.

N°	Items of the Annex I of the Regulation	Pages
8.	**Property, Plants and Equipment**	
8.1.	Material tangible fixed assets	45 to 47, 208, 209, 323
8.2	Environmental issues that pay affect the utilisation of the tangible fixed assets	84 to 100, 244
9.	**Operating and Financial Review**	
9.1.	Financial Condition	2, 3, 29 to 42, 47 to 50, 177 to 183, 338, 339 4 to 7, 26 to 37, 42 to 44, 157 to 163 of DDR 2011 4, 5, 20 to 34, 42, 43, 137 to 143 of DDR 2010
9.2.	Operating Results	
9.2.1	Significant factors materially affecting the issuer's income from operations	29 to 39, 201 to 204
9.2.2	Disclosure of material changes in net sales or revenues	29 to 39, 201
9.2.3	Policies or factors that have materially affected, or could materially affect, directly or indirectly, the issuer's operations	30, 31, 54 to 56
10.	**Capital Resources**	
10.1.	Issuer's capital resources	47 to 50, 180, 181, 215, 227 to 231 (note 25), 232 to 241 (note 28), 338, 339
10.2.	Sources and amounts of the issuer's cash flows	41, 42, 180, 181
10.3.	Information on the borrowing requirements and funding structure	47 to 50, 227 to 231
10.4.	Restrictions on the use of capital resources	N/A
10.5.	Anticipated sources of funds	41, 42, 47 to 50
11.	**Research and Development, Patents and Licences**	**51 to 53, 105 to 109**
12.	**Trend Information**	
12.1	The most significant recent trends in production, sales and inventory, and costs and selling prices since the end of the last financial year	56
12.2	Known trends, uncertainties, demands, commitments or events that are reasonably likely to have a material effect on the issuer's prospects	56
13.	**Profit Forecasts or Estimates**	
13.1	Statement setting out the principal assumptions upon which the issuer has based its forecast or estimate	N/A
13.2	Report prepared by independent accountants or auditors	N/A
13.3	Preparation of the forecast or estimate	N/A
13.4	Statement on the correctness of a forecast included in the prospectus	N/A
14.	**Administrative, Management, and Supervisory Bodies and Senior Management**	
14.1.	Composition – statements	118, 119, 160 to 171
14.2.	Conflicts of interests	120 to 122, 149
15.	**Remuneration and Benefits**	
15.1.	Remuneration and benefits in kind	124, 137 to 144, 149, 242, 243, 267
15.2.	Pension, retirement or similar benefits	145 to 149, 242, 243, 267
16.	**Board Practices**	
16.1.	Current term office	118, 160 to 171
16.2.	Contracts providing benefits upon termination of employment	148
16.3.	Information about audit and remuneration committee	125, 126, 128, 129, 149
16.4.	Statement related to corporate governance	120, 323

N°	Items of the Annex I of the Regulation	Pages
17.	**Employees**	
17.1.	Number of employees	78, 79, 202, 267
17.2.	Shareholdings and stock options	142 to 144, 151, 152 to 155, 243, 311
17.3.	Arrangements involving the employees in the capital of the issuer	152 to 159, 216 to 219, 280 to 283, 290 to 297
18.	**Major Shareholders**	
18.1.	Identification of the main shareholders	311
18.2.	Voting rights	311
18.3.	Ownership and control	311
18.4.	Arrangements which may result in a change in control of the issuer	311
19.	**Related party transactions**	**241, 242**
20.	**Financial Information concerning the issuer's assets and liabilities, financial position and profits and losses**	
20.1.	Historical Financial Information	2, 3, 29 to 42, 47 to 50, 177 to 273, 338, 339 4 to 7, 26 to 37, 42 to 44, 157 to 259 of DDR 2011 4, 5, 20 to 34, 42, 43, 137 to 234 of DDR 2010
20.2.	Pro forma financial information	N/A
20.3.	Financial statements	177 to 273 157 to 259 of DDR 2011 137 to 234 of DDR 2010
20.4.	Auditing of historical annual financial information	
20.4.1	Statement indicating that the historical financial information has been audited	251, 252, 270, 271, 328 232, 233, 256, 257, 302 of DDR 2011 213, 232, 292 of DDR 2010
20.4.2	Indication of other information which has been audited	112 to 114, 150, 298 to 307
20.4.3	Source of the data when financial data in the registration document is not extracted from the issuer's audited financial statements	N/A
20.5.	Age of latest financial information	December 31, 2012
20.6.	Interim and other financial information	N/A
20.6.1	Quarterly or half yearly financial information	N/A
20.6.2	Interim financial information	N/A
20.7	Dividend policy	321
20.7.1	Amount of dividends	6, 29, 61, 62, 205, 272, 277, 278, 284, 285, 322, 338, 339
20.8.	Legal and arbitration proceedings	27, 28, 220, 221, 244
20.9.	Significant change in the issuer's financial or trading position	244
21.	**Additional Information**	
21.1.	Share Capital	
21.1.1	Amount of issued capital	182, 215, 272, 310, 311
21.1.2	Shares not representing capital	N/A
21.1.3	Shares held by or on behalf of the issuer itself	182, 215, 311
21.1.4	Convertible securities, exchangeable securities or securities with warrants	N/A
21.1.5	Information about and terms of any acquisition rights and or obligations over authorised but unissued capital or an undertaking to increase the capital	280 to 283, 289 to 297, 312 to 314, 316, 317
21.1.6	Information about any capital of any member of the group which is under option or agreed conditionally or unconditionally to be put under option and details of such options including those persons to whom such options relate	142 to 144, 152 to 159, 216 to 219, 243, 280 to 283, 290 to 297
21.1.7	History of share capital	182, 183, 310, 311 162, 163, 286, 287 of DDR 2011 142, 143, 278, 279 of DDR 2010
21.2.	Memorandum and Articles of Association	

> CROSS-REFERENCE TABLE FOR THE ANNUAL FINANCIAL REPORT

In order to facilitate the reading of this document, the cross-reference table, hereafter, allows to identify in this Reference Document, the information which constitutes the Annual Financial Report having to be published by the listed companies in accordance with article L. 451-1-2 of the French Monetary and Financial Code and article 222-3 of the French Market Authorities' General Regulations.

> GLOSSARY

Financial glossary

A

Adjusted price

Share price adjusted to take account of changes in capital (issue of new shares, share split, etc.). The adjusted share price is used to produce meaningful comparisons of price changes over time.

AMF (Autorité des marchés financiers*, the French financial markets authority)*

The AMF governs and oversees the conduct and professional ethics of the markets and protects the interests of investors and shareholders.

B

Bearer share

Share held in a security account at the shareholder's financial broker.

Bond

Tradable debt security issued by a public or private company, a group, an association or a government. Bonds carry fixed interest for a specific period and are redeemable on maturity.

C

CAC 40 (Cotation assistée en continu *– Continuous Automated Trading)*

The flagship stock market index of NYSE Euronext in Paris, the CAC 40 tracks the evolution of a selection of 40 stocks registered on this stock market. A committee of NYSE Euronext specialists regularly revises its composition to ensure that it remains representative. Air Liquide has been included in the CAC 40 since its inception in 1988.

Capital employed

Balance sheet capital corresponding to financial resources used by a company to develop its business. It is the sum of equity, minority interests and net debt.

Capital gain

Gain realized on the sale of a security, that is, the difference between its sale price and its original purchase price, or book value.

Cash flow

This indicator provides the exact measure of annual cash flow that the Company is able to generate from its operations, independently of the evolution of the working capital requirement which can be seasonal or erratic. This indicator is before tax, dividends and cost of financing.

Conditional grant of shares to employees (CGSE)

Means of remuneration that grants free shares of the Company to all the employees or a specific employee category. The employee only becomes the owner of the shares after a given acquisition period and according to the plan's conditions. If the acquisition period is shorter than four years, the law provides that the employee must keep his/her shares for a minimum additional two year period.

Custody fees

Fees charged by a financial intermediary for maintaining a share account. They generally represent a percentage of the portfolio or a set fee per line of shares held. Air Liquide's Shareholder Services provide this service free of charge for shares held in a direct registered account.

D

Deferred settlement service (SRD)

Fee-based service available for the most traded stocks through which settlement for orders or delivery of shares is deferred to the last trading day of the month. Air Liquide shares are eligible for this service.

Diluted earnings per share (Diluted EPS)

Net profit Group share divided by the average weighted number of shares which would be outstanding, assuming conversion of all potential shares (exercise of share subscription options, definitive grant of free shares, etc.). The equivalent accounting term is diluted net profit by share.

Direct registered shares

Direct registered shares are managed by Air Liquide and registered in its accounts. They are held in a securities account opened at Air Liquide.

Dividend

The part of a company's net profit distributed to shareholders. Shareholders vote the dividend at the Annual General Meeting after approval of the financial statements and the allocation of earnings proposed by the Board of Directors.

E

Earnings per share (EPS)

Net profit Group share divided by the average weighted number of shares outstanding. The equivalent accounting term is net profit per share.

ESG (Environmental, Social and Corporate Governance)

Environmental, social and corporate governance are the three main areas appraised by SRI analysts. A positive appraisal of these criteria is a guarantee of quality. It reflects the sustainability of a company's development.

Euronext Paris

Name of the firm which organizes, manages and develops the securities market in Paris, and acts as market regulator (financial transactions, monitoring of companies listed on the stock market) with the delegated authority of the AMF.

Euro stoxx 50

Stock Exchange index composed of 50 of the highest capitalizations and most actively traded stocks listed in the eurozone.

F

Fractional right

Part of a share that cannot be distributed in the case of a free share attribution or subscription if the number of shares held is not a multiple of the transaction. Example: in a 1 for 10 free share attribution, a shareholder holding 68 shares is allocated 6 new shares and 8 fractional rights.

Free float

The part of a company's capital publicly available and tradable on the stock markets. The higher the free float, the greater the liquidity of the shares. Nearly 100% of Air Liquide's capital is floated.

Free share attribution

Transaction by which the Company issues new shares by capitalizing undistributed earnings at no cost to shareholders, and allocates new shares in proportion to the number of shares already held. Air Liquide allocates regularly such free shares.

G

Goodwill

Difference between the purchase price of a company and its net tangible assets on the day of the acquisition.

I

IFRS (International Financial Reporting Standards)

International accounting standards with effect from January 1, 2005, conceived by the International Accounting Standards Board, or IASB, for quoted companies to harmonize the presentation and increase the transparency of their financial statements.

Indirectly/intermediary registered shares

Indirectly/intermediary registered shares are registered in the Air Liquide accounts and held in a securities account at the shareholder's financial broker.

ISIN Codes (International Securities Identification Numbers)

Codes used to identify financial products quoted on the spot market on the stock exchanges (Air Liquide ISIN trading Code: FR0000120073; for the three other Air Liquide Codes, please refer to the shareholders section of this document).

L

Liquidity

Ratio of the volume of shares traded over the total number of shares outstanding, which make up the capital.

Loyalty bonus

The loyalty bonus increases the dividend distributed and the number of free shares attributed by 10% for registered shares held for more than two full calendar years and subject to the conditions defined by Air Liquide's articles of association.

Loyalty dividend

Pursuant to Air Liquide's articles of association, a dividend premium of 10%, granted to loyal shareholders for registered shares held continuously for more than two full calendar years and until the date of the payment of the dividend.

M

Market capitalization

A company's market value equal, at any given time, to the quoted share price multiplied by the total number of shares outstanding.

Market sheet

The market sheet presents all the buy and sell orders for a share, as well as the latest orders executed. Investors can only have access to the five best offers (sales) and the five best demands (purchases).

N

Net profit (Group share)

Profit or loss made by the Company. It is calculated by adding operating income recurring, other non recurring operating expenses, net finance costs, other net financial expenses, share of profit of associates, profit (loss) from discontinued operations, then subtracting Company tax and minority interests.

O

OPCVM (Organisme de placement collectif en valeurs mobilières – *pooled investment funds)*

A savings product that makes it possible to hold part of a collective marketable security portfolio handled by a professional, like SICAVs (open-ended investment companies) or FCPs (mutual funds).

Operating income recurring

Annual sales minus the cost of producing, distributing and selling products and the depreciation or amortization on capital expenditures. It provides an operating performance indicator before financing and taxes.

P

Par value

The issue price of a share as defined in a company's articles of association. A company's total capital is the par value of the share multiplied by the total number of shares outstanding.

PER (Price Earnings Ratio)

The ratio of the market price of a share over earnings per share.

Preferential subscription right

Tradable right giving shareholders priority in subscribing to a number of new shares in proportion to the number of shares already held in the event of a share issue. This is a negotiable right in the stock exchange. In exceptional cases, the Company may ask its shareholders to suspend their subscription right at an Extraordinary Shareholders' Meeting.

Q

Quorum

Minimum percentage of shares with voting rights required to be present or represented for a General Shareholders' Meeting to be validly constituted.

R

Registered share

Share registered in the Air Liquide accounts.

Retained earnings

Undistributed profit, held by the Company until further decision.

Roadshow

Organized series of meetings during which a listed company, represented by its management or an Investor Relations team, travels to meet with institutional investors in their offices.

ROCE (Return on capital employed)

The ratio of Net Profit before interest expenses and after taxes over average capital employed. It reflects the net return on funds invested by shareholders and those loaned by banks and financial institutions.

ROE (Return on equity)

The ratio of Net Profit over shareholders' equity. It represents the net return on money invested by shareholders.

S

Share

Tradable security representing a portion of a company's capital. The owner of a share, the shareholder, is a part-owner of the Company and enjoys certain rights. Shares can be held as registered or bearer shares.

Share buyback

Transaction by which a company buys its own stock on the market, up to the limit of 10% of its capital. The transaction requires shareholder approval at the Company's General Shareholders' Meeting. Bought back shares are not taken into account in the net earnings per share calculation and do not receive any dividends.

Shareholders' equity

The part of the Company's capital belonging to its shareholders. It includes the value of issued shares, retained earnings and Net Profit for the financial year.

SRI (Socially Responsible Investment)

Socially responsible investment integrates, over and above the standard financial criteria, environmental, social and corporate governance (ESG) criteria in the analysis process and investment decision.

Stock option

A subscription option that offers the right to subscribe, at a price set in advance, for a fixed period, a company's shares.

Share split

Split of a share's par value to improve its liquidity. A share split leads, in the same proportions, to a split in the share's market value and the multiplication of the number of shares comprising the capital. The value is unchanged.

U

Usufruct

The legal right to use and derive profit or benefit from property that belongs to another person, as long as the property is not damaged. The holder of an usufruct has the right to use and enjoy the property, as well as the right to receive profits from the fruits of the property.

V

Volatility

The degree of variation of a share over a given period. It is a risk indicator: the greater the volatility, the higher the risk.

Y

Yield

Ratio of dividend per share over market share price.

Technical glossary

Advanced precursors

The increasing performance of electronic chips requires the use of new materials. These materials are supplied and integrated into the chips by advanced precursors, complex molecules that are generally liquid.

Alternative energy

Energy that represents an alternative to traditional energies, produced by transformation of natural gas or coal using gasification and/or gas cleaning techniques.

ASU

Air Separation Unit.

Carrier Gases

Carrier gases (nitrogen, oxygen, hydrogen, etc.) are used to transport and dilute process gases or to protect semiconductors from minute dust particles.

Cogen

Cogeneration is the simultaneous production of electricity and steam. It is an environmentally virtuous process as it avoids energy loss by harnessing the heat emitted during electricity production to produce steam.

Cold technologies

All cryogenic-related technologies used, primarily, in the production of air gases.

Cryogenics

Very low temperatures, necessary to the liquefaction of air gases, hydrogen and helium. Concerns temperatures below -150 degrees Celsius.

Fab

Production facility in the Electronics sector.

Fellow

The second highest international level of expertise (among four) in Air Liquide Technical Career Ladder. Fellows are recognized as worldwide authorities within their given field of expertise. Fellows are consultants of the top management in long-term company strategy.

Hot technologies

All heat-producing technologies, such as combustion processes. For Air Liquide, hot technologies comprise steam reforming of methane to produce hydrogen and carbon monoxide and cogeneration units.

HyCO unit

Unit that simultaneously produces hydrogen (H_2) and carbon monoxide (CO).

On-site

On-site installations consist of gas production units installed directly on Industrial Merchant or Electronic customer premises, thanks to which truck deliveries can be avoided.

Orders in hand

They represent the contractual value of all Group and third-party engineering and construction contracts managed by the Engineering and Construction entities, excluding projects under warranty, from the signature date.

Orders intake

They represent the sum of all Group and third-party engineering contracts which entered into force during the period.

Renewable energy

Forms of energy whose production does not lead to a decline in resources on a human scale, *e.g.* solar, wind, geothermal and hydroelectric energies.

Substrate

Material on or in which components of a micro-electronic system or circuit are manufactured.

Take or Pay

Contracts used in Large Industries integrating fixed minimum payments below minimum volume thresholds.

Traditional energy

As opposed to renewable energies, energy whose production exhausts resources by consuming them more quickly than they are created. It is directly produced from fossil fuels: coal, oil, natural gas.

> TEN-YEAR CONSOLIDATED FINANCIAL SUMMARY

	Notes	2003	2004	2004 IFRS
Key figures *(in millions of euros)*				
Consolidated income statement				
Revenue		8,393.6	9,376.2	9,428.4
of which Gas and Services		*7,388.5*	*8,275.2*	*8,275.2*
Operating Income Recurring	(a)	1,196.0	1,276.9	1,374.6
Operating Income Recurring/revenue		14.2%	13.6%	14.6%
Net profit (Group share)		725.6	777.5	780.1
Consolidated statement of cash flows				
Cash flow from operating activities before changes in working capital	(b)	1,542.2	1,694.9	1,691.7
Purchase of property, plant and equipment and intangible assets		746.8	875.4	901.0
Purchase of property, plant and equipment and intangible assets/revenue		8.9%	9.3%	9.6%
Acquisition of subsidiaries and financial assets		74.9	2,858.5	2,858.5
Total capital expenditures/revenue	(c)	9.8%	39.8%	39.9%
Dividends related to fiscal year and paid in the following year	(d)	327.5	391.2	391.2
Consolidated balance sheet				
Shareholders' equity at the end of the period		5,079.2	5,373.6	4,916.3
Net indebtedness at the end of the period		1,730.2	3,790.3	4,012.5
Gearing		31.2%	66.3%	76.7%
Capital employed at the end of the period	(e)	7,269.4	9,505.4	9,245.0
Share capital				
Number of shares issued and outstanding at the end of period		99,912,917	109,180,823	109,180,823
Adjusted weighted average number of shares outstanding	(f)	310,988,148	309,022,563	309,022,563
Key figures per share in euros				
Net profit per share	(g)	2.33	2.52	2.52
Dividend per share		3.20	3.50	3.50
Total dividend (including tax credit until 2003)		4.80	3.50	3.50
Dividend adjusted per share	(h)	1.01	1.22	1.22
Ratios				
Return on equity (ROE)	(i)	14.1%	14.9%	16.3%
Return on capital employed after tax (ROCE)	(j)	11.6%	11.3%	11.9%

Loyalty dividend:

Since 1995, a 10% loyalty dividend is attributed to shareholders holding their shares in registered form for at least two years on the December 31 preceding the period of distribution, and owned until the date of the payment of the dividend.

The dividend proposed to the Annual General Meeting for fiscal year 2012 amounts to 2.50 euros per share, and the enhanced dividend to 2.75 euros per share representing a total distribution of 803.4 million euros. The tax credit associated to dividends is no longer applicable since fiscal year 2003.

(a) Operating income from 2003 until 2004.

(b) Funds provided by operations from 2003 until 2004 (before adjustments of profit/loss on disposal of fixed assets).

(c) Purchase of property, plant and equipment, intangible assets and long-term investments. Industrial and financial capital expenditures and transactions with minority shareholders are included.

(d) Without withholding tax of 8.7 million euros in 2003, and including a loyalty dividend of 22.7 million in 2012, 19.5 million in 2011, 16.5 million in 2010, 14.7 million in 2009, 15.0 million in 2008, 13.5 million in 2007, 12.5 million in 2006, 10.4 million in 2005, 9.1 million euros in 2004 and 7.8 million euros in 2003.

(e) Capital employed at the end of period: shareholders' equity + minority interests + net indebtedness.

	2005	2006	2007	2008	2009	2010	2011	2012
	10,434.8	10,948.7	11,801.2	13,103.1	11,976.1	13,488.0	14,456.9	15,326.3
	9,147.7	*9,628.0*	*9,998.5*	*11,027.6*	*10,191.8*	*11,885.7*	*13,046.0* [m]	*13,912.0*
	1,517.6	1,659.2	1,794.1	1,949.0	1,949.0	2,252.2	2,408.7	2,560.5
	14.5%	15.2%	15.2%	14.9%	16.3%	16.7%	16.7%	16.7%
	933.4	1,002.3	1,123.1	1,220.0	1,230.0	1,403.6	1,534.9	1,609.4
	1,804.8	1,889.3	2,054.4	2,206.7	2,274.5	2,660.9	2,728.1	2,912.6
	975.2	1,128.2	1,359.3	1,908.3	1,411.0	1,449.8	1,755.0	2,007.9
	9.3%	10.3%	11.5%	14.6%	11.8%	10.7%	12.1%	13.1%
	76.2	72.3	1,308.2	242.3	109.2	239.9	99.5	879.4
	10.1%	11.0%	22.6%	16.4%	12.7%	13.2%	12.9%	18.9%
	432.1	497.0	551.0	602.0	609.2	684.2	729.1	803.4
	5,930.5	6,285.8	6,369.5 [l]	6,757.4 [l]	7,583.7	8,903.5	9,758.6	10,211.7
	3,739.8	3,446.6	4,660.2	5,484.4	4,890.8	5,039.3	5,248.1	6,102.5
	60.2%	52.5%	71.5%	79.5%	63.1%	55.3%	52.5%	58.4%
	9,948.5	10,013.4	11,179.8 [l]	12,386.1 [l]	12,642.7	14,151.8	15,243.8	16,546.8
	109,538,475	121,149,189	238,844,710 [k]	260,922,348	264,254,354	284,095,093	283,812,941	312,281,159
	308,477,956	311,749,765	310,641,903	305,802,569	307,994,710	310,355,373	311,594,600	311,147,191
	3.03	3.22	3.62	3.99	3.99	4.52	4.93	5.17
	3.85	4.00	2.25	2.25	2.25	2.35	2.50	2.50
	3.85	4.00	2.25	2.25	2.25	2.35	2.50	2.50
	1.35	1.54	1.73	1.91	1.91	2.13	2.27	2.50
	17.2%	16.4%	17.7% [l]	18.6% [l]	17.2%	17.0%	16.8%	16.3%
	11.7%	11.9%	12.3% [l]	12.2% [l]	11.6%	12.1%	12.1%	11.7%

(f) Adjusted to account for, on a basis of a weighted number of shares outstanding, the two-for-one share split (in 2007), free share attribution (declared in 2012, 2010, 2008, 2006 and 2004), stock offering (from 2003 to 2012) and treasury shares.

(g) Calculated on the adjusted weighted number of shares outstanding during the year (excluding treasury shares).

(h) Adjusted to account for share capital movements.

(i) Return on equity: (Net profit Group share)/(weighted average of shareholders' equity over the year).

(j) Return on capital employed after tax: (Net profit after tax before deduction of minority interests – net cost of debt (financial result before 2004) after taxes)/weighted average for the year of (shareholders' equity + minority interests + net indebtedness).

(k) The L'Air Liquide S.A. two-for-one share split on June 13, 2007.

(l) Corresponds to the amounts as of December 31 restated for the impacts of the application of the option offered by the revised IAS19 «Employee Benefits», to immediately recognize all actuarial gains and losses and adjustments arising from the asset ceiling, net of deferred tax, in addition to the first-time adoption of IFRIC14.

(m) The specialty ingredients activities of Seppic and its subsidiaries were reclassified from "Other activities" to "Gas & Services"

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