2010 ANNUAL REPORT

AIR LIQUIDE™

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FINANCIAL INFORMATION AND SUSTAINABLE DEVELOPMENT KEY INDICATORS

WWW.AIRLIQUIDE.COM

AIR LIQUIDE IS THE WORLD LEADER IN GASES FOR INDUSTRY, HEALTH AND THE ENVIRONMENT

43,600 employees in **80** countries **13,5** billion in revenue

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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 to enable progress, to achieve dynamic growth and a consistent performance.

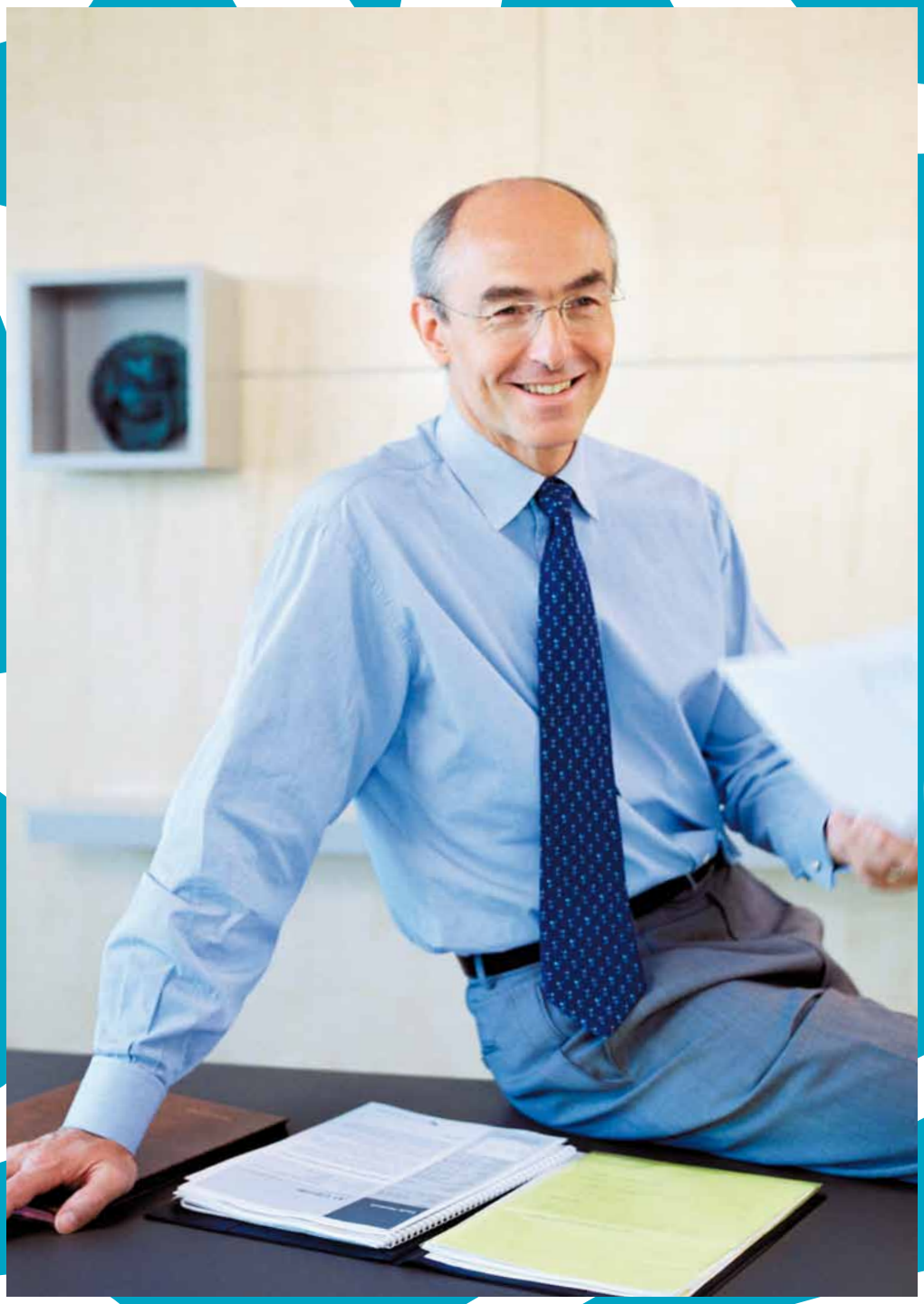
Innovative technologies that curb polluting emissions, lower industry's energy use, recover and reuse natural resources or develop the energies of tomorrow, such as hydrogen, biofuels or photovoltaic energy... Oxygen for hospitals, homecare, fighting nosocomial infections... Air Liquide combines many 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 sustainable development approach.


WE
EXPLORE
THE BEST THAT
AIR CAN OFFER
TO IMPROVE
QUALITY OF
LIFE
BE THE LEADER



INTERVIEW WITH THE CHAIRMAN

BENOÎT POTIER — CHAIRMAN AND CHIEF EXECUTIVE OFFICER

What general conclusions do you draw from 2010?

A return to growth. Air Liquide obtained solid results in 2010 with revenue up around 13% and net profit over €1.4 billion. These results are among the strongest in the Group's history. The past two years were marked by an unprecedented economic crisis. Our results in 2010 point to an economic recovery and provide positive foundations for both supporting future growth and sustaining our ambition.

Has this recovery been seen across all of the Group's business activities?

Yes, we've seen tangible growth across nearly all of our activities and geographies. I'd highlight our Large Industries and Electronics business lines, as well as the Asia-Pacific and Middle East regions, which saw the sharpest increases. In general, our Gas and Services activities are making sustained progress, but there is a deep contrast between Developing Economies, where sales grew by 29%, and Advanced Economies, where they progressed by 7%. This momentum confirms the strength of our five growth drivers. We have pursued acquisitions in Health, notably in France, and signed new projects in the Energy and Environment sectors: hydrogen in Saudi Arabia, hydrogen energy in Canada, and CO_2 capture and storage in the United States, to provide a few examples. In High-Tech, Air Liquide has strengthened its position as leader in the photovoltaic industry. Finally, the Group extended its positions in Developing Economies, with numerous contracts in China, India, Poland, and Russia.

Is the economic crisis definitely behind us?

If we measure the recovery in volumes of gas sold to our customers, 2010 appears to have been a transition year. Today, while short term fluctuations are still possible, I don't think a major economic reversal is likely.

What are the prospects for 2011? Are you confident in the Group's future?

Very much so. The Group has new momentum, made possible by accelerated development in certain markets after the crisis. This effort took shape in 2010 with the signing of new contracts, acquisitions and site takeovers, entry into new countries, and new production unit start-ups, which occurred at a rate of two per month – quite an achievement!

The recovery in the long-term investment cycle has enabled us to reestablish a sustained investment level, doubling that of 2009, an active strategy that will set the foundation for tomorrow's growth.

Furthermore, our five growth drivers—Energy, the Environment, Developing Economies, Health, and High-Tech—have been confirmed.

This favorable context will make it possible to seize many growth opportunities to accelerate the pace of our development over the long term. In this context, Air Liquide is confident in its ability to continue, under normal economic conditions, to regularly grow its net profit in 2011.

"2010 performance has already put us in a strong position for reaching our ALMA 2015 objectives"

In 2010, your investments focused largely on Developing Economies. What is the situation with Advanced Economies?

2010 has confirmed that the so-called "emerging" economies are no longer that–they have emerged! In these economies, activity is 40% higher than pre-crisis levels. They are modernizing existing facilities, investing in new industrial production capacities, and developing local markets. This is contributing to the formation of a new middle class. For the first time, more than half of our investments decisions in 2010 concern projects in Developing Economies.

At the same time, Advanced Economies still offer great opportunities for the Group, for example in the fields of Energy and the Environment. Here we are developing industrial pilot projects in CO_2 capture and storage, notably in the United States. We are participating in major projects related to hydrogen energy and second-generation biofuels. In Health, longer life expectancy, the increased frequency of certain chronic diseases, and the need to control healthcare expenditures all support growth in the homecare sector.

You announced ambitious objectives for 2015. What challenges must Air Liquide meet to reach them?

Our 2015 objectives are certainly ambitious. In a market where the growth potential will be +7% to +8% per year by 2015, we are aiming for annual revenue growth of +8% to +10%, combined with ongoing increases in efficiency of over €200 million per year. This will enable us to continue to improve our return on capital employed, with an objective of 12% to 13% over the period. Finally, we will further engage in responsibility objectives, as part of the Group strategy. This means that we must integrate new indicators into our management system, while sharing and deploying them Group-wide.

Our primary challenges include gaining positions in new markets, winning new contracts, and recruiting and training talent to support our development. Our success will come from our ability to transform the Group according to evolutions in our markets, while continuing to preserve our culture and our core values. 2010 performance has already put us in a strong position for reaching our ALMA 2015 objectives.

What do you mean by responsibility objectives?

Responsibility refers to how we act. Without responsibility, no company can have a long-term future. Responsibility is more difficult to define than performance, but I would say that it goes hand in hand with Air Liquide values, which we defined in our Principles of Action, as well as our corporate Sustainable Development Policy. The commitment to responsibility is not new for the Group: we first developed the subject many years ago. For the ALMA 2015 program, seven areas were identified, all of which are related to our commitment to the company's success over the long term. Throughout this year, we will develop responsibility indicators to complement our performance indicators.

One of the Group's challenges is to attract more than 30,000 new employees by 2015. How will this impact the Group?

To support Group growth, we must attract and welcome new talent that will enrich the Group through diversity: diversity of professions and roles, from research to production to fields such as Healthcare, diversity of nationalities and cultures, with half of new recruits coming from Developing Economies, as well as age diversity: by 2015, more than 40% of our workforce will be under 35 years of age! The Group profile will undergo profound changes. Air Liquide has always succeeded in opening and adapting to changes in the outside world and can build on real strengths in areas such as mobility and career development support.

Air Liquide is increasingly involved in environmental issues and clean energies. With the arrival of the electric car, is hydrogen energy still on the agenda?

A large proportion of our revenue comes from activities that contribute to preserving the environment, either by offering our customers solutions that make it possible to improve productivity while also protecting the environment in their industrial processes, or by contributing to the emergence of clean energies, such as photovoltaics and biofuels. Over 60% of the annual Research & Development budget is dedicated to these activities.

Hydrogen, used in fuel cells, is a highly promising clean energy carrier for cars, as it generates no CO_2 under certain production conditions. Air Liquide works on the entire implementation chain for hydrogen energy: production, hydrogen fueling stations, high-pressure storage technologies for vehicles, and fuel cells with our subsidiary AXANE.

The major market that we have our sights on for hydrogen is the automotive industry, but other applications will appear beforehand. This is already the case in North America, where we recently signed agreements with Walmart and Coca-Cola to supply forklifts with hydrogen and to install fueling stations. This will make it possible to fuel captive fleets that previously relied on electricity. Hydrogen is much more flexible and efficient, especially in terms of refueling. We can also use this technology to replace diesel generators in certain Developing Economies, such as India where we are conducting a study into powering mobile phone towers.

The Group displayed a very strong stock market performance in 2010. Have you seen changes in your shareholder base?

In December 2010, the Group reached the highest share price in its history, €99.15, and outperformed its market index by about 25%. This high share price certainly stimulated some share sales for profit, but in general our shareholder base, whether institutional or individual, continuously supports us and shares our long-term vision. The Group was able to count on the support of its shareholders during the crisis. Their loyalty enabled us, and will continue to enable us, to invest in and pursue our development over the long term.

To find out more about Air Liquide in 2010:
http://annualreport.airliquide.com

STRATEGY
SETTING THE COURSE FOR 2015

— In early 2008, Air Liquide launched the ALMA program with the aim of accelerating competitive growth. Strengthened by this program, the Group has continued to improve its performance and achieve solid results against an exceptionnal environment. The Group has achieved increases in investment decisions in Developing Economies and on new markets, improvements in competitiveness, better cash management, and success of production unit standardization programs. Additionally during this time the Group distributed the reference guidelines for the 12 main Air Liquide policies (the Bluebook) and launched Air Liquide University. These organizational efforts have allowed Air Liquide to mitigate the financial impact of the economic slowdown and set a framework for the future growth of the Group. Air Liquide can now once again look to the future.



BE THE LEADER OF OUR INDUSTRY THROUGH PERFORMANCE AND RESPONSIBILITY OVER THE LONG TERM

Identified in 2008 and reaffirmed during the new version of the ALMA company program for the 2011-2015 period, the five growth drivers, Energy, the Environment, Health, Developing Economies and High-Tech are now more relevant than ever. With support from the company's deep-rooted and long-term trends, their importance and potential have not lost strength in the post-crisis era.

FIVE SOLID GROWTH DRIVERS

Air Liquide contributes to the transformation of the **Energy** sector. In a context where energy needs are growing and fossil fuel resources are becoming increasingly rare, the Group offers its customers more effective, energy-efficient industrial solutions. Meanwhile, it is innovating in alternative energy such as hydrogen energy, an already operational technology, and is contributing to the development of new sources of fuel following in the footsteps of second generation biofuels produced from the non-edible parts of plants.

The Environment is an essential concern for all today's decision-makers, from industrials to Government, consumers to citizens. Air Liquide is a key player in this area. The Group's offer includes the reduction of industrial emissions, with important processes such as oxycombustion, which replaces air with pure oxygen in combustion boilers, allowing the capture and storage of more concentrated CO_2. Air Liquide also produces specialty gases that make the photovoltaic industry more competitive. Additionally, the Group produces hydrogen, which removes sulfur from hydrocarbons.

The challenges in the **Health** sector are numerous. Throughout the world, several factors have contributed to the Group's increased involvement within the health sector. Air Liquide has successfully brought its products and services into hospitals and homes in response to aging populations, the increase in chronic diseases, a need for less costly solutions within communities, and the search for a better quality of life for patients. In all countries where the Group is present, Air Liquide aims to reinforce its leadership in medical gases for hospitals and to develop its business in homecare services.

Today, **Developing Economies** present the majority of opportunities for the Group's investment portfolio. Air Liquide aims to work more closely with these regions as they grow, and build leadership positions. This includes responding to the increasing demand for gas for industry, health and the environment, as well as working to encourage economic development in the emerging regions of Asia, Central and Eastern Europe, the Middle East and Latin America.

Finally, in a world increasingly shaped by new information technologies such as microprocessors, fiber optics and flat screens, Air Liquide is at the cutting edge of progress in the **High Tech** sector. The Group fine tunes processes in increasing detail. For example, its range of new molecules (called advanced precursors) are essential for the semi-conductor industry. Air Liquide pushes the boundaries of science and knowledge while adapting its offer to the ever more specific needs of its customers.

Air Liquide's actions from 2011 to 2015 will take into account the changes occurring in the world and the development of needs: a new worldwide balance among Developing and Advanced Economies, the increasing importance of the energy and environment sectors and the rapid development of the health and high-tech sectors. Looking beyond the markets and countries where the Group is already present, Air Liquide aims to take advantage of every new growth opportunity.

ENRICHED AMBITION

To keep in step with the world and anticipate future changes, Air Liquide has chosen to redefine its ambition: "to be the leader in our industry through performance and responsibility over the long term". Performance and responsibility are two key, indivisible principles, and form an integral part of the Group's DNA. In reformulating its ambition, the Group emphasizes that these two concepts are equal in their importance. Performance is the result of the company's actions. Performance is visible and measureable, and the long-term trust of its stakeholders depends on it. Responsibility is the way the Group acts: a long-term commitment. It goes hand in hand with the values defined by Air Liquide in its Principles of Action and in its sustainable development policy.

PRECISE OBJECTIVES

Air Liquide has set concrete objectives for 2015 in line with this ambition. These were formulated after the reevaluation of its markets, in the light of changes following the crisis. For the 2011-2015 period, these objectives bring to light growth and competitive opportunities, both in terms of business sectors and geographical presence.

As such, the Group forecasts a growth in sales by +8% to +10% on average per year across all sectors, in a market whose estimated growth is around 7% to 8% annually. Air Liquide therefore predicts that by 2015 it will achieve one third of its Gas and Services sales revenue in Developing Economies, compared to 19% in 2010. Air Liquide also aims to deliver more than €200 million in operational efficiencies each year, improve its return on capital employed to between 12% and 13%, and measure its commitments in terms of social and environmental responsibility.

The means the Group has implemented are designed to meet these objectives: Air Liquide has set up a €12 billion industrial investment and acquisitions program, covering all its business sectors. The Group also plans to recruit 30,000 employees over the next few years, to rise to these challenges in each of the countries in which the Group operates.

A WELL-DEFINED STRATEGY

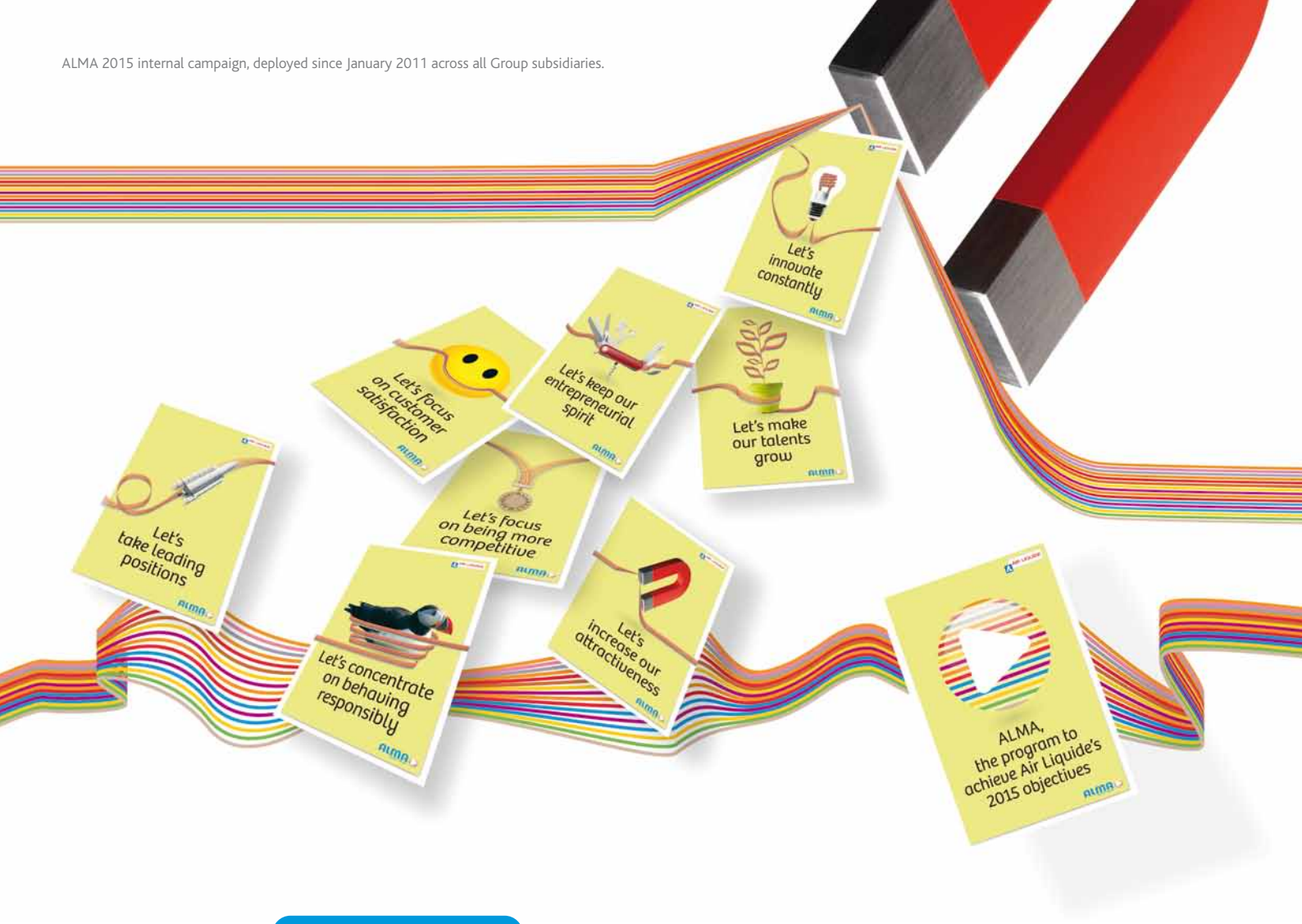
In order to reach these objectives, Air Liquide has defined a **strategy** based on **four strategic drivers**. These are reaffirmed in the actions carried out by the Group in previous years:

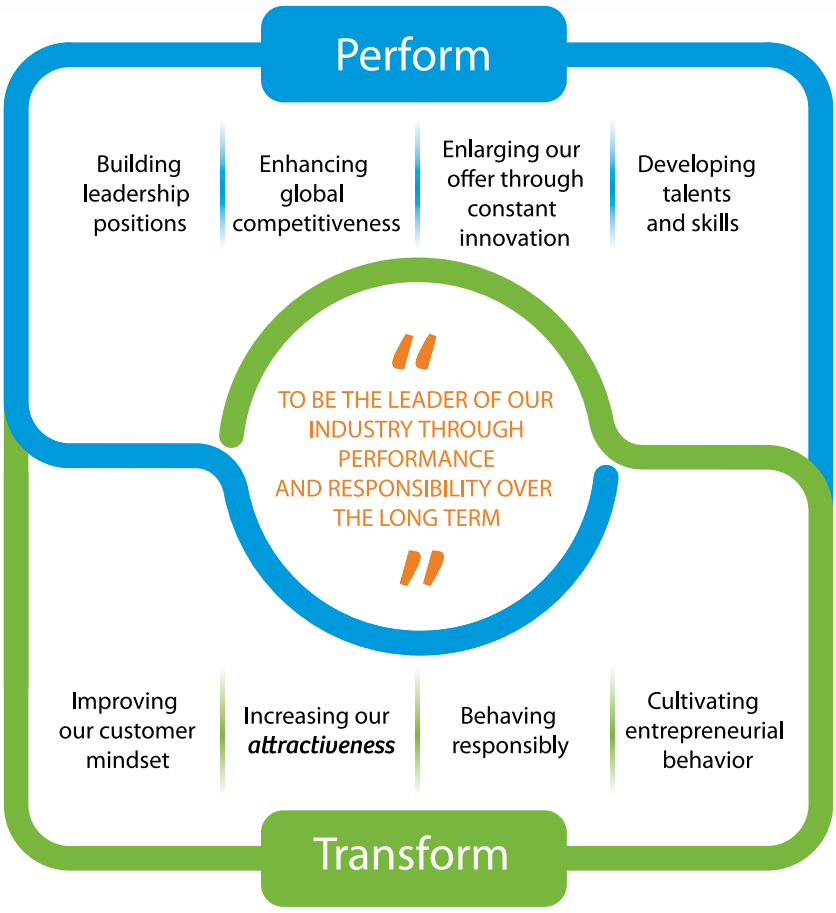
- building leadership positions,
- enhancing competiveness,
- enlarging our offer through innovation,
- developing talents and skills.

These strategic drivers are combined **with four enablers**: concrete, structural actions designed to put the Group in the best position possible to reach its objectives:

- improving customer mindset,
- increasing attractiveness,
- behaving responsibly,
- cultivating entrepreneurial behavior.

ALMA 2015 internal campaign, deployed since January 2011 across all Group subsidiaries.





THE ALMA PROGRAM FOR 2015

Strengthened by the success of the first version of ALMA, which enabled the Group to consolidate its foundations and progress in terms of responsiveness, Air Liquide is now entering, with ALMA 2015, a new crucial phase in the history of the Group and the world around it.

ALMA 2015 transposes the Group's strategy into eight concrete initiatives. These are hinged on two ideas:

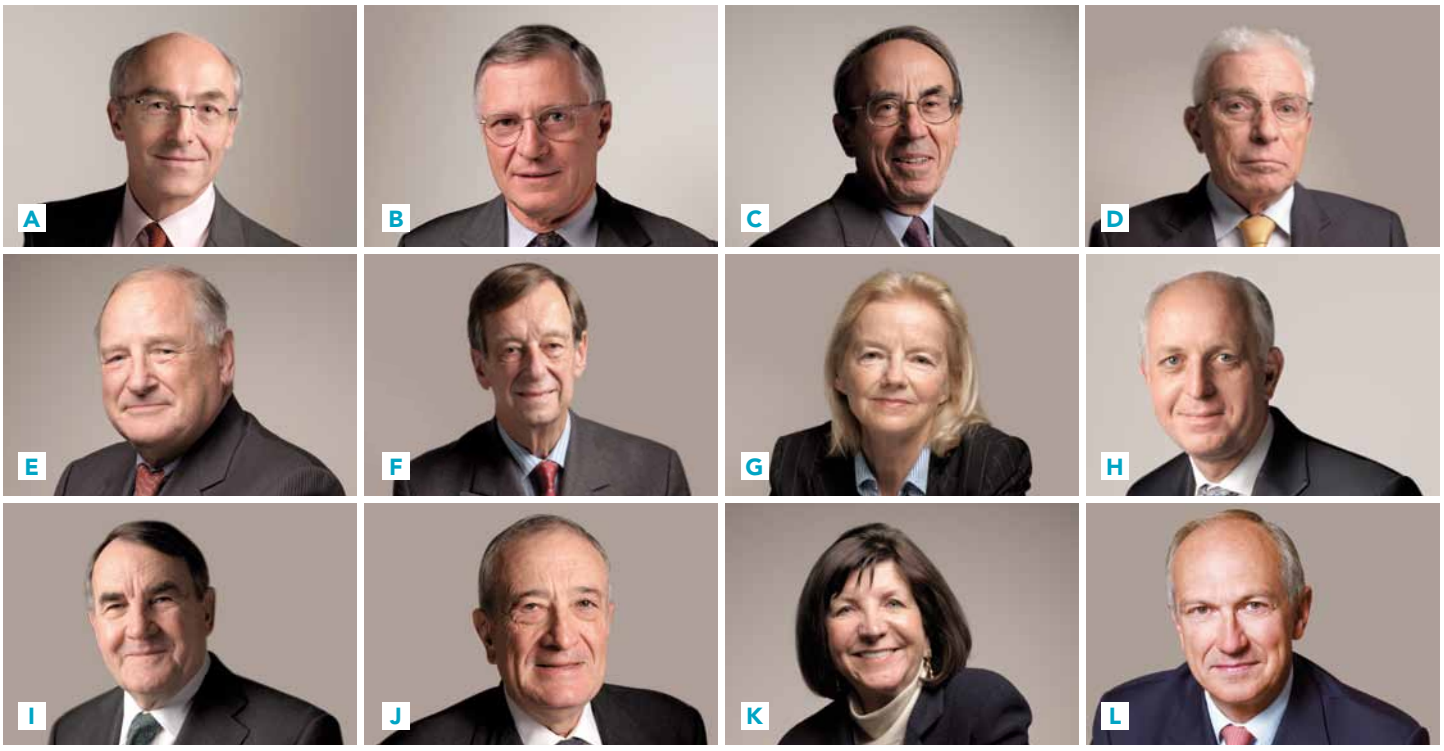
- the first aims to improve the **performance** of the Group and focuses on the four strategic drivers,
- the second is geared towards accelerating **transformation** and adapting the business to its new environment. It is based on the four enablers identified in the strategy.

ALMA 2015 is focused on the milestones that will allow each entity to live out this strategy, identify its major projects, and define the means of contributing most effectively to the Group's 2015 objectives.

ALMA
NEW WAYS ▸ OUR WAY

MANAGEMENT BODIES

THE BOARD OF DIRECTORS AS AT JANUARY 1, 2011



A — BENOÎT POTIER
Chairman and Chief Executive Officer
Expiration date of term: 2014

B — THIERRY DESMAREST
Director
Chairman of the Appointments and Governance Committee
Expiration date of term: 2013

C — ALAIN JOLY
Director
Expiration date of term: 2013

D — PROFESSOR ROLF KREBS
Director
Expiration date of term: 2012

E — GÉRARD DE LA MARTINIÈRE
Director
Chairman of the Audit and Accounts Committee
Expiration date of term: 2011*

F — CORNELIS VAN LEDE
Director
Chairman of the Remuneration Committee
Expiration date of term: 2011*

G — BÉATRICE MAJNONI D'INTIGNANO
Director
Expiration date of term: 2014

H — THIERRY PEUGEOT
Director
Expiration date of term: 2013

I — PAUL SKINNER
Director
Expiration date of term: 2014

J — JEAN-CLAUDE BUONO
Director
Expiration date of term: 2012

K — KAREN KATEN
Director
Expiration date of term: 2012

L — JEAN-PAUL AGON
Director
Expiration date of term: 2014

* Renewal of term proposed to the Annual General Meeting of May 4, 2011.

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, 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.

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, in the same way as the Management Board reported previously to the Supervisory Board, 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.

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.

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."

THE BOARD'S WORK IN 2010

In 2010, the Board of Directors met five times with an effective attendance rate or attendance rate by telephone of 95% of its members.

The Board's activities related to the following issues:

Monitoring of the Group's day-to-day management, 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 and authorize the distribution in 2010 of one free share for every 15 shares held;
- reviewing, at each meeting, the Group's financial position in the context of the gradual exit from an unprecedented international economic crisis;
- 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 EMTN program and the note exchange programs, the stock option and Conditional Grant of Shares to Employees plans or the development of employee savings schemes through the launch of a subscription in November 2010 and monitoring of the results obtained;
- reviewing at each meeting the report on acquisitions, disposals and major projects in progress;
- reviewing corporate documents,
- preparing the Annual General Meeting.

Monitoring of the Group's main strategies on significant issues

Functioning of the corporate governing bodies

For more information, refer to the section entitled "Corporate Governance" in the Reference Document available on our website www.airliquide.com or by request.

THE COMMITTEES

THE AUDIT AND ACCOUNTS COMMITTEE

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, Administration and Legal Divisions;
- the Internal Audit and Internal Control Management;
- 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 APPOINTMENTS AND GOVERNANCE COMMITTEE

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. The Committee looks for new members on the basis of its evaluation of the needs and developments expressed by 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 Executive Officers 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 REMUNERATION COMMITTEE

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.

For more information, refer to the section entitled "Corporate Governance" in the Reference Document available on our website www.airliquide.com or by request.

EXECUTIVE MANAGEMENT
AS AT FEBRUARY 15, 2011

A B C D E F

A — BENOÎT POTIER
Chairman and Chief Executive Officer
Born in 1957 – French

B — PIERRE DUFOUR
Senior Executive Vice-President
Born in 1955 – Canadian

C — JEAN-PIERRE DUPRIEU
Executive Vice-President
Born in 1952 – French

D — FRANÇOIS DARCHIS
Senior Vice-President
Engineering and Construction,
Research and Technology
Also supervising the Industrial Merchant,
Electronics and Healthcare
World Business Lines
Born in 1956 – French

E — JEAN-MARC DE ROYERE
Senior Vice-President
Asia-Pacific
Born in 1965 – French

F — FABIENNE LECORVAISIER
Group Vice-President,
Finance and Operations Control
Born in 1962 – French

AND EXECUTIVE COMMITTEE

G H I J K L M

G — RON LABARRE
Group Vice-President, Large Industries World Business Line
Born in 1950 – American

H — GUY SALZGEBER
Vice-President, Northern and Central Europe
Born in 1958 – French

I — AUGUSTIN DE ROUBIN
Vice-President, Southern and Eastern Europe (including France)
Also supervising Welding and Diving activities
Born in 1953 – French

J — MICHAEL J. GRAFF
Vice-President, Americas
Also supervising Safety and Industrial Systems
Born in 1955 – American

K — MOK KWONG WENG
Vice-President, North-East Asia
Born in 1953 – Singaporean

L — FRANÇOIS ABRIAL
Vice-President, Human Resources
Born in 1962 – French

M — PASCAL VINET
Vice-President, Healthcare World Business Line and Healthcare Operations
Born in 1962 – French

SOLID PERFORMANCE

— Due to the return to more sustained growth, a further improvement in operating performance and a recovery in the investment cycle, the Group achieved record levels in 2010 in terms of revenues and profits.

GROUP REVENUE

BY ACTIVITY IN MILLION OF EUROS

11,886
Gas and Services

851
Other Activities

751
Engineering and Construction

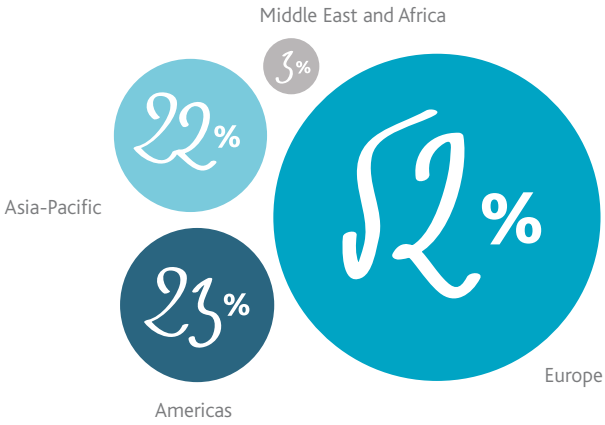
NET PROFIT (GROUP SHARE)

IN MILLION OF EUROS

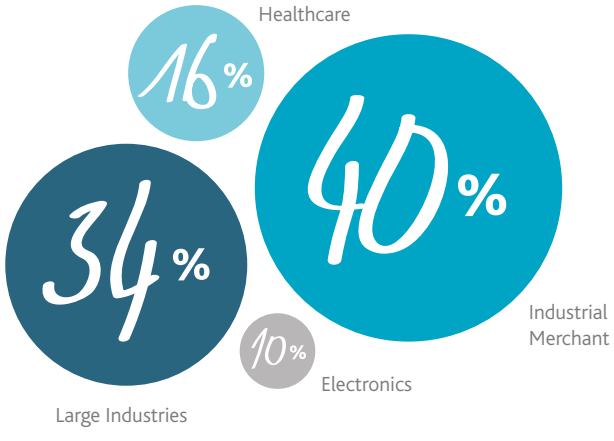
1,404

GAS AND SERVICES REVENUE

BY GEOGRAPHICAL AREA



BY BUSINESS LINE



REVENUE
IN MILLION OF EUROS

2010 13,488

2009 11,976

NET PROFIT
(GROUP SHARE)
IN MILLION OF EUROS

2010 1,404

2009 1,230

ROCE
RETURN ON CAPITAL EMPLOYED AFTER TAX
IN %

2010 12.1

2009 11.6

CONSOLIDATED INCOME STATEMENT SUMMARIZED
IN MILLION OF EUROS

Revenue	13,488
Operating income recurring before depreciation and amortization	3,374
Operating income recurring	2,252
Operating income	2,254
Net profit (Group share)	1,404
Basic earnings per share (in euros)	4.99
Diluted earnings per share (in euros)	4.97

DIVIDEND

€2.35

Proposed at the May 4, 2011 Annual General Meeting

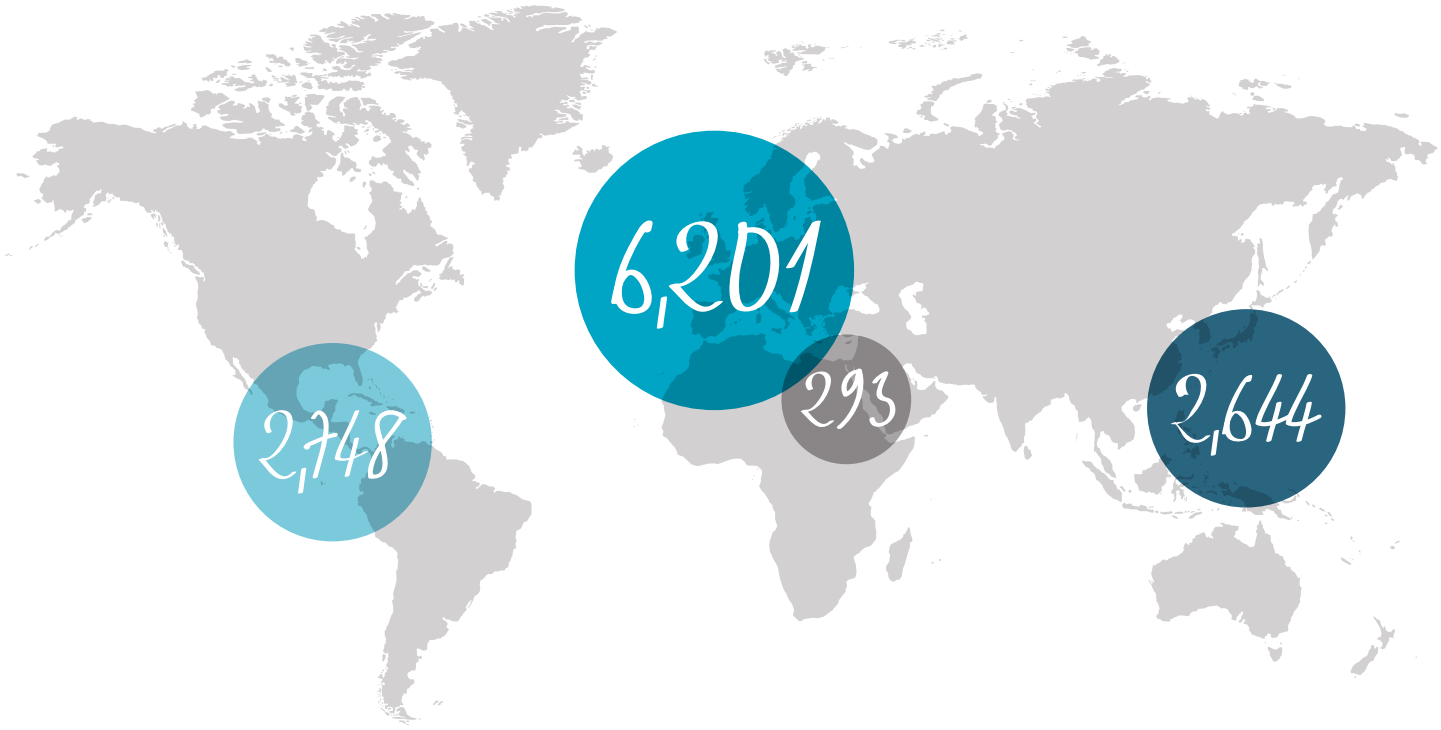
AIR LIQUIDE WORLDWIDE

— Understanding from the beginning the value of close relations with its global customers, Air Liquide quickly set out to develop internationally. Today, the Group is present in 80 countries.

GAS AND SERVICES REVENUE DISTRIBUTION

BY GEOGRAPHICAL AREA IN MILLION OF EUROS

Gas and Services revenue totaled 11,886 million euros. This performance was attributable to 29% increase in sales in Developing Economies due to solid growth in demand and a significant number of plant start-ups; as well as 7% increase in sales in Advanced Economies where recovery was gradual.

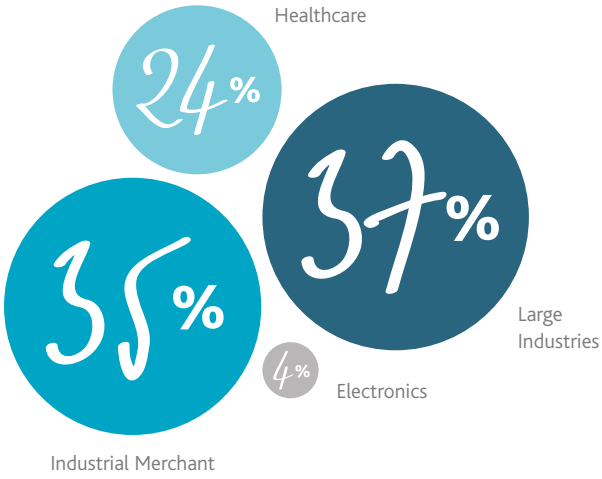


● Europe ● Americas ● Asia-Pacific ● Middle East and Africa

EUROPE

Europe revenue totaled 6,201 million euros with more significant growth in developing economies than in advanced economies. 2010 was marked by strong growth in Large Industries and a substantial turnaround in Electronics.

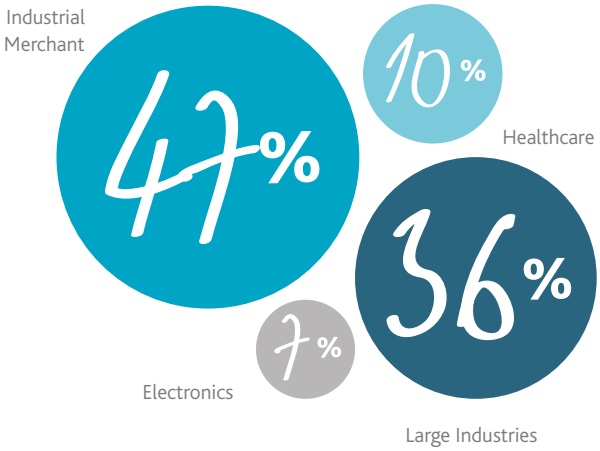
Gas and Services revenue



AMERICAS

Gas and Services revenue in the Americas totaled 2,748 million euros, up +10%. This performance was due to a solid turnaround in North America, particularly the United States, and sharp improvement in all activities in Latin America.

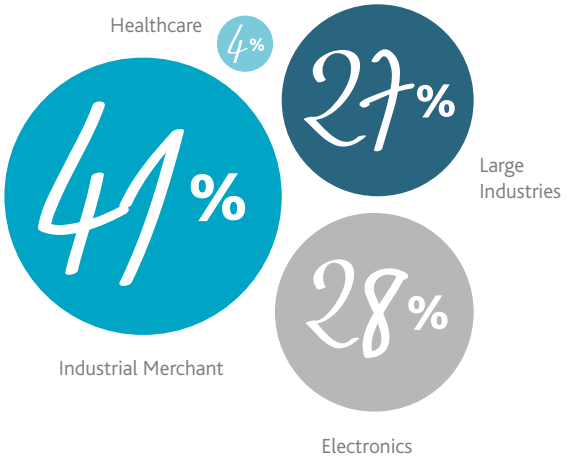
Gas and Services revenue



ASIA-PACIFIC

Asia-Pacific revenue rose by +23% to reach 2,644 million euros. Local demand increased substantially in all developing economies. The recovery in demand in the Electronics sector was as sudden as its decline in 2008. 2010 was an exceptional year for the Group in China and commissioned units in Singapore, India, Australia, Japan and Vietnam.

Gas and Services revenue



MIDDLE EAST AND AFRICA

Middle East and Africa revenue totaled 293 million euros, up +14%, due to start-ups in Egypt. New bulk and cylinder distribution facilities, acquired in the Middle East, also resulted in commercial synergies in the Group's industrial basins.

€293

million in revenue

JANUARY

France: new pain management outside the hospital by a medicinal gas

KALINOX™ is a medicinal gas which offers a new response to the issues of short painful medical treatments.

Further investments in India

Air Liquide is investing €40 million in significant new production capacity of liquefied gases (oxygen, nitrogen and argon) as well as in a new facility which produces cryogenic storage tanks.

FEBRUARY / MARCH

Homecare acquisition in France

Air Liquide has just completed the 100% acquisition of DinnoSanté, a company that specializes in medical-technical services for diabetes.

Contracts in China

Investments of €115 million to meet the needs for new steel producers customers.

APRIL

New oxygen units in China

Design and construction of four Air Separation Units (ASUs) for new customers in the coal-to-chemical industry.

Start-ups of units in South America

The Air Liquide Group is investing more than €36 million in a new hydrogen unit for Esso Petrolera Argentina refinery.

Start-up of a large Air separation Unit (ASU) for a steel producer customer in Brazil.

Shanghai 2010: Air Liquide hydrogen and healthcare expertise to support the exhibition

Air Liquide provided delivery service and back-up hydrogen supply for the hydrogen refilling stations serving the Shanghai World Expo.

MAY

Qatar: dual success in helium market

Air Liquide has been awarded a contract for a large turn-key helium extraction, purification and liquefaction unit. The new unit will be the largest in the world, with a production capacity of 38 million m^3 of helium per year. Air Liquide will be entitled to purchase 50% of the helium volumes produced by this new unit.

JUNE

Acquisition in Poland

Air Liquide completed the acquisition of AMCO-GAZ, a distributor of compressed and liquefied gases.

China: contract with one of the leaders on Special Steel market

Air Liquide is investing €25 million in a new Air Separation Unit (ASU) with production capacity of about 800 tonnes of oxygen per day.

Ten new contracts signed in Asia with solar photovoltaic leaders

Air Liquide is strengthening its market leadership position in the supply of gases and precursors to the solar photovoltaic manufacturers.

Air Liquide to power Canada's largest fleet of green forklifts

Air Liquide will power in hydrogen Walmart's new fleet of green lift trucks at the company's new distribution centre located in Canada.

JULY

New contract in Germany

Air Liquide is investing around €90 million in two Air Separation Units (ASUs) for a copper manufacturer.

Acquisition in Korea

Air Liquide completed the acquisition of H-Plus SGS, Ltd., a supplier of piped carbon monoxide and hydrogen (total capacity of 60,000 m^3 per hour of hydrogen and carbon monoxide).

Acquisition in Panama and in the US

Acquisition of Cryogas de Centroamerica, S.A., a leading supplier of medical and industrial gases in Panama and acquisition of the assets and business activities of Lion Copolymer Geismar Services (LCGS), an industrial utilities provider based in Louisiana.

China: contract with 6G Flat Panel Display producer

Air Liquide signed a long-term contract with Nanjing CEC Panda LCD Technology for its new 6-generation Flat Panel Display fab which will be one of the most advanced in China.

Acquisitions in homecare in Australia and South Korea

Air Liquide announced the acquisition in Australia of 70% of the company Snore Australia, a major player in the field of sleep diagnosis and the acquisition of 70% of Medions Homecare, the leading South-Korean company in home ventilation.

AUGUST

Growth in the Middle East: new investments

The Group invested almost €60 million in new production units in Egypt, Qatar and Syria.

Germany: acquisition of a large syngas plant

This plant will produce large quantities of hydrogen and carbon monoxide for OXEA, leader supplier in syngas.

SEPTEMBER

Saudi Arabia: Group's largest industrial investment ever in Yanbu for Saudi Aramco

Air Liquide will invest more than €350 million in two global-scale hydrogen production units with total production capacity of 300,000 Nm^3 per hour.

Italy: major photovoltaics contract with 3Sun

The Group becomes the sole supplier of gases and services to the new company.

OCTOBER

Russia: Air Liquide signs a new contract in the Chemical industry

Air Liquide will invest in an Air Separation Unit (ASU) with a capacity of more than 350 tonnes of oxygen per day.

The project FutureGen 2.0 in the US

Air Liquide participates in the development of FutureGen 2.0 – major CO_2 capture and storage (CCS) project in the US.

NOVEMBER

Air Liquide sets up in Turkey

Air Liquide is investing €35 million in a liquid oxygen and nitrogen production unit, with a production capacity of 200 tonnes per day.

Further expansion in China

Air Liquide will invest around €60 million in a large Air Separation Unit (ASU) with production capacity of 2,000 tonnes of oxygen per day to supply a coal producer.

DECEMBER

Support for research on the preservation of the atmosphere carried out by the Carnegie Institution for Science (US)

This research will focus on assessing the ammonia concentration of the atmosphere.

See all press releases at **www.airliquide.com**

PUSH BACK OUR OWN LIMITS

EXPLORING AND BUILDING THE FUTURE

— Innovation is a fundamental value for Air Liquide, which was born from a major technological innovation. Ever since, innovation has guided the global strategy of the Group's activities. During the financial crisis, Air Liquide fully maintained its investments in innovation. In today's context of economic recovery, innovation is increasingly emerging as an essential advantage in support of the Group's prospects for sustainable growth. There are now 4,000 innovation technology employees continuously building the solutions of tomorrow.

KEY FIGURES

INNOVATION

Air Liquide files

each year

around 200

to 300 new patents

Innovation is a state of mind that permeates all of the Group's activities. Innovation can only be achieved by cultivating a spirit of openness to the world. Innovating means having the audacity and ability to anticipate customer trends and needs, in order to provide them tomorrow's solutions today.

An integral part of Air Liquide's corporate culture, innovation has a variety of faces. Innovations that both build upon and break with the past are pursued to advance the technologies that reinforce the Group's offer and competitiveness.

INCREMENTAL IMPROVEMENTS AND TECHNOLOGICAL BREAKTHROUGHS

From a technological standpoint, the number of patents registered is an indicator of the Group's innovation capacity and the dynamism of its teams. Two hundred to 300 new patents are registered each year by Air Liquide. This figure notably illustrates the key role played by the Group in the field of cutting-edge technology, including environmentally friendly solutions that challenge old ideas. In terms of breakthrough innovations, the Technologies of the Future division also plays a major role in the fields of cryogenics, hydrogen energy, and, more generally, the fight against global warming.

STRUCTURED, MULTIFORM INNOVATION

Innovation, which is born in the minds of the men and women of Air Liquide, is encouraged by a specific support process. The Group has standardized several key steps to transform new ideas into operational innovations. This form of innovation management begins with the formalization of ideas, continues with the evaluation of their potential, technological feasibility, and development, and leads to their final implementation. From a safety perspective, the Group Industrial Management System (IMS) allows for improved risk management in R&D pilot projects.

Innovation is a key factor in the Group's progress. Used to develop new products and offers, it also heavily contributes to the efficiency goal set by the ALMA corporate program. Customer relationships also offer a favorable framework for innovation. For example, the ALTEC internal experts network creates synergies between customers, sales teams and gas experts within the Industrial Merchant business line, for the purpose of improving industrial processes.

The idea of sharing and collaboration lies at the core of innovation. This spirit also characterizes the idea of "open innovation" driven by Group R&D: along with partnerships formed with universities and projects developed with customers, the Group also establishes strong relationships with emerging technology companies. To encourage these initiatives, Air Liquide launched a specific program, "Open'air" intended to support open innovation.

TENDING TO THE FIRE

Cultivating innovation also means recognizing the successes and know-how of Air Liquide innovators. On local and international levels, the Technical Career Ladder (TCL), the Group's program designed for technical and scientific expertise recognition, enables optimized knowledge sharing. More specifically, Air Liquide Experts dedicate 20% of their time to developing talents and new ideas within the Group. Furthermore, the Inventor Recognition Program (IRP) rewards more than 60 patented inventions each year. The annual Vision'air Challenge highlights internal ideas in four of the Group's five growth drivers: Energy, Environment, High Tech, and Health. The winning teams present their projects during the *Innovation in Motion* day, organized in November to recognize and promote innovation at Air Liquide. In 2010, the Group's efforts in innovation led to its distinction among 3,400 international companies. Air Liquide received the Best Innovator prize, awarded by the strategy consulting firm AT Kearney, in partnership with the French newspaper *Les Échos*.

— The mission of R&D is to contribute to the Group's growth by designing new processes, new technologies, and new products for all its business lines. The goals: make the Group more competitive and support its growth, develop technical skills within the Group, and contribute to Air Liquide strategic decisions through technological expertise and vision. Despite two years of economic recession, the R&D budget has been maintained and remains well positioned to meet the challenges related to the Group's strategic growth drivers: Health, Environment, Energy, High Tech and Developing Economies.

INTERVIEW

Olivier Delabroy — Vice-President of Group Research and Development

What are the R&D challenges facing the Group?

R&D must remain at the cutting edge of innovation over the short, medium, and long terms in the growth drivers set by the Group. It is therefore essential to establish a balance that will make it possible to pursue medium-term projects, while maintaining R&D's ability to launch long-term projects known as "technopush". This has to be done in coordination with engineering, Technologies of the Future, and the business lines that bring innovations to the market.

How does R&D operate?

R&D relies on research centers located on three continents. It is challenging to create cross-functional synergies between various centers, while cultivating their fields of expertise, such as electronics in Japan. Another major challenge is detecting and anticipating innovations related to our R&D activities. This requires constant interaction between the various Group entities and partnerships with universities and start-ups. We must develop close relationships with our customers, whose R&D teams often work intimately with us. With the increasing level of mobility and convergence of media, our products look to become more and more essential. As an example, I would mention the new ALOHA™ molecules, called advanced precursors, developed for the semiconductor industry.

FOCUS

ALOHA™: HIGH-END MOLECULES

In the booming semiconductor and photovoltaics markets, the Air Liquide ALOHA™ product line offers an array of tailored molecules, called advanced precursors, which meet the specific needs of manufacturers' processes. The precursors market requires constant innovation. It is critical to remain proactive and responsive in order to keep pace with the tight deadlines faced by microchip manufacturers. To anticipate future needs, the ALOHA™ R&D teams work in constant collaboration with their partners (end customers, manufacturers, or research consortiums) in the framework of a project portfolio, so as to consolidate Air Liquide's position as leader in this market. This policy has notably led to growing commercial successes, such as the ZyALD™ and ToRuS™ precursors.

FOCUS

BECOMING MORE COMPETITIVE THROUGH R&D

For the Industrial Merchant business line, efficiency is a major goal in R&D. Since 2008, the TENOR logistics system, which enables optimized delivery route for bulk products, has been progressively deployed within the Group. At the same time, R&D pursues the development of new versions based on the Group's operational needs. One tool, known as BEST, allows Air Liquide to make the most of its bulk assets. In 2010, R&D successfully tested theBTA (Bulk Tank Allocation) application developed in partnership with Virginia Tech University (US). This application makes it possible to determine theoptimal size of "liquid" storage units on customer sites, thus increasing the Group's efficiency. This is also a major contribution to greenhouse gas reduction.

FOCUS

CHINA: TOWARDS OXYCOMBUSTION

Air Liquide and Zhejiang University in Hangzhou, China, have combined their expertise to co-develop coal oxycombustion solutions. Research related to this innovative combustion process, which uses pure oxygen instead of air, should enable Air Liquide to offer its customers solutions that are more energy efficient and less harmful to the environment. This research also meets the growing demand of energy markets, such as China, that continue to rely heavily on coal. This collaboration primarily relies on a combustion platform equipped with the most elaborate oxycombustion pilot furnace ever designed in China.

INTERVIEW

Linda Myrick — Medical Gases Group Manager at the *Centre de Recherche Claude-Delorme* (CRCD)

What is the role of the Medical Gases Group within the CRCD?

We are responsible for carrying out scientific research to demonstrate the safety, efficacy and new applications of Air Liquide therapeutic gases. Our group consists of anesthesiologists, pulmonologists, pharmacists, pharmacologists, analgesiologists, clinical trial managers and medical device experts.

Air Liquide has identified health as a key growth driver. How is your research group contributing to this?

We contribute to healthcare market growth by performing clinical trials in anesthesia, respiratory disease, homecare and pain therapy. For example, we are researching Chronic Obstructive Pulmonary Disease, the fourth leading cause of death worldwide. Through innovative application of our medical gases, we believe that we can make breathing less difficult and improve the quality of life for patients with this disease.

Can you give a few more examples of research projects within the Medical Gases Group?

Currently, we are modeling the flow of gas through the lungs so that we can customize patient treatment. We are also developing devices and software to monitor patients at home on long-term oxygen therapy. In the field of exploratory studies, we have been investigating the effectiveness of nitrous oxide in reducing acute and chronic post-operative pain.

— The Technologies of the Future division contributes to defining the shape of tomorrow's world by developing some of the Group's most innovative projects. With nearly 600 employees on three continents, the division gathers unique know-how in the fields of industrial information systems, hydrogen-energy, cryogenics, space, aeronautics, decentralized energies, and oxycombustion. Buoyed by its experience with collaborative projects and its ability to test and industrialize solutions with high technological added value, the division constitutes a valuable innovation driver for the Group, encouraging the exploration of new markets.

FOCUS

BRINGING BIOGAS TO THE FOREFRONT

Biogas is produced by fermenting organic wastes. The waste is transformed into fertilizer and biogas after fermentation in a digester. The biogas is then refined to produce "biomethane", a substitute for natural gas. This biomethane can be injected into the natural gas network or be liquefied for transportation. As such, the process both produces renewable energy and treats waste. In 2010, DTA launched two flagship initiatives in France financed by ADEME (*Agence de l'Environnement et de la Maîtrise de l'Énergie*). The first of these is the SIMBIOSE project, a pilot for injecting agricultural biogas into the natural gas network. The second, BIOMETIC, is a research project focused on improving the quality of biogas by combining membrane purification and cryogenic distillation.

INTERVIEW

Pierre-Étienne Franc — Director of the Technologies of the Future division

What role does innovation play within your division?

The Technologies of the Future division plays a major innovation role in cutting-edge fields around the world. We are focused on the future, while still remaining in harmony with our customers' specific needs. We have four goals: stay competitive, explore new markets, create long-term growth for the Group, and ensure our independence.

How does the division contribute to Group growth?

The fields in which we work have tremendous potential. Ten or 15 years from now, these cutting-edge technologies will become essential to daily life! Our innovations also help us improve the Air Liquide logistics chain, as shown by the BRIO-GPS telemetrics system. This solution combines real-time location and remote pressure monitoring functions for helium containers, with the aim to optimize their transport routes and react more efficiently when necessary.

What are your major strategic axes for the future?

Three major fields demand our attention. The first is hydrogen energy, which uses hydrogen fuel cells as a clean energy vector. Oxycombustion enables to capture and store more concentrated CO_2 through a combustion that uses pure oxygen. Finally, we are developing the transformation of plant wastes into biofuels. In Europe, new projects will soon be completed in Forbach, France, and Göteborg, Sweden, that use biogas as a substitute for natural gas and fuel for vehicles.

FOCUS

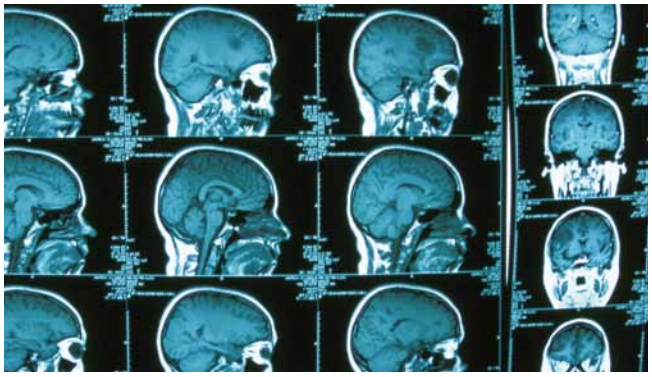
HYDROGEN ENERGY: THE FUTURE OF CLEAN CARS!

In September 2009, the European Union set a goal of reducing CO_2 emissions by 95% by 2050. To reach this goal, Air Liquide has teamed up with more than 30 major industry players (automotive manufacturers, oil and industrial gas companies, government organizations, etc.) in the framework of a unique study. The project's purpose is to compare the types of vehicles and infrastructure needed to reduce emissions. The report concluded that fuel cell vehicles offer one of the most efficient solutions for long-distance travel and family size cars, which represent 50% of all cars and 75% of all emissions. Furthermore, the implementation of a specific hydrogen chain appears technically feasible, economically affordable and flexible. Hydrogen energy may be one of the key vectors in the future of the transportation sector.

FOCUS

HELIAL ADVANCES CEREBRAL IMAGING

HELIAL is an automated helium liquefier developed by Air Liquide. This technology, which lowers helium to an extremely low temperature, is already in use in fields such as superconductivity, nanotechnologies, and quantum physics. But it is in the field of medical imaging that HELIAL is now rising to new challenges. The French Atomic Energy Commission in Saclay, has ordered a HELIAL system for its MRI NeuroSpin platform project. The challenge is to design a liquefier equipped with a cooling circuit for the device's gigantic magnet, called Iseult, able to function continuously for several years. This unique project should make it possible to obtain extremely precise images of the brain in order to better understand Alzheimer's disease.



INTERVIEW

Sébastien Bianchi — Manager of the development program for future launchers at DTA

How did the HX program come about?

HX is a technology demonstration program. The project was born in 2007 at the request of CNES, the French national aerospace research center, which wanted to prepare for the modifications to the current European launcher, Ariane 5 ECA. Based on previous work in research and technology, the DTA and Cryospace teams jointly proposed to develop innovative new cryogenics technologies. The ambition of the teams has been remarkable, and their enthusiasm palpable!

How much progress has been made on the project?

The program follows the traditional cycle of development and innovation: a research and basic testing phase, followed by a development phase that relies on a series of large-scale tests performed on a macro-demonstrator. We are currently in this last step, marked by concrete validation objectives on the industrial level. This phase will conclude in late 2011, at which time these technologies will be integrated into the global development cycle of the future launcher. The end customers, such as Astrium and space agencies, are collaborating on HX so that our efforts fit optimally into their programs and meet the deadlines imposed by the development of the launcher.

Will the project continue after this phase?

Beyond the aerospace field, the strong synergies developed with Cryospace will benefit the entire Group. We have already filed many patents in the framework of HX. Several of these technologies may as well be applied to other activities: cryogenic fluid management, thermal control, measurement instruments at extremely low temperatures, etc.

INDUSTRIAL MERCHANT

— One of Air Liquide's historic sectors, the Industrial Merchant World Business Line is the Group's largest source of revenue. It operates in five major diversified markets: food and pharmaceuticals, materials and energy, technology and research, craftsmen and distributors, and automotive and fabrication. It supplies its customers with the best solutions, through innovative gas applications, to create or improve the performance of their industrial processes. Industrial Merchant's core business is to help increase manufacturing safety, control energy costs, improve product quality, and reduce effluents for cleaner processes.

2010: A YEAR OF ACQUISITIONS...

Industrial Merchant's markets are always focused on the long term through strong trends that respond to our planet's major energy, environmental, demographic, and technological challenges. In 2010, Industrial Merchant successfully benefited from the recovery of worldwide economic growth and continued to expand its positions, both in mature and developing economies. Geographically covering 90% of the world's industrial gas market, the business line extended its geographical networks by actively pursuing its acquisitions policy, notably in China, Brazil, Poland, Panama, and Canada.

These acquisitions have enabled either to penetrate new territories in which the Group was not at all present (Panama) or only partially active (China, Poland) or to increase our market share through the acquisition of distributors (Brazil and Canada).

The Industrial Merchant business line also secured and diversified its supply sources by signing major contracts for helium, acetylene, and CO_2. For helium, the Qatar II agreement brings Air Liquide access to 50% of production from one of the world's largest helium sources and positions the Group as one of the world's major players in this field. Agreements on CO_2 capture from bioethanol units were also concluded in the United Kingdom and Austria.

... AND INNOVATION

Innovation has always been at the heart of the Industrial Merchant business line's strategy: the patents filed account for more than one third of all Group patents.

Several very innovative offers were launched and deployed in 2010. This is the case, for example, with EOX™, a new generation of oxygen production plants that offers increased productivity while limiting nitrous oxides emissions. Industrial Merchant also extended its CLEANBLAST™ offer, deploying a new high-pressure liquid nitrogen blasting process that makes it possible to clean surfaces without producing effluent, a solution particularly suited to the clean dismantling of nuclear plants.

The Industrial Merchant business line relies on ALTEC, a vast internal network of sector-oriented experts and researchers, which maintains and develops cutting-edge technological know-how. The business line is thus able to offer industrial companies throughout the world a wide array of gas solutions to optimize existing processes and develop new ones.

STRATEGY & PROSPECTS

The growth strategy of the Industrial Merchant business line is built around four key themes:

- building leadership positions by developing in targeted geographical areas and entering new markets,
- extending its solution portfolio through effective innovation management and the expertise of research, technology and engineering centers around the world,
- strengthening its efficiency by optimizing its cost structures and organization,
- developing employee talent by promoting diversity, training, and initiative.

In Advanced Economies, the business line aims to distinguish itself through innovation and value creation. In developing economies, the strategy is to earn market share, either directly, through new investments in liquid capacities or filling centers, or through acquisitions that will provide quicker access to the market.

VIEWPOINT

Éric Prades — Hydrogen Energy Director

What is the current status of hydrogen as an energy source for vehicles? Air Liquide is convinced that hydrogen energy will play a role among the new energies that help reduce CO_2 emissions in the road transport sector. This belief is reinforced by the results of a European study on the evaluation of future propulsion solutions in the automobile industry, entitled "Portfolio of power-trains for Europe"*, carried out in 2010 by a consortium of 30 companies, one of which was Air Liquide. The study shows that the only way to reach ambitious carbon reduction objectives in Europe is to electrify the fleet of vehicles, deploying either hybrid, battery or fuel cells electric vehicles. In this mix, hydrogen appears to be an excellent compromise in terms of meeting our decarbonization objectives and offering long autonomy, as today the most performing fuel cells vehicles can cover 800 kilometres with a full tank.

What are the challenges to hydrogen energy? I have two in mind. First is the decarbonization of the hydrogen production, in which various solutions are already possible, such as carbon capture or hydrogen production from electrolysis or biomass. Second is encouraging the simultaneous development of a hydrogen infrastructure by industrial companies, and hydrogen vehicles by manufacturers. Consortiums in many countries are currently working on this two-fold challenge. Among them is "H2 Mobility" in Germany, of which Air Liquide is a member, aims to gradually equip large cities and major highways with service stations, starting in 2015.

What technologies are necessary for the deployment of fuel cell vehicles? Fuel cells industrialization, of course, done by an increasing number of car manufacturers. For Air Liquide it is the development of a full supply chain from production, transport, all the way down to distribution at the hydrogen pump. Setting up this hydrogen delivery infrastructure is certainly possible. Let us take the example of Germany, where the supply of hydrogen to 300,000 fuel cells vehicles every day would require 170 deliveries to a network of 500 hydrogen stations. Currently, industrial gas suppliers in Germany, including Air Liquide, deliver hydrogen to 1,000 industrial customers every week: this means 160 deliveries every day. This is a challenge we are ready to take on!

* To find out more about the European study on future propulsion methods, go to : www.zeroemissionvehicles.eu

KEY FIGURES

INDUSTRIAL MERCHANT IN 2010

€4,753 million in revenue in 2010

17,600 employees

300 applications

More than 700 active patents

More than 13 million cylinders in circulation

INTERVIEW

Hicham Abdallah — Manager of the Middle East area for Air Liquide

What does your job involve, specifically within the Industrial Merchant business line?

My role is to cultivate a network of industrial contacts and ensure that we are recruiting the most skilled people available, locally if possible. I make sure that our joint ventures with local partners are functioning properly. For Industrial Merchant, I supervise the local application of our best practices and the IMS, our industrial management system, notably for companies that have been recently integrated into the Group.

What are Industrial Merchant's primary markets in the Middle East?

Among Industrial Merchant's five traditional fields, the most represented are materials and energy, due to the importance of the natural gas, oil, and chemical markets. Next is manufacturing, a field buoyed by major construction projects, and then food, which is benefiting from the rapid population growth.

What are the major prospects for the coming years?

The countries in this zone all display double-digit economic growth. Boosted by this economic success, the industrial gases activity is increasing by more than 20% per year. Within this area, the Group plays a pioneering role in new markets due to its innovative solutions: liquid nitrogen for freezing food, CO_2 for controlling the pH levels of water at purification stations, oxygen for fish farming, etc. We hope to take advantage of these opportunities while pursuing geographic expansion.

FOCUS

2010: HATS OFF TO THE TOP PRODUCT LINE

In 2010, Industrial Merchant pursued the worldwide deployment of its line of TOP cyclinder caps: Russia, Switzerland, Austria, Finland, New Zealand, Chile, and the United States now have access to these innovative systems. In October, the two million cylinders were equipped with the system, a record high. Within the product line, the ALTOP™ and MINITOP™ systems offer optimized ease of use and increased safety with its ergonomic design, integrated valve, easy-to-read level gauge, and patented on/off switch, unique on the market, allowing for immediate and easy flow stop when needed. The SMARTOP™ system offers similar simplified functions at a more attractive price for users who wish to use their own pressure valves.

FOCUS

OLYMPIC LEVEL HYDROGEN-ENERGY PERFORMANCE

The city of Whistler (British Columbia, Canada) hosted the ski and bobsled events of the 2010 Winter Olympic Games. For the occasion, Air Liquide installed the largest hydrogen filling station, which fueled a fleet of 20 fuel cell buses that serve the community. A 10 year partnership between Air Liquide and the transportation company BC Transit is now active. This life-sized success, born from synergies between Air Liquide Canada and the Group's Advanced Technologies Division (DTA), may soon inspire other of the world's major cities. New opportunities abound for Air Liquide in the framework of its Horizon Hydrogen Energy program, which aims to build a sustainable and competitive hydrogen-energy industry.

FOCUS

ALUX™, TOWARDS A BRIGHT FUTURE!

The industry related to new lighting technologies is undergoing a complete transformation: photovoltaic panels, light emitting diodes (LED) and reduced energy lamps have all begun to revolutionize our daily lives. To conquer these markets of the future, the Industrial Merchant business line developed the ALUX™ offer, a complete line of solutions intended for the lighting and fiber optics markets, which includes the supply, distribution, and purification of gas as well as related services. On the fiber optics market, the deployment of the ALUX™ offer in 2010 made it possible to claim significant market shares in India and China. In the lighting market, several contracts were signed in Europe and Asia.

LARGE INDUSTRIES

— Supplying gases and utilities to major global industrial customers, the Large Industries World Business Line is a key contributor to Air Liquide's success and growth. The Group constructs, owns and operates production units and pipeline systems that enable it to respond to the critical gas and utility needs of its most demanding global and local industrial customers. Large Industries is positioned to strengthen the Group's market presence in the next five years by building on a rigorous project development process, its cutting-edge technology and its wide global reach.

ROBUST AND RELIABLE

The Large Industries business line, along with Air Liquide's Engineering and Construction (E&C) division, delivers a combination of operations and technology expertise unsurpassed in the industry. Large Industries notably leverages E&C's expertise in hydrogen and air gases to deliver industrial gas reliability and efficiency to its customers around the world. Along with its technological expertise, and its well-established and rapidly growing customer base, Air Liquide is the market leader. In 2010, the business line reached a landmark €4 billion in sales with plans to accelerate the pace of investments in the coming years.

MODEL FOR SUCCESS

In a highly competitive marketplace, Air Liquide distinguishes itself through its disciplined development of targeted industrial areas. The Group continues to expand in some of the most well-established basins globally and is setting up its first projects in the newest, most promising industrial basins in the world. In 2010, in a deal with Saudi Aramco in the Yanbu industrial basin on Saudi Arabia's west coast, Air Liquide committed to its largest-ever project. With an investment of more than US$450 million, two hydrogen production units will be built, owned and operated by Air Liquide to meet the long-term hydrogen supply requirements of Saudi Aramco.

On the other side of the world, in a key basin located near Geismar, Louisiana (US), the Group acquired Lion Copolymer Geismar Services (LCGS). Air Liquide will provide steam, treated and de-mineralized water, and other critical products to this important industrial site. The acquired assets have been integrated with Air Liquide's existing facilities, including two large air separation units and a steam and electricity cogeneration unit, further strengthening Air Liquide's capabilities and ability to grow in the region.

On the same continent, the Group has extended its hydrogen pipeline to expand its reach into one of the world's largest petrochemical and refining basins.

STRATEGY & PROSPECTS

Air Liquide aims to continue to establish operations in leading industrial basins around the world. The recent investment announcement for the Yanbu basin in Saudi Arabia, the acquisition in the Geismar (US) basin, and the new unit start-up in Qatar's Ras Laffan Industrial City are three recent examples of this strategy. The outsourcing of industrial gases is an ongoing trend and the market potential is important. Air Liquide also taps new growth markets. Projects in developing economies such as Russia, China, Brazil and India are expected to account for 40% of sales by 2015, up from 20% in 2010.

FOCUS

EXPANDING THE BASE: A GERMAN EXAMPLE

In Germany, Air Liquide has reinforced its network with the acquisition of Oxea's Oberhausen syngas production unit. The contract gives the Group the ability to optimize unit operations and provide Oxea, a leading oxo-products supplier, with highly reliable and cost-effective pipeline quantities of carbon monoxide and hydrogen (also known as syngas or oxo-gas). The facility complements Air Liquide's adjoining industrial gas facilities in Oberhausen. The new arrangement will deliver important synergies to Air Liquide's operations in the region and represents a marjor milestone in the development of this basin.

KEY FIGURE

LARGE INDUSTRIES IN 2010

€4,019 million

in revenue

FOCUS

AIR LIQUIDE STRENGTHENS ITS NETWORK IN THE GULF OF MEXICO

The Group has positioned itself for growth by extending its hydrogen pipeline in the US Texas Gulf Coast region, providing new access to a key oil refining basin. The pipeline extension, which was completed in the 3rd quarter of 2010, now runs from the Houston-Freeport zone 137 km east to supply key customers and the growing hydrogen needs of the major refining cluster of Beaumont/Port Arthur (Texas).

VIEWPOINT

Antoine Sfeir — Editor of *Les Cahiers de l'Orient

What is the economic potential of the Middle East? It has enormous potential! We have every reason to believe that the region will see major development over the next five to ten years. First, the Arabian Peninsula has access to nearly unlimited financial resources. Second, the Near East can provide the manpower the region needs to develop. Along with North Africa, these three sub-regions complement each other well. Furthermore, the workforce now has access to quality higher education. Moreover, the "Arab Spring" currently taking place may offer more possibilities throughout the entire region, which, we must not forget, includes Iran. Currently under embargo, this nation of 80 million inhabitants, located at the crossroads of the Middle East, the Indian subcontinent, and Central Asia, could become a new El Dorado...

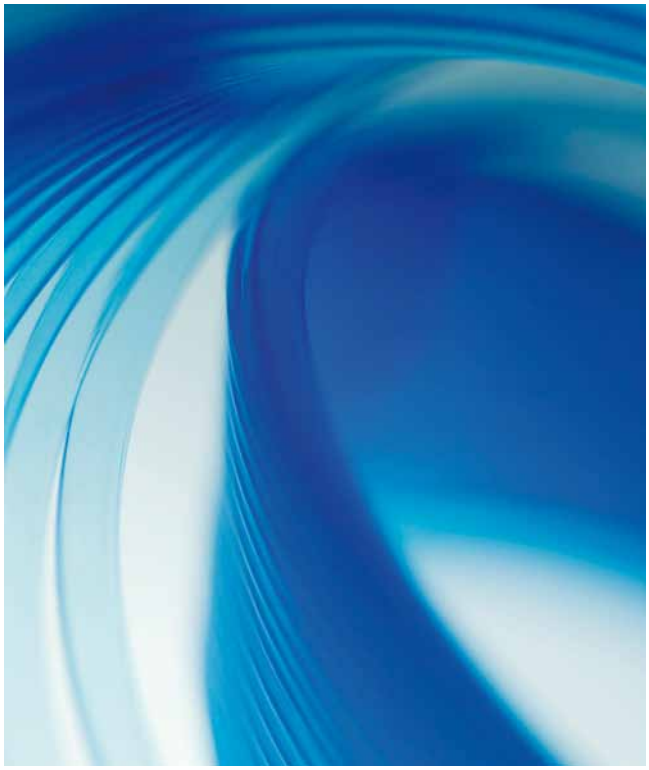
How can we seek successful industrial development in this context? Born out of the Internet generation, the "Arab Spring" has created a new mentality in "customer/supplier" or "investor/emerging country" relations in the region. What we are now seeing is a partnership. Although the development of a country revolves around economic factors, it must now take into account the intellectual abilities of local populations. For this reason, within the framework of fast-paced globalization, the Middle East represents a unified region with large financial means, excellent intellectual resources, locally learned skills, in a large territory. If partnerships are not pursued, the region risks falling under an isolationist policy, precisely because it has the means to achieve self-sufficiency and create its own industry leaders.

* *Les Cahiers de l'Orient* is a journal dedicated to the Middle East which aims to portray the specific reality of the Arab and Muslim world today.

FOCUS

DOUBLING CAPACITIES IN RUSSIA

Large Industries committed to building a number of new air separation units in Russia in 2010, nearly doubling its capacity to deliver oxygen in this rapidly growing region. The three units, one of which is among Air Liquide's line of standard plants, will serve both the steel and chemical sectors. Gases will be supplied to multiple sites owned by Severstal, a leading steel company, and RusVinyl, a joint venture to produce vinyls between Sibur, a Russian chemical company, and Solvay and BASF, a European partnership.



FOCUS

STANDARD PLANT PROGRAM YIELDS EXCEPTIONAL RESULTS

Air Liquide's Standard Plants Program is performing brilliantly. This was recently demonstrated in Ras Laffan, Qatar, at Oryx GTL, through the construction and commissioning of the latest Air Liquide facility in the region. The project was executed with time to spare in an unprecedented, tight schedule. The performance showcases the Group's strengths and capabilities for on-time delivery and project execution. Air Liquide's customers all over the world benefit from competitive solutions delivered within challenging time constraints.

INTERVIEW

Bernard Dhainaut — Senior Vice-President of Large Industries in China

What are Air Liquide's goals in China?

Our ambition is to be the market leader over the long term. To reach this goal, Large Industries is investing at a high rate in China. The pipeline we're building is a major part of this development, assuring supply efficiencies and reliability to our customers in Tianjin.

What is the current state of this pipeline?

In 2010, we successfully completed the first 120 km of this growing pipeline network, connecting four Air Liquide units in the Tianjin basin. Across China, in critical basins, we have 300 km of pipeline networks either in service or under construction.

How successful has Air Liquide been in China? What projects are on the horizon?

Between 2009 and 2010, Large Industries China commissioned eight projects to deliver the equivalent of 12,000 metric tons per day of oxygen. Developing countries will account for almost half of Large Industries sales in a few years and China will be first in line. In our immediate future, in addition to extending the pipelines, we have exciting opportunities in hydrogen, syngas and oxygen.

HEALTHCARE

— In 2010, Air Liquide confirmed its position as a leader in the healthcare sector and as the industrial gas company the most committed in healthcare. The year was marked by sustained growth, particularly in the Homecare activity, but also through the pursuit of geographic expansion in all of the Group's Healthcare activities.
Bolstered by these successes, Air Liquide defined a new ambition (2011-2015), in particular for its two Healthcare pillars: the hospital market, which involves medical gases, hygiene, and equipment; and the homecare market.

WORLD LEADER IN MEDICAL OXYGEN

Medical gases (oxygen, nitrous oxide, nitric oxide, xenon, etc.) constitute the core business of Air Liquide Healthcare. Meeting the needs of over 6,000 hospitals and clinics throughout the world, the Group produces and supplies medical gases to assist breathing, for anesthesia, pain relief and cells and tissues preservation. Air Liquide's global offer to hospital customers includes:

- medical gases (gaseous drugs and medical devices) and associated services,
- medical equipment necessary for administering gases in hospitals—developed by its subsidiary Air Liquide Medical Systems: pressure regulators-flow meters, ventilators, anesthesia workstations and masks for patients,
- hospital disinfection, especially for operating units and endoscopy—a field in which Air Liquide remains the European leader. This significant activity responds to a major public health issue: 5-10% of patients admitted to hospitals in Developed Economies contract one or more infections that can extend their hospital stay.

FOCUS

THERAPEUTIC GASES DEVELOPMENT IN EUROPE

Therapeutic gases are drugs. They are used for ventilation, oxygenating, anesthetizing, alleviating pain, or treating acute respiratory distress syndromes. They can be found in all parts of a hospital: in the emergency room, operating units, recovery rooms, intensive care units (ICUs), and patient rooms.
Over the past two years, Air Liquide has obtained marketing authorization in Belgium, Spain, Italy, Luxembourg, and Portugal for its VasoKinox™ (nitric oxide) gas used in intensive care in cases of acute pulmonary arterial hypertension. In 2010, in France, the Group obtained an extension of its marketing authorization for its Kalinox™ analgesic gas, a mixture composed of 50% medical oxygen and 50% medical nitrous oxide; making it possible for healthcare professionals to provide pain management outside of the hospital setting in short-duration medical interventions (dental care, dermatology, for example). With a marketing authorization in several European countries, Air Liquide is pursuing clinical studies for LENOXe™ (xenon), a product used in the maintenance of general anesthesia in adults, in order to measure its safety profile and efficacy within certain patient categories.

STRATEGY & PROSPECTS

Over the next five years, Air Liquide will strengthen its offer to hospitals by continuing to provide innovative solutions that meet its customers' budgetary constraints. Concerning its flagship molecule, oxygen, Air Liquide aims to extend its leadership through its expertise, the international recognition of its know-how, and the high quality standards that it implements on a daily basis.

The Group's Healthcare teams intend to conquer new markets in oxygen by leveraging Air Liquide's presence in 80 countries. At the same time, the Group will pursue its clinical research efforts in order to open new markets in medical gases.

VIEWPOINT

Dr Marianella Salapatas — President of the EFA*

What is the role of the EFA? National patients' organizations combined forces and created the Federation to have one voice on the European level, advocating for the rights of patients with allergies and asthma. Chronic obstructive pulmonary disease (COPD) was added to EFA's mandate in 2002.

Why is COPD on the top of your agenda now? COPD is very tricky. It is under-diagnosed. People don't realize that they have it and are reluctant to go to the doctor. Sometimes the doctor misdiagnoses it, and things go on and on until patients become increasingly short of breath and end up needing oxygen therapy. COPD is emerging as the 4th leading cause of death worldwide and unfortunately is likely to be the 3rd most common cause of death by 2030 according to the World Health Organization. In Europe 4% to 10% of adults have COPD, that's a really big number. This is why we have taken COPD so much to heart and are campaigning for awareness of the disease. If it is caught at an early stage, COPD is treatable and can be controlled. It is important to get the message out, for people to just get checked.

Why is it important for EFA to have a global approach and work with all stakeholders? We see EFA as a reference point where all stakeholders can come together, in a platform of discussion to identify the needs of patients. Scientific societies, politicians and of course industry ensure that we see the full picture. It is very important to have the input of the people who actually deliver the products, deliver the medication to the patients, because without them everything else is just an idea.

What is your roadmap for COPD? In June 2010 we issued a seven-point call to action at the European Parliament. Among the measures cited, we aimed to make COPD a priority, create awareness, emphasize diagnosis and support a patient-centered approach. We have also published a white paper on COPD, which looks at COPD issues and situations across Europe. We are planning workshops with the European Parliament to make sure that COPD is well understood at the political level. This is a condition that we can do something about. But we need to realize that fighting COPD now will not improve statistics right away. Even if magically everything improves now and the environment is very clean, nobody smokes and all pollution disappears, we would still have COPD for the next 20 years. However that should not put brakes on what we do because we are also striving to give a better life to people who have COPD now.

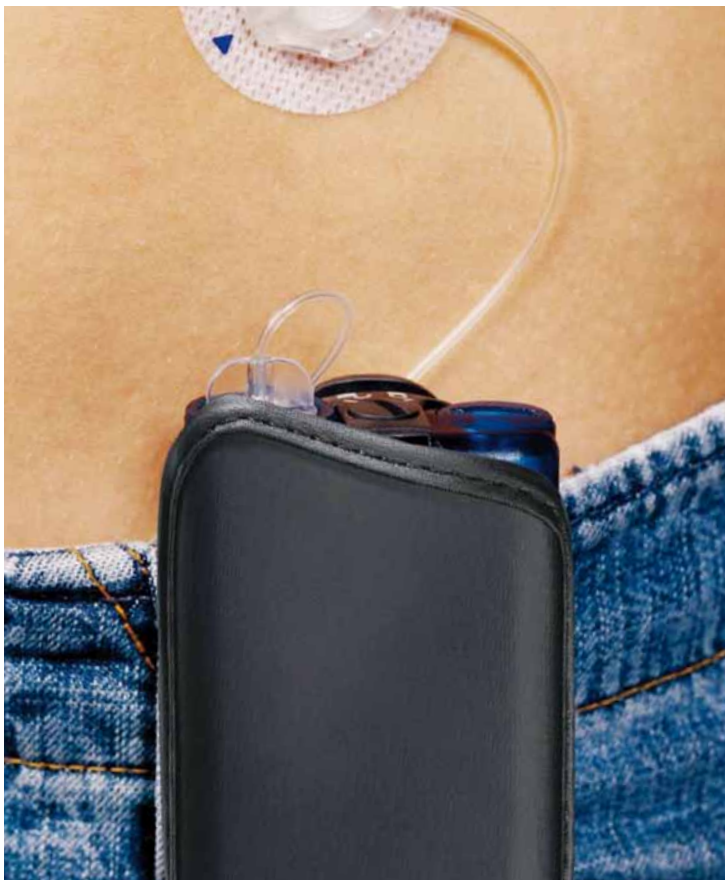
*European Federation of Allergy and Airways Diseases Patients Associations – 22 countries represented with 500,000 members.

ONE MILLION PATIENTS BY 2015

The rapid growth in Homecare needs has been spurred by the world's aging population, the development of chronic diseases, the emergence of new technologies, budget pressures pertaining to public policy, and above all, the desire of patients to receive care at home. Air Liquide, the European leader in this field, cares for more than 600,000 chronic patients, primarily in Europe, by providing set-up and follow-up services involving:

- respiratory assistance (oxygen therapy for severe cases of chronic obstructive pulmonary disease, ventilation for chronic respiratory failures, continuous positive airway pressure for sleep apnea),
- nutritional assistance and infusion therapy,
- insulin pump therapy for diabetes.

In 2010, Air Liquide strengthened its presence in the health sector through targeted acquisitions in Europe, Asia, and South America. The Group will continue to pursue this strategy over the next five years. The strategy will help Air Liquide reach the goals it has set for 2015, which includes the provision of homecare to one million patients.



FOCUS

DIABETES: A MAJOR PUBLIC HEALTH ISSUE

With more than 300 million people affected in 2010 and an estimated 400 million by 2030, diabetes has been called the "epidemic of the 21st century" by the World Health Organization (WHO). The rise of this chronic disease is largely connected to the Development of obesity and overweight problems. Although 70% of diabetics live in Developing Economies, only 20% of the world's health diabetes expenditures are dedicated to those countries. Buoyed by its position as leader in Homecare, Air Liquide answers the call to care for patients suffering from multiple chronic diseases and requiring respiratory assistance (sleep apnea and diabetes, for example). As such, in just a few years, the Group has become a major player in France in providing homecare to diabetic patients using insulin pumps. Air Liquide provides patients with cutting-edge medical equipment and personalized at-home follow-up through its network of nurses. This care service helps patients learn to live with their disease and improve their quality of life. Innovation lies at the heart of this activity's strategy, with a service offer tailored to each patient.

STRATEGY & PROSPECTS

The Group will develop and strengthen its offer in the field of respiratory care, provide innovative solutions to improve patient adherence to treatment at home, develop its service offer for diabetes and new therapeutic areas, such as Parkinson's disease. Homecare will continue to grow in the coming years, and evolve through the development of remote medicine, which makes it possible to monitor from a distance vital records for patients suffering from chronic diseases.

FOCUS

HOMECARE: GEOGRAPHIC EXPANSION

The leading European player in the Homecare market, Air Liquide is confirming its development strategy in this consistently growing field by acquiring two companies in Australia and South Korea. In July 2010, Air Liquide acquired 70% of Snore Australia, a company specialized in sleep diagnostics. These diagnostics help identify and assess the degree of symptoms for sleep apnea patients. An estimated 480,000 Australians suffer from this disorder, while only 25% of cases have been diagnosed to date. This company, created in 2000, owns 13 laboratories, where it performs over 15,000 sleep diagnostics per year. Its annual revenue stands at €6 million. Air Liquide also acquired 70% of the company Medions Homecare, the South Korean leader in home ventilation. Created in 1989, Medions Homecare handles follow-up for about 400 patients. Its annual revenue is €3 million in a Korean homecare market marked by more than 15% annual growth.

KEY FIGURES

HEALTHCARE IN 2010

€1,937

million in revenue

8,500

dedicated employees worldwide

INTERVIEW

Nathalie Gautier — Managing Nurse, specialized in diabetes in the Air Liquide network

How did your career develop? After working for 14 years in diabetology in a hospital setting, I joined Dinno Santé in 2008, which is now part of the AirLiquide network, as a home nursing service provider. In 2010, I became nursing manager. I now manage a team of nurses, and educate patients about the use of insulin pumps.

What is the typical training process with patients? After a first meeting at their home, we provide initial technical training to patients in a hospital center (and to parents in the case of children), in collaboration with medical teams. This training program shows patients with type 1 and type 2 diabetes how to use their insulin pumps. This technology improves the balance of their diabetes and their quality of life compared to standard therapy (multiple daily injections of insulin). We provide continuous technical training to homecare patients and ensure proper follow-up of their treatment.

What do you like about your profession and how do you see its future? We value close relationships with patients, and the level of confidence we build together. More than in a hospital setting, we have the time to listen to their needs. For me, it's a profession with a bright future that favors improved quality of life and more autonomy for patients.

ELECTRONICS

— Air Liquide holds a leadership position with the world's major electronics front-end manufacturers thanks to the Group's global reach and its infrastructure in key Asian regions. Its differentiated electronics offer, comprising high-purity carrier and specialty gases, innovative precursors, delivery equipment and on-site services, has enabled Air Liquide to partner with more than half of the world's microelectronics manufacturing facilities.
Air Liquide Electronics teams have installed over 250 on-site high-purity gas generators for customers around the world, supplying gases and advanced precursors to the solar photovoltaic, flat panel display and semiconductor industries.

A MULTIFACETED OFFER

Air Liquide distinguishes itself with its comprehensive range of products and services across the various electronics markets.

- **High-purity carrier gases**
  Nitrogen, hydrogen and argon are applied in a variety of ways for electronics manufacturers, including for protection against impurities and oxidation.
  After a resilient 2009, the product line grew in 2010, thanks to end markets' volume recovery and the start-ups of multiple new on-site generator contracts.
- **High-purity specialty gases and ALOHA™ precursors**
  High-purity specialty gases are used to etch, clean, or deposit thin film materials during semiconductor or flat panel manufacturing processes. Air Liquide is presently the only industrial gas company manufacturing silane gas (through a joint venture in Japan), a major product in this market. Air Liquide's ALOHA™ line of precursors is dedicated to the development, manufacturing and marketing of advanced and complex molecules, used to improve the isolative and conductive properties of electronic chips and photovoltaic cells.
  The specialty gases and precursors segment saw annual revenues increase by more than a third in 2010, as compared to 2009.
- **Equipment & Installation (E&I)**
  Customers use Air Liquide's primarily turnkey project services to install delivery systems for gases and chemicals and connect them to their semiconductor fabs' process tools. Driven by several new fab projects around the world, the E&I business posted a revenue increase of more than 50% over its 2009 baseline.
- **Services**
  A quarter of Air Liquide Electronics' 3,400 employees work on customer sites providing services such as logistics, inventory, quality control, and trace impurity analysis.

The business grew in 2010 thanks to a recovery of its Analytical Services division and the start-up of new on-site service contracts in Asia and the US.

MARKETS ON THE REBOUND

While 2009 was a difficult year across the electronics industry, market conditions improved significantly throughout 2010. Air Liquide registered strong growth from its key front-end manufacturing customers, fueled by increased consumer demands for notebooks, new tablet PCs, smartphones and flat screens, as well as by the rapidly developing solar photovoltaic sector. The Electronics WBL achieved €1,177 million in revenue, a 42% rise over 2009, with Air Liquide's top 10 semiconductor and flat panel display customers accounting for over half of Electronics' revenues. Market performance breakdowns:

- **Semiconductor**
  The Group supplies most of the semiconductor industry giants, namely Intel, TSMC, Toshiba, Micron, GlobalFoundries, STMicroelectronics and Texas Instruments, which all saw their revenues increase significantly in 2010.
- **Flat Panel Displays**
  Six customers in Asia produce 95% of the flat panels in the world, and Air Liquide is the preferred supplier for three of them. The Group experienced double-digit growth in this area in 2010, leveraging its successes in China and Taiwan.
- **Photovoltaics**
  Revenues from solar cell manufacturers, the fastest-expanding electronics segment, grew more than 60% in 2010. Having signed numerous long-term supply contracts, the Group is now the preferred supplier to eight of the global top 10 photovoltaics manufacturers.

VIEWPOINT

Tim Arcuri — Managing Director, Alternative Energy & Semiconductor, CITI Investment Research and Analysis

What are the main factors that have fueled growth in the semiconductor and flat screen display industries in recent years?
Mobile devices– tablets and smartphones– are driving high growth in chip units, 8-10% per year. In the last two years, developing markets, notably India and China, have become more important. The effect of mobile devices has been felt for a while, while developing markets are in early stages of growth, because Indian and Chinese consumers are just beginning to migrate to some of these mobile devices.

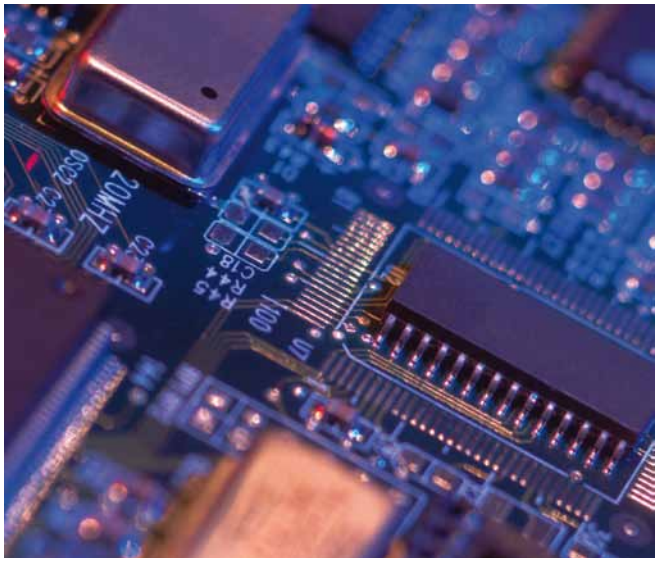
How are consumer needs and trends driving high-tech markets? One of the largest trends is distributed storage. We're seeing a continued proliferation of memory requirements because of mobile devices, and particularly NAND flash memory. As consumers demand more content, NAND is being included in more and more devices, pushing the limits of the technology more than any other application. This leads to a continued acceleration of the technology migration.
The rise in HDTV and the move to backlit screens with LEDs has been a big growth driver. We're entering into a period where we will see some very interesting technologies, flexible displays for instance, that will open up a completely new market.

What are projections for market growth in the medium term? Semiconductor growth is going to slow a little bit because companies across the supply chain were adding to inventory, building above demand. Now there is enough inventory, so I think we're going to revert to underlying demand. This should mean growth of around 5%. Flat screen display supply is low, so there will be a bigger snap-back in the growth rate, probably greater than 10%. The photovoltaic (PV) industry should grow significantly, in excess of 10%. PV markets have been mostly in Europe, but that is going to shift. Developing economies are about three to four years behind advanced economies regarding the PV market. Growth is very specific to geography, especially in PV, there's a lot of uncertainty about demand outside of Europe, but it's going to expand a lot in the United States and developing markets such as China and India.

STRATEGY & PROSPECTS

With 80% of its revenues coming from Asian markets, Electronics is targeting industry leaders in China, Taiwan, Korea and Southeast Asia, while leveraging its strong position in Japan, Europe and the US. With management based in Asia, the business line looks to further invest in photovoltaics and precursor molecules.

ALOHA™ precursors are a key strategic driver in the Group's effort to differentiate itself by developing proprietary molecules and new molecules engineered specifically to customer demands. More than 50 researchers are dedicated to this R&D effort.



FOCUS

SUPPLYING TOSHIBA'S NEW FLASH MEMORY FACTORY

Air Liquide was selected by Toshiba to supply carrier gases to its new 300mm fabrication facility, Fab 5, in Yokkaichi, Japan. The Group will supply large quantities of ultra-pure nitrogen, oxygen, argon and hydrogen, install gas distribution equipment, and provide analytical services to the new factory. The contract strengthens the Group's existing relationship with Toshiba and provides a growth platform: the global NAND flash memory market is expected to continue growing significantly, thanks to a booming demand for smartphones.

FOCUS

GASES FOR FLAT PANEL DISPLAYS IN CHINA

The Group signed a contract with CEC Panda LCD Technology Corporation for its new Generation 6 flat panel display fabrication facility in Nanjing, China. Air Liquide will supply ultra-high purity carrier gases such as nitrogen, oxygen, hydrogen, argon and helium, as well as gas equipment, installation and on-site services. The new factory is one of several expected to open in China in the next few years. It responds to demand for thin-film transistor liquid crystal display panels, which has tripled in China in the last 3 years.

FOCUS

POWERING SOLAR ENERGY IN ITALY

Air Liquide won the contract to become the exclusive supplier of gases to 3Sun, a newly established solar photovoltaic panel manufacturer based in Sicily, Italy. The Group will supply large volumes of specialty and carrier gases, as well as related services. Furthermore, it will build gas distribution and abatement networks. The 3Sun factory, owned jointly by Enel Green Power, Sharp Corporation and STMicroelectronics, will start operations in 2011. Responding to the fast-growing European demand for solar power, it will be the largest silicon thin-film solar factory in the world.

INTERVIEW

David LeBlanc — President,
Air Liquide Electronics US (ALEUS)

How did Air Liquide win the bid to supply gases to GlobalFoundries' new US semiconductor fab?

Our strong reputation with GlobalFoundries as a reliable supplier in Germany and Singapore played an important role in winning the contract. The bid was an exemplary global account team effort that involved not only US Electronics but many people across the organization.

What added value does Air Liquide bring to this project that other companies cannot?

We developed a very innovative solution for GlobalFoundries to meet its supply requirements. Our technical solution is phased in to match the requirements of the company's fairly lengthy production ramp-up schedule. We are also well known for our excellence in supplying the gases that they need.

Has the US electronics market picked up since the economic downturn?

The US semiconductor industry is very much alive, and GlobalFoundries' Fab 8 is representative of this renewed vigor. Fab 8 is an important milestone in semiconductor history because it is the first foundry fab constructed on US soil. We foresee continued growth for Air Liquide Electronics in the US!

FOCUS

GROWING WITH THE US SEMICONDUCTOR INDUSTRY

Air Liquide has been selected by GlobalFoundries to provide carrier and specialty gases, equipment and installation services, as well as on-site management of ultra-pure fluids, at Fab 8, its state-of-the-art 300mm fabrication facility located in upstate New York. The Group will construct a nearby air separation unit in 2011 for the supply of high purity nitrogen and other air gases. The project builds on the existing relationship between the two companies at sites in Europe and Asia and represents GlobalFoundries' first manufacturing facility in the US.

KEY FIGURE

ELECTRONICS IN 2010

€ 1,177

million in revenue

ENGINEERING AND CONSTRUCTION

— World leader in gases for industry, health, and the environment, Air Liquide is also the specialist in technologies needed to produce and purify these gases. Designing and installing these production units is the mission of the Engineering and Construction division. Active in diverse sectors throughout the world, the division serves a broad range of customers.

For more than a century, the Engineering and Construction division has worked to develop and continuously improve technologies to produce and purify industrial gases, the methods for implementing these technologies in production units and the manufacturing and installation of these units. These constant improvements lead to many new patent filings each year.

With its 2007 acquisition of Lurgi, Air Liquide added to its long-held air separation technology portfolio new technologies for the production of hydrogen and carbon monoxide by steam methane reforming; the gasification of coal and residue; and the purification of various gases (syngas, natural gas, and various petrochemical gases).

Today, the Engineering and Construction teams design and build all of the Group's production units intended for customers with large gas needs, working in the refining, petrochemical, and steel industries.

2010: A YEAR OF SUCCESS

After the economic slowdown and crisis context of 2009, 2010 was marked by a sharp recovery in activity, with nearly €1,200 million in order intake for the year, compared with €800 million in 2009.

Furthermore, the year saw the signing and development of major projects, thus illustrating throughout the world the division's technologies and know-how recognition, as well as its key role in Group growth.

THE ROAD TO HYDROGEN

In 2010, Air Liquide announced its largest-ever industrial investment, intended for the construction of two hydrogen production units in Saudi Arabia, on the Yanbu' site. Construction work on a large-scale steam methane reformer (SMR) began in La Porte, Texas (United States). Built by the Engineering and Construction division, this unit will eventually be operated by Air Liquide Large Industries U.S. LP. It should be operational in late 2011 and provide nearly 2.8 million Nm^3 (normal cubic meters) of pure hydrogen per day, thus supplying industrial customers by pipeline along the Gulf of Mexico. This increase in capacity will help the Group meet new demands and develop its hydrogen activities in this key geographic market, particularly in the field of refining.

LARGE-SCALE OPERATIONS AND CONTRACTS

Several major contracts were signed in 2010:

- Lurgi concluded two large contracts for the construction of polyamide-6 units in China, strengthening Lurgi Zimmer's position as world leader: one with LiHeng Polyamide Technology, another with Fujian Jinjiang Technology, two companies based in the southeast of the country,
- construction of the world's largest helium liquefier, with a capacity of 38 million m^3 per year, for RasGas Company (Qatar),
- the biggest carbon monoxide (CO) production unit in Longyu (China),
- the world's two largest nitrogen wash units in Jinkai (China).

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KEY FIGURES

ENGINEERING AND CONSTRUCTION IN 2010

€751

million in revenue in 2010

24

start-ups of Air Separation Units (ASU)

3,700

employees throughout the world

STRATEGY & PROSPECTS

In 2011, while China remains a major market for the Engineering and Construction activity, new opportunities should arise throughout the rest of Asia (India, Korea, Southeast Asia) and Eastern Europe, continuing the sustained growth displayed by developing economies. These new markets will help the Engineering and Construction division strengthen its leadership, become more competitive, improve its performance and pursue its innovation policy.

To handle these new challenges, the Engineering and Construction division will rely on its 3,700 employees located at its technology centers (which work closely with the Group's Research and Development centers) and project execution centers in close proximity to its customers and markets.

FOCUS

A LARGE-SCALE PROJECT

Air Liquide's landmark contract with Saudi Aramco represents the Group's largest-ever single industrial investment. The subsidiary will invest more than US$450 million in constructing two hydrogen production units and supply hydrogen for the next 30 years to the petroleum company's refinery. The facility, located in Yanbu Industrial City, along Saudi Arabia's west coast, will process 400,000 barrels of heavy crude per day when it becomes operational in 2014.

Providing outsourcing solutions

Aside from the scale of the investment, the deal is significant in that it represents the first time that a refinery in the Middle East has agreed to outsource its long-term hydrogen needs. As refining facilities become increasingly reliant on hydrogen to produce the sulfur-free oil and gas demanded by new environmental regulations, new opportunities are opening for Air Liquide. The Group's proven reliability and expertise make hydrogen supply outsourcing a cost-effective and secure choice for refineries.

Strategic growth plan

The contract is in line with the Group's strategy to foster progress in developing economies and to expand its offer within the energy sector. As one of the three main oil-processing, petrochemical and industrial areas in the kingdom, Yanbu' will grow in scale and importance, providing further business opportunities for the Group.

Over the last five years, Air Liquide has opened production sites in promising industrial basins in the Middle East, notably in Egypt, Lebanon, Kuwait, Oman, Qatar, Saudi Arabia, Syria and the United Arab Emirates.
The Group forecasts to invest an additionnal billion dollars in the region in the next five years.

FOCUS

THE ENVIRONMENT, A GROUP GROWTH DRIVER

In 2010, Air Liquide was chosen by the US Department of Energy to participate in the development of FutureGen 2.0, the world first large scale oxycombustion power plant, which will integrate CO_2 capture and storage. The oxycombustion process used in this facility relies on an innovative technology co-developed by Air Liquide and Babcock & Wilcox PPG. This ambitious project is designed to capture and store approximately 1.3 million metric tons of CO_2 each year, or 90% of the facility's CO_2 emissions. It will help meet energy needs while limiting the environmental footprint of its production.

INTERVIEW

Erich Caro — General Manager, Yanbu' Project

What will the successful completion of this project mean for the Group?

It will give Air Liquide a huge leg up in the Middle East. Saudi Aramco and other major companies in the region will benefit from Air Liquide's high level of expertise and its ability to deliver on its promises. This project also demonstrates the Group's collaborative capabilities.

Alongside Saudi partners TAQA and ARPIC, Air Liquide Arabia worked closely with Group subsidiary Lurgi for over two and a half years to win this contract and will continue to do so in completing the project.

What are the advantages of outsourcing to the Group?

First and foremost, there's a definite economic advantage. Thanks to Lurgi's hydrogen production process expertise and EPC experience, we can build and run a more efficient, cost-effective facility, with high reliability and availability.

What does the Group look to accomplish going forward in Saudi Arabia?

Expand the business. The kingdom has a very aggressive, large investment program over the next five years. We aim to provide for the hydrogen needs – and general industrial gas needs – of a number of companies in Saudi Arabia.

WELDING

— Through its welding activities, Air Liquide offers innovative and comprehensive solutions related to the welding and cutting of metals and is a world leader in these fields. Impacted by the financial crisis in 2009, the Group's welding activities successfully adapted to a new economic landscape in 2010 by focusing on its high added-value activities. It was able to tackle challenges and add to its leadership in the market through streamlined production capacities, optimized cash flow, large-scale budget reductions and innovation.

The Group's welding activities are mainly represented by Air Liquide Welding (ALW). The Group subsidiary designs, manufacturers, and brings to the market equipment for welding and electric arc cutting; consumables; material for welding and cutting with oxy-flame processes; and accessories for the welding work environment. It also offers a wide array of services to support users of welding technologies in order to optimize manufacturing processes.

A VARIETY OF CUSTOMERS AND PARTNERS

Thanks to a comprehensive product offer related to both metal processing and metalwork, ALW can respond to the needs of players from the automotive, railroad and naval industries, as well as to equipment manufacturers for chemical and food industries. Air Liquide also takes part in developing infrastructure and manufacturing equipment in the energy fields (oil, nuclear, wind).

Last year, while consumables and tools sales remained stable, equipment sales related to investment continued at a low level. Activity in the energy field was sustained and a gradual rise in sales began throughout ALW's network of partner distributors.

2010: A DIFFICULT POST-CRISIS YEAR

Revenue from welding activity in 2010 was €429 million. After 2009, which saw a 30% drop in activity, no significant rebound occurred in 2010, unlike other past post-crisis recoveries. Growth prospects in Europe do not expect a return to pre-crisis levels until 2013. These trends reflect the relative stagnation of the market, which ALW has been combating in several ways.

THE MAJOR INITIATIVES OF 2010

To cope with the strong drop in activity in 2009, three priorities were defined: reorganizing the company, reducing costs, and spurring innovation, a traditional approach at the heart of welding activities.

First, a plan for streamlining production capacities on three sites was put in place. Next, a major cost control effort yielded excellent results. Finally, two innovative projects were launched in 2010. The new CPM 400/450 plasma cutting torch provided a solution for improving the quality and productivity of sheet metal cutting. Furthermore, the new 3A Welding System for automated welding helped ALW broaden its Submerged Arc Welding offer.

STRATEGY & PROSPECTS

In keeping with 2010, the 2011 strategy is centered on three strategic drivers. The first is the pursuit of innovation efforts. Innovation was illustrated at the beginning of the year by the launch of the MIG/MAG Digipuls II and Citopuls II welding facilities, as well as new welding consumables intended for the energy markets.

The second driver will consist in intensifying ALW development in developing markets. Finally, the third driver involves focusing on key customers from the largest market segments, where growth potential is strongest.

INTERVIEW

Philippe Ogé — Executive Vice President of Air Liquide Welding France

Why was a streamlining process necessary? The economic downturn strongly affected our business. It therefore became imperative to implement measures to cope with the new landscape. The first of these measures involved consolidating our industrial activities in Europe by joining small units to the largest ones in order to yield economies of scale, improve our production costs, and become more competitive. This streamlining process had already been put in place, but was accelerated in order to attenuate the effects of the economic slowdown. On a more general level, we reorganized the subsidiary in order to adapt to a new sales volume.

How did you implement this plan? The ALW France reorganization project above all aimed to refocus our efforts on large activity segments, calling upon our expertise in key areas: high tech, power sources, electrodes and automated systems. Next, it planned for an increase in R&D in France and the optimization of infrastructure costs. This project, presented in October 2009, was deployed in four months.

What conclusions can we draw from the plan? Corporate management and the Corporate Central Committee demonstrated a high level of dialogue and reciprocal responsibilities. As a result of the voluntary leave procedure, 68 individuals benefited from a voluntary solution. The industrial transfers have now been performed, with no major difficulty or impact for customers.

FOCUS

AIR LIQUIDE WELDING FINDS SUCCESS WITH INVENTORY MANAGEMENT PROJECT

The effects of the 2009 economic slowdown highlighted the subsidiary's recurring cost control issues. It was thus necessary to rethink inventory management in order to improve the company's working capital needs. The Air Liquide Welding Inventory Management project aimed to reorganize the entire logistics chain management system. This effort centered on both raw materials and finished products. Purchasing procedures were reconsidered and monitored, while improving anticipation of needs. The distribution network in Europe was also redefined: primary storehouses were established near production sites, connected to a system for supplying secondary storehouses in each country, every week, according to local needs. The project generated immediate results. The number of stored items went from 60,000 to 50,000 and the overall inventory was reduced by 49%: a significant contribution to the cost control efforts conducted throughout the Group.

KEY FIGURE

WELDING IN 2010

€429

million in revenue

SPECIALTY CHEMICALS

— As part of the Group's Healthcare business line, SEPPIC develops and markets specialty chemicals to be used in the health, beauty and industrial sectors. Through expertise acquired over more than sixty years, and a strong entrepreneurial attitude, this Air Liquide subsidiary has become a major player for ingredients bound for the developing cosmetics, pharmacy-nutrition and vaccine markets. One hundred researchers pool together their know-how for the benefit of innovation, well-being and green chemistry.



In 2010, in the general context of strong upturn following the 2008-2009 crisis, SEPPIC results were carried by the key health and beauty sectors, which are at the core of SEPPIC's business and represent 75% of current sales revenue. To rise to the challenges related to market growth, the subsidiary relies on the know-how of its 640 employees in 12 countries and on its network of distributors in 70 countries.
The energy, rigor and innovating attitude shown by SEPPIC since its creation have already won over 5,000 customers, including the leading names in health and well-being.

A SYNERGY OF EXPERTISE

SEPPIC fields of expertise cover chemical processes, biology and immunology, including formulation and applications.
To provide its customers with reliable solutions that conform to regulatory standards around the world, SEPPIC also develops advanced competencies in analysis, intellectual property, regulations and product safety.
This know-how, developed through synergies, benefits the whole of SEPPIC. It supports the subsidiary's strong drive toward innovation and is essential for anticipating and responding to market expectations.

A team of 100 researchers, 30 invention declarations submitted each year, 144 patent families currently in force, and an open innovation program called SEP'INNOV are testament to SEPPIC's efforts to promote innovation. Through its responsiveness and the close ties that it forms with its customers, SEPPIC can provide a personalized product and service offer. Sepischool, the subsidiary's technical training institute, works to guide customers by offering "à la carte" training courses to enable them to benefit from the very best SEPPIC products.

PRIORITY TO GREEN CHEMISTRY

Today, green chemistry is a field in line with customer and market expectations, and is a field that dates back many years for SEPPIC. It involves innovative solutions in terms of biodegradable surfactants or green emulsifiers, and guarantees the fine-tuning of specific solutions to meet current major environmental challenges. This process forms part of SEPPIC's priorities for the years to come. Within a context of customer satisfaction objectives, green chemistry meets demands for sustainable development.

STRATEGY & PROSPECTS

SEPPIC's development acceleration is based on a program of acquisitions, on international development and on a priority placed on innovation. SEPPIC continues its strategy of international, sustainable growth to match its ambitions.

This strategy obviously appears in SEPPIC's unifying vision: to be the benchmark in specialties for the health and beauty market. SEPPIC has therefore ambitious objectives for 2015.

INTERVIEW

Gérard Trouvé — Group Expert and Manager of the Applied Research division in Castres (France)

Sandy Dumont — SEPPIC Expert and biology lab manager

In what way does applied research meet the needs of SEPPIC's customers?

G.T. : Through its expertise in formulation, SEPPIC has a truly comprehensive knowledge of its customers' businesses, whether in cosmetics, pharmacy, vaccines or industry. This enables us to anticipate our customers' needs and provide customized assistance from the design to the industrial phase.

S.D. : With regards to the biology laboratory, our work involves characterizing active ingredients. That means understanding, for example, how the active ingredients from a food supplement or cosmetic product are effective on cells or human tissue. Next, we demonstrate it to our customers through various clinical tests.

Biology, immunology, chemistry… What is the advantage for SEPPIC of combining various fields of expertise?

G.T. : Synergy! There are several benefits, and they all come together to strengthen our image as the expert in SEPPIC's target markets. The synergy of these fields of expertise enables our teams to master the entire life cycle of the product, from the design of its molecules to the manufacture of the product in which they are formulated. This synergy also helps us objectify and therefore add value to the performance of our products from the customer's point of view. We are closer to their needs, as we are familiar with the design, the manufacturing and the use of their products.

S.D. : Our expertise in biology enables us to put in place more relevant evaluation methods, as well as more innovative and accurate tests, in order to better explain to our customers how the active ingredient works, and to prove its effectiveness. In this way, we contribute to research on future health and beauty products.

KEY FIGURES

SPECIALTY CHEMICALS IN 2010

640
employees

100
researchers

5,000
customers

FOCUS

PROXIMITY AND COOPERATION WITH TECHNICAL CUSTOMER CENTERS

Cooperation is a shared value at the core of the three SEPPIC **technical centers for customer services** (CTSC) in China, France and the United States. The CTSCs provide complementary and tailored services according to customer needs, such as technical assistance or guidance with development projects for new products. The CTSC in Shanghai (China), for example, is designed for customers in the Asia-Pacific region and answers the specific expectations of a fast-blossoming local cosmetics market. Through its special product training programs, SEPPIC helps its customers make the most of its expertise and technical competencies. Furthermore, it contributes to the image of expertise provided by the new generation adjuvant vaccine unit located in Qing Pu.

CRYOGENICS

— Thanks to its technological expertise in the field of cryogenics, the Air Liquide Advanced Technologies Division (DTA) designs systems for cold production and liquefaction, as well as for storage and distribution of fluids, helium and hydrogen, at very low temperatures. The HELIAL helium liquefier has allowed the Group to take part in large-scale projects that advance science and push back the boundaries of knowledge.

A LEADER IN CRYOGENICS

A specialist in mastering extremely low temperatures, Air Liquide DTA lends its expertise to major scientific programs. The Group has thus partnered with many major players in research, including the CEA (French Atomic Energy Commission in Saclay, France), CERN (European Nuclear Research Organization, Switzerland and France), and several major universities.

The division designs cryogenics systems used in numerous high-tech fields. For example, the HELIAL line of helium liquefiers has won over a world market.

DTA also offers tailored refrigeration systems, intended for major industrial and scientific projects.

2010: SUSTAINED ACTIVITY AND NEW OPPORTUNITIES

One of the largest successes of 2010 was undoubtedly Air Liquide's participation in the RHEA project, with participation from Engineering and Construction and DTA teams. The project involved the construction of a new helium purification and liquefaction unit in Qatar, five years after the construction of an initial unit. This new facility will have twice the capacity of the first unit and will enable the Group to considerably increase its helium production capacity.

Activity concerning tailored solutions for continued quality control of gases and cryogenic equipment also remained stable: 2010 saw several new opportunities arise, notably in China, Japan, and the United States.

Three Continued Quality Control analysis bays were also acquired by one of the American leaders in the semiconductor foundry industry.

Eleven ULTRALTM purifiers were sold to the electronics industry – an unprecedented figure. This success is explained in part by the expansion of the LED lamp market in China, which requires ultrapure hydrogen for manufacturing.

This strong momentum should continue in the years to come, notably with the ITER European thermonuclear reactor project and similar prospects offered through India's participation in the project, and the Japanese JT-60 Tokamak reactor.

STRATEGY & PROSPECTS

DTA's primary goal is to play a major role in the fields of scientific research (cryogenics), aerospace and aeronautics… while constantly improving the performance and competitiveness of its solutions and accelerating its international development. For cryogenics, the objective is to become the world leader in helium refrigeration systems. Three drivers will structure these efforts: becoming involved at the beginning of large refrigeration equipment projects, developing the HELIAL solutions market, and anticipating future markets, such as energy transportation through superconducting cables. Air Liquide also aims to consolidate its privileged position in the European aerospace industry, provide new services, and maintain interest in cryogenic propulsion. Within the field of aeronautics, DTA plans to consolidate its penetration into the defense sector while seizing opportunities in the developing commercial sector.

AERONAUTICS AND AEROSPACE

— Air Liquide has been a partner in the ongoing space adventure for more than 50 years. Relying on its expertise in cryogenics, it has taken part in the largest space projects, such as the Ariane program and the development of the two most complex satellites ever designed in Europe: Planck and Herschel. Present on the world's primary launch pads (Kourou, Tanegashima, Cape Canaveral), Air Liquide pursues its efforts to develop cryogenic equipment, taking an active role in the scientific community's quest to uncover the secrets of the universe.

FOCUS

HX PROGRAM: SOON IN ORBIT!

With the HX program, DTA and Cryospace combine their expertise and skills to develop the launch vehicles of the future, under the command of CNES (the French national aerospace research center). The goal is to improve the current Ariane 5 launch vehicle performance and make possible the re-ignition of the upper stage motor during flight, so as to place several satellites into orbit. Scheduled to begin in spring 2011, "life-size" tests will be performed in Sassenage (France) at a macro-demonstrator on the ground that simulates vacuum conditions and thermal space environment. Certain technologies will probably then need to be validated during a sub-orbital flight in micro-gravity. While the first Ariane 5 ME launch vehicles integrating a portion of this technology should lift off in 2017, Technologies of the Future teams are also working on the next generation of Ariane, scheduled for 2025.

LONG-TERM PARTNER OF THE ARIANE PROGRAM

For more than 50 years, Air Liquide has taken part in the European space odyssey, participating in the Ariane program since its launch in 1973. In order to leave Earth, rockets are charged with liquid fuel (composed ofhydrogen) and liquid oxygen, which are necessary for combustion. A specific cryotechnical system, adapted tanks, and thermal insulation are needed to maintain the liquid state of thesepropulsion elements. The Air Liquide Advanced Technologies Division (DTA) and Cryospace (an economic interest group founded in 1988 between Air Liquide and EADS) design and manufacture the cryogenic tanks and equipment necessary to meet the specific needs of the space field.

ARIANE 5 MIDLIFE EVOLUTION: THE NEW GENERATION

Air Liquide and Astrium, subsidiary of EADS, announced the creation of a new economic interest group for the development of the future tank for the upper cryogenic stage of Ariane 5 Midlife Evolution (ME). Beginning in 2011, a production unit will be built near Bremen (Germany). The new upper cryogenic stage of Ariane 5 ME, fueled by liquid hydrogen and oxygen, will offer increased capacity (12 metric tons of payload compared to the current 10) and will be able to place several satellites into orbit or send probes to other planets. The signing of this partnership strengthens the Group's presence in the European aerospace industry. Air Liquide also hopes to serve as partner for future European observation satellite projects such as Composantes Spatiales Optiques (CSO), a program of CNES, the French national aerospace research center.

FLYING EVER HIGHER IN AERONAUTICS

Through DTA's cutting-edge expertise, Air Liquide has become a major player in the military aeronautics industry, alongside builders and equipment suppliers, with its gas generation systems and on-board respiratory equipment. The Group also offers global solutions for improving the availability and safety of aircraft and helicopters, ground support resources, and cryogenic mini-refrigerators.
2010 was a prosperous year for the military aeronautics activity, continuing the successes of the previous year.

DIVING

— Aqua Lung, an Air Liquide subsidiary, manufactures equipment that meets needs in terms of adventure, fitness and safety – in the water, on land and in the air. Originally a specialist in diving equipment, Aqua Lung has diversified into several new markets over the last decade. With its wide range of reliable, adapted products, Air Liquide's Diving subsidiary is now a major global player in sectors ranging from water sports to public safety and military equipment.

BREATHING FRESH AIR INTO THE DIVING INDUSTRY

The public safety sector uses Aqua Lung's diving equipment for water rescue, police search and recovery activities.
In the military industry, a specialized line of closed circuit rebreathers enables divers to conduct covert missions without emitting bubbles. This product range has been renewed over the last 10 years and is enjoying strong success in many global markets.
As a result of this diversification, Aqua Lung has seen its non-diving sales increase from a quarter of its overall business to around 50% of revenue today. In addition to these new markets, Aqua Lung's historical customers include specialty shops, namely those in the diving and water sports markets, followed by sporting goods chains and mass market retailers.

TAKING TO THE AIR

As further proof of Aqua Lung's capacity for innovation across diverse markets, the subsidiary offers a range of specialized products for helicopter pilots and crews. Two compact products stand out:

- **Survival Egress Air (SEA).** This emergency breathing device consists of a small cylinder of air that affords its wearer approximately two minutes of air. Notably used by pilots whose helicopters have crashed at sea, the SEA provides pilots and crew the possibility to escape a sinking aircraft.
- **Personal Helicopter Oxygen Delivery System (PHODS).** This cylinder is filled with oxygen, enabling pilots and crew to fly at high altitudes for more than one hour, depending on altitude reached.

EXPANDING TO NEW FRONTIERS

Seeking new territories in which to grow its business, the subsidiary opened an office in Egypt in 2009 in a bid to improve on the sales already being made by local distributors there. Thanks to its presence in the country, Aqua Lung's subsidiary can offer local services and quick delivery time. This decision has been vindicated, with sales growing strongly in 2010 despite challenges imposed by import restrictions. The company's products are now used in most popular Egyptian seaside resorts.
In March 2010, Aqua Lung acquired the Canadian company Whites, which manufactures an innovative diving dry suit called Fusion, providing unmatched flexibility. Perfectly fitted to cold-water environments, the Fusion dry suit fully meets the specific needs of the military and public safety markets.
Aqua Lung's swim brand, Aqua Sphere, has also developed the NAIAD line of swimwear, constructed with an integrated body support system aimed at the women's competitive swimming market. In addition, Aqua Lung has expanded into the dynamic diving travel market with its Pack n' Dive product line (see focus opposite).
Now counting 1,000 employees, Aqua Lung has 13 offices in 10 countries.

STRATEGY AND PROSPECTS

To ensure continued growth, Aqua Lung is focusing on innovation and targeting new markets worldwide. Regions such as Asia, Eastern Europe and Latin America offer great opportunities for the Diving subsidiary to build a stronger presence and grow market share. Aqua Lung is deploying a network of representatives to these areas in order to gain local knowledge and perspectives, and is working at strengthening its partnerships with distributors.

INTERVIEW

John Gardner — President of Whites

How do Aqua Lung and Whites mutually benefit each other?

Aqua Lung truly helps Whites become a world-class company through access to its distribution network, systems and infrastructure, and its financial acumen. The partnership with Whites makes Aqua Lung a Tier 1 supplier for professional diving markets.
We also take great pride in knowing that we're a division of Air Liquide, a performance-driven, stable and innovative company. Air Liquide's experience and high standards in safety constitute major assets.

How would you describe Whites' Fusion dry suit?

Its design consists of a large inner waterproof garment enveloped by an outer compression layer. This gives a shrink-wrap fit that is better than a traditional custom fit for the diver. It enables incredible mobility, rivaling lightweight wetsuits.
For women, this product is a game changer. Fusion accommodates differences in female body shapes by effectively molding the suit to each individual body.

What challenges are on your horizon?

Number one: maintaining focus. The Fusion patent is applicable to diving, surface water sports, aviation, fishing and more. With so many distinct opportunities, the challenge is to focus on meeting needs in each of these different categories.

FOCUS

SUPPORTING FEMALE ATHLETES

Aqua Sphere's new range of NAIAD women's swimwear is equipped with a specialized body support system which provides muscle toning compression. During the product launch, US Olympic gold medalist swimmer Amanda Beard acted as spokesperson.

FOCUS

TRAVEL LIGHT

Divers find it increasingly difficult and expensive to travel due to additional airline baggage fees and size limits. In response, Aqua Lung introduced Pack n' Dive, a new product range aimed at this market. This unique set of gear is a compact, lightweight system that is small enough to be carried on board.

SAFETY

— The mission of the Group safety teams consists in anticipating accident risks for all Air Liquide employees in their occupational environment. While the diversity of the Group's activities and its wide international presence make this task challenging, constant efforts must be made whenever safety is at stake. Historically, safety has been a top concern for the Group, and the increase in the number of accidents in 2010 has led Air Liquide to redouble its efforts to ensure the maximum level of safety in each of its business lines.

Safety has long been a priority at Air Liquide. The Group goal is to avoid any form of accident or endangerment to its employees. To do this, Air Liquide defines technical standards and sets rules and procedures that aim to protect personnel, employees and subcontractors in the context of theirduties. Thisframework must then be deployed throughout all entities, while ensuring that it is applied by management and operational teams with the same focus around the world.
In 2010, indicators displayed a rise in the number of lost time accidents. However, without understating this increase, it should be mentioned that Air Liquide results remain comparable to other companies in its sector.

PERPETUAL SAFETY ACROSS ALL SUBSIDIARIES

As a responsible global player, Air Liquide constantly ensures that its operations do not place its employees, customers, or local populations in danger. A global safety policy has been drawn up on the Group level. Its primary goal: maintain a constant level of vigilance on a daily basis.
The wide variety of activities and countries in which the Group operates, along with the independence accorded to its subsidiaries, complicate the application of this policy. The goal for teams in charge of safety is to promote common references in this heterogeneous environment. These efforts take into account cultural differences, notably the specific ways in which risk is viewed in each country.

TWO REQUIREMENTS: A UNIFIED CULTURE AND RULES

Since 2005, the Air Liquide Group has implemented an Industrial Management System (IMS). This combines all operational procedures, technical standards, and best practices that aim to guarantee individual safety, environmental respect, and operational reliability.
This system has been gradually deployed in all Air Liquide business lines to promote safety rules consistency. In 2010, an internal and external audit of the IMS was initiated at the Group level. This study proved the relevance of the system, which makes Air Liquide one of the most innovative companies in the field of industrial risk evaluation and management.

While the IMS continues to take root throughout the Group, Air Liquide considers it equally necessary to continuously promote a culture of safety based on personal responsibility. Only the combination of practical, effective rules with personal and collective awareness of the human stakes of safety will help Air Liquide pursue continuous, lasting improvement of its performance in this field.

AN ADAPTED RESPONSE

Within the Group, three central teams are responsible for performing "IMS audits", identifying and reducing industrial risks, and coordinating initiatives in terms of health, safety, and the environment. They work closely with the different business lines' Worldwide Industrial Management teams on a variety of initiatives. Training modules are regularly provided to Group employees, treating specific themes in order to offer focused prevention efforts. A follow-up system makes it possible to collect and centralize contextual data surrounding each potential or actual accident. The most critical events are regularly analyzed so that they do not recur: this feedback enables the Group to close the accident loop by updating its rules andprocedures.
Following a difficult 2010 in terms of safety, the Group intends to return to the continuous progress of the three previous years. Emphasis will be placed on management training, follow-up on the deployment of Group rules and technical procedures deployment, and employee communication that focuses more on daily realities and the concrete consequences of accidents.

FOCUS

RISK MANAGEMENT: INNOVATIVE METHODS AND TOOLS

For its safety policy, Air Liquide has developed specific tools (failure database, 3D dispersion model, risk modeling guide) and innovative, original generic risk analysis methods. Based on Seveso regulations and applied to all Group technologies, the generic risk studies make it possible to identify all risk scenarios for a given process and define protective solutions at each step of a project cycle. These methods and tools are recognized for their professionalism by customers, local authorities and consultants. They have also been discussed at international conventions or in the framework of workgroups dedicated to industrial risk management. They enable Air Liquide to strengthen its internal safety policy and demonstrate its commitment in this area.

INTERVIEW

Guy Ngatoum — IMS Manager for Sub-Saharan Africa

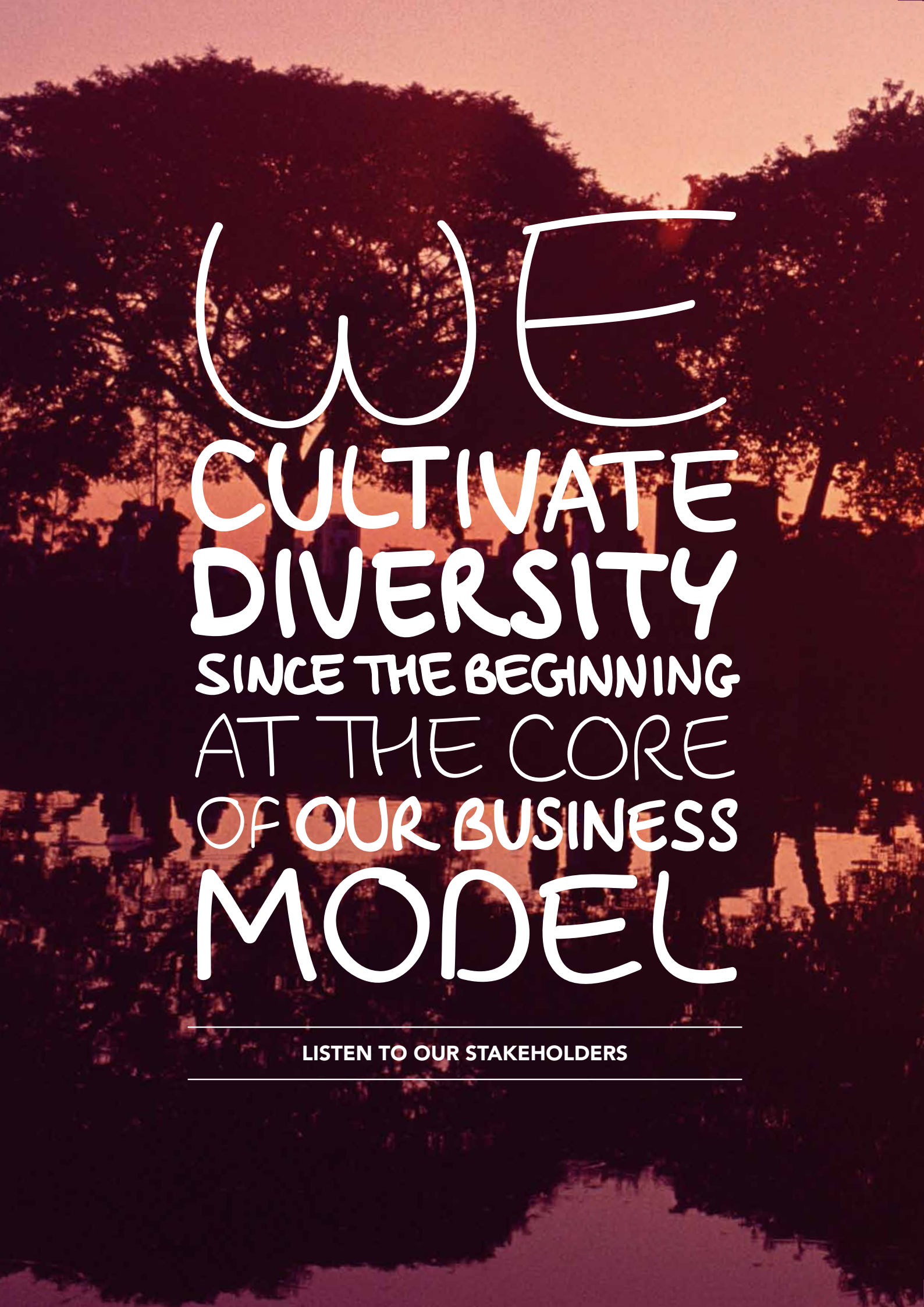
What are the particularities of applying Group rules in your region?

First, we must mention the political and economic context, which can be quite unstable. Then, there is our employees' daily social reality, which differs greatly at work and outside of work. Further, we must take into account the absence or obsolescence of certain local legislation. Finally, though the smaller size of our subsidiaries may facilitate communication, it means we have fewer resources, as well.

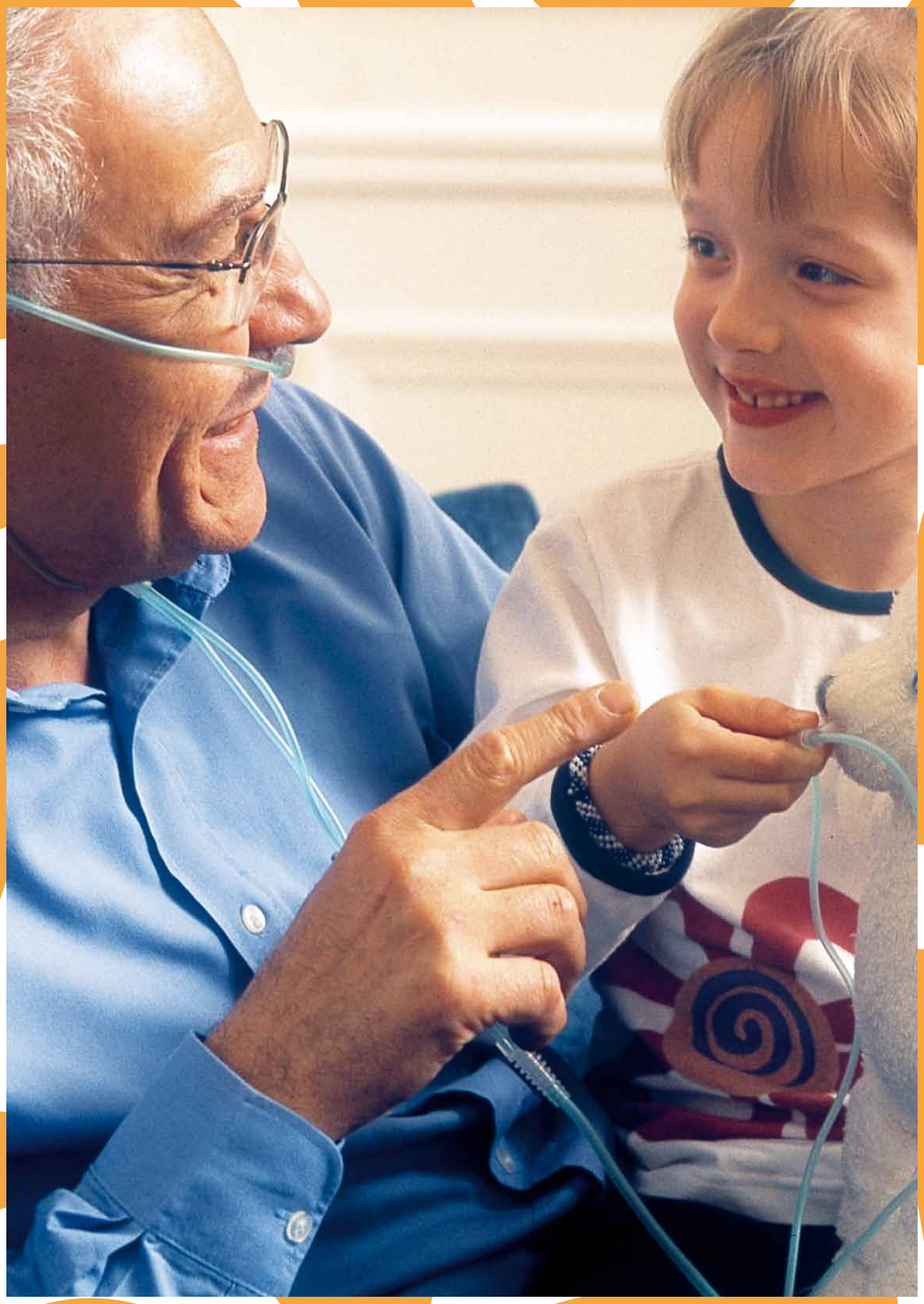
Can you discuss a concrete example?

I'll bring up the application of certain Group rules in old Air Separation Units (ASUs). Currently, these units are expected to integrate a chromatograph in order to detect the presence of hydrocarbons in the liquid oxygen bath. This technology is poorly adapted to the small size and operational age of our ASUs. As a first measure, we adopted a more strict operational procedure to reduce the risk of hydrocarbon accumulation. Specifically, we defrost more often, shut down the facility if acetylene infiltrates the air, and drain all fluids each time we shut down the ASU.

think SAFETY act SAFELY



LISTEN TO OUR STAKEHOLDERS



CUSTOMERS

RESPONDING TO OUR CUSTOMERS' DIVERSITY

INTERVIEW WITH THIBAUT POULAIN — DIRECTOR OF THE ALMA 2015 PROGRAM

Why was a "Customers" section added to ALMA 2015? In order to mobilize all Air Liquide teams and better respond to customer expectations, which of course, have evolved over the course of more than one hundred years. Recently, we've seen a more pronounced shift in customer mindset. More than just a product, customers want flexibility, swift action, service, availability and a truly long-term partnership. According to their needs, they seek increased productivity, reliability, environmental respect, safety and user friendliness in our offers, in addition to simplicity, availability, and responsiveness in our daily interactions.

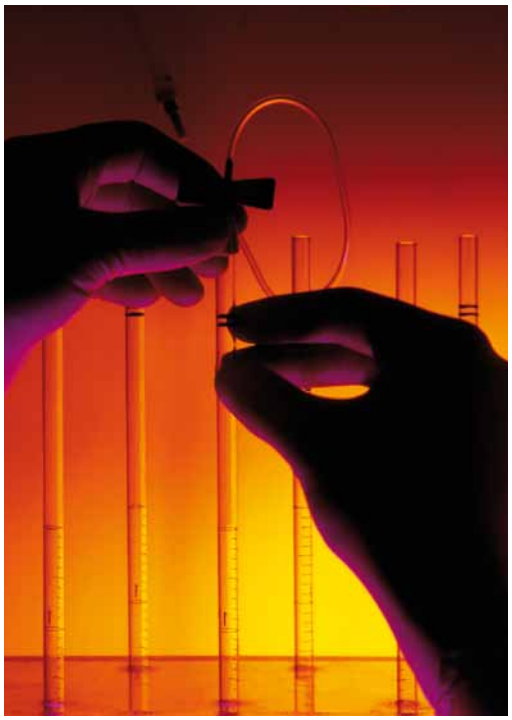
Who are Air Liquide's customers? We have around two million customers that come from four major groups representing 87% of Air Liquide revenue: Large Industries, Electronics, Industrial Merchant and Healthcare. These last two cover the large majority of our two million customers. We work with an extremely diverse set of customers with a variety of business expectations within sectors such as heating repair, automobile manufacturing, water treatment, flat screen and microprocessor production, refining, food, aeronautics and space. Within the healthcare sector, we count three types of customers: patients, doctors and pharmacists, and paying agencies.

What kind of relationship does each customer expect? With very large industrial customers – chemical companies, refiners, high-tech, steel producers, etc. – relationships are formalized in long term 10-, 15-, or 20-year contracts. Trust is built on personal relationships as well as on the expertise and industrial management of our teams. Craftsmen and small- and medium-size enterprises are both deciders and users. They ask us to make their work simpler. For this reason, we offer them practical solutions, such as the option to place orders day and night through our online shops for certain products and in certain countries. With health professionals, Air Liquide must offer still other services, as people are directly affected in this industry. More than in other industries, swift action is here a determining factor for our customers, as is a high level of service. This explains the strong "customer" orientation of our Healthcare entities, which manage extremely sophisticated call centers.

How does Air Liquide successfully adapt its offer to real expectations? This depends on the customer and, of course, the request. There are plenty of examples of our ability to work alongside our customers in various development stages, through changes in their needs or their geographical mobility. Air Liquide's geographical coverage and its presence in over 80 countries also enable us to meet the specific needs and expectations of international groups as well as local customers. This is Air Liquide's strength: being both internationally oriented and close to each customer.

Is there an "Air Liquide model" in customer relations? Absolutely. In Large Industries, priority is given to the long term, which corresponds perfectly to the scale of the investments at stake and the critical role that industrial gases play in industrial processes. Industrial Merchant adheres more to a customer diversity approach. With the supply and implementation of ultra-pure gases requiring specific know-how, Electronics implements a partner relationship that goes well beyond that of a simple gas supplier. Teams often work permanently on customer sites, such that they often blend in entirely with customer teams. Finally, through its medical gases and individual services, Healthcare involves another kind of relationship, as customers may be patients in this case.

Outside your core business, which of your services provide added value? Beyond quantitative elements such as cost and productivity, qualitative factors are of increasing concern for customers. Number one on the list is safety, a major focus for Air Liquide over the course of our development. We constantly aim to share our safety culture with customers, such as through specifically designed training courses. Respect for the environment is another advantage we can bring to our customers. For example, 42% of the Group's sales revenue is dedicated to applications associated with sustainable development, i.e. preserving life and the environment. In the same spirit, 86% of Air Liquide deliveries of air gases and hydrogen are made through pipelines or direct production at the customer's site, which cuts road transport for industrial gas to 14%. This has the two-fold benefit of being closer to the customer and limiting greenhouse gas emissions. All these points make Air Liquide a privileged partner, able to create adapted and innovative solutions for added value to customer partner companies.



FOCUS

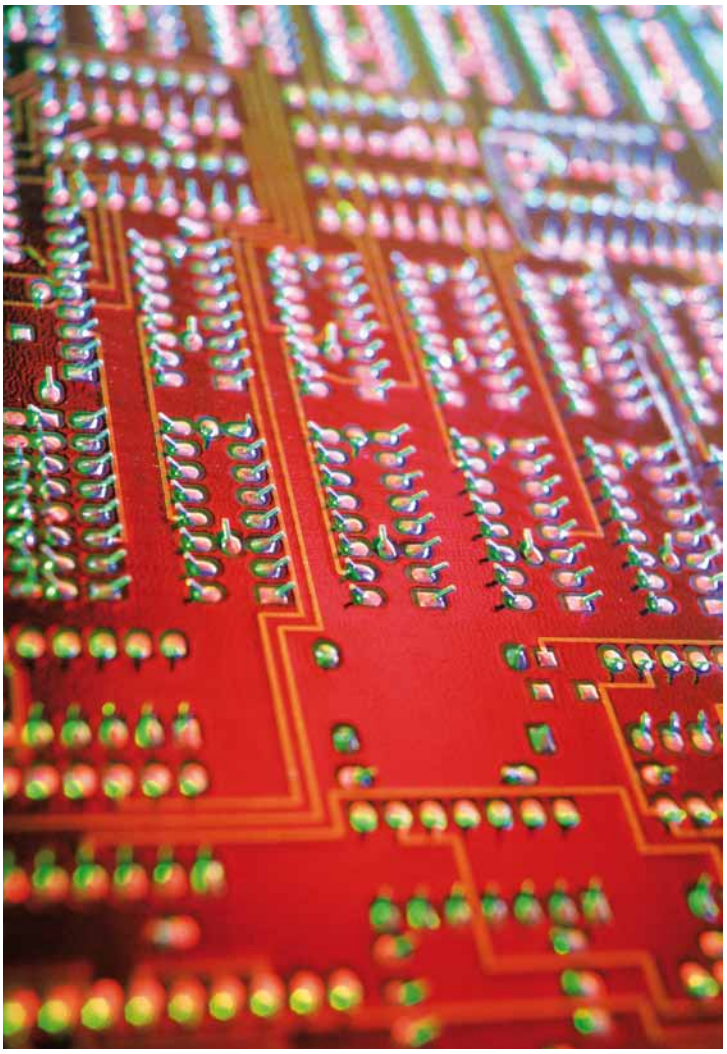
A CONTRACT BASED ON CONFIDENCE

How can industrial companies that produce their own gases (e.g., chemical companies, steel producers) be convinced to purchase industrial gases instead? The answer lies in the value of the outsourcing model, which is firmly in place in advanced economies and growing strongly in developing countries, such as Russia, China, Turkey and Brazil. To encourage companies to take this step, the Group creates an environment of trust with companies through regular, open dialogue. Bolstered by its strong reputation, Air Liquide advances two compelling arguments for how outsourcing benefits the customer. First, reduced investment costs help companies save funds and focus on their core business (as these costs are taken on by Air Liquide). Second, companies incur lower operating expenses for three reasons: resource sharing, increased operational efficiency and product synergies. Pooling resources results in large-scale savings because, as the Group manages production, costs can be shared among several customers. Air Liquide's operational efficiency, developed over more than a century, further lowers the customer's expenses (limited technical outages, units with improved management and maintenance, etc.). Finally, in contrast to a customer with a specific gas need, the Group maximizes product synergies by co-producing a variety of gases, and even energy, with optimal efficiency.

FOCUS

STRATEGIC SUPPLIER TO THE ELECTRONICS INDUSTRY

As a key supplier to the manufacturers of high tech electronics devices, Air Liquide supports its customers at their production sites throughout the world. To this end, the Group has developed both a standardized offer, and extremely high quality requirements. These enable the Group to ensure reliability, safety, and monitoring of the supply chain for specialty and on-site production air gases. To establish a lasting relationship as a strategic supplier to its customers, Air Liquide fulfills two roles: one as the key supplier of gases, new materials and services, and another as a production manager in customer plants of the gases supply scheme.
Today, more than 800 Air Liquide engineers and technicians work permanently on customer sites. In order to ensure these customers a level of service and responsiveness that meet their expectations and a plan for corrective action in the case of non-conformance, Air Liquide has implemented a Global Account Management Program.
It relies on two key elements: a dedicated account manager who deploys the Air Liquide strategic plan at customers industrial sites, and operations teams that understand the customer's strategy over the short and medium term. This rewarding strategy has enabled Air Liquide to broaden its offer from carrier and specialty gases to molecules and services, which provide greater added value.



INTERVIEW

Toshihiko Hirata — Business Development Manager based in Vietnam

What is your role as a business development manager in Vietnam?

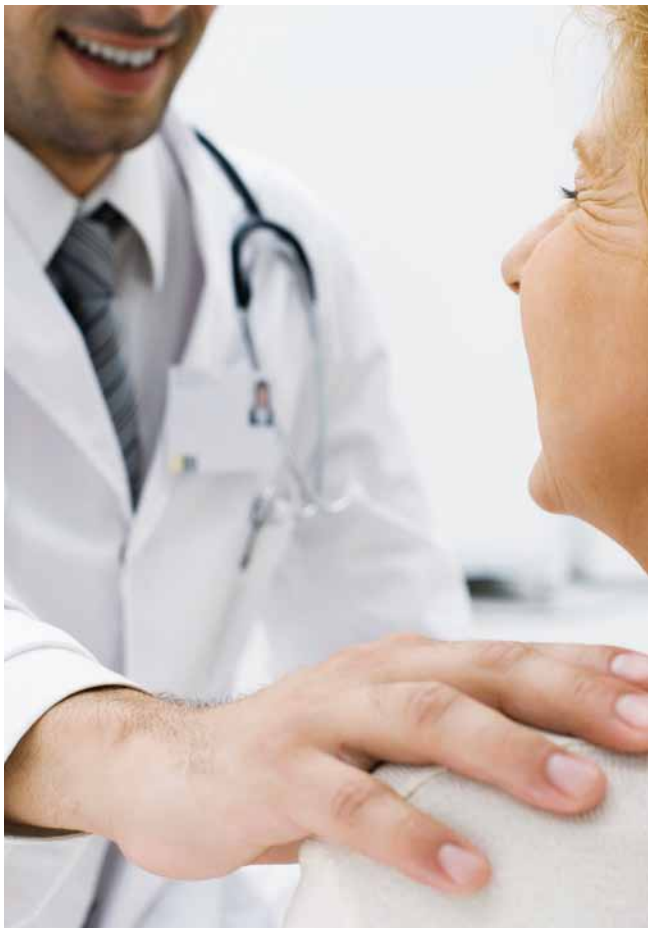
My main mission is to expand Air Liquide's business with Japanese customers in Vietnam. I came here two years ago, when many Japanese companies started coming to Vietnam. There are 500 to 600 Japanese industrial companies here, in activities such as glass-making, assembly, automobiles, heat treatment and welding. Among our main Japanese customers are NSG Pilkington, Honda, Toyota and Hoya Glass Disk. Air Liquide is very different from local industrial gas suppliers – I want to make Air Liquide known to all Japanese companies here.

How do you work with your customers in Vietnam?

My job is to support existing customers and to get new customers. I am integrated with our sales team. We prepare economic studies and investment projections, then send in proposals and negotiate. I build relationships with Japanese managers in synergy with the local sales forces who work with their Vietnamese counterparts. You need this dual action to create successful business.

What are your goals for the next year?

Our liquid and packaged gases sales grew by more than 40% last year. We are aiming to maintain 25-30% annual growth. We have added 13 new customers in the past two years. I never experienced that in my years in Japan. I hope to get 10 more customers this year. Vietnam is a very active market, and also very competitive. It's very exciting to be here. I learn a lot from the pace and local context of projects, and at the same time help bring to the local team the quality and customer mindset necessary to do business, especially with Japanese customers.



FOCUS

PROTECTING PATIENTS FROM NOSOCOMICAL INFECTIONS

Air Liquide and its Healthcare business line make protecting patients from hospital-contracted infections a high priority. It is also a problem for which there is no single solution. For this reason, the Group, in partnership with certain hospitals, is implementing a protective shield, one aspect of which is training hospital staff.
Thus, in Germany, nearly 20% of hospitals have already turned to the Air Liquide Healthcare business line for coordinating a "hygiene" plan in each service representing high patient risk (urology, intensive care, oncology). Among these hospitals, 5% opted for a medium-term follow-up contract, thus responding to the highly strict demands of the German Ministry of Health.
Concretely, the "hygiene" plan consists in training hygienists and other related staff members in five to seven sessions per year. Focused on validating hygiene processes, the sessions emphasize, for example, the necessity of actions like disinfecting medical instruments.
In 2010 alone, over 400 professionals, mostly nurses, received this training. As a result, the number of infections contracted in high-risk areas significantly fell.

EMPLOYEES

AIR LIQUIDE: EXCELLENCE FOR EMPLOYEES

INTERVIEW WITH FRANÇOIS ABRIAL — VICE-PRESIDENT GROUP HUMAN RESOURCES

What does investing in Human Resources mean for Air Liquide? The men and women who make up the Group lie at the heart of our ongoing development. They constitute an important element in the long-term strategy of the Group. Investing in Human Resources means making sure that the best available talents join the Group. It also involves motivating and helping these talented individuals evolve throughout their careers, in addition to offering them a rich and varied professional development. We always say that employees can lead several professional lives at Air Liquide.

What are the driving forces of the HR process? We have defined two major ambitions. First, grow from 44,000 to 57,000 employees by the end of 2015, across all business lines and geographic zones. This means planning an attractive framework for potential employees and their integration into a large international group. Logically, the second ambition aims for excellence. We want to be a reference in terms of job and workplace quality, well-being, performance and personal development, so that everyone can perform his or her best. To get there, we will rely on four pillars: recruiting and developing talents, lifelong learning, supported by our diversity and our procedural efficiency.

What career development tools does Air Liquide offer its employees? I'd cite two things: the development of Air Liquide University and the emphasis on employee mobility. Considering the success of Air Liquide University, we will increase the number of modules offered and extend them throughout the world. Mobility also remains an essential element of our career management. The economic upturn has reignited the demand for expertise — and thus for expatriations or missions — especially in developing economies.

How do you plan to promote lifelong learning? By developing tools such as social networks and e-learning. Social networks are a new way to train oneself, through the use of one's contacts. They offer vision and synergies that are enriching for individuals and, therefore, the Group. For example, the new Air Liquide community of former TCL members who participated in the Invent training module is preparing an internal network for sharing ideas and innovations. We also recently launched Discover, our first e-learning module. E-learning is a powerful way to reach employees and offer on-the-job training. Easy to implement, the programs are electronically translated into the Group's eight principal languages. E learning offers equal access to all, including those without a personal computer. But let's not forget about traditional training. Our goal is to reach 25 hours per person per year – or three full days of training - while ensuring that everyone can access these programs. This will enable each employee to do his or her best and help the whole organization progress. We already cover 75% of our employees, but we can and must improve this figure.

How has diversity developed at Air Liquide? We will only reach optimal performance and excellence through a broad diversity in our teams, in terms of nationality, gender, educational background and age group. By the end of 2015, our goal is to grow from 49 to 70 nationalities, nearly the number of countries in which we are present. In terms of equality, we aim for 33% of our high-potential employees to be women by the end of 2015 (compared to the current 24%). In terms of educational backgrounds, we plan to integrate new professions, notably in the health sector. Lastly, the 33,000 new recruits planned by 2015 will instigate major changes within the Group's age distribution: in five years, more than 40% of our workforce will be under 35 years of age, and the number of employees over 60 years of age will grow from 3% to 10% in 2020. It is now up to us to make these changes an advantage for the Group and our employees, notably by encouraging knowledge sharing.

The company's image will be a major advantage for reaching these goals… For the Air Liquide Group to become a worldwide reference, it must respond generally and individually to the following employee criteria: professional evolution, corporate ethics, work environment… This requires strengthening our image as an employer. We have to further promote our values and better underscore our on-site commitment in order to appeal to potential employees. Over 90% of interns choose to stay with the Group when offered a position at the end of their internship. This clearly proves that Air Liquide has what it takes to attract new employees! We must therefore continue to appeal to more young people by offering new ways to discover the Group: internships, professional training, international corporate volunteering opportunities, etc. To spark interest among these groups, we are going to ask each subsidiary around the world to develop privileged relationships with three local universities or schools. This could take the form of partnerships, courses given by Air Liquide employees, etc.

KEY FIGURES

EMPLOYEES IN 2010

43,600

employees

49

nationalities represented in management positions

FOCUS

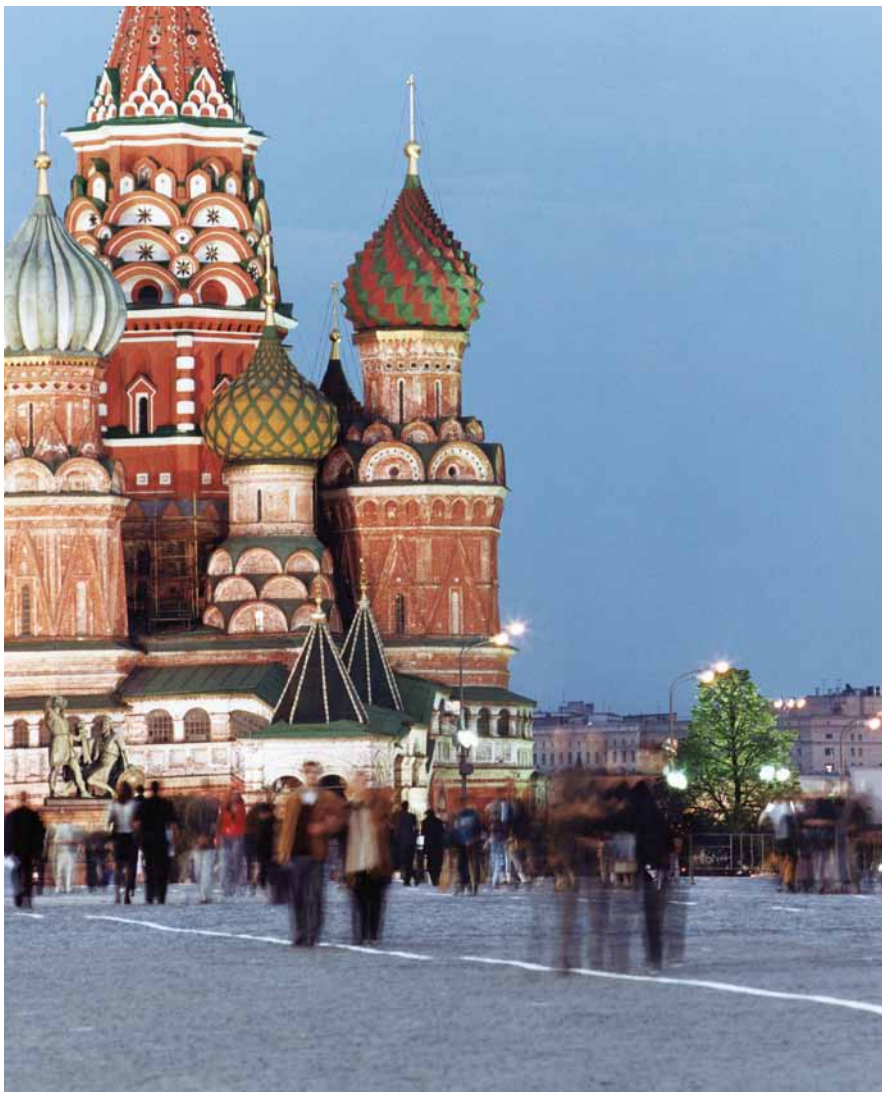
TALENT WITHOUT BORDERS

In deploying its recruiting campaign for the next five years, Air Liquide is targeting candidates who are looking to develop their skills while evolving within the Group. Air Liquide is also seeking candidates who demonstrate an openness to diversity and willingness to commit over the long term. Half of our employment offers are aimed at candidates with little or no professional experience. The goal: provide young professionals access to the job market and teach them about Air Liquide's culture and businesses. To this end, the Group deploys a campus management process, through which each country develops partnerships with selected schools to recruit talent. The aim is to integrate specific initiatives and best practices in order to build a partnership adapted to each country and the needs of local entities. The Group is committed to giving technical and business classes to students, presenting its business, giving presentations on campuses during professional events (career fairs, etc.) and offering internships and full time employment. The Group thus creates a special relationship with students and contributes to their educational curriculum. In order to attract and develop talent, the Head Office will coordinate international programs with Air Liquide entities: internships, training scholarships, young expatriate programs, etc.

FOCUS

RUSSIA'S TALENTS REVEALED

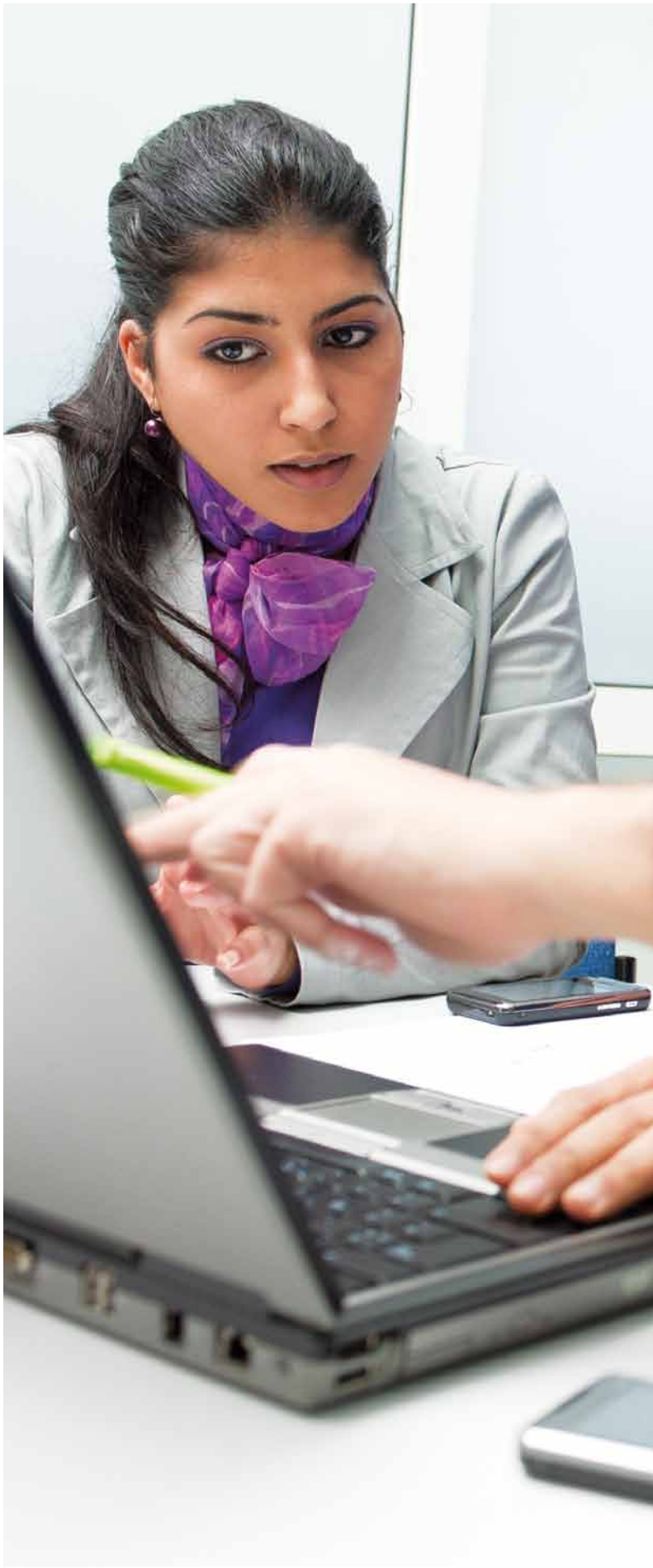
Air Liquide is ramping up its activities in Russia, aiming to increase its workforce from 250 to over 1,300 by 2015. This presents a major human resources challenge. It involves not only massive recruitment efforts to hire around 200 people per year, but also training and acclimating them to the Group. Air Liquide hopes to create new generations of Russian managers who will ensure long-term business success.
This recruitment strategy involves strengthening relationships with Russia's leading universities, as well as offering internships and entry-level positions to recent graduates with degrees in engineering and business. It also aims to recruit younger candidates from the international program Copernic, and actively draws on Air Liquide's START program, which sends young professionals to work abroad in developed economies. Finally, the Group has chosen recruitment agencies that can provide local support in finding experienced candidates, and has formed ties with engineering schools in France that accept Russian students.
Air Liquide University will contribute as well, offering classes in Russia as part of the "Launch" employee integration program and the "Gear Up" management program. In addition, the Air Liquide HR Europe team is providing much support to its Russian counterpart in defining a recruitment and training plan.



FOCUS

TCL RETAINS TECHNICAL EXPERTISE

How can the Group keep the competitive advantage created by its most talented technicians? Air Liquide responded to this concern in 2002 by setting up the Technical Career Ladder (TCL). Based on best practices observed in the field, it provides attractive career opportunities for each technician and a means of expressing their full potential as experts. For example, a technician recognized for his/her skills in the production of steam and electricity can work on the design of a procedure for dry-ice cleaning of heat recovery steam generators (HRSG), thus contributing to best practices during technical shutdowns of cogeneration units.
Whether for career development or pay increases, learning or further training, thanks to the TCL, talented technicians can now have careers that are both flexible and structured in the same way as those available to managers.
Forthcoming challenges for the TCL include the integration of 2,000 local and international experts to the program by 2015, and a pilot mentoring scheme to be set up in 2011, to organize the transfer of knowledge held by senior experts and international specialists to local experts in the various branches of the Group.



"The sense of others and interdependence creates valuable collective performance."

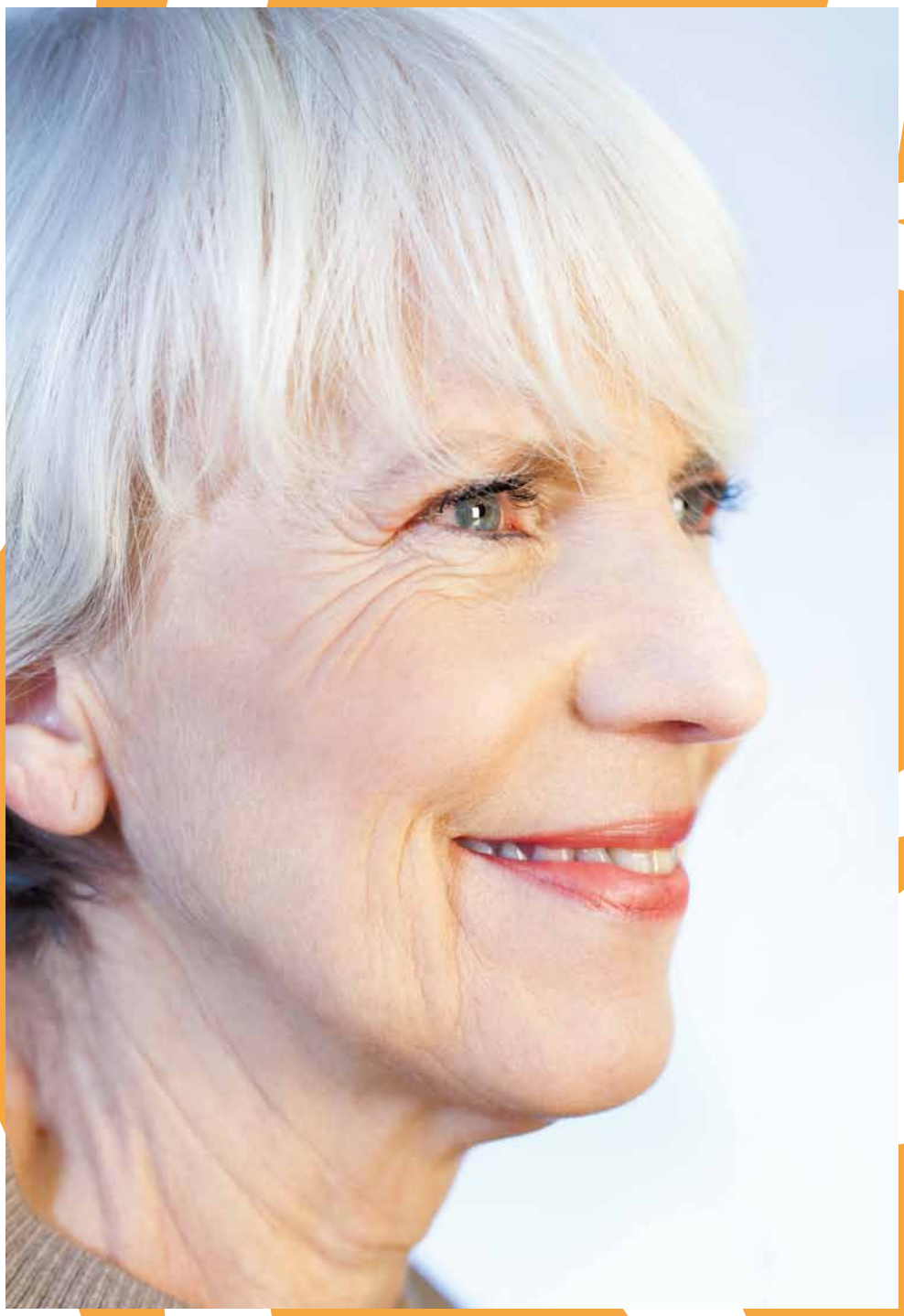
POINT OF VIEW EMPLOYEES

Meryem Le Saget — International Management Consultant
Author of *le Manager intuitif*

Are employees considered "valuable assets" in the management of companies? Yes, as long as they can act and make decisions according to their level. Even the most traditional companies are realizing that solutions cannot come only from the top. The increasing complexity of markets and organizations is making it necessary to take into account the perspectives of a wide variety of individuals, familiar with onsite realities and thus able to innovate and respond to local issues. Management systems are no longer enough; it's now employees—not alone, but supported by professional intelligence and teamwork with others—who represent true value to companies. It's this sense of others and interdependence that creates valuable collective performance.

How have relations within companies evolved? We have passed from the close knit to the contractual—a more Anglo-Saxon model. Young recruits think above all about what a company can offer and how they will benefit. And when the give and take relationship no longer suits them, they will leave without much concern. Another major shift, especially among new generations, is the desire to be considered a partner. I've labeled this global trend "the fall of the parent child model," which gives the party with knowledge power over the party without knowledge. This revolution, which began in families about fifteen years ago, is now occurring with respect to medical, institutional, scholastic, and other authorities. Within companies, the impact on the manager — working in an environment altered by social networks — is important. Newer generations, having grown up with no strong authority in the household, are arriving with ideas, a lot of energy, and great creativity, but they place difficult expectations on the manager: be available but not overly present, help create without controlling, provide regular feedback... All this without acting superior.

It's a real challenge for managers... Managers have to know how to lead a "community" in which they must develop projects, expect results, explain a strategy, and sustain a participatory vision... Managers are no longer marked by their authority, but instead by their influence, which is gained through their ability to communicate, motivate, create collaboratively and oversee changes smoothly. Employees will only follow managers if they see the adventure presenting more advantages than drawbacks.



SHAREHOLDERS

INDIVIDUAL AND INSTITUTIONAL SHAREHOLDERS: A LASTING RELATIONSHIP IS OUR PRIORITY

INTERVIEW **WITH LAURENT DUBLANCHET —** DIRECTOR OF SHAREHOLDER SERVICES

Air Liquide seems to have a very natural relationship with its individual shareholders…

Let's instead call it a partnership over the long term, supported by continuous growth and a high-performance business model that includes shareholders through a consistent distribution policy. Simply achieving good financial results, however, is not enough to maintain this partnership over the long term. We must constantly develop services and maintain a close dialogue. As revealed by a recent study, 25% of individual shareholders invest more passionately in the companies that appeal to them.

Direct contact with the company is therefore one of the keys to this partnership's success?

In return for the confidence they show in us, shareholders want transparency. They want to understand from an insider's perspective where the company they are investing in is headed. They expect consistent, transparent, and proactive information on company topics they are interested in. We discuss the same themes with them as we do with institutional shareholders — the Group, its strategy, performance, and prospects. We just take into account the fact that they are not professional investors, even though, especially due to the Internet, our shareholders are more and more informed!

Individual shareholders expect services for the shares they hold, as well as information about taxes. Thanks to the expertise of Air Liquide employees, we can meet this challenge. The direct relationship with our shareholders cuts the wait between their questions and our answers. Shareholders can almost always receive information in real time.

How do you respond to this need for transparency and education?

Our Shareholder's Guide and the explanation-oriented invitation — including the presentation of resolutions — distributed for the Annual General Meeting are part of our educational approach. But starting in 2011, we're taking the idea further! Our dedicated Shareholders Reception Lounge will host exhibits providing information on Air Liquide's business activities.

In response to shareholders' numerous requests for information on the Group, these temporary, interactive exhibits will offer them a simple and instructive way to learn more about us. It's a way to bring them closer to Air Liquide, to enable them to get a grasp of our research topics and business lines, to meet our experts, and more.

How does Air Liquide plan to attract new shareholders?

We have to restore the central role of shareholders in business. Especially among young investors, the trend recently has been moving toward a speculative approach to investing in stock securities. However, investing also means helping to finance a company's development and getting involved for the long term! Our role thus also consists in restoring future oriented relations with a company. For example, we are going to strengthen our initiatives among students in higher education programs, in direct partnership with the Group's Human Resources Department, through sessions aimed at explaining our share ownership model and the services we offer.



INFORMATION TRANSPARENCY AND QUALITY RELATIONSHIPS

INTERVIEW WITH VIRGINIA JEANSON — DIRECTOR OF INVESTOR RELATIONS

How do you manage your institutional investors at Air Liquide?

Our investor relations strategy is built upon the knowledge that institutional investors are a core part of our shareholder structure. This strategy is based on financial and strategic transparency; close, direct and regular contact with analysts and investors; and an ever improving understanding and identification of our institutional investors.

How do you identify potential shareholders?

Primarily we use databases, CMS (Customer Management Systems) and shareholder reports to improve our methods of identifying not only current shareholders but also potential investors. In this way, we can optimize our communications efforts by geography, targeting existing shareholders and potential investors that seek to invest in companies generating regular, profitable, long-term growth. Once these investors have been identified, we establish an annual IR program including roadshows in most of the major financial centers as well as organizing individual meetings and Air Liquide site visits.

How would you assess the relationship between Air Liquide and its shareholders?

Although their reasons for investing may differ, institutional investors investing for the long term have similar needs to the individual shareholder. Air Liquide's open-door policy has resulted in more interaction with institutional investors. This is the result of several years of effort, notably in being quick to respond to questions and meeting requests from investors. We also work hard to establish a strong relationship with the analysts that represent a crucial intermediary between the company and institutional investors. Since we are in the best position to provide information about the Group and its environment, we hold regular discussions with our analysts on various topics, such as our business model, the characteristics of our industry and promoting Air Liquide's flagship themes, such as hydrogen, etc. In this way, we try to ensure that Air Liquide shares knowledge and understanding with its investors.

How do you ensure transparency in financial communications?

We present the Group results clearly using high-quality material including presentations, conference calls, management reports and press releases. The aim is to ensure that the analyst or investor can rapidly evaluate the Group's results, and thereby encourage them to invest in the Group. Our role is to set the most recent results in context during the different investor events. These one-to-one meetings are the best way to interact with fund managers, to deliver a concise and clear picture of our industry, and our business model. As such, it is IR's role to explain Air Liquide's competitive advantages, and to highlight its strategy for regular, long-term growth.

FOCUS

MINI-EXPO AT THE SHAREHOLDERS RECEPTION LOUNGE

The discovery mini-exhibition is the latest initiative undertaken at the Shareholders Reception Lounge. Designed for the general public, it pursues Air Liquide's drive to offer current and future shareholders a clear vision of its activities. This unprecedented display provides an opportunity to increase contact with shareholders, build closer relationships and enrich the services offered at the Shareholders Reception Lounge, a unique site among companies in Paris.
The discovery mini-exhibition's first theme is hydrogen energy. The need to develop alternative energies in order to meet growing energy needs, to cope with the depletion of fossil fuels, and to counter their environmental impact, all make hydrogen energy a very pertinent topic today. Visitors discover, in an informative and engaging way, how the Group is involved in this industry. The hydrogen production chain, distribution chain and its applications (fuel cells, hydrogen vehicles, etc.) are explained through films, animations, charts, and audio commentaries by both internal and external experts.

FOCUS

SHAREHOLDER SERVICES ADVISORS

The advisors at Air Liquide's Shareholder Services come from diverse professional backgrounds and possess a wide array of expertise.
The service is unique: no other company has such an internal structure of 25 people dedicated to individual shareholders and able to manage 78,000 direct registered shareholders in real time.
What are the daily tasks of these experts? Listening to, assisting and informing shareholders, while efficiently giving information about the share. Considering that renewing and innovating highly regulated topics remains a continuous challenge, the Shareholder Services offers a number of advantages: tailored information and knowledge of the shareholding business make it possible to fully meet shareholders' highest expectations. These services are delivered by professionals with different competences. Some of our advisors have worked in the service for several years, while others are newly recruited. In this way, we can offer a sound combination of experience as well as continually renewed points of view.

FOCUS

DEMONSTRATING OUR LEADERSHIP THROUGH A SITE VISIT

The Group's investor site visit to Antwerp was designed to achieve two key objectives: firstly, to demonstrate the post-crisis growth prospects in Western Europe; and secondly, to explain how the Group can fully benefit from its position in its Northern Europe network.
The day included visiting two large steam methane reformers (SMR) with a production capacity of 200,000 m^3 of hydrogen; the Air Separation Unit facilities that supply Air Liquide's pipeline networks; and finally the network's control room. The program also illustrated the Group's capacity for industrial integration on a large chemical site, that of major player BASF. The visit continued with a presentation of operations and business in the Benelux region. The presentation led to in-depth discussions, providing an excellent forum for operational managers to reinforce messages on the industrial basin strategy, as well as on Air Liquide's competitive advantages. The visit was particularly beneficial as it provided investors with the opportunity to view operations on-site, whilst learning about the strength of the Large Industries business model, the extended presence in the Benelux countries and the new opportunities relating to energy and the environment. Overall, the event gave investors a better understanding of the strength of the Group's culture and of the motivation, expertise and commitment of our local teams.

FOCUS

THE SRI ROADSHOW

Amongst the few companies to actively offer Socially Responsible Investment (SRI) roadshows, Air Liquide demonstrates its strong SRI commitment, a theme that is growing in importance within the global financial markets. More and more brokers are specializing in this field, regularly inviting the Company to meet potential investors from their client base in key financial centres such as Paris and London. A team, composed of the Investor Relations Director and the Sustainable Development Manager, runs the event. Over the course of an intense day, they typically maintain a tight schedule meeting up to twenty potential investors. During the course of one hour, they provide a comprehensive overview of the Group's financial and operational details and discuss all themes related to Sustainable Development and Corporate Responsibility.
The discussions that follow with investors are generally instructive in improving Air Liquide's SRI approach, developing interesting topics, pinpointing emerging trends, and so on. As a result of Air Liquide's global footprint, the prospect of future roadshows in New York, Frankfurt, and Zurich is gaining momentum.

FOCUS

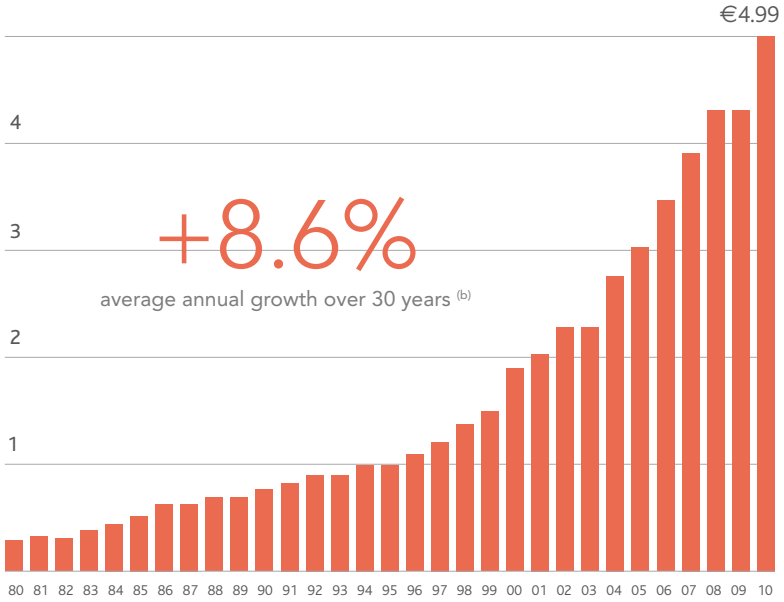
INVESTOR DAY A SUCCESS

On December 13, 2010, Air Liquide held its annual Investor Day, titled "Ambition & 2015 Objectives". The aim of the day was to highlight the Group's growth potential and share its vision of the markets in which it operates, as the world emerges from the financial crisis. The day included discussions with over a hundred financial markets professionals (French, English, German, and American). Analysts and investors were able to interact with Executive Management as well as with operational managers. This important event, which mobilizes the Investor Relations and top management teams, helps analysts better understand the Group, and provides a forum for Air Liquide to communicate its strategic messages.
With nearly 140 participants, the 2010 event achieved record attendance — an indication of the high level of interest of the financial world in the Group's new objectives. Following the event, the Investor Day received positive feedback from all analysts and investors: realistic goals, transparent information, strong credibility of messages and management.

ADJUSTED NET PROFIT PER SHARE [a] OVER 30 YEARS

IN EUROS

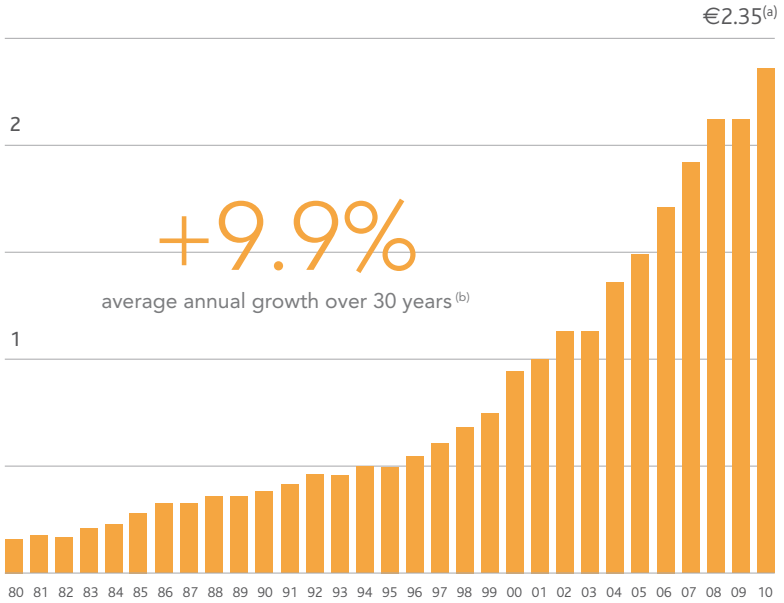
Air Liquide's growth is profitable. The adjusted net profit per share has grown by an average of 8.6% over the past 30 years: a solid performance built on strong business fundamentals.



(a) Adjusted to account for the attribution of free shares and for the stock split.
(b) Data calculated over 30 years according to accounting standards in force at the time.

STEADY DIVIDEND GROWTH OVER TIME

IN EUROS PER SHARE

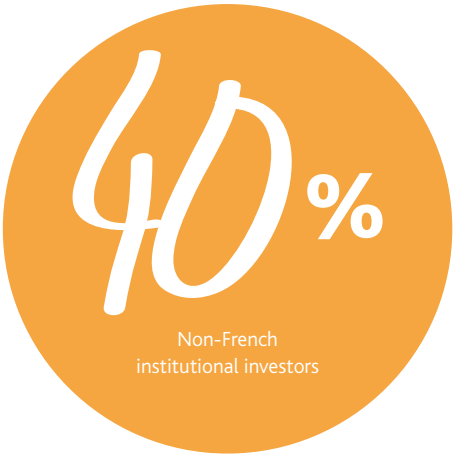


(a) Amount proposed to the Annual General Meeting of May 4, 2011for 2010 fiscal year.
(b) Dividend adjusted to account for the attribution of free shares and stock split.
Data calculated over 30 years, according to accounting standards in force at the time.

AIR LIQUIDE SHARE OWNERSHIP

AS AT DECEMBER 31, 2010

Air Liquide share ownership represents a balanced mix between individual investors from France and abroad.



SUPPLIERS

PROCUREMENT STEP ONE: STRUCTURING. STEP TWO: PROFESSIONALIZATION

INTERVIEW **WITH JAN KELLER** — VICE PRESIDENT, GROUP PROCUREMENT

What is the role of Procurement at Air Liquide?

Procurement manages the relation with some 60,000 suppliers around the world, representing an annual purchasing volume (excluding energy) of around €6 billion. One of our main challenges is to make Procurement competitive in order to contribute to the Group's efficiency. The results have been positive. 40% of the €280 million saved by the Group in 2010 were achieved thanks to the globalization of purchases in raw materials, equipment and services.

How do you obtain this level of competitiveness?

Procurement is organized by geographic zone and business, in order to globalize demand as much as possible and manage supplier markets in a structured way. The ultimate goal is to have three levels of decision-making within Procurement: the Group, the 9 Procurement platforms covering around 90% of Air Liquide's entities – structured by geographical zone o business – and the operational entities.

What kind of ethical guidelines have been put in place for relationships with suppliers?

After drawing up a procurement code of conduct for Air Liquide employees in 2008, in 2010 we began measuring supplier's Sustainable Development performance. This applies to compliance with regulations, work rights, environmental preservation, etc. and is included in the Group's Risk Management approach. The goal is to class "critical" suppliers according to ethics criteria. It also includes training for procurement teams in ethics and environmental risk. Finally, we're working on an external procurement charter, which will officially state our values regarding suppliers.

Does Air Liquide aim to create partnerships for innovation with its suppliers?

At Air Liquide, the procurement function is in full development, and supplier innovation is a primary development axis. One of the concrete examples of shared innovation I can cite is the built-in valve system for cylinders, designed for the Industrial Merchant business line. However, there are still many fields in which this approach needs to be applied. We hope that procurement will identify innovative suppliers in order to improve our products and demonstrate the usefulness of working with suppliers in a project's early stages.

This approach requires an increase in the quality of human resources…

As for any growing function, we have to invest in human resources. Among the flagship projects for the coming years, we plan to focus on developing procurement skills. In the framework of the ALMA program, we're launching a joint project with the Group's Human Resources in order to develop the division's professional skills. The idea is to attract, train, and develop more high-level employees. This project will involve some 200 entities in Air Liquide and will be accomplished with help from intermediaries: our platforms.

How does socially responsible procurement find its place within the Group?

Responsible procurement is a criteria for supplier qualification, along with technical and economic performance. With the help of an external service provider, we have developed a system for grading the sustainable development performance of Air Liquide's main suppliers. This approach is deployed throughout the Group, while we train our procurement staff on ethical and environmental risks. We hope that each of our suppliers understand this message and adopt the necessary measures for improvement.

KEY FIGURE

2010 SUPPLIERS

40%

is the percentage
of contribution by procurement
to the Group's efficiency objective

FOCUS

NEWS FROM THE EAST

Asia Pacific is not only well known for its manufacturing/export capability, capacity and low cost, but also provides a huge growth market for the Group. Air Liquide's decision to open its Asia-Pacific procurement platform in Shanghai is based on such economic, geographical and growth factors. The platform's role is to source key category products by leveraging the spend in the zone, support and execute group sourcing projects, improve procurement proficiency, and implement best process/procedures.
The base allows the Group to access suppliers not only in China, but throughout the entire region.
The vast region also brings great variations in business sophistications and quality expectations. The platform assists local teams to close such gaps. For instance, the China procurement team follows the group processes and guidelines to identify, qualify and develop local suppliers. The team puts out extra efforts in quality system auditing and product quality monitoring to ensure quality delivery and sustainability.
Standardized sourcing, qualification and supplier management process is the key to success in procurement Asia.

FOCUS

EVALUATING SUPPLIERS

Air Liquide has assigned the task of measuring the Corporate Social Responsibility (CSR) of Group suppliers to an external service provider. The idea is to define and evaluate the environmental, social, and ethical performance of suppliers, as well as the CSR performance of the suppliers' suppliers.
In 2009-2010, an initial campaign with a panel of 50 representative suppliers made it possible to validate the approach and raise awareness of this issue within the Group.

A new evaluation campaign was launched end 2010 with 200 suppliers, selected among the procurement families presenting the most risk. An unsatisfactory evaluation in one of the four fields will require the implementation of an action plan with the supplier.
In the end, the CSR evaluation will be systematically performed for the Group's principal critical suppliers, leading to action plans and performance reviews. CSR training will be given to Air Liquide's primary purchasers in 2011 to support them in their dialogue with suppliers.
Beyond the simple measurement of CSR risk, these new supplier relations management measures provide a new source of value in the supply chain, both for Air Liquide and the supplier.

FOCUS

PROCUREMENT IN GOOD "HEALTH"

Air Liquide has created a dedicated platform to improve the efficiency of purchases in the "Homecare" area of business. Its role is to establish a global procurement strategy, negotiate optimal sales conditions with strategic suppliers, and coordinate negotiations led by subsidiaries with the support of medical technology experts and international purchasers. The platform represents a breakthrough in strategic supplier relationships. It creates a complementary interaction between "lead buyers", who oversee supplier relationships within the platform, and "zone buyers", who manage purchases for a geographic zone.
The procurement process begins by monitoring global technological advances in medical devices, along with test monitoring and comparisons.
The platform adapts its recommendation to country profiles and local regulatory constraints. It selects medical systems in collaboration with the Marketing and Operations Departments in the country, and then leads sales negotiations. If a country commits to homecare services, the recommendation is adjusted according to local economic possibilities and profitability requirements. The platform recommends the most suitable medical systems and provides medical technology and procurement support.

KEEPING UP WITH GLOBAL CHANGES AND PRESERVING THE FUTURE

— Concern for environmental problems has been central to Air Liquide's corporate strategy for a long time. As a responsible corporate citizen, the Group works daily to offer technological solutions to the world's major environmental and energy-related challenges of tomorrow. This commitment and the concrete initiatives led by the Group perfectly illustrate its position as the world leader in gases for industry, health and the environment.

KEY FIGURES

ENVIRONMENT

Over 60% of the Group's annual R&D budget is dedicated to efforts related to life, the environment and sustainable development.

TAKING ON ENVIRONMENTAL CHALLENGES

To reach sustained and harmonious growth, people need energy: both cleaner and more environmentally friendly energy, and alternative energy sources to meet growing demand in a constantly changing world. These are the two major, fundamental challenges that we must overcome to ensure the future of our planet.

REDUCING CO_2 EMISSIONS

Combustion of fossil fuel resources generates carbon dioxide (CO_2), a greenhouse gas considered by many to be the main cause of climate change. Since the beginning of the industrial era, the amount of CO_2 in the atmosphere has increased considerably. If measures are not taken to limit this trend, the rate of CO_2 discharge will continue to accelerate, and most likely will result in the rise of global temperatures. In this context, it is of great importance to use our energy sources more efficiently and develop solutions to reduce their environmental footprint.

DEVELOPING ALTERNATIVES TO FOSSIL FUEL ENERGY SOURCES

Today, fossil fuel energy sources – coal, oil, natural gas – represent the majority of the world's energy consumption. Given the accelerated rate of industrialization in certain regions of the world, demand for fossil fuel is expected to increase even more over the decades to come. However, fossil fuel reserves are limited and concentrated in certain countries. Confronted with this problem, it is now necessary to diversify our energy sources, especially through alternative, cleaner solutions.

ENVIRONMENTALLY RESPECTFUL SOLUTIONS

Air Liquide believes that leaders have a duty to act responsibly. For this reason, the Group is firmly committed to developing technological solutions to overcome these major environmental and energy-related challenges. Air Liquide actively works toward this objective by applying its expertise to initiatives in four major areas.

AIR LIQUIDE PARTICIPATES IN THE DEVELOPMENT OF CARBON CAPTURE AND STORAGE (CCS) in particular through its expertise in oxycombustion.
Thanks to these techniques, large quantities of CO_2 emissions from industrial plants can be concentrated, purified and stored underground, which avoids large-scale discharge into the atmosphere.

AIR LIQUIDE IS INVESTED IN DEVELOPING HYDROGEN ENERGY SOURCES. Hydrogen is a gas with a lot of potential! Used in the desulfurization of hydrocarbons (thus limiting sulfur dioxide emissions caused by their combustion), it can also be used as an energy vector when combined with fuel cells.

AIR LIQUIDE'S MOLECULES ARE CRITICAL TO THE PHOTOVOLTAIC INDUSTRY, which creates solar energy panels in order to transform solar energy into electricity. Several industrial gas supply contracts have been signed with leading manufacturers of solar cells and LED lighting, reaffirming the Group's position as the world gas supply leader in this fast-growing industry.

THE GROUP DEVELOPS SOLUTIONS FOR THE PRODUCTION OF SECOND-GENERATION BIOFUELS from non-edible plant matter while conserving the edible parts for food. Through its subsidiary Lurgi, Air Liquide possesses recognized expertise in gasification technology, essential for this process and currently being developed at pilot industrial sites in Germany and France.

To follow the Group Energy and Environment news, go to Twitter:
https://twitter.com/AirLiquidenergy

"Climate must be treated as
a permanent risk in the economy
and should be managed
through positive efforts".

VIEWPOINT

Christian De Perthuis — Professor of economics
at Paris- Dauphine University
Climate Economics chair

What general assessment do you make of climate change?

Climate change is occurring much more quickly than we imagined. Data on temperature and sea level are at the high end of previous estimates made by climatologists, sometimes surpassing these figures. Two densely populated and highly vulnerable areas of the world demand immediate action: river deltas and arid regions. Nearly 300 million people inhabit river deltas, the majority in Asia. Arid regions, such as the southern Mediterranean, the Sahel, Central Asia, and Latin America comprise between 1.5 and two billion people, living mostly in rural areas. They confront deficiencies in agriculture and food, and will be faced with a lack of water aggravated by climate change.

How should companies respond to this situation?

Companies should focus on two points when taking into account the effects of climate change: site location selection, and how to limit their contribution to the greenhouse effect. The solution: apply the principle of precaution in an intelligent way. This means taking concrete actions and not putting up roadblocks to every decision. Climate must be treated as a permanent risk in the economy and should be managed through positive efforts.

How urgent is the need to adopt a new energy model?

Since the environment is a "planetary public asset," its protection requires drastic policies for reducing greenhouse gas emissions. However, two major systems – energy and agriculture/forestry – lie at the origin of the problem. For the former, responsible for two thirds of global emissions, we must rapidly prepare a new economy that takes into account a new restriction on the use of the atmosphere by putting a price on carbon. Europe is currently the leader in matters of carbon restrictions, both in terms of market and tax. But targeting the energy system alone is not enough. We must also rethink our agricultural and forestry systems (the remaining third of global emissions), and change the way we use soil in order to improve the safety of food supplies, notably by implementing more intense ecological measures. This requires strong methods for raising awareness directly among farmers and foresters, representing several hundred million producers spread all around the world and who often lack information.

Is proper management of climate risk sure to create progress?

Absolutely! It forces us to come to grips with questions that many companies are unfit – or unwilling – to address, whether in terms of energy or food and agriculture. We must break from our fossil fuel addiction and improve agricultural and nutritional conditions around the world.

— Industrial processes that involve fossil fuel combustion produce significant CO_2 emissions. Today, there is an alternative to discharging these greenhouse gases into the atmosphere: concentrating and capturing the gas at its source, and then injecting it underground. This is why this process is of particular interest. Air Liquide actively contributes to Carbon Capture and Storage (CCS) development through innovation and participation in several partnerships and projects. CCS is a groundbreaking solution, considering that the industrial sites that can benefit from it are responsible for over 60% of the world's CO_2 emissions.

HOW DOES IT WORK?

Capture and storage technologies enable the recovery of large quantities of CO_2 released by heavy industry (power plants, steelworks, cement works, refineries, etc.) resulting from the combustion of raw materials (oil, gas or coal). Once captured, the CO_2 can be stored in very deep underground geological structures. This reproduces what nature has done for millions of years in the form of natural deposits.

Three technologies make it possible to carry out the first phase of the CCS process, designed to concentrate the CO_2 to facilitate its capture:

- **oxycombustion:** fuel is burned with oxygen instead of air, producing fumes that contain almost no nitrogen and thus a naturally higher concentration of CO_2.
- **post-combustion :** CO_2 is concentrated after combustion by removing the nitrogen.
- **pre-combustion :** even before it is burned, the fuel is transformed into hydrogen and CO_2, through a gasification process using oxygen. The CO_2 is recovered, while the hydrogen is used in the combustion process, producing only steam.

Once concentrated (using oxycombustion technologies) and captured, the CO_2 is purified by a cryogenic purification unit (CPU) to increase CO_2 concentration. The gas is then transported to its storage area via pipelines, by ship, or over land. The CO_2 can be stored in depleted hydrocarbon deposits (oil or gas) or deep saline aquifers (porous rock containing salt water unsafe for drinking).

COMPLETE EXPERTISE

Air Liquide is involved in the entire CO_2 capture and storage process, in particular through the Group's most sought after expertise is in oxycombustion. Over 800 patents related to these technologies have been filed by Air Liquide for industrial applications in various industries, such as the chemical, glass manufacturing and steel industries.

For oxycombustion processes, the Group provides oxygen via its Air Separation Units (ASU), and supplies CPUs for CO_2 purification. In addition, Air Liquide has also designed a mixing system, the Floxynator™, which safely mixes oxygen with CO_2 from the fumes in order to control the combustion. Finally, Air Liquide is developing burners specially designed for oxygen use.

PILOT PROJECTS INITIATED THROUGHOUT THE WORLD

Air Liquide is also involved in a number of projects designed to test CCS technologies.

In Europe, Air Liquide has partnered with Total on the Lacq project in the South of France. Air Liquide provides 240 metric tons of oxygen per day, as well as the burners to use the oxygen. The Group is also participating in the France Nord project, a consortium of research organizations and six major industrial groups. Its objective is to create a pilot infrastructure for CO_2 underground storage in North-Central France.

In North America, in partnership with Babcock & Wilcox Power Generation Group, Air Liquide is helping design the largest power plant using oxycombustion: FutureGen 2.0. The project aims to capture and store approximately 1.3 million metric tons of CO_2 each year, representing 90% of the CO_2 produced by the plant. The first phase of the project, involving the first engineering studies and economic analysis, began in October 2010.

The next phases will deal with the engineering and construction of the necessary infrastructure (see the interview below). Based on the conclusions made, the 200 MW AER power plant in Meredosia, Illinois, is expected to be repowered by integrating this clean fuel technology.
Finally, in Australia, Air Liquide has a partnership with Callide Oxyfuel Services to supply an ASU and a CO_2 CPU.

A PROMISING MARKET

The European Union plans to implement CO_2 storage on around 100 industrial sites before the year 2030.
Converting 10% of the power plants in the United States to oxycombustion would require a supply of 660,000 metric tons of oxygen per day.
10,000 metric tons of oxygen per day are necessary to capture and store the CO_2 from one 500 MW power plant.

INTERVIEW

Nicolas Perrin — Clean Power & CCS Director for the Large Industries World Business Line

What are the major stakes of CCS technologies?

The main stake is to reduce the CO_2 emissions of the biggest producers, especially electrical power plants that today represent 40% of CO_2 emissions. The first step involves making the plants more efficient, but that's not enough. It is essential to develop technological solutions like CCS. According to the International Energy Agency, CCS could contribute to 10% of CO_2 emission reduction by 2030 and 20% by 2050. So it's a highly strategic field that's especially exciting to work in.

Does the FutureGen 2.0 project represent an important step forward?

FutureGen 2.0 is part of a 10-year ongoing development initiative in collaboration with Babcock & Wilcox. This facility uses oxy-coal combustion technology and should produce 150 MW per day by 2016. Financed by the US Department of Energy, it is the reference for large-scale power plants. Today, it is the largest oxycombustion project in the world with secured financing. This project is a collaborative effort between three technological partners. Air Liquide will supply the Air Separation Unit and the Cryogenic Purification Unit; Babcock & Wilcox will provide the boiler and the flue gas treatment installation; and the FutureGen Alliance will be responsible for CO_2 transportation and storage.

What are the keys to this project's success?

Generally speaking, the synergy between Air Liquide and the major players in this area, such as Babcock & Wilcox for the FutureGen 2.0 project is essential. The strong collaboration between Air Liquide's R&D, Engineering & Constuction, the Large Industries market team and European and American teams within Air Liquide is equally important and enables us to position ourselves today as leader in the oxycombustion.

— Hydrogen, in combination with fuel cells, is a clean alternative energy source. It is clean because it can produce electricity with only water as a by-product. It is considered alternative because it can be produced from many different sources, some independent from fossil fuels. Air Liquide is convinced of the enormous potential of this solution to current and future environmental problems and boasts recognized expertise in the entire hydrogen production chain. For several years, Air Liquide has been committed to initiatives aimed at developing ever-more innovative and high-performance technologies while helping the general public to enter the era of hydrogen energy with confidence.

HOW DOES IT WORK?

Fuel cells produce electricity through a reaction between hydrogen and the oxygen in the surrounding air. This opens doors today that yesterday we could only dream of: a clean energy source with water as its only by-product!

What are its main advantages? Not only are hydrogen-powered fuel cells quiet, but they do not produce any CO_2 emissions. Hydrogen energy makes it possible to reduce our carbon footprint by producing clean electricity.

Studies show that using hydrogen produced with technologies that are currently available (for example, steam methane reformers) could already make it possible to cut CO_2 emissions from automobiles in half. Further, when produced in an environmentally way (for example, by water electrolysis using decarbonized electricity), hydrogen has the potential to attain "zero emission".

GUIDED BY INNOVATION

Air Liquide is a center-stage player in the fast-growing field of hydrogen energy development. The Group masters the entire industrial chain, from production and storage to distribution and application.

Air Liquide launched the hydrogen adventure in 2001 by creating Axane, a subsidiary dedicated to developing fuel cells.

Axane designs, manufactures and commercializes these fuel cells. Their production costs are now only one tenth of what they were four years ago. Air Liquide has also offered innovations to the hydrogen logistics chain by developing composite cylinders that can resist pressure of up to 700 bar, as well as the associated filling centers. Additionally, Air Liquide develops hydrogen distribution stations that are among the most efficient and cutting-edge on the market today. These stations, about 50 of which are already in operation around the world, can fill vehicles' tanks with hydrogen gas in less than five minutes at a pressure of up to 700 bar.

Beyond these innovations, Air Liquide is also involved in various partnerships to develop and promote this new energy vector. Since 2008, Air Liquide has been the leader of the Horizon Hydrogen Energy (H2E) program financed by OSEO (a French agency supporting innovation), which unites 19 industrial and research partners. Its mission? To open the market by developing sectors where hydrogen energy already provides real benefits, such as off-grid remote areas supplying electrical power to sensitive sites (emergency energy sources), to captive vehicle fleets (forklifts and buses), and portable generators such as those used for open-air events. The H2E program is developing 33 technological objects that are expected to be available on the market between 2013 and 2016. This will help familiarize some new customers with this high-potential energy vector.

PROMISING APPLICATIONS

Above and beyond the innovation programs already underway, Air Liquide's commitment to advancing hydrogen energy is evident through applications that have just recently been designed.

In 2009, Air Liquide proceded with the installation of several hydrogen distribution stations, in particular in Whistler, Canada. The Whistler filling station's capacity is greater than any of its kind and powers about 20 hydrogen fuel-cell powered buses.

During the year, the filling stations installed by Air Liquide throughout the world have provided over 40,000 hydrogen recharges.

INTERVIEW

Pierre Gauthier — Director of Sales for Air Liquide Hydrogen Energy

What are your responsibilities within the Group?

Within the dedicated subsidiary Air Liquide Hydrogen Energy, which is part of the Technologies of the Future division, my mission is to promote hydrogen as a viable energy source for all industries where it can provide our customers with real environmental benefits and also be competitive with alternative solutions.

In what ways is hydrogen energy considered a priority for Air Liquide in overcoming environmental challenges?

Hydrogen combines energy efficiency with the absence of emissions. It is already established that this solution does not generate any greenhouse gases. Plus, fuel cells allow for greater efficiency than traditional batteries that still require lengthy recharge times. Today, the Group is the only gas producer with a complete offer in this area that enables its customers to improve their carbon footprint.

Do these solutions have global potential?

New horizons are emerging all over the globe. The hydrogen-powered fuel cell system is aimed at all potential customers looking to reduce their greenhouse gas emissions. Just to give two examples, the transportation industry (buses, cars, trucks, etc.) and cost-effective electric power supply for remote telecommunication towers.

Our recent successes confirm the potential for these hydrogen-based solutions. The Group is also a pioneer in helping implementing regulations and societal acceptance of this new technology on an international level. I'm proud to contribute to this effort.

Air Liquide has also had several commercial successes in the forklift market. Fuel-cell powered forklifts are more productive than traditional battery-powered forklifts, since recharging the vehicles takes less than two minutes. In 2010, Air Liquide installed the first hydrogen filling station to power forklifts for American retailing giant Walmart. The station is located at Walmart's distribution center in Alberta, Canada. Air Liquide also signed a contract to provide hydrogen starting in 2011 for a fleet of 37 forklifts at the Coca-Cola distribution and bottling plant in San Leandro, California. Air Liquide will provide liquid hydrogen alongside the distribution station itself.

In the long run, the market for hydrogen-powered vehicles is considered the most promising in terms of opportunities for this technology. In November 2010, a major study was collectively initiated by a consortium of 30 companies including Air Liquide. It concluded that hydrogen energy will play an essential role in the future of propulsion vehicles. This emerging industry is incontestably undergoing an exciting evolution. Numerous ambitious initiatives have already been launched. H2 Mobility is one such initiative of which the Group is a partner. Its goal is to deploy the infrastructure for filling hydrogen-powered vehicles in Germany.

HYDROGEN ENERGY: ENORMOUS POTENTIAL

By 2015, budding hydrogen energy markets could be valued at €1 billion.

In 2050, 70 million of electric vehicles could be powered by hydrogen in Europe, consuming over 10 million metric tons of hydrogen.

AIR LIQUIDE FOUNDATION

— In line with its sustainable development approach, Air Liquide has decided to focus its Foundation's action on three areas in which the Group, through its activities and presence throughout the world, has clear legitimacy: the Environment, Healthcare and Micro-Initiatives.

AIR LIQUIDE FONDATION D'ENTREPRISE

100	70	30	Projects in 35
projects	projects financed	projects under consideration	countries

Data as at February 2011.

PROMOTING SCIENTIFIC RESEARCH

Innovation has been in the Company's genes since its inception. Therefore, the Air Liquide Foundation has naturally taken on the mission to support research, both to preserve the air and improve the respiratory function.

Preserving our planet's atmosphere

Greenhouse gases, deforestation, ice floe melting... these are the realities the world must face in order to fight climate change. In partnership with research organizations, the Air Liquide Foundation is working to preserve the atmosphere by extending and developing scientific understanding of the Earth's atmosphere and its interaction with ecosystems.

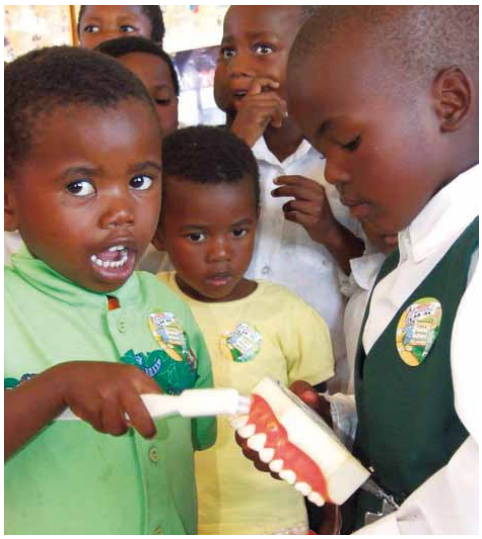
Breathing new life into research

Chronic respiratory illnesses are the main cause of death throughout the world today, and the number of patients is constantly growing. The Air Liquide Foundation is teaming up with institutes and university laboratories on research programs aimed at broadening our understanding of these diseases and developing new treatments.

ENCOURAGING LOCAL DEVELOPMENT

Fostering close relations with local communities

Extending access to education and vocational training, increasing access to healthcare, supporting micro-entrepreneurship, improving comfort for the disabled... The Air Liquide Foundation intends to support local initiatives in the 80 countries in which the Group operates.



FOCUS

UNDER THE POLE: UNDER THE ICE CAPS, CLIMATE...

Along with an exploration project aimed at providing a unique photo and film account of the ice caps' underwater world, two scientific programs were carried out: the first one focused on measuring the thickness of snow on the ice caps – a crucial parameter for estimating ice volumes – and the second considered human physiology through studies of sleep and the body temperature changes of team members.

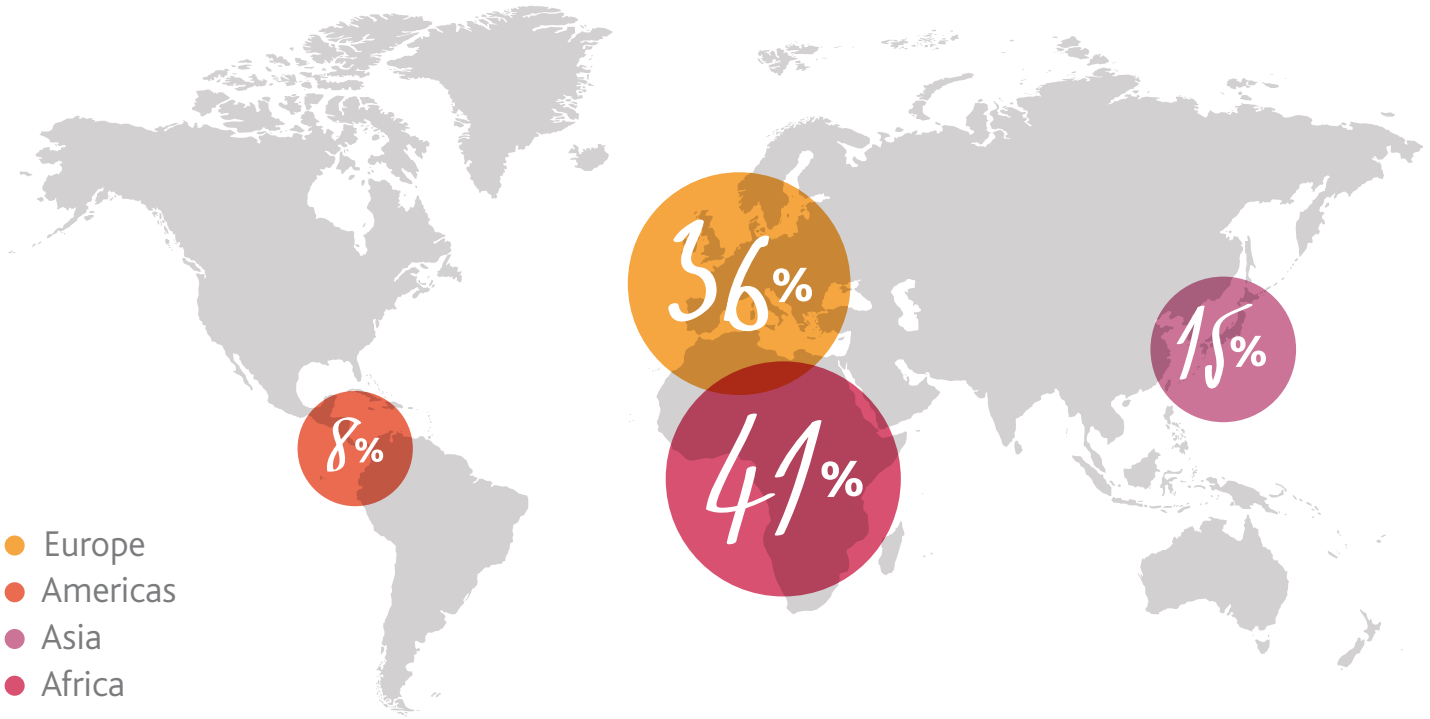
After three years of preparation, Ghislain Bardout and his eight-member team, along with one husky dog, arrived at the North Pole toward the end of the Arctic night. For 45 days, they traveled by ski, and performed 51 dives under the ice caps to gather never-before collected data.

"The data collected will be compared to other measurements previously taken at the same period of the year. All we can say is that during the expedition, Arctic temperatures were abnormally high. The ice caps were thinner and more chaotic because the ice has become fragile, which satellite observations have confirmed."

Ghislain Bardout — Leader of the Under the Pole expedition

FOCUS

BREAKDOWN OF THE PROJECTS WORLDWIDE



FOCUS

OTHER PROJECTS SUPPORTED BY THE FOUNDATION

Carnegie Institution for Science (United States): Assessment of the ammonia concentration in the atmosphere and understanding of the causes of its variations, with the aim of refining climate evolution simulation models

Teaching Hospital of Grenoble (France): Support for research on the association between respiratory ailments and cardiovascular risks

Virlanie Foundation (Philippines): Renovation of an itinerant school for underprivileged children in Manila

Fundacion Leer (Argentina): Creation of reading corners and training of teachers in four primary schools in Neuquén

Educmad (Madagascar): Rollout of scientific media libraries in Antsiranana

***Entrepreneurs du Monde* (Ghana)**: Establishment of social coverage for disadvantaged populations in the suburbs of Accra

Nhan-Duc Hospital (Vietnam): Equipment for the respiratory disease treatment center at a new hospital in Dalat province

FOCUS

THAILAND: IMPROVED CARE FOR BURMESE REFUGEES

Conflicts in Burma have forced thousands of civilians to seek refuge in Thai camps that present precarious living and hygiene conditions. Working in three camps, the NGO Aide Médicale Internationale (AMI) provides healthcare to refugees and lends its support to health professionals in the field by facilitating skill sharing. AMI has produced Health Messenger, a magazine focusing on chronic diseases – a real medical training tool financed by the Air Liquide Foundation.

"Medical personnel here consider Health Messenger a useful tool for continuous training. Full of information and easy to read, this magazine provides them with the basic knowledge enabling them to deliver a diagnosis and prescribe first treatments for Burmese refugees."

Carole Déglise — Medical coordinator in Thailand, AMI

FOCUS

SPOTLIGHT ON LIGHTING A BILLION LIVES

Continuing its commitment to local communities, the Air Liquide Foundation is supporting "Lighting a Billion Lives" (LaBL), a program launched by The Energy Resources Institute. Specializing in renewable energies, this non-profit organization based in Delhi, India, aims to supply one billion people with electricity, both in India and around the world. Of the 1.5 billion people without access to electricity worldwide, one quarter live in the Indian sub-continent.
The LaBL program relies on an innovative model: provide access to energy, a source of progress and comfort, while combating the harmful health effects of emissions from oil lamps and wood fires. Centered on the installation of photovoltaic electricity stations in rural areas, the project involves three steps. First, eliminate the presence of kerosene lamps in villages by constructing solar energy stations that provide clean lighting at affordable prices. These stations will recharge lanterns that are rented to villagers every night. Second, the rental, sale, and use of these lanterns will gradually generate business opportunities for local entrepreneurs who manage and maintain the solar stations. Finally, this new source of energy will encourage business activities and create economic growth. The Air Liquide Foundation has already financed the installation of stations in three villages, each located near Group locations in India. In all, the operation will benefit more than 750 individuals.

VIEWPOINT

Kunal Nagpal — manager of Lighting a Billion Lives (LaBL) The Energy and Resources Institute (TERI), India

What are LaBL's most important accomplishments?

In three years, this program has set up charging stations in 660 villages in India. In all, that comes to about 165,000 people whose lives directly benefit from the lanterns. Where before they were using kerosene lanterns or paraffin candles, they now have clean lighting. The smokeless indoor atmosphere is healthier for students and children who can study more at night. It obviously benefits women who usually do all the cooking at home in rural areas. The lanterns also provide longer working hours for farmers and small shops and enterprises, they can now work later at night. All these productive working hours are definitely a larger benefit for the rural community.

What are the economic benefits of the program?

When setting up charging stations, we also train people to run them and so are helping train the next generation of budding rural entrepreneurs who can learn to be self-sufficient.

Once the green lighting has been provided the next step is to ensure proper after-sales coverage in terms of repairs and service issues. We have started training people to become rural technicians to provide after-sales service for the green lantern charging stations we are setting up.

As the solar charging stations are expanding and more and more people's lives are illuminated we are also in parallel training solar technicians who will be part of the coming movement to renewable energy and the green economy.

What is another project on the horizon for TERI?

An outcome of all the work TERI has done with solar lighting in the field is that the Indian Ministry of New and Renewable Energy (MNRE) has just approved funds for TERI to set up a permanent lab to do long-term evaluation and testing of lighting systems. Through this lab we are hoping to develop standards for all the products on the market right now. It's a big project!

FINANCIAL INFORMATION AND SUSTAINABLE DEVELOPMENT KEY INDICATORS

CONSOLIDATED INCOME STATEMENTS (SUMMARIZED)

FOR THE YEAR ENDED DECEMBER 31

IN MILLION OF EUROS	2009	2010
Revenue	11,976.1	13,488.0
Purchase	(4,563.3)	(5,240.0)
Personnel expenses	(2,236.5)	(2,378.3)
Other income and expenses	(2,207.3)	(2,495.4)
Operating income recurring before depreciation and amortization	2,969.0	3,374.3
Depreciation and amortization expense	(1,020.0)	(1,122.1)
Operating income recurring	1,949.0	2,252.2
Other non-recurring operating income and expenses	10.1	2.0
Operating income	1,959.1	2,254.2
Net finance costs	(221.7)	(228.9)
Other financial income and expenses	(52.9)	(82.3)
Income taxes	(419.1)	(512.7)
Share of profit of associates	19.8	27.8
Profit for the period	1,285.2	1,458.1
Minority interests	55.2	54.5
Net profit (Group share)	1,230.0	1,403.6
Basic earnings per share (in euros)	4.40	4.99
Diluted earnings per share (in euros)	4.40	4.97

STATEMENT INCOME AND GAIN AND LOSSES RECOGNIZED DIRECTLY IN EQUITY

FOR THE YEAR ENDED DECEMBER 31

IN MILLION OF EUROS	2009	2010
Profit for the period	1,285.2	1,458.1
Items recognized in equity		
Fair value variation of financial instruments	(2.1)	(6.7)
Change in foreign currency translation reserve	35.0	480.6
Actuarial gains (losses)	(32.9)	(52.9)
Items recognized in equity, net of taxes		421.0
Net income and gain and losses recognized directly in equity	1,285.2	1,879.1
- Attributable to minority interests	55.6	69.9
- Attributable to equity holders of the parent	1,229.6	1,809.2

CONSOLIDATED BALANCE SHEET (SUMMARIZED)

FOR THE YEAR ENDED DECEMBER 31

IN MILLION OF EUROS	December 31, 2009	December 31, 2010
ASSETS		
Non-current assets		
Goodwill	4,002.9	4,390.8
Property, plant and equipment	10,596.8	11,706.8
Other non-current assets	940.1	973.0
TOTAL NON-CURRENT ASSETS	15,539.8	17,070.6
Current assets		
Inventories and work-in-progress	709.7	741.7
Trade receivables and other current assets	2,931.5	3,150.4
Cash and cash equivalents including fair value of derivatives (assets)	1,444.6	1,574.9
TOTAL CURRENT ASSETS	5,085.8	5,467.0
TOTAL ASSETS	20,625.6	22,537.6

IN MILLION OF EUROS	December 31, 2009	December 31, 2010
EQUITY AND LIABILITIES		
Shareholder's equity	7,583.7	8,903.5
Minority interests	168.2	209.0
TOTAL EQUITY	7,751.9	9,112.5
Non-current liabilities		
Provisions, pensions and other employee benefits and deferred tax liabilities	2,777.5	2,930.0
Non-current borrowings	5,528.9	5,680.8
Other non-current liabilities	280.8	336.1
TOTAL NON-CURRENT LIABILITIES	8,587.2	8,946.9
Current liabilities		
Provisions, pensions and other employee benefits	222.4	216.4
Trade payables and other current liabilities	3,197.1	3,298.2
Current borrowings including fair value of current derivatives (liabilities)	867.0	963.6
TOTAL CURRENT LIABILITIES	4,286.5	4,478.2
TOTAL EQUITY AND LIABILITIES	20,625.6	22,537.6

CONSOLIDATED STATEMENT OF CASH FLOWS (SUMMARIZED)

FOR THE YEAR ENDED DECEMBER 31

IN MILLION OF EUROS	2009	2010
Operating activities		
Cash flow from operating activities before changes in working capital	2,274.5	2,660.9
Changes in working capital	165.5	(154.9)
Other	11.8	(86.1)
Net cash from operating activities	2,451.8	2,419.9
Investing activities		
Purchase of property, plant and equipment and intangible assets	(1,411.0)	(1,449.8)
Acquisition of subsidiaries and financial assets	(109.2)	(239.9)
Proceeds from sale of property, plant and equipment and intangible assets	78.5	43.0
Proceeds from sale of financial assets	1.9	0.8
Net cash used in investing activities	(1,439.8)	(1,645.9)
Financing activities		
Dividends paid		
- L'Air Liquide S.A.	(601.9)	(609.0)
- Minority interests	(28.8)	(37.8)
Proceeds from issues of share capital	175.1	110.3
Purchase of treasury shares	(1.1)	2.8
Increase (decrease) in borrowings	(416.6)	99.3
Net cash from (used in) financing activities	(873.3)	(526.9)
Effect of exchange rate changes and change in scope of consolidation	45.7	(90.8)
Net increase (decrease) in cash and cash equivalents	184.4	156.3
NET CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	1,141.5	1,325.9
NET CASH AND CASH EQUIVALENTS AT END OF PERIOD	1,325.9	1,482.2

NET INDEBTNESS CALCULATION

IN MILLION OF EUROS	2009	2010
Non-current borrowings	(5,528.9)	(5,680.8)
Current borrowings	(826.4)	(921.2)
TOTAL GROSS INDEBTEDNESS	(6,355.3)	(6,602.0)
Cash and cash equivalents	1,385.3	1,523.1
Derivative instruments (assets) - fair value hedge of borrowings	79.2	39.6
TOTAL NET INDEBTEDNESS AT THE END OF THE PERIOD	(4,890.8)	(5,039.3)

STATEMENT OF CHANGES IN NET INDEBTNESS

IN MILLION OF EUROS	2009	2010
Net indebtedness at the beginning of the period	(5,484.4)	(4,890.8)
Net cash from operating activities	2,451.8	2,419.9
Net cash used in investing activities	(1,439.8)	(1,645.9)
Net cash used in financing activities excluding increase (decrease) in borrowings	(456.7)	(626.2)
Total net cash flow	555.3	147.8
Effect of exchange rate changes, change in scope of consolidation and others	38.3	(296.3)
Change in net indebtedness	593.6	(148.5)
NET INDEBTEDNESS AT THE END OF THE PERIOD	(4,890.8)	(5,039.3)

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

FOR THE YEAR ENDED DECEMBER 31

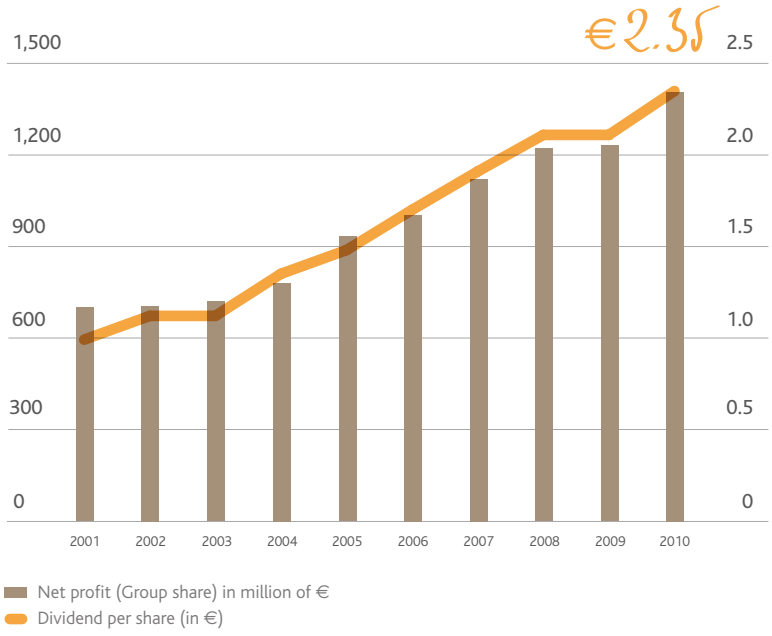
IN MILLION OF EUROS	Share capital	Additional paid-in capital	Retained earnings (including net profit)	Net income recognized directly in equity: Fair value of financial instruments	Net income recognized directly in equity: Translation reserves	Treasury shares	Shareholders' equity	Minority interests	Total equity
Equity and minority interests as of January 1, 2010	1,453.4	171.8	6,786.5	(18.4)	(705.7)	(103.9)	7,583.7	168.2	7,751.9
Profit for the period			1,403.6				1,403.6	54.5	1,458.1
Items recognized in equity			(52.6)	(6.7)	464.9		405.6	15.4	421.0
Net income and gains and losses recognized directly in equity for the period			1,351.0	(6.7)	464.9		1,809.2	69.9	1,879.1
Increase (decrease) in share capital	9.7	97.9					107.6	2.7	110.3
Free share attribution	99.4	(99.4)							
Distribution			(609.0)				(609.0)	(37.8)	(646.8)
Purchase of treasury shares						2.8	2.8		2.8
Share-based payments			16.2				16.2		16.2
Put options granted to minority shareholders								1.7	1.7
Transactions with minority shareholders recognized directly in equity			(11.1)		(0.8)		(11.9)	4.0	(7.9)
Other		4.9					4.9	0.3	5.2
Equity and minority interests as of December 31, 2010	1,562.5	170.3	7,538.5	(25.1)	(241.6)	(101.1)	8,903.5	209.0	9,112.5

IN MILLION OF EUROS	Share capital	Additional paid-in capital	Retained earnings (including net profit)	Net income recognized directly in equity: Fair value of financial instruments	Net income recognized directly in equity: Translation reserves	Treasury shares	Shareholders' equity	Minority interests	Total equity
Equity and minority interests as of January 1, 2009	1,435.1	18.4	6,172.8	(16.3)	(741.8)	(110.8)	6,757.4	144.3	6,901.7
Profi t for the period			1,230.0				1,230.0	55.2	1,285.2
Items recognized in equity			(34.4)	(2.1)	36.1		(0.4)	0.4	
Net income and gains and losses recognized directly in equity for the period			1,195.6	(2.1)	36.1		1,229.6	55.6	1,285.2
Increase (decrease) in share capital	18.3	153.4					171.7	3.4	175.1
Distribution			(601.9)				(601.9)	(28.8)	(630.7)
Purchase of treasury shares						(1.1)	(1.1)		(1.1)
Share-based payments			19.7				19.7		19.7
Put options granted to minority shareholders								(1.3)	(1.3)
Other			0.3			8.0	8.3	(5.0)	3.3
Equity and minority interests as of December 31, 2009	1,453.4	171.8	6,786.5	(18.4)	(705.7)	(103.9)	7,583.7	168.2	7,751.9

SUSTAINABLE DEVELOPMENT KEY INDICATORS

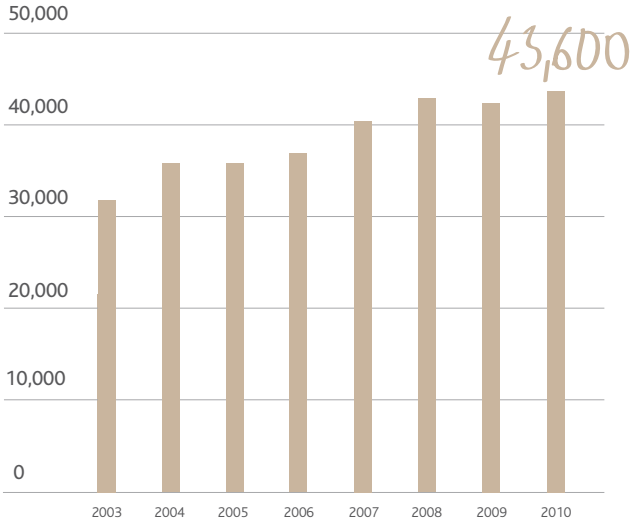
NET PROFIT AND DIVIDEND

During the last 10 years, **the return rate for an Air Liquide shareholder was on average +10.2% per year**, including gross dividends reinvested in shares, allocations of free shares and loyalty bonuses to registered shareholders. The Group's objective is to maintain this comprehensive remuneration policy for shareholders to ensure regular long-term value enhancement in a transparent manner.



EVOLUTION OF EMPLOYEES

Located in 80 countries in the world, the Group has continued to develop and acquire new skills. With 43,600 employees in 2010, compared to 31,900 in 2003, Air Liquide has displayed a **37% growth in its workforce over the past seven years**.



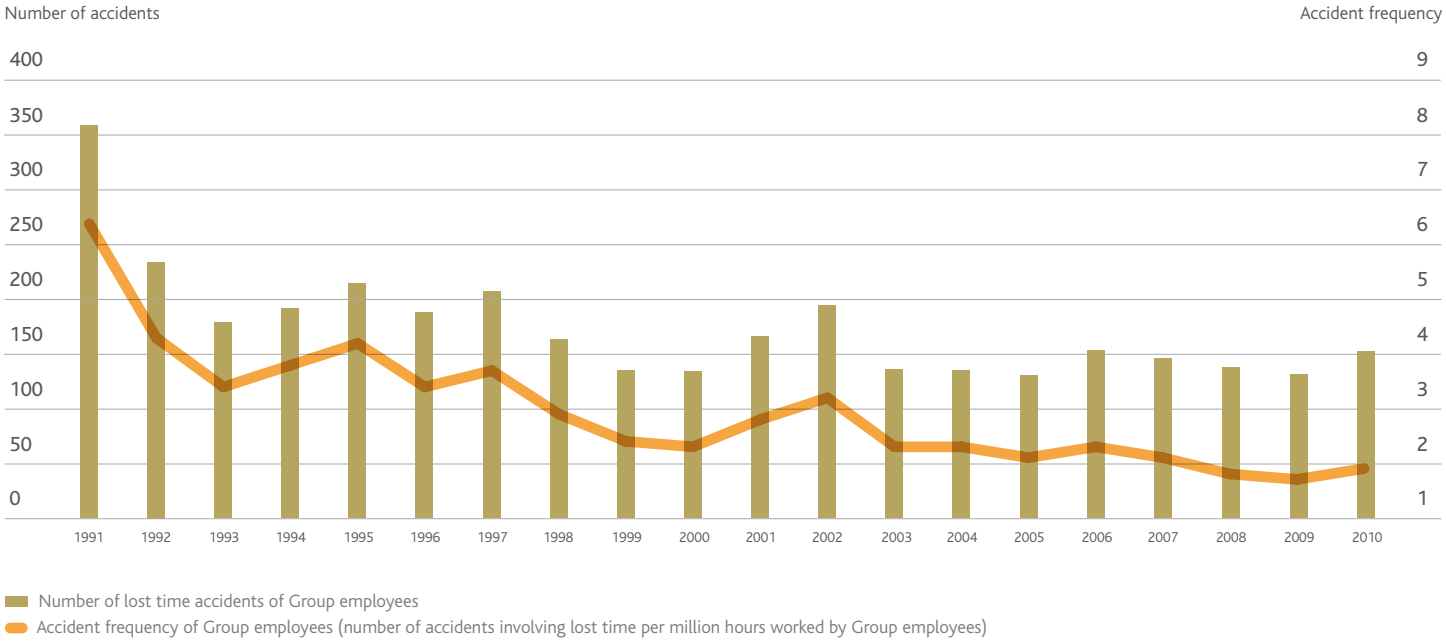
PERCENTAGE OF WOMEN AMONG MANAGERS AND PROFESSIONALS

Diversity is one of the pillars of Air Liquide's Human Resources policy, which seeks a more equitable division of responsibilities between men and women. Between 2003 and 2010, the percentage of women among Managers and Professionals positions rose from 14% to 24%, an increase of **over 70%**. This 24% figure is very close to the global percentage of women in the Group (25%) and illustrates the strong representation of women in Air Liquide's management.

Consult the 2010 Sustainable Development Report in the **Reference Document**.

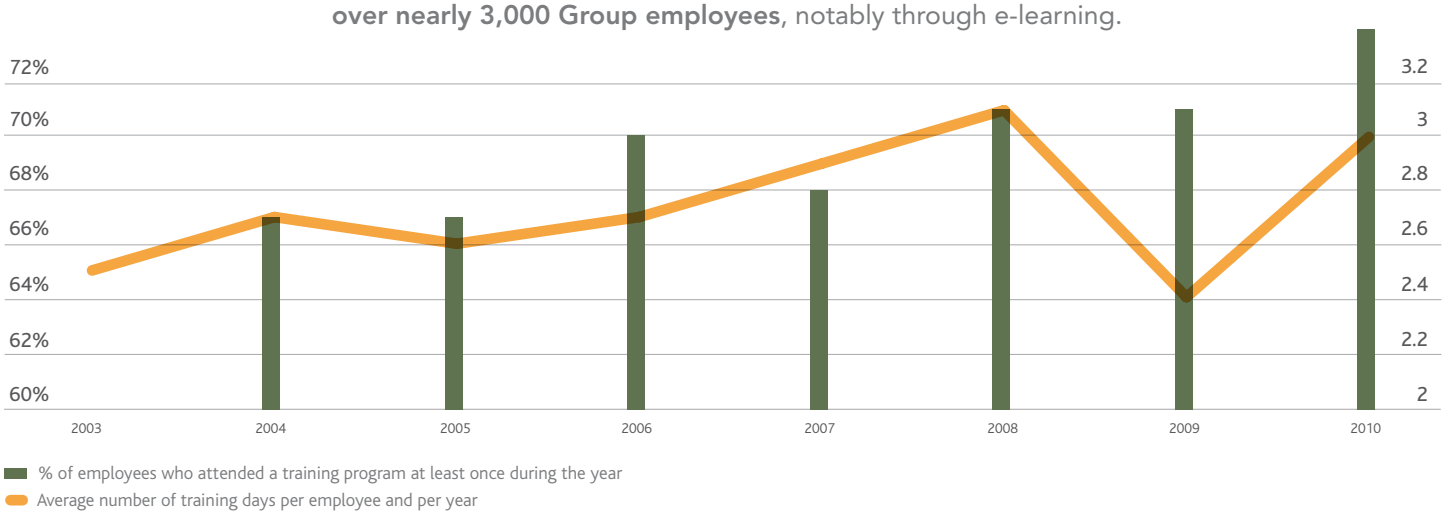
SAFETY: NUMBER OF ACCIDENTS WITH LOST TIME AND FREQUENCY OF ACCIDENTS

Continuously and sustainably improving the safety of its employees is a major goal for Air Liquide, which has the objective of "zero accident" on each site, in each region and in each unit. Over the last 20 years, **the Group's accident frequency rate has been divided by 3** while the number of employees has increased by more than 50%.



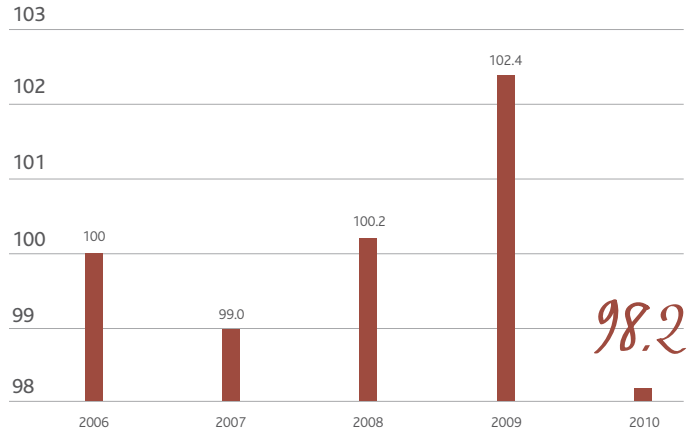
TRAINING

Air Liquide is committed to training its employees on a regular basis. In 2010, 74 % 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 3 days in 2010. Since its creation, **Air Liquide University has already trained over nearly 3,000 Group employees**, notably through e-learning.



MORE EFFICIENT AIR SEPARATION UNITS

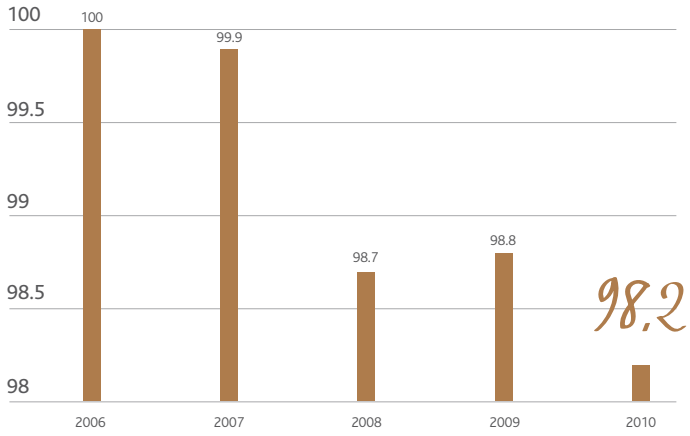
In 2010, the energy consumption per m^3 of air gas produced (i.e., the energy efficiency of air separation units) improved considerably, thanks to start-ups of very efficient large units, and the return of most units to operating modes closer to optimal conditions. The global efficiency level reached in 2010 was higher than the one observed before the crisis in 2007 and constitutes **the highest level ever reached.**



Evolution of energy consumption per m^3 of air gas produced (base 100 in 2006)

MORE EFFICIENT HYDROGEN UNITS

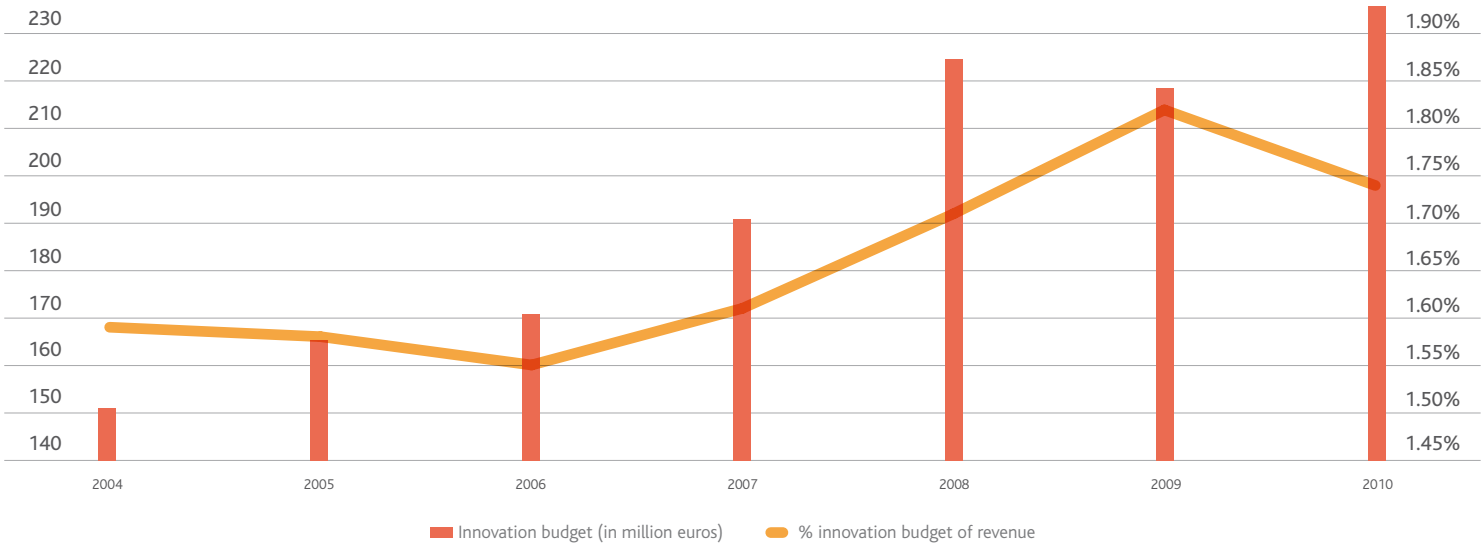
The energy efficiency of the hydrogen units continued to improve between 2009 and 2010 representing an improvement of 1.8% compared to 2006.



Evolution of energy consumption per m^3 of hydrogen produced (base 100 in 2006)

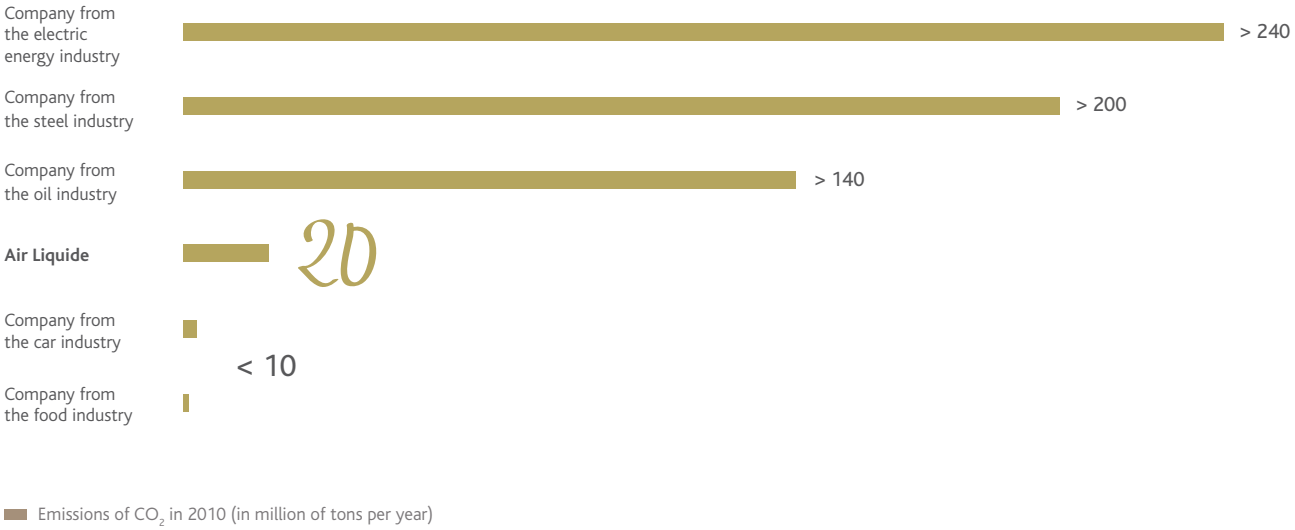
INNOVATION BUDGET

Innovation is an integral part of Air Liquide's culture. Over 60 % of the Group's R&D budget is devoted to work on life (e.g. therapeutic gases), the environment and sustainable development.



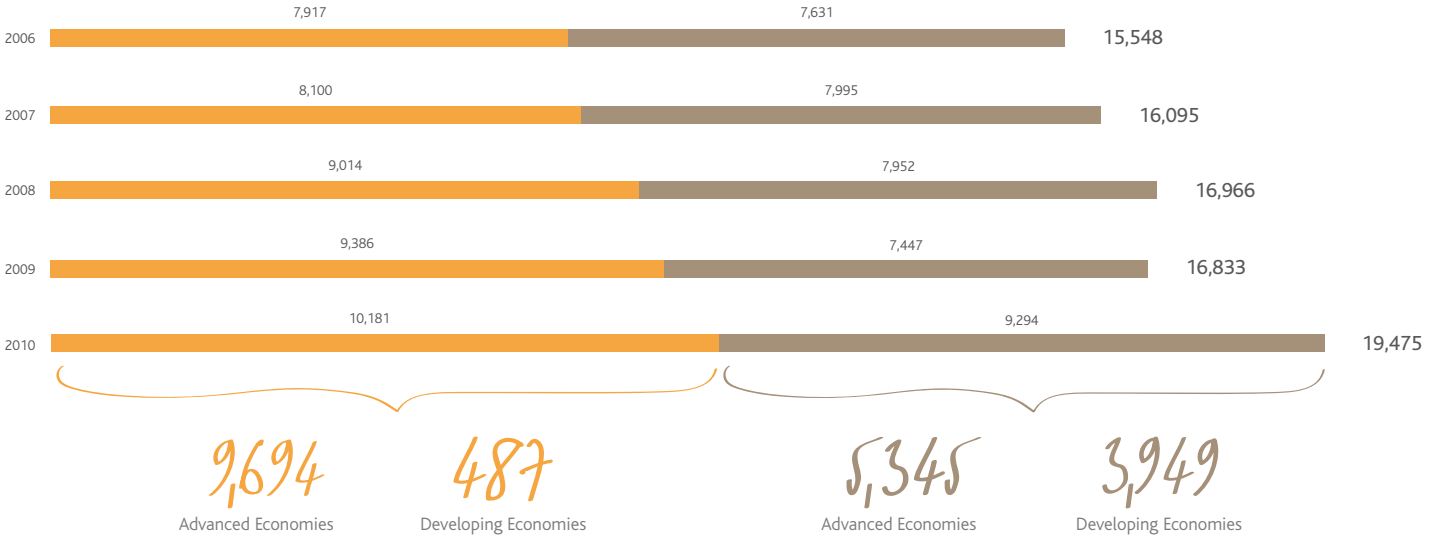
AIR LIQUIDE'S GREENHOUSE GAS EMISSIONS (GHG) COMPARED TO OTHER INDUSTRY LEADERS

Air Liquide is an average-size emitter of greenhouse gas relative to other leaders of the industry sector.



Emissions of CO_2 in 2010 (in million of tons per year)

DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS (GHG) OF THE AIR LIQUIDE GROUP



Direct GHG emissions (in thousands of tons of CO_2 eq.)
Indirect GHG emissions (in thousands of tons of CO_2)

Consult the 2010 Sustainable Development Report in the **Reference Document**.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABSOLUTE ZERO
It is the coldest temperature theoretically possible. By international agreement, it is defined as −273.15°C or 0 Kelvin.

ADJUVANT
An additive that strengthens another element or reinforces the element's effectiveness.

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.

ASU
Air Separation Unit.

BIOMASS
Organic materials, usually plant-based, that can be used to produce energy, or to serve other purposes.

CARRIER GASES
Carrier gases (nitrogen, oxygen, hydrogen, etc.) are used to transport and dilute process gases or to protect semiconductors from minute dust particles.

CNES
CNES (*Centre National d'Études Spatiales*) The French national space agency, in charge of proposing to the French Government a space policy for France, within the European framework, and implementing this policy. It works with scientific partners and industrial companies which collaborate on the space programs designed by the Center.

COGENERATION
The simultaneous production of steam and electricity. Cogeneration enables more efficient use of primary energy and produces less air pollution, specifically fewer carbon dioxide (CO_2) emissions.

DILUTION COOLER
This system works by mixing two isotopes of helium, 3He and 4He, which circulate through tubes of extremely small dimensions. It serves to lower the temperature of the Planck satellite's sensors to 0.1 K (-273.05°C) and stabilize this temperature to a millionth of a degree.

EFFLUENT
Any gas or liquid waste material that carries polluting agents and contains substances hazardous to the environment.

EXOGENOUS SURFACTANT
An endogenous pulmonary surfactant is a complex molecule produced by an organism that helps it reduce the effort required for breathing. A deficit of this molecule causes respiratory distress syndrome in premature babies, which can be treated by administering exogenous surfactants.

FUEL CELL
A fuel cell is an electrochemical device that produces electricity by using hydrogen and oxygen. It makes no noise and only emits water.

GREENHOUSE EFFECT
The greenhouse effect prevents solar heat from dissipating back into space. This effect is necessary because without it, the average temperature on the surface of the earth would be -18 °C. However, negative consequences arise when too much greenhouse gas concentrates within the atmosphere.

HYCO UNIT
Unit that simultaneously produces hydrogen (H2) and carbon monoxide (CO).

LIQUID GASES
Gases can assume a liquid form, usually at an extremely low temperature, thus considerably reducing their volume. For example: when reheated, one liter of liquid nitrogen at -196°C produces close to 700 liters of nitrogen gas at room temperature. This makes it possible to more easily transport, distribute and store gases.

LOYALTY BONUS
The loyalty bonus increases the dividend distributed and the number of free shares attributed by 10% for shares held for more than two full calendar years and subject to the conditions defined by Air Liquide's articles of association.

ON-SITE UNIT
Industrial or medical gas production unit set up on the customer's site and operated by Air Liquide.

RARE GASES
Rare gases are natural, inert products found in very small quantities in the air we breathe: argon (0.9% of air), neon (0.002%), krypton (0.0001%), xenon (0.00001%).

REACH
The European Union's REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) regulation governs the registration, evaluation and authorization of chemical products produced in or imported within the European Union.

REFORMING
Natural gas reforming enables the production of hydrogen through a high-temperature chemical reaction between methane (the main element of natural gas) and steam.

RENEWABLE ENERGY
Biodiesel, bioethanol plants as well as oleochemical units.

SILICON
After oxygen, Silicon is the most common element present in the earth's crust. It does not exist in a free state, but is found in composite substances, such as silica (a component of sand).

SOX
Sulfur oxides are pollutants that cause acid rain, smog and respiratory illnesses. They are produced by the combustion of hydrocarbons containing sulfur.

SUPERCONDUCTIVITY
A phenomenon characterized by zero electrical resistance and the exclusion of the interior magnetic field in certain so-called "superconducting" materials. Superconductivity occurs at very low temperatures.

L'AIR LIQUIDE S.A.
Société anonyme pour l'étude et l'exploitation des procédés Georges CLAUDE with registered capital of 1,562,878,850.50 euros

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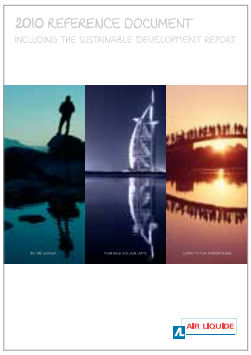
FIND OTHER AIR LIQUIDE DOCUMENTS

These documents are available at www.airliquide.com or by request



Reference Document (including the Sustainable Development Report)

Letter to shareholders

Shareholder's Guide

Go into details about the subjects covered through videos, animations, etc — **http:/annualreport.airliquide.com**

Air Liquide would like to thank all the people who contributed to this Annual Report and to the photos.

This report was printed on a Triple Star satin paper. As part of its sustainable development approach, Air Liquide has chosen to print this document on a PEFC-certified paper. The fibers of this paper come from forests planted and managed in a sustainable manner. The paper is printed by an ISO 14001-certified printer which holds an imprim'vert label.


AIR LIQUIDE