Sol Group Health, Safety and Environment Report 2010

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

Drafted by
SOL Group Industrial Risk Management Office
SOL Group Quality, Safety and Environment Head Office
May 2011

Sol Spa

Registered office
Via Borgazzi, 27
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Share Capital
Euro 47.164.000,00 fully paid up.

C.F and company register of Monza e Brianza
n° 04127270157
R.E.A. n° 991655
C.C.I.A.A. Monza e Brianza

Our commitment

The year 2010 was particularly packed with initiatives for all of us at SOL.
Among the many, we also wish to remind you of the establishment of the first Group Company outside of Europe, in India, and the start-up of operations in the Biotechnology sector.
The second edition of the Health, Safety and Environment Report also contains important new changes, starting with its extension to all sectors and to all 53 SOL Group Companies.
This decision is the logical consequence of the desire to bear witness to the Group's commitment to pursuing a sustainable development policy in the 21 Countries and 5 sectors in which it operates.
The Report is work in progress as it is continuously evolving and being extended, thanks to the involvement of the various components of the Group. The results attained in 2010 were highly positive in the safety, protection of workers' health and environmental fields, also as a result of the investments made. Specifically, the accident gravity index further improved compared to previous years, and the specific electricity consumption, which constitutes the major environmental aspect of our activities, proved to be lower than the 2009 figure. Our target for 2011 is still that of continuing down the path of development we have taken in observance of man and the environment, with increasing involvement of all the colleagues who work in the SOL Group all over the world.

Aldo Fumagalli Romario
Chairman, SOL Group

Marco Annoni
Vice Chairman, SOL Group

Health, Safety e Environment

We have enriched and completed the collection of data for this second edition of the health, safety and environment report, with the confirmation that the constant development and success of our Group is not only consistent and in compliance with the technical regulations and laws of reference, but is also continuously oriented towards the approach of sustainable development both for our plants, processes and services and for the use of our products by customers.
We continue to believe in the development of a culture and a shared code of ethics. For us, protecting health and the environment and technological development are not only topics that only a handful of specialists pay attention to and apply but, as already emphasized in the past, should form part of the conscious and responsible day-to-day activities of everyone in the working world.
We repeat that all of us who work in the many Group activities are aware that working in safe conditions, protecting health and the environment, above all means showing respect both for ourselves and for those around us, knowing that nothing is free of risk but that, nonetheless, everything can be achieved, managed and maintained with the objective of "zero accidents, zero injuries, and zero environmental impact".

Alessandro Castelli
SOL Group Quality, Safety, Environment and Regulatory Affairs Manager

Vincenzo Camparada
SOL Group Industrial Risk and Insurance Manager

Introduction

The contents of this second edition of the "Health, Safety and Environment Report" have been updated after having expanded the base of reference to all Group Companies.
The activities undertaken and the results achieved by the SOL Group in the area of safeguarding the environment, of safety and protection of health are described in the Report.

The most significant environmental and safety parameters gathered in the primary production plants and regarding 2010 and the four previous years are illustrated.
The report is designed to be a tool for internal analysis, and a testament for the benefit of all interested parties, to SOL's continued commitment to bringing together environmental, safety, social and economic issues and satisfying, therefore, the requirements of today without compromising the possibility that the future generations may also satisfy theirs.

The Report is divided into six parts:

1. Group Profile

Main financial data, some historical data and the principles of ethics and conduct to which the Group adheres are provided. The activities carried out and the products dealt with by the various sectors making up the Group are also described.

2. The safety and environmental management system

The integrated quality, safety and environment management system is described

3. Environmental indexes

The most significant environmental parameters regarding the Group's primary production plants are provided

4. Health and safety

Analysis of injury trends

5. Relations with the Stakeholders

6. Glossary

This Health, Safety and Environmental Report refers to the solar year that goes from 1 January 2010 to 31 December 2010.

The origins of the SOL Group date to 1927, when the first company was formed in Monza, Italy
Rapid expansion started in the early Sixties, which resulted in the Group operating today in 21 countries with 53 Companies.

Alongside its territorial expansion, the SOL Group has pursued diversification of the activities it carries out in the sectors of:

- technical, pure and high purity gases
- medical gases and medical devices
- home care
- biotechnologies
- production of energy from renewable sources

The activity carried out in each of the sectors listed above will be examined in detail below.

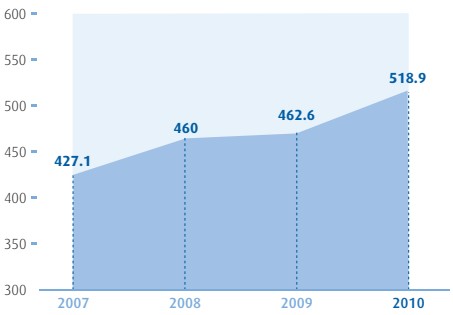
The Parent Company SOL S.p.A. has been listed on the Milan Stock Exchange since 1998 with a capitalisation of around 500 million Euro.

In additional to building up its presence in Europe with an acquisition in the United Kingdom, the first initiative outside the European borders was achieved in 2010 with the formation of a company in India.

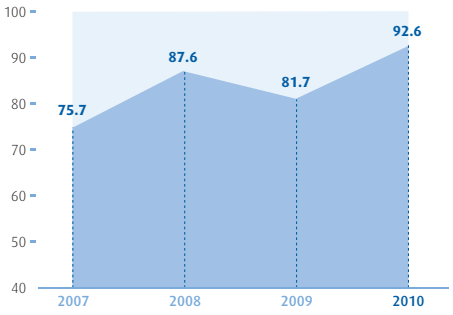
The Group's production activities take place in 34 primary production plants, units that produce gas using raw materials (electric power, atmospheric air, natural gas, calcium carbide and ammonium nitrate) and in 54 secondary production plants, units that deal with the filling of gas cylinders, their storage and distribution (mainly deriving from primary processing units), and the production of high purity gas, as well as high precision mixtures.

The trend of the main SOL Group figures is shown in the following graphics.

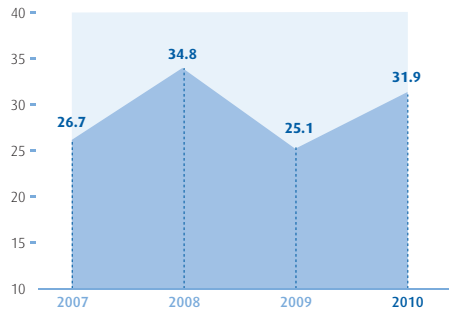
Revenue



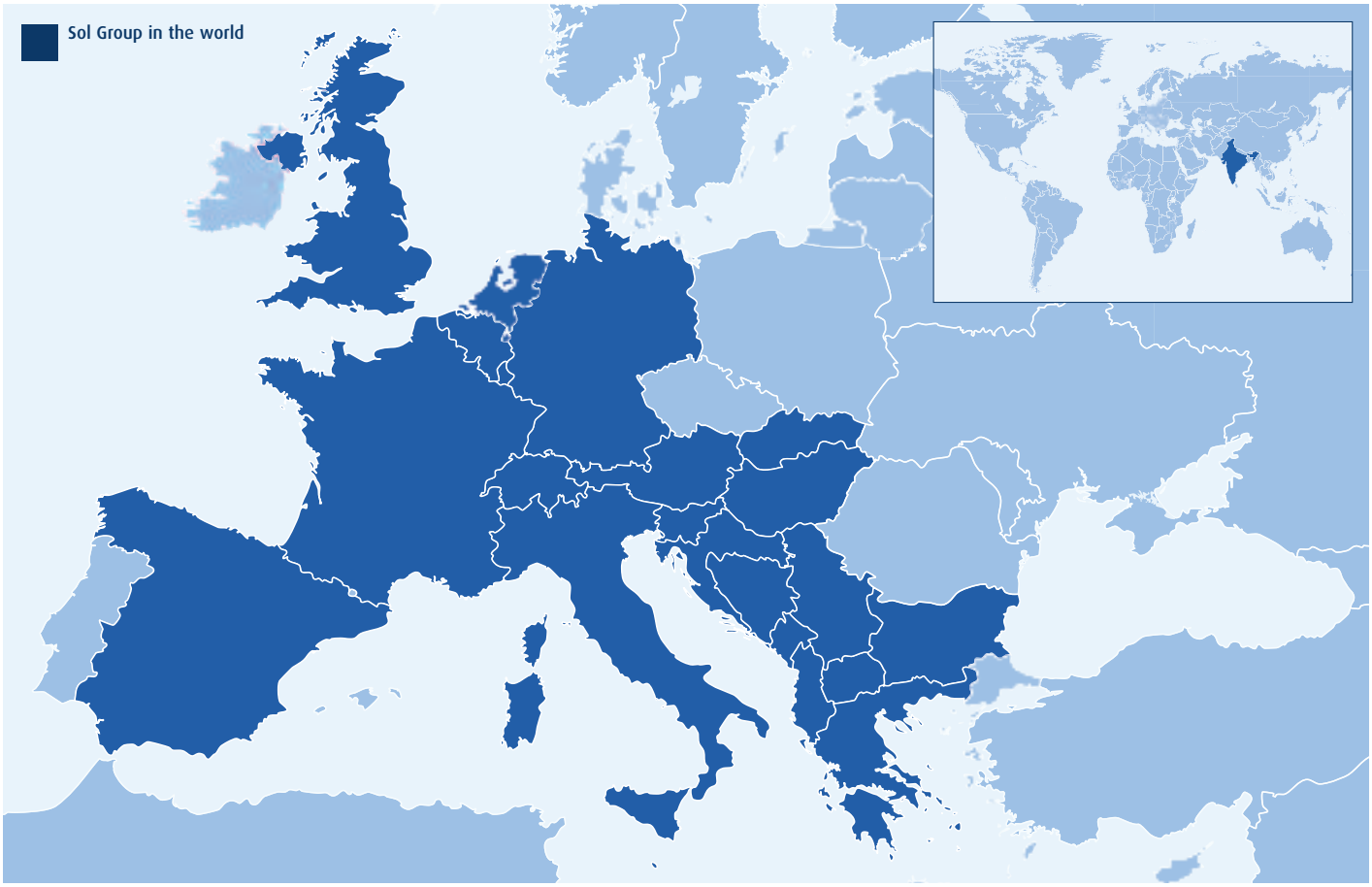
Cash Flow



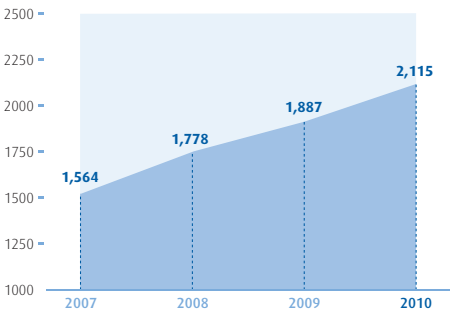
Net profit



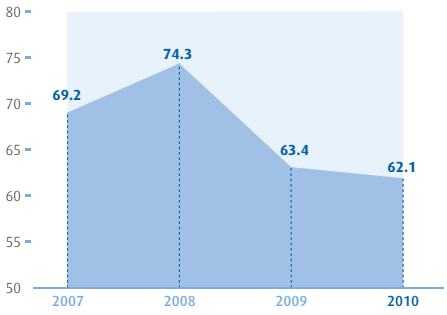
Group Profile



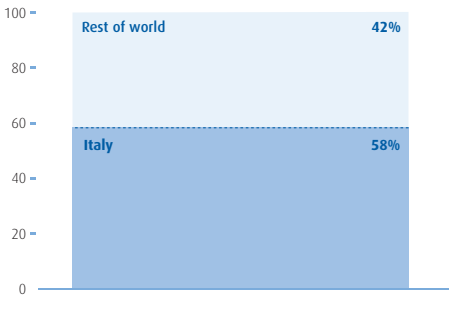
no. employees as at 31/12



Investments



Revenue ratio Italy/rest of world 2010



Code of Ethics and Organisation, Management and Control Model pursuant to Italian Legislative Decree 231/01

The Code of Ethics defines the values underpinning the activities of SOL, to which SOL employees and suppliers adhere.

The SOL Board of Directors confirmed, in its meeting of 19 February 2009, the validity of the Code of Ethics, which entered into force on 1 January 2006 and that is being progressively adopted by all Group Companies.

SOL S.p.A. and Vivisol s.r.l. have also adopted an Organisation, Management and Control Model pursuant to Italian Legislative Decree 231/01 that, among others, integrates the offences relating to health and safety at the workplace included in Italian Legislative Decree 81/08.

Below is the "Introduction" of the Group's Code of Ethics in its entirety. The complete text can be found on the website www.sol.it.

Code of Ethics: Introduction

The SOL Group operates mainly in the production, sale and distribution of technical gases (industrial, pure and medical), applied research, plant engineering and related services for the home-care sector.

SOL is a multinational organisation with operations in 20 European countries and in India. Due to the complexity of its structure and the range of fields in which it operates, on the occasion of the conformity and effectiveness audit performed in compliance with Italian legislative decree no. 231/2001, the Group decided to bring together in a single document the values and principles that have always distinguished SOL's activities and its relations with employees, consultants, customers, suppliers, shareholders, partners and public authorities: in other words, all individuals and organisations with whom the Group has business relations.

Fair and honest conduct, the circulation of information, willingness to listen, acknowledgement of customers' problems as our own, and awareness that the economic process cannot exist independently of a system of values: these are the principles to which we are committed and by which we have always sought to conduct our business.

At SOL we believe that the internal structure of an organisation should allow each individual adequate space to work autonomously within his or her particular area of responsibility while maintaining a solid relation of trust with the company. Each employee should accept the normal degree of motivation, control and coordination performed by the organisational hierarchy as part of its task of unification and regulation.
We are increasingly convinced that success does not derive solely from the pursuit of profit,

but that it is also the result of our role in the wider social context and the variety of relations we have with the community as a whole.
It is therefore essential that we be capable of integrating the company's economic dimension with its social, legal and ethical dimensions, enabling each individual activity to contribute to the well-being of all, with improvements in both quantitative and qualitative terms.

In assessing how our company operates, we must not limit ourselves to merely measuring its efficiency, but must also find appropriate parameters for measuring the contribution made by the company itself and by each of us towards the common good.

Our business involves some of the noblest of all human aspirations - self-fulfilment, commitment, solidarity, creativity and a sense of responsibility - which must be nurtured and allowed to develop. This will inevitably have important ethical implications for the company, above and beyond any strictly economic concerns. Only by sharing these beliefs and behaving accordingly, increasing the quality, transparency and fairness of our professional conduct, will it be possible, for ourselves and for our company, to rise to the challenge of the global market.
It is our firm conviction that these principles enable us to respond to our customers' requirements more effectively, to take on new challenges confidently, and to renew and improve the Group, the companies of which it is composed and, finally, ourselves as individuals.

It is in this spirit that on November 11th, 2005 the Board of Directors of SOL S.p.A. approved this Code of Ethics and Conduct (hereafter also referred to as the "Code"), effective as of January 1st, 2006 as the "Constitutional Charter" of the Group.

Technical gases sector

The figures of the technical gases sector:

- 30 Companies
- 19 countries
- 1,273 employees
- 34 primary production plants
- 54 secondary production plants
- more than 40,000 customers

Activities carried out:

Design, construction and management of on-site gas production plants, of storage and distribution plants, of apparatus and systems for gas utilization such as, for example, apparatus for cryogenic applications, freezing tunnels, oxy-fuel burners, ozonisers, and welding machines and apparatus. Administration of services connected with the use of the gases produced.

Gases produced and distributed:

Oxygen, Nitrogen, Argon, Hydrogen, Carbon dioxide, Acetylene, Nitrous oxide, Gas Mixtures, Very high-purity gases, Medical gases, Food gases and gaseous Helium.

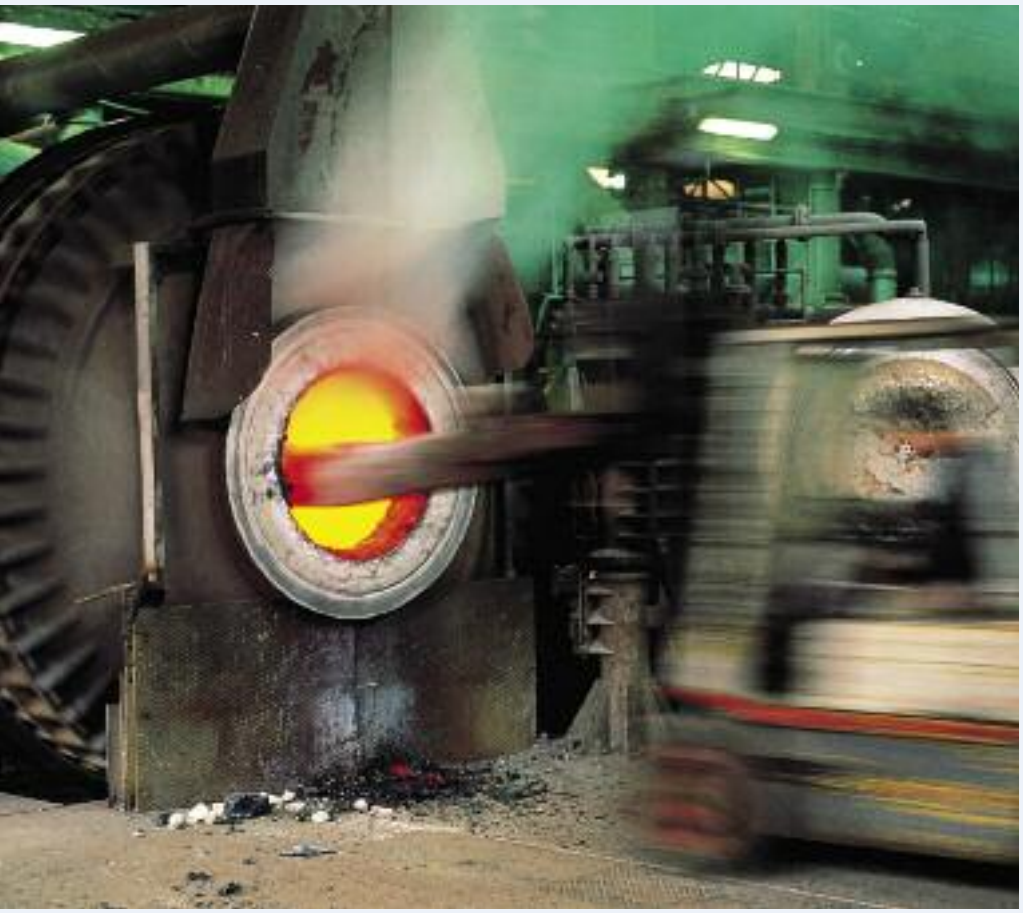
Main gases sold:

Liquid Helium, Gas for electronics, Ammonia and combustible gases for industrial use.

Commitment towards environment and safety

SOL's focus on environmental and safety problems is not limited to the realm of its production activities, but for over thirty years has also been concentrated on the development of technologies and services for its clientele.

As a result, numerous gas applications and plant solutions have been designed whose strengths include the safety of the user and the safeguarding and protection of the environment. The main examples of these are listed below.



Oxygen

Used in the following processes, among others:

- *oxy-fuel combustion in industrial furnaces:* energy requirements are reduced, increasing efficiency and reducing the emission of particulates and NO_X
- *water treatment:* the use of oxygen makes it possible to reduce the volume of sludge and VOC emissions, increasing, at the same time, treatment capacity; technologies based on ozone increase the level of purification and eliminate undesirable by-products
- *incineration of solid waste:* a safer approach is possible, with the destruction of pollutants
- *environmental remediation:* oxygen transformed into ozone makes rapid remediation of contaminated soils and ground water

Nitrogen

Used in the following processes, among others:

- *freezing:* nitrogen is an alternative to the use of refrigerants, such as fluorine derivatives, responsible for the greenhouse effect
- *inertization:* the chemical inertia of nitrogen is exploited to avoid contact with the oxidising substances of chemical products, oil and gas products etc., reducing both the risk of contamination and of explosion

Hydrogen

The use of hydrogen as a combustible in internal combustion engines makes it possible to reduce greenhouse gas emissions to practically zero. SOL actively participates in a range of projects for the development of technologies for the distribution, storage and use of hydrogen as a clean energy carrier in various sectors, including the automotive sector.

On-site plants

Another significant contribution to the protection of the environment comes from the onsite realisation of gas-producing plants at client premises. These "onsite systems" contribute to the achievement of two important goals:

- reduction of atmospheric pollution thanks to the fewer kilometres travelled, as they represent an alternative to traditional road deliveries with cylinders or in bulk
- a reduction in energy consumption as the production process, specialised in the production of a single gas with specific qualities, has lower energy consumption levels than a traditional centralised plant.

It is possible to calculate the environmental impact of these reductions in terms of lower amounts of CO_2 emitted into the atmosphere by applying the "Life Cycle Assessment" method. In 2010 production using on-site plants in place of equal quantities produced with traditional plants led to a lower emission of CO_2, totalling 13,506 tonnes.

Medical gases and medical devices sector

The figures of the medical gases sector:

- 19 countries in which the same Companies of the Technical Gases Sector operate
- 58 dedicated employees
- more than 500 customers
- 35 pharmaceutical manufacturing sites, of which 21 in Italy and 14 in the rest of Europe

Activities carried out:

Production, distribution and putting on the market gases and gas mixtures classified both as Medical and as Medical Devices and pharmaceutical Active Ingredients.
Design, construction, management and maintenance of Medical Devices such as centralized medical gas distribution plants and vacuum plants, anaesthetic gas evacuation plants, cryogenic nitrogen distribution plants for cryo-conservation.
Design and management of hospital services such as Total Gas Management, Cryomanagement, Cellmanagement, operating theatre environmental monitoring, domestic water disinfection.
Design and management of ECM accredited training services

Gases produced and distributed:

Oxygen, Nitrous oxide, Air, Nitrogen, Carbon dioxide, Gas Mixtures
On-site plants for producing medical air

Commitment towards environment and safety

The SOL Group activities in the field of design and management of the supply of medical products and hospital services have always been focussed on improving safety conditions in which the medical gases are administered inside hospital and nursing facilities.
Attention paid to the safety of the patient, the medical staff and more in general all personnel of the hospital facility is a primary goal for the SOL Group, and develops through the activities listed below.

Management services

By designing and supplying medical gas management services it is possible to reduce to a minimum the risks connected with handling medical gas containers and with their procurement, in this way considerably improving safety indexes.

Training services

Training to use medical gases and their packaging in total safety is essential in order to correctly manipulate and administer products.
Training is carried out with ECM courses, which consist of theoretical and practical sessions, and verification of what has been learned.

Plants and accessories for using gases

Medical gas distribution plants are designed in compliance with the essential requirements of the Medical Devices Directive precisely because their main objective must be safety, even though they are made up of kilometres of pipes that convey the gas throughout the hospital facility. The right gas must reach every patient needing it in the right form and in the right amount.

The utilization accessories (pressure reduction units, reducing valves, delivery devices) are researched and designed to ensure the gas is delivered and administered to the patient in safety conditions.

On-site plants

The on-site plants are also part of the products handled by the medical gases sector with the same objectives for reducing atmospheric pollution and energy consumption already seen in the technical gases sector.

Home-care sector

Commitment towards environment and safety

VIVISOL carries on its activity aware of the need to maintain and further develop a management policy for quality oriented towards continuous improvement in the field of home-care services and in an outlook of overall management of its activities.

As a result, numerous home solutions and services have been designed whose strengths include the safety of the user and the safeguarding and protection of the environment. The main examples of these are listed below:

- a logistics system able to optimize the routes of vans used for deliveries with reduced atmospheric pollution because fewer kilometres are travelled.
- a progressive replacement of the vehicles used for deliveries by introducing euro 4 and euro 5 approved vehicles
- a system able to optimize the external commitment of nursing and medical personnel and the routes of their cars for making home visits to patients
- an emergency phone assistance system as a reference for patients in case of technical problems with the apparatus
- a technical assistance service with a wide range of available interventions

The figures of the home-care sector:

- 19 Companies
- 9 countries
- 832 employees
- more than 145,000 customers
- 14 pharmaceutical manufacturing sites, of which 9 are in Italy and 5 in the rest of Europe

Activities carried out:

Supply of services, apparatus and products for home oxygen therapy with liquid oxygen, gaseous oxygen and concentrators

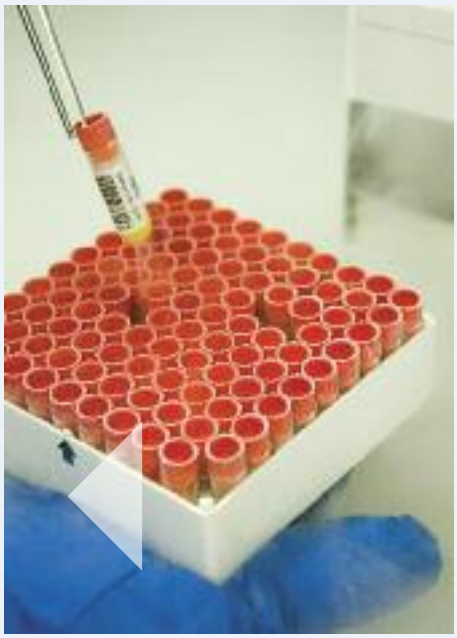
Supply of services and apparatus for mechanical home ventilation

Home treatment of obstructive sleep apnea syndrome (OSAS)

Supply of products and apparatus for artificial home nutrition

Supply of integrated home-care (IHC) Services

Supply of apparatus and services for home-care of bedsores



Biotechnologies sector

The figures of the biotechnologies sector:

- one Company in Italy (Biotechsol)
- 4 employees
- more than 200 customers

Activities carried out:

Services for preserving stem cells extracted from the blood of the umbilical cord
Metabolic screening diagnostic services
Scientific research development activities

Commitment towards environment and safety

The service for preserving stem cells extracted from the blood of the umbilical cord emerges as a choice made by parents in order to better safeguard the future health of their child.
It is indeed possible to cure the major diseases of the haemopoietic system with these stem cells and thanks to the clinical tests in progress, curing neurodegenerative diseases will also probably become possible in the future.
The metabolic screening service is one more element for the safety of correct development of the infant as it provides an early diagnosis on certain diseases that if diagnosed in time can be treated and ensure the healthy growth of the infant.

Production of energy from renewable sources sector

Commitment towards environment and safety

The production of technical gases heavily depends on electric power mostly produced from fossil fuels such as gas, coal and oil, which have a highly negative impact on the environment.

One of the goals that the SOL Group set for itself some time ago is to cover part of its energy needs with the self-production of electric power from a renewable source so as to reduce its dependence on fossil fuels to the full benefit of the environment.

Therefore, several projects have been launched. A part of them are in the development stage and have led to the construction of a number of hydroelectric power plants over recent years, already able to contribute to some of the Group's energy requirements.

It is possible to estimate that more than 35,000 t/year of CO_2 emitted into the atmosphere are reduced by generating electric power produced in the Group's plants.

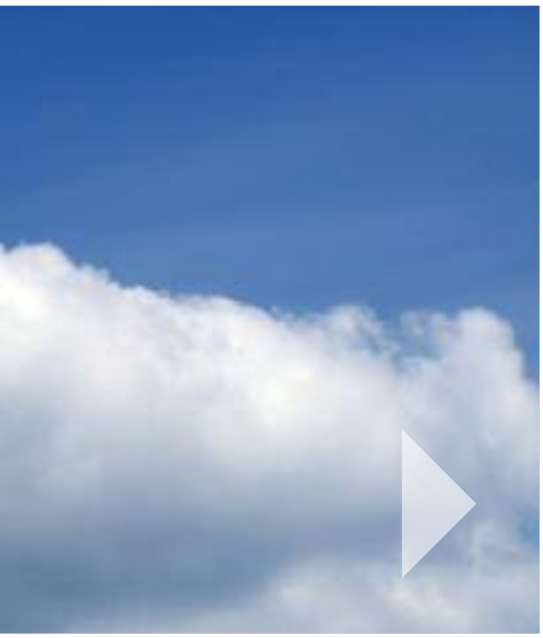
The figures of the energy production sector:

- 3 Companies: Energetika doo, with 6 hydroelectric power plants in operation; Hydroenergy Sh.p.k, with 2 hydroelectric power plants under construction and Hydrosol Sh.p.k.
- 2 countries: Slovenia, Albania.
- 6 employees

Activities carried out:

Production of electric power by hydroelectric power plants

Exploration and identification, design, construction and management of hydroelectric power plants connected to the national high voltage electricity distribution grid with distribution of energy for the Group's production plants.



The safety and environment management system

The SOL Group has designed an integrated Quality, Safety and Environmental management system to guarantee coverage of all its activities, eliminating pointless duplications and emphasising synergies.

Policy

The SOL Group management policy in the area of safety and the environment is outlined in a document signed by the Chairman, the Managing Director and the Safety, Environment and Regulatory Affairs Manager. This establishes the principles that guide the company's operations, consistent with the objectives of safeguarding the environment, and guaranteeing and protecting the safety and health of employees, suppliers, clients and the general public.

The policy document regarding safety and the environment is published on the Group website and widely distributed internally, at all levels.

The periodical revision of the document ensures that any necessary updates to the objectives can be administered and integrated.

The Units subject to the field of application of the "Seveso Directive" or that are certified in agreement with the BS OHSAS 18001 or ISO 14001 standard also issue their own environmental and safety policy documents that after adopting the policy principles of the Group, integrate them with the specific objectives of the site.

Organising structure

Environmental, and health and safety in the workplace issues are entrusted to a specific department which, forming part of the Quality, Safety and Environment Head Office, has the task of managing activities relating to the corporate management system, defining action areas, checking their application, and coordinating the actions of the Units and the other Offices.

One or more members of staff in each Unit are also trained in order to acquire specific skills in the areas of safety and the environment, enabling them to enact company directives and monitor their correct application.

Training and awareness

The training of employees is key to the correct application of the corporate management system.
As such, all employees are involved in ongoing awareness raising and training activities in the environmental and safety sector with the goal of eliminating or minimising the possible environmental impact of our activities, and guaranteeing high levels of safety.
The training requirements of each individual Unit are established on an annual basis by the respective Offices, and implemented in personalised training programmes aimed at employees of all levels.
The training and updating of managers is also crucial.
To this end, periodical meetings are organised, also involving the participation of external specialists, to improve the skills of managers, but also to stimulate collaboration between the Units and to share management methods.
Further attention is focused on safety issues through the periodical publication of "Safety Alerts" (which, taking events that have occurred in the sector as a starting point, encourage respect for correct codes of conduct) and the "Quarterly Accident Reports" (which illustrate and analyse the most serious accidents to have occurred during the period).

Training on safety topics

The Italian Group Companies held 482 training meetings during 2010, with 2,933 people attending for a total of 8,031 hours.

Training on environmental topics

The Italian Group Companies held 87 training meetings during 2010, with 519 people attending for a total of 1,478 hours.

Auditing

Inspections ("audits") are the main tools used to monitor the correct functioning of the health, safety and environmental management system, and to identify and subsequently implement eventual corrective measures.

Audits can be "internal", i.e. carried out by SOL Group personnel, or "external", i.e. entrusted to third party organisations, normally for the renewal or attainment of new certification.
The aim of internal audits is:

- to verify that activities are carried out in compliance with company procedures and regulations, and to determine the corrective measures to take in the event of non compliance

- to support the Unit subjected to the audit in their efforts to improve, contributing the experiences of other Units and strengthening company culture in terms of health, safety and the environment.

In 2010, a total of 25 days of internal audits were carried out in the areas of safety and the environment.
External audits are carried out by the certification body in the same way as internal audits, and are aimed at verifying the correct application of the management system, and the respect for reference regulations (ISO 14001, OHSAS 18001 and EMAS).
In 2010, SOL's operations were subject to 19.5 days of external auditing by certification body Certiquality.

Safety and Environment certifications

After adopting a Quality, Safety and Environment management system, the next logical step is that of obtaining certification.
The aim of obtaining certification is to have an official and independent report of the company's commitment to health, safety and environmental issues, making it increasingly qualified in the eyes of external third parties.
With the entry into effect of Italian Legislative Decree 81/08 which foresees, as a necessary condition to avoid the possible application of sanctions outlined in Italian Decree 231/01, the adoption of a management system in line with OHSAS 18001, Certification is even more relevant as it acts as a guarantee of the Top Management.
On behalf of all its Units, SOL S.p.A. has therefore decided to obtain Safety Management System Certification, in accordance with the OHSAS 18001 standard.
The certification activity came to a close in July 2010 with obtainment of Certificate no. 8511.

The situation as at 31 December 2010 of the certifications obtained by the SOL Group in the safety and environment area is illustrated in the following table:

Company	Unit		ISO 14001	EMAS	OHSAS 18001
SOL S.p.A.	Mantua	Primary production	X	X	X
	Verona		X	X	X
	Cuneo				X
	Piombino				X
	Salerno				X
	Ravenna				X
	Cremona		X		X
	Ancona				X
	Caserta				X
	Pavia	Secondary production			X
	Bigarello				X
	Padua				X
	Bologna				X
	Pisa				X
	Modugno				X
	Catania				X
	Gas puri Monza				X
	Cagliari				X
	Genova				X
	Pomezia				X
	Beinasco				X
	Palermo	Offices			X
	Brescia				X
	Firenze				X
	Perugia				X
	Udine				X
	Pesaro				X
	Main warehouse	Warehouse			X
	Head offices	Head offices	X		X
ICOA	ICOA	Primary production	X		
SOL SpA Belgium Branch	Feluy	Primary production	X		
Vivisol s.r.l	Head offices	Head offices	X		

In addition to certifications in Safety and Environment areas, SOL Group has obtained certifications according to ISO 9001 (Quality) for 59 Units in the following Countries: Italy (41 Units), The Netherlands (2 Units), Belgium (2 Units), Austria (2 Units), Germany (5 Units), Republic of Macedonia (5 Units) and Croatia (2 Units).

Responsible Care

In 1995, SOL S.p.A. was one of the first companies in Italy to adhere to the Responsible Care programme, the chemical industry's global voluntary initiative, endorsed in Italy by Federchimica. The company plays an active role in the programme and has a representative on the management committee.
Each year the programme collects various environmental and work safety performance indicators, also used when drafting this report.

Seveso Directive

Because of the types of gas they produce and the amounts they have in storage, some of the Group Units are subject to the Directive 96/82/EC ("Seveso Directive"), implemented in Italy with Italian Legislative Decree 334/01.
It affects the Italian plants in Piombino and Mantua (art. 8) and in Cremona, Cuneo, Salerno, Ancona, Verona and Pisa (art. 6), as well as those in Feluy (Belgium), Frankfurt, Gersthofen and Krefeld (Germany), Cergy Pontoise (France), Tillburg (Holland) and Jesenice (Slovenia).
Directive 96/82/EC imposes the adoption of a specific safety management system (which has many similarities with the contents of OHSAS 18001) and this further strengthens the commitment of the plants involved, which are periodically subject to controls by the Authorities (six during 2010: three in Italy, one in France, Holland and Germany), all of which concluded with a positive outcome.

I.P.P.C. and Integrated Environmental Authorization

Some SOL S.p.A. plants are subject to Italian Legislative Decree no. 59 of 18/02/2005 on Integrated Pollution Prevention and Control (I.P.P.C.), which disciplines the issuance, renewal and re-examination of Integrated Environmental Authorization.
The company attained this authorisation for its hydrogen production (Ravenna, Cuneo and Salerno), nitrous oxide production (Cremona and Caserta), and acetylene production (Ancona).

Environmental indexes

In general, SOL's production activities have a modest impact on the environment both in terms of the amount of waste produced, and atmospheric and water emissions.
The impact then becomes marginal for the activities other than those carried on by the Companies of the technical gases sector in their primary production plants
More significant however, in terms of global impact, is the level of energy consumption in primary production and the level of fuel consumption of gas transportation vehicles.
The environmental database has been expanded with this second edition of the Health, Safety and Environment Report, and is now extended to all Group primary production Units.

The plants

The environmental indexes provided herein therefore concern the primary production plants of the technical gases sector, and are listed in the table below.
As far as Italy is concerned, these data are also sent to Federchimica every year and contribute to drawing up the Responsible Care Report.
The table provides some information on the primary processing units, whose environmental parameters are summarised in this Report.

As well as the gases produced, the following information is also provided:

AIA(1)

The plant has Integrated Environmental Authorisation, falling within the IPPC field of application.

Certifications(2)

If it has a logo, the site is certified as being compliant with one or more of the following standards: ISO 9001, ISO 14001, OHSAS 18001 or EMAS Registration (according to the logo displayed).

Seveso Directive(3)

The plant falls within the Directive 96/82/EC ("Seveso Directive") field of application.

Company	Unit		AIA[1]	ISO 14001[2]	EMAS[2]	OHSAS 18001[2]	Seveso Directive[3]
SOL S.p.A.	Mantua	Liquid oxygen, nitrogen and argon; nitrogen and air gas					X
	Verona	Liquid oxygen, nitrogen and argon; oxygen gas					X
	Cuneo	Liquid oxygen, nitrogen, argon and carbon dioxide; nitrogen and hydrogen gas	X				X
	Piombino	Oxygen, nitrogen and argon, liquid and gas					X
	Salerno	Liquid oxygen, nitrogen and argon; nitrogen and hydrogen gas	X				X
	Ravenna	Hydrogen gas	X				
	Cremona	Nitrous oxide; compressed gases in mobile containers	X				X
	Ancona	Acetylene; compressed gases in mobile containers	X				X
	Caserta	Nitrous oxide; compressed gases in mobile containers	X				X
	Pisa	Compressed gases in mobile containers					X
SPG (Slovenia)	Jesenice	Liquid oxygen, nitrogen and argon; oxygen gas					X
SOL SpA Belgium Branch	Feluy	Liquid oxygen, nitrogen and argon					X
SOL SpA Germany Branch	Frankfurt	Liquid oxygen, nitrogen and argon					X
NTG (Holland)	Tillburg	Nitrous oxide; compressed gases in mobile containers					X
UTP (Croatia)	Pola	Acetylene; compressed gases in mobile containers					
Kisikana (Croatia)	Sisak	Liquid oxygen, nitrogen; oxygen and nitrogen gas					
SOL SEE (Republic of Macedonia)	Kavadarci	Liquid oxygen, nitrogen and argon; oxygen gas					
TGS (Republic of Macedonia)	Bitola	Liquid carbon dioxide					
	Volkovo	Liquid carbon dioxide					
	Skopje	Liquid oxygen, nitrogen; oxygen gas					
	Skopje	Acetylene; compressed gases in mobile containers					
TGP (Bosnia)	Petrovo	Liquid carbon dioxide					

Energy

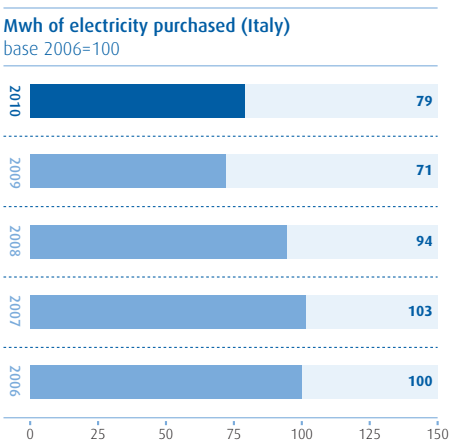
Electricity consumption is key to the air separation process for the production of cryogenic gas as both the compression of the gases and their liquefaction are operations that involve significant energy consumption.

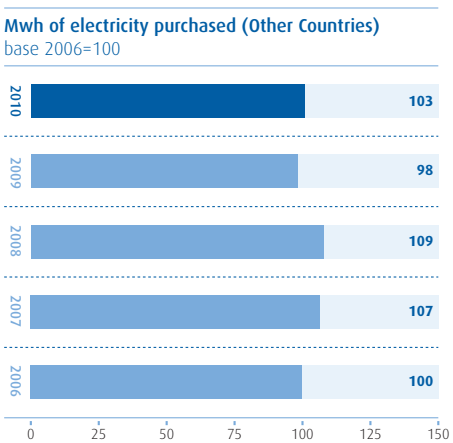
The company is particularly attentive to monitoring energy consumption, not only for economic reasons, but also to fulfil the sustainability criteria that underpin the SOL Group culture.

Activities to contain energy consumption are not just limited to optimising processes and the careful management of plants, but extend to the design and choice of plant solutions and the updating of plant machinery, areas in which there is significant investment every year.

The activity carried on the sector of energy production from renewable sources is further proof of the Group's commitment towards defending the environment

The graphic outlines the trends as regards the quantities (Mwh) of electricity purchased, taking 2006 = 100 as a basis.
The revival of the market is at the root of the higher purchases of energy.
The data pertaining to the "Other Countries" also deducts operation of the Frankfurt plant, which went on line in mid 2009, for the full year of 2010
Also in 2010 it was possible to concentrate productions on the plants with lower specific consumption, encouraging a reduction of the specific consumption.





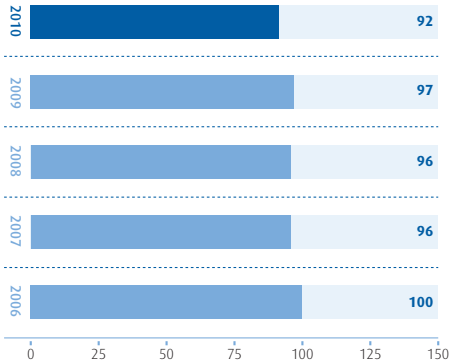
Transport

Transportation is another key topic when it comes to environmental and safety issues.
In fact, products are mainly distributed to the widespread customer base by road.
The characteristics of the main products are such that special vehicles (heavily insulated tankers for cryogenic liquids) or containers (cylinders for compressed gases) are often required whose basic characteristics result in low efficiency as for consumption of fuel per unit of product transported.
SOL's activities to reduce fuel consumption and, therefore, environmental impact, take the form of:

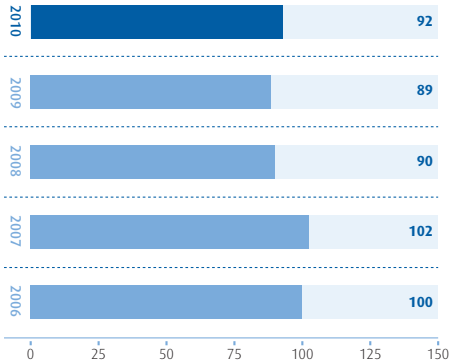
- developing production units that are as widespread as possible in order to reduce the distances travelled by vehicles
- investments in next generation heavy insulated tankers, with a better relationship between the weight of the product being transported and overall weight
- the adoption of logistics management methodologies designed to optimise routes.

In this respect, the process of adopting a specific software program for planning the distribution of liquid products in continuing as scheduled and the 2011 deadline for extending it to all the centres managing the vehicles is confirmed.
The graphic outlines the trend in the ratio between kilometres covered and units of transported product (m3/kg), taking 2006 = 100 as a basis.
Although influenced by the product and client mix, the data illustrate a consolidated reduction of around 4% compared to years 2006-2009 for Italy, and an additional considerable reduction in 2010, also in connection with the introduction of the above-mentioned software for planning journeys.
The reduction is just as substantial for the other countries, and is linked to the construction over the years of new production units that are more barycentric as to the customers.
Reducing the ratio - meaning improving transport efficiency - has a positive repercussion on the environment due to the lower CO_2 emissions per m3/kg of transported product.

Relationship between km travelled and products transported (Italy)
base 2006=100 (m^3/kg)



Relationship between km travelled and products transported (Other Countries)
base 2006=100 (m^3/kg)



Acoustic emissions

Noise pollution originally mainly came from compressors, turbines, tank loading operations and the functioning of the cooling towers used to cool industrial water.
To reduce emission levels, which were already limited in the plant design phase with the adoption of a number of technical features (such as the encapsulation of the compressors), over the years a number of other steps have been taken, such as the installation of silencers at tank loading lines and the soundproofing of evaporating towers.
Thanks above all to these operations, the daytime noise levels at the perimeter walls of all of the plants were found to be below 70 dB(A), and therefore within the legal limit for industrial areas.
The company is nonetheless committed to continuously monitoring noise pollution levels and, where possible, reducing them further with new plant operations.

Atmospheric emissions

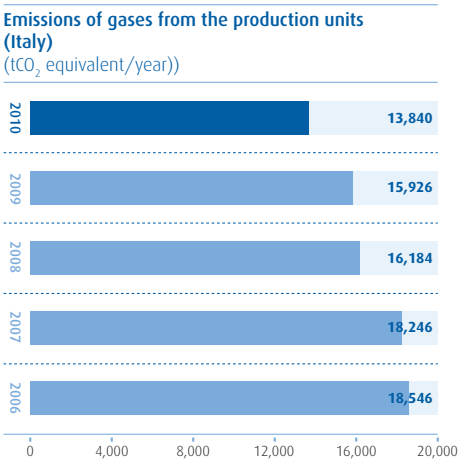
The production processes do not generate significant amounts of harmful emissions.
The emission values are monitored periodically and are always well below the legal limits.

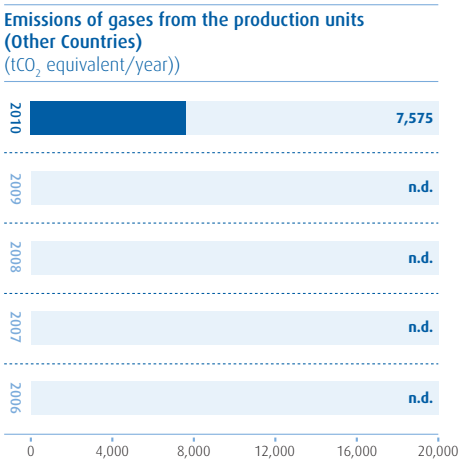
Greenhouse gases (tCO_2 equivalent/year)

The emission of greenhouse gases consists of:

- carbon dioxide, a by-product in the plants producing hydrogen via steam reforming of natural gas and release in the plants producing CO_2 from wells
- nitrous oxide, released in the plants producing N_2O from ammonium nitrate
- HFC (Hydrofluorocarbons), used in the plant refrigeration circuits.

The graphic shows the quantity of greenhouse gases emitted by the production units, expressed in tonnes of carbon dioxide equivalent.
The progressive reduction of emissions is ascribable to the reduction of the quantities of hydrogen produced.

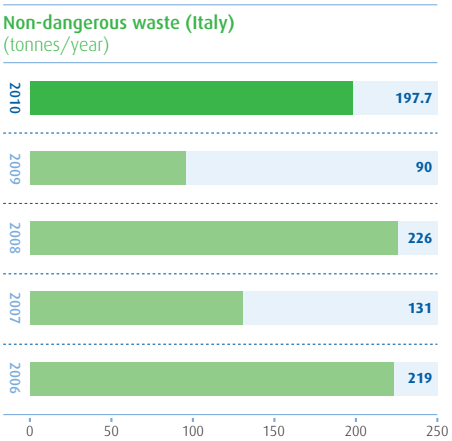


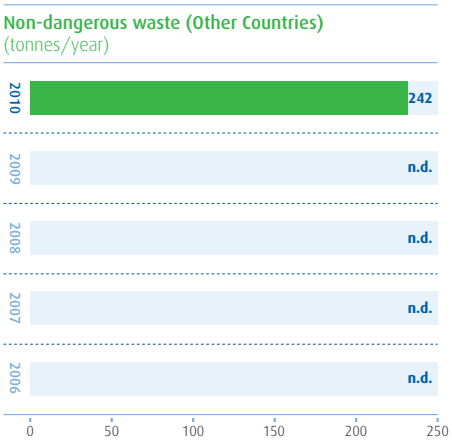


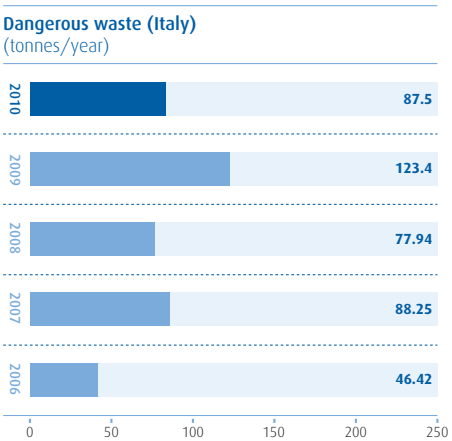
Waste (tonnes/year)

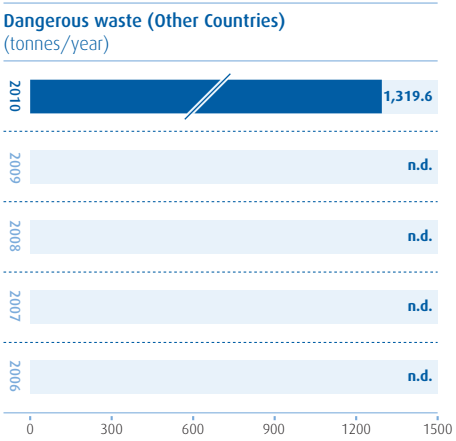
The production of waste consists of:

- waste coming from the maintenance activity, for the most part made up of iron scraps, packaging and insulating materials, normally classified as non-dangerous, and of exhaust oils previously used to lubricate the machines and classified as dangerous. The amount of this waste varies from one year to the next, depending on the number and type of maintenance interventions performed
- calcium hydrate, a by-product of acetylene production, and ammonia solution, a by-product of ammonia conditioning, both considered dangerous waste. The quantities of calcium hydrate are higher in the countries other than Italy due to the higher quantities of acetylene produced as a whole and the prevalence of disposing of it instead of selling it (solution normally adopted in Italy).



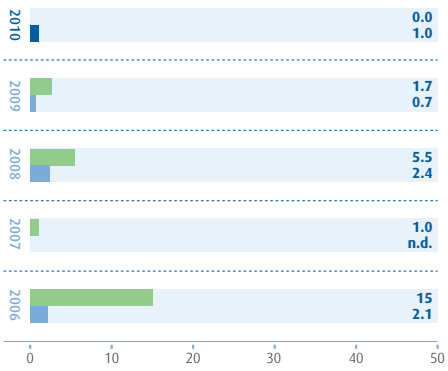




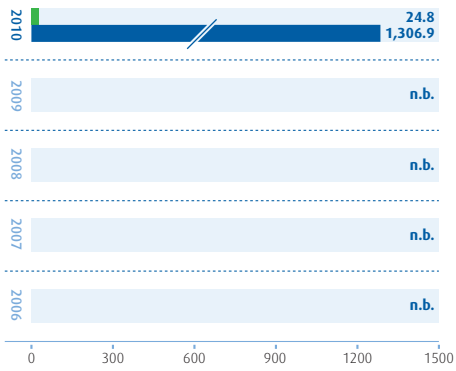


The waste produced is separated as follows:

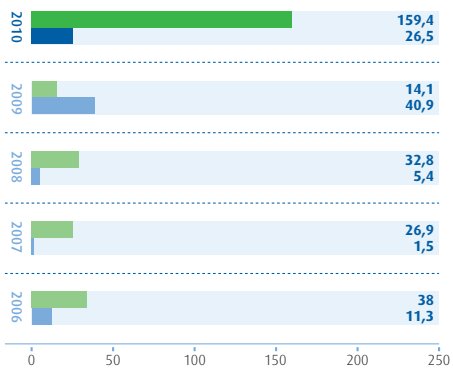
Landfill (Italy)
(tonnes/year)



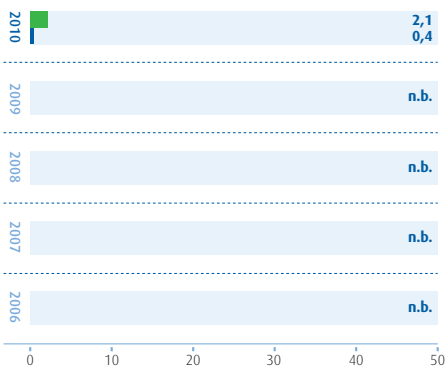
Landfill (Other Countries)
(tonnes/year)



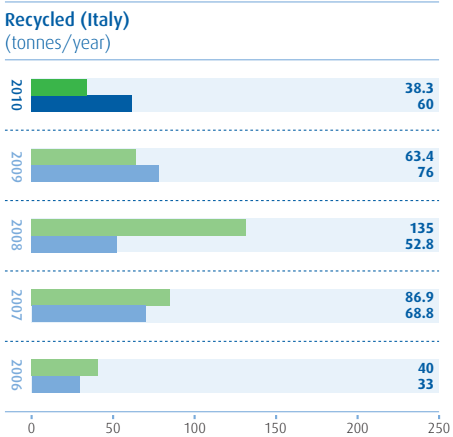
Treatment (Italy)
(tonnes/year)



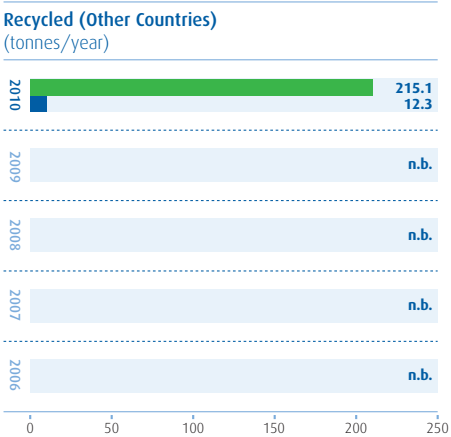
Treatment (Other Countries)
(tonnes/year)



Recycled (Italy)
(tonnes/year)



Recycled (Other Countries)
(tonnes/year)

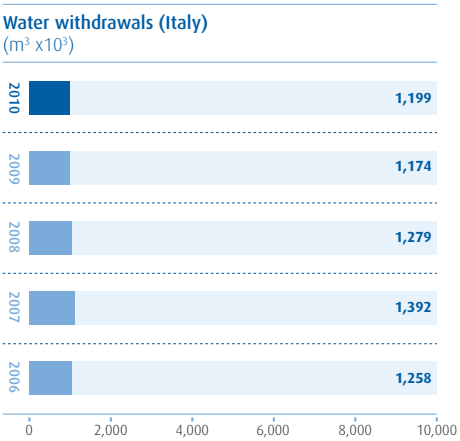


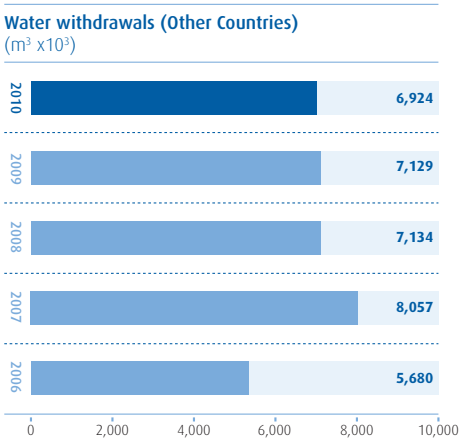
Non-dangerous waste

Dangerous waste

Water withdrawals ($m^3 \times 10^3$)

The water is mostly used in the cooling circuits of the machines in the production plants. In most plants the water is recycled, so consumption is mostly associated with replenishing the evaporated quantities.
An exception to the rule are the Skopje (Republic of Macedonia) and Sisak (Croatia) plants, which do not have recycling plants. This explains the relatively higher value of consumption shown in the "Other Countries" graphic
The slight increase of water withdrawals by the Italian plants is the result of increased quantities produced.





Water drainage (tonnes/year)

The plants carry out water drainage monitoring and quality control programmes.
Data is collected systematically for the Italian Group plants, and it is currently being implemented for those of the other countries.
This is why these latter data are not shown on this report
In any case, the analyses carried out show that, as well as the absolute values of the pollution quantities outlined in the following graphics, the concentration of pollutants is well below the limits established by law.

	COD	Total Nitrogen	Suspended solids	Total Phosphorous	Heavy metals
2010	10.45	3.83	7.69	0.88	0.10
2009	10.62	4.32	5.16	3.08	0.10
2008	6.50	2.62	3.97	0.78	0.29
2007	10.33	4.57	5.12	1.80	0.08
2006	20.08	5.08	10.93	0.56	0.21

Soils and aquifers

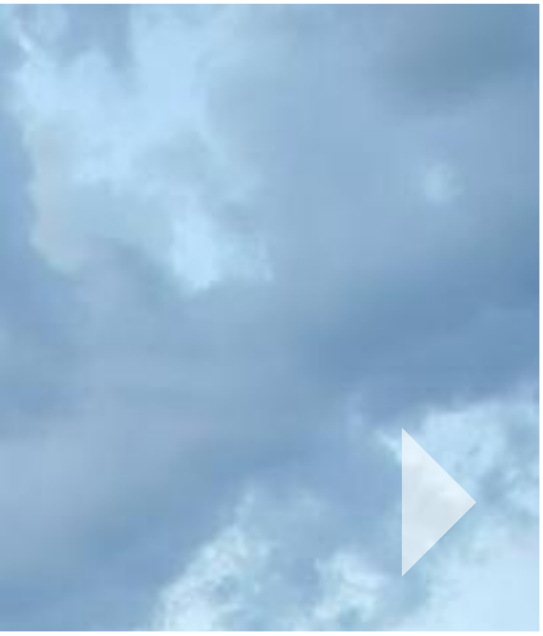
The production of oxygen, nitrogen and argon is carried using a typically physical process (air separation) that excludes the possible presence of substances that can provoke the contamination of the soil or the groundwater.
The hydrogen production process from steam reforming does not involve harmful chemical substances either.
The nitrous oxide production process uses ammonium nitrate, in liquid concentrate or solid form, as a raw material, and this is stored in such a way as to prevent it from dispersed into the soil or groundwater.
In the acetylene production process, the reaction produces calcium hydrate as a by-product, which is stored in special tanks before being sold to users in different product sectors, or sent for disposal.
A number of SOL Units were set up in areas with soil and groundwater contamination problems, although these problems are exogenous and pre-existed the arrival of SOL in the area.

Mantua

A section of the SOL plant in Mantova, set up as part of the chemical industry park, is included in the “Sito di interesse nazionale Laghi di Mantova e Polo chimico”.
SOL took part in the annual "Established underground water monitoring campaign" promoted by the Mantua Regional Environmental Protection Agency (ARPA) also in 2010.

Ravenna

The SOL plant is located in the Ravenna Chemical Industry Park, where the groundwater has been found to be polluted.
As requested by the Ravenna ARPA, SOL has set up a piezometer on its land, and takes part in periodical monitoring campaigns.



Health and safety

The protection of health and safety of its human resources are basic and inalienable values for SOL. They are based on the ethical vision of the workplace that guides day-to-day activities within SOL and its subsidiaries.

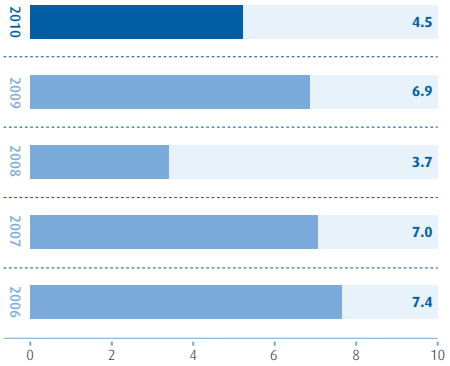
The trend in terms of accident statistics as outlined below shows that the entire organisation is fully committed to respecting good company practices, as established by the Management System.

Injury indexes

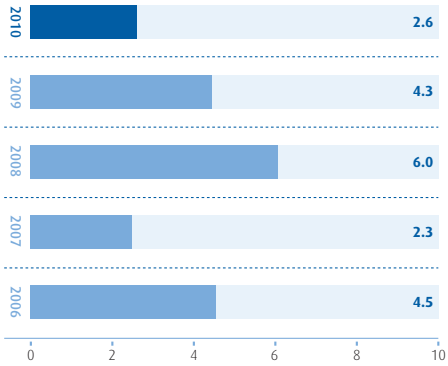
In 2010 the injury frequency and gravity indexes (injuries that resulted in absence from the workplace for at least a day, excluding the day of the accident itself) came to 4.5 and 82.0 for Italy and 2.6 and 29.7 for the other countries, respectively.

Both indexes show a consolidation of positive values in previous years, in line with those of technical gas sector at both Italian and European level.
The value of the frequency index concerning Italy is around 60% that of the chemical industry (as reported by INAIL, which however considers injuries that result in over 3 days of absence of work, as opposed to SOL, who count those injuries leading to more than single day off work) which, in turn, is lower than 50% of the average value recorded in the manufacturing industry.

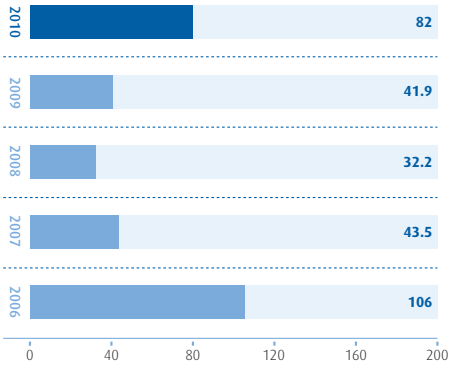
Frequency index (Italy)
number of injuries/10^6 hours worked



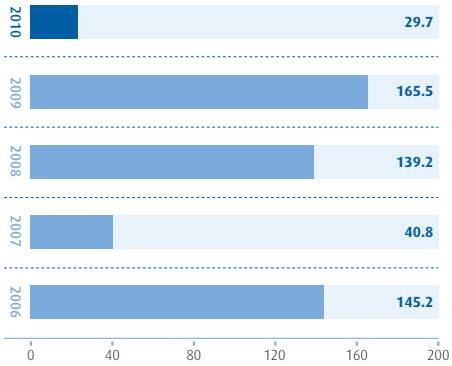
Frequency index (Other Countries)
number of injuries/10^6 hours worked



Gravity index (Italy)
number of injuries/10^6 hours worked



Gravity index (Other Countries)
number of injuries/10^6 hours worked



Employee health

All employees potentially exposed to health risks undergo medical check-ups at a frequency established by the company Occupational Health Doctor (OHD).
Moreover, in order to maximise the quality of the check-ups actually complex such as those of SOL S.p.A. and Vivisol s.r.l., these companies appointed a head company OHD who will establish guidelines and monitor the health protocols adopted by local OHDs.
The results of check-ups have not brought to light any pathologies connected with the company's activities and there are no cases of professional illnesses.

Product safety

After the Classification, Labelling and Packaging (CLP) regulations regarding European harmonisation of the classification and labelling of substances and dangerous preparations came into effect, the safety data sheets of all substances for all of the Companies operating in the European Community countries were revised.
The labels put on the mobile containers were likewise revised.
With regard to REACh, the Company registered the lime (by-product in the production of acetylene).
The other substances subject to pre-registration (acetylene, nitrous oxide and calcium carbide) will be registered starting in 2013, as they are produced or imported in quantities lower than the limit of 1,000 t/year.
SOL participates in working groups at national and international level on these issues with the aim of keeping constantly up to date with the evolution of regulations, and to work in harmony with the other companies in the sector.

Relations with the stakeholders

To pursue its objectives and quickly identify all possible areas for improvement, the SOL Group makes sure its channels of communication with all social interlocutors, at local, national and international level, are open at all times. These subjects include employees, shareholders, clients, suppliers, authorities and the general public.

Employees

To work in a responsible manner, respecting the environment and protecting health and safety, it is crucial to involve all personnel.
For this, SOL encourages open communication at all levels, regardless of company role. The frequent meetings between Unit Top Management and operations staff, the maintenance and continual improvement of the company Intranet, and the publication of the company newspaper "SOL News" are all designed to share information and knowledge, the goals of such activities including that of raising ecological awareness and acting with greater responsibility.

Shareholders

The main tool used to communicate with the shareholders is the Financial Statement. For this reason, the company has sought to go beyond mere compliance with legal obligations and enrich the report, particularly in the "Notes to the Financial Statements" and the "Management Report", with useful information that sheds further light on company activities.

Suppliers

SOL makes increasing use of external resources for activities such as transportation, maintenance and installations.
According to the SOL working method, critical operations involving safety, quality and the environment are only entrusted to companies that have been previously approved following a qualification process involving the filling out of questionnaires and, where deemed necessary, the carrying out of audits.
Of particular relevance, among these continuously monitored requisites, is technical and organisation suitability and the emphasis on environmental issues, and health and safety in the workplace.
SOL is committed to promoting the growing awareness of safety and environmental protection issues among companies that operate at its units, which are involved, where deemed appropriate, in periodical training meetings.

Clients

The ultimate goal of all SOL's operations in all sectors is customer satisfaction, not only through the punctual supply of specific products but also, and above all, by helping to identify the best gas usage conditions and methods.
With clients showing an increasing interest in environmental and safety issues, SOL has invested in the identification and development of technologies that, using the gases supplied, make it possible to improve usage conditions, reducing, for example, atmospheric emissions or making water purification processes more efficient.
Our clients also increasingly frequently ask us for evidence of a Management System, particularly for Quality and the Environment, through the presentation of questionnaires and the carrying of audits at our production units.
SOL's rapid response to such requests represents further qualification of the company in the eyes of our clients.

Authorities

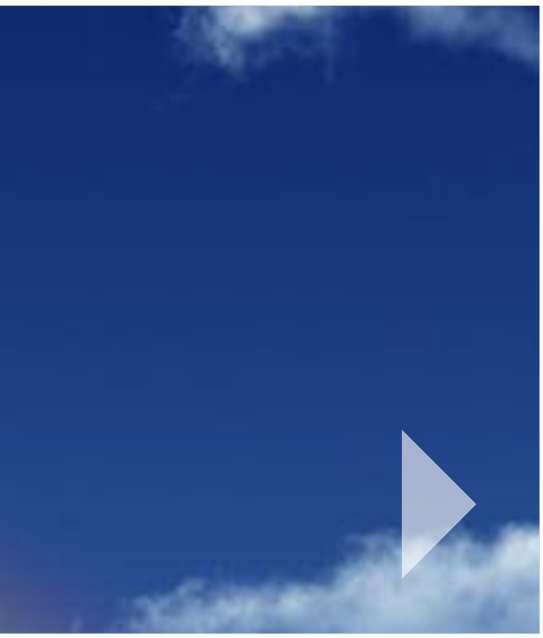
In the management of relations with both local and national authorities, SOL seeks to instil on the basis of objective data and technical and scientific evidence, and with due respect for the roles of the parties involved, constructive dialogue aimed at continual improvement.

General Public

The characteristics of the production processes and the majority of processed products mean that, generally speaking, no problems are created as regards the management of relationships with local communities.
The company is nonetheless committed to open and frank dialogue, and seeks to understand the requirements and requests of the communities in the vicinity of its production units in order to achieve maximum acceptance. SOL also actively participates in formulating the External Emergency Plans (where applicable).
One important project is the "Open Day" initiative, promoted in Italy by Federchimica, which every year allows the public (whether the general public, students, authorities, clients, or suppliers) to visit a production plant and get a first-hand view of how a complex industrial business is managed.

Associations

SOL actively participates in the work of the principle associations, which group together companies from the technical and medical gas sector in the major European countries, in Europe (EIGA) and at international level (IOMA).
SOL experts sit on various working groups within these associations, contributing to the sharing of technical knowledge and the formulation and updating of sector standards.
Aldo Fumagalli Romario, Chairman and CEO of SOL S.p.A., holds the office of Chairman of the Confindustria Sustainable Development Commission.



Glossary

Accident: event due to a chance event that has the potential of leading to an incident or of causing damages to objects.

Air separation: process of separating gases making up the air by distillation, obtaining both liquid and gas products.

Audit: Systematic, independent and documented process for objectively assessing to which extent the management criteria taken as reference have been met.

BS OHSAS 18001: international standard issued by the British Standard Institute that establishes the requirements that a health and safety management system must have.. It allows an organisation to know the risks resulting from operations in normal and extraordinary conditions and keep them under control, and to improve its safety performance

Cylinder: container made of steel or light alloy suitable for containing compressed, liquefied or dissolved gases.

Cylinder basket: steel structure that contains several cylinders vertically, normally from 8 to 16 cylinders, to make simultaneous handling of the cylinders easier using normal forklift trucks.

Cylinder bundle: set of cylinders connected to each other and supported by a metal structure. A single manifold contains the individual outlets of the cylinders.

Cold converter: container with insulated vacuum air space for containing highly refrigerated liquefied cryogenic gases complete with interception, measurement and safety instruments.

Conditioning: production activity consisting in withdrawing the gas from a secondary storage tank and compressing it in the gaseous or liquid state and putting it into mobile containers. Conditioning also includes the sequence of operations that are carried out on the containers from the time they arrive at the centre until their are stored filled and ready for delivery.

Eco-Management and Audit Scheme (EMAS): European Community regulations 761/2001. It is a voluntary tool for implementing the Community Environmental Policy aimed at the continued improvement of environmental performance by the companies and enterprises that adopt them

Food safety: is the concept for which food must not cause injuries to the consumer if prepared according to its intended use.

Frequency index: ratio between number of injuries and hours worked, multiplied by 1,000,000. It is the measurement of the frequency of accidents occurring.

Gravity index: ratio between number of days of absence due to injury and hours worked, multiplied by 1,000,000. It is the measurement of the gravity of accidents.

Injury: undesired event that leads to body lesions or diseases objectively verifiable during work.

Integrated Pollution Prevention and Control (IPPC): Strategy established with Directive 96/61/EC for the purpose of minimising the pollution caused by the various sources located throughout the EU. It envisages the need to obtain integrated authorisations from the authorities of the various countries for all types of plants listed in Annex 1 of the Directive. It is founded on the assumption that failure to adopt a common approach for controlling emissions into the atmosphere, water and soil may transfer pollution from one sector to another rather than lead to its reduction.

Major accident: event such as an emission, fire or explosion of grave extent due to uncontrolled developments that occur during activities with the presence of dangerous substances, which give rise to a grave danger for human health or for the environment.

Means of sale: technical and technological products purchased by third parties and granted to the Client for use within the sphere of a service, but intended to remain the property of SOL such as, for example, mobile containers, cold converters, etc.

Medical device (MD): any instrument, apparatus, equipment, machine, device, system, in vitro or calibration reagent, computer software, material or other similar or correlated product to be used alone or in combination in man for one or more specific diagnosis, prevention, control, treatment or attenuation of a disease purposes; for diagnosis, control, treatment, attenuation or compensation of an injury or

handicap purposes; for study, replacement or modification of the anatomy or physiological process purposes; for intervening on conception and whose main designed action in or on the human body is not achieved with pharmacological or immunological means or through metabolism, but whose function can be assisted by these means.

Medical gas: every medication made up of one or more active gas substances mixed or not mixed with excipient gases.

Mobile container: container for compressed, liquefied, melted and cryogenic gases used for handling products. Mobile containers are: cylinders, drums, gas cylinders, cylinder bundles, dewars, base units and portable units.

Policy (Quality, Safety, Environment): general principles guidelines of an organisation, expressed in a formal manner by top management.

Primary production units: Unit where there are plants that produce the gases starting from raw materials.

Primary storage: tank of liquefied cryogenic gas supplied directly by the production plant.
Secondary storage: tank of liquefied cryogenic gas supplied by tankers and normally installed at the conditioning centres.

Quality, Safety and Environment Management System: the part of the overall management system that includes the organisational structure, planning activities, responsibilities, procedures, processes and resources for drawing up, implementing and keeping active the defined quality, safety and/or environment policies.

Raw materials - Primary production units: atmospheric air for producing oxygen, nitrogen and argon; natural gas for the production of hydrogen and carbon dioxide; calcium carbide for producing acetylene; ammonium nitrate for producing nitrous oxide.

REACH: EC regulations no. 1907/2006 (Registration, Evaluation, Authorization and Restriction of Chemicals). Its main purpose is to improve the awareness of dangers and risks caused by chemical substances, with the aim of reaching a high level of protection of human health and of the environment.

Responsible Care: voluntary programme of the international Chemical Industry based on the implementation of principles and behaviours regarding the Health and Safety of Employees and Environmental Protection, and the commitment to report the results attained towards a continuous, significant and tangible improvement

Secondary production units: Units where the gases are conditioned by usually using the gases coming from the primary production units in the physical state (which can be compressed gas or cryogenic liquid) and in the containers (tankers, tanker bundles, drums or tanks) best suited for their distribution to the end users. Mixtures of pure and high purity gases are also produced in some units.

Seveso Directive (EEC/82/501 and subsequent amendments): European standard for preventing and controlling risks of major accidents occurring.
It regulates the industrial activities that contemplate holding and/or using given quantities of dangerous substances.

Stakeholder: indicates all categories of private or public, individual or collective, inside or outside parties that can affect the success of an enterprise or that have an interest involved in the enterprise's decisions: clients, suppliers, investors, local communities, employees, trade unions, public administration, future generations, etc.

Steam reforming: process in which natural gas reacts with steam when there is a catalyst to produce hydrogen and CO.

Sustainability (see sustainable development):

Sustainable development: is that which allows current economic, environmental and social needs to be met without jeopardising the possibilities for future generations to meet their own

UNI EN ISO 14001 Standard: International standard that establishes the requirements that an environmental management system must have.
It allows an organisation to know the activities that have a significant environmental impact and keep them under control, and to improve its environmental performance

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