



2014

Sustainability report SOL Group

**SOLGROUP**  
a breath of life

# Summary

<b>Looking ahead, responsibly</b>	<b>1</b>	<b>4. Environmental sustainability</b>	<b>34</b>
<b>Foundamentals of know-how</b>	<b>3</b>	4.1. Production activities, their environmental impact and raw materials used	35
<b>1. The SOL Group</b>	<b>4</b>	4.2. Energy resources	38
1.1. Group structure	5	4.3. Transport	39
1.2. New initiatives and acquisitions	6	4.4. Acoustic emissions	40
1.3. Sectors of activity	8	4.5. Atmospheric emissions	40
<b>2. The system of governance</b>	<b>20</b>	4.6. Climate protection: greenhouse gases	41
2.1. Governance and sustainability	21	4.7. Waste	43
2.2. Dialogue with stakeholders	28	4.8. Water	45
<b>3. Economic sustainability</b>	<b>30</b>	4.9. Terrain and groundwater	47
3.1. Financial data	31	4.10. Biodiversity	47
3.2. The distribution of added value	32	<b>5. Social sustainability</b>	<b>48</b>
3.3. Shareholders	33	5.1. Human resources management	49
3.4. Suppliers	33	5.2. Customers and products	59
		5.3. Social commitment	60
		<b>6. Methodological note</b>	<b>64</b>
		<b>7. GRI - G3.1 - Indicators</b>	<b>65</b>
		<b>8. Glossary</b>	<b>70</b>

## SOL Spa

### Registered office

Via Borgazzi, 27  
20900 Monza

### 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

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Comments and suggestions  
are particularly welcome

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## Looking ahead, responsibly

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*A commitment to sustainable development means taking to heart the correct use of resources so as not to reduce their availability for future generations. For us in SOL, it also means, in times of difficulty for the economic context in which we operate such as those we lived through in 2014, finding new paths for development, investing in new projects, opening up new markets and reacting to the crisis with determination, looking to the future with confidence.*

*We feel a deep responsibility, towards all our collaborators and their families, towards our customers and the territories where we are present and operate, to react and work hard to sow the seeds for future development.*

*It is with this spirit that we present the sixth SOL Group Sustainability Report.*

*We strive to improve, constantly. Year after year, we raise our targets for Quality, Safety and the Environment, convinced as we are that we must aim for excellence to meet the expectations of those we meet on our path.*

*The 2014 Report is enriched with data and in-depth analysis; this also covers the new companies which became part of the SOL Group during the year. More space than in the past has been dedicated to the home care sector under the VIVISOL brand, which is close to accounting for 50% of Group turnover.*

*During 2014, for the first time in the history of the Group, turnover of activities outside Italy was greater than that of national activities, thanks also to acquisitions during the year.*

*In Germany we acquired two companies of the Tyczka Group, putting SOL into third place among the producers of liquid carbon dioxide in the country; in India SICGILSOL, a joint venture between SOL and the Indian company SICGIL, acquired the SEVA company in the south of Tamil Nadu, with its modern air fractionating that reinforces its competitive position in the country; in France VIVISOL France acquired the M-Bar company in Tours, which operates in the home care sector; while in Italy SOL acquired the Tesi company, which opens up new and interesting opportunities for the group in the clinical engineering services sector.*

*The significant investments made during the year, more than €130 million, involved not only the above acquisitions but also the strengthening of the Group's production and distribution infrastructures. In 2014 the new air fractionating plant in Varna, Bulgaria, was completed and activated, and investments in developing the air fractionating plants in Mantova, Italy and Kavadarci, Macedonia, completed.*

*In the home care sector, VIVISOL continued its vigorous growth in all the countries where it operates, serving more than 280,000 patients, and bringing up to strength its recent activity in Spain, following the win of an important tender in the Seville region.*

*Significant resources were destined to improving the energy efficiency performance of our plants. Our Research and Development staff continued, together with partner companies, universities and research bodies, to develop innovative technologies for our customers to improve the performance and environmental impacts of their processes.*

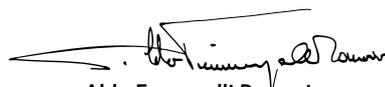
*Development of the Group in the renewable energy sources sector attained important targets: in 2014 the two impoundment hydroelectric plants with their basin and dam in Albania, and three of the four planned in Macedonia.*

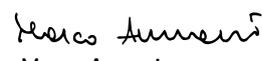
*In the biotech sector, our subsidiary Diatheva has made important progress in research in the development of a new anti-cancer drug, together with CRS biomolecular therapy development, the Istituto Superiore di Sanità, the Rizzoli Orthopaedic Institute in Bologna and Professor Magnani of the University of Urbino.*

*Thanks to these efforts, the SOL Group has created value and development, which can also be measured by the continued growth in the number of employees both in Italy and abroad, now more than 2,800.*

*Over the year, SOL continued its efforts to improve its image: a new group website was inaugurated, [www.solgroup.com](http://www.solgroup.com), to communicate with greater clarity, immediacy and completeness the structure of the SOL Group, its history, its values and its economic and financial data.*

*Although we are well aware of the continuing difficulties in the Italian and European economic scenario, our Group is thus looking to the future with confidence, ready to broaden the frontiers of the markets where it operates and to seize every opportunity to consolidate its presence in the more traditional markets, with an approach that is always responsible and careful management of the financial resources dedicated to it.*

  
**Aldo Fumagalli Romario**  
Chairman, SOL Group

  
**Marco Annoni**  
Vice-chairman, SOL Group

## Fundamentals of know-how

*Every year, compiling the sustainability report is a demanding but satisfying job. Collecting data, looking back on the many initiatives, verifying the results of the commitment of the entire organisation and of individual colleagues in matters relating to sustainability allows us to get a good feel for the coherence with which all of us operate day by day and for the constant improvement in the awareness and commitment in these areas.*

*It is a continual effort which every year finds confirmation in the intense training and information activities in all our locations, for constant updating and reminders about company rules, regulations, procedures and instructions are a necessary premise for operating in a correct way and identifying margins for improvement.*

*The topics covered in the numerous training and information sessions have not only led to compliance with legal requirements but have also been important occasions for discussion, sharing and reminders of the substantial and fundamental aspects of our day-to-day operations in the company.*

*It is only through commitment and care in designing, planning, acting, accounting and controlling that our company community is attentive and proactive in promoting sustainable development.*

*In 2014 the data collected in the Report bear witness to the growth of our activities and confirm the validity of the approach we adopted many years ago when we were among the first in Italy to adhere to the Federchimica Responsible Care programme.*

*This year too all the positive results illustrated have been attained thanks to the strong commitment of top management and intense participation by the men and women in our Group who make an increasing contribution to the Group's common objective: growing in sustainability.*

*In fact again in 2014, both in the traditional sectors of technical gases, medical gases, medical devices and home care and in the more recently developed sectors of biotechnologies and the production of energy from renewable sources, activities have been carried out respecting the shared principles that inspire us and using the operating tools made available by the parent company.*

*The 2014 sustainability report thus continues to provide a meaningful picture of the work we all do, which is marked by an increasing awareness of sustainable development that translates into good conduct, based on the "fundamentals of know-how": knowledge, awareness and correctness.*



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# 1 | The SOL Group



The SOL Group is made up of more than 60 operating Companies, with more than 2,800 employees, active in 24 countries in the sectors of technical, pure and high purity gases, medical gases and medical devices, home care, biotechnology and energy production from renewable sources

## 1.1. Group structure

Turnover in the financial year 2014 was €636.4 million.

The parent company SOL Spa is quoted on the Milan Stock Exchange with a market capitalisation, at 31.12.2014, of €604 million.

The Group's production is spread over more than 100 plants: in primary processing plants, gases are produced from raw materials such as electrical energy, atmospheric air, natural gas, calcium carbide and ammonium nitrate, while the secondary processing plants bottle, store and distribute gases in general (mostly coming from the primary processing plants) and produce high purity gases and precision mixtures.

2014 saw a further important step forward in renewing the Group image and developing communication tools, thanks to the creation of a new Group website. This means that the various stakeholders can have easy access to the information that interests them, be it corporate, financial or commercial.



Technical and  
Medical Gases

Home Care  
Services

Biotechnologies

Renewable  
Energy

## 1.2. New initiatives and acquisitions

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2014 saw the acquisition of 100% of the company capital of Tyczka Kohlensäure GmbH & Co. KG and 50% of the capital of CT Biocarbonic GmbH (“CTB”).

Thanks to these acquisitions the SOL Group has become the third operator in Germany in the liquid carbon dioxide sector and, thanks to CTB, can count on the country’s principal sustainable production of CO<sub>2</sub> from biomass.

SicgilSOL India, a 50% joint venture between SOL and Sicgil, completed the acquisition of the Indian company SEVA Gases Private Ltd, one of the main producers and suppliers of medical and industrial gases in Tamil Nadu. Today SicgilSOL India is a highly integrated company, whose production range includes all industrial and medicinal gases produced in its air separation unit in Pudukudi, Tamil Nadu and in four filling stations.

In the home-care sector, Vivisol France srl acquired 100% of the M-BAR Assistance Respiratoire S.A.S. company, currently operating in the Centre-Val de Loire region.

The most significant investments, particularly in terms of environmental impact, were:

- In Italy, an increase of the production capacity of the Mantova plant.
- In Bulgaria, the construction of a new technical gases production plant at the Agropolichym fertiliser pole in Devnja on the Black Sea.
- In Macedonia, completion of the enlargement of the primary production plant in Kavadarci.
- In Albania and Macedonia, completion of the construction of a dam and five hydroelectric energy plants.
- The construction of production units in Settimo Torinese, Italy and Stirling, Scotland
- The modernisation and rationalisation of the secondary processing plants in Cremona, Catania and Pavia in Italy, Krefeld, Germany, Bedford in the United Kingdom and Banja Luka in Bosnia Herzegovina.

In February 2015 SOL Spa acquired FLOSIT SA, a technical gas production and sales company based in Nouasseur (Casablanca – Marocco). This acquisition marks the SOL Group’s first entry into the African continent.



## 1.3. Sectors of activity

### 1.3.1. The technical gases sector



#### Data on the sector:

- 23 countries
- 1,471 employees
- more than 45,000 customers

#### Activities:

- Production and marketing of industrial, medical, pure and high purity technical gases.
- The design, construction and operation of on-site gas production plants, storage and distribution plants, apparatus and usage systems including, for example, apparatus for cryogenic applications, freezing tunnels, oxy-fuel burners, ozonisers, welding machines and apparatus.
- The supply of services related to the use of the gases produced.

#### Gases produced and distributed:

Oxygen, Nitrogen, Argon, Hydrogen, Carbon dioxide, Acetylene, Nitrous oxide, Gas mixtures, High purity gases, Medical gases, Food grade gases and gaseous Helium.

#### Main gases marketed:

Liquid helium, Gases for electronics, Ammonia and Combustible gases for industrial use.

### Our commitment to the environment and safety

For more than 30 years, the SOL Group has been developing applications for gases and the related technologies and services, which allow its customers to improve safety in the workplace and reduce the environmental impact of their activities.

The applications concern almost all the industrial sectors, as illustrated in detail on the following pages.

### On-site plant

Producing gas directly on customer premises using on-site plants significantly contributes to environment protection:

- a reduction in atmospheric pollution, compared with traditional supply in bottles or tanks delivered by road
- a reduction of energy consumption, since the production process specialising in a single gas with specific characteristics normally consumes less energy than a traditional centralised plant.

Applying the "Life Cycle Assessment" method, **the lower quantities of CO<sub>2</sub> emitted into the atmosphere** in 2014 using on-site plants instead of traditional ones **amounted to 16,968 tonnes.**



## FOOD & BEVERAGE

### Industries served

- Agriculture
- Fish
- Red and white meat
- Fruit and vegetables
- Milk and derivatives
- Ready meals
- Bread and pastries
- Ice cream
- Beverages
- Wine and oil
- Catering

### Technologies and solutions for:

- Carbonic fertilisation with CO<sub>2</sub>: increase in production and in quality and look of the product
- Fumigation and pest control with CO<sub>2</sub> of biological agricultural products for which no chemical products, such as phosphine, can be used
- Fish and mussel farming with O<sub>2</sub>: increase in production and quality of the finished product.
- Cooling, flash freezing, cryogenic freezing, IQF with Lin o LCO<sub>2</sub>: improved quality of frozen product, taste characteristics maintained, better aesthetic aspect, reduced freezing times and space saving.
- Packaging in atmosphere modified with N<sub>2</sub> and CO<sub>2</sub>: shelf life optimisation, improved aesthetic aspect, freshness maintained
- Transport at temperature controlled with Lin or dry ice: safeguarding of freezing chain to preserve quality of food and avoid spread of bacteria
- Gassing, pressing with nitrogen, water dosage: plastic bottle weight reduction.



## METAL PRODUCTION

### Industries served

- Carbon and stainless steel
- Aluminium
- Ferrous products and cast-iron
- Nonferrous products: zinc, lead, copper, magnesium
- Semifinished products and forges
- Mineral extraction
- Precious metal processing
- Glass and ceramics
- Cement and lime

### Technologies and solutions for:

- Oxy combustion and hyper oxygenation with oxygen: reduction of exhaust gas volumes and methane used for combustion, helping safeguard the environment and at the same time increasing productivity
- Wall and fall burners, with conforming flame, low NO<sub>x</sub>: plant designed to optimise emission reduction and limited environmental impact, adaptable to the various types of furnace present.
- Inertisation and degassing with argon, nitrogen and SF<sub>6</sub>: maintenance and improvement of quality of metals produced, reduced waste. Substitutes such toxic chemical compounds as chlorine
- Controlled protective and reactive atmospheres with nitrogen, hydrogen, Solmix: production of high-quality metal products in line with design specifications.
- After burners with oxygen: complete treatment of emissions, limiting quantity and environmental impact



## METAL FABRICATION

### Industries served

- Thermal treatments
- Carbon and stainless steel processing
- Aluminium and nonferrous metal processing
- Automotive industry
- Aeronautical and railway construction
- Shipyards
- Construction sites
- Boilers
- Tools

### Technologies and solutions for:

- Controlled protective and reactive atmospheres with nitrogen and hydrogen
- Endothermic and exothermic atmospheres with solmix controlled carbon potential
- Keying with Lin: products made not using heat but cold, limiting fuel consumption.
- Lin soldering of electronic cards: reduced waste and manual elimination of defective cards, increasing production quality
- Cutting and laser welding with nitrogen and oxygen: increased productivity and product quality
- Oxy cutting and oxyacetylene welding, Mig/Mag, Tig and plasma welding and welders.
- Gas distribution automation and plant: reduced manual operations help reduce risk of accidents
- Pressure & fugitive tests with helium and nitrogen: guarantees tightness of components treated, reducing risks of leakage of products, also toxic products, from plant where they are used (e.g. offshore oil wellhead valves).



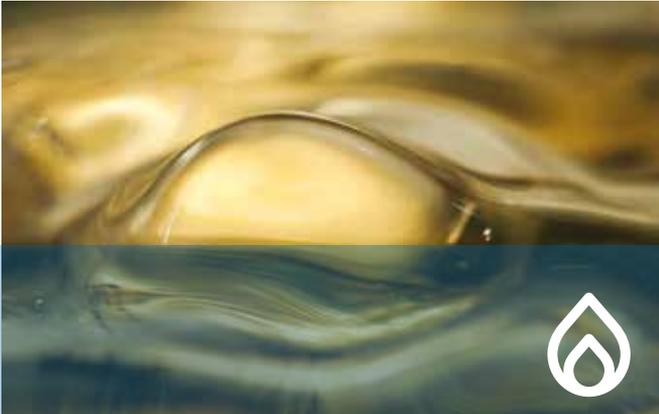
## CHEMISTRY & PHARMA

### Industries served

- Basic and inorganic chemistry
- Synthetic intermediates
- Polymers
- Fine chemistry
- Bulk pharmaceuticals
- Pharmaceutical specialities
- Cosmetics
- Herbalism
- Plastics and rubber

### Technologies and solutions for:

- Inert and protective atmospheres with nitrogen: reduction of risk of accident from contact of products with oxygen, at the same time preserving their quality.
- Fluxing, pressurisation and stripping with nitrogen: plant cleaning with reduced use of polluting chemical additives.
- Grinding and micronisation with Lin and gaseous nitrogen: increased quality of ground product.
- Packaging in inert and sterile atmosphere of pharmaceutical products: preserving and guaranteeing product quality.
- VOC treatment and solvent recovery with Lin: reduced environmental emissions and at the same time recovery of the chemical products they contain
- Cryogenic cleaning with CO<sub>2</sub>: replaces cleaning methods using water, solvents or sandblasting, thus limiting the environmental impact of residues.



## OIL & GAS

### Industries served

- Extraction
- Transport and pipelines
- Refining
- Raw materials and finished products stocking
- Off-shore
- Components and equipment

### Technologies and solutions for:

- EOR processes with nitrogen and CO<sub>2</sub>: increased extraction productivity avoiding the need for new wells
- Fluxing, pressurisation and stripping: plant cleaning with reduced use of polluting chemical additives.
- Controlled cooling with Lin: reduced plant maintenance times, faster cooling and less risk for operators.
- Inertisation and drying with nitrogen: plant maintained in controlled stand-by, limiting accident risks and permitting fast restart
- Cryogenic cooling with Lin: permits work on filled pipes without need for emptying.
- Claus processes with oxygen: improved and optimised recovery of sulphur from refinery flows and lower emissions.
- Control and regulation of technical and special gases, management and maintenance of emission control units: emission control units are kept efficient, reducing the risks of accidental emissions.



## ENERGY & ENVIRONMENT

### Industries served

- Multiutility
- Wastewater purification
- Purification
- Waste Management
- Special waste management
- Incineration
- Chemical, pharmaceutical, fabric and leather, food, paper, petrochemical and extraction industries.

### Technologies and solutions for:

- Treatment of wastewater with O<sub>2</sub>: better purifying and purifying capacity with less environmental impact and better control of treatment
- Treatment of wastewater with ozone: reduced colour, micro contamination, nitrates: treatment optimisation with less environmental impact
- AOP processes with ozone: on-site environmental clean-up, less removal of terrain and combustion treatments with higher environmental impact
- Wastewater deodorisation with oxygen: reduced environmental impact
- Disinfection with oxygen: watercourses receiving wastewater after treatment are protected from bacterial pollution without the use of chlorine compounds
- Surplus sludge reduction with oxygen: less surplus sludge to send to dump, reduced environmental impact
- pH control with CO<sub>2</sub>: replaces mineral acids (sulphuric and hydrochloric) that pollute the water
- Re-carbonisation and re-mineralisation of drinking water with CO<sub>2</sub>: drinking water can be made to meet legal requirements using a certified food additive
- Oxy combustion of refuse with oxygen: reduction of gaseous emissions and increased control of incinerator plant with widely varying refuse loads (tourist areas)
- After burners with oxygen: full treatment of emissions, limiting their quantity and environmental impact
- VOC treatments and solvent recovery: low environmental emissions and at the same time recovery of the chemical products they contain

### 1.3.2. The medical gases sector



#### Data on the sector:

- 23 countries in which Technical Gases Sector companies and the TESI subsidiary operate
- more than 500 large customers
- 39 pharmaceutical plants, 21 in Italy and 18 elsewhere in Europe

#### Activities:

- The production, distribution and sale of medical gases with Marketing Authorisation, other mono gases and gas mixtures classified as Active Pharmaceutical Ingredients (API), gases and therapeutical mixtures.
- The production, distribution and sale of gases and mixtures certified as Medical Devices.
- The design, manufacturing, management and operation of such Medical Devices as centralised gas distribution plant and plants for the endocavitary aspiration and the evacuation of anaesthetic gases; complementary materials, accessories and consumable materials for the administration of medical drugs and the use of fluids.
- The design, manufacturing, management and operation of on-site plant for medical air Ph.Eu, endocavitary aspiration and self-producers of very high purity gases for laboratories.
- The design, production and management of processes for handling supplies, services, materials, and the sanitising of air, water, plants, environments, surfaces and devices, and for environmental monitoring; management services and accounting of consumption, costs and inventories.
- Gas quality control services with an EN17025 (Accredia n°1415) accredited laboratory and mobile analysis units with highly qualified operators.
- The design and management of integrated hospital services: Total Gas Management, Cryo-management, Cell-management, management of the entire process of distribution of pharmaceuticals and patient records in health structures.
- The management and maintenance of electro-medical apparatus resources (Clinical Engineering services), medical devices for diagnosis, spirometry and other specific applications.
- The design and operation of ECM accredited training services for staff, also on workplace safety topics, both residential and distance training with highly qualified instructors.

#### Gases produced and distributed:

Gases with Marketing Authorisation: Oxygen, Nitrous oxide, Synthetic and compressed air, Neophyr and Donopa mixtures.

Other gases Ph.Eu: Nitrogen, Carbon dioxide

Mixtures for therapeutic use on prescription

Gases and certified mixtures

Gases and certified mixtures for diagnostic and instrumental use

Special gases and mixtures to very high levels of purity



## Our commitment to the environment and safety

The safety of patients, operators and all those present for various reasons in the places where medical gases and services are supplied, managed and administered is a primary objective for us.

The experience we have built up and a continual exchange of information allows us to bring innovation to the products and services, also with the aim of making them intrinsically safer: examples are the integrated reduction valves for compressed gas packages, safety and protection devices for handling cryogenic gases and safety and monitoring devices for rapid analysis of dangerous atmosphere.

Reduction of the environmental impact of these activities is achieved by the optimisation of transport and computerisation of financial documents and reports. Reports are produced using verification and anti-counterfeiting systems, digital signatures and validated software so as to ensure the security of private information.

## Management services

The **Total Gas Management Service** (TGM) offers health structures the possibility of reducing to a minimum the risks connected with handling of medical gas packages and containers and their supplying. TGM is planned case by case, so as to satisfy the requirements of different organisational models.

In the biological samples management services sector, **“Disaster Recovery”** is an integrated organisational, logistic and plant service that guarantees customers the safety of the biological material stored in the structure in catastrophes or emergencies. The service can also put in motion special transport to remove the samples from the affected location quickly, without ever compromising safety and quality.

Through its subsidiary TESI Tecnologia & Sicurezza, SOL can today become a partner in the ordinary management, operation and emergency management for electromedical apparatus, from the simplest device to diagnostic machinery and life-saving therapy devices.

## Training services

Training in the safe use of medical fluids, their containers and accessories is fundamental for correct product administration and handling.

Training is provided through ECM courses, which can be accredited of customer request. They can be held both residentially and at a distance, to satisfy the needs of structures and individual students.

All participants are encouraged to contribute their experiences and express their opinion on the effectiveness of the events. These data are then analysed and used to identify areas for improvement, following the evolution of technologies and procedures in the health sector.

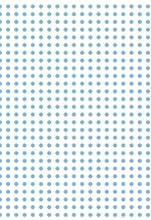
## Plant and accessories for gas usage

Plants for medical gas distribution are designed to meet the essential requirements of community legislation on Medical Devices and the related technical regulations, with the main aim of safety: the right gas must arrive with the right quality and the right quantity to each patient that needs it.

All accessories needed for the use of gases are designed, manufactured and maintained to guarantee safe administration to the patient.

## On-site plant

On-site plants, which have been used now for more than 20 years, are continually revised and redesigned to improve further their performance, with particular attention to their strong points: reduction of acoustic and atmospheric pollution, of energy consumption and of the production of waste and refuse.



### 1.3.3. The home care sector



#### Data on the sector:

- 18 companies
- 11 countries
- 1,411 employees
- more than 280,000 customers
- 20 pharmaceutical plant, six in Italy and 14 elsewhere in Europe

#### Activities:

- The supply of services, apparatus and products for home oxygen therapy with liquid or gaseous oxygen and concentrators
- The supply of services and apparatus for home mechanical ventilation
- Home treatment of the obstructive sleep apnoea syndrome (OSAS)
- The supply of products and apparatus for home artificial feeding
- The supply of integrated home care services
- The supply of apparatus and services for home care of bedsore

#### Our commitment to the environment and safety

VIVISOL operates with awareness of the need to maintain and further develop a quality management policy aimed at continuously improving home care services and with an overall management vision of its activities.

Home solutions and services have been perfected with strong points including the safety of the user and the defence and protection of the environment. Principal among these are:

- a logistics system that optimises the routes of delivery vehicles, reducing atmospheric pollution thanks to lower mileage
- progressive substitution of delivery vehicles with the introduction of euro 4 and Euro 5 certified vehicles
- a system that optimises home visits by nursing and medical personnel and the routes of the vehicles they use
- an emergency telephone helpline for patients who have technical problems with the apparatus
- a technical assistance service with ready availability
- software for planning the transfer of materials between warehouses and centres, leading to a reduction in the number of supply trips needed



### Home oxygen therapy service

VIVISOL operates throughout Italy and in the main European countries, providing care for patients with respiratory insufficiency. Thanks to VIVITRAVEL, patients can continue to use the service even when they are travelling in Italy and in the main European countries.

### Ventilotherapy

VIVISOL offers mechanical ventilation apparatus that can be interfaced with various remote monitoring systems thanks to agreements with leading world producers. The VIVISOL service includes installation, ordinary and extraordinary maintenance, instruction and training for the patient and caregiver.

### Treatment of sleep apnoea

Analysis of the quality of sleep is a new science that makes it possible to intervene with suitable therapies on certain pathologies that are often hidden or latent. The VIVIDREAM service offers an accurate analysis of sleep, using sophisticated apparatus that can remotely monitor clinical data obtained directly in the patient's home.

### Aerosol therapy

Aerosol therapy is a natural, ancient and effective method, with no counter indications and recognised benefits. The service offered includes installation of the apparatus in the patient's home, training for the patient and his family and a technical assistance service.

### Alternative communication

VIVISOL is able to offer a service dedicated to those affected by pathologies that limit or prevent communication, for example neuromuscular pathologies. The reacquisition of the possibility of communicating autonomously offered by the service leads to an improvement in the patient's quality of life.

### Artificial feeding service

When enteral or parenteral feeding is used for long periods, doctors may decide to have the patient continue the therapy at home. VIVISOL provides all the feeding products, the apparatus and accessories needed to administer the treatment, guarantees training for patients and caregivers and offers ongoing technical and health assistance.

### Telemedicine

Telemedicine is an important result achieved by VIVISOL in patient care and assistance. It can overcome time and distance, making it possible for doctors to monitor patients at home with an effectiveness and immediacy comparable to hospital care.

### Home healthcare

The high-intensity home care service offered by VIVISOL is specially formulated to satisfy the user's social and health care needs, offering in the home services typical of the hospital that demand the integration of technological and health resources.

### Therapy aid and antidecubitus treatment management

Since 2002 VIVISOL has also specialised in the management of certain therapy aids, including, among others, those for preventing and treating decubitus lesions.

### Training services

VIVISOL organises training meetings, for example those held in Holland for 250 professional doctors on oxygen (Breathless symposium) and sleep apnoea (Sleepless symposium). It also participates with trainers at seminars organised by hospitals for their nursing staff.



## The Vivitravel service

Throughout Europe, oxygen therapy using medical oxygen is recognised by Health Authorities as a treatment method for patients affected by respiratory pathologies that improves their quality of life.

Vivisol sees the patient as an active person who wants to get out of his home environment, travel in his own country and abroad and live a fully autonomous life.

Vivisol's Vivitravel service puts the patient at the centre of things, attaching importance to his wishes and needs often based on impediments caused by pathologies, thus going beyond the simple organisation of the service.

This is possible because those who work in Vivisol at whatever level and in every country are trained and motivated, share Group values and have embraced the culture of "seeing with the eyes of the patient".

Vivisol with its Vivitravel service guarantees its patients throughout Europe:

- assistance: thanks to a 24/7 toll-free number ready to respond to their needs with empathy;
- highly efficient services: a widespread presence in Europe allows patients to feel protected and insured both in their own country and in all the European countries where Vivisol operates;
- protection and safety: Vivisol personnel can be recognised by their identification badges and uniforms;
- clarity and transparency: brochures and information sheets on the management of the service are distributed;
- guarantees during holidays: thanks to a direct relationship with shipping companies, travel agents and tourist structures who cooperate to make the stay of the patient as comfortable as possible;
- peace of mind: patients' needs are looked after also outside the home, so they can feel at home even when they are miles away.



### 1.3.5. The biotechnologies sector



#### Data on the sector:

- two companies in Italy: BiotechSol e Diatheva
- 14 employees
- more than 300 customers
- 1 pharmaceutical plant

#### Activities:

Clean Room laboratories and cell and tissue processing and conservation centres; design, construction and management of cryo-biological rooms: design, construction and operational and documentary management of the rooms and the samples stored there; event and emergency management (Disaster recovery)

Biological sample transport and conservation services for third parties

Pre-and post natal diagnostic services

Production and sale of diagnostic systems and services

GMP production of monoclonal antibodies and recombinant proteins

Scientific, pre-clinical and clinical research on new biological pharmaceuticals

### Our commitment to the environment and safety

The service of designing and creating ISO 9001 certified cryo- biological rooms is aimed at public and private structures that carry out scientific research and manipulation for cell, tissue and organ transplants and need to preserve their biological samples for long periods of time in liquid nitrogen.

The complementary Disaster Recovery service guarantees public and private structures the transfer, in emergency situations, of biological samples to SOL's own cryo-biological rooms.

The pre- and post natal diagnostic screening services are important for ensuring correct development of the newborn baby since they

permit early diagnosis of numerous and insidious diseases which can be cured if diagnosed in time. The Bioshipping service provides transport of biological samples between health structures in conditions of total security and traceability, with continuous control of parameters.

This service is growing continually and is of particular importance for numerous uses and applications, in particular for delicate and often unrepeatable samples such as gametes. The SOL Group can satisfy the requirements for reliability and very high specialisation required by the regulations governing structures for Medically Assisted Procreation and follow its continual evolution.

Through its subsidiary Diatheva the SOL Group entered the sector of the development, production

and sale of diagnostic systems for clinical, diagnostic and analytical application. Diatheva diagnostic systems are innovative because they permit identification and quantification using DNA amplification techniques of food pathogens in any matrix and for any requirements.

Compared with traditional techniques such as cultures they can reduce the time required to obtain results to just a few hours and are aimed principally at the food and environmental control sectors where fast analytical results are critical for taking decisions that will affect the safety of people and the environment.

### 1.3.4. The energy production from renewable sources sector



#### Data on the sector:

- 3 companies:
  - Energetika doo, with 6 hydroelectric power stations operating;
  - Hydroenergy Sh.p.k, with 2 reservoir fed hydroelectric power stations in operation;
  - SOL Hydropower d.o.o.e.i., with 4 hydroelectric power stations, three operational and one in start-up
- 3 countries: Slovenia, Albania and Macedonia
- 18 employees

#### Activities:

Production of electrical energy in hydroelectric power stations

The exploration and identification, design, construction and management of hydroelectric power stations connected to the national high tension electricity distribution network.

### Our commitment to the environment and safety

The production of technical gases is strongly dependent on electrical energy, mostly produced from such fossil fuels as gas, carbon and petrol which have a considerable negative impact on the environment.

Among the objectives the SOL Group has long had is to meet part of its energy needs by itself producing electrical energy from renewable sources, so as to benefit the environment by reducing its dependence on fossil fuels.

Various projects have been launched, some still under development, which have led over the years to the construction of a number of hydroelectric power stations that are already able to meet part of the Group's energy needs.

**The reduction in CO<sub>2</sub> atmospheric emissions in 2014 thanks to the electrical energy generated in the Group's power stations is estimated at more than 59,500 t per year.**



# 2

## The governance system





The SOL Group sustainable development model aims to create economic growth while minimising the impact of its activities on the environment and safeguarding the health and safety of its employees, while ensuring their professional development.

We are well aware that the expectations of shareholders must be balanced with those of all parties who interface with the company, since they have legitimate interests.

## 2.1. Governance and sustainability

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The governance model adopted to guarantee the attainment of the sustainability objectives hinges on the corporate governance system, that of internal control and on the integrated quality, safety and environment management system.

This latter system manages development plans in all company environments, aiming for continuous improvement and guaranteeing that company operations potentially at risk are handled, even with regard to situations whose likelihood of occurrence is evaluated as remote, with a precautional approach and not just taking preventive action against known risks.

### 2.1.1. The Corporate governance system

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The parent company SOL Spa has adopted a model of corporate governance that it feels is substantially adequate for its structure, size and market capitalisation and that can continue to guarantee, at this time, the transparency required by market practice and a balanced and effective system of controls.

The organs making up the governance structure of SOL Spa are:

- the Shareholders' assembly;
- the Board of Directors;
- the Board of Auditors;
- the Auditors firm.

For further information, see the section "Investor relations" on [www.solgroup.com](http://www.solgroup.com).

## 2.1.2. The internal control system

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The Board of Directors of the parent company SOL Spa has created the internal control function, with the job of ensuring that internal operational and administrative procedures, laid down to ensure clean and efficient management and to identify, prevent and handle risks of a financial and operational nature and attempts to defraud the company, are effectively respected.

Those responsible for the internal control function do not answer in hierarchical terms to any operational area managers but directly to the Board of Directors.

Both SOL Spa and Vivisol Srl have also instituted a “Supervisory Body”, with suitable means and the necessary autonomy, which verifies that the organisation, management and control model under D.Lgs. 231/2001 is respected.

The internal control system is integrated by the Code of Ethics and the regulations and procedures in the integrated system of quality, safety and environmental management.

### The Code of Ethics

The Code of Ethics defines the values on which the activity of the SOL Group is founded and with which Group employees and collaborators must comply.

The Board of Administration of SOL Spa confirmed in a meeting on February 19, 2009 the validity of the Group Code of Ethics, which came into force on January 1, 2006 and was progressively adopted by all Group companies.

The document, in particular:

- expresses the values on which SOL Group activity is based: correct and loyal behaviour, the circulation of information, a willingness to listen, a readiness to understand that the problems of those we have to deal with are our problems and an awareness that the economic process must be continually coordinated with a system of values;
- highlights the principles of behaviour to be followed by all employees and collaborators;
- highlights the principles of behaviour the SOL Group follows in managing business activities, both internally and externally;
- identifies the stakeholders of the Group and describes the approach to each of them;
- expresses the principles that inspired the “personnel policies” and the activities for the “safeguard of safety, health and the environment”;
- expresses the commitment to a prudent and responsible use of resources and information;
- lays down the sanctions for failure to respect the Code.





### The model of organisation, management and control under D.Lgs 231/01

SOL Spa and Vivisol Srl have each adopted their own Model for organisation, management and control as laid down by Legislative Decree 8/06/2001 n. 231 which, among other things, integrates the offences relating to safety and health in the workplace, laid down by D.Lgs 81/08.

The first versions of the two Models date back to 2006 and have been subsequently updated to take account of the experience built up in management, the introduction of new offences and the related jurisprudence.

During 2013 the SOL Spa Model was updated following the introduction, among the offences laid down by D.Lgs. 231, other criminal offences laid down by certain European Community Directives on environmental crimes (n. 2008/99/CE and n. 2009/123/CE) and the extension to companies, with article 25-undecies of D.Lgs 231, of the administrative responsibility for certain environmental crimes.

The updating of the Model was approved by the Board of Directors on March 29, 2013 (that of Vivisol Srl had been approved in 2012 by the Board of Directors on December 13). Both the Code of Ethics and the Model distributed to all employees and collaborators of the companies concerned, and also published on [www.solgroup.com](http://www.solgroup.com). Every employee is encouraged to report to his superior possible violations of the Code of Ethics. In particular for SOL Spa and Vivisol Srl a specific email address has been created for reports to the Supervisory Body.

## 2.1.3. The Management systems

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The SOL Group has opted to impose in an integrated way its Quality, Safety and Environmental Management System (SHEQ/MS), to guarantee coverage of all its activities, eliminating pointless duplication and emphasising synergies.

Application of the Management System is aimed at improving the quality, efficiency and effectiveness of the various company processes, thus continuously reducing impacts on the health of employees, safety conditions in the workplace and the external environment.

### The organisational structure

The *governance* of the Management systems is entrusted to the “Quality, Safety and Environment Management System Steering Committee” (CGSQ) made up of the executive directors, general managers and central directors. This has the task of re-examining the Management system to ensure its efficacy and adequacy over time.

The CGSQ:

- examines the progress of the SHEQ Management System;
- evaluates and define strategic interventions;
- verifies and, when necessary, updates the quality, safety and environmental management policies;
- deliberates objectives and activity programmes for quality, safety and environmental management that appear necessary after Committee discussions.

In operational terms, the Management systems are under the responsibility of central quality, safety and environment Management (DIQS), which reports annually to the CGSQ. Progress and any updates are presented by DIQS to top management at quarterly report meetings and the investment summit.

Matters relating to organisation, labour and industrial relations are handled by Central Personnel and Legal Affairs Management, which presents the following data on human resources management annually to the managing directors and general managers:

- the main indicators relating to human resources and their cost
- data on turnover, absenteeism, over time, hours worked, holidays
- the types of contract used
- the state of industrial relations with union representatives and any disagreements
- the principal training initiatives and investments for improving human resources management

### Policies

The basis of the Management system is the Policies.

The Policies are documents underwritten by the President and General Managers of the Group that outline the principles behind the operations of Group companies and define the objectives that top management intends to pursue in the various sectors.

**SOL Group companies quality management Policy:** this document from the integrated quality, safety and environment management system was published for the first time in 1993 and revised and updated in March 2013.

The document is made available to the all Group employees through publication on the company intranet.

The Policy expresses the concept that SOL Group companies carry out their activities aware of the need to maintain and further develop a quality management system oriented towards continuous improvement, in an overall vision of their activities, in the conviction that quality is a value that everybody creates together, day by day, through dialogue, participation, agreement and involvement.

**SOL Group companies safety and environment Policy:** this document from the integrated quality, safety and environment management system was published for the first time in 1993 and revised and updated in June 2013.

The commitments and fundamental principles expressed in the Policy are:

- respect for health, safety and environmental rules, laws and regulations;
- the carrying out of activities with the aim of preventing all accidents and injuries;
- a review of performance aiming for continual improvement;
- the identification, elimination or control of potential risk situations connected with activities;
- continual improvement in personnel training at all levels, technical updating of plant and the sharing of best practices with partners and in category associations.

Because, as the “Policy” states:

- safety and respect for the environment mean consciousness and awareness
- safety and respect for the environment mean teamwork
- safety and respect for the environment mean a sense of responsibility
- safety and respect for the environment mean professionalism

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

It is periodically revised to ensure that any needs to update objectives are recognised and integrated in the document.

Units to which the “Seveso Directive” applies or which are certified BS OHSAS 18001 or under the ISO 14001 standard also issue their own documents of environmental and safety policy which include the principles of Group policy and integrate them with the specific objectives of the site.

### Responsible Care

SOL Spa was, in 1995, one of the first companies in Italy to subscribe to Responsible Care, the voluntary programme of the world chemical industry supported, in Italy, by Federchimica, in which it plays an active part, with its own representative on the managing Committee.



As part of this programme, several environmental and workplace safety performance indicators are collected each year, and are also used in this report.

On January 7, 2015 SOL adhered to the “Responsible Care Global Charter”, committing itself to promoting the principles and contents of the initiative in all countries where the Group is present.

### The Charter of principles for environmental sustainability

SOL has adopted the “Charter of principles for environmental sustainability” produced by Confindustria and proposed at the beginning of 2012 to member companies.

SOL played a leading part in the drafting of the Charter of principles and of the relative Operational guidelines, with company directors participating in the working group set up by Confindustria



## Certifications

**ISO 9001:** starting from the certification of the first Units in 1994, the Group has subsequently extended the perimeter and also in 2014 new Units were added. The certifications cover 95 (89 in 2013) Units in the various European countries, more than 75% of the total.

**BS OHSAS 18001:** with the coming into force in Italy of Legislative Decree 81/2008, which lays down, as a necessary condition for exemption from application of the sanctions laid down by Decree 231/01, the adoption of a Management system in line with Regulation OHSAS 18001, certification becomes even more important as a guarantee for top management.

SOL Spa and Vivisol Srl obtained certification of the Safety management system for all their Units, as laid down by the standard OHSAS 18001.

Later, other Units in Slovenia, Spain and Rumania were added to those certified in Italy. A further extension of the adoption of the OHSAS 18001 Management System is among our objectives for the coming three years.

**ISO 14001 and EMAS:** considering the importance attached to respecting environmental issues, though the Group's production activities have a quite limited direct impact on the environment, the correct adoption of the Group Management System was verified with certification of some particularly significant Units.

The number of units certified is growing continually, from 14 in 2013 to the current 16.

The new Units certified are those of Dolby Vivisol in the UK.

Two Italian Units also adhere to the EMAS regulation.

**Responsible care:** the implementation of the "Responsible care" Programme in SOL Spa was submitted, in 2014, to an "Audit of the verification scheme by Federchimica". This audit confirmed conformity with the principles and requirements of the Programme.

**ISO 50001:** the Frankfurt plant of SOL Spa Branch Deutschland is certified ISO 50001, the international standard whose adoption helps organisations to improve their energy performance, increasing efficiency and reducing climatic and environmental impact. Among the strategic objectives the 2015 is certification under the ISO 50001 standard of all Italian primary process plants.

**ISO 27001:** the ISO 27001 standard defines the requirements for creating and running an Information security management system (logical, physical and organisational security), with the aim of protecting data and information from threats of all kinds, ensuring its integrity, confidentiality and availability.

Certification under this standard was obtained in 2012 for the headquarters of SOL Spa, Vivisol Srl and Biotechsol Srl, in the two distinct areas of management and monitoring of centrally distributed IT services and the development of applications to support business processes.



## Certifications at December 31, 2014.

Company	Country	ISO 9001	OHSAS 18001	ISO 14001	EMAS	ISO 50001	ISO 13485	ISO 27001	FSSC 22000
<b>Technical gases sector</b>									
SOL Spa	Italy	22	29	6	2	-	2	1	2
ICOA Srl	Italy	1	-	1	-	-	-	-	-
SOL Welding	Italy	1							
SOL Spa Belgium	Belgium	1	-	1	-	-	-	-	-
SOL Spa Deutschland	Germany	1				1			1
BTG BVBA	Belgium	1							
NTG BV	Netherlands	2							2
TGS AD	Republic of Macedonia	3	-	-		-			3
SOL SEE doo	Republic of Macedonia	2							2
SOL TG GmbH	Austria	1	-	-			1		
UTP doo	Croatia	2							
Kisikana	Croatia	3							
SOL France SA	France	1					1		
SPG doo	Slovenia	1	1	1					
TPJ	Slovenia	1							
SOL Hellas	Greece	3					1		3
SOL Srbija	Serbia	1							
IMG	Serbia	1							
GTS	Albania	1							
TGP	Bosnia-Herzegovina	1		1					1
TMG	Germany	2							2
SOL Kohlensäure	Germany	1							1
GTH	Romania	1	1						
SOL Bulgaria	Bulgaria								1
SicgilSOL	India	1							
<b>Home care sector</b>									
Visisol Srl	Italy	20	20	1			2	1	
Visisol Napoli Srl	Italy	1							
Visisol Silarus Srl	Italy	1							
Visisol Calabria Srl	Italy	1							
Visisol Deutschland GmbH	Germany	5					4		
Visisol Nederland	Netherlands	1							
Visisol Austria	Austria	2							
Visisol Hellas	Greece	2							
Dolby Visisol	United Kingdom	2	1	2				1	
Visisol Iberica	Spain	3	3	3					
<b>Biotechnologies sector</b>									
Biotechsol Srl	Italy	1					1		

## 2.2. The dialogue with stakeholders

The SOL Group is aware that no company organisation should conduct its activity without taking into due account the indications and expectations of all its stakeholders.

It is the stakeholders who guide our behaviour and drive us to continual improvement: for this reason we keep channels of communication constantly open with all those who can influence our decisions and actions and whose actions and decisions can be influenced by us.

In the absence of a GRI standard for the technical gases sector, we have sought to select information we feel is useful for our stakeholders, on the basis of the nature of our activity and the risks and opportunities associated with it.

We have analysed, on the basis of potential interest and reciprocal priorities, all categories of potential stakeholders, and feel that those who can take advantage of the information in this Report are the following:

### Stakeholder and report sections



## Charter of Environmental Sustainability Principles

Companies are called to operate in an increasingly globalised market. As they grow, they are faced with the internationalisation of the economy, which they strongly support.

In their path towards development and economic growth, companies pursue a strategy for generating wealth, while ensuring the combination of competitiveness, environmental sustainability and social responsibility, as crucial criteria for success and core elements of a genuine enterprise culture.

Companies are aware that the protection of the natural and social environment is a primary community interest. Therefore, their aim is to achieve development goals while improving their environmental performance.

Environmental sustainability is one of the pillars of development.

It should be pursued through a synergy between the industrial system, the institutions and the social partners, with the aim to promote a shared pro-active and responsible commitment, which will drive a virtuous cycle of “mutual emulation”.

In this effort, companies hope to be increasingly supported by a smooth and consistent regulatory framework which will be clear and enforceable both at national and international level, to respond quickly and effectively to emerging challenges and opportunities. For this purpose, promoting rewarding instruments for voluntary initiatives is useful.

In line with the above principles, Confindustria has decided to adopt a Charter of Environmental Sustainability Principles. The Charter is meant as a signpost to direct member companies and has taken stock of their differences in size and in the activities they conduct. The Charter sets out shared principles and indicates the actions needed for a uniform and gradual progress towards greater environmental sustainability by outlining realistic and achievable goals for Italian companies.

Therefore, member companies and organizations that voluntarily adhere to the Charter commit themselves to integrate these principles and commitments in their activity and their growth paths.

## 10 “Principles” for 10 “Commitments”

### 1. Achievement of short, medium and long term environmental sustainability objectives

Set environmental protection as an integral part of company activity and growth path.

### 2. Adoption of a precautionary approach

Assess the impact of activities, products and services to manage the environmental aspects according to a preventive approach and promote the use of best available technologies.

### 3. Efficient use of natural resources

Promote the efficient use of natural resources, with particular attention to the rational management of water and energy resources.

### 4. Control and Reduction



General Manager

### of environmental impacts

Control and, where possible, reduce emissions into air, water and soil; achieve further reductions of waste production and more efficient waste management by privileging recovery and reuse against disposal; take steps to limit the effects of industrial activities on climate change; promote the protection of biodiversity and ecosystems.

### 5. The central role of innovative technologies

Invest in research, development and innovation to develop processes, products and services which have increasingly reduced environmental impacts.

### 6. Responsible product



Chairman



HSE Manager

### management

Promote responsible management of products or services throughout the entire life cycle to improve performance and reduce environmental impact, including information to customers on product “end-life” management.

### 7. Responsible management of the supply chain

Promote the preservation of the environment in the management of the supply chain by involving suppliers, customers and stakeholders as primary actors in their own sustainability policy.

### 8. Awareness and training

Promote activities of information, awareness and training to involve the company and its organisation in implementing their own environmental policy.

### 9. Transparency in relations with stakeholders

Foster relationships with stakeholders based on transparency to promote a shared approach in environmental policies.

### 10. Consistency with international activities

Act consistently with the principles endorsed in this Charter in all the Countries where the company carries out its activities.



General Manager



3

Economic sustainability

## 3.1. Financial data

Net sales in 2014 grew to

**636.4** million euro

**↑ + 6.9%**  
on 2013

Net sales in 2014 grew to 636.4 million Euro (+6.9% compared with 2013).

In more detail, the turnover of the technical, special and medical gases sector (351.7 million Euro), despite the general decrease in production in almost all European countries, grew nevertheless (+2.9%) over 2013.

In general there was a slight increase in sales volumes to certain economic sectors. The exception was Italy where, while most sectors remain substantially stable, the metalworking and mechanical sectors suffered a decrease.

The home care sector saw good growth, with a turnover of 312.8 million Euro (+11.2%), both in Italy and overseas countries, thanks to a continuous commitment to develop new products and services alongside and integrating oxygen therapy activities. The cash flow was 106.2 million Euro (16.7% of sales).

Recorded investments were 98 million Euro (92 million Euro in 2013).

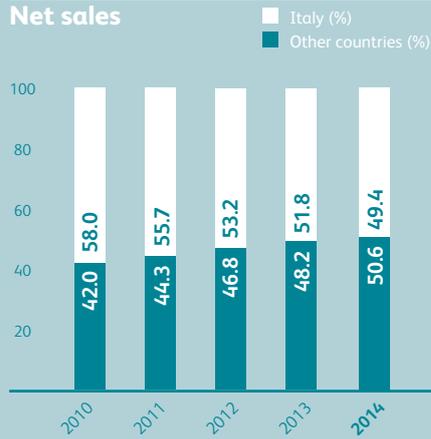
For more information on Group trends, see the balance sheet published on our website [www.solgroup.com](http://www.solgroup.com).

NOTE: Financial data refer to the draft balance sheet approved by the Board of Directors on March 30, 2015

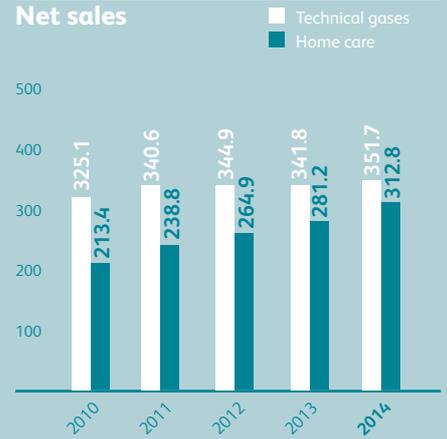
**Revenue**  
million Euro



**Net sales**



**Net sales**



	2014	2013	2012	2011	2010
Net sales	636.4	595.4	583.0	555.7	518.9
EBITDA	142.9	131.8	132.2	130.4	123.6
EBIT	61.9	53.5	56.5	59.6	59.6
Net profit	29.2	21.6	29.0	31.1	31.9
Cash-flow	106.2	92.6	98.5	97.0	92.6
Investments	98.0	92.0	85.4	84.7	62.1
Employees	2,806	2,580	2,479	2,251	2,103
Number of countries	24	24	23	21	21

## 3.2. The distribution of added value

The distribution of added value allows the relationships between the SOL Group and the main stakeholders to be expressed in monetary terms.



<sup>1</sup> Includes amortisation and non-distributed profit

### 3.3.

## Shareholders and investors

#### **The strategic success of a company is pursued also by maximising value for shareholders**

*Code of ethics, article 2 – Conduct of business activity management*

The principal means of communication with shareholders is the Balance Sheet, published in the "Investor relations" section of the Group website [www.solgroup.com](http://www.solgroup.com). For this reason, as well as fulfilling legal requirements, the Balance Sheet has been expanded, especially in the sections "Additional notes" and "Management report", with information giving greater detail on the activities carried out.

Communication with shareholders and investors also includes:

- the periodic publication of press releases on the Group website and their transmission to institutional investors
- participation in conferences promoted by financial institutions
- meetings and conference calls with investors and analysts
- roadshows

### 3.4.

## Suppliers

#### **Relations with suppliers are handled with impartiality, correctness and openness to competition.**

*Code of ethics, article 2 – Conduct of business activity management*

The SOL Group implements a supply policy that guarantees to all potential suppliers equal opportunity to propose their products and services and that relationships with them are managed with the criteria of impartiality, correctness and openness to competition.

In the selection of partners for the supply of goods and services that are critical for safety, quality and the environment, SOL uses a qualifying process that verifies the possession of requisites demanded by company procedures.

Possession of these requisites is verified by objective methods such as the compilation of questionnaires and, where it is felt necessary, the carrying out of audits at supplier headquarters. Suppliers are required to acquaint themselves with the Group Code of Ethics and, in Italy, with the Organisation, management and control Model under D.Lgs 231/01, and with the safety and environment Policies, and must adopt their content in carrying out their activities.

The responsible management of the Group means both constant attention to cost optimisation, including efficiency in purchasing, and the safeguarding of local interests and the maintaining of equitable and correct relationships with suppliers, aimed at creating value in the long term.

Concerning the parameter of supplier provenance, the SOL Group favours local suppliers, which for the Group's Italian companies, in Italy represent 90% of the overall value of the purchase of goods and services (a value in line with that of 2013).

Similar data are not available at this time for other countries, but it can be reasonably supposed that local suppliers represent similar percentage values.

4

## Environmental sustainability





**In tackling environmental issues, the SOL Group adheres to the principles expressed in the Code of Ethics and the commitments made in the “Safety and Environmental Policy of SOL Group companies”.**

## 4.1. Production activities, their environmental impact and the raw materials used

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In tackling environmental issues, the SOL Group adheres to the principles expressed in the Code of Ethics and the commitments made in the “Safety and Environmental Policy of SOL Group companies”.

An analysis of the matter shows that, given the characteristics of SOL production activities, emissions into the atmosphere and water do not constitute a critical factor and, in any case, show significant values only in primary process plants.

On the other hand, consumption of electrical energy is significant in the primary process Units, as is fuel consumption by vehicles used for gas deliveries.

The environmental indicators presented in this section thus relate to:

- Air separation plant
- Hydrogen producing plant
- Acetylene producing plant
- Nitrous oxide producing plant
- Plant for purifying and liquefying carbon dioxide
- Plant for producing special gases

The environmental parameters are shown separately for Italy and for the other countries where the Group is present, since production activities in Italy represent about 50% of the total.

### **AIA <sup>(1)</sup>**

The plant has Integrated Environmental Authorisation as it falls in the field of application of the IPPC

### **Certification <sup>(2)</sup>**

The plant is certified under one or more of the following standards: ISO 14001, OHSAS 18001 or EMAS Registration.

### **Seveso Directive <sup>(3)</sup>**

The plant falls in the field of application of Directive 96/82/CE (“Seveso Directive”)

Company	Country	Unit	Plant type	AIA <sup>(1)</sup>	ISO 14001 <sup>(2)</sup>	EMAS <sup>(2)</sup>	OHSAS 18001 <sup>(2)</sup>	Seveso Directive <sup>(3)</sup>
SOL Spa	Italy	Mantova	Air separation (ASU)					X
		Verona	Air separation (ASU)					X
		Cuneo	Air separation (ASU)					X
		Piombino	Air separation (ASU)					X
		Salerno	Air separation (ASU)					X
		Ravenna	Hydrogen production	X				
		Cremona	Nitrous oxide production	X				X
		Ancona	Acetylene production	X				X
		Caserta	Nitrous oxide production	X				X
		Pisa	Cylinder filling unit					X
		Monza	Special gas production					
		SPG	Slovenia	Jesenice	Air separation (ASU)			
SOL France	France	Cergy Pontoise	Cylinder filling unit					X
		Saint Savin	Cylinder filling unit					X
SOL Spa Branch	Belgium	Feluy	Air separation (ASU)					X
SOL Spa Branch	Germany	Francoforte	Gas liquefying from air separation					X
SOL Kohlensäure	Germany		Carbon dioxide production					
NTG	Netherlands	Tillburg	Nitrous oxide production					X
UTP	Croatia	Pola	Acetylene production					
Kisikana	Croatia	Sisak	Air separation (ASU)					
SOL SEE	Republic of Macedonia	Kavadarci	Air separation (ASU)					
TGS	Republic of Macedonia	Bitola	Carbon dioxide production					
		Volkovo	Carbon dioxide production					
		Lotepro	Air separation (ASU)					
		George Petrov	Acetylene production					
SOL BG	Bulgaria	Varna	Carbon dioxide production					
TGP	Bosnia-Erzegovina	Petrovo	Carbon dioxide production					



### Air separation plant

The process of air separation for the production of oxygen, nitrogen and argon is a physical one. These processes use atmospheric air as raw material and have a high consumption of electrical energy, as shown in detail below.

**Environmental aspects:** air separation plant emit into the atmosphere negligible quantities of CO<sub>2</sub>, sulphur oxides (SO<sub>x</sub>) and oxides of nitrogen (NO<sub>x</sub>) and can be considered particularly compatible with the environment.

### Hydrogen production plant

These use natural gas and water as raw material in a chemical reaction that produces hydrogen.

**Environmental aspects:** hydrogen production plant emit CO<sub>2</sub> and oxides of nitrogen (NO<sub>x</sub>).

### Nitrous oxide production plant

These use as raw material ammonium nitrate, either solid or in water solution, in a thermal decomposition process.

**Environmental aspects:** not significant

### Acetylene production plant

These use as raw material calcium carbide, a solid that decomposes in water.

**Environmental aspects:** the process produces calcium hydroxide, which is normally recycled for use in industry or agriculture.

### Carbon dioxide purification and liquefying plant

The raw material is carbon dioxide itself, obtained as a sub product of chemical plant or from natural underground deposits. The carbon dioxide is purified and liquefied, through the use of energy.

**Environmental aspects:** the carbon dioxide obtained in this way is reused in industrial applications and not emitted directly into the atmosphere.

### Units subject to I.E.D. and Integrated Environmental Authorisation

Some Units of SOL Spa fall into the field of application of D.Lgs. 11/04/2014 n. 46 which transposes the EU Directive n. 75 (21/11/2010) "Industrial Emission Directive" (IED), extending the scope of IPPC regulation, and which governs the granting, renewal and re-examination of Integrated Environmental Authorisation.

The company has obtained this authorisation for its hydrogen (Ravenna), nitrous oxide (Cremona and Caserta) and acetylene (Ancona) production plants.

## 4.2. Energy resources

16.4%

self-produced electrical energy

The consumption of electrical energy is one of the critical factors in the process of air separation for the production of cryogenic gases: both the compression and the liquefaction of gases consume a great deal of energy. In fact, the energy consumption of the ASU represents almost 95% of Group energy consumption.

The Group is particularly careful to monitor energy consumption, not just for the economic aspects but also to meet the sustainability criteria that are a fundamental part of SOL Group culture.

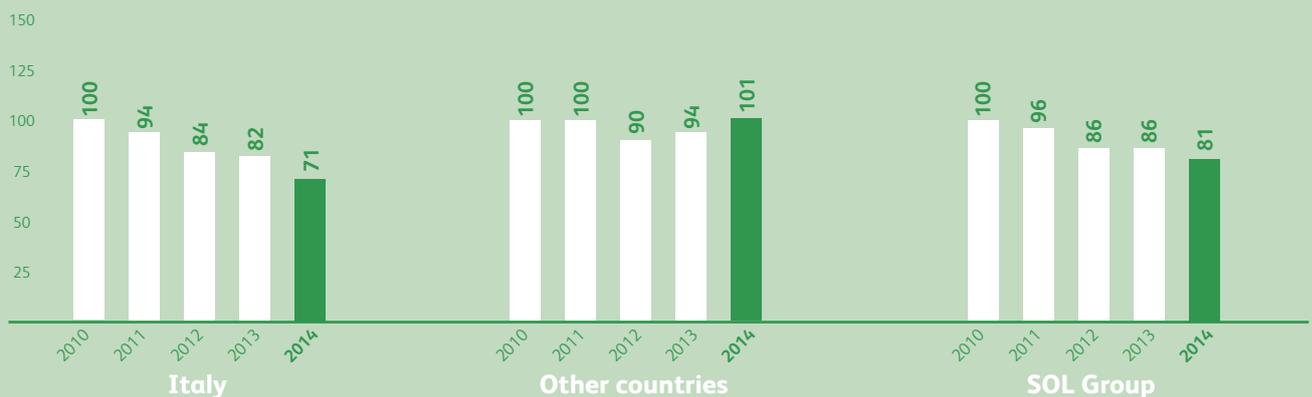
Investments in the energy production from renewable sources sector are a further demonstration of the Group's commitment to defending the environment. Thanks to increased production started in 2014, the amount of self-produced electrical energy accounts for 16.4% of overall electrical energy needs (compared with 8% in 2013). Interventions to contain energy consumption are not limited to the optimisation of processes and careful plant operation, but also extend to the design and choice of solutions for plant and the renewal of machinery used in the plant, to which an important slice of investments is destined annually.

Consumption is however considerably influenced by customer demand and the start-up (or shutdown) of production plant.

In particular, the negative performance of the Italian economy and in particular the closure of the Lucchini steelworks in Piombino are responsible for the reduction of consumption in Italy. In other countries, the positive trend in sales has the consequence of a marked increase in consumption.

On the efficiency front, the construction of two new liquefying plants in Mantova (Italy) and Kavadarci (Macedonian Republic) will help reduce specific consumption.

MWh of electrical energy consumed base 2010 = 100



## 4.3. Transport

### 4.3.1. Deliveries to customers



- 4.8%

Kilometers per unit of product transported in Italy

Attention to transport is of fundamental importance for environmental and safety aspects. Products are distributed mainly by road and to an extremely widespread customer base.

The chemical and physical characteristics of the main products also make it necessary to use special vehicles for transport (super isolated tankers for cryogenic liquids) or special containers (cylinders for compressed gases and base units for liquid oxygen for home care use). In both cases, the unfavourable ratio between the tare weight and the weight of the products transported makes for low fuel consumption efficiency per product unit.

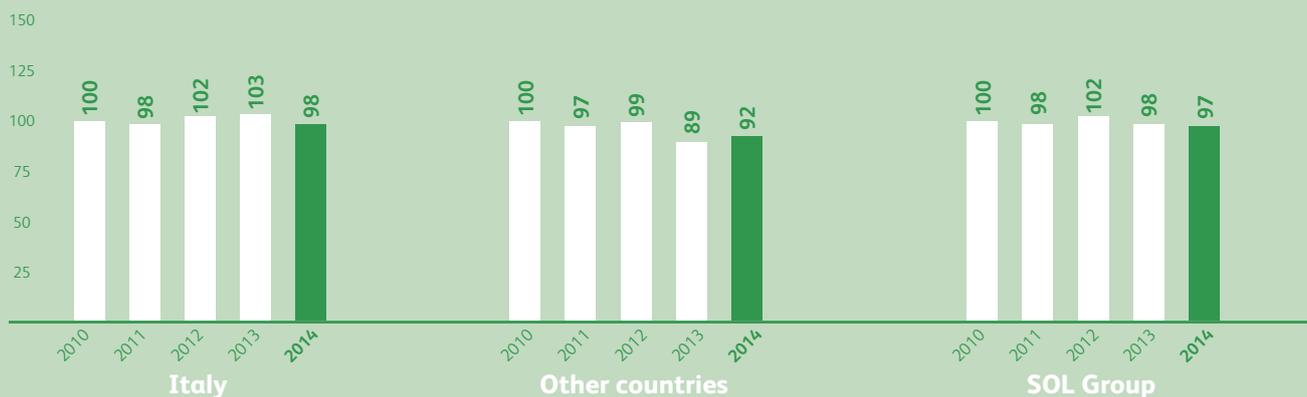
Bearing in mind these limits, SOL action to reduce fuel consumption and hence environmental impact consisted of:

- the creation of production units spread as widely as possible over the territory, to reduce vehicle mileage
- investments to purchase new generation super isolated tankers, with a higher ratio between weight of product transported and total weight
- the adoption of logistics management methods aimed at optimising routes.

Rainbow, a software for planning the distribution of liquid products adopted and perfected in 2012 for companies operating in Italy, has now been adopted for all other companies, except for those recently acquired where introduction of the software is planned.

The graph shows the trend in the ratio between kilometres driven and product units transported (mc/kg), with the base reference 2010 = 100.

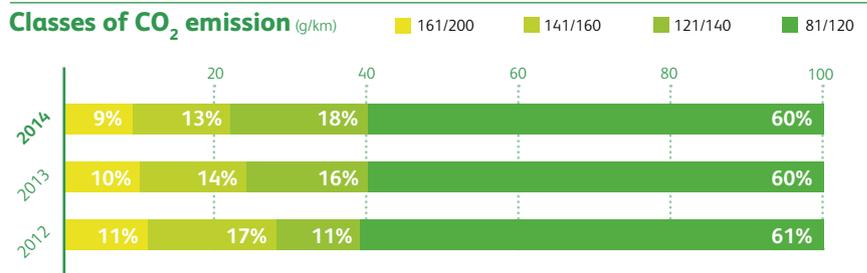
Ratio between kilometres driven and product transported (mc/kg) base 2010 = 100



### 4.3.2. Mobility of technical and sales staff

The environmental impact of the mobility of technical and sales staff operating in Italy is also kept under control through a policy of renewing the fleet of company vehicles acquired through leasing, favouring models with reduced CO<sub>2</sub> emissions.

In 2014 the percentage of vehicles in the middle-lower categories, between 81 and 140 g/km, rose from 76% to 78%, an increase of 2.6%.



### 4.4. Acoustic emissions

Acoustic pollution is mainly caused by machinery such as compressors and turbines, by the loading of tankers and by evaporation towers used to cool industrial water.

To reduce emissions, which already in the plant design phase have been limited by certain technical measures (for example, the encapsulation of compressors), further interventions have been carried out over the years, including the installation of silencers along the tanker loading lines and the soundproofing of evaporation towers.

For all plant, thanks above all to the above interventions, daily noise levels at the perimeter wall have been recorded as lower than 70 dB(A), thus within the limits allowed by law in industrial areas.

The company is however committed to monitoring constantly the levels of acoustic pollution and acting, where technically possible, to reduce it further with additional interventions on plant.

### 4.5. Emissions into the atmosphere

The nature of the production processes is such that no significant quantities of nitrogen (NO<sub>x</sub>) or sulphur (SO<sub>x</sub>) emissions are generated.

The levels of emissions are however periodically controlled, but are always found to be well below legal limits.

## 4.6. Climate protection: greenhouse gases

The emission of greenhouse gases is made up of:

- carbon dioxide, a sub-product in plants producing hydrogen by steam reforming of methane, emitted from plant producing CO<sub>2</sub> from wells
- nitrous oxide, emitted from plant producing N<sub>2</sub>O from ammonium nitrate
- HFC (hydrofluorocarbons), used in plant refrigeration circuits.

### Gas emissions from production units (tCO<sub>2</sub> equivalent/year)

	2014	2013	2012	2011	2010
<b>Italy</b>	19,259	17,702	11,618	11,765	13,840
<b>Other countries</b>	8,676	8,650	8,361	7,289	7,575

The table shows the quantities of greenhouse gases emitted by production units, in equivalent tons of carbon dioxide.

## HBUS project: zero emissions public mobility signed by SOL

The HBUS project, implemented by SOL in collaboration with CNR-ITAE Messina, CNR-IM Naples and STMicroelectronics, has been completed. The project, financed by a competition organised by MIUR – the Ministry of Universities and Research – involve the modification of a purely electric vehicle to increase its autonomy from 150 to 300 km by means of a hydrogen powered fuel cell. Besides the technologically innovative aspects, the bus was completely designed and constructed by Italian partners.

SOL's role in this program was to design, manufacture and test two key components of this transformation: the 350 bar hydrogen reservoir on board the vehicle, needed for powering the fuel cell to produce electrical energy, and the filling station on the ground.

In the R&D lab then being set up in Salerno, the systems were assembled and subjected to an intense phase of testing, simulating the different operating conditions, to verify

that they corresponded to the demanding specifications in terms of safety in the transport sector.

The other partners, with CNR-ITAE in the front line, then carried out the modifications on the vehicle to integrate the various systems and optimise the benefits of the conversion.

The bus, 7.5 m long, is conceived for use in small urban centres and can carry up to 44 people: on its route, the vehicle does not

produce any kind of polluting emissions and so contributes to improving the quality of the air in our cities.

Currently the buses in use at the Messina CNR-ITAE: in parallel with the completion of the road tests and the final bureaucratic requirements demanded by the Ministry, the technical verification needed for official approval is underway, after which the vehicle will be able to be used for regular service or in other demonstrative projects.



## 4.7. Waste

The production processes used in Group Units do not directly produce waste, with only one significant exception: the acetylene production process, which generates calcium hydroxide, prevalently sold as a sub-product or sent for disposal.

As laid down in the objectives laid out in the preceding Report, it has been possible also in Croatia and Macedonia to sell much of the calcium hydroxide as a sub-product, with a consequent reduction in the production of harmful waste.

The Report gives the quantities of waste produced:

- in the primary process plants:
  - non-harmful waste produced by maintenance activity: prevalently scrap iron, packaging and insulating materials;
  - harmful waste produced by maintenance activities: prevalently oil formerly used for machine lubrication;
  - calcium hydroxide, a sub-product in the production of acetylene and ammonia solution, a sub-product of the conditioning of ammonia, both considered dangerous waste.

Starting from the 2012 edition of the Report we have extended the gathering of data on waste produced to the following activities:

- testing of cylinders and cryogenic vessels;
- repairer of electrical and electronic apparatus;
- activities on customer premises:
  - harmful waste from maintenance activities: prevalently oil formerly used to lubricate machines and plant filtering systems;
  - sanitary waste from home care activities.

Note that, given the origin of the waste produced, the type and quantity varies from year to year with the number and type of maintenance interventions carried out.

### Waste (t/year)

		2014	2013	2012	2011	2010
<b>Italy</b>	<i>Non-harmful waste</i>	125.2	401.0	329.5	79.8	197.7
	<i>Harmful waste</i>	86.7	101.2	184.0	61.2	87.5
<b>Other countries</b>	<i>Non-harmful waste</i>	45.2	31.7	14.4	15.1	242.0
	<i>Harmful waste</i>	476.3	2,320.0	2,025.0	2,668.7	1,319.6

The destinations of the waste produced are the following:

#### Dump (t/year)

		2014	2013	2012	2011	2010
Italy	Non-harmful	6.5	0.0	5.0	0.0	0.0
	Harmful	13.0	0.0	5.3	0.0	1.0
Other countries	Non-harmful	30.2	16.8	3.5	10.6	24.8
	Harmful	469.9	2,309.3	2,019.0	2,566.9	1,306.9

#### Treatment (t/year)

		2014	2013	2012	2011	2010
Italy	Non-harmful	10.2	28.6	85.3	16.6	159.4
	Harmful	93.5	65.6	44.3	54.4	26.5
Other countries	Non-harmful	5.5	1.6	1.2	0.0	2.1
	Harmful	5.6	4.0	5.6	100.1	0.4

#### Recovery (t/year)

		2014	2013	2012	2011	2010
Italy	Non-harmful	108.5	327.4	239.2	64.2	38.3
	Harmful	0.0	35.6	134.4	6.8	60.0
Other countries	Non-harmful	9.5	13.3	9.7	4.5	215.1
	Harmful	0.8	6.7	0.6	0.8	12.3



## 4.8. Water resources

For the SOL Group, managing water resources means:

- optimising usage in its own plant, by reducing withdrawals to a minimum also through investments in recycling;
- research and application on customer premises of technologies which by using technical gases can improve processes such as wastewater treatment or making it drinkable for civil uses.

### 4.8.1. Water usage

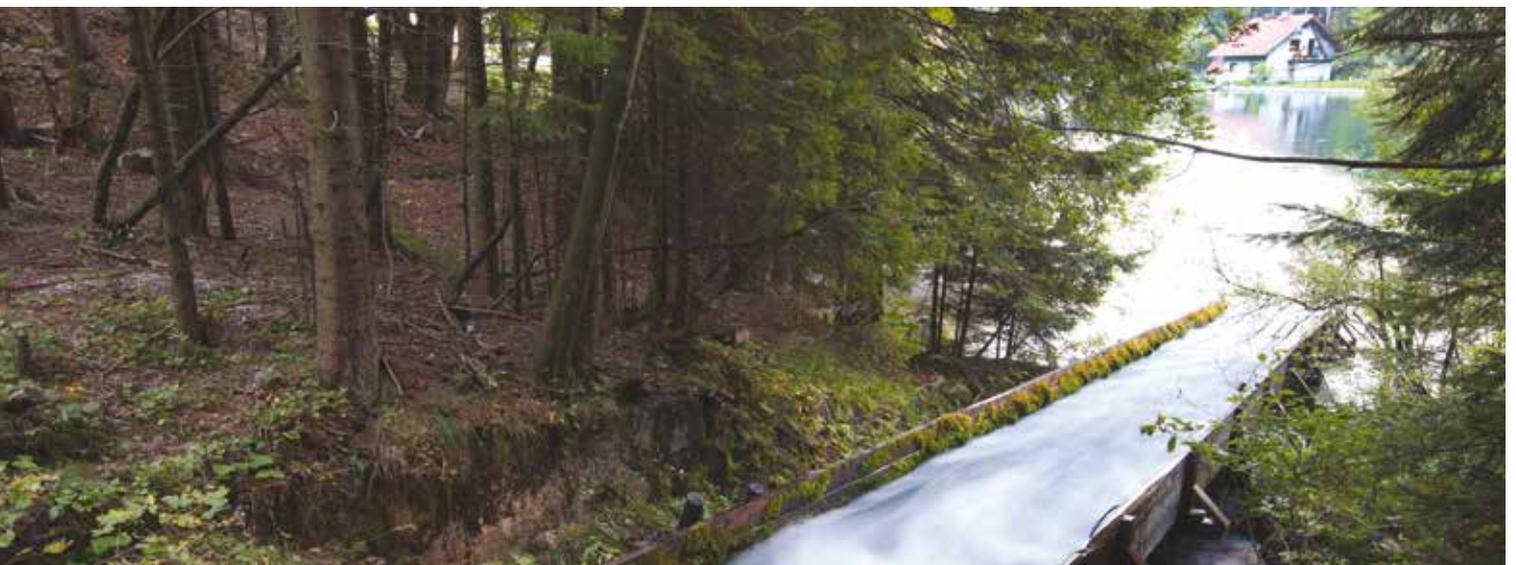
Most of the water is used in the cooling circuits of machinery in production plant.

In the majority of plant, water is recycled and consumption is thus prevalently related to the integration of the quantities evaporated.

The slight increase in usage in “Other countries” is due to the start-up of new plants and increases in production.

#### Water usage (m<sup>3</sup> x 10<sup>3</sup>)

	2014	2013	2012	2011	2009
<b>Italy</b>	1,060	1,053	1,094	1,215	1,199
<b>Other countries</b>	2,052	1,990	1,616	5,560	7,253



## 4.8.2. Water discharge

Plant implement monitoring and control programmes on the quality of water discharged. Analyses show that, over and above the absolute values of the quantity of pollutants shown in the tables below, their concentration is well below legal limits.

### Water discharge (t/year)

		2014	2013	2012	2011	2010
<b>Italy</b>	<i>COD</i>	6.59	15.59	24.61	22.15	10.45
	<i>Total nitrogen</i>	3.02	4.97	4.27	6.64	3.83
	<i>Suspended solids</i>	5.98	6.50	4.88	4.24	7.69
	<i>Total phosphorus</i>	0.18	0.54	0.37	0.46	0.88
	<i>Heavy metals</i>	0.04	0.12	0.09	0.11	0.10
<b>Other countries</b>	<i>COD</i>	1.98	1.64	2.77		
	<i>Total nitrogen</i>	0.29	0.35	0.65		
	<i>Suspended solids</i>	1.16	1.76	0.76		
	<i>Total phosphorus</i>	0.01	0.11	0.41		
	<i>Heavy metals</i>	0.0	0.0	1.50		

## 4.8.3. Technologies for customers

Among the principal technologies perfected by the Group for the management of water resources are:

- the treatment of wastewater with O<sub>2</sub>: makes purification more effective and increases purification capacity, reducing the environmental impact and giving better control over treatment;
- the treatment of wastewater with ozone: reduces colouration, micro-pollutants and nitrates and so reduces the environmental impact of the treatment;
- disinfection with ozone: this protects the watercourses where wastewater is re-emitted after treatment from bacterial pollution and also avoids the use of chlorine compounds;
- control of the pH with CO<sub>2</sub>: this substitutes mineral acids (sulphuric and hydrochloric) which leave pollutants in the water.

## R&D Lab – Salerno: development of technologies to improve the environment

In the SOL establishment in Salerno the SOL Group's first research and development centre has been created: the R&D Lab (Research and Development Laboratory).

In the Italian and European research and development projects in which SOL is engaged, the laboratory ensures a fully equipped testing area for assembling, installing and testing pilot plants of different sizes and types.

Three projects are currently underway in the laboratory. The first (ATR Project) is aimed at producing on-site plants for producing hydrogen from methane that are extremely compact and have start-up and shutdown times significantly shorter

than those of traditional technologies: these solutions are suitable for use in applications that require hydrogen in a non-continuous manner (with frequent stopping and restarting of consumption), both in industrial environments and in filling stations for vehicles (hydrogen or hydro methane).

The second (SEOS Project) and third (Demoys Project) involve the use of innovative materials (high-temperature membranes) to separate oxygen from the air and hydrogen from mixtures. The membranes for oxygen production in the SEOS project have significant potential in large electric power stations where their application could increase the efficiency of turbo gases and at the same time

guarantee, at low cost, less polluting emissions. Those for hydrogen production, produced in the Demoys project, would make traditional plants for producing this gas more efficient and have interesting possibilities also for the purification of particular kinds of biogas.

The R&D Lab will also be involved in the coming months in improving SOL's more traditional technologies, and also in new innovative projects, proposals for which are currently being evaluated by the European Commission.





## 4.9. Terrain and groundwater

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Oxygen, nitrogen and argon are produced by a process (air separation) which is physical in nature and excludes the possibility of the presence of substances that could contaminate to rain groundwater.

Nor does the production of oxygen with the steam reforming process involve chemical pollutants.

In the production of nitrous oxide, ammonium nitrate, as a concentrated liquid or solid, is used as the raw material. It is stored using methods designed to prevent any dispersal in terrain or groundwater.

In acetylene production, the reaction produces calcium hydroxide as a sub-product, and this is stored in special tanks before being transferred to users in various market sectors or sent for disposal.

Some SOL Units have been constructed in locations that have terrain and groundwater contamination problems, but these have other causes and predated the arrival of SOL.

### **Mantova**

Part of the SOL plant in Mantova, constructed inside the chemical Park, falls within the boundary of the "Mantova Lakes and chemical Park site of national interest".

Again in 2014 SOL took part in the annual "Planned groundwater monitoring campaign" promoted by the Mantova ARPA.

### **Ravenna**

The SOL plant is located inside the Ravenna chemical Park, which has a groundwater pollution problem.

SOL has constructed a piezometer on its own land, as requested by the Ravenna ARPA, and takes part in periodical monitoring campaigns.

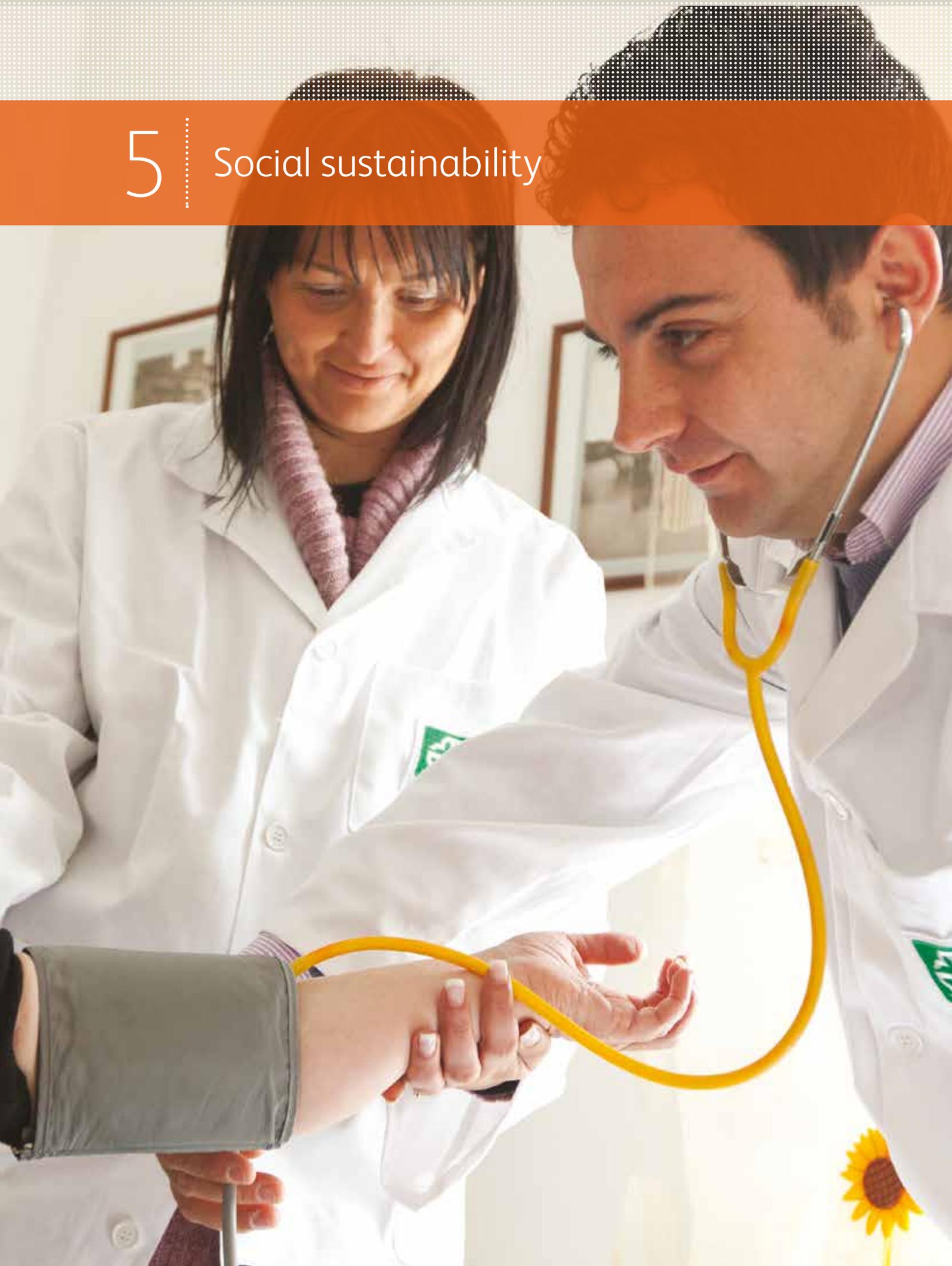
## 4.10. Biodiversity

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The activities of the SOL Group have a very limited impact on biodiversity, since the production units are relatively small in size and located in industrial areas.

5

Social sustainability



**Transparency, loyalty, impartiality, honesty, integrity, a continual commitment to quality, continual improvement of safety and respect for the environment are the fundamental values that SOL Group wishes to find and constantly encourage in all its employees.**

## 5.1. Human resources management

### 5.1.1. Management policies

**SOL attaches the maximum importance to those who work within the Group, contributing directly to the development of the company**

*Code of Ethics, article 4 – Personnel policies*

To operate responsibly, respecting the environment and safeguarding health and safety, it is indispensable to involve all personnel.

For this reason the SOL Group favours free and transparent communication at any time and at all levels, regardless of necessary hierarchical relationships.

Also scheduled appointments, such as the periodical meetings between headquarters management and operational personnel, and the maintenance and continual enrichment of the company Intranet and publication of the company magazine “SOL News” are instruments designed to exchange information and experiences, and contribute to the personal and professional growth of employees.

It is above all through human resources that the SOL Group is able to develop and improve its performance.

All SOL Group employees, whatever their roles and with whatever type of contract they operate within the Group, are responsible for the objectives entrusted to them and must thus have the possibility, within the limits of their responsibility and with respect for the organisation, of taking decisions and working with a high degree of autonomy, in a strong relation of trust with the company.

In this sense the SOL Group undertakes to:

- develop the abilities and competences of its employees so that the commitment and the creativity of each of them can find full expression in realising their own potential, in harmony with the requirements of the organisation;
- maintain a close connection between the Holding company and the various subsidiaries in the field with a spirit of partnership;
- stimulate the exchange of information through internal communication media that are increasingly varied thanks also to the use of modern Informatics technology;
- make the most of human capital through the sharing of the main values on which the Group identity is based and the integration of diversity and best practices within the Group;
- guarantee to all its collaborators psycho-physical integrity with respect for their moral personality. In this sense the SOL Group is constantly committed to respecting national labour regulations, international conventions and recommendations, including the resolutions of such international organisms as the ILO (International Labour Organization) and the UN (United Nations Organization).

## 5.1.2. Employment and the management of diversity

Employees at 31.12.2014  
**2,806**

**↑ + 8.7%**  
with respect to 2013

Below are some general data, referring to the situation at 31.12.2014, on the personnel within the SOL Group.  
The few cases where the data refer only to companies operating in Italy are duly indicated.

### Employment trends

Despite the lasting market crisis, again in 2014 the number of employees grew both in Italy and in the other countries where the group operates.

Overall growth with respect to 2013 was 226 units, 8.7%.

Of the 226 units, 199 (+ 12.0%) relate to overseas companies while the remaining 27 (+2.9%) to those operating in Italy.

Note that, following the modification of the accounting boundaries following the coming into force of the amendment to IFRS 11 mentioned in the “Methodological note”, employees of the Group’s Indian companies have been excluded from the report, and data from previous years have been adjusted accordingly.

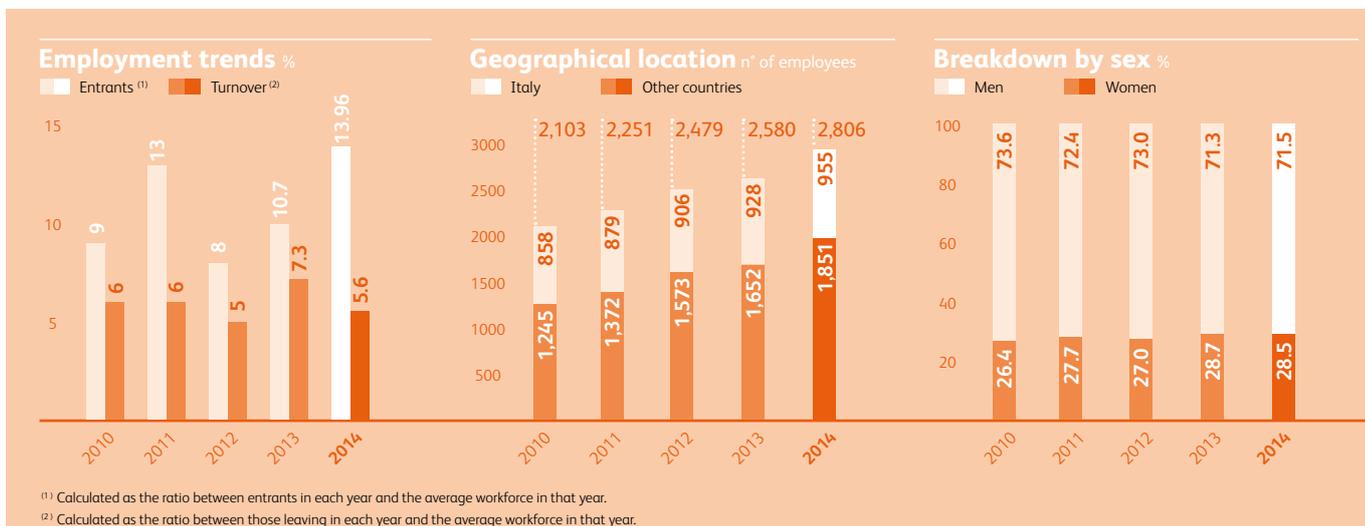
If these employees are also considered, the total would be 2,914 with an increase of 11.6% compared with 2013.

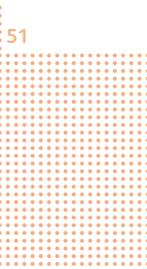
The drop in the turnover percentage is only partly due to the economic crisis: increasing loyalty is above all a consequence of the consolidation of activities and the greater structuring of the companies operating in countries outside Italy.

### Work-life balance

The SOL Group, compatibly with technical and production organisational needs, is sensitive to the needs of its employees to balance their working life with personal and family requirements, even of a temporary nature.

In fact the SOL Group operates forms of flexible working hours, is favourable to granting periods of leave on motivated the request, even beyond what is laid down by law or the collective contract, has had positive experiences of tele-working. The percentage of





part-time workers, more than 6% of the average Group workforce, is particularly significant. The concession of loans on favourable conditions is formally envisaged as is the willingness to concede advances on end of service payments, even for reasons different from those laid down by law.

**Management of diversity and demographic trends**

The graphs show the breakdowns by sex, length of service and age group of Group personnel.

The percentage of women has been increasing since 2010, and in 2014 represented 29% of the total workforce. Compared with the previous year, in 2014 the number of women grew by 102.

**Absenteeism**

The SOL Group has for years in Italy had a level of absenteeism far below both the national average for the sector and the average for industry generally.

The 2014 figure for the Italian companies in the Group dropped further compared with the 3.5% in 2013, to 3.15%.

The phenomenon is under control also in the overseas companies and does not represent a critical factor.

**5.1.3. Remuneration and social benefits**

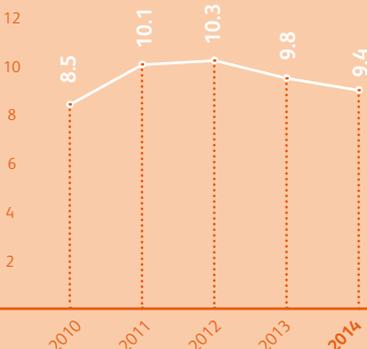
The SOL Group operates with the aim of constantly developing in its human resources management policies optimal management of its personnel through the combined use of a series of instruments.

The SOL Group makes no distinctions of sex in the management of remuneration policies which, for each role, are based on competences and results.

The SOL Group generally applies to personnel the collective contracts laid down by the laws of the countries of reference.

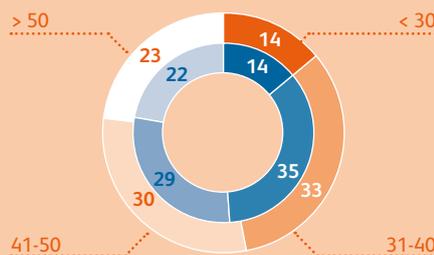
**Breakdown by length of service**

Average years of service



**Breakdown by age group %**

2014 (orange) 2013 (blue)



### Remuneration policies

In the Group companies, great attention is paid to the use of remuneration development incentives both at collective level and at individual level through a merit policy and bonuses for individual performance.

Normally the increases in retribution laid down by collective sector contracts or by law are guaranteed and, where union representation is present, integrity of contracts are negotiated that can include, as for example happens in Italy, bonuses for production and participation linked to the trend in parameters of productivity, company profitability and injury indices.

### Supplementary pension plans

In Italy, as part of the chemical industry national collective contract, there is the “FONCHIM” pension fund (to which SOL subscribed right from the start) which, with joint contributions from the employee and the company, creates individual pensions that supplement public pensions. The level of participation in the fund by personnel in the Group’s Italian companies is quite high, considering both the validity of the initiative in the constant promotion and information activity by the company both at the moment of hiring and during employment.

FONCHIM	Average participants	%	Contribution from the company
2014	580	74%	418,600
2013	582	73%	390,800
2012	567	77%	414,000
2011	569	77%	378,000
2010	570	77%	315,000

In line with differing practices in the various European countries, many Group subsidiaries also contribute to similar pension plans.

### Supplementary health plans

The supplementary health fund for the Italian chemical industry “FASCHIM”, also created by the national collective contract, is more recent.

The chemical sector was the first to introduce this coverage at category level, making it part of collective negotiations, being well aware of that the public health system would find it increasingly difficult to meet public health needs.

The majority of the contribution is paid by the company. Employees can also add their families. The fund has been an undeniable success, with more than 80% of company employees subscribing.

In this sector too similar initiatives have been taken by the principal overseas Group subsidiaries.

FASCHIM	Average participants	%	Contribution from the company
2014	630	81%	171,400
2013	613	79%	150,400
2012	574	79%	157,000
2011	572	79%	156,000
2010	578	83%	153,000



#### 5.1.4. Personnel selection and talent attraction

##### Insurance

Company personnel required to travel abroad are protected by a specially stipulated insurance policy to cover medical expenses, theft of baggage and all other misfortunes.

Recruitment and selection play a key role in succeeding in attracting on to the staff of Group companies highly qualified collaborators of great professional value.

To recruit for its staff a team of collaborators who are qualified and of professional value, particular attention is paid by the company to recruitment and selection.

In addition to the direct operational involvement of the central and local Human Resources functions, contact is often made with the leading universities, training bodies, schools and professional associations, with participation also in special recruiting events (“career fairs”) and publication of the company profile in some of the leading career directories.

These contacts lead each year to university students entering the company, and not merely for professional orientation stages or thesis material gathering.

## Diversity & Inclusion Management

### Diversity & Inclusion Management

The SOL Group brings together people and interacts with suppliers and customers from different cultural contexts and countries, with different abilities, experience and points of view.

This “different difference” between people working inside an organisation is one of the most important assets for a multinational company like ours, and also an opportunity for growth for all employees.

“Diversity & Inclusion Management” started in the USA in the 90s as a new approach to the management of Human Resources and as an organisational strategy in a business context increasingly marked by demographic changes, immigration, globalisation and market diversification, and it aims to promote equal opportunities at work, putting people, with their individual potential, at the centre of organisational decisions and thus becoming also a “driver” to attract, retain and develop talent.

Diversity includes not only the so-called visible differences (race, sex, age, disability or country of origin) but also the invisible ones such as economic conditions, sentimental orientation, religion, culture and all the other differences that make every individual unique.

The project launched by the SOL Group in 2014 involved the organisation of a course on Diversity Management to promote a greater knowledge and awareness of the cultural differences among all Group employees.

It was a distance course that involved all the companies in the Group and in the summer of 2014 all employees took part through the company intranet.

The training event was supported by a manual translated into 14 languages, followed by a first seminar organised by an external partner that took a close look at the management of interculturality

The training efforts of the Group will continue on these topics also in coming years so that correct management and development of diversities will continue to be an integral part of our culture and accompany the growth of our business in an increasingly multicultural and global environment.

*“If you need a hand it doesn't matter where it comes from...”*



### 5.1.5. Training, development and communication

Learning and training, in the broadest sense, are an integral part of SOL Group culture. For this reason, the companies in the Group attach great importance to the training and development of personnel at both the technical and managerial levels.

In the SOL Group we believe that the main stimulus to improving our professionalism is to be found within ourselves: in our curiosity, in the determination with which we face new challenges, in the desire to learn and face up to new things.

In this context, in our Group training is primarily “in the field”, with more experienced colleagues constantly at one’s side.

In addition to technical and obligatory and non-obligatory security training, Human Resources Management organises and coordinates each year special training plans dedicated, with an international viewpoint, to knowledge of the company and its culture.

The most important training events of 2014 were:

- foreign language studies, particularly in English, the language used for communication between Group companies;
- the financing of a number of Masters for employees involved in career plans;
- public speaking courses;
- coaching courses for executives and directors.

Particular attention was also attached to managerial training courses with those responsible for economic and human resource management in Group companies.

Below is a summary of data on training carried out in Italy in 2014 and coordinated directly by HR Management:

	Training hours	Participants
<b>New recruits training</b>	320	34
<b>Management training</b>	178	19
<b>Coaching</b>	88	6
<b>Languages</b>	360	24

### 5.1.6. Industrial relations

Central Personnel and Legal Affairs Management directly handles industrial relations for all Italian companies in the Group and coordinates them for overseas companies, intervening when necessary.

SOL is an active member of the chemical industry Confederation (Federchimica) and takes part in negotiations for the renewal of the national contract and in other joint initiatives.

At company level, SOL has periodical meetings with union representatives aimed at maximum collaboration and transparency, and negotiates a company contract, complementary to the collective contract which, as provided for by the national contract, aims to reward objective improvements in productivity and profitability.

## 5.1.7. Health and safety in the workplace

**Conformity with legal requirements is a priority requisite for SOL and for all its collaborators and employees. SOL is constantly engaged in the safeguarding of the environment, health and safety in the workplace.**

*Code of Ethics, article 5 – Safeguarding of safety, health and the environment*

Safeguarding the health and safety of its human resources are basic, inalienable values for the SOL Group. These values are based on an ethical vision of work which guides daily action in all Group companies.

### Organisation

The importance of the subject led to the creation back in 2005, as part of central Quality, Safety and Environmental Management, of a specific function serving all the companies in the Group, that has the job of handling all activities safeguarding:

- people: health, accident prevention and workplace hygiene;
- company property: fire prevention, plant safety and environmental hygiene;
- administrative company responsibility pursuant to D.Lgs 213/01: company management system for health and safety, in accordance with BS OHSAS 18001.

The Function defines the lines of action, verifies their application and coordinates operations of the territorial Units and the other Functions.

In every Group company, each unit has one or more people trained to acquire specific competences in the areas of safety and the environment, and so able to implement company directives and ensure they are correctly applied.

For each company in the Technical Gases Sector, a “Safety and Environment Reference Person (SERP)” has been unequivocally nominated. The SERP:

- is the first point of reference for all communications regarding safety and the environment
- is responsible for distributing these communications within the company and the consequent training activity
- takes part in periodical training meetings where experiences are also shared.

In 2014 this initiative was extended to the main companies in the Home Care Sector.

### Seveso directive

Seventeen Group Units, because of the kind of gases they produce and the quantities stocked, fall into the field of application of Directive 96/82/CE (“Seveso directive”), implemented in Italy by D.Lgs 334/01.

They are the Italian units in Piombino and Mantova (art. 8), in Cremona, Cuneo, Salerno, Ancona, Marcianise, Verona and Pisa (art. 6), and those in Feluy (Belgium), Frankfurt, Gersthofen and Krefeld (Germany), Cergy Pontoise and Saint Savin (France), Tillburg (Netherlands) and Jesenice (Slovenia).

Directive 96/82/CE makes it obligatory to adopt a specific safety management system (which has much in common with the provisions of OHSAS 18001), and this further reinforces the commitment of the units involved, which are periodically subjected to controls by the Authorities (three during 2014, all with positive outcomes).

### Training and awareness

Workforce training plays a fundamental role in the correct application of the company Management System.

All employees are thus involved in constant awareness and training activity aimed at avoiding or at least minimising the impact of our activities on the environment and ensuring a high level of safety.

The training needs of individual Units are determined annually by their managers and take concrete form in customised training programmes for personnel of all levels.

The training and updating of managers is also crucial.

To this end, periodical meetings are organised, with interventions also from outside specialists, to extend competences and also to stimulate collaboration among Units and share management methods.

A further reminder of safety problems comes from the periodical publication (in Italian and English) of:

- “Safety alerts”, documents which, starting from incidents that have happened in the sector, encourage the respect of rules of correct conduct;
- “Quarterly Accident Reports”, documents which illustrate and analyse any incidents that have occurred during the period within the Group and in other companies in the sector belonging to Assogastecnici and EIGA.

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8,948 hours  
of safety training

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#### > Safety training

During 2013, the Italian companies of the Group organised 718 training meetings, with 3567 people taking part, and a total of 8948 hours.

#### > Environmental training

During 2014, the Italian companies of the Group organised 171 training meetings, with 1230 people taking part, and a total of 3468 hours.

### Audits

Audits are the main instrument for verifying that the health, safety and environmental management system is working properly and for identifying and implementing any corrective measures.

Audits may be internal, carried out by SOL Group staff, or external, carried out by outside organisations, normally when certifications have to be renewed or obtained.

The aim of the internal audits is:

- to verify that activities are carried out in accordance with company rules and procedures, taking corrective action if this is not the case;
- to assist the Units subjected to audit in making improvements, making use of the experience of other Units and reinforcing company health, safety and environmental culture.

During 2014, internal safety and environmental audits were carried out on 40 days. External audits are carried out by the certifying body, with methods similar to those of the internal audits, and are designed to verify the correct application of the management system and observance of the regulations of reference (ISO 9001, ISO 14001, OHSAS 18001, EMAS, etc.).

During 2014, the activities of Group Units were subjected to 32 days of external audits by the Certiquality certification body.

### Injury rates

The trend in accident indices shown below shows that the entire organisation is constantly engaged in respecting good company practices, as laid down by the Management System.

In 2014 the frequency (IF) and severity (IG) indices of accidents within the Group (accidents that involved absence from work for at least a day, excluding that of the accident) were, respectively 7.6 and 95.

Both indices are significantly lower than those of last year, demonstrating the commitment of the entire structure to prevention.

The frequency index for Italy is about 80% of that of the chemical industry (as determined by INAIL which, however, only considers accidents leading to an absence of more than three days, while SOL also considers absences of more than one day). This is about 50% of the average for manufacturing industry.

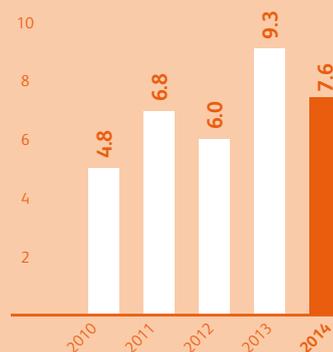
The tables show the indices for countries where at least 100 workers operate. The indices of almost all the countries taken into consideration show a positive trend.

Where, as in the United Kingdom and in Germany, the indices are significantly above Group averages, accidents were minor and mostly due to operator distraction: in all cases corrective measures were taken to reach the objective of zero accidents.



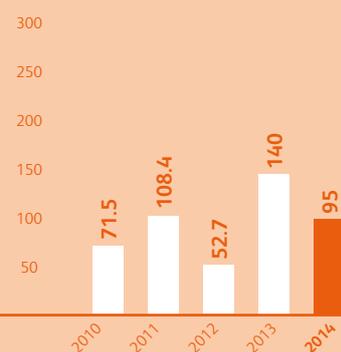
### Frequency rate (SOL Group)

Accidents/10<sup>6</sup> hours worked



### Severity rate (SOL Group)

Days lost/10<sup>6</sup> hours worked



**Frequency rate** Accidents/10<sup>6</sup> hours worked

	Italy	France	Germany	Netherlands	Belgium	Republic of Macedonia	UK
<b>2014</b>	<b>3.0</b>	<b>6.3</b>	<b>18.7</b>	<b>2.8</b>	<b>0.0</b>	<b>0.0</b>	<b>31.0</b>
2013	5.6	15.2	16.7	3.5	0.0	22.5	24.1
2012	6.0	0.0	8.3	4.0	14.6	0.0	18.9
2011	6.8	4.0	6.2	4.0	29.8	0.0	n.d.
2010	4.5	6.7	2.5	0.0	0.0	0.0	n.d.

**Severity rate** Days lost/10<sup>6</sup> hours worked

	Italy	France	Germany	Netherlands	Belgium	Republic of Macedonia	UK
<b>2014</b>	<b>60</b>	<b>76</b>	<b>105</b>	<b>8.8</b>	<b>0</b>	<b>0</b>	<b>228</b>
2013	75.2	284.2	159.8	34.5	0.0	472.8	334.5
2012	46.5	0.0	108.8	8.0	114.4	0.0	163.4
2011	80.3	57.8	141.7	87.7	268.5	0.0	n.d.
2010	82.3	64.8	24.7	0.0	0.0	0.0	n.d.

“Zero accidents” objective  
achieved by **79%**  
of the Group’s production units

**“Zero accidents” objective**

Retaining the “Zero accidents” objective is the challenge that each Unit of the SOL Group sets itself each year, almost always with success, thanks to the commitment of the entire workforce.

The success is closely linked to an awareness that safety in the workplace is above all an ethical matter, because it involves the quality of life of the people working in our Group.

This is how we are able to create and maintain over time a shared culture that makes safety the basis of all activities carried out.

During 2014, the “Zero accidents” objective was attained by 59 Group Units, representing 79 % of the Group’s production units.

Many Units have been able to repeat this result over time, as shown by the fact that, in the past three years:

- 15 Units have reached five consecutive years without accidents
- 5 Units have reached ten consecutive years without accidents
- 3 Units have reached 15 consecutive years without accidents
- 47 Units have reached 20 consecutive years without accidents

### Worker health

All personnel potentially exposed to health risks are given medical checks, as laid down by law in the various countries and at intervals fixed by the doctor involved.

To maximise the quality of these checks in such complex organisations as SOL Spa and Visisol s.r.l, a coordinating Doctor has been nominated to set guidelines and verify the health protocols followed by local doctors.

Starting from 2012, health control monitoring, formerly limited to SOL Spa and Visisol Srl, was extended to all Group companies. The percentage of employees undergoing health surveillance is shown in brackets.

	Italy	Other countries
Medical examinations (n° of employees)	419 (43.9%)	384 (19.6%)
Clinical analyses (n° of employees)	277 (29.0%)	196 (10.0%)
Further checks (n° of employees) <sup>(1)</sup>	236 (24.7%)	153 (7.8%)

<sup>(1)</sup> electrocardiograms, spirometry, audiometry etc

The lower percentages of employees subjected to health monitoring in “other countries” are mainly due to a difference in regulations.

The outcomes of the checks carried out revealed 22 cases of pathologies deriving from work activity, mainly from manual load handling.

There were no positive results in tests for the assumption of psychotropic or narcotic substances.

There was no evidence of professional illnesses.

## 5.2. Customers and products

### 5.2.1. Customers

**The ability to realise that our customers' problems are our problems; complete satisfaction of their requirements; a commitment to work together on single objectives to reach the most advanced results. These have always been the goals that SOL pursues in managing customer relationships.**

*Code of Ethics, article 2 - Conduct in managing business activities*

The SOL Group aims to satisfy its customers' needs in all the sectors where it operates, not only with the punctual supply of specified products but also and above all with assistance in identifying the best conditions and methods of use of the gases and apparatus supplied.

Given the growing sensitivity of customers to environmental and safety matters, SOL has invested in the identification and development of technologies which, during usage of the products supplied, permit an improvement of working conditions, reducing for example atmospheric emissions or making water purifying processes more efficient.

In addition, our customers increasingly often ask us to demonstrate the implementation of a management system, in particular for quality and the environment, sending questionnaires and carrying out audits in our production Units.

The rapid response to these requests that SOL habitually gives is a further qualifying element for customers.

## Cryoemergency project

SOL, in collaboration with Centro Futura of the Tor Vergata University in Rome, has created a polyvalent mobile bio bank, which from the moment it was installed has become a significant added value for complete theoretical and practical training of those taking part in the courses periodically organised in the Centre.

The Centro Gestione Futura, directly managed by the University head of safety, handles professional training and prevention for activities within the University and also for external public and private bodies (for example the Istituto Superiore di Sanità).

The SOL bio bank, called Cryoemergency,

is regularly used as a teaching space where, under the supervision of qualified personnel of the Tor Vergata University, it is possible to follow the practical operations that Medically Assisted Procreation (MAP) operators and laboratory technicians have to carry out every day.

Cryoemergency is a complete bio bank constructed on a mobile container, which can be transported anywhere and has all the equipment required in environments such as cryogenic sample storage banks and class C laboratories for cell cultures.

Again in collaboration with Tor Vergata, a new version of Cryoemergency is being



designed. It is smaller than the present one with different technical equipment inside, and is designed to play a part in the national emergency plan as a valid solution for tackling emergencies (earthquakes, floods etc.) in hospitals.

## 5.2.2. Product safety

5,918 Safety data sheets

12 languages

Management of the safety instructions of all substances and for all companies operating in the European Community is centralised in the Monza headquarters.

All these instructions, together with the labels applied to mobile containers, conform to CLP (Classification, Labelling and Packaging), aimed at standardising the classification and labelling of dangerous substances and preparations in Europe.

As far as REACh (Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals) is concerned, in 2014 acetylene and calcium hydroxide (a sub product of acetylene production) were registered in Croatia for the UTP.

These two registrations are in addition to the only other one so far made, for calcium hydroxide in Italy.

The registration required for other substances that have already been preregistered (acetylene in other countries, nitrous oxide and calcium carbide) has been postponed until the 2018 deadline after verification that the quantities produced or imported are below the limit of 100 t per year.

The SOL Group takes part in national and international working groups on these matters so as to be constantly updated on the evolution of regulations and operate in harmony with other companies in the sector.

## 5.3. Social commitment

### 5.3.1. Authorities and Public Administration

**Relationships with the Public Administration must always be conducted by each employee and/or external collaborator with the principles of loyalty, correctness and transparency**

*Code of Ethics, article 2 - Conduct in managing business activities*

The Group's activities involve frequent contact with the Authorities and Public Administration, both for the handling of authorisation processes and for periodical verifications that laws are being respected.

On the second point, during 2014 Group Units were subjected to 43 days of audits by the Authorities on safety, environmental and pharmaceutical GMP issues (in 2013: 59 days).

In handling relationships with local and national Authorities, the SOL Group endeavours, while respecting the roles of the parties involved, to set up a constructive dialogue aimed at constant improvement, on the basis of objective data and technical and scientific evidence.

### 5.3.2. The community

The characteristics of the production processes and of most products do not normally create problems in managing relationships with local communities. The SOL Group is however always committed to maintaining a frank dialogue, seeking to understand the needs and requests of the communities in the neighbourhood of its production Units in order to obtain better acceptance of its presence. Active participation in the preparation of External Emergency Plans (where required) is further evidence of sensibility to the needs of the community.

An important initiative is the "Open Factory" events, promoted in Italy by Federchimica, which periodically allow the public (on different occasions: inhabitants, students, authorities, customers, suppliers etc) to visit a production unit and see with their own eyes how a complex industrial reality is managed.

The SOL Group gives its support to bodies, institutions, associations and sports clubs operating coherently with Group values, both with financial contributions and by making available its competences.

In 2014 contributions totalled about €470,000.

Among the projects worthy of mention:

Italy: both **SOL Spa** and **Vivisol Srl** contribute to various non-profit organisations. SOL, in particular, is a sponsor and partner of Progetto SLAncio, promoted by the La Meridiana Cooperative in Monza, which supplies assistance to those suffering from invalidating neurological and neuromuscular illnesses.

Vivisol supports AISLA, an association with the mission of becoming the national point of reference for the protection, assistance and care of SLA sufferers and for the development of scientific research into a neurodegenerative disease which affects motoneurons and gradually limits muscular activity; TELETHON Onlus which since 1990 has invested in research into a cure for rare genetic illnesses; the Associazione Vivi Down Onlus, which every day supplies Down Syndrome sufferers and their families tools to alleviate the difficulties that this disability involves; UILDM, the national association of reference for those affected by dystrophies and other neuromuscular diseases.

About **470,000** €  
of contributions paid in 2014

Austria: **Vivisol Austria** supports the “Charity Care Award” of the ÖGP (Austrian Pneumology Association) which helps patients with economic problems.

Bulgaria: **SOL Bulgaria** sponsors the initiatives of the Italian embassy, the Italian Cultural Institute and the ICE office in Sofia

Germany: **Vivisol D** supports, among others, the Deutsche Sauerstoffliga LOT eV (Association of patients in home oxygen therapy) and the QVH (Association for quality in home respiratory care).

Greece: **Vivisol H** supports the research activities of the University Hospitals of Athens and Thessaloniki.

Macedonia: **TGS** participates in research projects with the Mechanics faculty of the University of Sts Cyril and Mthodius in Skopje.

Netherlands: **Vivisol Nederland** supports several projects and bodies, particularly significant among which is the “EOLUS” research project of the Medical Centre of the University of Groningen, which carried out remote monitoring of a sample of patients receiving pulmonary ventilation and demonstrated that home treatment is just as safe as that applied in hospital structures, and costs less. The research was repeated, as the “Homerun project”, in other centres (Utrecht Maastricht and Rotterdam), also sponsored by Vivisol.

**NTG** supports the non-governmental organisation Stichting NGO, which provides medical support of sporting events.

Spain: **Vivisol I** supports the Spanish Pneumology and Thoracic Surgery Society (SEPAR), the European Respiratory Society (ERS) and the World Association of Sleep Medicine (WASM).

United Kingdom: **Dolby Vivisol** supports several Associations including the BLF – British Lung Foundation; the ARTP – Association For Respiratory Technology & Physiology, of which it has been a corporate member since 2012; the BTS – British Thoracic Society; the CHSS – Chest, Heart & Stroke Scotland; the SEHTA - South East Health Technologies Alliance: projects for home care of patients; and the Scottish Sleep Forum.

### 5.3.3. Associations

The SOL Group takes an active part in the activities of the main associations of companies in the technical and medicinal gases sector, in the home care and biotechnologies sector in Europe and in various European countries.

Group experts take part in several working groups in these associations, contributing to the exchange of technical knowledge and the drafting and updating of sector standards.

#### **International Oxygen Manufacturers Association (IOMA)**

SOL Spa is a member of the IOMA, which includes all the world’s main operators in the technical and medical gases sector. IOMA’s principal objective is to coordinate the harmonisation of safety rules so that operational practices are the same throughout the world.



### European Industrial Gases Association (EIGA)

In addition to SOL Spa, members of EIGA, which includes all the main European operators in the technical and medicinal gases sector, are also Group companies NTG, BTG, TMG and Vivisol Austria.

During 2014 the SOL Group further increased its involvement with associations and today has its own representatives on the Board of EIGA, in the four Councils, in ten working groups (eight in 2013) and in 14 ad hoc Groups (12 in 2013), contributing to the definition of standards and best practices in the sector.

### National category associations

Among the national Associations of which Group companies are members we mention:

- industry and chemical and pharmaceutical industry associations: Confindustria, Assolombarda and Federchimica (Italy), UIC (France), Essenscia, Febeliec and Pharmabe (Belgium), Spectaris, VCI and BVMW (Germany), HACI (Greece), UGIR (Romania), CIA (Macedonian Republic)
- technical gases industry associations: Assogastecnici (Italy - SOL Spa), IGV (Germany - TMG and SOL Kohlensäure), ÖIGV (Austria - SOLTG), VFIG (Holland - NTG), BIMGA (Belgium - BTG), AFGC and APHARGAZ (France - SOL France), HAIMG (Greece - SOL Hellas), GIZ TP (Slovenia - TPJ), BCGA (United Kingdom - Dolby Vivisol), BIGA (Bulgaria - SOL BG); AIIGMA (India - SicgilSOL).
- associations for biotechnology development: Assobiotec (Italy - Biotechsol)
- associations of home care sector operators: ÖGP (Austria - Vivisol A); Deutschen SauerstoffLiga LOT and QVH (Germany - Vivisol D); FHI (Holland - Vivisol Nederland); SYNALAM and FFAIR (France - Vivisol F and France Oxygene); Assobiomedica, which represents companies supplying medical devices to health structures (Italy - Vivisol)
- other associations: Unamec "Association of producers, importers and distributors of medical devices" (Belgium - Vivisol Belgio); ARTP "Association of Respiratory Technology and Physiology" (United Kingdom - Dolby Vivisol); Unternehmenschaft Niederrhein (Germany - TMG)

### Various

Group companies are part of prestige associations, with their own representatives who, in many cases, hold positions of responsibility in governing Councils:

- FBN – Family Business Network, includes more than 6.000 companies from 56 countries and has the aim of helping family companies to grow, succeed and prosper through the exchange of new ideas and "best practices"
- AIDAF – Associazione Italiana Delle Aziende Familiari, which includes Italian family companies that shared the guide values of business ethics, meritocracy, social responsibility and sustainability
- Aspen Institute Italia which promotes and encourages the development of enlightened leadership that is open to dialogue and able to face the challenges of a global society
- IAI – Istituto Affari Internazionali, which aims to promote an awareness of international problems in the fields of foreign policy, the economy and safety through research, conferences, publications and training
- ISPI – Istituto Studi di Politica Internazionale, one of the most ancient and prestige Italian institutions specialising in international activities which, among other things, constitute a point of reference for companies and institutions intending to extend their range of action abroad, offering materials and ad hoc encounters

# 6

## Methodological note

### Reference guidelines

In drafting the Report reference was made to the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines, aiming to progress towards complete conformity. The standard used for compiling the 2014 Report is GRI G3.1. We are planning to evaluate the adoption of the GRI G4 standard for future editions.

### Analysis of materiality

To define the scope of the report, a process of relevance analysis was carried out with the aim of identifying, on the basis of the impact that the various activities have, the most relevant topics both for Group companies and for the stakeholders of reference. The content of this edition of the Report already takes into account the initial results of this analysis, which will be further developed in the years to come.

### Scope of the report

The data given generally refer to all Group companies. Data referring only to certain companies in the Group have been highlighted in the comments on the individual sections or in the correlation table below.

In line with the rules adopted for drawing up the Balance Sheet, following the coming into force of the amendment to IFRS 11 (Joint Arrangements) which does not permit consolidation of companies in which there is a shareholding of  $\leq 50\%$ , this Report does not take into consideration the data of the two Indian companies

All data refer to the period 1/1/2014 - 31/12/2014, except for information on certain events during the first months of 2015 which are felt to be particularly significant.

### Data collection

Data were collected using a standardised form sent to and used by all managers of the companies involved.

### Balance

The parameters used reflect the progress of performance, regardless of whether this has improved or worsened with respect to the past, and are objectively and systematically presented.

### Accuracy

The data have been checked by the managers responsible. The reference for economic and Group data is the Group's Consolidated Balance Sheet.

### Variations and corrections concerning previous editions

It has not been found necessary to revise the information supplied in the previous edition of the Report.

The subjects dealt with in this edition are in line with those in the previous edition.

# 7 GRI - G3.1 - Indicators

The symbols in the “Coverage” column have, with reference to the GRI standard, the following meanings:

- the data and information given satisfy the requirements of the standard
- the data and information given partly satisfy the requirements of the standard
- no data or information given
- n.m.** The data and information required by the standard are not considered material

The “Page” column indicates the pages of the Report where the subject is covered.

The “Notes” column gives additional information and clarification

Rif.	Description	Coverage	Page	Notes
<b>1. Strategy and analysis</b>				
1.1	President's declaration	<input checked="" type="checkbox"/>	1	
1.2	Main impacts, risks and opportunities	<input type="checkbox"/>	31	See also the “Director's report” section of SOL Group Annual Report
<b>2. Organisation profile</b>				
2.1	Name of organisation	<input checked="" type="checkbox"/>	5	
2.2	Main brands, products and/or services	<input checked="" type="checkbox"/>	From 8 to 18	
2.3	Operating structure	<input checked="" type="checkbox"/>	5	
2.4	Headquarters	<input checked="" type="checkbox"/>	5	
2.5	Countries of operation	<input checked="" type="checkbox"/>	7	
2.6	Ownership and legal form	<input checked="" type="checkbox"/>	5	
2.7	Markets served	<input checked="" type="checkbox"/>	From 8 to 18	
2.8	Size of the organisation	<input checked="" type="checkbox"/>	From 8 to 18	
2.9	Significant changes	<input type="checkbox"/>	6	
2.10	Recognition/prizes received	<input type="checkbox"/>		
<b>3. Report parameters</b>				
<b>PROFILE</b>				
3.1	Reporting period	<input checked="" type="checkbox"/>	64	
3.2	Date of previous report	<input checked="" type="checkbox"/>		2014
3.3	Reporting cycle	<input checked="" type="checkbox"/>		Annual
3.4	Contacts and addresses for information on report	<input checked="" type="checkbox"/>		Inside front cover
<b>REPORT SCOPE AND BOUNDARY</b>				
3.5	Process for defining content	<input checked="" type="checkbox"/>	64	
3.6	Boundary of the report	<input type="checkbox"/>	64	
3.7	Limitations on scope or boundary of report	<input type="checkbox"/>	64	
3.8	Information on other related companies	<input type="checkbox"/>		
3.9	Data measurement techniques and basis of calculation	<input type="checkbox"/>		
3.10	Modifications with respect to previous report	<input checked="" type="checkbox"/>	64	
3.11	Significant changes with respect to previous report	<input checked="" type="checkbox"/>	64	

Rif.	Description	Coverage	Page	Notes
<b>GRI CONTENT INDEX</b>				
3.12	Table of reference	<input checked="" type="checkbox"/>	65	
<b>ACCREDITATION OF THE REPORT</b>				
3.13	External assurance	<input type="checkbox"/>		
<b>4. Governance, commitment, involvement of stakeholders</b>				
<b>GOVERNANCE</b>				
4.1	Governance structure	<input checked="" type="checkbox"/>	21	
4.2	Is the President also an executive officer	<input checked="" type="checkbox"/>		See "Annual report of the Board of Directors on company Governance and ownership structure" on <a href="http://www.solgroup.com">www.solgroup.com</a>
4.3	Independent and non-executive officers	<input checked="" type="checkbox"/>		See "Annual report of the Board of Directors on company Governance and ownership structure" on <a href="http://www.solgroup.com">www.solgroup.com</a>
4.4	Mechanisms for shareholders and employees to provide recommendations	<input type="checkbox"/>		
4.5	Connection between compensation of officers and top management and performance	<input type="checkbox"/>		
4.6	Conflicts of interest	<input checked="" type="checkbox"/>		See "Annual report of the Board of Directors on company Governance and ownership structure" on <a href="http://www.solgroup.com">www.solgroup.com</a>
4.7	Qualifications of officers	<input checked="" type="checkbox"/>		See "Annual report of the Board of Directors on company Governance and ownership structure" on <a href="http://www.solgroup.com">www.solgroup.com</a>
4.8	Mission, values, codes of conduct and principles	<input checked="" type="checkbox"/>	22	
4.9	Procedures for identifying and managing economic, environmental and social performance	<input checked="" type="checkbox"/>	23	
4.10	Process for evaluating the performance of the Board of Directors	<input type="checkbox"/>		
<b>Commitments to external activities</b>				
4.11	How the precautionary principle or approach is applied	<input checked="" type="checkbox"/>	21	
4.12	Adoption of external codes and principles in economic, social and environmental matters	<input checked="" type="checkbox"/>	From 23 to 27	
4.13	Participation in category associations	<input checked="" type="checkbox"/>	60	
<b>Involvement of stakeholders</b>				
4.14	List of stakeholders involved	<input checked="" type="checkbox"/>	28	
4.15	Principles for identifying the stakeholders to involve	<input checked="" type="checkbox"/>	28	
4.16	Involvement of the stakeholders	<input checked="" type="checkbox"/>	33/59/60/ 61/62	Formalised only for certain stakeholders
4.17	Activities involving stakeholders	<input checked="" type="checkbox"/>	33/59/60/ 61/62	Formalised only for certain stakeholders
<b>Economic performance</b>				
<b>ECONOMIC PERFORMANCE</b>				
EC1	Economic value directly generated and distributed	<input checked="" type="checkbox"/>	32	
EC2	Financial implications and other risks and opportunities connected with climate change	<input type="checkbox"/>		
EC3	Coverage of obligations assumed when pension plan was drawn up	<input checked="" type="checkbox"/>	52	
EC4	Significant financing from Public Administration	<input checked="" type="checkbox"/>		No significant financing
<b>MARKET PRESENCE</b>				
EC5	How standard new employee wages compare with local minimum	<input type="checkbox"/>		
EC6	Policies, practices and percentage of spending with local suppliers	<input checked="" type="checkbox"/>	33	Italy only
EC7	Procedures for hiring management locally	<input type="checkbox"/>		
<b>INDIRECT ECONOMIC IMPACTS</b>				
EC8	Development and impact of investments in public utility infrastructures and services	<b>n.m.</b>		
EC9	Indirect economic impacts	<input type="checkbox"/>		

Rif.	Description	Coverage	Page	Notes
<b>Environmental performance</b>				
<b>RAW MATERIALS</b>				
EN1	Raw materials used	<input checked="" type="checkbox"/>	35	
EN2	Percentage of materials used deriving from recycled material	n.m.		
<b>ENERGY</b>				
EN3	Energy consumption by source	<input checked="" type="checkbox"/>	38	
EN4	Indirect energy consumption by source	<input checked="" type="checkbox"/>	39	
EN5	Energy saving	<input checked="" type="checkbox"/>	38/39	
EN6	Products and services for energy efficiency or based on renewable energy	<input checked="" type="checkbox"/>	9/10/11/ 41/46	
EN7	Initiatives for reducing indirect energy consumption	<input checked="" type="checkbox"/>	39	
<b>WATER</b>				
EN8	Water consumption by source	<input checked="" type="checkbox"/>	44	Consumption only
EN9	Water sources significantly affected by usage	<input type="checkbox"/>		
EN10	Percentage in total volume of water recycled and reused	<input checked="" type="checkbox"/>	44	
<b>BIODIVERSITY</b>				
EN11	Land owned, rented or managed in protected areas of significant value for biodiversity	n.m.		
EN12	Description of major impacts on biodiversity	n.m.		
EN13	Habitat protected or restored	n.m.		
EN14	Strategies for managing the impacts on biodiversity	n.m.		
EN15	Number of species listed in the IUNC red list	n.m.		
<b>EMISSIONS, EFFLUENTS AND WASTE</b>				
EN16	Greenhouse gas emissions	<input checked="" type="checkbox"/>	41	Production units only
EN17	Other indirect emissions of greenhouse gas	<input type="checkbox"/>		
EN18	Action to reduce greenhouse gas emissions	<input checked="" type="checkbox"/>	41	
EN19	Emissions of substances harmful for the ozone layer	<input checked="" type="checkbox"/>	40	
EN20	Other atmospheric emissions	<input checked="" type="checkbox"/>	40	
EN21	Water discharge	<input checked="" type="checkbox"/>	45	
EN22	Production of waste and disposal methods	<input checked="" type="checkbox"/>	42/43	
EN23	Total number and volume of polluting spills	<input checked="" type="checkbox"/>	47	
EN24	Weight of waste classified as dangerous under the Basel Convention transported, imported or treated	<input checked="" type="checkbox"/>	43	
EN25	Characteristics of biodiversity of aquatic fauna and flora significantly hit by effluents and dispersion from the organisation	<input checked="" type="checkbox"/>	47	
<b>PRODUCTS AND SERVICES</b>				
EN26	Impacts of products and services on the environment	<input checked="" type="checkbox"/>	9/10/11	Qualitative
EN27	Percentage of products sold and packaging material recycled or reused	<input type="checkbox"/>		
<b>CONFORMITY</b>				
EN28	Amount of fines and number of sanctions for environmental offences	<input type="checkbox"/>		
<b>TRASPORT</b>				
EN29	Significant environmental impact of transport of products and goods/materials and for staff movement	<input checked="" type="checkbox"/>	39/40	
<b>GENERAL</b>				
EN30	Expenses and investments for environmental protection, by type	<input type="checkbox"/>		

Rif.	Description	Coverage	Page	Notes
<b>Social performance</b>				
<b>EMPLOYMENT</b>				
LA1	Personnel by type, contract and region	<input checked="" type="checkbox"/>	50/51	
LA2	Turnover by age, sex and region	<input checked="" type="checkbox"/>	50	
LA3	Benefits offered to full time, but not to part-time workers	<input type="checkbox"/>		
<b>INDUSTRIAL RELATIONS</b>				
LA4	Coverage of collective contracts	<input checked="" type="checkbox"/>	54	
LA5	Minimum for warning for operational modifications	<input type="checkbox"/>		
<b>HEALTH AND SAFETY IN THE WORKPLACE</b>				
LA6	Percentage of workers represented on the health and safety Committee	<input type="checkbox"/>		
LA7	Accidents at work and illnesses	<input checked="" type="checkbox"/>	57/58/59	
LA8	Training programs for the prevention and control of risks to help personnel avoid disturbances or serious illnesses	<input checked="" type="checkbox"/>	56	
LA9	Formal agreements with the unions on health and safety	<input checked="" type="checkbox"/>		Where laid down in collective contracts
<b>TRAINING AND INSTRUCTION</b>				
LA10	Staff training	<input checked="" type="checkbox"/>	53/54	
LA11	Programmes for development of competences and career advancement	<input checked="" type="checkbox"/>	54	
LA12	Percentage of staff who receive regular assessments on their performance and career development	<input type="checkbox"/>		
<b>DIVERSITY AND EQUAL OPPORTUNITIES</b>				
LA13	Staff by sex and other diversity indicators	<input checked="" type="checkbox"/>	50	
LA14	Relationship between men's and women's basic wages	<input checked="" type="checkbox"/>	51	Qualitative
<b>Human rights</b>				
<b>INVESTMENT AND SUPPLY PRACTICES</b>				
HR1	Operations with human rights clauses	<b>n.m.</b>		
HR2	Suppliers evaluated for respect of human rights	<b>n.m.</b>		
HR3	Hours of training on human rights policies and procedures relevant for the organisation	<b>n.m.</b>		
<b>NONDISCRIMINATION</b>				
HR4	Cases of discrimination	<input type="checkbox"/>		
<b>FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING</b>				
HR5	Risks for right to freedom of association and collective bargaining	<input type="checkbox"/>		
<b>CHILD LABOUR</b>				
HR6	Use of child labour	<b>n.m.</b>		
<b>FORCED LABOUR</b>				
HR7	Use of forced labour	<b>n.m.</b>		
<b>SAFETY PRACTICES</b>				
HR8	Percentages of safety personnel who have received training on human rights policies and procedures relevant for the organisation	<b>n.m.</b>		
<b>INDIGENOUS POPULATION RIGHTS</b>				
HR9	Number of violations of rights of local community and actions taken	<b>n.m.</b>		

Rif.	Description	Coverage	Page	Notes
<b>Impacts on society</b>				
COMMUNITY				
S01	Management of impacts on community	<input checked="" type="checkbox"/>	61	
CORRUPTION				
S02	Monitoring of risk of corruption	<input type="checkbox"/>		Italy – D.Lgs 231/01
S03	Staff trained in corruption crime prevention	<input type="checkbox"/>		Italy – D.Lgs 231/01
S04	Action taken following cases of corruption	<input checked="" type="checkbox"/>		No reported cases
POLITICAL CONTRIBUTIONS				
S05	Position on public policy and lobbying	n.m.		Not part of Group policy
S06	Total financial contributions and benefits to parties by country	n.m.		Not part of Group policy
ANTI-COLLUSION CONDUCT				
S07	Number of legal actions for non-competitive behaviour, anti-trust and monopoly practices	<input type="checkbox"/>		
CONFORMITY				
S08	Money value of sanctions for non-conformity with laws or regulations	<input type="checkbox"/>		
<b>Product responsibility</b>				
CONSUMER HEALTH AND SAFETY				
PR1	Products and services health and safety	<input checked="" type="checkbox"/>	60	
PR2	Nonconformity with regulations and voluntary codes	<input checked="" type="checkbox"/>		None on record
LABELLING OF PRODUCTS AND SERVICES				
PR3	Information on products and services	<input checked="" type="checkbox"/>	60	
PR4	Number of cases of nonconformity with regulations or voluntary codes concerning information on products/services	<input type="checkbox"/>		
PR5	Customer satisfaction	<input type="checkbox"/>		
MARKETING COMMUNICATION				
PR6	Laws, standards and voluntary codes on marketing and advertising	n.m.		
PR7	Number of cases of nonconformity and marketing communications	n.m.		
RESPECT FOR PRIVACY				
PR8	Number of complaints on privacy and data loss	<input checked="" type="checkbox"/>		No complaints
CONFORMITY				
PR9	Sanctions for nonconformity with laws or regulations	<input type="checkbox"/>		

## 8

## Glossary

**Accident:** a chance event that could lead to injury or material damage.

**Air separation:** process of separating out the gases contained in air by distillation, producing both liquid and gaseous products.

**Audit:** A systematic, independent and documented process for objectively evaluating to what extent the management criteria of reference have been satisfied.

**BS OHSAS 18001:** an international standard issued by the British Standards Institute that establishes the requirements of a health and safety management system. It allows organisations to be aware of and keep under control risks deriving from operations in normal and extraordinary conditions and to improve safety performance.

**Cold converter:** container with insulated vacuum chamber for highly refrigerated cryogenic gases, complete with interception, measuring and safety instruments.

**Conditioning:** a production operation that consists in taking gas from a secondary storage tank and compressing it in a gaseous or liquid state and transferring it to mobile containers. Conditioning also includes the sequence of operations carried out on the containers from when they arrive at the centre to storage of full containers ready for delivery.

**Cylinder basket:** steel structure containing a number of cylinders, normally 8 or 16, in a vertical position to facilitate their handling with normal forklift trucks.

**Cylinder bundle:** set of interconnected cylinders supported by a metal structure. The outlets of the cylinders are led to a single manifold.

**Cylinder:** container in steel or light alloy for compressed, liquefied or dissolved gases.

**EMAS (Eco-Management and Audit Scheme):** European Community regulation 761/2001. A voluntary instrument for implementing Community Environmental Policy aimed at continually improving environmental performance of the companies and businesses adopting it.

**Food safety:** the concept that food must not cause harm to consumers if prepared in accordance with its intended use.

**Frequency index:** ratio between the number of accidents and hours worked multiplied by 1 million. It measures the frequency of accident occurrence.

**Global Reporting Initiative (GRI):** a multi-stakeholder network instituted in 1997 and made up of companies, NGOs, associations of accountancy experts, business organisations and other international stakeholders involved in subjects relating to Corporate Social Responsibility. GRI's mission is to develop, supply and promote global reference guidelines for the drawing up of Sustainability Reports that describe the economic, environmental and social impacts that companies or organisations cause with their activities.

**Injury:** undesired event in the workplace that provokes bodily damage or objectively verifiable illness.

**IPPC (Integrated Pollution Prevention and Control):** Strategy instituted with Directive 96/61/CE for minimising the pollution caused by various sources throughout the EU. All types of installation listed in Appendix 1 of the Directive must obtain integrated authorisation from the authorities of the various countries. It is based on the premise that the failure to adopt

a common approach for controlling emissions into air, water and terrain could lead not to a reduction of pollution but to its transfer from one compartment to another.

**ISO 13485 standard (Medical devices – quality management systems):** an international standard that aims to maximise the probability that organisations operating in the medical devices sector satisfy the legal requirements existing at world level on quality management, and so supply safe and effective medical devices.

**ISO 14001 standard (Environmental Management):** an international standard that lays down the requisites for an environmental management system. It allows organisations to be aware of that and keep under control activities that have significant environmental impact, and improve their environmental performance.

**ISO 22000 standard (Food Safety Management Systems):** an international standard that defines the requirements for a food safety and hygiene management system.

**ISO 27001 standard (Information security):** an international standard that defines the requirements for setting up and running an information security management system (logical, physical and organisational security), with the aim of protecting data and information from threats of all kinds, ensuring the integrity, confidentiality and availability.

**ISO 50001 standard (Energy Management):** an international standard aimed at helping organisations improve their energy performance, increasing energy efficiency and reducing climate and environmental impact.

**Major accident:** event such as a serious spill, fire or explosion due to uncontrolled developments

in activities in the presence of dangerous substances, that could cause grave danger for human health or the environment.

**Medical device (MD):** any instrument, apparatus, equipment, machine, device, plant, reagent in vitro or for calibration, computer software, material or other similar or related product for use, alone or in culmination, on persons for one or more specific purposes of diagnosis, prevention, control, therapy or attenuation of an illness; for diagnosis, control, therapy, attenuation or compensation of a wound or handicap; for studying, substituting or modifying anatomy or a physiological process; for intervening on conception where the main desired action in or on the human body is not carried out with pharmacological or immunological means or through metabolism, but whose function can be aided by these means.

**Medical gas:** any medication consisting of one or more active gaseous substances that may or may not be mixed with excipient gases.

**Mobile container:** container for compressed, liquid, dissolved and cryogenic gases used for transporting products. Mobile containers are: cylinders, drums, gas cylinders, cylinder bundles, dewars, base units and portable units.

**Policy (quality, safety, environment):** general principles and guidelines of an organisation, formerly expressed by top management.

**Primary process units:** units where gases are produced from raw materials.

**Primary storage:** liquefied cryogenic gas container filled directly by the production plant. Quality, safety and environmental management system.

### Quality, Safety and Environment

**Management System (SHEQ/MS):** that part of the general management system that includes the organisational structure, planning, responsibilities, procedures, processes and resources for drawing up, implementing and maintaining active well-defined quality, safety and/or environmental policies.

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

**REACH:** EC regulation n. 1907/2006 (Registration, Evaluation, Authorization and Restriction of Chemicals). Its main aim is to improve the awareness of the dangers and risks deriving from chemical substances, aiming to attain a high level of protection of human health and the environment.

**Responsible Care:** a voluntary program of the world chemical industry based on the implementation of principles and conduct concerning the safety and health of employees and environmental protection, and the commitment to communicate the results obtained aiming for continual, significant and tangible improvement.

**Sale equipment:** technical/technological equipment purchased from third parties and supplied for use to customers as part of a service, but destined to remain the property of SOL; for example mobile containers, cold converters etc.

**Secondary process units:** units where gases are conditioned, normally using gases coming from primary process units, into their physical form (which may be compressed gas or

cryogenic liquid) in the containers (cylinders, cylinder bundles, drums or tanks) best suited for distribution to end users. Some units also produce pure and high purity gas mixtures.

**Secondary storage:** liquefied cryogenic gas container filled by tankers, normally installed in secondary process units.

**Severity index:** ratio between days of absence due to injury and hours worked multiplied by 1 million. It measures the severity of injuries.

**Seveso Directive (CEE/82/501 and later modifications):** European regulation aimed at preventing and controlling the risk of serious accidents. It governs industrial activities that involve the stocking and/or use of certain quantities of dangerous substances.

**Stakeholder:** all categories of subjects, private or public, individual or collective, internal or external, that can influence the success of a business or whose interests are involved in business decisions: customers, suppliers, investors, local communities, employees, unions, public administration, future generations etc.

**Steam reforming:** process in which methane reacts with steam, in the presence of a catalyst, to produce hydrogen and CO<sub>2</sub>.

### Sustainability (see Sustainable development)

**Sustainable development:** development that can satisfy current economic, environmental and social needs, without compromising the chances of future generations being able to satisfy theirs.

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