

# HSE

HEALTH  
SAFETY

ENVIRONMENT

COMPENDIUM OF THE 2006 REPORT





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## HSE

## 2006



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ALESSANDRO GARRONE**  
*(Chief Executive Officer)*

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# LETTER FROM ALESSANDRO GARRONE

We are aware that the continuous development of our role within the Italian energy industry entails major responsibilities vis-à-vis all our main interlocutors. The challenging investment plan that we intend to carry out over the next few years cannot leave aside our business values and their consistent implementation.

We believe that economic results must be achieved and maintained via a responsible management of socio-environmental variables, with the involvement of all parties concerned both inside and outside ERG. The protection of the environment, people's health and the safety of our operations are all fundamental factors for the Group's sustainability. In this respect, the incident that occurred at the Priolo Refinery has prompted improvement with a view to further enhancing the level of prevention. For such purpose, we are carrying out and elaborating a careful analysis of the causes, in order to put in place appropriate corrective measures from both a plant engineering and an operational perspective.

The organisational decisions taken in

recent years are also precisely aimed at achieving these objectives of prevention and hence of risk minimisation. To this effect further impulse will be given to the plans for implementation and certification of the industrial sites' management systems.

In our strategic business decisions we have taken account of market prospects and the environmental sustainability of projects, especially as regards energy production from renewable sources. In fact, over the next four years ERG aims to become one of Italy's leading producers of wind-generated energy.

Our sense of responsibility also concerns continuing the soil and subsoil protection interventions with a view to preventing all forms of pollution, in keeping with the actions taken in 2006, and contributing where necessary towards the reclamation of the areas involved.

Our relationship with the local environment, particularly as regards Sicily where there is a greater

presence of ERG industrial plants, will be further consolidated. In our vision of a business as an integral part of the community, our intention is to become interlocutors capable of contributing towards social and economic growth wherever our main operations are based. In order to do this we are making available adequate organisational and operational resources.

ERG's intention, in presenting this 2006 HSE Report, is therefore to clearly explain the initiatives undertaken, the results achieved and the objectives set, with a constant view to transparent and effective business communication.



ALESSANDRO GARRONE  
Chief Executive Officer



## THE ERG GROUP

ERG is the leading Italian independent Group operating in the energy and petroleum sectors. ERG's shares, which have been listed on the Stock Exchange since October 1997, at the end of 2005 were included in the MIDEX index, within the Blue-Chips segment.

ERG also forms part of the Index set up by Kempen Capital Management and SNS Asset Management, grouping together the companies which, at European level, stand out for their implementation of sustainability policies on matters connected with ethics, the environment and human resource management. Since it was established, ERG's growth has passed through various stages of development and consolidation, to become a multi-energy group operating in the sector of refining and distribution of petroleum products and in the production of electricity also from renewable sources. Today the Group represents approximately 22% of total domestic refining capacity and is the second largest sector operator in Italy. ERG sales on the domestic market account for 9% of the national consumption of petroleum products. The Group's activities are divided into three business areas.

## COASTAL REFINING

Through its subsidiary ERG Raffinerie Mediterranee (ERG Med; 100% ERG), it owns the ISAB Refinery, whose plants are located in Priolo Gargallo (Syracuse).

ERG manages one of the largest and most efficient refining complexes in Europe (with a processing capacity of approximately 380,000 barrels/day) and is the largest Italian exporter of petroleum products (mainly diesel and gasoline). ERG Med also supplies products to other oil companies operating in Italy.

## INTEGRATED DOWNSTREAM

Through its subsidiary ERG Petroli (100% ERG), ERG manages the marketing and logistics divisions; furthermore, ERG Petroli owns important shareholdings in two refineries: one in Trecate, near Milan, and one near Rome (with an overall capacity of 60,000 barrels/day). The ERG logistics system is one of the largest in Italy and is strategically positioned to allow the distribution of petroleum products throughout the country. The distribution of transport petroleum products in Italy is carried out via a network of almost 2,000 service stations, which account for around 7% of the domestic market.





ERG Petroli sells gasoline, diesel, fuel oil, bitumen and LPG on the wholesale market, via a network of retailers in Italy and Switzerland. ERG Petroli also sells petroleum products to other domestic and international market operators.

Via its subsidiary ERG Petroleos (100% ERG Petroli), ERG Petroli also operates in the retail and wholesale markets in Spain.

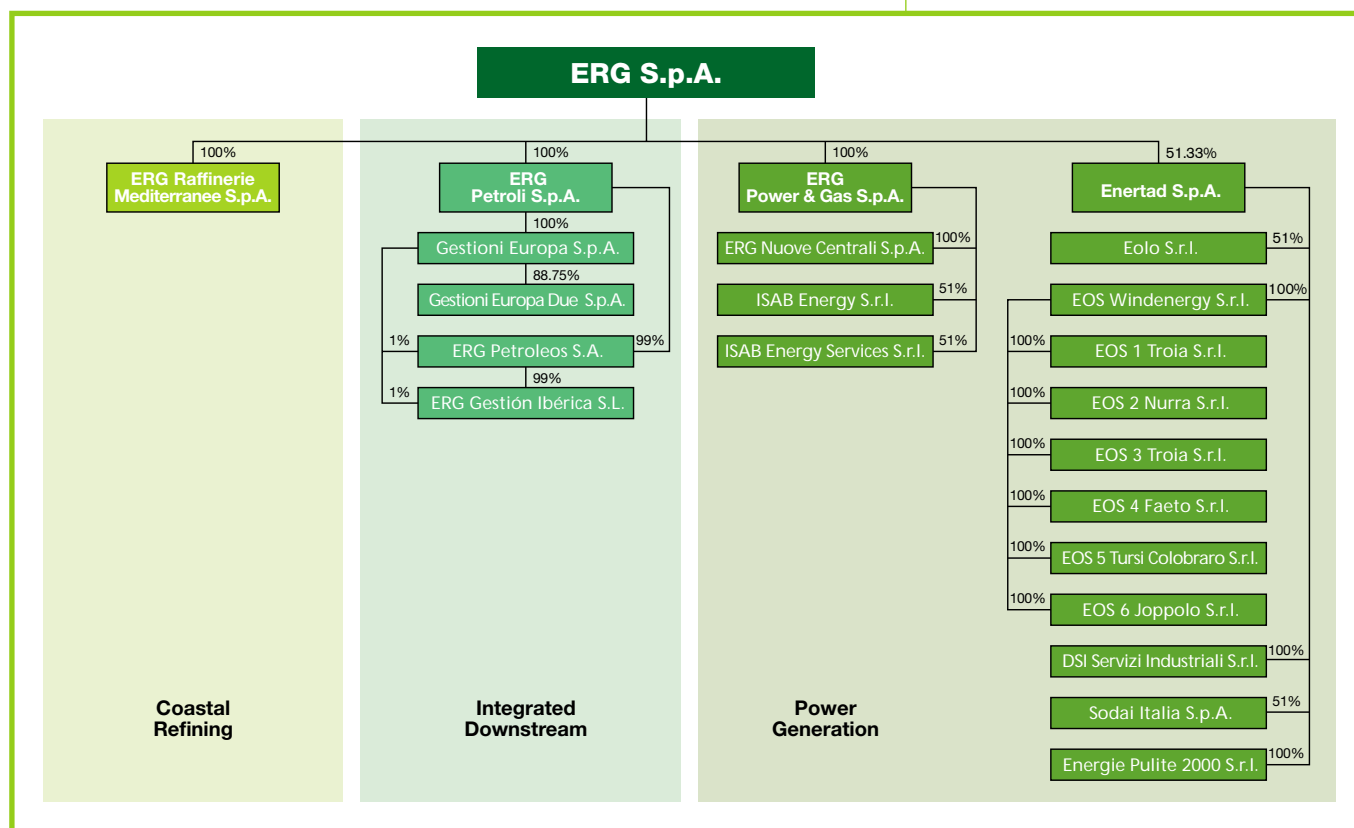
## POWER GENERATION

Through its subsidiary ERG Power & Gas (100% ERG), ERG manages and develops the production and marketing of electrical power, steam and gas. In particular, ISAB Energy (51% ERG Power & Gas) produces electricity via a power station with a capacity of 528 MW, which uses as its fuel syngas deriving from the gasification of residues from crude oil processing at the nearby ISAB Sud refinery. The power station is operationally managed by ISAB Energy Services, another affiliated company of ERG Power & Gas.

Projects are already underway for the repowering of the two power plants inside the ERG Med refineries, with capacities of 99 MW and 450 MW respectively, which will be fuelled mainly by natural gas.

These power plants come under the company ERG Nuove Centrali (ERG NuCe), another ERG Power & Gas affiliated company.

ERG CESA Eolica (50% ERG Power & Gas), active in the development



of wind farms, has 33 MW in operation and 188 MW already authorised.

Enertad (51% ERG), a company listed on the Milan Stock Exchange, operates in electricity production from wind power, with an installed capacity of 77 MW and a market share, in Italy, equal to 4.5%. The 2007-2010 industrial plan provides for a further growth to reach an overall capacity of 390 MW, of which 169 MW already authorised.

ERG Power & Gas has entered into a 50:50 joint venture with Shell Energy Italia (Ionio Gas) for the development of a liquid natural gas regasification plant within the Syracuse industrial complex.

## MAIN ECONOMIC AND FINANCIAL DATA (ERG 2006 Consolidated Financial Statements)

(million Euro)	2004	2005	2006
TOTAL REVENUES <sup>(1)</sup>	6,380	9,029	9,303
<b>EBITDA</b>	<b>583</b>	<b>869</b>	<b>442</b>
EBITDA AT REPLACEMENT COST <sup>(2)</sup>	503	633	463
EBIT	433	712	285
<b>EBIT AT REPLACEMENT COST <sup>(2)</sup></b>	<b>354</b>	<b>477</b>	<b>305</b>
NET INCOME	224	421	194
OF WHICH GROUP NET INCOME	194	385	153
<b>OF WHICH GROUP NET INCOME AT REPLACEMENT COST <sup>(3)</sup></b>	<b>144</b>	<b>230</b>	<b>103</b>
<b>CASH FLOW FROM OPERATIONS</b>	<b>610</b>	<b>469</b>	<b>47</b>
INVESTMENTS/DIVESTMENTS	(136)	(254)	(511)
CHANGES IN SHAREHOLDERS' EQUITY	(51)	(66)	(113)
CHANGE IN SCOPE OF CONSOLIDATION	2	–	(10)
<b>CHANGE IN NET FINANCIAL DEBT</b>	<b>417</b>	<b>114</b>	<b>(587)</b>
<b>NET INVESTED CAPITAL</b>	<b>1,783</b>	<b>1,977</b>	<b>2,754</b>
SHAREHOLDERS' EQUITY	900	1,209	1,398
NET FINANCIAL DEBT (EXCLUDING PROJECT FINANCING)	535	415	1,038
NON-RECOURSE PROJECT FINANCING <sup>(4)</sup>	348	354	318
ROACE <sup>(5)</sup>	12%	16%	8%
ROE <sup>(5)</sup>	22%	25%	11%
FINANCIAL LEVERAGE	50%	39%	49%

<sup>(1)</sup> not including excise duties, swaps and forward dealings on crude oil and products

<sup>(2)</sup> EBITDA and EBIT at replacement cost do not include gains (losses) on inventory or non-recurring items

<sup>(3)</sup> net Group income at replacement cost does not include gains (losses) on inventory, non-recurring items or their related theoretical taxes

<sup>(4)</sup> net of cash and cash equivalents

<sup>(5)</sup> calculated based on results at replacement cost



## OPERATIONAL DATA

(ERG 2006 Consolidated Financial Statements)

		2004	2005	2006
<b>INVESTMENTS <sup>(1)</sup></b>	<i>MILLION EURO</i>	<b>152</b>	<b>274</b>	<b>365</b>
EMPLOYEES AT CLOSE OF PERIOD		2,643	2,679	2,820
<b>PROCESSING AT THE REFINERIES</b>	<i>THOUSAND TONNES</i>	<b>21,095</b>	<b>21,163</b>	<b>18,681</b>
PROCESSING AT THE REFINERIES	<i>THOUSAND BARRELS/DAY</i>	424	426	376
<b>ELECTRICAL POWER PRODUCTION</b>	<i>MILLION KWH</i>	<b>5,516</b>	<b>5,266</b>	<b>5,098</b>
SALE OF ELECTRICITY	<i>MILLION KWH</i>	5,107	4,797	4,561
<b>EXPORT OF PETROLEUM PRODUCTS</b>	<i>THOUSAND TONNES</i>	<b>8,305</b>	<b>9,190</b>	<b>7,812</b>
DOMESTIC RETAIL SALES	<i>THOUSAND TONNES</i>	2,113	2,082	2,019
<b>DOMESTIC RETAIL MARKET SHARE <sup>(2)</sup></b>	<i>GASOLINE + DIESEL</i>	<b>7.1%</b>	<b>7.1%</b>	<b>7.0%</b>
DOMESTIC RETAIL OUTLETS AT CLOSE OF PERIOD	<i>NUMBER OF OUTLETS</i>	1,969	1,967	1,968
<b>AVERAGE THROUGHPUT <sup>(3)</sup></b>	<i>M<sup>3</sup>/OUTLET AT THE END OF THE YEAR</i>	<b>1,341</b>	<b>1,326</b>	<b>1,295</b>
INVENTORY OF RAW MATERIALS AND PRODUCTS	<i>THOUSAND TONNES</i>	2,094	2,736	2,630

<sup>(1)</sup> investments in tangible and intangible assets recorded during the period

<sup>(2)</sup> 2006 figures estimated

<sup>(3)</sup> calculated on the basis of number of retail outlets at the end of the period



### ERG'S HSE GUIDING PRINCIPLES

- Management commitment
- Motivation and participation of all employees
- Responsibility
- Risk analysis and assessment
- Objectives and plans for constant enhancement
- Anticipation and control of emergencies
- Periodic effectiveness and efficiency verifications and controls
- Information and training
- Communication
- Recording and analysis of each event
- Relationship with external institutions and the community
- Choice of suppliers
- Documentability and traceability of each action

## HSE POLICY

People's Health and Safety and Environmental Protection are primary values within the ERG Group business culture and therefore represent an important commitment as regards the operations of the various functional divisions and in relationships with the external community. ERG firmly believes that the complete integration of its activities with the local environment is the most important condition for the achievement of its development objectives.

In accordance with such principles, ERG endeavours:

- to promote and put into practice all reasonable initiatives intended to minimise risks and remove the causes that can endanger the safety and health of both its employees and the local people in its operational areas;
- to guarantee constant attention and commitment in order to improve its environmental performance, by reducing air, water and soil emissions, as well as through a responsible and conscious use of natural resources;
- to evaluate beforehand the environmental impact of all new activities, processes and products;
- to develop a relationship of constructive cooperation, based on utmost transparency and trust, both within the Group itself and vis-à-vis the external community and the Institutions in the management of environmental, health and safety issues;
- to maintain high safety and environmental standards through the implementation of efficient management systems.

ERG, conscious of the fact that the aforesaid objectives cannot be achieved without the active contribution of all personnel, plans to develop an ongoing action of targeted education, awareness and training.

The adoption of behaviours consistent with company policies is considered a factor for evaluation of individual performances, since compliance with legal provisions must be constantly guaranteed by the Company and by all personnel, at every level of responsibility.

ERG encourages adoption of the policy on the part of its suppliers and customers, particularly vis-à-vis contractors working inside ERG's production sites.

Appropriate reviews and verifications are periodically carried out to evaluate the results, according to the system of reference indicators

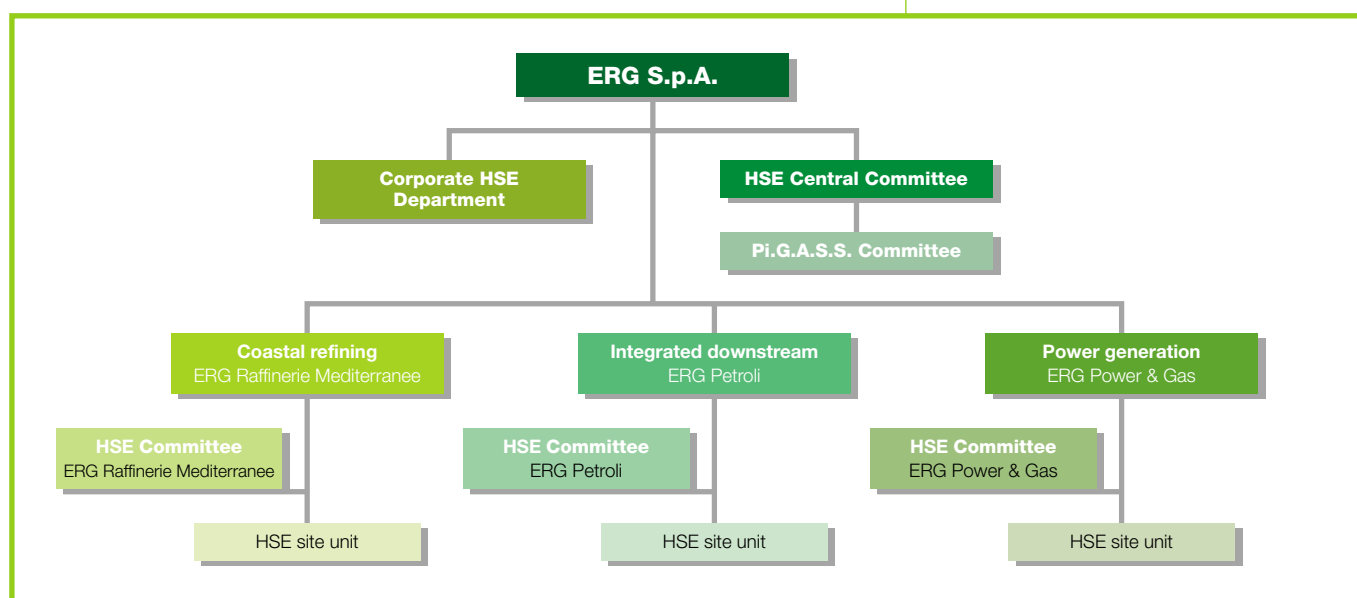
identified by the Company, and to define any necessary corrective actions.

## ORGANISATION

The creation of value on the part of the ERG Group is achieved also through the efficiency of the organisation regulating HSE variables. To this effect it is construed as structural capital, which therefore needs to be continuously revised in order to pursue the developments required of the ERG Group.

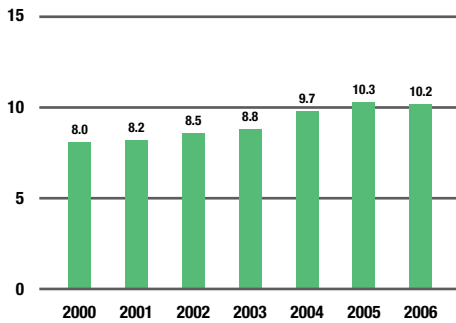
The first element for growth is the participation and total involvement of all personnel. The HSE management system is in fact structured based on a series of committees at holding company, corporate and individual production site level. Operating at Group level are the HSE Central Committee and the Pi.G.A.S.S. (Pianificazione e Gestione Ambiente, Salute e Sicurezza) Committee.

The Central Committee determines policies and strategies at Group level for the continuous enhancement of relevant performances. It also sets general and specific targets, systematically checking the achievement of same, while respecting a wide autonomy in the individual operating companies' management. The Committee is formed of its chairman, in the person of ERG's Chief Executive Officer, the Chairmen and Managing Directors of the subsidiaries, ERG staff functions and the Corporate HSE Department.

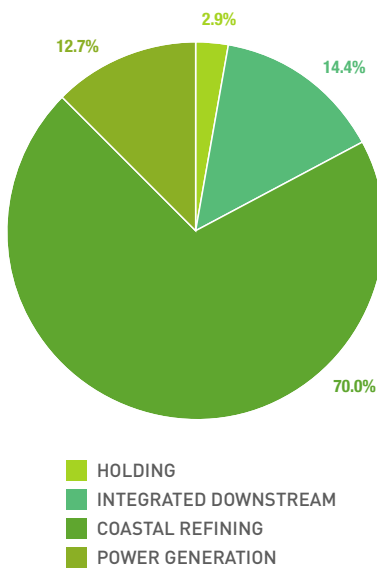


The necessary technical support is provided by the Pi.G.A.S.S. Committee, which carries out checks, investigations and studies focused on various issues arising from the HSE management of the industrial sites, thereby facilitating the liaison and cooperation

**HSE EQUIVALENTS**  
(% ERG Group total personnel)



**BREAKDOWN OF HSE PERSONNEL**  
**BY BUSINESS AREA**  
280 full time equivalents



between all the structures involved. Chaired by the Corporate HSE Department, the Committee comprises all the people responsible for HSE from each site, the people in charge of the Prevention and Protection Service (RSPP – Responsabili Servizio Prevenzione e Protezione), the Health Supervisor and the Legal Department. Alongside the Group management bodies, similar HSE Committees have been set up by the operating Companies ERG Petroli, ERG Raffinerie Mediterranee and ERG Power & Gas, in order to guarantee the homogeneous and shared application of HSE Policies and Guidelines.

The human resources assigned to HSE management are dimensioned so as to implement a strategy that sees prevention as the prime element in optimal management of risks.

With regard to safety, the RSPPs ensure the correct application of regulations and perform all relevant formalities, consulting Union Representatives as appropriate.

Management of health related topics is entrusted to a group of Competent Doctors, specialists in occupational medicine, who perform continuous monitoring of the working population, taking appropriate preventive action to avoid the occurrence of specific pathologies.

During the last few years, the company's personnel has become more and more involved in HSE issues both from an operational standpoint, through specific training, and from a management perspective. Analysis of the roles and activities performed by individual staff members shows the high level of participation. In 2006, 10.2% (280 full time equivalents) of the Group's overall headcount, in the course of their work, had direct involvement in safety management and environmental protection. This result is in keeping with last year<sup>(1)</sup>. In view of the risk level associated with production activities, most of the resources are assigned to the refining and power generation areas. The operational integration between the Priolo industrial structures (refineries and power plants for the production of electricity and steam) has also led to an operational synergy in terms of personnel, particularly as regards the fire fighting service.

<sup>(1)</sup> The data for previous years have been recalculated to include the staff of companies directly managing the sales outlets.

## MANAGEMENT SYSTEMS AND CERTIFICATIONS

The ERG Group, for some time now, has drawn up Guidelines for the integrated management of employee health, safety and the environment. These constitute the fundamental reference for promoting the coordinated and standardised growth of all the Group's companies operating in the various industrial sectors.

In keeping with the principles set forth in the Guidelines and with the HSE Policy, which are based on the concept of corporate social responsibility, ERG has identified, as fundamental organisation and management tool, the gradual adoption at each production site of an Integrated Health, Safety and Environmental Management System, certifiable in accordance with standards recognised at national and international level. The implementation of an ERG certification programme therefore falls within the strategy of utilising best management practices to prevent and minimise the risks associated with its activities. The plan's full evolution occurred during the period between 2003 and 2006.

### ENVIRONMENT

The certification relating to environmental management, a clear indication of ecocompatibility, pollution prevention and constant improvement of organisational performances, represents one of the most important objectives achieved by the Group in recent years. ISO 14001 certification has been completed for the two ERG Petroli depots in Trecate and Savona, the ISAB Energy IGCC plant, the company operating this facility, ISAB Energy Services, the Priolo refining complex (Impianti Nord and Impianti Sud) belonging to ERG Raffinerie Mediterranee. In the latter case, in particular, now that the physical interconnection and organisational integration of the two plants has been completed, a process has been launched to combine the Environmental Management Systems, which already starting from 2007 will be subject to "parallel" inspections on the part of the accredited Entity with a view to future certification of the whole "supersite". The ERG Nuove Centrali electricity and steam power generation plants have undergone significant changes, from both an organisational and plant engineering perspective (for example, the "revamping" of the Impianti Sud facility). This made it objectively impossible to realise the goal of certification by the end of 2006. For the Impianti Sud, the aim is to achieve this target by the end of 2007.



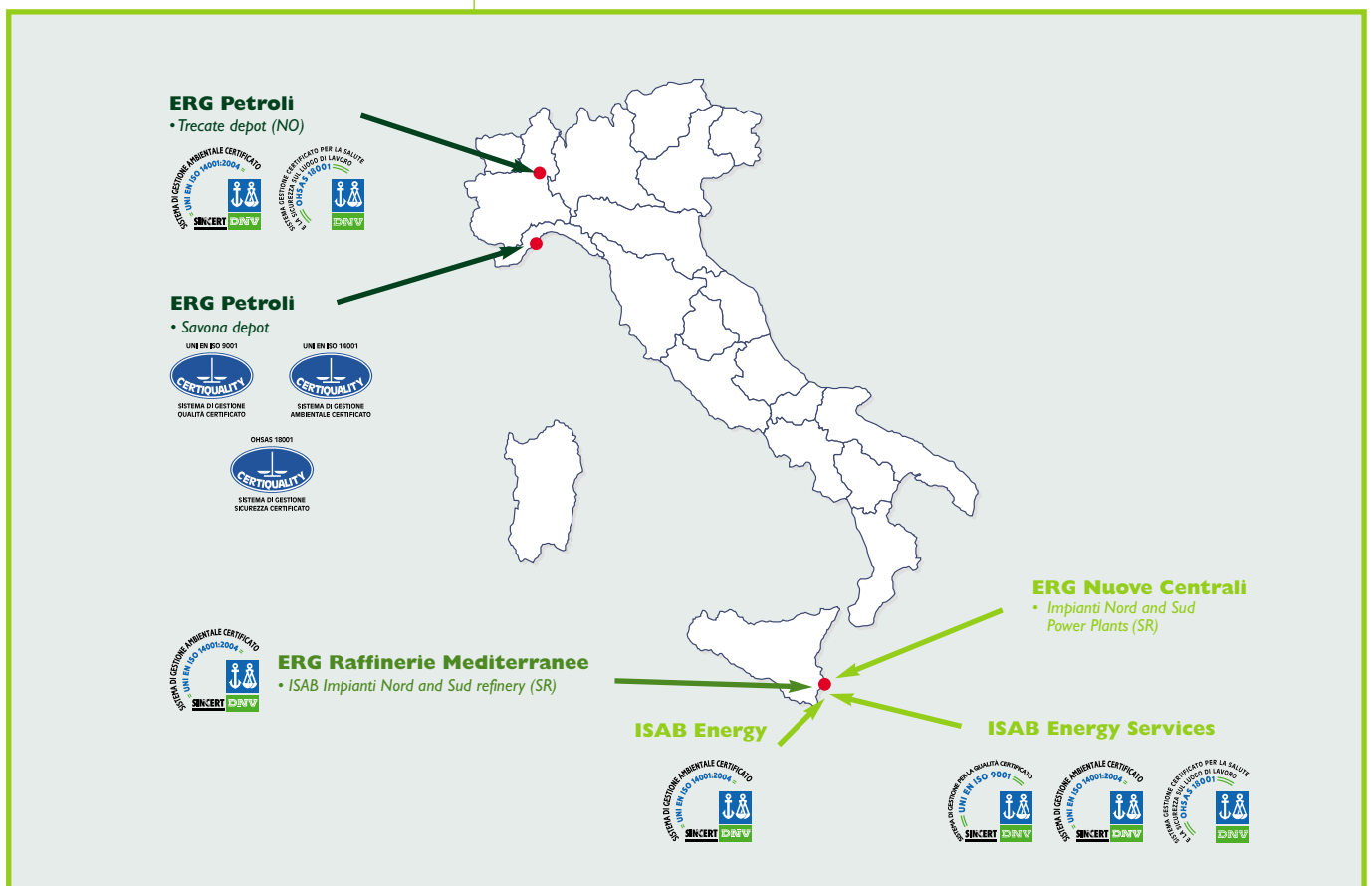


## HEALTH AND SAFETY

Human resources represent the cornerstone of the ERG Group. To this effect, the protection of health and prevention of any form of accident or injury (as regards both its own workers and those of third parties employed at the industrial sites) are primary objectives of ERG. The international reference OHSAS 18001 certification has already been achieved by ISAB Energy Services and by both of the ERG Petroli depots (Savona and Treocate). ERG Raffinerie Mediterranee aims to realise a standard compliant Management System, by the end of 2007, and to subsequently obtain certification. At such time its Health and Safety Systems will be integrated with the Environmental Management Systems.

## QUALITY

A further opportunity for improvement concerns the ability to offer products and services which, in a structured manner, meet the needs and expectations of customers. It is precisely with this in mind that ERG Petroli's Savona depot and ISAB Energy Services, industrial structures respectively oriented towards the lubricants market and the operation of power generation plants, have created a Quality Management System, ISO 9001 certified and perfectly integrated with the HSE Management Systems.





The integrated management also includes specific activities such as control of the HSE services of companies operating at the industrial sites, the monitoring of activities carried out by contractors providing special waste treatment and disposal services, the implementation of criteria for acceptance of ships at the terminals.

The System for Management of HSEQ issues, as structured, can be included in the Group Corporate Governance policy, by implementing the industrial strategy in accordance with its own model for business sustainability.

## TRAINING AND INFORMATION

HSE training and information is a fundamental tool for both the valorisation of human resources and the implementation of Management Systems, intended to minimise the risks associated with operational activities.

The training is designed to also transmit and share ERG's guiding values, involving in the training programmes also the external operators who for various reasons are present at the industrial sites.

The activities are structured so as to respond to the needs of all professional roles and take into consideration new hires, personnel transferred or who have changed their position and the staff concerned with legislative, organisational and/or technological developments.

The programme also includes specialised training addressed to particular groups of employees, such as:

- first aid and rescue team officers;
- prevention and protection service personnel;
- the Workers' Representatives for Safety and Environment (Rappresentanti dei Lavoratori per la Sicurezza e l'Ambiente - RLSA);
- personnel qualified to perform specific activities (boiler operators, people handling toxic gases, etc.);
- in-company trainers.

Occasional visitors to the plants also receive specific information concerning general risks, the main regulations and the procedure to be followed in case of emergency.

The full implementation of effective Management Systems has, in recent years, supported a growth in training activities. In 2006 the



hours of training provided was up by 18.2% over 2005<sup>(2)</sup> and the specific index rose from 14.4 to 16.1 hours per employee.

<b>HSE TRAINING AND INFORMATION</b> (no. of hours)	<b>2004</b>	<b>2005</b>	<b>2006</b>
INTEGRATED DOWNSTREAM	2,437	2,105	3,272
COASTAL REFINING	21,024	28,889	34,955
POWER GENERATION	6,012	6,509	6,090
<b>TOTAL</b>	<b>29,473</b>	<b>37,503</b>	<b>44,317</b>

<b>HSE TRAINING AND INFORMATION INDEX</b> (hours/average no. employees)	<b>2004</b>	<b>2005</b>	<b>2006</b>
	11.0	14.4	16.1

## HEALTH PROTECTION AND SAFETY

On 30 April 2006 a fire broke out at the ISAB Nord Refinery in Priolo. At 2.40 p.m. an operator reported to the tanks area shift supervisor and to the general shift supervisor a leak in a crude oil pipeline near the underpass of the ex strada statale (former state road) 114. Having located the leak on the pipeline that links the crude oil tanks to the refinery "topping" plant, the managers in charge of operation, safety and maintenance were informed. After the outside Authorities had been informed, in compliance with current legal provisions and according to the protocols with the local Administrations, repair interventions were set in motion. More specifically, following the deinsulation of the pipeline, a "collar" was in the process of being installed, an intervention considered to be compatible with the size of the leak found; however, a few minutes after the start of the interventions, the staff involved noticed that smoke was forming at the entrance to the underpass. The intervention of the company's fire fighters was requested, and they promptly arrived with two fire-fighting vehicles and stopped the traffic along the ex strada statale 114. Immediately afterwards the fire fighters of the Syracuse provincial fire service were called out who, in accordance with the emergency handling procedure, took full charge of operations. Despite having intercepted the underpass lines, just before 6.00 p.m. another fire broke out in the exit area. After about an hour, due to the high temperatures reached, some pipelines exploded. At this point, the order was given for the general shutdown of all installations of the refinery and of the other industrial plants of the Priolo multicompany site.

<sup>(2)</sup> The data for previous years have been recalculated to include the staff of companies directly managing the sales outlets.



The fire lasted a total of about 48 hours. The 6 casualties, 4 light and 2 more serious, all had a positive outcome. Also involved were 8 fire fighters of the national fire service, who were treated for bruises and slight burns. The April incident at the ISAB Nord Refinery (6 casualties, 4 slight and 2 more serious) affected the total performance indicators in terms of both frequency and severity.

NO. OF INJURIES	2004	2005	2006
INTEGRATED DOWNSTREAM	12	14	11
COASTAL REFINING	7	3	15
POWER GENERATION	–	–	–
<b>TOTAL</b>	<b>19</b>	<b>18<sup>(1)</sup></b>	<b>26</b>

<sup>(1)</sup> one injury concerned the Holding Company

Overall, the Group's injuries in 2006 numbered 26. The frequency index of events and their severity are in keeping with the average for the European oil industry (see CONCAWE Report 7/06).

In most of the other cases, the injuries that occurred during 2006 were ascribable to the non-oil commercial activities of the directly managed retail outlets. Following an analysis of the events it was possible to identify the causes, which in limited cases were due to incorrect application of prevention procedures.

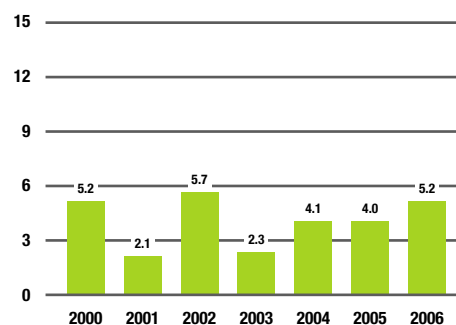
Conscious of the fact that personal safety is a fundamental element of its business sustainability, ERG has launched a project developing the issue of prevention in all its main structural and operational variations, in order to put in place corrective measures wherever shortcomings are found. This project will also involve an in-depth analysis of "near accidents" (episodes which could have led to accidents or injuries), on-site tests and relevant best practices at international level. The first results of such analyses will be available by the end of 2007.

In terms of specific on-site performance, the Trecate depot and the IGCC facility, both OHSAS 18001 certified, confirmed the total absence of injuries. This target has been achieved respectively for the past 10 and 6 years.

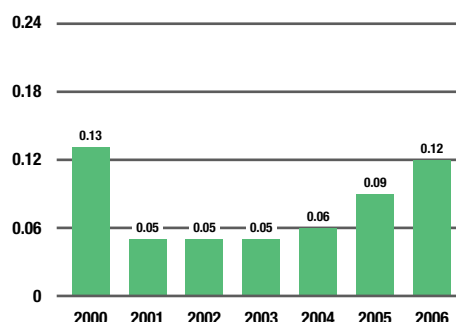
NEAR ACCIDENT (no.)	2004	2005	2006
	90	381	375

As far as the management of employee health is concerned, specific protocols were applied, accompanied by voluntary awareness and test

**FREQUENCY INDEX**  
no. of accidents x 10<sup>6</sup> / hours worked

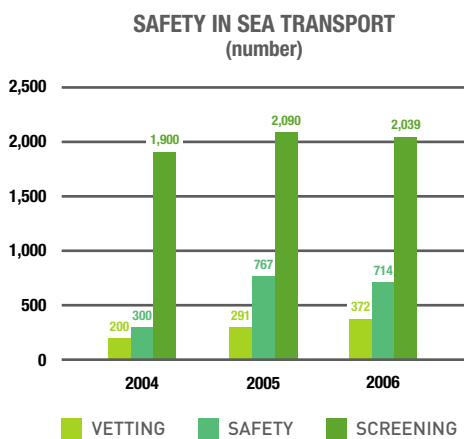


**SEVERITY INDEX**  
days lost x 10<sup>3</sup> / hours worked



initiatives. Regarding the latter activity, ERG, three years ago, developed the “Prevention” project with a view to carrying out large-scale prevention of the pathologies emerging in the area according to assessments originating from the Ministry of Health and/or the World Health Organisation. The programme, available on a voluntary basis to employees and their families, is based on clinical-instrumental diagnosis and information and health education.

HEALTHCARE ACTIVITIES (no.)	2004	2005	2006
MEDICAL EXAMINATIONS AND CLINICAL-INSTRUMENTAL ANALYSIS	1,852	1,495	1,555
HEALTH CHECK-UPS	7,040	7,000	6,580
MEDICAL EXAMINATIONS UNDER VOLUNTARY “PREVENTION” PROJECT	300	620	560



## SAFETY IN SEA TRANSPORT

In order to implement the principles of prevention also with regard to sea transport, ERG further encouraged renewal of the fleets operating at its terminals. In particular, of the ships used 70% were less than 10 years old (97% less than 20 years). The introduction of stricter parameters as regards hull integrity implied a notable increase in the number of ships rejected already during the Screening phase, showing a preference more and more oriented towards recently constructed vessels.

Prevention activities also concern the structural checks carried out prior to acceptance (Vetting) and the on-site inspections during operations at the terminals (Safety), conducted by outside personnel qualified at national and international level.

## POLLUTION PREVENTION AND RECLAMATION ACTIVITIES

In keeping with actions taken in previous years, in 2006 the Group’s industrial sites assigned notable efforts to environmental characterisation, safety enhancement and reclamation of the surface soil and subsoil.

Special attention is dedicated to the sites located within the boundaries of the so-called “Priolo national interest site”, in view of the area’s heavy industrialisation, for which interventions are carried out under the supervision and control of the Environment Ministry (Ministero dell’Ambiente e delle Tutela del territorio e del Mare), with the support of the Local Authorities.

In particular at ERG Raffinerie Mediterranee's Impianti Nord and Impianti Sud and ISAB Energy's IGCC facility additional characterisation surveys were performed, as agreed and approved by the competent Authorities, with a view to a more in-depth analysis of the environmental status of the land and the groundwaters, in both the industrialised and non-industrialised areas. At the Impianti Sud alone approximately 700 geognostic drillings were carried out with thousands of samples taken on which an analysis of the principle organic and non-organic compounds was performed. The analysis of the results did not provide any additional indications of soil contamination.

As regards the considerable ongoing investments, great commitment was directed towards the characterisation activities concerning the areas destined for the new installations; in fact, the areas inside the plants, prior to any further construction, have to be "released" following environmental surveys to ascertain the absence of pollution. These characterisations are carried out by way of "in situ" sampling of land and groundwater in the presence of the Regional Environmental Protection Agency (Agenzia Regionale di Protezione Ambientale - ARPA). The activities are concluded with validation of the submitted analyses on the part of the same Entity and restitution of the areas for legitimate uses approved by the Ministry.

Moreover, during the year safety enhancement activities continued consisting in the withdrawal and treatment inside the plants of contaminated groundwaters, the withdrawal of surnatant and reclamation interventions using techniques such as air sparging and soil vapour extraction.

The ongoing implementation of these interventions has made it possible in recent years to achieve notable reductions in subsoil pollution and progressive adjustment to the limits provided by current legislation with regard to reclaimed lands.

Lastly, precisely in relation to recent legislative updates, the ERG Raffinerie Mediterranee plants and ISAB Energy have submitted to the competent Authorities a revision of the reclamation projects, in connection with the risk-based approach.

This approach is even more site-specific compared to those defined by earlier provisions and is in keeping with international standards and the corresponding sector provisions issued in other European Union member states.





## GREENHOUSE GAS EMISSIONS

The ERG Group is strongly committed to consolidating its position in the field of energy production based on criteria of high environmental sustainability. This commitment translates, for example, into numerous investment projects in the wind-power sector, the constant pursuit of energy efficiency improvement, the use of fuels with reduced environmental impact throughout their life cycle.

ERG is directly involved in the greenhouse gas emissions management activities, since seven of its plants are subject to the European "Emissions Trading" Directive: the two ERG Raffinerie Mediterranee refineries, the Roma and Treocate refineries, the IGCC facility and the two ERG Nuove Centrali thermoelectric power plants. The Group has a specific Management System wherein are defined the responsibilities for fulfilment of obligations vis-à-vis the Authorities, the procedures for valorising CO<sub>2</sub> in programming and investment planning activities, emissions optimisation, the minimisation of risks via the trading of emissions quotas and/or the use of financial instruments. The main operational activities to be managed are the monitoring and reporting of emissions (system developed and certified by accredited third party entities as required by European guidelines) and the trading of rights (quotas).

Among the various ongoing activities, ERG has chosen to subscribe, together with several other leading Italian companies, to the Italian Carbon Fund, a fund set up by the Environment Ministry in agreement with the World Bank. Last October, during the first annual meeting, the Participants' Committee (body overseeing the fund's activities) was appointed, comprising 5 members, including one appointed by ERG.

The main purpose of these funds is to acquire credits on the market, financing projects to reduce greenhouse gas emissions in developing countries, the so-called "Clean Development Mechanism" (CDM). This is a tool, introduced by the Kyoto Protocol, for obtaining credits, that can be spent within the framework of Emissions Trading. The Italian Carbon Fund's portfolio of projects is diversified as regards both the type of technologies and the geographical regions, which include China, the Mediterranean area, Latin and Central America, the Balkans and the Middle East.





## ECONOMIC RESOURCES

ERG's investment plans, evermore in keeping with the vision of a multi-energy reference Group, view the environmental and safety component as strategic in order to guarantee the sustainability of its business activities.

The main projects concern all business areas. In particular the expansion of desulphurisation and sulphur recovery capacity in coastal refining; the improvement of the distribution systems and enhancement of the range of more eco-compatible products in the Integrated Downstream division; improvement of energy efficiency, expansion of the capacity for producing electricity from natural gas and from wind in the area of Power Generation.

These development plans provide for the maintaining of commitments undertaken as regards the characterisation and reclamation of the industrial sites. The most significant weight of 2006 expenditures in fact pertained both to the soil and subsoil monitoring and protection activities and to environmental recovery (+26% over 2005).

The main expenditure items with regard to employee health and safety, up by 18.1% compared to 2005, concerned the management of structures for risk and emergency control.

The increase in the item "Other HSE Expenses", which include the component relating to HSE personnel<sup>(3)</sup>, is partly due to the environmental risk and safety studies and evaluations performed during the year. The increase in HSE training and information compared to 2005 led to a rise of 13.6% in expenses dedicated to this activity.

### HSE Investments

(thousand Euro)	2004	2005	2006
<b>ENVIRONMENT</b>	17,398	23,159	24,596
<b>HEALTH AND SAFETY</b>	10,986	15,675	12,371
<b>TOTAL</b>	28,385	38,834	36,967



<sup>(3)</sup> Personnel expenses have been adjusted to include the companies directly managing the sales outlets.

## HSE Current Expenditures

(thousand Euro)	2004	2005	2006
<b>ENVIRONMENT</b>	<b>39,044</b>	<b>44,858</b>	<b>56,752</b>
AIR PROTECTION (AIR EMISSIONS)	6,610	7,011	12,912
SURFACE WATER PROTECTION (WATER DISCHARGE)	9,459	10,724	13,153
SOIL AND GROUNDWATER PROTECTION	7,868	10,436	13,596
WASTES	15,107	16,687	17,091
<b>HEALTH AND SAFETY</b>	<b>17,953</b>	<b>17,679</b>	<b>20,888</b>
<b>HSE INSURANCE</b>	<b>2,959</b>	<b>2,607</b>	<b>2,644</b>
<b>ENVIRONMENTAL TAXES</b>	<b>1,646</b>	<b>1,870</b>	<b>1,690</b>
<b>OTHER EXPENSES</b>	<b>16,489</b>	<b>17,708</b>	<b>19,581</b>
<b>TOTAL</b>	<b>78,091</b>	<b>84,722</b>	<b>101,555</b>

The operating expenses reported at Group level also include, under the item "Other HSE Expenses", those pertaining to personnel. This component is calculated considering the number of HSE equivalent persons, based on an analysis of the activities performed by each employee and the average salary level per role/Group company.

## ENVIRONMENTAL DATA

The trend in the main environmental impact data follows the production/processing levels of the industrial sites, conditioned both by the incident that occurred at the ISAB Nord Refinery, which led to the stoppage of the plants also affecting the area's other production units, and by some breakdowns recorded in the electricity generation area.

The management of the sites is in any case based on process efficiency and the minimisation of air emissions (maximum utilisation of fuel gas, minimum sulphur content in fuels). In this connection, it is worth noting the satisfying results achieved by the Coastal Refining division.

In the area of electricity generation, the repowering of the ERG Nu.Ce. power plants will give rise to a general improvement in environmental indicators in terms of both energy and emissions.

The quantities of waste produced, substantially less than in 2005, reflected the intense characterisation and reclamation activities, carried out above all within the Syracuse industrial complex. In 2006, the internal treatment of waste was maximised, especially as regards the water polluted by hydrocarbons extracted from the subsoil.

## Physical data

	2004	2005	2006
<b>ENERGY CONSUMPTION</b> (million toe)	<b>2.6</b>	<b>2.5</b>	<b>2.4</b>
<b>WATER WITHDRAWALS</b> (million m <sup>3</sup> )	<b>563</b>	<b>503</b>	<b>522</b>
DRINKING WATER	0.5	0.6	0.6
INDUSTRIAL WATER	13.4	12.9	11.7
SEAWATER	549	489	510
<b>WATER DISCHARGE</b> (million m <sup>3</sup> ) <sup>(*)</sup>	<b>536</b>	<b>473</b>	<b>458</b>
OILS (tons)	29	49	28
<b>WASTE PRODUCED</b> (tons)	<b>333,445</b>	<b>326,234</b>	<b>279,945</b>
OF WHICH FROM RECLAMATION ACTIVITIES	276,103	248,232	184,766
HAZARDOUS	276,103	232,761	178,734
NON HAZARDOUS	–	15,471	6,032
DISPOSED	272,554	233,002	170,498
RECYCLED	3,549	15,230	14,268
OF WHICH RELATING TO NEW CONSTRUCTIONS <sup>(**)</sup>	–	–	28,941
HAZARDOUS	–	–	6,409
NON HAZARDOUS	–	–	22,533
DISPOSED	–	–	28,941
RECYCLED	–	–	–
OF WHICH FROM ROUTINE AND MAINTENANCE OPERATIONS	57,342	78,002	66,238
HAZARDOUS	20,698	29,884	28,132
NON HAZARDOUS	36,643	48,118	38,106
DISPOSED	44,633	62,207	43,907
RECYCLED	12,709	15,794	22,332
<b>AIR EMISSIONS</b> (tons)			
NO <sub>x</sub>	5,256	6,258	5,282
SO <sub>2</sub>	25,386	24,358	18,082
PARTICULATES	1,017	1,038	459
CO <sub>2</sub>	7,535,648	7,253,326	6,618,494
VOCs	5,728	5,573	5,598

(\*) the quantities transferred to off-site wastewater treatment plants are not considered

(\*\*) these refer to the activities of ERG Nuove Centrali's Impianti Nord

## Adopted methodology

The structure and contents of the HSE Report are based on the methodological lines used to draw up the environmental reports prepared by ENI's Enrico Mattei Foundation. Moreover, for the identification and calculation of some HSE indicators, the recommendations followed were those set forth in the Global Reporting Initiative's sustainability reporting Guidelines.

### HSE data reporting perimeter

The 2006 HSE Report considers all the main activities over which ERG exercises operational control and is in a position to influence HSE performances. The grouping of data is shown both at consolidated level (Compendium reporting perimeter) and for each business area. To this effect, the terms of reference of the Report include the following businesses:

- **Coastal Refining;**
- **Integrated Downstream;**
- **Power Generation.**

The reporting perimeter for the HSE Report does not include the Enertad businesses.

### Reporting elements

Consideration has been given to aspects concerning: employee health and safety, consumption of natural resources, wastewater, waste and air emissions.

As regards the recording of quantitative data, the methodology adopted integrates the estimation methods and identification and quantification criteria set by various national and international organisations such as Eurostat, FEE, CONCAWE, CORINAIR, EPA, Unione Petrolifera.

The main air emissions are determined through continuous measuring at the emission points and, where necessary, by estimates based on emission coefficients which take into account both the combustion systems and the quality of the fuels used. In particular, for the purpose of reporting CO<sub>2</sub> emissions, reference has been made to the national and European Guidelines setting forth specific procedures for determining the quantity and quality of fuels.

Specifications with regard to identification, quantification, management, gathering and transmission activities are defined within the scope of the ERG HSE Accounting System and form an integral part of the Group HSE Guidelines.

Economic information is broken down between investment and operating expenditures (current expenditures). Attention should be drawn to the fact that for the recording of expenditures, it is necessary to reclassify some so that they can be shown “by use” and not “by origin”, as on the other hand is required for general company accounting purposes.

The level of integration, at the industrial sites, of the HSE economic accounting within SAP, the integrated management information system, is 70%.

As regards employee health and safety, the data shown consider issues concerning the frequency of events as well as their seriousness (INAIL indices), in accordance with the relevant legislation. Together with prevention activities, the Report also describes the monitoring of near accidents, i.e. the episodes that could have led to injuries and/or accidents.

As far as the aspects relating to HSE training and information are concerned, the data reported at consolidated level incorporate the activities of each single business area.

*Translation from the Italian original which remains the definitive version*



## DET NORSKE VERITAS

hereby states that the

**Rapporto Salute, Sicurezza e Ambiente 2006**

of

**ERG Group\***

is consistent with:

- the analysed management and operational processes, as related to the data, the information and the commitments undertaken in the Report;
- the reference guidelines and principles expressed in the Report;
- the data and the information produced by operational activities.

This statement is issued on the basis of audits that have been carried out according to the DNV evaluation methodology.

The sections "EVALUATION METHODOLOGY" and "PRINCIPAL CONSIDERATIONS" described on the second page form an integral part of this statement.

*Statement n. STAT-14819-2007-CSM-ENG-DNV*

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\* For information regarding the structure of the ERG Group, refer to the "methodology" section and to the relevant section in the 2006 "Rapporto Salute, Sicurezza e Ambiente".

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Translation from the Italian original which remains the definitive version



DNV

## DET NORSKE VERITAS

### EVALUATION METHODOLOGY

DNV has analysed the company processes that have generated the data included in the evaluated Report, and can therefore be considered the results of stable and repeatable activities.

The audit has been based on a document review, interviews and visits to the operational sites, according to the following procedures:

- a sampling audit on the processes which are the basis for the generation, the gathering and the management of quantitative and qualitative data;
- verification of the Management's commitments for sustainable development;
- the acquisition of information and of technical data from the certified management systems;
- the acquisition of information and of economic-financial data from the certified 2006 consolidated balance sheet;
- the verification of the completeness of the Report with respect to the topics that could be found in international best practices.

### PRINCIPAL CONSIDERATIONS

The limitations defined by the audit procedures are included in the Report. In particular, the exactness of the data included in the Report was not subjected to audit.

The following comments are underscored with a view to a continuous improvement and consolidation of the approach and in order guarantee a responsible management process for the matters that are linked to a sustainable development:

- It would be important to develop appropriate tools to support reporting activities in order to consolidate the system for the transfer of information and to achieve a greater integration of the processes for the management of the quality, environmental, safety and social accountability systems.
- A structured report of the strategy and plan of action to involve and dialogue with the identified stakeholders could enhance future issues of the Report and render communication of the company's overall sustainability more efficient.
- The identification of quantitative indicators and a more timely analysis of what has been carried out during the reporting period could lead to an improvement in the communication of the commitments for the future.

Agrate Brianza (MI), 2007-04-18

Det Norske Veritas Italia S.r.l.

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# GLOSSARY

**CO<sub>2</sub>**

Carbon dioxide. Gas formed by all processes relating to combustion, respiration, decomposition of organic material, due to complete oxidation of the carbon. Carbon dioxide emissions represent approximately 80% of greenhouse gas emissions produced in the European Union. Changes in the concentration of carbon dioxide in the atmosphere, essentially due to anthropic activities (combustion, deforestation, etc.), are the cause of climate changes.

**CONCAWE**

European organisation of petroleum companies with recognised competencies on questions of Health, Safety and Environment. Specifically, its studies are focused on the technical and economic implications of the refining, distribution and marketing of petroleum products in Europe.

**CORINAIR**

(COoRdination - INformation - AIR)

Polluting air emissions inventory project promoted by the European Union (Bouscaren, 1989).

**DESULPHURISATION**

Petroleum fraction treatment process designed to reduce the sulphur content in end products.

**DISTILLATION**

Gradual separation of crude oil components in the distillation column, at the base of which crude oil is injected, via the countercurrent flow of a liquid or steam which are, respectively, enriched with the heaviest or lightest components.

**ENI ENRICO MATTEI  
FOUNDATION**

(Fondazione ENI Enrico Mattei)

International non-profit research institute, set up to carry out innovative research in the field of sustainable development. The institute was recognised by the President of the Italian Republic in 1989.

**ENVIRONMENTAL  
IMPACT**

Any positive or negative, total or partial, alteration of the environment as a result of an organisation's activities, products or services.

**EPA**

(Environmental Protection Agency)

United States Agency for the Protection of the Environment.

**EUROSTAT**

The European Union Statistics Institute is one of the European Commission Directorates-General. It provides reliable official statistical data on member states and their regions, information concerning Switzerland and other countries of the European Economic Space and, for certain sectors, also statistical data regarding the United States and Japan. EUROSTAT does not directly handle the gathering of such statistical data, but receives same from member states. Statistics are diffused by way of printed and electronic publications.

**FEE**

European Federation of Expert Accountants.

Combined with the severity index, this is one of the typical indicators of workplace health and safety performance: with respect to a given period of time, it expresses the relationship between the number of accidents and the number of hours worked.

Heavy fraction obtained by refining petroleum, used as fuel, more and more often in the low sulphur content quality in order to limit the negative environmental impact in terms of air emissions (mainly SO<sub>2</sub> and particulate).

Estimate of the number of people dedicated to a specific activity, obtained from the ratio between the total number of hours spent annually on the activity and the number of annual hours worked by one person.

Internationally recognised English abbreviation for Health, Safety and Environment.

A set of activities performed for the purpose of a systematic and objective evaluation of the performances achieved in terms of Health, Safety and Environment.

A plant for producing syngas from refinery residues and subsequent combined cycle generation of electricity and heat.

Series of international standards setting out principles, requirements and provisions with regard to environmental management.

Series of international standards setting out principles, requirements and provisions with regard to quality management.

The organisation, planning, responsibilities, procedures, operating practices, processes and resources to elaborate, implement, achieve, reassess and maintain active control over all internal and external variables.

Financing for a project which does not require guarantees from the shareholders of the company receiving the loan.

Nitrogen oxides (in particular NO and NO<sub>2</sub>). Gases mainly produced by the photochemical oxidation of nitrogen in the atmosphere and as a secondary reaction in the high-temperature combustion of fossil fuels. Together with sulphur dioxide (SO<sub>2</sub>), they are the cause of acid rain.

Series of international standards setting out principles, requirements and provisions with regard to the management of safety issues.

Chemical compounds of diverse origin, the particles of which measure

**FREQUENCY INDEX**

**FUEL OIL**

**FULL TIME EQUIVALENTS**

**HSE**

(Health, Safety, Environment)

**HSE AUDIT**

**IGCC**

(Integrated Gasification Combined Cycle)

**ISO 14000**

**ISO 9000**

**MANAGEMENT SYSTEM**

**NON RECOURSE  
PROJECT FINANCING**

**NO<sub>x</sub>**

**OHSAS 18000**

**PARTICULATES**

## RECLAMATION

## REFINING

## REPOWERING

## ROACE

(Return On Average Capital Employed)

## ROE

(Return On Equity)

## SEVERITY INDEX

## SO<sub>x</sub>

## SULPHUR

## TOE

(tons of oil equivalent)

## UP

(Unione Petrolifera)

## VOCs

(Volatile Organic Compounds)

between 10-3 µm and a few hundred µm: the smaller particles are present above all in the fumes from coal or fuel oil fired combustion systems; the larger particles are found in the exhaust gases of internal combustion engines, especially diesel engines, as a result of incomplete combustion.

A set of physical, chemical or biological actions to remediate situations of degradation or remove plants that are no longer in use in order to eliminate or reduce risks to human health and/or the environment.

The combination of operations for the conversion of crude oil into derivatives of different quality (mostly LPG, light gasoline, naphta, kerosene, diesel and residues).

Interventions on industrial plants to increase processing capacity.

$$\text{ROACE} = \frac{(\text{EBIT} - \text{notional taxes}) + \text{expenses and income from investments}}{\text{average net invested capital}}$$

$$\text{ROE} = \frac{\text{net profit}}{\text{average shareholders' equity}}$$

With respect to a given period of time, it expresses the relationship between the number of days of temporary invalidity associated with the accidents occurred and the number of hours worked.

Sulphur oxides (in particular SO<sub>2</sub> and SO<sub>3</sub>). Their production is mostly tied to the sulphur content of the fuels used, as well as to the weather conditions in which combustion occurs. They constitute the main cause of acid rain.

Chemical element contained in crude oil as sulphate compounds. The sulphur recovered from the desulphurisation process is then sold for use by the chemical industry.

A conventional unit of measure, equal to 10 million kcal, used to express the quantity of any energy source, comparing its calorific power to that of crude oil.

Italian association of oil companies.

These comprise the volatile fraction of the hydrocarbons in fuels and essentially include substances with between 4 and 8 carbon atoms.

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