2013

# Sustainability Report

Terna

TERNA GROUP

## Mission

Terna is a leading grid operator for energy transmission. The Company manages electricity transmission in Italy and guarantees its safety, quality and affordability over time. It ensures equal access conditions for all grid users. It develops market activities and new business opportunities with the experience and technical expertise acquired in managing complex systems. It creates value for shareholders with a strong commitment towards professional excellence and with a responsible approach towards the community, fully respecting the environment it operates in.

2013

# Sustainability Report

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# Contents

# Letter to the stakeholders

In presenting this 2013 Sustainability Report, we would like to draw your attention to the fact that as of this year, for the first time, the Terna Group's main environmental and social performance indicators are also presented in the Integrated Report. The Director's Report, accompanying the Financial Statements, has, in fact, been totally revised so as to comprehensively illustrate the Terna Group's business model, its attitudes towards sustainability issues and the results achieved, not just from a financial point of view. This choice represents a key step in the progress of Terna's reporting system, after two years of actively participating in the International Integrated Reporting Committee (IIRC) pilot programme. It revolves around the firm belief that shareholders and all other stakeholders should be provided with the full picture as regards the Group's performance and how its results have been achieved. Even more so at Terna where, given its role in the electricity system, there is close correlation between good results for shareholders and improvements to the transmission service for the public. In this new guise, the Sustainability Report is more slimline than in the past, with the contents largely shared with the Integrated Report, but, at the same time, it offers more detail, applying the standards set out in the GRI guidelines.

For the ninth year running, 2013 once again showed results on the up for the main economic and financial figures – revenues, EBITDA and net profits for the year. The Terna share price reached a record high in November, which was subsequently exceeded a number of times in the first few months of 2014. At the root of these excellent results is sustained investment, which, as in the two previous years, amounted to over 1.2 billion euro, allocated mainly to grid extension works. For the electricity service, these investments mean a closing of the infrastructural gap with the rest of Europe, an increase in efficiency and a reduction of costs. For the Italian economy, it has also meant a direct contribution to economic growth, an aspect of no less importance during a time of continuing economic and employment crisis. In 2013, Terna employed approximately 2,300 full-time workers through contracts at its over 200 construction sites, in addition to the Group's 3,500 employees.

The positive economic results are also a reflection of operating activities which set out to achieve the business goals by respecting stakeholders, limiting the environmental impact of works and creating shared values. This Report provides a full account of such activities, for the first time including a chapter on stakeholder engagement and publishing the results of the materiality analysis conducted in 2013. On this matter, although the Report has been prepared applying the G3.1 version of the GRI guidelines, it anticipates one of the most important introductions of the G4 version, illustrating how work has been carried out with the transparency for which Terna is renowned. Again, as regards transparency, the Report reconfirms one of its most original characteristics: its publication of comparative data with other companies for a number of particularly significant indicators.

Among the environmental results is the installation of the "Germoglio" pylons, designed by architect Hugh Dutton, along the Trino – Lacchiarella line: one of the results of a commitment to improving the integration of pylons into the landscape and environment. Progress has also been made with regard to many indicators, for example by further reducing the incidence of $SF_6$ leakage, an insulating greenhouse gas which is our main source of direct emissions. Lastly, we renewed our partnership with the WWF, proof of how interaction with stakeholders is a crucial aspect of our operating activities.

The same may be said of Terna's social commitments, which in 2013 saw the implementation of a number of projects – currently in progress – to develop the suggestions received from internal and external stakeholders, resulting in the identification of schooling and access to energy in the poorer areas of the world as among Terna's most significant areas of intervention. Work to make the safeguarding of social and environmental issues in the supply chain more effective continued, with ramifications for qualification requisites and the identification of countries at risk as regards compliance with labour rights. Interaction with stakeholders also remains central to consultation activities, aimed at identifying shared solutions for locating new infrastructure, even when our investment plans – beneficial to society – come up against opposition.

The year 2013 was also marked by an intensification of efforts to foster a sustainability culture. Our membership of the United Nation's Global Compact which, as previously stated, finds its expression in initiatives and programmes aimed at fostering integrity in management activities and at safeguarding the environment and human rights, in 2013 saw the involvement of Terna, as one of the founding members, in creating the Global Compact Network Italy Foundation. Internally, sustainability programmes were presented and widely discussed with management, including at the area offices, so as to facilitate better integration with the managerial culture.

Looking ahead, Terna's strategy is focused on all-round sustainability, in all its various spheres. From an economic point of view, our Strategic Plan involves an increasing contribution from non-traditional activities, so as to ensure the continuity of the positive results achieved so far. Alongside this, constant focus on the stakeholders will be the key to further improving on the environmental and social fronts.

The Chairman
LUIGI ROTH

The CEO
FLAVIO CATTANEO

2013

# The Report in brief

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# The report in brief

2013 was an important year for Terna's reporting: preparation of the Group's first Integrated Report and materiality analysis (see page 18) significantly altered how the Company represents its ability to create value over time.

### The main changes to the Sustainability Report

The result of these two initiatives is also reflected in the Sustainability Report which, although retaining the traditional chapter divisions, is generally more linked to the "Sustainability" section of the website www.terna.it and, above all, **is more focused on relevant topics for the Company and its stakeholders**.
There are fewer boxes providing more in-depth information but the main concepts are more immediately understandable, thanks to some of the **key figures** for 2013 being highlighted.
A new chapter has been introduced on **stakeholder engagement** providing an account, for each of the main categories, of the most important initiatives launched by Terna to understand stakeholders' needs.
For the fourth year running, **comparisons were made with other companies** on seven important environmental and social indicators, so as to allow the stakeholders involved to assess Terna's figures and performance compared to other companies (see the Methodological Note on page 18).

## The main sustainability results

In 2013, Terna actively contributed to perfecting the IIRC model for Integrated Reporting by participating in the "Consultation draft of the Integrated Reporting Framework", ending in July 2013.
On the social-responsibility front, the first "Social Action Plan" was launched, in part based on a stakeholder engagement initiative involving 50 external experts and 60 employees.
Revision of the system of ethics and social and environmental responsibility with regard to the supply chain continued, leading to the creation of a list of countries identified as potentially at risk. This provided for developing supplementary measures for additional care in supplier qualification and procurement processes.
An in-depth "materiality analysis" was conducted in the second half of 2013, launching a process to strengthen the corporate tools designed to reveal stakeholders' expectations and to plan congruent actions to benefit relations with them.
Terna's inclusion in the main international stock exchange sustainability indexes and ratings was confirmed.

## Stakeholder engagement

This new chapter lists the main categories of Terna's stakeholders, showing for each the instruments provided by the Company to build, maintain and consolidate a relationship of mutual trust. Some of the most important information is presented below.

The figures

| | |
|---|---|
| Consultation: | **216 meetings** involving **149 regional and local authorities**<br>**250 comments** from the AEEG **on the 2012 Development Plan** |
| Employees: | **61% of managers and staff co-ordinators** answered the questionnaire on the **effectiveness of training**; 95% described it as effective/highly effective |

Information boxes

- The Social Action Plan 2013-2014 on page 53
- Relevant issues for Terna: the stakeholders' point of view on page 54.

## Responsibility for the electricity service

This year the chapter was supplemented with introductory information on Italy's energy demand and production. Special focus was given, in the second part, to applied research, progress in developing storage systems, and smart transmission solutions. Some of the most important information is presented below.

The figures

| | |
|---|---|
| Safety Plan: | **76 million Euro** invested in 2013 |
| New lines: | **30 km** of High-Voltage and Extremely-High-Voltage lines came into operation |
| Inspections: | **105,300 km of three-phase power** lines were inspected, of which **24,700 km by helicopter** |
| Live-line works: | **1,500 works** performed during the year |

Information boxes
- Terna and the ENTSO-E: the Ten-Year European Network Development Plan on page 71-72
- New electricity interconnection between Italy and France: work begins in Italy on page 75
- The "BE.S.T. P.A.T.H.S." project (BEyond State of the art Technologies for re-Powering AC corridors & multi-Terminal HVDC Systems) on page 75

## Economic responsibility

A description of Terna's regulatory framework and revenue structure, the incentive mechanisms introduced by the Italian Electricity and Gas Regulatory Authority, the transmission cost on the end-user's bill, risk management and other economic impacts are just some of the topics dealt with in this chapter, which also offers an overview of relations with shareholders, suppliers and operators of the electricity service. Highlighted:

The figures

| | |
|---|---|
| Job creation: | **3,442** employees in the Group |
| indirect employment: | **2,277** full-time equivalent |

## Environmental responsibility

This part of the Report deals with the most significant environmental aspects of Terna's activities, such as the visual impact of lines and stations; the impact of lines on biodiversity, with particular reference to birdlife; the management of special waste; electric and magnetic fields and emissions of greenhouses gases. Highlighted:

The figures

| | |
|---|---|
| Environmental offsets: | **8.4 million Euro** |
| $SF_6$ leaks: | incidence of leakage down to **0.49%** |
| Waste recovered: | **87%** |

Information boxes
- SEA portal and the Environmental Report on page 92
- Terna's new pylons on page 93
- "Nests on pylons": the Terna - *Ornis italica* partnership continues on page 95
- LCA – Life Cycle Assessment on page 103-104

Comparisons
- $CO_2$ emissions on page 97-98
- $SF_6$ leakage on page 99-100
- Water consumption on page 104
- Waste production on page 106

# Social responsibility

This last chapter illustrates Terna's approach to its people and to society. The first part, devoted entirely to human resources, describes the attention paid to safety and preventing injury; the management and development systems to improve individual performance and develop individual skills; training, wage policies and industrial relations. The second part describes Terna's involvement in national and international associations and the main corporate-giving initiatives.

The figures

| | |
|---|---|
| Training: | **120,115 hours** of training provided, amounting to **35 hours** per capita |
| Equal opportunities: | **11.5%** of all employees are women |
| | **17.9%** of all managerial positions are occupied by women |
| Corporate giving: | **1,167,864 Euro** paid out to support social, cultural and humanitarian initiatives |

Information boxes


- Management of generational turnover on page 111
- Non-conventional storage system safety on page 118
- From support to joint project design: Terna and Arci Milan work together on the "Here Come Grandma and Grandpa" project on page 127
- The Terna 05 Award, special solidarity edition on page 127


Comparisons


- Personnel turnover: comparative data on page 112
- Training for employees: comparative data on page 114
- Gender pay gap: comparative data on page 117


**Reading approaches for stakeholders**


- Shareholders, financial analysts and lenders: pages 45, 49 and 83
- Employees: pages 42, 50, 110-119 and 121-122
- Suppliers: pages 50 and 84-85
- Grid users, customers and business partners: pages 51 and 85-86
- Regulatory authorities and institutions, AEEG: pages 51, 71-72 and 78-79
- National institutions and associations: pages 52 and 124-125
- Media, focus groups, and the scientific community: pages 53 and 95
- Society and local communities: pages 39, 54-55, 68-69 and 91-94

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Methodological note

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# Methodological note

The Sustainability Report as at 31 December 2013 (hereinafter "Sustainability Report 2013") of the Terna Group was prepared according to the "Sustainability Reporting Guidelines & Electric Utilities Sector Supplement (EUSS)", defined in 2009 by the GRI (Global Reporting Initiative) and the update G3.1 Guidelines of March 2011. As in the last few years, the Report was approved by Terna S.p.A.'s Board of Directors and subjected to specific auditing procedures. The assurance report, prepared by PricewaterhouseCoopers, is provided as an annex.
The level of application is confirmed as A+. In fact, in the light of the results of the GRI Content Index, **we estimate that we have achieved an A+ level of application** of the aforesaid guidelines.
The process of preparing the document involved identifying the significant aspects to report (see the "Materiality" paragraph below) and presenting the performance achieved by the Group in relation to such aspects and the sustainability targets.
The period of observation is the year 2013: all data refer to the financial year ending on 31 December 2013; at the descriptive level, the significant changes occurring up to 18 March 2014 have also been indicated.
Over the course of its progressive adoption of the principles outlined by the IIRC (International Integrated Reporting Council; see, for the most recent version: IIRC, "The International <IR> framework," December 2013) over recent years, Terna has tested partial forms of integration of the individual elements of the framework. Publishing the Integrated Report this year, coinciding with the Director's Report on Operations of the Annual Financial Report 2013. This Report also contains numerous topics dealt with in this Sustainability Report. The discussion of the aforementioned topics is the same in both Reports, except where further detail is required pursuant, for example, to specific requirements in the GRI guidelines. The sustainability issues included in the Integrated Report were chosen based on materiality considerations.
Furthermore, some of the most important information on Terna's sustainability performance, provided in this Report, has also been included in the Annual Financial Report 2013, following the recommendations of the National Council of Accountants and Tax Consultant (CNDCEC) on sustainability information in compulsory corporate reporting ("The Management Report on the Compilation of Financial Statements in the light of the changes introduced by Legislative Decree 32/2007", CNDCEC, January 2009).

## Materiality

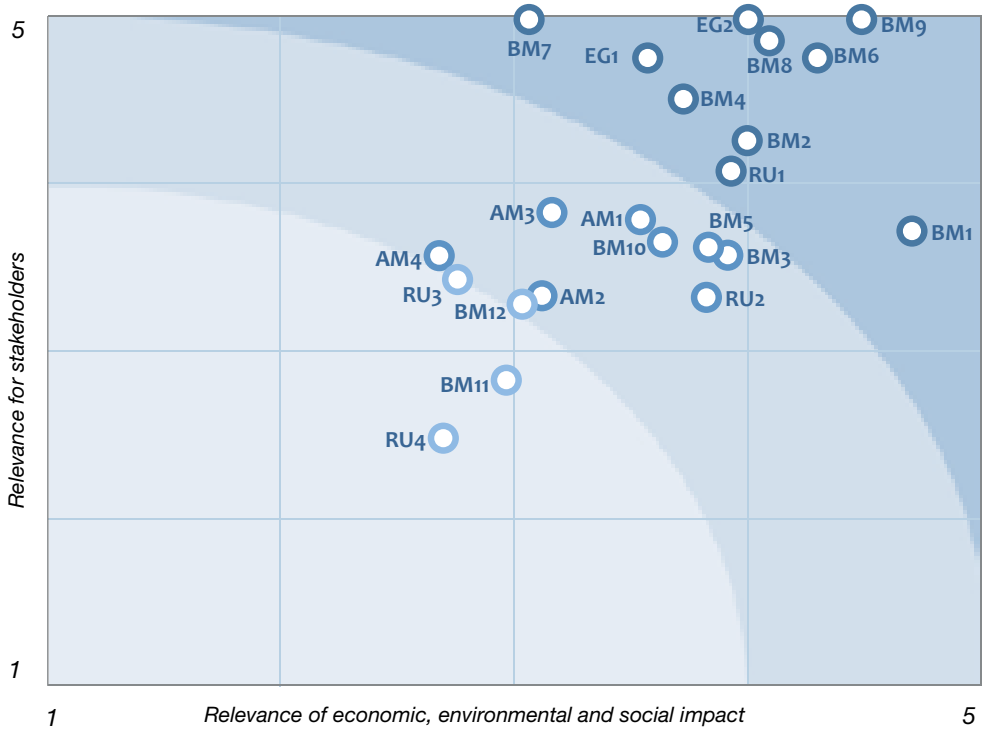
The information and GRI indicators to be included in this Report, so as to enable stakeholders to make a balanced assessment of the Group's performance, were chosen on the basis of a careful analysis of the informative objectives of the contents of the Report and its pertinence to Terna's activities and the interests of its stakeholders. The Report is in fact ideally aimed at all the stakeholders identified in the Company's Code of Ethics.
The analysis performed adopted the principle of materiality, as defined by the standard GRI-G4, enabling the differentiation, through identifying and prioritising the relevant topics, of issues critical to the success of corporate strategies that are a priority for stakeholders (material) from those which are relevant but not material or currently not relevant.
Specifically, the materiality analysis involved a process divided into the following phases:

- **Definition of the relevant topics** (specific to the company or recognised as relevant for the sector and for comparable companies). A complete mapping of all the relevant topics was conducted, by means of analysis of internal documentation (for example: Sustainability Report 2012, Industrial Plan, Policy, report on initiatives aimed as listening to and involving stakeholders, etc.) and external documentation (for example: sustainability rating agency questionnaires, publications by national and international institutions, industrial associations, authorities and multi-lateral bodies, press reviews, national and international NGO websites and publications, sustainability reports, etc.) The issues identified were then organised into a three-tier hierarchical classification.
- The topics identified were classified in terms of their impact on strategies, in other words, the potential for each topic to generate risks and opportunities for corporate objectives in the short, medium and long term. The classification was based on an analysis of the commitments made by the Company, both publicly (identified through analysis of externally diffused sources) and internally (through analysis of documents for internal use only). For a dynamic picture and perspective of the impact on strategies, the CEOs of the subsidiaries and some Terna S.p.A. managers were interviewed, including all those reporting directly to the CEO. A "Relevance of economic, environmental and social impact" score was obtained, for each topic, by weighing up the two results (assessment of sources and assessment by managers).

- The topics were then assigned a priority rating for the second aspect analysed: "Relevance for stakeholders". It was in this context that the **Multi-stakeholder Panel** came into play; an event organised by Terna on 19 September 2013, it was aimed at gathering stakeholders' contributions and ideas on the various topics emerging as most relevant in the previous analysis. On the basis of the results emerging from the panel and a documented analysis of stakeholders' interests and priorities, a "Relevance for stakeholders" score was obtained for each topic.
- After validating the results obtained for the two aspects with Terna's departments, the **Materiality Matrix** was calculated, positioning the topics according to their relevance for corporate strategies (relevance of economic, environmental and social impact) and their relevance for stakeholders. The concentration of the scores in the area above "3" is due to the method used, based on identifying relevant topics.

The activities conducted represent a first organisation of the materiality analysis which Terna intends to consolidate and perfect over the years to come, with periodic updates of its stakeholder map and investigation into their opinions and expectations.

THE TERNA GROUP'S MATERIALITY MATRIX




## Legend

### Ethics and governance model

**EG1** Efficacy of the governance model
**EG2** Integrity and transparency in corporate conduct

### Environmental conservation and improvement

**AM1** Mitigation of visual impact
**AM2** Safeguarding biodiversity
**AM3** Management and monitoring of electromagnetic fields
**AM4** Climate change, emissions and responsible use of resources

### Relations with people

**RU1** Health and safety of workers and correct working practices
**RU2** Developing human resources
**RU3** Corporate welfare
**RU4** Promoting diversity and equal opportunities

## Activities to develop and increase respect for society

### Business Management

**BM1** Excellence of economic financial performance
**BM2** Containment of service costs
**BM3** Developing new business
**BM4** Development of interconnections with foreign countries
**BM5** Careful risk management
**BM6** Responsible planning of the NTG
**BM7** Local stakeholder engagement to develop the NTG
**BM8** Innovation and integration of renewable sources
**BM9** Quality, safety and continuity of the energy supply
**BM10** Fairness in relations with electricity operators
**BM11** Responsible management of the supply chain
**BM12** Social commitment and positive impact on the country

## Structure of the Report

The chapter divisions in the Report are the same as in previous years, except for the addition of a new chapter which gives more space to "Stakeholder Engagement". After the Terna Company profile and stakeholder engagement comes the standard division of the issues into four main sections, corresponding to the *triple bottom line* – economic, environmental, and social – typical of sustainability reports, preceded by the section on responsibility for the electricity service, which is specific to Terna.
Each chapter begins with an explanation of the managerial approach to the specific area. This is followed by several thematic sections, which integrate into a single text both the precise information required by the GRI Guidelines and the in-depth analysis that Terna considers important to provide. In order to make the Report easier to read, the information regarding the GRI indicators is signalled by the related code in the margin of the text, next to the relevant passages or next to the title if the entire section is considered relevant.
The Indicator Tables, summarising the GRI indicators and supplementing them with others, complete the Report. For the meaning of technical terms specific to the electricity industry, see the Glossary on the website www.terna.it on the "Tools" page using the following link: www.terna.it/default/home_en/sustainability/Tools_sustainability.aspx.

## Scope and indicators

Unless stated otherwise, the data and information in the 2013 Sustainability Report refer to the Terna Group, that is to say the scope which includes Terna S.p.A. and the companies that were consolidated in the Consolidated Financial Statements for the year ending 31 December 2013. In accordance with the GRI Boundary Protocol, the data included in the Sustainability Report include all the companies with a significant impact on sustainability (i.e. by size or rather the number of employees; or by potential impact on the environment and society or rather the number of operations/activities which took place during the year), over which Terna exercises control, directly or indirectly, that is to say for which it has the power to determine the financial and operational policies. There are no relations with joint ventures, subsidiaries or leased businesses that could significantly influence the boundary or the comparability of the environmental and social data. The Group's activities abroad – including those of the Montenegrin subsidiary Terna Crna Gora d.o.o. – did not involve activities throughout 2013 with significant external impact (e.g. development of infrastructure, building works). For this reason, the activities carried out abroad have not been included in the calculation of the indicators published in this Report.
The data were calculated precisely on the basis of the entries in the general accounting and Terna's other information systems. In the case of estimates in determining the indicators, the procedure followed is stated.
All the GRI indicators published are listed below in the GRI Content Index, which also includes any limitations relative to the requirements of the Reporting Guidelines. The list also includes the core indicators, necessary for the application of the Guidelines at level A, which are not applicable to Terna.
In comparing this Report to that of 2012, the following should be noted:

- the different definition of days not worked relative to injuries used to calculate the lost-day rate (indicator LA7). Unlike previous years, for 2013 only the days not worked relative to injuries occurring during the year were considered and not any continued absence related to injuries occurring during the previous years;
- the change to the scope of the EU17 indicator relative to "days worked by contractor and subcontractor employees involved in plant construction, operation & maintenance activities". The figure presented in this Report includes, for 2013, in addition to the sites related to the construction and maintenance of lines and stations, the workers employed for the renovation of several offices and the Group's subsidiaries Terna Storage and Terna Plus.

## Comparative analysis of sustainability performance

Convinced that a comparison of the environmental, social and governance performance is of interest, in addition to the Company itself, also to its stakeholders, certain comparisons between Terna's results and those of other companies are included in the 2013 Sustainability Report, as was the case in the preceding three years.
Listed below are the main criteria adopted in the analysis, as an introduction to the reading and interpretation of the comparisons of individual indicators in the Report:

- three panels of companies were identified: an industry panel, composed of the European transmission system operators and the major extra-European operators by kilometres of lines managed; and two multi-industry panels, the first relative to large Italian companies (the 40 companies of the FTSE-MIB at 18 December 2013) and the second relative to the best international performers (the 24 world "Sustainability Industry Group Leaders", identified by the RobecoSAM sustainability rating agency and disclosed at the publishing of the Dow Jones Sustainability Index of September 2013). The purpose of the three panels is to guarantee, also relative to the type of indicator reviewed, a comparison between companies with the same operational characteristics, an Italian comparison and one with the top international performers. The Terna figures do not contribute to the calculation of the average in the case of the RobecoSAM – Supersector Leaders panel;
- among the companies of the three panels, the ones take into consideration were those which publicise the information necessary for comparisons on their websites, through the Sustainability Report (even if not prepared following the GRI guidelines) or through other documentation (HSE Report, financial report, etc.). This led to a reduction in the sample compared to the starting panel;
- the use of published Sustainability Reports entails reference to 2012 data, since the comparisons were prepared when the 2013 Reports were still being prepared, as was the case for Terna.

It must be noted that, despite the exclusion of data which was explicitly not homogeneous, in numerous cases doubts linger regarding the actual comparability between companies, especially when the average and best performances are viewed from a distance: it is in fact probable that significant deviations depend on different application criteria – not explained – of the GRI protocols, rather than on particularly progressive corporate behaviour.
Some of the indicators considered (water consumption, waste produced, $CO_2$ emissions) are expressed as physical quantities in absolute terms and therefore show very different levels depending on the type of production activity and the size of the company. In these cases, the comparison provides information on the varying significance of the environmental aspects being considered for the individual companies, but does not fulfil the task of making the performance comparable.
For further details, see the Terna website and the note "Comparing sustainability performance: Terna's experience" contained in the study "Beyond the financial figures: companies and collective well-being", drafted by CSR Manager Network and ISTAT, and available on their respective websites (www.csrmanagernetwork.it and www.istat.it/it/archivio/85255).

# GRI Content Index

The GRI Content Index is a table of the contents of this Sustainability Report, which enables readers to find indicators quickly and use them to check the Company's performance and compare it with that of other companies that use the same reporting standard.
Each performance indicator has a code relating to the area concerned and the pages of the document where it is found.

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(1) The page numbers refer to the Report on corporate governance and ownership structures in the 2013 Annual Report of the Terna Group, available on the website www.terna.it.

## List of G3.1 Performance indicators published

| Code | Indicator | Limitation and notes | Page |
|---|---|---|---|
| EC1 | Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and to governments. | | 81-82; 125-126 |
| EC2 | Financial implications and other risks and opportunities for the organization's activities due to climate change. | | 80-81 |
| EC3 | Coverage of the organization's defined benefit plan obligations. | | 115; 210-211[1] |
| EC4 | Significant financing received from the government. | | 82 |
| EC6 | Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation. | | 82-83; 134 |
| EC7 | Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation. | | 33; 116 |
| EC8 | Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement. | | 68-69; 125-126 |
| EC9 | Understanding and describing significant indirect economic impacts, including the extent of impacts. | | 82-83 |
| EN1 | Materials used by weight or volume. | | 102-103; 137 |
| EN2 | Percentage of materials used that are recycled input materials. | | 104; 137 |
| EN3 | Direct energy consumption by primary energy source. | | 96; 137 |
| EN4 | Indirect energy consumption by primary energy source. | | 96,137 |
| EN5 | Energy saved due to conservation and efficiency improvements. | | 100-101 |
| EN8 | Total water withdrawal by source. | | 104; 137 |
| EN11 | Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas. | | 94; 138 |
| EN12 | Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas. | | 70; 94-96 |
| EN13 | Habitats protected or restored. | | 93 |
| EN14 | Strategies, current actions, and future plans for managing impacts on biodiversity. | | 95;138 |
| EN16 | Total direct and indirect greenhouse gas emissions by weight. | | 97; 136 |
| EN17 | Other relevant indirect greenhouse gas emissions by weight. | | 98; 136 |
| EN18 | Initiatives to reduce greenhouse gas emissions and reductions achieved. | | 99-101 |
| EN19 | Emissions of ozone-depleting substances by weight. | | 99; 136 |
| EN20 | $NO_x$, $SO_x$, and other significant air emissions by type and weight. | Available as of 2012 | 99; 136 |
| | *Data collection started in 2012.* | | |
| EN21 | Total water discharge by quality and destination. | Not applicable | |
| | *Water is not part of the production cycle of Terna's service.* | | 105; 138 |
| EN22 | Total weight of waste by type and disposal method. | | 90-91 |
| EN23 | Total number and volume of significant spills. | | 68-69; 91-93; 94-95 |
| EN26 | Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation. | | |
| EN27 | Percentage of products sold and their packaging materials that are reclaimed by category. | Not applicable | |
| | *The service provided by Terna does not include the activities mentioned in this indicator.* | | |
| EN28 | Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations. | | 56; 90 |
| EN29 | Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce. | | 96; 97; 100; 136 |
| EN30 | Total environmental protection expenditures and investments by type. | | 106-107; 138 |

1 The page numbers refer to the 2013 Annual Report of the Terna Group, available on the website www.terna.it.

| Code | Indicator | Limitation and notes | Page |
|---|---|---|---|
| LA1 | Total workforce by employment type, employment contract, and region broken down by gender. | | 110-111; 139 |
| LA2 | Total number and rate of employee hires and employee turnover by age group, gender, and region. | | 110-111; 139 |
| LA3 | Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operations. | | 115 |
| LA4 | Percentage of employees covered by collective bargaining agreements. | | 121 |
| LA5 | Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements. | | 122 |
| LA6 | Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs. | | 122 |
| LA7 | Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities, by region and gender. | | 119; 142 |
| LA8 | Education, training, counselling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases. | | 115 |
| LA9 | Health and safety topics covered in formal agreements with trade unions. | | 122 |
| LA10 | Average hours of training per year per employee by gender and by employee category. | | 113; 140 |
| LA12 | Percentage of employees receiving regular performance and career development reviews, by gender. | | 114 |
| LA13 | Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity. | | 116; 131; 139; 141 |
| LA14 | Ratio of basic salary and remuneration of women to men by employee category. | | 116; 141 |
| LA15 | Return to work and retention rates after parental leave, by gender. | | 115-116 |
| HR1 | Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening. | | 120 |
| HR2 | Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening and actions taken. | | 84; 121 |
| HR3 | Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained. | | 42;120;140 |
| HR4 | Total number of incidents of discrimination and corrective actions taken. | | 120 |
| HR5 | Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights. | | 40; 120; 121 |
| HR6 | Operations and significant suppliers identified as having significant risk for incidents of child labour, and measures taken to contribute to the effective abolition of child labour. | | 40; 120 |
| HR7 | Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of forced or compulsory labour. | | 40; 120 |
| HR9 | Total number of incidents of violations involving rights of indigenous people and actions taken. | | 120 |
| HR10 | Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments. | | 120 |
| HR11 | Number of grievances related to human rights filed, addressed, and resolved through formal grievance mechanisms. | | 120 |
| SO1 | Percentage of operations with implemented local community engagement, impact assessment and development programs. | | 54-55; 68-69; 124 |
| SO2 | Percentage and total number of business units analysed for risks related to corruption. | | 41 |
| SO3 | Percentage of employees trained in organization's anti-corruption policies and procedures. | | 42; 140 |
| SO4 | Actions taken in response to incidents of corruption. | | 42; 56 |
| SO5 | Public policy positions and participation in public policy development and lobbying. | | 52 |
| SO6 | Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country. | | 125 |

| Code | Indicator | Limitation and notes | Page |
|---|---|---|---|
| **SO7** | Total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcomes. | | 56 |
| **SO8** | Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations. | | 56 |
| **SO9** | Operations with significant potential or actual negative impacts on local communities. | | 91-93; 124 |
| **SO10** | Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities. | | 68-69; 91-93 |
| **PR1** | Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures. | Not applicable | |
| | *Given the nature of its service, Terna is not affected by problems of product safety and security with regard to business partners (customers). Safety and security impact of the service are considered with regard to society (see the "Monitoring and supervision of electromagnetic fields" paragraph on page 94).* | | |
| **PR3** | Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements. | Not applicable | |
| | *The service provided by Terna does not include the activities mentioned in this indicator.* | | |
| **PR6** | Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship. | Not applicable | |
| | *The service provided by Terna does not include the activities mentioned in this indicator.* | | |
| **PR8** | Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data. | | 62 |
| **PR9** | Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services. | | 56 |

## List of G3.1 performance indicators published in the electric utilities sector supplement (EUSS)

| Code | Indicator | Limitation and notes | Page |
|---|---|---|---|
| **EU1** | Installed capacity, broken down by primary energy source and by regulatory regime. | Not applicable | |
| | *Terna neither possesses nor manages electric power plants.* | | |
| **EU2** | Net energy output broken down by primary energy source and by regulatory regime. | Not applicable | |
| | *Terna neither possesses nor manages electric power plants.* | | |
| **EU3** | Number of residential, industrial and commercial customer accounts. | | 86; 135 |
| **EU4** | Length of above and underground transmission and distribution lines by regulatory regime. | | 32 |
| **EU5** | Allocation of $CO_2$ emissions allowances broken down by carbon trading framework. | Not applicable | |
| | *Terna is not subject to emissions reduction obligations or emissions trading schemes.* | | |
| **EU6** | Management approach to ensure short and long-term electricity availability and reliability. | | 35-36; 61; 70; 73; 75 |
| **EU7** | Demand-side management programs including residential, commercial, institutional and industrial programs. | Not applicable | |
| | *Demand-side management programs are not part of Terna's regulatory framework.* | | |
| **EU8** | Research and development activity aimed at providing reliable electricity and promoting sustainable development. | | 72-73; 74; 75 |
| **EU9** | Provisions for decommissioning of nuclear power sites. | Not applicable | |
| | *Terna neither possesses nor manages nuclear power plants and does not operate in the decommissioning field.* | | |
| **EU10** | Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime. | Not applicable | |
| | *Terna's responsibility in terms of electricity demand is limited to the management of the electricity system, with no implications for energy generation. See the "Terna Company Profile", in particular the "Core Business: Electricity Transmission" paragraph, and the "Responsibility for the electricity service" section, in particular the "Our approach" and "The security of the electricity system" paragraphs.* | | |

| Code | Indicator | Limitation and notes | Page |
|---|---|---|---|
| EU11 | Average generation efficiency of thermal plants by energy source and by regulatory regime. | Not applicable | |
| | *Terna neither possesses nor manages thermoelectric power plants.* | | |
| EU12 | Transmission and distribution efficiency (grid losses) as a percentage of total energy. | | 98 |
| EU13 | Biodiversity of offset habitats compared to the biodiversity of the affected areas. | | 92; 94-95 |
| EU14 | Programs and processes to ensure the availability of a skilled workforce. | | 112-114 |
| EU15 | Percentage of employees eligible to retire in the next 5 and 10 years broken down by job category and by region. | | 111 |
| EU16 | Policies and requirements regarding health and safety of employees and employees of contractors and subcontractors. | | 117-118; 120; 142 |
| EU17 | Days worked by contractor and subcontractor employees involved in construction, operation & maintenance activities. | | 120; 139 |
| EU18 | Percentage of contractor and subcontractor employees that have undergone relevant health and safety training. | | 120 |
| EU19 | Stakeholder participation in the decision-making process related to energy planning and infrastructure development. | | 54; 68-69 |
| EU20 | Approach to managing the impacts of displacement. | | 124 |
| EU21 | Contingency planning measures, disaster/emergency management plan and training programs, and recovery/restoration plans. | | 61; 62 |
| EU22 | Number of people physically or economically displaced, broken down by type of project, generation plants or transmission lines. | | 124 |
| EU23 | Programs, including those in partnership with government, to improve or maintain access to electricity services. | | 35-36; 71; 75 |
| EU24 | Practices to address language, cultural, low literacy and disability related barriers to accessing and safely using electricity and customer support services. | Not applicable | |
| | *The service provided by Terna does not include the activities mentioned in this indicator.* | | |
| EU25 | Number of injuries and fatalities to the public involving company assets, including legal judgements, settlements and pending legal cases of diseases. | | 56 |
| EU26 | Percentage of population not served in licensed distribution or service areas, broken down by rural and urban population. | Not applicable | |
| | *Terna does not have relations with end users of the electrical service.* | | |
| EU27 | Number of residential disconnections for non-payment, broken down by duration of disconnection. | Not applicable | |
| | *Terna does not have relations with end users of the electrical service.* | | |
| EU28 | Power outage frequency (SAIFI). | | 62-65 |
| EU29 | Average power outage duration (SAIDI). | | 62-65 |
| EU30 | Average plant availability by energy source and by regulatory regime. | Not applicable | |
| | *Terna neither possesses nor manages electric power plants.* | | |

# Connection with the Global Compact's 10 Principles

The following table shows the G3.1 version of GRI indicators that apply to Terna and their relation to each of the 10 Principles of the Global Compact. It aims at facilitating finding information relevant to stakeholders who wish to assess Terna's implementation of the Principles.

| AREA | Global Compact Principle | GRI Indicator | Page |
|---|---|---|---|
| **HUMAN RIGHTS** | **Principle 1**<br>Businesses should support and respect the protection of internationally proclaimed human rights. | **Actions taken to implement Principle 1**<br>HR3, HR10, SO1, SO9, SO10 | 42; 54-55; 68-69; 91-93 |
| | | **Results of implementing Principle 1**<br>HR9, HR11 | 120; 124; 140 |
| | **Principle 2**<br>Businesses should make sure they are not complicit in human rights abuses. | **Actions taken to implement Principle 2**<br>HR2 | 84; 121 |
| | | **Results of implementing Principle 2**<br>HR1 | 120 |
| **LABOUR** | **Principle 3**<br>Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining. | **Actions taken to implement Principle 3**<br>HR5, LA5 | 40; 120; 121 |
| | | **Results of implementing Principle 3**<br>LA4 | 122 |
| | **Principle 4**<br>Businesses should uphold the elimination of all forms of forced and compulsory labour. | **Actions taken to implement Principle 4**<br>HR7 | 40; 120 |
| | **Principle 5**<br>Businesses should uphold the effective abolition of child labour. | **Actions taken to implement Principle 5**<br>HR6 | 40; 120 |
| | **Principle 6**<br>Businesses should uphold the elimination of discrimination in respect of employment and occupation. | **Actions taken to implement Principle 6**<br>EC7, HR4 | 33; 116; 120 |
| | | **Results of implementing Principle 6**<br>LA1, LA2, LA10, LA12, LA13, LA14, LA15 | 110-111; 113; 114; 115; 116; 131; 139; 140; 141 |
| **ENVIRONMENT** | **Principle 7**<br>Businesses should support a precautionary approach to environmental challenges. | **Actions taken to implement Principle 7**<br>EC2, EN26, EN30 | 68-69; 80-81; 91-93; 94-95; 106-107; 138 |
| | | **Results of implementing Principle 7**<br>EN1, EN3, EN8, EN16, EN19, EN20 | |
| | **Principle 8**<br>Businesses should undertake initiatives to promote greater environmental responsibility. | **Actions taken to implement Principle 8**<br>EN14, EN18, EN26, EN30 | 68-69; 91-93; 94-95; 99-101; 106-107; 138; |
| | | **Results of implementing Principle 8**<br>EN1, EN2, EN3, EN4, EN5, EN8, EN11, EN12, EN13, EN15, EN16, EN17, EN19, EN20, EN22, EN23, EN28, EN29 | 89-105; 136-138 |
| | **Principle 9**<br>Businesses should encourage the development and diffusion of environmentally friendly technologies. | **Actions taken to implement Principle 9**<br>EN18, EN26, EN30 | 68-69; 91-93; 94-95; 99-101; 106-107; 138 |
| **THE FIGHT AGAINST CORRUPTION** | **Principle 10**<br>Businesses should work against corruption in all its forms, including extortion and bribery. | **Actions taken to implement Principle 10**<br>SO4, SO5 | 42; 52; 56 |
| | | **Results of implementing Principle 10**<br>SO2, SO3 | 41; 42; 140 |

Source: Official site Global Compact (www.unglobalcompact.org/resources/306) "*Making the Connection: Using the GRI G3.1 Guidelines to Communicate Progress on The UN Global Compact Principles*" 2013.

2013

# Terna company Profile

Terna
TERNA GROUP

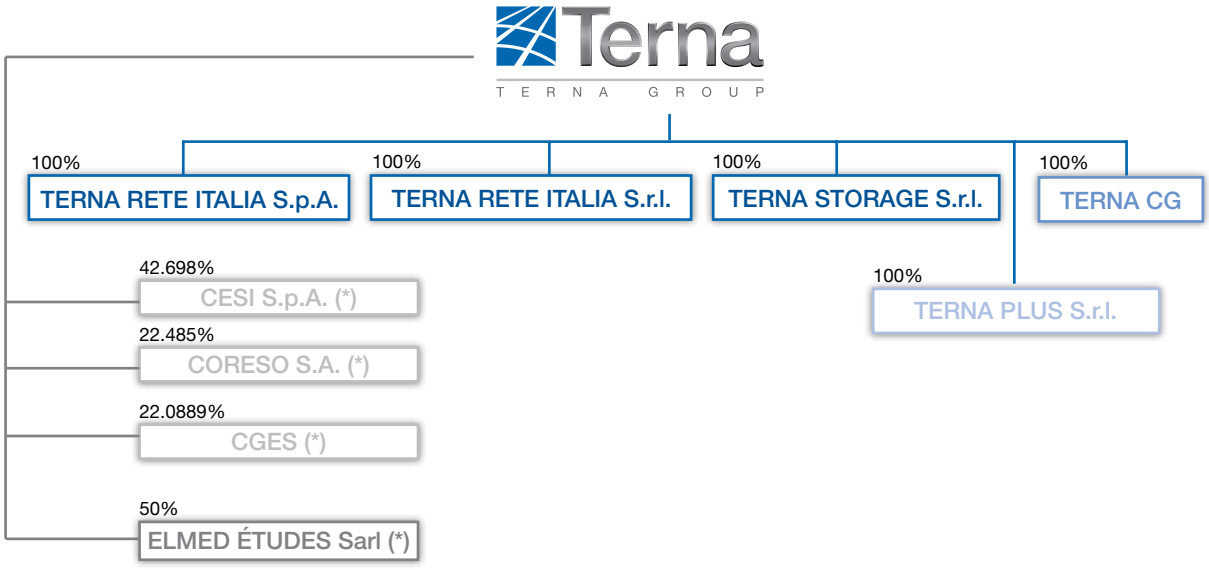
# Presentation of the Company

Terna is the largest independent transmission system operator (TSO) in Europe and the sixth largest in the world in terms of kilometres of lines managed.
The Company has its headquarters in Rome and is the owner of the Italian National Transmission Grid (NTG), with 57,539 km of high-voltage lines (more than 63,500 km of three-phase power lines), 475 transformer stations, and 22 lines interconnecting with foreign grids (data at 31 December 2013).
In Italy, Terna acts as the TSO with a monopoly under a government licence in accordance with the Decree of 20 April 2005 of the Ministry of Production. It is responsible for transmitting and dispatching electricity along the high-voltage and very-high-voltage grid throughout the whole of Italy, as well as for planning, constructing and maintaining the grid.
**Terna's mission** is to:

- manage electricity transmission in Italy, guaranteeing its security, quality and affordability over time;
- ensure equal conditions of access for all grid users;
- develop market activity and new business opportunities with the experience and technical skills gained in managing complex systems;
- create value for its shareholders with a strong commitment to professional best practices and with a responsible approach to the community, respecting the environment in which it operates.

## The Terna Group

The Terna Group's shareholding structure at 31 December 2013 is as follows:




(*) Companies valued by the equity method

At 31 December 2013, the Terna Group includes:

- Italian subsidiaries controlled directly with a 100% stake: Terna Rete Italia S.p.A., Terna Rete Italia S.r.l., Terna Storage S.r.l. and Terna Plus S.r.l;
- the Montenegrin company controlled directly, with a 100% stake, Terna Crna Gora d.o.o.;
- the associated companies CESI S.p.A. (42.698% stake), CORESO S.A. (Belgian company, 22.485% stake); CRNOGORSKI ELEKTROPRENOSNI SISTEM AD – "CGES" (Montenegrin company 22.0889% stake) and the Tunisian joint-venture ELMED ÉTUDES S.a.r.l. (50% stake).

## Organisational structure

The Terna Group has adopted an organisational structure divided into a parent company and operating companies (with employees) wholly controlled by the parent company itself:

- Terna S.p.A., the parent company, as well as being the owner of the licence for the transmission and despatching of electricity also owns the capital assets and is responsible for defining the NTG Development Plan and the Defence Plan;
- Terna Rete Italia S.p.A. is granted, through a business unit rental agreement with a four-year term, the task of performing all traditional operational activities, ordinary and extraordinary maintenance of the NTG, management and performance of work on developing the grid, associated with the implementation of the provisions of said Agreement and on the basis of guidelines laid down in the Development Plan. 90% of the Group's human resources are concentrated within Terna Rete Italia;
- Terna Storage S.r.l., founded in 2012, is responsible, within the Terna Group, pursuant to a contract signed to such end with the parent company, for "ensuring the implementation" of diffused energy storage system projects, as well as the related "coordination", "study" and "research" activities;
- Terna Plus S.r.l. is the operating company devoted to non-traditional business projects. It has developed a slim and flexible operating structure;
- Terna Crna Gora d.o.o., a Montenegrin limited liability company (S.r.l.) incorporated on 22 June 2011 and wholly controlled by Terna, is engaged in authorising, constructing and managing the electricity interconnection in Montenegro. Investments made by the company in Montenegro in 2013 equal 6,186.5 thousand Euro; in addition, the investments relative to the Italy - Balkans interconnection (Network Interconnection Link - NIL) and realised (including advance payments) by the company Terna Crna Gora d.o.o. in international waters, were bought by the Parent Company (around 7.9 million Euro in 2012 and 7.7 million Euro in 2013). These investments relate to design and acquisition, not to operating activities requiring building works and the development of infrastructure.

At the end of 2013, the company recorded revenues of 400.8 thousand Euro and a loss of 893.7 thousand Euro; therefore, taxes paid to the Montenegrin state were not recorded.

Compared to the scope of consolidation as at 31 December 2012, the variation regards "non-traditional activities" only, specifically the sale of Rete Solare S.r.l. by the subsidiary Suntergrid (24 July 2013) and, subsequently, the incorporation of Suntergrid in Terna Plus (21 October 2013).

## Associates

CESI is a leading company in testing and certifying electro-mechanical equipment, and electrical system consultation; it covers all stages of the electricity system life cycle and offers companies operating in the electricity system (generation, transmission and distribution), the manufacturers of electric and electronic equipment, large electricity consumers, and local and national public administration a full range of services aimed at resolving problems related to the production processes of the entire electrical energy sector.

CORESO is a Belgian service company with its headquarters in Brussels; Terna became a shareholder in November 2010 with a 22.485% stake. The shareholding structure of the company includes the operators of France (RTE), Belgium (Elia) and Great Britain (National Grid), each with a share equal to that of Terna and the German operator, 50 Hertz Transmission, of 10%. CORESO prepares daily forecasts and real-time analyses of energy flows in Central and Western Europe, identifying possible critical issues and duly informing the TSOs concerned in a timely manner.

CRNOGORSKI ELEKTROPRENOSNI SISTEM AD ("CGES") is the Montenegrin TSO of which Terna became a shareholder, holding 22.09% of the capital, following approval by the CGES shareholders' meeting of a capital increase restricted to Terna. The agreement is the fruit of industrial and country-system cooperation and is part of the intergovernmental agreements between Italy and Montenegro, which began on the 19 December 2007 and were ratified with the signing of a strategic partnership agreement in November 2010, for the construction of a new submarine electricity interconnection and the implementation of the partnerships between national transmission operators.

## Joint ventures

ELMED ÉTUDES is a special-purpose entity, equally owned by Terna and the Tunisian electricity operator STEG. The company purpose is to perform preliminary studies so as to prepare for the international tender by the Ministry of Industry and Technology of the Tunisian Republic granting production rights in Tunisia and for constructing the underwater Italy-Tunisia connection (ELMED Project). On 31 July 2013, the shareholders' meeting of ELMED Études resolved to revise the ELMED Project, separating the transport part from the production part and granting a mandate to the company's directors to take all the action needed for such purpose.

For information on recent developments in the regulatory and legislative framework of interest to the Group, see the annual Financial Report 2013.

SIZE OF THE TERNA GROUP AS OF 31.12.2013

| | | |
|---|---|---|
| Number of employees: | | |
| Group (Italian perimeter) | | 3,442 |
| of whom: | Terna SpA | 372 |
| | Terna Rete Italia | 3,056 |
| | Terna Storage | 5 |
| | Terna Plus | 9 |
| Terna Crna Gora[1] | | 3 |
| Turnover in millions of Euro | | 1,896 |
| Total capitalisation in millions of Euro | | 7,061 |
| EU4 Km of three-phase power lines[2] | | 63,594 |
| Km of lines[2] | | 57,539 |
| of which underground | | 1,512 |
| of which underwater cables | | 1,348 |

(1) Unless explicitly indicated, the three employees of Terna Crna Gora d.o.o. are excluded from the data presented in this Report.
(2) For a breakdown of the km of lines and three-phase power lines by voltage, please see the indicator tables on page 130.

## Ownership structure

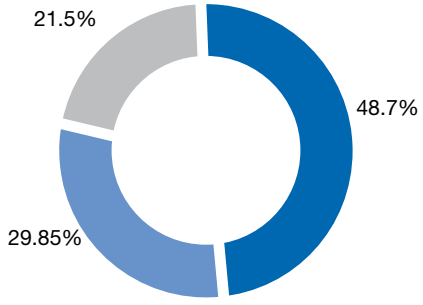
At the date on which the present Report was prepared, Terna S.p.A.'s share capital amounted to 442,198,240 Euro, represented by 2,009,992,000 ordinary shares, with a par value of 0.22 Euro each.
On the basis of the shareholder register and other information gathered when this report was prepared, ownership of Terna S.p.A. is divided as follows:

- Cassa Depositi e Prestiti S.p.A. (CdP)[2] 29.85%
- Institutional investors 48.7%
- Retail investors 21.5%

TERNA'S SHAREHOLDERS BY TYPE

| | |
|---|---|
| Institutional investors | 48.7% |
| Cassa Depositi e Prestiti S.p.A. | 29.85% |
| Retail investors | 21.5% |

**Total 100%**




On the basis of the periodic surveys carried out by Terna, it is believed that 57.9% of Terna S.p.A. shares are held by Italian investors (CdP, 29.85%; retail investors, 21.5%; and institutional investors, 6.6%), and the remaining 42.1% by foreign institutional investors, primarily American and European.
At the end of 2013, 14.8% of Terna's share capital was held by socially responsible investors (SRI). There were 85 SRIs (Socially Responsible Investors), i.e. those choosing to invest in Terna with a sustainable approach in mind, based on the consideration of ESG (Environmental, Social and Governance) aspects (up on the 66 SRIs at the end of 2012). They represent 7.2% of the floating shares (5.2% at the end of 2012) and 10% of the shares held by institutional investors (8.4% at the end of 2012).

2 These shareholders have a stake in Terna S.p.A. share capital above the thresholds indicated in Consob Resolution No 11971/99, based on the information available, and communications from Consob.

As part of the "Report on corporate governance and ownership structures", approved by the Board of Directors for the financial year 2013 – Section II: Information on corporate structure published alongside Terna and the Terna Group's Annual Financial Report reported information on ownership structures, restrictions on the transfer of shares, shares which grant special rights, and restrictions on voting rights required under Article 123-*bis* of the Consolidated Law on Finance (Legislative Decree No 58 "TUF" of 24 February 1998).
Moreover, in order to safeguard Terna's independence and impartiality, no electricity sector operator may exercise voting rights in appointing the Board of Directors for a share of more than 5% of the share capital.

## Corporate governance

Terna S.p.A.'s governance structure is based on the traditional administrative and control model, and is compliant with the provisions of Italian law on listed companies. Terna adopted the Corporate Governance Code for listed companies published by the Corporate Governance Committee supported by Abi, Ania, Assonime, Assogestioni, Borsa Italiana and Confindustria, as last updated in December 2011 (accessible from Borsa Italiana S.p.A.'s website www.borsaitaliana.it) and, pursuant to the period of adaptation provided for in the transitory regulations, approved and implemented the upgrades to the Corporate Governance system to comply with the commitments established by the Code[3].
The Board of Directors – appointed by the General Shareholders' Meeting – is entrusted with managing the firm. The Board of Directors is responsible for establishing strategic and organisational guidelines for the Company and the Group, as well as ensuring that the controls necessary for monitoring the performance of the Company and its subsidiaries are in place.

BOARD OF DIRECTORS IN OFFICE AT 31.12.2013

EC7

| Office | Members | Executive | Non-executive | Independent | Internal Control Committee | Compensation Committee | Committee on Transactions with Related Parties |
|---|---|---|---|---|---|---|---|
| Chairperson | Luigi Roth | | ● | | | | |
| Chief Executive Officer | Flavio Cattaneo | ● | | | | | |
| Director | Paolo Dal Pino | | ● | ● | ● | ● | ● |
| Director | Matteo Del Fante | | ● | | ● | | |
| Director | Salvatore Machì | | ● | ● | | ● | ● |
| Director | Romano Minozzi | | ● | ● | | ● | ● |
| Director | Francesco Pensato | | ● | ● | ● | | |
| Director | Michele Polo | | ● | ● | ● | | |
| Director | Antonio Segni | | ● | ● | | | |

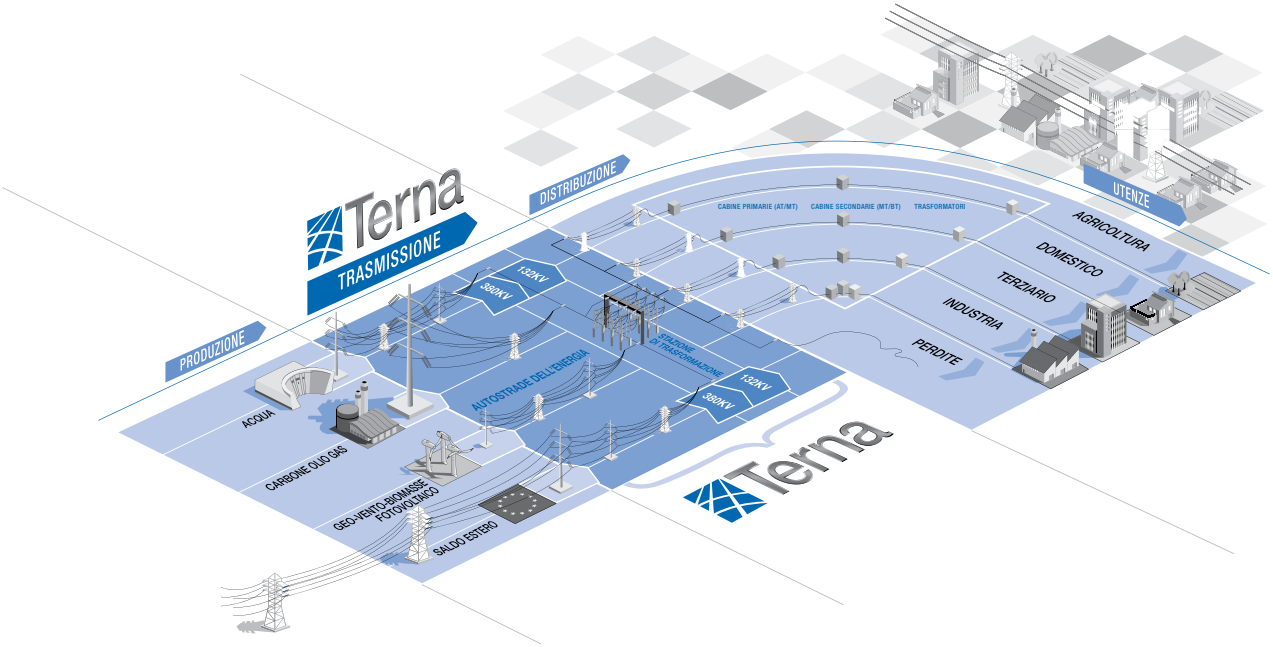
The Board of Directors is comprised of nine members, whose mandate will expire upon approval of the budget for the 2013 financial year.
Further information on Terna's corporate governance can be found in the "Report on Corporate governance and ownership structures", which was approved by the Board of Directors on 25 March 2014 and is available on the Company's website www.terna.it in the "Investor Relations" section, accessible from the homepage. It is also published alongside the 2013 Terna Annual Financial Report.

3 Further details on governance structure and hierarchy are given in the "Report on corporate governance and ownership structures", approved by the administrative body, published jointly with the Terna and Terna Group Annual Financial Report. *Renewable production can be defined as total production from wind, solar, geothermoelectric, biomass (included in the table under thermal production) and hydro power net of pumping plant production.*

# Core Business: Electricity Transmission

**Terna's core business is the transmission of electricity in Italy.**
The Italian electricity system consists of four stages: producing, transmitting, distributing, and selling electricity.
**Terna is responsible for managing the electricity system by:**

- **operating the high-voltage grid**
- **maintaining infrastructure**
- **planning and implementing grid development projects**




The main stages of transmission are as follows.

## Operating the grid

In operating the grid, it is **essential to ensure a balance between input and output at all times**, i.e. between the supply of energy, produced domestically and imported, and consumption by end users. This function is termed dispatching and is managed by Terna Rete Italia.
Preparation for real-time operation includes **planning unavailability** (of the grid and of production plants) with different time horizons, forecasting national electricity demand, comparing demand for consistency with the production plan determined as the result of the free energy market (Electricity Market and contracts outside of the Electricity Market), acquisition of resources for dispatching, and checks on the power transits for all the transmission grid lines.
During the **real-time control** stage, the National Control Centre, coordinating other centres around the country, monitors the electricity system and dispatches electricity, intervening, by communicating commands to producers and Remote-Control Centres, in order to vary grid supply and distribution. To avoid the risk of grid degeneration and prolonged power outages, it may also intervene in an emergency to reduce the demand.

## Maintenance

Terna Rete Italia **maintains power lines and stations** through three Area Offices, which are divided into eight Operational Transmission Areas and which rely on over 85% of the Group's human resources.

### Grid development planning

Analysing electricity flows in the grid and producing demand projections allow Terna to **identify the critical points of the grid and work to be carried out** in order to ensure the system's adequacy in terms of meeting demand, securing operations, reducing congestion, and improving service quality and continuity.
Work to be carried out is detailed in the National Transmission Grid Development Plan, which is presented every year to the Ministry for Economic Development for approval. Terna then follows the authorisation process, from prior consultation with local government through to construction authorisation.
Finally, by analysing the grid, Terna also sees to identifying the **best ways of connecting to the transmission grid** for all operators who wish to connect their plants.

### Construction

Terna Rete Italia sets the engineering standards for plants connected to the grid, particularly construction standards and the performance required from equipment, machinery, and station and electricity-line components.
As far as plant construction is concerned, **Terna prepares projects for the authorised works**. It sets out the requirements for external resources and project budgets, as well as the working methods and technical specifications for the components and materials that will be used in constructing the new lines or stations, including the adoption of innovative methods. The construction of new plants is normally outsourced.

## Other activities

EU6

EU23

To complement its core business, **Terna works on developing non-traditional activities or those subject to regulation by the Electricity and Gas Regulatory Authority (AEEG) but different from the licensed activities.**
In 2013, these activities concerned:

- progress with investment projects in storage systems (see page 73);
- continuation of initiatives abroad.

### Development abroad

Terna's work abroad has two objectives: firstly, developing interconnections with neighbouring countries to provide greater security, cost-effectiveness and sustainability of supply, and, secondly, investing in foreign countries, which is essential in order to diversify from national investments.
With regard to the first type of investment, Italy is the most interconnected state in Europe; particularly among the Mediterranean countries: France, Slovenia, Greece and soon Malta (in 2014) and Montenegro (in 2017). Focusing international development on the Mediterranean basin allows Terna to benefit from Italy's competitive advantage: its geographical positioning – not only a potential outlet market but a hub between continental Europe and the Mediterranean. To this, the impact on the security of the system can be added; following the integration of renewable sources in the grid, and European regulations to create a single market, it is essential to create strong interconnections with foreign countries and, therefore, natural outlet markets such as the Balkans and North Africa.
Investment in other countries with positive economic growth trends requires electrical infrastructure, and, along with a stable, reliable legislative/regulatory framework, increase the value of Terna's skills, regarded as best practice worldwide.

### The Balkans

The Balkan Peninsula is the area of greatest strategic interest for Terna, considering its proximity and the energy potential in the region, particularly with regard to renewable resources.
The new underwater power line between Italy and Montenegro, incorporated into the NTG Development Plan, will link Italy to the Balkans via 415 km of 400 kV cable between the hubs in Villanova (Pescara, Italy) and Kotor (Montenegro), with a transmission capacity of 1,000 MW.
The power line is based on agreements between the two Governments, and between Terna, the Government of Montenegro and local transmission operator CGES through the strategic partnership between Terna and CGES, in which Terna holds a stake (also see page 31).
The construction of interconnection cables received the necessary authorisation. The international tenders have been awarded: in Italy, the work is managed by Terna Rete Italia, while in Montenegro by Terna Crna Gora.

### North Africa

To date, there are no Terna investment projects in progress in North Africa, only research and preliminary development work which could translate into a Euro-Mediterranean multilateral cooperation project by:

- constructing a Maghreb-Europe electric transmission corridor by interconnecting the systems within the countries concerned;
- participating in cooperation, institutional and industrial initiatives.

Interconnection projects in their development phase, in which Terna is involved relate to connections with the Tunisian and Algerian systems.

Analysis is underway in order to identify the best opportunities for interconnection with North Africa, based on Terna's experience in the following projects:

**Project Elmed**: this was originally an integrated production and transmission project involving the production of electricity in Tunisia and its exportation to Italy, on the basis of an intergovernmental Italian – Tunisian agreement. Elmed Études (a joint-venture company owned by Terna and STEG, the Tunisian electricity operator) has carried out technical and regulatory studies to analyse the conditions for developing the project.

**Italy – Algeria interconnection**: in order to proceed with interconnecting the Algerian and Italian electricity systems, Terna and Sonelgaz signed an agreement in 2011 to implement a previous feasibility study on an underwater connection between Algeria and Italy. Work was concluded at the end of 2013.

The EC-financed **Paving the Way for the Mediterranean Solar Plan** project – a technical assistance project to develop the Mediterranean Solar Plan, involving nine countries from the MENA countries (Middle East and North Africa) along with RTE (France), Sonelgaz (Algeria), MVV Decon (Germany) and the ENEA (Italian National Agency for New Technologies, Energy, Sustainable Economic Development) – has now been completed. Other similar cooperation initiatives in which Terna has taken part include:

**Medgrid**: a private French-law company involved in promoting a Euro-Mediterranean electricity grid for the exchange of electricity produced from renewable resources among MENA countries and transporting it to Europe.

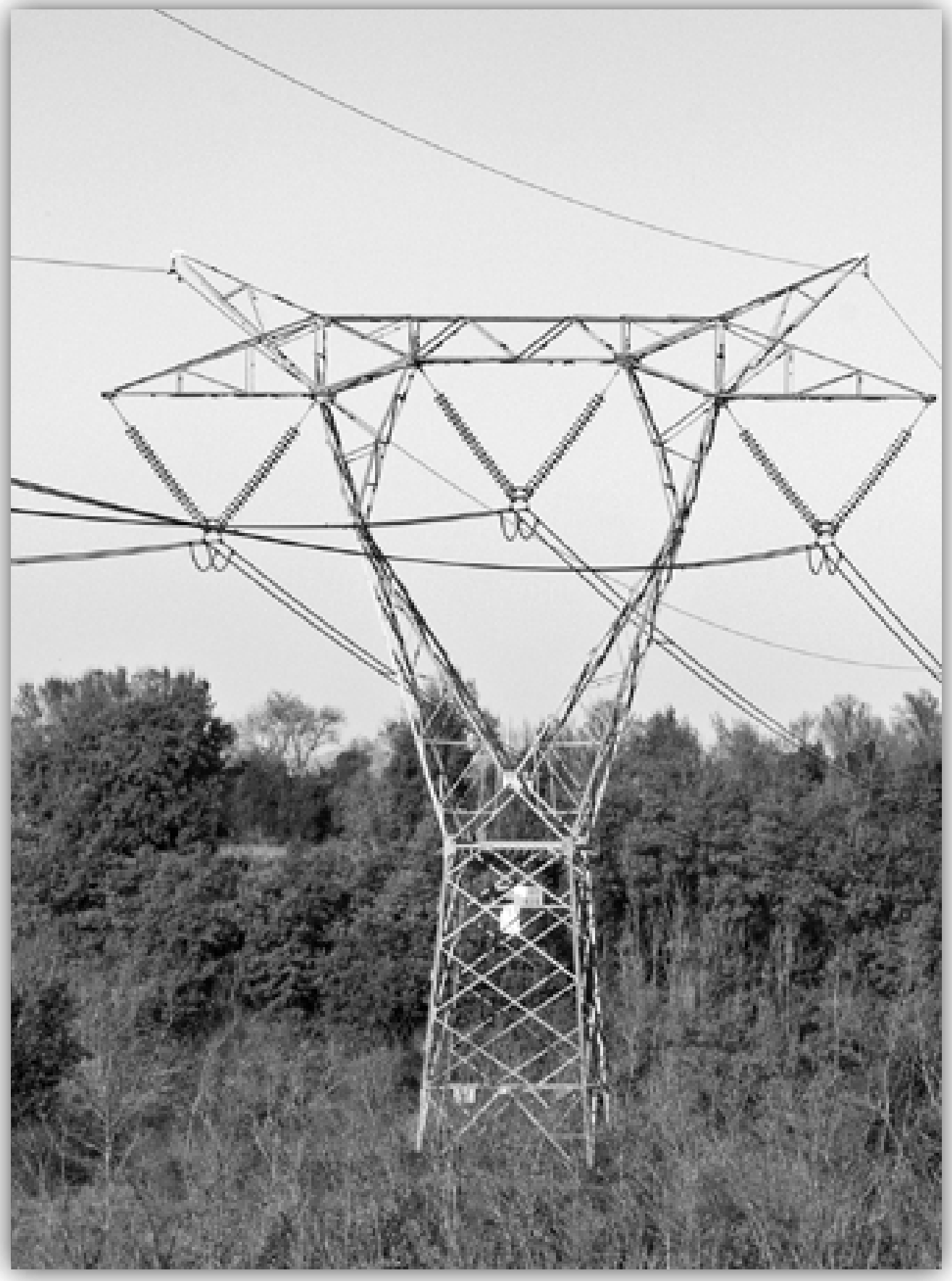
**DII (Desert Industrial Initiative)**: a German-led industrial initiative aiming to promote Europe-Mediterranean cooperation in electricity production, mainly from renewable resources, in the MENA countries and exporting it to Europe.

**Med-TSO**: the association of Mediterranean transmission system operators sponsored by Terna. It was formed in Rome (Italy) in 2012 as a platform for dialogue among TSOs, with the aim of integrating electricity systems in the Mediterranean. It is comprised of 19 TSOs from 17 countries in the Mediterranean. The most recent members are the Palestinian transmission system operators (PETL) and the Israeli operators (IEC). The European Commission expressed its support for the development of Med-TSO and assigned the group the task of preparing a Master Plan for Mediterranean interconnections. The results were presented at the end of 2013, at the meeting of energy ministers from the EU and the rest of the Mediterranean.

## The Strategic Plan

On 25 March 2014, Terna approved the Terna Group's Strategic Plan for the period 2014-2018, the guidelines of which are shown below:

- Traditional activities: 3.6 billion Euro of investments to maintain and develop the grid.
- Non-traditional activities: commitment increased to 1.3 billion Euro within the time horizon of the Plan (900 million potential confirmed, added to which is the value of the activities already announced).
- Improvement of margins: the EBITDA margin will be over 79% in 2018.
- Solid financial structure: no refinancing requirement until the end of 2015 and net debt/RAB ratio below 60% during the years of the Plan.
- Dividend policy: the dividend policy consisting of paying advances and balances was confirmed. A basic dividend is forecast, deriving from traditional activities, of 19 Euro cents per share, to which the contribution of non-traditional activities (pay out of 60% on results) will be summed.



# Sustainability

## Terna's concerns

Terna's main business is the provision of a service which is indispensable for the operation of the entire Italian electricity system and to ensure electricity for everyone. The greatest social and economic impact of the company's business lies in its ability to provide the general public with a reliable, efficient electricity service. Commitment to service is therefore also our main reference point when approaching sustainability matters. This has been confirmed by the results of the materiality analysis carried out in 2013 (see the methodological note on page 18).
In general, Terna's intent, as ratified in its Code of Ethics, is to construct and develop relationships based on trust with stakeholders, which are able to create value for the business and for the stakeholders themselves.
Although the end users of the electricity service are not direct customers of Terna, but rather of companies that distribute and sell electricity, the essential role it performs in the electricity system makes Terna **ethically responsible for the service with regard to Italian society**. Thus Terna is fully aware of the responsibility entrusted to it by the government licence, and sets itself the following objectives:

- providing a secure, reliable, continuous, and cost-effective service;
- developing and ensuring an efficient transmission system;
- respecting impartiality and neutrality in order to ensure equal treatment for all grid users.

In Terna's view, business and sustainability matters are closely linked, so much so that both the company and its stakeholders consider **adopting a responsible approach to planning the NTG** a company priority.
This means being pro-actively concerned about the possible environmental and social impact of any development, by adopting all the necessary measures to prevent and minimise such an impact, and pursuing a **constructive dialogue with local communities** who live in the area where the development is planned, or where there are power lines.
For Terna, respect for the environment and for local communities is a rule of conduct which can trigger a virtuous cycle: it allows biodiversity and the richness of the landscape and local culture to be preserved, and facilitates acceptance and the creation of new infrastructure, generating financial benefits for shareholders and for society, which can enjoy a more secure, more efficient and less costly service. Focus on the community is also demonstrated by the creation of social, humanitarian and cultural initiatives which are a concrete sign of participation in the growth of civil society.
The role of human resources in Terna's work is crucial. **Renewing specific technical skills**, which are often rare or unique in the electricity industry, constitutes an important part of Terna's sustainability approach. Another, which is just as important, is **occupational safety**. This is especially relevant due to the fact that many operational tasks are associated with particular risks such as work high above ground and maintenance work on live lines.
Further details on the key sustainability issues for Terna can be found in the first section of the four chapters on service, economic, environmental, and social responsibility in this report.

## Medium-term prospects

In the medium-long term, sustainability meets development strategies when it comes to relations with local communities and the environmental impact of Terna's work. The need to face up to a significant generational change will keep the issue of core-competence management alive over the next few years, alongside issues which are always a priority such as the quality and security of the electricity service.
Community involvement, regulated by a dedicated plan launched in 2013, is an area of growing interest as regards positive relations with stakeholders at the local and central levels.

### Relations with local communities

In the medium term, the creation of value for shareholders and the quality of the electricity service are linked to the development of the grid and of interconnections with other countries. **Acceptance by local communities** is therefore a relevant issue: in addition to relationships with institutions, which are already based on solutions agreed in advance, increasing the degree of acceptance of electricity infrastructure in the communities involved is of utmost importance. This is exemplified by the disputes outlined in this report. Terna has begun analysing the most effective ways of presenting its development projects. With respect to these objectives, involvement and communication play an important role, as do local institutions and regional associations representing civil society.

### Electromagnetism, visual impact and other environmental factors

With regard to electromagnetic fields, Terna's commitment is expressed by its scrupulous compliance with Italian law, which is among the strictest internationally. Considering the sensitivity of public opinion on the issue, Terna pays **constant attention to advances in scientific research on electromagnetic fields**, in order to assess any risks connected with its work. In addition, it will continue to contribute to providing correct information to the public on the matter.
A further effect of Terna's work which is highly perceptible to the public is the visual impact. For this reason, the company constantly strives to reduce it. This is done by working on the lines (rationalising them or, in some cases, installing them underground), the aesthetics of the pylons, and the surrounding environment (using natural engineering and camouflaging).
Although Terna is not subject to obligations to reduce emissions, **it has, for some time, been developing strategies to control and contain direct and indirect emissions** and will maintain its commitment to achieving greater energy efficiency. Terna's greatest contribution to lowering $CO_2$ emissions is grid development, making the electricity system as a whole more efficient and **making it possible to feed in growing production from renewable sources**.

### Activities abroad

Developing foreign business based on current forecasts does not lead us to expect issues to emerge that are not already covered in the current planning of social responsibility activities. However, constant monitoring of the adequacy of tools and processes will be required, as has already begun, for example, with the supply chain.

### Human Resources

Constant concern for human resources with regard to **safety**, but also **training to continually update industry-specific technical capabilities** will continue to be a priority for Terna.
The subject of professional training will remain of particular importance in relation to the generational staff turnover at Terna over the next few years, although the impact of the transition has been distributed over a longer time horizon than foreseen, following the pension reform introduced by the Italian Government in December 2011. One of the distinctive elements of the response strategy is knowledge transfer through the Faculty Campus.

### Social commitment

Terna works to tackle a number of pertinent issues such as access to energy, school and research by supporting and organising social initiatives. A constant commitment to solidarity, combined with close monitoring of the impact of its initiatives, can help to encourage the Group's positive position in the eyes of the relevant stakeholders at the central and local levels.

# Sustainability governance

## The Code of Ethics

The Code of Ethics, approved by the Board of Directors on 21 December 2006, is the highest reference point for identifying sustainability issues relevant to Terna and for defining internal policies and guidelines. It can be used as a concrete guide in everyday decisions, helping to achieve the objective of establishing and consolidating trust with stakeholders.

One of the commitments expressed in the Code is to provide evidence in the Sustainability Report of the implementation of the Company's environmental and social policy, as well as the consistency between the objectives and results achieved.

The Code of Ethics is available in the "Investor Relations" section of Terna's website under "Corporate Governance".

HR5 HR6 HR7

## The Global Compact

When it joined the Global Compact in 2009 – the United Nations' multi-stakeholder network – Terna further cemented its commitment to observing the 10 principles of the Global Compact on human rights, employment, the environment and preventing corruption. These principles were already set out in Terna's Code of Ethics as a benchmark for the company's corporate responsibility and sustainability initiatives.

## Management policies and systems

The principles and criteria of conduct in the Code of Ethics have been translated into corporate policies and coherent management systems. Specifically, these include:

## The integrated Quality, Environment and Occupational Safety management system

Work in the sensitive fields of the environment and occupational safety, which are a crucial part of Terna's sustainability vision, are coordinated and directed in the integrated Quality, Environment and Occupational Safety management system, which has obtained the **ISO 9001:2008, ISO 14001:2004 e BS OHSAS 18001:2007. The integrated system covers 100% of Terna's activities in Italy,** both the work carried out on existing plants, and the planning, design and construction of new plants. In November 2013, the Quality, Environment and Occupational Health and Safety certification broadened the extent of its coverage to include the subsidiaries Terna Crna Gora and Terna Storage.

In 2013, Terna also confirmed its ISO/IEC 27001:2005 certification (obtained in 2011) for TIMM applications (the integrated test for monitoring the electricity market).

The ISO/IEC 27001:2005 is an international standard which provides the requisites for an Information Security Management System (ISMS) with regard to aspects of physical, logical and organisational security. It is consistent with the ISO 9001:2008 quality management system and Terna's risk management system.

Among its 2013 results, Terna records its first accreditation for the multi-site laboratory management system (Viverone, Civitavecchia, Frattamaggiore), in accordance with the ISO/IEC 17025:2005 standard. The Group's objective is to become the sole body able to carry out tests on equipment used in live-line working, and a point of reference within the "high-voltage" energy sector for Southern Europe.

On the topic of environment, after the "initial energy analysis" and the planning of the "energy consumed for own use management system", completed in 2012 with the aim of aligning the system to the UNI CEI EN ISO 50001:2005 standard, Terna carried out a detailed energy analysis of the Rome offices in viale Galbani and via Palmiano and of the operational transmission area offices in Milan, Padua, Florence, part of those in Rome (in the Engineering and Dispatch, Campus and SOC Building departments), Naples, Palermo and Cagliari.

This will continue in 2014 in order to implement an energy management system which complies with the UNI CEI EN ISO 50001:2011:2005 standard, with a view to obtaining future certification.

## The Balanced Scorecard and incentive schemes

A Balanced Scorecard (BSC) system is used to monitor and control corporate activity; this control panel of indicators makes it possible to follow, every quarter, the progress of the operating objectives into which the annual objectives of the Strategic Plan are organised (divided into economic/financial, organisation/process, strategy/customer, and innovation/development). In an effort to share the sustainable approach to Terna's business, it is particularly important to note that sustainability objectives are entered into the BSC system. Thanks to the link between the Balanced Scorecard and managers' variable pay schemes (MBOs), the sustainability objectives are also supported by incentive systems based on pay.

### Internal organisation

With regard to sustainability, the following are of particular significance:

- the presence of a Corporate Social Responsibility Unit within the External Relations and Communication Department, which, in collaboration with all company departments and with reference to best practices, helps define the company's sustainability objectives from an ethical, social, environmental and sustainability-governance viewpoint, and communicate the objectives and results of corporate social responsibility. Moreover, the Unit constantly monitors the risks connected with sustainability, which entail potential negative repercussions for the company's reputation and its intangible value, by analysing the ratings of the main agencies (such as RobecoSAM, Vigeo and Eiris), which regularly assess sustainability;
- the presence of a Sustainability and Environmental Steering Committee, whose members are the Heads of Departments sharing the responsibility for implementing sustainability projects and monitoring their impact, the Secretary of which is the Group's CSR Manager;
- the use of SDM software (Sustainability Data Manager) to manage the sustainability IT system which currently collects more than 1,500 indicators corresponding to textual information, data, conversion factors and formulas for monitoring Terna's environmental and social performance;
- the presentation to the Board of Directors of sustainability objectives and results, when it approves the Sustainability Report.

## Respecting the law and preventing corruption

For Terna, the prevention of corruption is a strategic activity which is intrinsically linked to internal control systems. Legality and honesty are two of the general principles on which the Code of Ethics and the conduct of the Company's business are based.

Terna's strategy in this regard focuses on three major areas: Organisational Model 231, fraud management and staff training.

In the period 2011-2013, the Audit Department examined all company departments (100%) and subsidiaries several times in relation to various types of risk, including those relating to corruption within the scope of audit and risk assessment activities for procedures and departments.

S02

### Organisational Model 231 (pursuant to Legislative Decree 231/2001)

In 2002, Terna's Board of Directors resolved to adopt an Organisational and Management Model which met the requirements of Legislative Decree No 231 of 8 June 2001.

Terna's adoption of the Organisational and Management Model 231 aims to ensure "correctness and transparency in carrying out company business and activities in order to protect its position and image and the expectations of its stakeholders".

The current Model is divided into 11 parts, 1 "general part" and 10 "special parts", in addition to the compliance Regulation.

In 2013, the Department for Project Coordination and Overseeing Organisational Model 231, in agreement with the Legal and Corporate Affairs Department, carried out intensive research into sector regulations and, following the introduction of the "Anti-corruption Law", has adapted Organisational Models throughout the Terna Group. In addition to updating the "Special Part (Crimes against the Public Administration)", a specific section in the "Special Part (Corporate Crimes)" was dedicated to "corruption between individuals". Finally, a section was introduced on illegal influence peddling.

Further information on Terna's Organisational Model and those of the Group's other companies is available in the "Investor Relations" section under "Corporate Governance" on Terna's homepage www.terna.it.
(www.terna.it/default/home_en/investor_relations_en/corporate_governance_en/organizational_model.aspx).

### Fraud Management

This unit, within the Security Services Department, performs the following tasks:

- preventing and managing crimes by systematically analysing the pre-conditions for fraudulent acts; outlining specific monitoring and control procedures in order to mitigate risks; and continuously monitoring the efficacy of preventative measures adopted;
- checking and assessing new subjects and counterparties with the aim of containing risks deriving from transactions with third parties;
- validating, *ex ante*, requests for awarding consultancy services, professional appointments and IT services, and procedures for awarding contracts to predetermined suppliers;
- sending, in accordance with the Memoranda of Understanding signed with them, data, information and news on contractors and subcontractors to the institutions responsible, in order to prevent criminal attempts to infiltrate construction work on the infrastructure of the National Transmission Grid.

SO3 HR3

### Personnel training

All new employees attend training courses which aim to ensure awareness and dissemination of the rules on conduct and procedures established to prevent crime at all levels of the company. These courses also train and inform personnel about the areas at risk of criminal activity and about potential crime in relation to the work carried out. Training courses on the Code of Ethics and the Organisational Model 231 are also provided for (see the indicator tables on page 130).

SO4

Finally in 2013, as in the three previous years, no disputes relating to corruption were recorded (see page 41 of this chapter).

## Sustainability objectives and results

The improvement in Terna's environmental and social performance is based on a constant commitment to making progress in all areas of sustainability, which translates into sustainability objectives and plans. Among the **results of 2013**, the following are worth noting:

- active participation in the International Integrated Reporting Council's Pilot Programme, which resulted in observations being formulated at the "Consultation draft of the Integrated Reporting Framework" and in the development of an interactive version of the "Draft Integrated Report 2012", a requisite for the compilation of the "Integrated Report 2013;
- setting out Terna's Social Action Plan which is also based on a stakeholder engagement initiative involving 50 external experts and 60 employees. The Plan identified the main areas of engagement and outlined a series of coherent initiatives, launched in part in 2013 (e.g. the "Here Come Grandma and Grandpa" project with ARCI Milan), and will be developed fully in 2014;
- revision of the system of ethics and social and environmental responsibility with regard to the supply chain – a task which began in 2012 and will continue over the next few years. This has resulted in a list of countries identified as potentially at risk of not respecting human rights and of a lacking integrity within their business management. It will allow the establishment of additional care procedures when approving suppliers and during procurement processes in relation to such countries;
- renewal of the collaboration agreement with the WWF Italia (July 2013) and the completion – with the work being carried out at the Pollino National Park – of efforts to protect biodiversity envisaged in the previous agreement.

The materiality analysis conducted in the second half of 2013 (see the section on page 18) launched the process of strengthening those business tools designed to uncover shareholders' expectations and to plan further action which will benefit relations with these shareholders.

The integration of sustainability into management and managerial decisions has been supported by the creation of awareness initiatives which involved all the Group managers (Sustainability Day, May 2013) and subsequently the middle management from the three Regional Directorates.

The following table shows some of the most relevant **objectives for 2014** in the general interest, notwithstanding the fact that most of the initiatives planned have to do with improving internal procedures. The following are notable:

- revision of the system of ethics and social and environmental responsibility with regard to the supply chain, which will involve implementing the activities identified in 2013;
- revision of stakeholder mapping with a particular focus on local stakeholders, as part of a multi-year programme for the organisation and periodic updating of the stakeholder engagement process;
- continued active participation in the International Integrated Reporting Council's Pilot Programme, to consolidate the experience – launched in the last two-year period – of drawing up an integrated report;
- strengthening of environmental impact management through the Life Cycle Assessment of cables and overhead lines, in practical terms meaning extending the initial environmental analysis to the Group's new activities (storage systems);
- implementing solidarity projects – as provided for by the relating Plan – where the common denominator is Terna's strong presence as regards thinking up, organising and implementing the initiatives, in partnership with selected non-profit organisations.

| AREA OF RESPONSIBILITY | 2013 OBJECTIVES | 2013 RESULTS | 2014 OBJECTIVES |
|---|---|---|---|
| Governance and general considerations | Supply chain, environment and human rights: planning initiatives to improve and achieve 2013 milestones | ●●● | Revision of stakeholder mapping, with a focus on local stakeholders |
| | Integrated Reporting: participation in the Pilot Programme of the International Integrated Reporting Council | ●●● | Integrated Reporting: participation in the Pilot Programme of the International Integrated Reporting Council |
| | Internal training campaign on CSR | ●●● | Supply chain: revision of contractual documents with ethical, environmental and social content |
| | | | Supply chain: introduction of ISO 14001 and BS OHSAS 18001 standards as selection requisites in selected sectors |
| Environmental responsibility | Revision of action plans on $SF_6$ leakage | ●●○ | Revision of action plans on $SF_6$ leakage |
| | Preparation of the Policy and KPI for monitoring the energy-efficiency management system, in line with the ISO 50001 requirements | ●●● | Update of environmental analysis ISO 14001 for new activities (storage) |
| | Renewal of the agreement with the WWF | ●●● | Life cycle assessment:<br>- conclusion of cable study<br>- start of 380 kV overhead lines study |
| Social responsibility | Definition of guidelines for the Group's social commitment and implementation of coherent first initiatives | ●●● | Realisation of Social Action Plan projects:<br>- "100 Schools" project<br>- "Kimbondo" project<br>- "Here Come Grandma and Grandpa" project |
| | Definition of rules for employee volunteer work | ●●● | Recognition of human rights in line with UN Ruggie Report |
| | | | Update of management system BS OHSAS 18001 with new activities (e.g. storage) |

Legend
●●● objective achieved
●●○ partly achieved
●○○ postponed or suspended

## Sustainability indexes

Terna's commitment to improving its ESG (Environmental, Social and Governance) performance shows in its sustainability ratings, its inclusion in the main international stock exchange sustainability indexes and the appreciation of socially responsible investors.
In 2013, Terna was again present in these indexes. As for the transparency of communications on its $CO_2$ emissions and the containment programmes implemented, it was again included on the "CDP Italy 100 Climate Discloser Leadership Index", prepared by the Carbon Disclosure Project, an international initiative supported in 2013 by 722 investors who manage 87,000 billion dollars.

TERNA'S PRESENCE IN SUSTAINABILITY INDEXES (AS OF 31.12.2013)

| INDEX | YEAR INCLUDED | INDEX FEATURES |
|---|---|---|
| FTSE4Good<br>- Global<br>- Europe | 2005 | The FTSE4Good indexes include the best companies in terms of sustainability performance on the basis of the analyses of the EIRIS agency.<br>The index is reviewed twice a year, in March and September, in order to include potential new firms and to exclude those which have not maintained the required sustainability standards.<br>Terna has been continually present on the index since 2005. |
| AXIA<br>- Global<br>- ASI | 2006 | Axia Financial research produces sustainability indexes which select the best practices in the area of sustainability from the most highly capitalised companies in Italy and in Europe.<br>Terna is present on the Axia Global Sustainable Index and, since its creation in March 2012, on the Axia Sustainable Index (ASI) which includes the 40 top stocks listed on the Italian market. |
| ECPI<br>- Ethical Global<br>- Ethical Euro<br>- Ethical EMU | 2007 | These indexes were designed to be used by customers for investment analysis, benchmarking, and performance measurement based on the analyses of the ECPI agency. |
| MSCI<br>- WORLD ESG<br>- EAFE ESG<br>- EMU ESG<br>- EUROPE ESG | 2007 | These continue the KLD Indexes, which were among the first to trace the non-financial performances of companies and still constitute one of the most highly regarded references in the United States.<br>Terna's shares are permanently included in the numerous indexes belonging to the families indicated. |
| ETHIBEL<br>- PIONEER<br>- EXCELLENCE<br>- Investment Registers | 2009 | The indexes are developed on the basis of the ratings provided by the Vigeo rating agency. Inclusion is subject to the positive opinion of the Ethibel Forum, a panel of independent experts on the different aspects of sustainability. |
| ESI<br>- Excellence Europe | 2009 | The indexes are developed on the basis of the ratings provided by the Vigeo rating agency. Inclusion is subject to the positive opinion of the Ethibel Forum, a panel of independent experts on the different aspects of sustainability. |
| Dow Jones Sustainability indices<br>- World<br>- Europe | 2009<br>2010 | The DJSI indexes select the companies with the best sustainability performance among those most highly capitalised (for the World Index, the top 2,500 and for the Europe Index, the top 600) according to the rankings of the RobecoSAM agency. |
| FTSE ECPI<br>- Italy SRI Benchmark<br>- Italy SRI Leaders | 2010 | Introduced in 2010, and based on the analyses of ECPI, these are the only sustainability indexes that include solely companies listed on the Italian Stock Exchange. |
| STOXX® ESG<br>- Global ESG Leaders Index<br>- Global Environmental Leaders<br>- Global Social Leaders<br>- Global ESG Governance Leaders | 2011 | Launched in 2011, these indexes are prepared on the basis of the assessments of the Sustainalytics rating agency and select the 300 best stocks for ESG performance among the 1,800 present in the general STOXX® Global index.<br>To be included in the Global ESG Leaders Index, it is necessary to be included in at least one of the 3 specialised indexes (Global Environmental Leaders, Global Social Leaders and Global ESG Governance Leaders).<br>Terna is the only Italian utility company included in all three. |
| VIGEO<br>- Euronext Vigeo Word 120<br>- Euronext Vigeo Europe 120<br>- Euronext Vigeo Eurozone 120 | 2012 | Presented in 2012 by the social, environmental and governance rating agency Vigeo, these indexes are made up of companies listed in the North American, Asian and European markets and included in the STOXX® 1800 benchmark. Vigeo's new ESG indexes are prepared on the basis of a methodology with more than 330 indicators and 38 sustainability criteria. |

2013

Terna
TERNA GROUP

# Stakeholder engagement

Terna sees establishing a relationship of trust with its stakeholders as an important part of its role.
Building a relationship based on mutual trust begins with considering stakeholders' interests and analysing their compatibility with those of the Company, in order to adopt a consistent and transparent approach.
When establishing its Code of Ethics, Terna – with the active participation of its senior executives and management – identified the eight most significant categories of stakeholders in terms of continuity of the relationship and of the importance of the Company's impact on them and vice versa.
For every category of stakeholder, the following table shows the most important commitments expressed in the Code of Ethics and the specific engagement tools, such as monitoring and checking expectations and opinions. The various monitoring tools are used to different extents.
In 2013, as part of its materiality analysis (see page 18), Terna began revising its stakeholder mapping procedures and the related forms of interaction. In the years to come, this will lead to better organised methods for listening to and engaging with stakeholders. A first initiative is described in the "Relevant issues for Terna: the stakeholders' point of view" box on page 54.

| Stakeholder | Commitments | Instruments for monitoring and checking |
|---|---|---|
| SHAREHOLDERS, FINANCIAL ANALYSTS AND LENDERS<br>Shareholders, financial analysts, lenders, banks, creditors, ratings agencies | • Balanced management of financial, security and service-quality objectives.<br>• Creating value for shareholders in the short and long term.<br>• Corporate governance aligned with best practices.<br>• Adopting systems to forestall and control risks.<br>• Listening to shareholders and informing them in a timely and equal manner.<br>• Commitment to avoiding insider trading. | Road shows, dedicated meetings, website and dedicated e-mail.<br>Sustainability rating. |
| EMPLOYEES<br>Employees, directors, collaborators, employee representatives, trade union organisations | • Safeguarding the physical integrity of employees and their personal dignity.<br>• Non-discrimination and equal opportunities.<br>• Investment in professional growth.<br>• Recognition of individual capabilities and merit. | Survey on Organisational Wellness.<br>Focus groups on specific subjects.<br>Consultations, discussions and negotiation with the Trade Unions. |
| SUPPLIERS | • Opportunity to compete on the basis of quality and price.<br>• Transparency and fulfilment of agreements and contractual commitments.<br>• Transparent procurement processes.<br>• Supplier qualification including through quality, environmental, and social certification.<br>• Anti-mafia and anti-money-laundering efforts with suppliers | Procurement portal, direct meetings. |
| GRID USERS, CUSTOMERS AND BUSINESS PARTNERS<br>Private customers, grid users – producers, distributors, traders, interruptible customers – users of the electricity system, grid owners, other grid operators, business partners | • Efficient, quality service aiming at constant improvement.<br>• No arbitrary discrimination among companies.<br>• Confidentiality of information regarding grid users. | Consultation committee on Grid Code, dedicated meetings. "Operator Consulting" section on Terna's website. |
| REGULATORY AUTHORITIES AND INSTITUTIONS, AEEG<br>AEEG – the Italian Electricity and Gas Regulatory Authority, other industry regulatory authorities, government bodies or bodies with policy-making powers, Antitrust bodies, CONSOB, stock exchange entities, strike regulatory commission | • Transparent, complete, reliable information.<br>• Meeting deadlines.<br>• Fair and collaborative approach to facilitate regulation. | Regular meetings.<br>Ongoing relations with the AEEG offices and Committee. |

| Stakeholder | Commitments | Instruments for monitoring and checking |
|---|---|---|
| INSTITUTIONS AND ASSOCIATIONS<br>European Union and international bodies, national institutions and government agencies, civil protection, national security authority and police forces, regions, provinces and autonomous provinces, associations representing economic interests, ETSO, UCTE | • Representing the Company's interests and positions in a transparent, scrupulous and consistent fashion, avoiding collusion.<br>• Ensuring utmost clarity in relations. | Direct involvement in technical committees and governing bodies. |
| MEDIA, FOCUS GROUPS, AND THE SCIENTIFIC COMMUNITY<br>Media, universities and scientific associations, environmentalist associations, consumer associations, opinion makers, focus groups, national and international technical standards bodies, political parties | • Public and uniform dissemination of information.<br>• Excluding exploitation and manipulation of information to the advantage of the Company.<br>• Pursuing areas of cooperation in the interests of both parties, with associations representing stakeholders. | Presenting and distributing the Sustainability Report and the Development Plan. Organising seminars, workshops and targeted surveys.<br>Collaboration and partnership initiatives. |
| SOCIETY AND LOCAL COMMUNITIES<br>National community and country, territory and environment, end users of the electricity service, local authorities directly affected by Terna's work | • Ensuring the security, quality, and cost-effectiveness of the service over time.<br>• Assessing the long-term effects of the Company's choices.<br>• Reducing the environmental impact of company activities.<br>• Advancing dialogue with local institutions to invest in a way that is respectful of the environment, landscape, and local interests.<br>• Supporting social, humanitarian, and cultural initiatives.<br>• Providing evidence of the implementation of environmental and social policy. | Consultation process in planning the electricity grid. Sample population surveys. |

## Shareholders, financial analysts and lenders

The relationship between Terna and its institutional and individual investors is built around transparency and a timely exchange of information. Specifically, the Investor Relations Unit interacts with market operators and the Department of Corporate Affairs with retail shareholders.
Retail investors can contact the Company by phone on (+39) 06-8313.8136 and (+39) 06-8313.8359 and by e-mail at: azionisti.retail@terna.it.
For institutional investors, the contact numbers are: (+39) 06-8313.8106 and (+39) 06-8313.9041 and the e-mail address is investor.relations@terna.it.
To further encourage dialogue with investors, Terna has developed a dedicated "Investor Relations" section on its company homepage www.terna.it, which offers any interested parties **timely updates on the company's economic results and strategic objectives**. The section contains information of an economic-financial nature, and up-to-date data and documents of general interest to shareholders. In addition to the complete documentation produced by the Company also available in an interactive version, web streaming enables visitors to the site to follow the conference calls organised both when the Company's results (quarterly, half-yearly and annual) are published and when significant extraordinary transactions take place. Live participation in these events exceeds fifty connections on average, including analysts who follow Terna's shares and publish studies.
In 2013, retail investors made 20 requests for information via e-mail (compared with 21 in 2012, and 29 in 2011). The requests concerned dividends (policy, advances and rights to receive), and company documentation for general shareholders' meetings.
The Corporate Social Responsibility Unit maintains ongoing relationships with sustainability ratings agencies and, in collaboration with the Investor Relations Unit, with analysts and fund managers, to which it provides the information necessary to assess the company's ESG performance. In 2013, the following organisations requested and obtained information: Carbon Disclosure Project, EIRIS, Financière Responsable, Macif Gestion, RobecoSAM, Sustainalytics, Etica Sgr and Goldman Sachs.

## Employees

In February 2013, the bi-annual survey on the effectiveness of training, involving all managers and staff coordinators, took place in order to obtain summary feedback on the quality of the training provided in 2012. 61% of the managers involved responded (+2% compared to the previous survey).
The questionnaire used was divided into three sections: the first, related to the training attended by the interviewee, the second to the training attended by collaborators, and the third the overall view of the role of training in the company. Compared to the previous survey (performed in 2011 on the training provided in 2010), an increase in positive feedback was recorded for all items and, in particular, 95% judged the training personally received as effective/very effective overall, with 97% saying the same for the training provided to collaborators.

### Relations with Trade Unions

The relationship between Terna and the trade unions at the company level is governed by the "Protocol on the system of industrial Relations", which lays down a system of relations divided into contract negotiation, discussions, consultation, and advance and/or periodic information.
**During the three year period 2011-2013**, negotiations with industry trade unions resulted in the **signing of 41 written agreements**.
In 2013, a key development in industrial relations was the signing, on 18 February, of the renewal of the National Collective Employment Agreement (CCNL) for the electricity sector which had expired on 31 December 2012.
With regard to exercising the right to strike within the electricity industry, on the same date, a further agreement was signed – implementing Law No 146 of 12 June 1990 – which established rules on exercising the right to strike for essential public services, and which was validated by the approved Commission regulating the implementation of the same law.
February 2013 also saw the conclusion, at the company level, of preliminary talks with the Secretariat of National Trade Unions regarding the new organisational and geographical structure of the Terna Rete Italia Group. In subsequent months, the appropriate consultations with Regional Trade Union Secretariats took place in order to examine the effect on staff.
During the latter stages of the year, as part of the Terna Bilateral Commission on Training, the "Multi-skill Training" project was presented. This project aims to support the development of multi-skilled professionals (workers, clerical personnel) with line and station multi-skill expertise, as established by the new Terna Rete Italia Group organisational structure.

## Suppliers

The usual point of contact for Terna and its suppliers is the "**Procurement Portal**", the section of the institutional website where it is possible to learn about tenders, participate in online tenders, and go through the qualification process for inclusion on the Supplier Register.
The Procurement and Contracts Department also maintains direct contact with suppliers to manage contractual relations and improve the Company's knowledge of specific problems with groups of suppliers. To that end, meetings are periodically organised with specialist companies or industrial associations to inform them about any updates to the requirements, or points of attention related to the ethical conduct to be followed in relations with Terna.
**Terna presents and discusses its main investment projects** and relative procurement plans **with the electromechanical companies in the energy industry** (mostly members of Confindustria ANIE). The important action programme requires an even greater effort on the part of suppliers, who are required to act not merely as simple contractors but as real technological partners. Terna plays an active role in key meetings with suppliers such as industry meetings, expos and conferences.
In order to expand its portfolio of suppliers, Terna continuously engages in "**procurement marketing**" by market scouting, benchmarking, and monitoring the performance of suppliers. This involves constant meetings with both Italian and overseas supplier firms.

## Grid users and companies in the electricity sector

Terna maintains relations with grid users and operators of the electricity service using various means including the MyTerna and Gaudì portals and the Consultation Committee described below.

### Consultation Committee

Throughout 2013, Terna continued to promote the involvement of electricity companies, for example via the Grid Users Consultation Committee.
The Committee is the technical consultation body established in accordance with the Prime Minister's Decree of 11 May 2004 which regulates the unified ownership and management of the grid. It is a permanent base for consultation with companies involved in the electricity sector and it includes representatives from the various categories, namely: distributors, producers (from both conventional and renewable sources), large industrial customers, wholesalers, and consumers. The Electricity and Gas Regulatory Authority and the Ministry for Economic Development participate as observers.
The Committee advises on the general criteria for developing the grid and interconnections, and for classifying sensitive information and access to such information. It also defends grid security, puts forward proposal for changes to current regulations and acts as an arbitrator, given that, on the request of the parties, it can facilitate the resolution of any disputes between grid users deriving from the application of the rules of the Grid Code.
During 2013, the Committee was involved in the consultation process and expressed its opinion on the following elements:

- the Terna Development Plan 2013;
- the review of the dispatching rules contained in the Grid Code, in accordance with Resolutions 46/2013/R/EEL and 231/2013/R/EEL, of the Regulatory Authority, which specifically considered the voluntary access mechanism for valuing the primary reserve.

In addition to the issues listed above, on which the Committee was formally called upon to express its opinion, during 2013 Terna provided Committee members with constant information on the progress of the Development Plan for the National Transmission Grid, as well as on new requirements and developments.
Moreover, the Committee have received updates on action taken in order to encourage greater integration of renewable energy plants in the distribution network (distributed generation).
Finally, in the area of European regulation, work continued on reporting the progress of implementing the Grid Codes in relation to ENTSO-E (overall progress made with the Codes with a specific focus on electricity balancing in the Grid Code).

## AEEG – The Electricity and Gas Regulatory Authority

Terna works mainly in a regulated context and the AEEG is the main stakeholder: through tariffs it determines almost all Terna's revenues and, with its measures, it defines the methods and conditions for carrying out the business for which Terna is the licensee.

### Public consultation on the Development Plan promoted by the AEEG

On the basis of Article 36(13) of Italian Legislative Decree 93/11, in 2012 the AEEG specifically intervened for the first time in the assessment procedure of the Transmission Grid Development Plan prepared by Terna, through public consultation. During the consultation process, which involved two presentations by Terna, around 250 points were brought to Terna's attention. The relevant responses were published on the Authority's website in August 2012. Subsequently, in May 2013, the Authority sent the Ministry for Economic Development and Terna their own assessment of the 2012 Development Plan, as well as some recommendations for future plans.
Following the consultation process, during the second part of 2012 and throughout 2013 Terna examined both comments from operators and the Authority's opinion, and provided the Authority with a punctual summary of the progressive evolution of the Development Plan.
Finally, please note that the Authority has not yet begun the public consultation process on the 2013 and 2014 Development Plans sent by Terna on 31 January 2013 and 31 January 2014 respectively.

## S05 National institutions and associations

Terna's work requires the active involvement of, and constant dialogue with, governmental institutions (Prime Minister's Office, Ministry of Economic Development, Ministry of the Environment, Ministry for Cultural Assets and Heritage), Parliament (Chamber and Senate of the Republic), political contacts and national associations. This also requires attendance at hearings, meetings, conferences and forums to promote shared interests. In addition, continual discussion with regional and local authorities is also necessary to work on legislation governing the industry, authorisation procedures, and consultations with local communities.
In 2013, the company was invited, on several occasions, to take part in Parliamentary hearings on important issues relating to Terna's operations.
By way of example, the following parliamentary enquiries were launched, namely:

- the hearing at the Senate Industry Commission (October 2013) on the inquiry into electricity and gas prices as a strategic factor for the growth of the country's production system;
- the Chamber Production Commission hearing (February 2014) on the inquiry on the National Energy Strategy.

The prospect of an ongoing and collaborative dialogue with representatives of the political parties, Government and Members of Parliament has been addressed, aimed at representing Terna's point of view, as a transmission operator, on issues relating to the Italian electricity sector.
Bilateral meetings with the Prime Minister's Office, and with the institutions, on subjects of particular significance to the company and for the development of the national electricity system also intensified. In particular, meetings with the Ministry of Economic Development increased as part of the process of drafting European legislation relating to the industry, promoting the involvement of national institutions in the activities of the Committee of Member States. This related specifically to the issue of implementing the third energy package (e.g. the European Grid Codes).

### Interaction with consumer associations

In 2013, Terna continued work developing and managing a consensus through a new national project, "Local Awareness Campaign TERNA-AA.CC". It began in January in collaboration with some of the 18 consumer associations (Codacons, Adiconsum, Codici, Lega Consumatori, Unc, MDC, Assoutenti, Adoc, Movimento Consumatori) and aimed to share as much as possible with local areas affected by the construction of planned infrastructure, as well as increasing awareness on the usefulness and benefits of the infrastructure proposed by the National Electricity Transmission Network.
It seems appropriate that local activities be accompanied by exchange of information, participation and sharing of local needs, focusing on exploring the costs and benefits of the operation. Consumer associations have a strong regional presence and are well represented at institutions. They may therefore facilitate dialogue with the local administration and with the community.
This project can be divided into two phases:

1. Training phase, for managers of all CNCU Consumer Associations (National Secretariats and Regional Offices).
2. Operational phase, (raising local awareness – carried out on a progressive basis, setting supervision, consolidation and integration objectives for the operation, and synchronising information on the local impact and benefits of the work).

## The Social Action Plan 2013-2014

Terna's multi-stakeholder survey on corporate social commitment carried out from November 2012 to January 2013 (see page 49 of the 2012 Sustainability Report) provided specific suggestions, collected both internally and externally, on the future angle of Group initiatives.
In particular, four key areas were identified (schools, education and research; Italian artistic and cultural heritage; locally relevant environmental and social issues; and access to sustainable energy in the poorer regions of the world) and implemented in the "Social Action Plan 2013-2014".
The Social Action Plan identifies "schools, education and research" as the most important area for Terna's social commitments, given Terna's status, in the eyes of the stakeholders involved in the survey, as a company whose excellence is based on technical skill and, more generally, on knowledge.
The Plan for 2014 then sets the following objectives: organising teaching activities in schools and visits to plants to increase awareness of the electricity system and of Terna; supporting programmes for teaching technical-scientific subjects in schools; and supporting social-support programmes dealing with issues such as school drop-outs. In the second half of 2013, Terna launched a pilot scheme in public preschools in Milan (see box page 127), and strengthened its commitment to a project aimed at discouraging young people from dropping out of school, set up by Intervita Onlus, a charity organisation (see page 126).
The recognition, on the part of Terna's stakeholders, of the Company's usefulness for Italy and its commitment to bringing out the best in the country serves as a guide for its future projects involving safeguarding and restoring Italy's artistic and cultural heritage.
Local environmental and social issues are the third key area for Terna's social action. Terna is involving its employees in the creation of a local awareness network, so as to be able to choose the projects to support at a later date, including through employee volunteer schemes.
The last suggestion emerging from the survey, and the only one on an international scale, regards supporting initiatives for providing access to electricity in the poorer regions of the world. Here, the idea is to sustain one important project at a time, jointly with NGOs and/or business partners, donating corporate assets and employee time. An international project with these aims is due to be launched in the first half of 2014.

## Media, focus groups, and the scientific community

In 2013, Terna's external communication was again assessed using the Demoskopea survey "City Journalists", a reference tool for finding out how effective journalists think companies' communication strategies are and how they judge their relations with press offices.
The 23rd edition of "City Giornalisti" held in 2013 saw Terna's press office climb three positions, reaching third place in the overall classification. It involved 80 financial journalists, 12 directors of various national newspapers and was conducted on a sample of 44 firms.

## Relevant issues for Terna: the stakeholders' point of view

Materiality, or rather the ability to establish and measure the relevance and significance of an issue for the firm or its stakeholders is a crucial topic nowadays for those concerned with corporate social responsibility.
The G4 instructions, the new GRI (Global Reporting Initiative) standard – which comes into effect from 2015 – and that of the IIRC (International Integrated Reporting Council) – the international organisation which, in December 2013, put forward the first framework for the integration of financial and non-financial information in a single report – indicate the growing importance of materiality analyses as the basis of reporting.
Therefore, Terna has decided to launch a detailed materiality analysis based on two categories: "company" and "stakeholder". With regard to the latter, Terna organised a series of multi-stakeholder panels in September, following a preliminary document analysis which identified five relevant issues.
These are: integration of renewable energy sources; acceptance of new infrastructures (and management of the relative environmental impact); health and safety for contract work; development of the grid as part of the Euro-Mediterranean framework; and integrity and transparency. These issues were explored during five animated discussions with reference stakeholders, selected so as to represent a plurality of points of view.
With the support of an external facilitator, and without any Terna representatives being present, the panellists were free to draft a quantitative assessment which focused on their perception of the importance to stakeholders of the issue put forward ("perceived relevance") and of the efforts made by Terna to manage the situation ("perceived management"). Comments, suggestions and criticisms were then provided to add a qualitative component.
This initiative concluded with a final plenary session, presenting the findings of each of the five panels. The Directors at Terna most closely involved with the issues tackled attended this session.

## S01 Society and local communities

### Consultation with local governments

Terna's approach to local areas, which is especially important when new lines must be constructed, consists of a voluntary process of prior engagement with local institutions (regional and local administrations, park authorities, etc.). This process involves sharing the development needs of the National Electricity Transmission Grid (NTG) with local institutions, a willingness to listen to the opinions of stakeholders and seeking a shared solution for locating new infrastructure and adjusting that already in place.
To facilitate acceptance of electricity infrastructure by local communities, Terna, in fact, considers it fundamental to hold discussions with local administrations as early as possible, right from the moment in which the need for a new NTG development project is recognised. In this way, the conditions are created in which to develop and "build" the grid together, thus making it more sustainable and acceptable.
EU19 The voluntary pre-authorisation process is illustrated in detail in the chapter on grid development.
In 2013, a total of 216 meetings were held involving 149 regional and local authorities.
In February 2014, Terna signed an agreement with ANCI, the National Association of Italian Municipalities, of which 7,318 municipalities representing 90% of the population are members, to share the location of electricity works throughout Italy through increased harmonisation between Terna's development projects and the municipalities' town and local planning instruments.

### Managing opposition to building new lines

Terna considers respect for the environment and for the territory an integral part of grid planning and makes every effort to act in agreement with the local institutions. However, new infrastructure-creation projects often provoke adverse reactions attributable to "NIMBY" (Not In My Backyard) syndrome. In these cases, Terna is willing to examine the situation and find alternative solutions, including ones which are technically more complex than those originally identified, provided that they are compatible with the general interest of the electricity service in terms of security, efficiency and cost-effectiveness.

Searching for agreed solutions requires difficult discussions and can be drawn out process. The results are normally positive, but local opposition may persist throughout. Please note the following cases from 2013:

- **"Sorgente – Rizziconi".** In 2011, when the construction sites opened, protests broke out in the Messina area against the new power line under construction, despite the fact that the route was the result of more than two years of technical and environmental studies, and despite consultation with local communities having begun in 2004 and involving over 100 meetings.
- **"Redipuglia – Udine West".** Construction of the line began in October 2013. When the construction sites opened, some parties expressed their disapproval and some controversy arose during the authorisation process. These, however, did become less intense.
- **"Rationalisation in the Middle Piave Valley".** The project was authorised in February 2011 and, today, is in the environmental-impact assessment phase. Some municipalities including Belluno and Sorvenze are opposed to the route proposed. Terna has informally put forward an alternative which is currently under consideration.
- **"Rationalisation in Arezzo".** During the authorisation phase, when Terna presented additions to the documentation, a people's committee voiced their opposition to the works.
- **"Montesano della Marcellana Station".** The station, authorised in 2010, is under construction. When the construction site opened, strong opposition broke out among the local population.

## Inquiries, litigation and penalties

### Preliminary inquiries of the Italian Electricity and Gas Regulatory Authority

In 2013, the Electricity and Gas Regulatory Authority launched **two fact-finding inquiries** of potential interest to Terna.

*Resolution No. 450/2013/E/eel of 11 October 2013 – Determination of electricity price trends in Sicily during the maintenance period on the Sicily – Mainland interconnection in October 2013.*

With this provision, the authority extended the fact-finding investigation launched in 2012 (resolution 401/2012/R/eel) on critical issues in the management of the electricity system to include Sardinia as well as Sicily. This has been done in order to acquire further information on management of the Sicilian electrical system and the conduct of operators. The deadline for conclusion of both investigations has been extended to 31 March 2014.

*Resolution 475/2013/E/EEL of 31 October 2013 – Launch of a fact-finding inquiry into the provision of metering services.*

After certain critical issues were brought to light relating to the provision of metering services, with particular reference to distributed generation facilities connected to the distribution grid, the Authority has launched a fact-finding inquiry in order to obtain data on the following:

- the measurement of energy produced and energy fed into the grid by distributed generation plants;
- the measurement of energy consumed from the transmission and distribution grid by final end users and distributing companies.

The inquiry is set to reach its conclusion in 180 days.

### Environmental litigation

Environmental litigation originates from the installation and operation of electricity plants and primarily involves damages which could be derived from exposure to electrical and magnetic fields generated by power lines. The Parent Company and the subsidiary Terna Rete Italia S.r.l. are involved in various civil and administrative lawsuits requesting the transfer or change in operations of allegedly harmful power lines, despite their being installed in full compliance with the applicable legislation (Italian Law No. 36 of 22 February 2001 and the Prime Minister's Decree of 8 July 2003). Only in a very small number of cases were compensation claims made for harm to health caused by electromagnetic fields.

With regard to rulings made in this area, please note that only in a few cases have judgements been issued against the Parent Company. These have been appealed and the appeals are still pending, although adverse rulings are considered unlikely.

### Litigation regarding concessionary activities

Given that it has been the licensee for transmission and dispatching since 1 November 2005, the Parent Company has been involved in some legal cases, mainly appealing against measures by the AEEG, MED and/or Terna itself, relating to such activities. Only in those cases in which the claimants not only claim defects in the measures appealed against, but also allege that Terna violated the rules established by such authorities has the Company appeared in court. Within the scope of this litigation, although a number of cases have seen AEEG Resolutions annulled in first and/or second level courts, together with the consequent measures adopted by Terna, it is felt that there is little risk of adverse outcomes for Terna, since the matters generally regard pass-through items. This position is supported by the information provided by the external legal counsel representing the Company in the cases involved. As the licensee for transmission and dispatching, the measures taken by the Parent Company Terna when applying the Resolutions adopted by the Authority are sometimes challenged. In appropriate circumstances, the financial costs of such challenges may be borne by the Authority.

### Other litigation

In addition, a number of cases relating to urban planning and environmental issues connected with constructing and operating certain transmission lines are pending. The possible effects of any unfavourable outcome to these cases are unpredictable and, accordingly, have not been considered when determining the "Provisions for disputes and other contingencies".

In a limited number of cases, the possibility of an adverse outcome cannot be entirely ruled out. The possible consequences could, in addition to the award of damages, include the costs of modifying lines and their temporary suspension. In any case, any unfavourable outcome would not jeopardise line operations.

Examination of the above litigation, having regard for the information provided by the external legal consultants, suggests that the likelihood of adverse outcomes is remote.

### Penalties

EU25 S04 S07 S08

During the period 2011-2013:

- there were no definitive criminal convictions or plea bargaining for injuries to third parties caused by Terna's assets;
- as of 31 December 2013 there was no pending litigation nor had any legal proceedings been conclusive regarding corruption, unfair competition, anti-trust, or monopolistic practices. Regarding these same matters, no definitive administrative or judicial, monetary or non-monetary penalties were imposed for non-observance of laws or regulations, including environmental ones, that imposed an obligation on Terna to "do/not do" (e.g. prohibitions) or criminally convicted its employees.

EN28 In the three-year period 2011-2013, no significant penalties were imposed regarding the environment or, more generally, compliance with the law.

PR9 On the basis of AEEG Resolution VIS 16/11, during financial year 2011, Terna S.p.A. paid a fine of 420,000 Euro imposed at the end of the inquiry proceedings launched with Resolution VIS 171/09, for breaching the AEEG's orders on the subject of provision of electricity transmission, dispatching and metering services. In particular, the dispute related to anomalies found in determining electricity supplies withdrawn from the NTG and not correctly attributed to the users of the dispatch.

2013

# Responsibility for the electricity service

Terna
TERNA GROUP

# Our approach

Terna's core business is the provision of electricity transmission and dispatching services in Italy. These are services are in the general interest of society and performed, as in other European countries, on the basis of a government concession which assigns Terna the role of National Electricity Transmission System Operator (TSO). The service performed by Terna is indispensable for the operation of the entire electricity system and for ensuring electricity for everyone.

**The role that Terna plays within the electricity system renders it ethically responsible for the service provided to the whole of Italy.** This responsibility regards both everyday operation of the transmission grid and medium and long term considerations.
The grid is Terna's asset, however it is also essential infrastructure for the Italian nation. Its management, maintenance and development must ensure efficiency and security in the immediate future, as well as for future generations.

**Our managerial objectives** are therefore **connected** first and foremost **to compliance with regulations and meeting the specific targets set out by the industry regulatory authority** (the AEEG – the Electricity and Gas Regulatory Authority). Targets of particular relevance include:

- continuity of performance measurements. Terna's performance in this area in recent years has been in line with the targets set;
- security and grid-development goals **set out in**:
  1. **the Security Plan for the Electricity System** in order to plan the investments needed to improve elements which have an impact on the safety of the Electricity system;
  2. **the Development Plan**, approved every year by the Ministry for Economic Development, which sets forth the construction of new electricity lines and stations necessary to ensure an efficient and cost-effective system. Terna also selects development projects on the condition that the overall financial benefits to the electricity system outweigh the costs.

As the operator of the electricity system, Terna is also responsible for compiling Italian national statistics for the electricity industry. This entails knowledge of confidential sector-operator data, and especially those pertaining to electricity producers. Terna protects this confidential data using the best practices possible to avoid information in its possession being accessed or communicated to unauthorised third parties. Given the nature of the service, Terna is not affected by problems of product responsibility typical of producers of goods or services for end customers.

# Energy Context

## Demand for electrical energy in Italy

In 2013, for the second year running, the demand for electrical energy in Italy fell. Over 2013, the demand for electrical energy in Italy was 317,144 million kWh (provisional data), reporting a fall of 3.4% in comparison with 2012, which ended with a decline of 1.9%. This year-on-year decline is the largest after that of 2009 (when a decrease of 5.7% was reported). When comparing 2013 results with same day and temperature results from the previous year, the aforementioned decline is 3.1%. Indeed, during the summer months of 2013, the average temperature was around half a degree lower. Moreover, there was one less day in 2013 (2012 was a leap-year) and the extra day in 2012 was a public holiday.

ELECTRICITY BALANCE SHEET FOR ITALY

| GWh | 2013* | 2012 | 2011 |
|---|---|---|---|
| Net production | 277,380 | 287,805 | 291,446 |
| From foreign suppliers | 44,331 | 45,408 | 47,520 |
| Sold to foreign clients | 2,178 | 2,304 | 1,787 |
| For pumping | 2,389 | 2,689 | 2,539 |
| **Total demand in Italy** | **317,144** | **328,220** | **334,640** |

** provisional data*

## Production of electrical energy

In 2013, national net production was 277,380 million kWh (provisional data), showing a fall of 3.6% from the previous year. The same production, divided according to source, shows that, in comparison with 2012, there was a fall in the production of thermal energy and an increase in production by renewable sources[4] including wind, solar and geothermal. There was a sharp increase in hydroelectric production (please see the following table).

PRODUCTION OF ELECTRICAL ENERGY IN ITALY

| GWh | 2013* | 2012 | 2011 |
|---|---|---|---|
| Net hydro production | 52,515 | 43,256 | 47,202 |
| Net thermal production | 182,528 | 207,327 | 218,486 |
| Net wind, photovoltaic and geothermal production | 42,337 | 37,222 | 25,758 |
| **Total net production** | **277,380** | **287,805** | **291,446** |

** provisional data*

# The security of the electricity system

Ensuring the security of the Italian electricity system which is interconnected with the European grid is a difficult task, which Terna performs through a series of actions based on a scrupulous assessment of operational risks.
**The objective is to maintain the risk of service outage within pre-established limits and mitigate the negative consequences of such events as much as possible, should they occur.**
For Terna, preventing and containing operational risk means monitoring and protecting the physical integrity of its plants, preparing defence plans to limit the impact of outages, preventative planning of operations, improving the capacity for real-time control, training its operators, developing new methods in support of the process of planning and control, increasing the reliability of the supporting resources, and coordinating the management of the system interconnected with the TSOs of neighbouring countries. EU6 EU21
In this framework, the main investment projects are set out in the **Security Plan for the Electricity System**, prepared by Terna and approved by the Ministry of Economic Development. The Plan is drawn up every year for a four-year planning period. With each edition of the plan the approach to the security of the electricity system has become increasingly complex.
The current structure of the Security Plan provides for eight subject areas relating to the activities of planning, control, regulation and protection, restarting and monitoring of the electricity system, as well as an area devoted to the safe and optimal management of renewable resources.
The projects included in the plan are concerned both with short-to-medium term objectives aimed at boosting the security of the electricity system, beginning in the next few years, and with medium-to-long term objectives primarily related to research and analysis on new operating scenarios for the electricity system, followed by experimentation and the development of innovative solutions.
Those short-to-medium term projects which aim to secure distributed generation from non-programmable renewable energy sources (NPRS) are particularly significant, for example the implementation and use of non-conventional systems to regulate frequency on the major islands (Sardinia and Sicily) based on electrochemical storage systems (see also “Planning and development of storage systems” on page 73).
The 2013 Security Plan also introduces a new initiative which aims to install appropriate equipment for regulating grid voltage in western Sicily, increasing the stability of the island’s electrical system.
In 2013, the investments of the Security Plan totalled 76 million Euro. The planning period from 2013-2016 sets out total investments of around 320 million Euro.

4 Renewable production can be defined as total production from wind, solar, geothermoelectric, biomass (included in the table under thermal production) and hydro power net of pumping plant production.

## EU21 Information security

Terna holds and stores large quantities of business-sensitive information in its database, including data on the users of transmission and dispatching services. In particular, it holds information on electricity producers and traders (for example, data on plant specifications, with the related production capacity and injection plans presented to the Power Exchange) and information derived from operators in order to compile industry statistics (this is carried out by Terna as part of the National Statistics System). This also includes information made available by the Electricity and Gas Regulatory Authority for the purposes of monitoring the Electricity Market (as set out by Resolution No 115/08 of the AEEG).
Given its respective value to the firm and/or commercial value, this information is classified and managed appropriately in order to ensure the relevant protection measures are in place.
In 2013, Terna developed initiatives and projects which aim to:

- defend the boundaries of the company network and its critical areas;
- research a suitable "intrinsic" security position for any new system, service or application;
- develop and monitor the effectiveness of maintenance procedures for security systems in operation;
- research compliance relative to cyber crime and related issues.

Particular attention was given to securing the network, which is a strategic asset playing a key dual role, providing a vehicle for accessing company IT resources while simultaneously protecting such resources.
As a result of the trend of threats towards industrial control and the consequent need for strategic reinforcements (which is promoted by the ENTSO-E), there was an acceleration of the initiatives to review the architecture of the industrial domain in 2013, in order to increase the degree of physical-logical segregation as a means of countering intrusion or contamination by computer viruses or other attacks.
With regard to security checks, the first target for 2013 was to automate activity as much as possible and to reduce the time needed to check quantitative/ qualitative information on the state of individual assets, which in turn is used to produce overall assessments of "global" security.
Furthermore, 2013 also saw the implementation of periodic external penetration tests on Group websites in order to check their degree of resistance to potential cyber attacks, particularly for areas of the site allocated to specific categories of stakeholders (suppliers, operators, producers, etc.).
In the latter part of the year, Terna was an active participant in a national simulation of a complex cyber attack. This simulation included both public and private bodies and tested cooperation and collective action capabilities. The exercise, which was named CYBIT 2013, was prepared and coordinated by a technical committee comprised of institutional bodies of Ministries, ISCOM, the Italian Digital Agency and others. It consisted of a scenario in which there was a credible and sustainable organised attack, along with the appropriate combined and coordinated counter and defence action.

PR8 In the field of personal data protection, as in previous years, no complaints were received in 2013 regarding breaches of privacy or illicit use by unauthorised users of personal data entrusted to Terna, neither via the specific mailbox for such notifications (privacy@terna.it) nor via any other reporting or survey means.

## EU28 Service continuity and quality

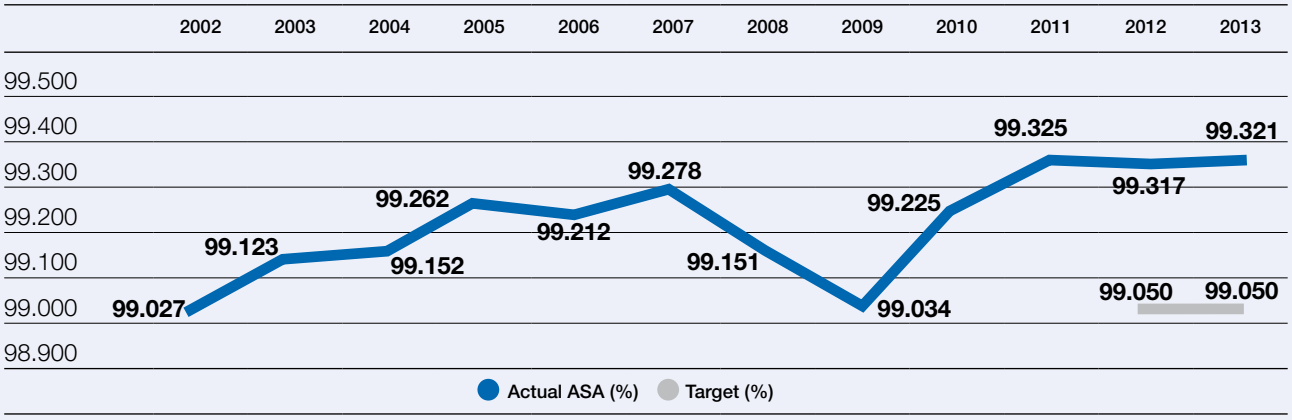
EU29

Continuity is the most important measure of the performance of the electricity service. Each stage of the electricity system – generation, transmission, and distribution – contributes to the final result: ensuring the availability of electricity for society, with outages below pre-set thresholds and with appropriate standards of technical quality.
Terna monitors the quality of the service provided using different indexes, and identifies annual targets for improvement of its internal procedures. The indexes below, where not otherwise specified, are defined by AEEG (Resolution 250/04) and by the Terna Grid Code.
The change in the indexes over time does not reveal significant trends. Each index moves within a very small range in ratio to the overall service measured. In addition, among the causes of change are both external factors, such as weather conditions, and events (for example faults) attributable to management of the NTG. Analysis of the latter non does not show systematic trends.

## AVAILABILITY INDICATOR

### Average System Availability (ASA)

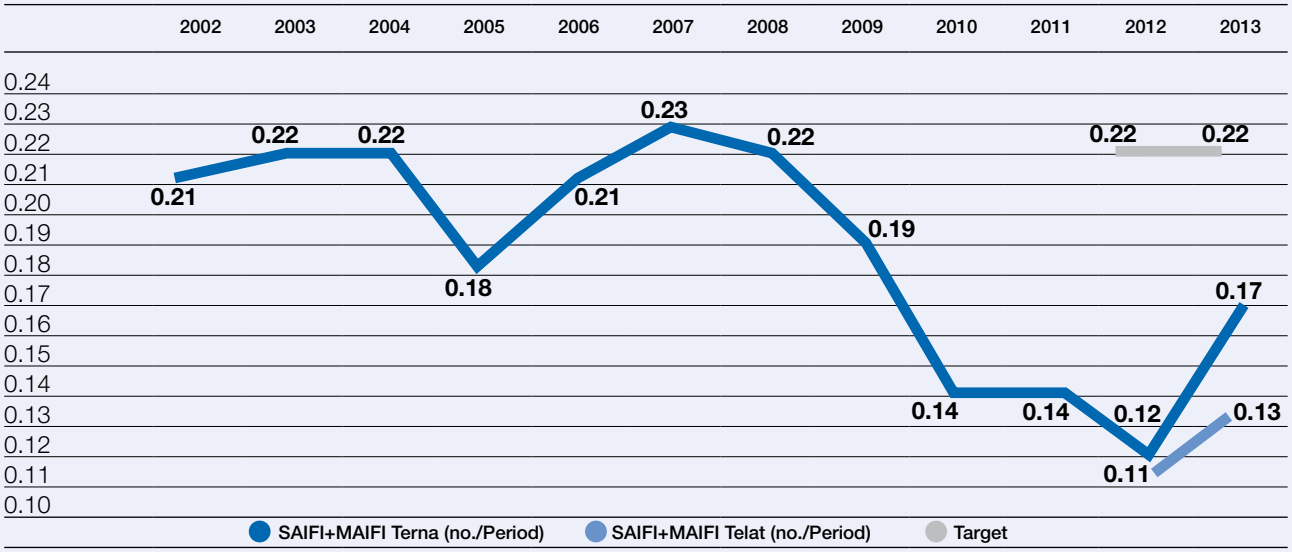
Average availability of the electricity grid components for use in a given period.
This index can be expressed in terms of specific categories (for example, by voltage level), grid areas, or – as in this case – the entire National Transmission Grid.
The higher the level of the indicator, the better the service performance.
Below is a graph showing the trend of the ASA index from 2002 to 2013[5].




## CONTINUITY INDICATOR

### Short Average Interruption Frequency Index + Medium Average Interruption Frequency Index (SAIFI+MAIFI)

This interruption frequency index is calculated as the ratio between the number of customers involved in short (less than 3 minutes) and long (more than 3 minutes) interruptions, and the number of users of the National Transmission Grid.
The lower the level of the indicator, the better the service performance.
Performance in 2013 in relation to the Terna NTG exceeded the target set. Since 2012, the indicator has included the Telat NTG.

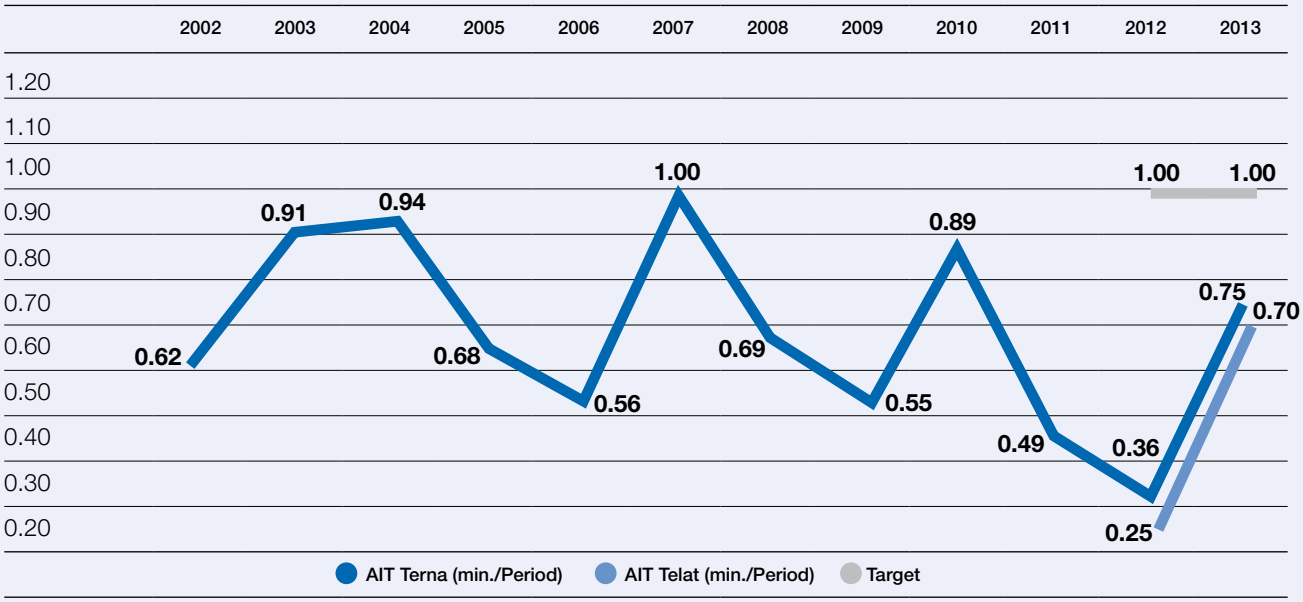



5 As at the reporting date, the 2013 data for the ASA index is provisional.

## SYSTEM CONTINUITY INDICATOR

### Average Interruption Time (AIT)

This is a internal indicator which measures the average interruption time of the electricity system (NTG) in a year, calculated as the ratio between the energy not supplied in a certain period (ENS value) and the average power consumed by the NTG in the period considered. The figure is rounded to two decimal places.
The lower the level of the indicator, the better the service performance.
Performance in 2013 in relation to the Terna NTG exceeded the target set. Since 2012, the indicator has included the Telat NTG.

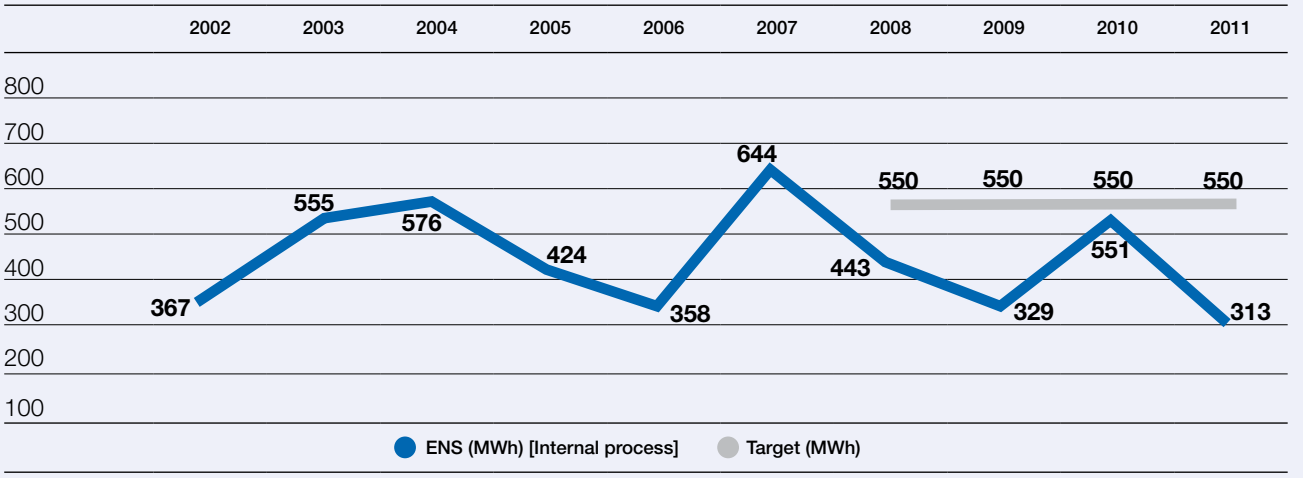



## SERVICE CONTINUITY INDICATORS

Service continuity indicators measure the energy not supplied to users of the grid following certain events, according to criteria defined and calculated by the AEEG.
The lower the indicator, the better the service performance. The following shows the changes in these indicators since they were introduced in 2011.

### Energy Not Supplied (ENS)

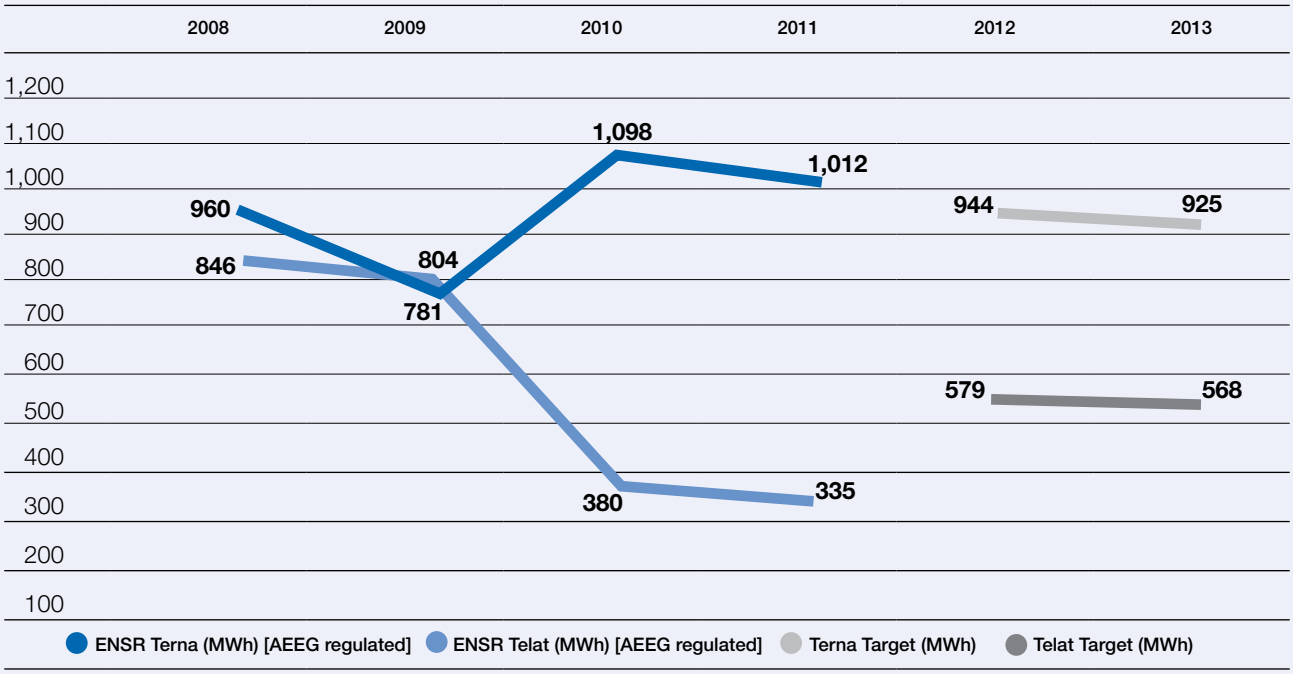
The energy not supplied (ENS) indicator shows the energy not supplied to users connected to the NTG following events which affect the NTG, net of the amount attributable to relevant incidents.



### SERVICE CONTINUITY INDICATORS

#### Regulated Energy Not Supplied (RENS)

The AEEG regulated the quality of the service provided by Terna using an incentive/penalty mechanism set out in Resolution AEEG 197/11. It is applicable to the regulatory period 2012-2015 and relates to the Regulated Energy Not Supplied (RENS) index referring to the Terna S.p.A. grid (hereinafter the "Terna Grid") and the Telat S.r.l. grid (hereinafter also the "Telat Grid").
The targets for 2012-2015 have been set as an average of the RENS 2008-2011 indicator, referred to in the aforementioned resolution, and require a 2% improvement in performance year on year.




**The final evaluation of the following continuity indicators for 2012 and 2013 by the AEEG was not available at the time this report was published.**

# Grid development

The transmission grid must gradually evolve and expand in accordance with developments in the generation and consumption of electricity. Both the supply and demand of electricity grow at different rates in different areas of Italy. The combination of these elements changes the flows of electricity in the system, causing congestion in the existing grid. To tackle these issues, Terna prepares annual **grid development investment programmes**, so as to stay up to date with the evolution of production capacity and consumption, and to increase its efficiency and security. The development work that Terna plans and carries out also has positive repercussions on society; in fact, the assumption underlying its implementation is that the collective financial benefit that this work generates outweighs its cost.
Every year, Terna prepares a **Transmission Grid Development Plan** containing the **national transmission grid development projects** and the progress made on development works planned in previous years.
The 2014 Development Plan is concerned with the transmission grid development investments for 2014-2023; it describes the theoretical framework, the objectives and the criteria used to set out the planning process for the transmission grid, the new development needs identified in 2013, priorities for action and the expected results of the Plan. It is accompanied by a closer examination of analyses carried out on the economic sustainability of the main development plans.
Each Development Plan goes through a structured process; it is assessed and approved by the Ministry for Economic Development, and subject to public consultation (pursuant to Article 36.13 of Legislative Decree 93/11) by the Electricity and Gas Regulatory Authority and to assessment by the Grid User's Consultation Committee.
Furthermore, in accordance with Legislative Decree 152/06 and subsequent amendments, the plan is also subject to the Strategic Environmental Assessment (SEA)[6] process carried out by the Ministry for Environment, Land and Sea in collaboration with the Ministry for Cultural Heritage.

6 It is also potentially subject to screening to check whether it should undergo SEA pursuant to Legislative Decree No 1 of 24 January 2012.

## Main grid development work in progress

Each year, grid development work takes the shape of numerous projects at different stages of the implementation cycle.

### Completed work

In 2013, Terna increased its transformation capacity by about 2,000 MVA of power and put around 100 km of new High and Very-High Voltage lines into operation. Among the works completed, the projects of primary interest include: new 220 kV underground power lines from “Baggio – Ricevitrice West” and “Stura – Turin Centre” to improve service safety in the Milan and Turin metropolitan areas; removal of the transport restrictions on the 380 kV grid interconnection with France; rationalisation of the 132 kV grid north of Trieste; the 132 kV “Cerreto Castello – Biella Est” power line and the 380 kV “Feroleto – Maida” power line to improve the safety conditions of the Calabria grid. With regard to power plants which feed in and use production from renewable sources in the south of Italy, two important 380 kV and 150 kV stations have been completed. Upgrades have also been made to extensive 150 kV portions of the grid such as the completion of new transformer stations in Aliano, Erchie and Manfrediona and the 150 kV switching station in Stornara and their respective overhead and underground connection cables. Two reactors have been installed at the power stations in Castelluccia and Marginone, and various underground cables have been laid close to Lacchiarella and in Tavarnuzze and in Sicily (“Sorgente – Duferdofin”).

### Progress on construction sites

The major works still in progress in 2013 aim to reduce grid congestion, connect new power plants (particularly those based on renewable sources) and to make national transmission more reliable with a greater emphasis on the environment and safety. The 85 km, 380 kV “Foggia – Benevento II” line and the 380 kV “Gissi – Villanova” line (the first of the sections needed to double the Adriatic backbone to 380 kV) represent a step in this direction.
Work on the 380 kV double three-phase power line between “Trino and Lacchiarella”, which measures more than 100 km in length, is nearing completion, while work on the new 380 kV “Sorgente – Rizziconi” underground cable connection is ongoing.
As part of the wider “Udine West – Redipuglia” planned project, construction sites have opened at the Udine South power station.

### Authorised work and authorisation procedures in progress

In 2013, authorisation procedures were initiated for projects relating to: the 380 kV “Cassano – Chiari” power line; the 220/132 kV Monte di Malo transformer station; the 132 Kv “Magliano A. – Fossano” power line; restructuring the 380 kV and 132 kV grid in Lucca and Vaiano; the 150 kV connection cables between the 380/150 kV stations in Tuscania and Rotello in order to feed in production from renewable sources; the 150 kV “Cappuccini – Camerino” power line and finally the 150 kV “S. Teresa – Tempio – Buddusò” line to improve the mesh structure of the 150 kV grid in Sardinia.
Following an approach based on the utmost transparency towards its stakeholders, the Company has developed a new web platform, which, since March 2011, has made it possible to visualise up-to-date online information on the progress made on the projects included in the Development Plan. Please see:
www.terna.it/default/Home/SISTEMA_ELETTRICO/CantieriTernaPerItalia.aspx.


Figure 1 - Main Development Plan projects which have been authorised or are in the authorisation process.

* Last December, the Council of State confirmed the annulment of the authorisation order for implementation of the NTG works entitled "Dolo – Camin" (380 kV rationalisation between Venice and Padua). Therefore, during 2013, activities were completed on making safe and conserving the works already done, and a new study was launched on rearranging the grid so as to re-propose an authorisation process. At present, the date on which the new authorisation will be obtained is unknown, and no impact is foreseeable, in terms of times and costs, on implementing the project.

## Projects set out in the Development Plan for use of renewable energy systems

Implementing Directive 2009/28/EC and the National Action Plan (NAP) prepared by the Ministry of Economic Development, Terna included a specific section in the National Development Plan which defines the action needed for full use of the energy deriving from the production of renewable source systems.
The grid analyses carried out in order to facilitate the use and development of production from renewable sources have enabled us to identify action to be taken both on the primary 380-220 kV transmission grid, and on the 150-132 kV High-Voltage grid.


Figure 2 - Main action on the 380 kV grid needed to make full use of energy produced by renewable source systems

## S01 A responsible approach to grid development: consultation

S010 EC8 EN26 EU19

Since 2002, Terna has utilised a new framework for creating infrastructure in Italy, by choosing to **voluntarily bring discussions with local communities forward to the project planning stage** (power lines and electricity stations) within its Development Plan. This improves the quality of relations with public authorities at various levels compared with previous interaction, when the company merely complied with legal requirements which stipulated that discussions with local communities need only begin when the planning of the infrastructure was already well-defined, often leading to strong opposition from local institutions and residents. On the contrary, Terna's new approach involves regional authorities, sharing grid development needs and working alongside Terna to find sustainable solutions which accommodate those needs.

The aim of this method is to achieve **optimal localisation of the new installations**. Terna and the public authorities find shared solutions based on "ERPA criteria" used to characterise the area and ratified in specific agreements. Terna therefore has initiated a voluntary approach which aims to integrate environmental and landscape considerations into the planning process, through constant discussion with local stakeholders, preceding integration which would subsequently be outlined by the Strategic Environmental Assessment (SEA).

The SEA, at the time the subject of an EC Directive (2001/42/EC), was to be transposed into Italian law only many years later (in 2007 with Italian Legislative Decree 152/2006) and with much less detailed implications at the level of relations with local institutions.

From 2002, Terna has signed Protocols of Understanding and Planning Agreements in 18 Regions and in the Autonomous Province of Trento in order to formalise reciprocal commitments as part of a transparent, inclusive planning process.

Further information on SEA is available in the "Electricity System" section of the website:
www.terna.it/default/home_en/electric_system/sea.aspx which can also be accessed from the dedicated map portal ("SEA Portal").

### Area criteria

During consultation with local institutions, agreeing on **location criteria** is one of the most effective instruments for selecting alternatives with least impact. These criteria are used to determine the greater or lesser degree of suitability of an area to host electrical infrastructure.
As part of the National SEA Committee, Terna and regional administrations agreed on a system of criteria **(ERPA)** based on four classes:

- **Exclusion**: areas in which all construction is excluded. Currently, the exclusion criterion includes areas recognised by law as areas of absolute exclusion (such as airports and military zones) and areas which are not directly excluded by law but which are constrained by a priori agreements between Terna and the entities involved.
- **Repulsion**: areas that can be considered only in the absence of more environmentally compatible alternatives.
- **Problematic**: areas in which passing is problematic for an objective reason associated with specific features of the area and documented by the authorities involved, which therefore require further analysis.
- **Attraction**: areas with good landscape compatibility and areas that already host line infrastructure such as energy corridors, in which it would be more sustainable to position a new line with respect to new areas that do not have any line infrastructure.

The support of GIS (Geographic Information System) technology is fundamental when searching for sustainable locations for NTG development projects. This technology allows comprehensive consideration of all information relating to the different types of land use and protection obligations (territorial, naturalistic, cultural, landscape, etc.), in order identify possible locations which are the most compatible with the area concerned.

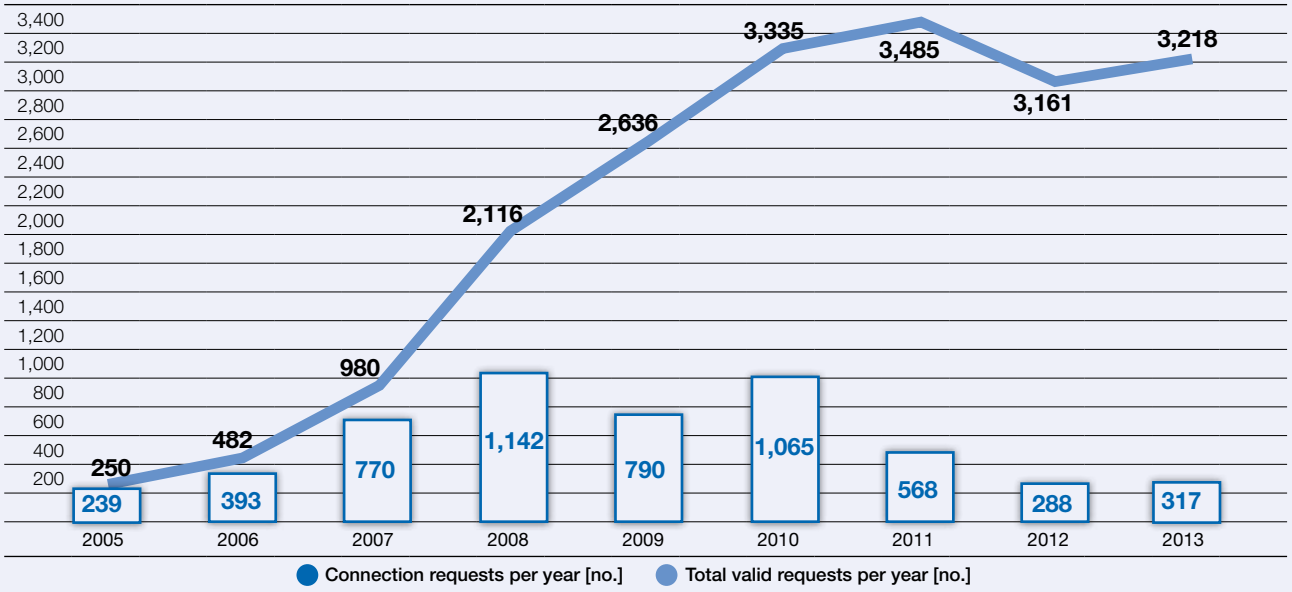
## Connecting new plants

Terna “has an obligation to connect all potential users that request connection to the National Transmission Grid (NGT)” and provides, as stipulated by the Grid Code and by provisions on the matter issued by the Electricity and Gas Regulatory Authority, connection estimates to the applicant, which include the grid works necessary to feed into and withdraw from the system the electrical energy produced/collected by the power plant.
The NTG connection procedure begins with the presentation of a connection request to Terna and concludes when the power plant enters into service. There are four key stages: a preliminary stage concerned with developing the connection plans; a planning stage during which a project of works on the NTG is drafted and submitted to Terna for approval; an authorisation stage in which the project is submitted to the relevant authority; and an execution stage preceded by contractual arrangements between Terna and the proponent regarding the construction of NTG facilities.
Although, in recent years, there has been a steady decline in the number of connection requests, owing mainly to changes in the incentive scheme for the production of energy from renewable sources and the abandonment of some initiatives for non-compliance by advocates of regulatory compliance, it should be noted that:

- there was a slight upward trend in connection requests in 2013 in comparison with 2012;
- with regard to the connection process, there has been a significant upward trend in initiatives in the execution phase in comparison with 2012 (particularly for contractor plants in incentives tenders);
- several plants owned by distribution companies, which are connected to the NTG, have been authorised. These plants are examples of infrastructure works included in an action programme involving several bodies, which aims to bring forward connection requests from power plants run on renewable energy sources and, more generally, to ensure a well-managed, sustainable development of renewable energy across the country;
- 22 generation plants became operative in 2013, for a total power of 380 MW.

It has been confirmed that, in 2013, there were more requests for the connection of renewable energy plants in Southern Italy and the Islands, which are more favourable in terms of the availability of primary sources. Throughout the whole of Italy, there has been a significant reduction in connection requests from solar sources.
As regards generation from conventional sources, there are a number of plants which, despite having obtained building permits over the past years (for a total of about 6,500 MW nationally), have not yet opened the construction sites on account of the current economic situation which has led to a review of the sustainability of the planned works.

The graph below shows the cumulative curve of valid connection requests made to Terna (10 MW or more) since 2005:




## EU6 Plant maintenance

Plant maintenance is essential for ensuring service quality and continuity. To ensure that plants can be identified immediately and reached as quickly as possible, especially in the event of malfunctions, Terna's workers use a hand-held device that incorporates a navigation system showing all plants, allowing them to be identified.
These were the main actions performed in 2013 with regard to electric stations and lines:
**Plant monitoring and inspection:** in addition to the checks prescribed by law, the following checks were carried out:

- 24,400 periodical technical and surveillance checks on stations at different voltage levels;
- Inspections with visual checks on around 105,300 km of lines, approximately 24,700 km of which were carried out by helicopter (visual+ infra-red), with a total average frequency of a little under two inspections per year for each power line;
- 13,200 instrumental checks, using thermal cameras to identify hot spots, and DayCor UV cameras to pinpoint the corona effect on insulators and conductors, also climbing pylons with LLW (live-line working) techniques;
- Power line inspections by helicopter: After concluding the LIDAR (Laser Imaging Detection and Ranging) project and achieving the aim of creating a geo-referential platform of the National Transmission Grid, Terna started large-scale experimentation of helicopter inspections; Terna personnel thus continue to monitor the appearance and functioning of the High-Voltage overhead lines using helicopters, in order to improve diagnostics and to make checks objective by registering the results of the instrument surveys, in line with the best practices of the leading European Transmission System Operators.

**Ordinary Maintenance:** Terna identifies the work to be done on the basis of signs of deterioration signalled by the integrated remote-management system, online sensors, and the results of the plant monitoring process. Since 2005, it has made use of an expert system to support line and station maintenance work called MBI (Maintenance and Business Intelligence) which enables the optimisation of maintenance work.

EN12 **Controlling Vegetation:** for correct operation of the lines, continual monitoring is necessary to assess the growth of vegetation and prevent it from getting too close to the energy conductors and causing possible short circuits and line interruption. In 2013, vegetation was cut along 14,700 km of power lines.
**Live-line working (LLW):** approximately 1,700 monitoring inspections and 1,500 maintenance jobs were performed on live wires.
This work is performed with the line in operation and increases the availability of facilities, contributing to improving service quality and continuity.
**Special Maintenance:** in 2013, Terna reconstructed 10 km of overhead lines and 13 km of underground cables, and replaced approximately 3,000 km of energy and guard wires.

# Terna and the ENTSO-E: the ten year development plan for the European Network

EU23


Terna is a member of the ENTSO-E, the European Network of Transmission System Operators, which represents 41 TSOs belonging to 34 countries, including the countries of South-East Europe (excluding Albania and Kosovo).
Since 3 March 2011, the ENTSO-E, with head office in Brussels, under the terms of the EU's "Third Energy Package" has been the official body for cooperation among grid operators at the EU level. ENTSO-E's work is carried out in close coordination with the European Commission and the Agency for the Cooperation of Energy Regulators (ACER).

## European Network Codes

The ENTSO-E has the task of preparing European Network Codes which refer to grid connection (generators, distributors and end users), the market, and the operation of the electricity system. Once they have been finalised (including the consultation process with the reference stakeholders), they will be adopted by the European Commission, becoming supra-national, and binding legislative acts which shall take precedence over national codes in cross-border issues.
In 2011, the European Commission, the ENTSO-E and the ACER established a three-year work programme which provides for the composition of twelve European Network Codes for the electricity industry and which takes into account the political conclusions of the European Council of 4 February 2011, which fixed 2014 as the term for completing the integration of the national and regional electricity markets.
In order to achieve this objective for 2014, the ENTSO-E is working on composing ten Network Codes. Two of the connection codes, one market code and three transmission grid operating codes, are currently being considered by EU Member States for final approval via the comitology process. The remaining four Codes will be presented to the European Commission by the end of 2014.

## Market transparency and integrity

The ENTSO-E contributes to energy market transparency by establishing a centralised platform for the publication of privileged data and information. In June 2013, the European Commission adopted Regulation 543/2013 on transparency and the ENTSO-E is correspondingly constructing a new European central platform which will publish (as set out in the Regulation) the data of the 41 European grid operators.
Moreover, in accordance with EU Regulation 1227/2009 on integrity and transparency in the electricity market, ENTSO-E is collaborating with ACER in order to construct a European monitoring platform ARIS (ACER REMIT Information System) which will be used to identify any potential manipulation of the electricity markets.

**Ten-Year European Network Development Plan**
The ENTSO-E prepares the Ten-Year European Network Development Plan (TYNDP), starting from the national investment plans, and taking into account EU guidelines on the trans-European energy network. In addition, the TYNDP identifies the need to develop cross-border capacity and any possible obstacles such as those deriving from authorisation procedures.
The plan is published every two years and together with the other TSOs, Terna is already working on the next edition which will be issued this year. The new Plan will be made up of six regional investment plans, the Development Plan for the European grid, and the report on the forecast scenarios and adequacy of the European electricity system. In addition, this edition will, for the first time, feature forecasts on the state of the grid in 2030. This looking ahead to 2030 represents an intermediate step in the modular development of the "Electricity Highways" for 2050, one of the objectives of the European Commission's "Energy Roadmap 2050", in order to complete decarbonisation of the European electricity system by that date.

**European research plans**
The mandates assigned to the ENTSO-E by the Third Energy Package include the publication of European Research and Development Plans regarding the electricity transmission industry. In 2012, the ENTSO-E then published a Ten-Year 2013-2022 Roadmap, which identifies technological gaps which need to be addressed in order to achieve the 20-20-20 community objectives set in 2009. The ENTSO-E updates the Roadmap Implementation Plan which defines the priority R&D themes which the European transmission system operators must begin working on in the forthcoming three-year period.

## EU8 Technology and Innovation

When introducing technological and plant solutions, new instruments and methods aimed at improving the reliability of power plants and, in turn, service quality, Terna mainly uses in-house technicians who base their work on carefully monitoring and analysing the performance of plants and equipment. Terna also makes use of the specialist support of manufacturers, collaboration with universities, RSE S.p.A. (Ricerca Sistema Energetico) and CESI S.p.A., a specialised service company in which it has a 42.698% shareholding. In 2013, the Terna Group incurred costs of 17.4 million Euro in relation to its associate CESI.

### Applied Research
Research into innovations and new developments in engineering can be divided into four broad fields:

- **Optimisation of infrastructure and materials**

This area is concerned with designing pylons with less visual impact and which are more easily integrated into the surrounding environment; as well as identifying ways to boost the transmission capacity of existing lines; and developing new technology for High-Voltage cables.
One of the major achievements in 2013 was the installation of "Germoglio" pylons, designed by architect Hugh Dutton, along the 380 kV double three-phase "Trino – Lacchiarella" power line. Along the "Lacchiarella – Vernate" line, an experimental section of 150 kV cable, made entirely from recyclable materials, was installed and put into service (technology which is already well established for Medium-Voltage cables).

- **Equipment diagnostics**

The purpose of the research carried out in this area is to develop new monitoring systems which can, for example, be used with station equipment and machinery, line components, and partial discharges in High-Voltage cable systems. At the Lacchiarella power station, work was completed on the installation of a new type of sensor on the 132 kV section, in addition to those already installed in 2012 which made it the first Terna station to be fully monitored. Data transmission tests began on the central monitoring system (PSE).
The positive results of these tests will form the basis for replicating the technology at other facilities in the future. Monitoring of electrical machinery at 11 plants was also completed. Specifically, at the Rondissone power station a device for measuring partial discharge online was installed on the Phase Shifter Transformer, in addition to the rest of the sensors.

- **New equipment**

Research in this area is dedicated to developing and implementing compact rapid installation stations. After a positive trial run with the 150 kV Compact Rapid Installation Station (SCRI), a similar project has been planned for 380 kV. The viability of this project has been confirmed by the manufacturers and the specifications to allow the basic components to be tested in 2014 have been drawn up.

- **Plant safety**

The main aim of research in this area is to guarantee greater levels of safety at plants and in the surrounding area in the event of external, potentially dangerous events such as fires, earthquakes, etc.
In 2013, the final design for a feasible barrier-system project to contain power transformers (ATRs) on all four sides was completed. The plan has standardised features so that it can be used all over the country. In the event of a transformer fire, the barriers are able to shield the plant from flames and the impact of flying shrapnel, increasing safety. Preparation is under way for a set of guidelines which will define the specifics of the fire protection system and its fields of application, in line with the regulations for electrical machinery under Presidential Decree 151/11.
Another plant-safety project in 2013 focused on providing anti-seismic devices for the most vulnerable equipment.
In collaboration with the Roma Tre University, Terna completed a study on plant seismic vulnerability. It paid particular attention to the most at-risk equipment, and the Wipe-Rope TRI system obtained seismic qualification AF5.
Seismic testing using a shaking table demonstrated the effectiveness of the insulation system, showing a 50% reduction in structural fatigue when equal force was exerted. This result allowed us to reach and exceed the required seismic qualification.
Following these results, in 2014 the devices tested will be installed on Siemens 380 kV switches in stations at high risk of seismic activity.

## Planning and development of storage systems

EU6

Terna has affirmed its commitment to guaranteeing secure and economical grid management by launching an innovative storage system agenda. The ambitious plan is divided into two macro-projects - “Energy Intensive” and “Power Intensive” - which envisage the installation of various types of systems. Their development is managed by the Terna Storage Company which was purposely formed by the Parent Company in 2012.
The “Energy Intensive” project was first introduced in the 2011 Development Plan and envisages the construction of three storage systems in Southern Italy with a total capacity of 34.8 MW, ensuring greater flexibility in the management of renewable energy plants and an increase in the grid’s capacity to feed in green energy. As a result, the introduction of storage systems contributes to reducing energy costs and increasing the security and efficiency of the electricity system.
The cumulative 34.8 MW introduced by the “Energy Intensive” project will allow for the recuperation of hundreds of GWh of energy produced by wind energy plants, cut off until now. This is quantifiable as savings for the system across the country and as an environmental benefit thanks to the large proportional reduction in $CO_2$ emissions.
In 2013, the AEEG approved Terna’s projects and provided extra incentives.
The “Power Intensive” project, which had already been approved by the Ministry of Economic Development as part of the 2012 Defence Plan, provided increased security to the electricity systems on the major Islands by installing a 40 MW storage system. The project had two stages. The first stage, the “Storage Lab”, is under construction and will see the installation of two multi-technology plants (different storage technologies and no less than 8 different commercial products) for a total of 16 MW, shared between Sicily and Sardinia. Following the first stage, which also aims to analyse the performances of the different solutions installed, a further 24 MW will be achieved by selecting the most promising technologies.
The “Power intensive” batteries will enhance the security of the electricity system at particular points of the grid (for example on the larger islands) where traditional defence instruments have had greater difficulty in coping with increased production from renewable resources.
In 2013, authorisation for the site in Sardinia was obtained and the authorisation procedure for the site in Sicily was initiated.

## EU8 Smart transmission solutions

One of Terna's main needs is to make the transmission grid dynamic, i.e. capable of evolving rapidly and effectively in response to unpredictable and rapidly changing circumstances.
In the Development Plan, Terna has set out projects which will guarantee security, reliability and efficiency in the electricity system under various operating conditions, while maximising the timely and flexible use of existing infrastructure and thus facilitating integration of growing production from renewable sources, including those not directly connected to the NTG.
Such projects include:

- installing electrical equipment (PST – Phase Shifting Transformers) for power flow control on the High and Very-High-Voltage grids;
- installing synchronous condensers to improve the stability and operating security of the system;
- installing reactors and condensers for proper management of reactive power flows on the grid, with consequent cost reduction for the Dispatching Market;
- using high-capacity conductors to maximise the transport capacity of the existing lines, also on the basis of the temperature (Dynamic Thermal Rating – DTR). The testing drawing to a close will make it possible to define types and standards for applying the method, in order for it to be progressively implemented and diffused, in particular on the critical Central North – North and Central South – South line sections and on renewable collection lines;
- testing of diffused storage systems to maximise the exploitation of power from renewable sources and to improve the regulation of the High and Very-High-Voltage systems;
- initiatives based on smart logics aimed at improving the prediction and control of distributed generation.

These solutions generally have **reduced environmental impact** (allowing use of existing assets to be maximised), and implementation times and costs which are typically lower than those necessary for the creation of new network infrastructures (High-Voltage lines and stations).
The following innovative solutions are also planned:

- **Participation in the GREEN-ME project** (*Grid integration of REnewable Energy sources in the North - Mediterranean*): this project was presented to the European Commission, as part of the Connecting Europe Facility by Italian and French TSOs and DSOs (Distribution System Operators). It involves the development of systems to integrate distributed generation from the South of France to the Regions of Northern Italy. The project is on the list of Projects of Common Interest (PCI) published in October 2013, as part of the Smart Grids projects.
  The project is conditional on receiving possible financing by the European Commission.
- **Improving grid identification and control with digital systems:** exploiting the potential of digital equipment to provide measurements directly for the analysis and monitoring of service quality.
- **Monitoring grids:** the growing impact of renewable sources on the distribution grids requires data collection and modelling which will enable a more detailed view of the load/generation on distribution systems that operate with the transmission grid.

## New electricity interconnection between Italy and France: work begins in Italy

EU6

EU23

One of the most important developments which Terna is working on, the direct-current interconnection with France, became operational with the opening of the construction site on the Italian side in Piossasco in July 2013. This interconnection is among the Projects of Common Interest (PCI) identified by the European Commission and has been included in the Ten-Year Development Plan of the European electricity grid, published by the European Network of Transmission System Operators ENTSO-E in 2012.
This new electric line, "Piemonte – Savoia", will entail laying 190 km of HVDC (High-Voltage Direct Current) cable underground and will be carried out in synergy with the existing road and motorway infrastructure, including the Fréjus safety tunnel currently under construction. When fully operational, this line will increase the security of supplies and exchange capacity between the two countries up to 1,200 MW.
The type of layout used for the new connection has involved perfecting new cable laying methods, especially for the section on the Italian side, corresponding to the five dedicated passages (total length of 15 km) and to the approximately 14 km of viaducts along the A32 motorway affected by the work.
The cables for this connection use XLPE extruded insulation technology, among the first applications for this voltage level (320 kV): this represents technical innovation without precedent in Italy and with only a few examples on the global scene.
The feasibility studies for this project, expected to become operational in 2019, have been co-funded by the European Commission with over 1.3 million Euro.

## The "BE.S.T. P.A.T.H.S." project (BEyond State of the art Technologies for re-Powering AC corridors & multi-Terminal HVDC Systems)

EU8

This is the largest research and development project in the demonstration phase of the European Union's 7th Framework Programme. It was proposed for the "Large-scale demonstration of innovative transmission system integration and operation solutions for (inter)connecting renewable electricity production" call for tenders, by a consortium of 39 partners including TSOs (Terna, RTE, REE, 50 Hertz, Elia, Mavir, Stattnett, REN, EnergieNet), utilities (E-On, Iberdrola), manufacturers (ABB, Toshiba, Alstom, Siemens, General Cable, Nexans, De Angelis), universities and research institutes (RSE, CERN, STRI, Columbus and many others).
Terna Rete Italia chairs the consortium and is the leader of the largest of the five projects (with a budget of 23 million Euro out of a total of 65 million Euro), relative to the development of technology, components and systems which aim to restore the SACOI link in the future (HVDC between Sardinia, Corsica and mainland Italy). This qualifying holding not only brings financial benefits (financing which covers over 50% of the total budget), it also results in technological influences from the other projects which focus on: repowering HVAC lines, using DC superconductors in AC grids, interoperability between converters in HVDC grids, and interaction between wind firms and converters.
These topics are closely related with the issue of sustainability as they coincide with the guiding evolutionary principles with which the transmission grid must comply in order to be suited to a decarbonised electricity system which encompasses delocalised and distributed renewable generation and integrated horizontal and vertical management.
Other than carrying out its own functional and system planning activities (for a total of 68 person months), Terna Rete Italia also directs, specifies and monitors the activities of its partners: Toshiba for HVDC VSC multilevel converters, Nexans for 500 kV submarine and underground XLPE cables, De Angelis for high-performance overhead DC conductors, RSE for DC isolators and systems studies.
The proposal presented in January 2013 was provisionally accepted by the European Commission in April 2013. It was then subject to long, complex negotiations on the budget, contents, and synchronisation of the various areas, completed in March 2014 with the formal constitution of the consortium and the signing of the Grant Agreement. The project will last four years and will commence on 1° March 2014.

2013

Terna
TERNA GROUP

# Our approach

At Terna, we believe that service objectives are to be integrated with financial performance objectives. The synthesis of these two areas results from the search for operating efficiency and growth opportunities, whilst fulfilling service obligations and, in particular, ensuring the security of the electricity system.
In Italy, Terna holds the monopoly on electricity transmission. It cannot therefore increase business or revenue by enlarging its market share; hence it pursues these objectives mainly by:

- promptly delivering the investments set out in the Grid Development Plan, which both improve the electricity service for society and constitute a source of corporate income;
- seeking operational efficiency and optimal capital structure;
- developing non-traditional activities connected to transmission;
- seeking business opportunities in industries other than transmission;
- expanding business abroad.

For a detailed presentation of the economic and financial results achieved by the Group, see the Annual Reports available online at www.terna.it in the "Investor Relations" section and, in particular, the 2013 Integrated Report. The main results of the last three years are, however, discussed in this chapter.

# Revenue and risk management

## Revenue structure and the regulatory framework

In 2013, the Terna Group's revenue amounted to 1,896.4 million Euro. The majority of this revenue (about 97%) derives from traditional activities regulated by the Electricity and Gas Regulatory Authority (AEEG) and 3% refers to non-traditional activities. The latter consist mainly of specialised services provided by the Terna Group to third party entities, such as maintenance activities on HV facilities, plant engineering, maintenance of the fibre optic network, housing of tlc equipment, as well as other consulting activities in the transmission sector.

### Regulated revenue

The Company's regulated revenue is generated by tariffs – the most important of which is the transmission tariff (CTR) – paid to Terna by different categories of operators in the electricity industry (distributors, producers and dispatching users) in proportion to specific physical quantities set as a reference by the AEEG (quantity of energy transported in the National Transmission Grid - NTG, energy dispatched, number of input points).
The AEEG determines the unit sum of tariff components for transmission and dispatching services annually, on the basis of rules defined at the beginning of every four-year regulatory period. Terna's recognised costs and the amounts set as a reference (forecasts) for the aforementioned physical quantities are contributing factors. The cost components considered when determining the transmission rates belong to three main categories:

- **RAB Remuneration.** The RAB (*Regulatory Asset Base*) is revalued annually on the basis of Istat data regarding the change in the gross-fixed-investment deflator and is updated to account for net investments made by Terna and decommissioning carried out during the year. The RAB is remunerated by the AEEG at a rate of return linked to the market rate, or 7.4% for investments carried out up to 2011 (at the 2013 base rate). For some categories of development investment, this return increases for 12 years after its entry into operation, while for certain strategically important investments this increase also occurs during the expenditure period while they remain works in progress. In 2013, RAB remuneration constituted approximately 49% of Terna's recognised costs.
- **Depreciation and amortisation.** Recognised depreciation and amortisation are adjusted in accordance with the useful life of assets and the effect of new investments which have come into operation. They are also re-evaluated according to changes in the deflator of gross fixed investments. The share of amortisation/depreciation remuneration represented approximately 30% of the total recognised costs in 2013.
- **Operating costs.** These are typically the costs of labour and the procurement of goods and services, which do not constitute investments. The component covering these costs, which in 2013 came to about 21%, is based on annual operating costs, valid for the entire regulatory period (i.e. 2010 for the regulatory period 2012-2015), revalued annually on the basis of inflation and adjusted annually by an efficiency factor (price cap mechanism).

Once the unit amounts of the various tariff components have been established (recognised costs divided by the reference quantity), the returns gained by Terna depend on the actual dynamic of the physical quantities concerned, and particularly on energy transported by the NTG and the energy dispatched. The sharp decline in consumption that began in the second half of 2008, together with the increase in the energy input into the distribution networks due to the incentives for the production of renewable energy, have rendered the trend in energy transported by the NTG less predictable and led the AEEG to confirm, for the IV regulatory period (four-year period 2012-2015), the mechanism to partially neutralise the volume effect, introduced by Resolution ARG/elt 188/08. This mechanism establishes that, in relation to the volume of energy used to calculate tariffs and two fixed exemptions equal to +/-0.5%:

- if the final energy total is lower than the figure used for the tariffs, the AEEG guarantees Terna's remuneration for the difference in volumes between the final total and the exemption of -0.5% of guaranteed volumes;
- if the final energy total is greater than the figure used for the tariffs, the AEEG requires Terna to return the excess earnings for the portion of volumes which exceed the 0.5% exemption.

### Pass-through items

In addition to regulated revenues and those generated from non-traditional activities, Terna is responsible for managing the settlement of items linked to the Electricity Exchange: these are "pass-through items" (revenues equal costs) which do not influence net income on the Terna Group's income statement.
These items include payments such as the capacity payment which Terna collects from withdrawal dispatching users and grants to the producers who make the capacity available on the market. It also includes the payment that Terna collects from the withdrawal dispatching users and grants to the operators which supply the load interruption service.
A significant proportion of pass-through items consist of uplifts, a tariff component which includes various system costs, including covering the net expenses incurred to procure resources on the Dispatching Service Market (DSM). In 2013, pass-through revenues and costs for the Terna Group totalled 5,807.3 million Euro (6,326.8 in 2012).

### 2013 Incentive schemes

The AEEG has introduced specific bonus and penalty schemes aimed at encouraging service improvement, both in terms of technical reliability and cost. As is implicit with incentive mechanisms, upon reaching objectives, the benefit to service users will be a multiple of the incentive paid to Terna. In particular, in 2013 incentive mechanisms were provided for:

- quality of transmission service;
- acceleration of investment to develop the NTG.

The bonuses earned for achieving the objectives established in 2013 as part of the incentive schemes are included in Terna's total regulated revenue.

2013 INCENTIVE SCHEMES

| Objective | AEEG Resolution | Period applicable |
|---|---|---|
| Quality of transmission service | Resolution 197/11 | 2012-2015 |
| Acceleration of investment to develop the NTG | Resolution 199/11 | 2012-2015 |

### The cost of transmission on the end user's bill

In accordance with current regulations, much of Terna's recognised costs are billed to end customers of the electricity service by the distribution companies. Even without an official breakdown of the costs for the domestic end user which directly shows the impact of the costs resulting from Terna's activity, based on the figures published by AEEG it can be estimated that the **transmission costs have a weight of about 3.3% on the electric bill of an average domestic user[7].**

7 This is the relation between the unit cost of transmission (which the distributing companies pay to Terna) and the cost of electricity for an average domestic consumer (family with 3 kW of committed power and 2,700 kWh of annual consumption); Terna calculations using AEEG data.

## Risk management

Since over 90% of Terna Group's revenues are derived from activities recognised and remunerated by the Electricity and Gas Regulatory Authority, the risks arising from changes to the regulatory framework could have a significant impact on achieving objectives.
This particular context which transforms some market risks into regulatory risks, influences our approach to risk management.
Terna, which is part of the country's "critical infrastructure", assesses and analyses possible risk scenarios, paying particular attention to operational risks in order to reduce service disruption and damage to the health of staff in the workplace, and to optimise business processes.
For these reasons the corporate governance model which Terna has adopted is committed to giving adequate consideration to all interests involved. In particular, the Remuneration Committee and the Audit and Risk Committee are present in the context of the Board of Directors. The Audit and Risk Committee has a consultative and advisory function, supporting the Board in decisions which relate both to internal audit systems and risk management, with regard to periodic checks to ensure the adequacy and efficacy of this system in accordance with the company's characteristics and risk profile. The Audit and Risk Committee is comprised entirely of non-executive directors and has an independent majority; at least one member has adequate experience in accounting and finance.
For more details on governance structure and hierarchy, please refer to the "Report on corporate governance and ownership structures", published alongside the Terna and Terna Group Financial Report.
Corporate policy on the internal audit system also establishes a direct relationship between the Audit and Risk Committee and the Chief Risk Officer (CRO).
The Chief Risk Officer (CRO) – appointed in May 2013 by the Director in charge of the Internal Audit and Risk Management System, after consultation with the Audit and Risk Committee – is responsible for supporting senior management in their handling of the Risk Management process at the Group level effectively, with respect to all financial, operational, business and other risks. Terna carries out this process by using the Enterprise Risk Management (ERM) methodology, in accordance with sector best practices.
As part of the integrated and systematic risk management which distinguishes it, Terna adopts structural management tools and prevention measures in line with its own Risk Management rationale.
With regard to reputational risk, across all of the Group's activities, protection is guaranteed and strengthened by a sustainable approach to business. Starting from the assumption that legal compliance is a must, this considers the potential environmental and social consequences so as to prevent and mitigate the effects of such risks.
Finally, Terna constantly monitors risks associated with aspects of sustainability which may have a negative impact on its reputation and its intangible value, including through ratings analyses by the main agencies which periodically conduct sustainability assessments (such as RobecoSAM, Vigeo and Eiris).
For a full description of the procedures for preventing and managing such risk, please refer to the 2013 Annual Financial Report.
Climate change risks and opportunities are illustrated below, in line with the EC2 indicator.

### EC2 Climate change risks and opportunities

Terna, as a utility company, transmits electricity as its main task. It is not involved in any way in the generation of electricity and thus is not subject to any obligation to reduce emissions or to any emission-trading schemes.
At present, there are no fiscal (e.g. a carbon tax) or regulatory measures (e.g. emission-reduction targets, inclusion in emission-trading schemes) which have direct consequences on Terna's business and financial performance.
Terna's management has identified potential, albeit remote, risks connected with global warming and the reactions that it may provoke within governments and customer attitudes.
Ares of overlap with Terna's work are as follows:

- the task of maintaining a balance between the input and withdrawal of electricity to/from the grid becomes more difficult when weather conditions are extreme. Examples of this include during water shortages and in extreme heat or freezing conditions. The probability of critical situations increases, which can result in the temporary disconnection of users in certain areas of the country. This consequently draws the attention of the public authorities and the mass media towards Terna;
- concern over climate change or the increase in the price of energy raw materials could lead to a reduction in the elasticity of energy demand to GDP growth. The trend towards saving energy and research into greater energy efficiency has already altered the traditional relationship between economic growth and demand for electricity. These trends could also result in lower growth in the demand for electricity than currently seen, under equal conditions. The rules adopted so far by the AEEG regarding the remuneration of the transmission service make it very unlikely that the possible reduction in volume could translate into a decrease in revenue for Terna;

- the increase in the production of energy from renewable sources poses various challenges for Terna in relation to an increase in the requests for connection to the grid from renewable energy plants, the need to plan and realise investments to resolve the grid congestion problems and the need for an efficient and safe management of non-programmable production. Furthermore, intermittent production (in particular wind production) makes dispatching more difficult, increasing the need for power reserves and regulation.

On the contrary, climate change has provoked changes in legislation to encourage renewable energy sources. This has already provided Terna with opportunities to explore new business avenues.
Investments in the transmission grid, made necessary by connecting renewable energy plants, are a source of revenue for Terna. Furthermore, grid development investment has significant consequences in terms of reducing emissions throughout the electricity system (reduction of losses, improvement in the production mix, connection to new renewable energy plants). This is positive for Terna's image. The long-term prospect of developing interconnections in areas which are not connected today (e.g the Balkans and North Africa) enables Terna to cultivate business opportunities. In the short term, Terna is experimenting with storage devices (batteries), which may actually encourage the use of renewable sources, while resolving grid regulation problems. These investments may open a new business avenue for Terna which is indirectly linked to climate change.

# Terna's economic impact

EC1

## Value added

Value Added is a measurement of a company's income, as well as of a whole economy, during a given period (usually one year). In corporate accounting terms, value added is calculated by subtracting costs incurred for purchasing intermediary goods and services necessary for production from the value of production (revenue associated with goods and services produced during the year). These costs do not include labour costs, which are instead part of the value the company adds, through its activities, to intermediary goods and services. The difference between sales revenue from the final product and the cost of raw materials (and support services) is value added. Other than the cost of labour, value added also includes profits and the share of income allocated to paying interest on debts or taxes.

TERNA GROUP – VALUE ADDED STATEMENT[1]

| Values in euro | Financial year 2013 | Financial year 2012 | Financial year 2011 |
|---|---|---|---|
| A. Staff Remuneration | 282,591,663 | 275,766,675 | 283,116,896 |
| B. Remuneration of public authorities | 433,790,713 | 437,398,256 | 393,415,250 |
| C. Return on borrowed capital | 190,767,423 | 211,447,315 | 182,201,999 |
| D. Return on risk capital[2] | 401,998,400 | 401,998,400 | 422,098,320 |
| E. Remuneration of the Company | 111,606,710 | 61,541,976 | 17,906,390 |
| Total net global value added | 1,420,754,909 | 1,388,152,622 | 1,298,738,855 |
| of which net global net value added of ongoing activities | 1,420,754,909 | 1,388,152,622 | 1,186,035,046 |
| of which value added of discontinued operations and activities destined for sale | - | - | 112,703,809 |

1) The amounts relative to the creation and distribution of the Value Added are taken from the Consolidated Financial Statements, which were prepared according to the international accounting principles IFRS/IAS. Specifically, the Terna Group has used the IFRS/IAS International Accounting Standards since 2005.

2) The return on risk capital 2013 refers to the advance on the dividends distributed in November 2013 (140.7 million Euro) and to the balance payment of the dividends proposed to the Meeting of the Board in the session on 25 March 2014 (261.3 million Euro).

The value added generated by the Group increased by 19.8% over the three-year period 2011-2013 with regard to ongoing activities, and by 9.4% when also including the value added of discontinued operations in 2011.
During the 2011-2013 three-year period, the incidence of staff remuneration (on average 21.2%) and borrowed capital (on average 14.7%), as well as direct and indirect tax (on average 31.7%), relative to the total net value added of ongoing activities was essentially stable.
As a proportion of the total net value added, the return on risk capital was essentially in line with 2011 (-0.6%) and recorded a slight reduction (1.9%) if compared with the total net value added of ongoing activities.
In the three-year period, the provisions for reserves, in relation to the total net value added, record growth from about 2% to about 8%.

## EC9 Other economic effects

Terna's economic impact does not end with the production and distribution of value added. First and foremost, **the economic repercussions of the electricity service** must be considered: Terna ensures that a service of general interest, which contributes to the country's economic growth, is provided over time.
**The Company's grid development work is of particular importance.** Developing interconnections with bordering countries makes it possible to import electricity at more competitive prices compared to domestic production, to have an additional power reserve and to guarantee greater competition within the energy markets. Reducing grid congestion improves the use of generation resources in order to meet demand and makes it possible to use the most competitive plants, with positive effects on competition within the generation sector and on end prices.
In accordance with the legal and regulatory framework, all of Terna's investments in grid development are examined from a technical and economic perspective, by comparing the estimated cost of the work with the related benefits in terms of the reduction of the overall system expense, in order to maximise the cost/benefit ratio. Consequently, every Euro invested by Terna on average generates multiple savings for the users of the grid, which are ultimately passed on to the end consumer. It is therefore significant that Terna's investment (most of which is to develop the grid) has constantly increased over the last few years.

OVERALL INVESTMENTS – TERNA GROUP

| | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 |
|---|---|---|---|---|---|---|---|---|---|
| Millions of Euro | 1,212.3 | 1,235.2 | 1,229.2 | 1,162.7 | 900.4 | 764.9 | 606 | 345.5 | 263.5 |

Compared with the overall investments shown in the table for 2013, 1,196.4 million Euro refer to the investments in traditional activities and 15.9 million Euro to non-traditional activities.

EC4 In 2013, public contributions to the plant account – a direct reduction in the value of the plants – amounted to 1,972,121.42 Euro (1,561,023.47 Euro in 2012, and 2,316,994.17 Euro in 2011).

The second aspect to consider is the **creation of jobs and procurement expenses**. Terna employees **3,442 employees** (data as at 31 December 2013), of which 900 are located in Rome. The remaining employees are distributed evenly throughout the whole of Italy.
In 2013, Terna indirectly employed labourers from **contractors and subcontractors totalling the equivalent of 2,277 full-time employees** to perform building works – above all the construction and maintenance of power lines.
In 2013, the **economic value of Terna's procurement** of services, supplies and works came to approximately 750 billion Euro. The majority of purchases made were from national suppliers, although during the three-year period 2010-2013, the share of purchases made from suppliers abroad increased.

EC6 The predominance of Italian suppliers is in line with the Group's policies, which exclude selecting suppliers based on their location, and is due to the need for fast maintenance work on plants to ensure the utmost security of the electric system. Furthermore, suppliers located nearby are more competitive in terms of the cost of transporting heavy and bulky supplies. A significant share of the sum spent on local purchases actually refers to companies of international industrial groups with branches in Italy such as ABB, Siemens and Prysmian, worldwide leaders within the specific markets concerned.

The percentage of spending on total purchases (including Non Traditional Activities) made during the 2011-2013 period is shown in the table:

PURCHASES FROM ITALIAN AND FOREIGN SUPPLIERS (PERCENTAGES OF TOTAL PROCUREMENT)

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| Italian | 77 | 64 | 91 |
| Foreign | 23 | 36 | 9 |

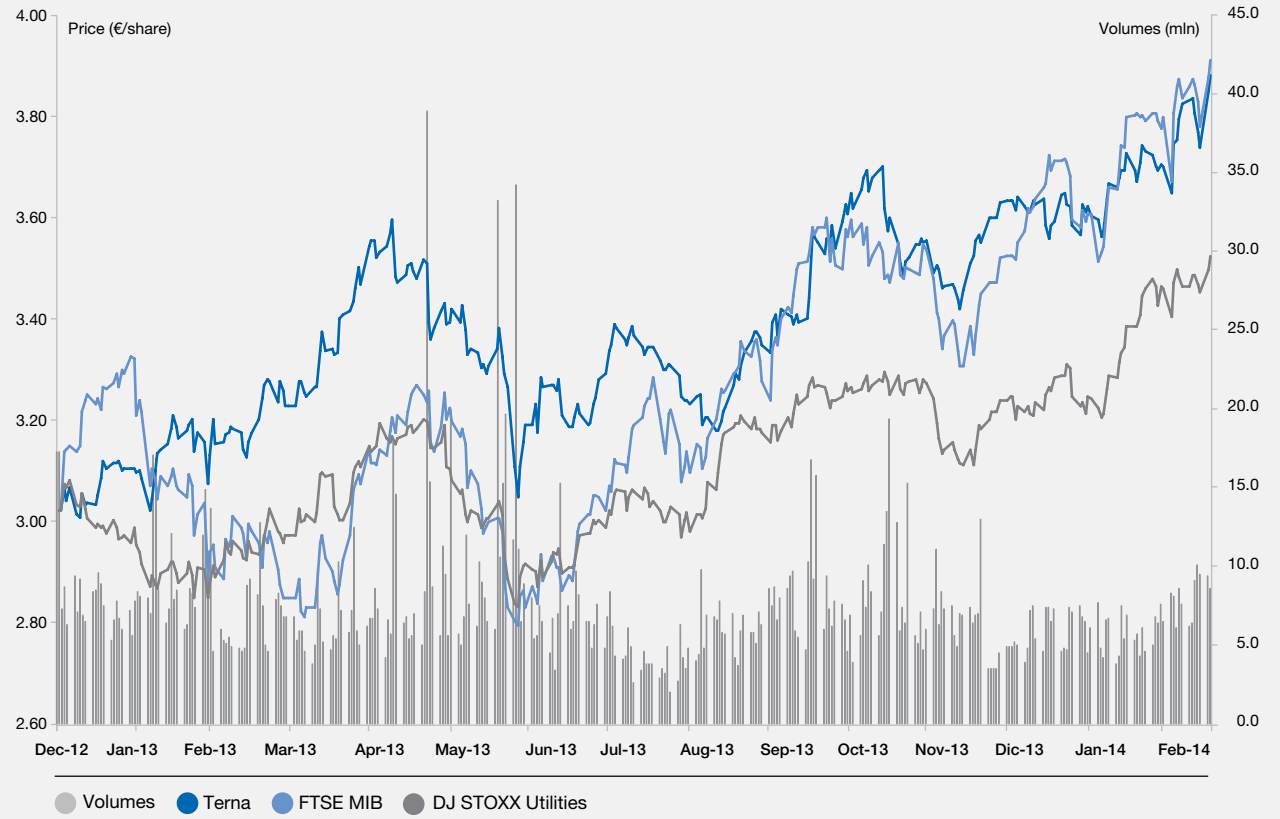
There is no steady trend shown in expenditure towards foreign suppliers during the three year period. The value for 2012 (36%) in particular was attributable to activities related to the Italy - Montenegro link, which included many large international groups based abroad. Although it has decreased from the previous year, the figure for 2013 (23%) is significantly higher than the trend reported up until 2012 (9%). The 2013 figure is partly influenced by procurement activities related to storage systems (see page 73) which saw some tenders awarded to foreign suppliers.

# Relations with shareholders

## Share performance

2013 was a good year for the major global financial centres, which were encouraged by expansionary monetary policies put forward by central banks. Despite the expected reduction in monetary stimulus by the Fed, in the United States the Dow Jones Index ended the year up 26.5%, a new record high. In Europe, the economic recovery has been less consistent, with negative growth and high unemployment rates particularly in the European Union's peripheral countries. However, the perception of risk by investors in these countries has declined, with the return differential on sovereign bonds in relation to the German Bund falling sharply (spread BTP10Y/Bund10Y at 31/12/2013, 220 basis points compared with 318 basis points at the end of 2012). The Frankfurt Stock Exchange performed the best in Europe (Dax Index +21.4%), whilst the FTSE MIB in Milan closed the year up 16.6%.
Within the sector, in 2013 there was a reversal of the negative performance seen over the previous three years, with a 7.5% gain on the European Utilities Index. In this context, Terna's stock has outperformed both the sector Index and the Milan Index with an increase in value of 20.1% and a Total Shareholder's Return (TSR) of 27.6%, coming among the first of comparable companies. On 12 November, the share prices reached a historical peak of 3.70 Euro per share and, at the end of the year, with a market capitalisation of 7.3 billion Euro it was confirmed as 14$^{th}$ in terms of size among the FTSE MIB companies. The average volume traded in 2013 stood at approximately 7.8 million units daily. Finally, it should be noted that, since its listing on the stock exchange (23 June 2004), the stock has increased in value by 114% with a TSR of 284%. This performance is in sharp contrast with the market (TSR FTSE MIB -0.3%) and is three times better than the sector's performance (TSR DJ Stoxx Utilities +94.5%).
Lastly, the share price earned 5.6% in the first few months of 2014, reaching its record high of 3.836 Euro per share on 11 March 2014.

Trend of Terna stock and the FTSE MIB and DJ STOXX 600 Utilities indexes




*Source: Bloomberg. Data as at 18 March 2014*

Terna has adopted a policy which provides for the payment of dividends twice a year. The 2013 dividend advance payment was 0.070 Euro (coupon detachment date 18/11/13, payment on 21/11/13), while the balance proposed to the Meeting of the Board of Directors (session 25 March 2014) was 0.130 Euro. Further information on share performance and dividend trends can be found on the site (www.terna.it/default/home_en/investor_relations_en.aspx).

# Relations with suppliers

As stated in its Code of Ethics, Terna prioritises transparency and fairness in its relations with suppliers (2,026 contracted in 2013). Suppliers which satisfy conditions of non-involvement in illegal activities, observance of safety standards, respect for human rights, and organisational and professional solidity are welcomed to compete on quality and price as equals. Procurement is normally carried out on the basis of the outcome of **tenders** which guarantee the participating suppliers equal opportunities and maximum transparency. The objective of purchasing at the lowest cost, subject to meeting required quality and security levels, is integrated with the checking of suppliers' **ethical, social and environmental** requisites.

HR2

These conditions are concerned, for example, with:

- the existence of clauses relative to compliance with the Terna Code of Ethics and Model 231;
- the request to sign a specific "Integrity Agreement" obliging suppliers to conform to the principles of honesty, transparency, and fairness and committing them to avoiding behaviour that could limit competition;
- the existence of a clause which obliges the suppliers to communicate to Terna detailed information regarding all assigned subcontracts, with the goal of preventing the risk of criminal infiltration through the relationship with the suppliers, thus implementing the Memorandum of Understanding signed with the Finance Police;
- with regard to tenders, the request for UNI 9001:2008 quality certification as a guarantee of an efficient corporate managerial and organisational system;
- the existence, in case of tenders, of clauses guaranteeing the maximum protection of the personnel working for contractors, under penalty of rescission of the contract.

The Terna Group has adopted a new "Regulation on Purchases" governing all contracts which are instrumental and non-instrumental to institutional activities. This will ensure that Terna and its Italian subsidiaries implement updates adopted by the legislator regarding tender awarding procedures regulated by national legislation (Legislative Decree 163/2006) which, in turn, implements specific EU directives.
In the most important areas for Terna's core business (supplies, contract work and services in electricity transmission sectors), Terna uses a **supplier qualification system** through which only those companies which are able to satisfy a series of particularly strict requirements – also regarding environmental and social issues – are included on the register. Terna verifies that requirements have been satisfied both during the first stage of qualification and afterwards through constant monitoring.
In 2014, Terna plans to implement a computer-based platform for conducting the tender awarding process. This platform will allow the paperless acquisition of tenders and documentation relating to the awarding of contracts.

## The qualification process

The qualification process allows Terna to assess suppliers with regard to their observance of the law, their technical, organisational and financial solidity, and their conformity with the ethical, social, and environmental requirements of Terna's policy, as ratified in the Company's Code of Ethics.
Scrupulous management of the ethical, social, and environmental aspects in keeping with Terna's policies is a condition for inclusion in the register of suppliers for companies belonging to the product categories subject to qualification.
Qualification requirements also include the application by suppliers of regulatory and pay conditions which are no lower than those established by collective bargaining agreements applicable for the type of activity in question, and the implementation of laws relating to environmental protection and safety at work.
Within sectors where environmental and social aspects are of particular importance, the qualification requirements are, accordingly, more severe: suppliers are asked to provide ISO certifications or at least documented procedures adopted to protect the environment and the health and safety of workers.
At present, of all the qualified suppliers, 62% have acquired or are acquiring certification in the BS OHSAS 18001:2007 safety field, and 67% have acquired or are acquiring ISO 14001:2004 environmental certification.
Verification, throughout the three years for which the qualification is valid, is performed by a monitoring service. **In 2013, there were 715 instances of monitoring.**
In 2013, the qualification criteria for the product categories relative to "Safety-related appointments" and "Works Managers" were revised to provide for increasingly strict controls so as to continually improve safety aspects on construction sites.

SUPPLIER QUALIFICATION

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| Companies qualified for entry in supplier register[1] | 369 | 373 | 353 |
| Qualified categories | 44 | 41 | 41 |
| % qualified suppliers[2] | 50 | 64 | 43 |
| Instances of monitoring | 715 | 508 | 749 |

(1) Considering also the qualified companies associated in consortia, the total number of suitable companies in the register would be 393 in 2013, 392 in 2012 and 372 in 2011.
(2) Number of qualified suppliers out of the total number of suppliers with orders greater than 500,000 Euro.

In the event that their behaviour is no longer in keeping with the qualification requirements, the suppliers may be given a warning or temporarily suspended from the register. Cancellation is envisaged for the most serious cases. In **2013**, following an analysis of non-compliance, **three suppliers were temporarily suspended, while four were warned**; no cancellations from the register were recorded. The entire company qualification process, from initial qualification to the monitoring of actual behaviour and the infliction of sanctions is entrusted to Terna's **Company Qualification Committee**, which consists of eleven members of senior management and an external independent Chairman with proven legal and technical expertise.
Details of activities carried out by Terna to guarantee the safety of workers operating on construction sites can be found in the section entitled "Protecting contractor's health, safety and human rights" in the chapter "Our people" on page 120.

# Relations with service operators

Terna mainly deals with companies which operate within the electricity industry and which belong to one or more of the following categories:

- **distribution companies**, with which Terna regulates the energy transmission service on its own grid;
- **dispatching users**, i.e. producers, end customers, or wholesalers with which Terna regulates the dispatching service;
- **interruptible customers**, i.e. end customers of withdrawals that grant Terna the right to interrupt their service;
- **owners of production plants and owners of grid segments**, to which Terna must guarantee the right to connection in compliance with regulatory and technical provisions.

Relations between operators within the industry and Terna are regulated mainly by the industry authorities and are defined technically and commercially in the Grid Code.

In particular, with regard to the dispatching service, Terna regulates the financial items regarding the **procurement of the resources necessary to safeguard the security of the National Electricity System** with the users of the input dispatching service. Thus it maintains the balance between input and withdrawals, as well as ensuring that grid parameters such as voltage and frequency are at appropriate levels.

The economic items regarding procurement on the Dispatching Service Market (DSM) and other input-side system charges are liabilities and, in 2013, amounted to about 2.5 billion Euro.

The system charges relative to withdrawal dispatching, mainly composed of the uplift payment for the DSM resource procurement, are assets and, in 2013, amounted to about 3.26 billion Euro.

Moreover, with both input and withdrawal dispatching users, Terna regulates the financial items relating to imbalances, understood as the difference between the plans the users presented on the electricity markets and the actual value of the electricity input or withdrawn. With regard to input, the amount comes to about 7 million Euro (asset for the operator) while the amount relative to withdrawal comes to about 0.2 billion Euro (liability for the operator).

Most of the interactions with electricity operators are managed through the **MyTerna portal**, a platform created to optimise the commercial relationship with counterparts.

The portal represents the main access channel for services dedicated to the operators, including the management of the database for requests for connection to the NTG; the stipulation of withdrawal contracts; the management of contacts; the viewing of the main data on each operator.

In 2013, Terna procured resources for interruptibility and instant-load-reduction services, which aim to secure the functioning of the National Electricity system in the event that resources procured on the market were found to be insufficient. In 2013, there were 322 assignees of the interruptibility and instant-load-reduction service for about 4,209 MW of power and the related economic liability amounted to about 0.6 billion Euro on an annual basis.

EU3 ELECTRICITY INDUSTRY OPERATORS COLLABORATING WITH TERNA – NUMBER OF COMPANIES

| COMPANIES | 2013 | 2012 | 2011 |
|---|---|---|---|
| Interruptible users | 322 | 234 | 171 |
| Distributors directly connected to the NTG | 24 | 24 | 20 |
| Input dispatching users (Producers and Traders) | 102 | 88 | 91 |
| Withdrawal dispatching users (Traders and end customers, including the Single Buyer) | 140 | 130 | 110 |

## The Gaudì Portal

In 2011, the Gaudì Portal (Management of the Single Database of the Plants) was created by integrating the three main database archives managed by Terna: CENSIMP for surveying plants, RUP for the significant production units database[8] and UPN6 for the non-significant production units database.

The system, which was established by specific provisions set out by the Electricity and Gas Regulatory Authority, allows registration and technical data for all plants and electricity production units to be received and stored. It facilitates management throughout the life-cycle of the plant by recording upgrades, structural modifications, commercial and technical variations and decommissioning (total or partial) of plants. The purpose is to centralise all data on all completed production units or units in progress across the country, regardless of the size or the type of plant. This will ensure that the database is complete and constantly updated. There are over 580,000 plants registered in the system in total.

8 Significant production units are production units where the overall power of the associated generation groups is not less than 10 MVA.

2013

Terna
TERNA GROUP

# Our approach

Terna recognises the importance of the right balance between energy requirements and safeguarding the environment and local communities. In carrying out its business, it therefore seeks appropriate solutions to ensure Italy the electricity it needs in the most reliable, economical, and environmentally sustainable way.
From an environmental point of view, the most significant impact of Terna's work is not so much in using natural resources or in emitting pollutants, but rather the **physical presence of the lines and electricity stations**, and their interaction with the surrounding natural and human environment.
The **most significant environmental aspects** of Terna's work are thus:

- the visual impact of stations and lines on the landscape;
- the impact of lines on biodiversity, with particular regard to birdlife;
- special waste and its management;
- electric and magnetic fields;
- greenhouse gas emissions.

**Terna has established an Environmental Policy**, which expresses its commitment to practices which limit and reduce its environmental impact, even beyond the limits imposed by law, whenever this does not compromise the other general interests that Terna is obliged to protect.
Among Terna's main environmental commitments, the following should be noted:

- in the planning of grid development investments, paying attention to the needs expressed by stakeholders (in particular, local institutions and environmentalist associations) and seeking agreement on solutions, through a process of **voluntary prior consultation with territorial institutions** (see the dedicated focus in the section: "Responsible development of the electricity grid " in the chapter "Responsibility for the electricity service");
- in the construction, management and maintenance of the grid, adopting procedures in accordance with the provisions of the law and, where possible, reducing environmental impact. Terna has adopted an **ISO 14001:2004 certified** Environmental Management System which regards **all of the Terna Group's activities and covers 100% of the national transmission grid (stations and lines) and offices**; since 2013, the Environmental Management System of the company Terna Gora has also been ISO 14001:2004 certified;
- in relations with suppliers, the requirement to gradually adapt to the environmental standards adopted by Terna;
- with regard to magnetic fields, strict compliance with regulations and attentiveness to the development of scientific studies, as well as contributing to the correct presentation and understanding of the phenomenon;
- with regard to biodiversity, the commitment to limit the impact of the grid, particularly on birdlife, and to carry out activities to mitigate the effects, including programmes agreed upon with environmental associations;
- with regard to climate change, a recognition of the importance of the problem and commitment to take action, as far as is operationally possible, to reduce the emission of greenhouse gases.

In organisational terms, environmental matters are overseen by several departments, responsible for specific aspects, which are coordinated by the Sustainability and Environment Steering Committee.
The Environmental Responsibility chapter is therefore organised as follows:

- description of the environmental aspects of grid development;
- thematic focus on handling specific areas of impact; electric and magnetic fields, biodiversity, consumption, emissions, use of materials, waste.

## Compliance with the law

EN23
EN28

In the three years 2011-2013, no definitive administrative or judicial, monetary or non-monetary penalties were imposed for non-compliance with environmental laws or regulations. The "Tables of indicators" section and the paragraph "Disputes and litigation" contain further data on environmental litigation and complaints.
In 2013, as in the previous two-year period, there were no significant leaks of pollutant liquids.
The main activities in 2013 were as follows:

- The training of employees responsible for installing and maintaining fire-prevention systems and extinguishers containing fluorinated greenhouse gases, as set out in the legislation (Italian Presidential Decree No. 43/2012 transposing Regulation (EC) No. 842/2006 on certain fluorinated greenhouse gases), came to a close;

- from March 2014, all Terna's operating structures will be licensed for conferring special waste produced in compliance with the SISTRI system. The Group's representatives qualified to use the system have been trained to such purpose. The guidelines defining waste management criteria within the Terna Group were updated. Further training has been planned for all staff involved on the specific changes introduced by the new hazardous waste management system, as specified by SISTRI;
- as regards the requirements provided for by law ("Seveso" legislation) for non-conventional storage systems, see the passage in the paragraph on health and safety on page 118.

# Managing the environmental impact of grid development

## Lines and local communities

EN26 S09 S010

The **construction of new lines** responds to the technical needs of the electricity system – such as removing congestion and eliminating overload risks – and to increasing energy production and consumption, which accompanies the economic growth of specific areas or of the entire country. Terna includes the necessary new constructions in the Grid Development Plan, which every year follows a complex authorisation procedure (for the authorisation procedure of each specific project, see the monitoring platform "Terna's Construction Sites for Italy" available on the website www.terna.it).
While grid development caters to society's general interest, the environmental impact associated with the construction of new power lines is instead concentrated on the area affected by the line route. In addition, the population density of many parts of Italy and the artistic-cultural value and landscape of many others make planning more complex and construction more difficult. In response to these problems, Terna has voluntarily adopted an approach involving dialogue and consultation with institutions, so as to find solutions for preserving the richness and potential of the country's environmental and cultural assets (see the paragraph on consultation on page 68).
As regards **existing lines**, the need to intervene is usually due to the fact that many lines were built some decades ago. The gradual transformation of rural areas into urban settlements and the adoption of new legal rules, modifying parameters previously in force regarding the interaction between power lines and the land, determine the need to make changes to portions of the existing grid.
The environmental action preceding the coming into operation of grid development investments are described below, divided into the following phases: planning, consultation, design and construction.

### Planning

During the grid planning phase, Terna can reduce the impact of electric lines on the environment through operations which can be divided into two categories:

- **Rationalisation**, complex work which involves several grid components at the same time, consisting mainly of replacing plants with superior plants, eliminating parts of the grid which are of negligible use following new constructions, or adding new grid elements to avoid having to upgrade saturated lines.
  Of all the rationalisations envisaged by the Development Plan, there are many more demolitions than new constructions, with a positive net effect in terms of the presence of power lines around the country. **Dismantling of stretches of line**, made possible by the construction of new power lines, is the most significant benefit for the environment resulting from grid development work.
- **Reclassification** provides for the conversion of existing power lines to a higher voltage, through constructing new conductors and pylons in place of the existing ones. This can involve replacing old pylons with larger ones, which therefore take up more space. Reclassification, however, has the advantage, compared with constructing a new line, of **generally using pre-existing infrastructural corridors, avoiding taking over new land**.

### Consultation

From 2002 onwards, Terna has chosen to voluntarily bring forward discussions with local communities to the project planning stage of its Development Plan. The dialogue with local institutions at the consultation stage and the **Strategic Environmental Assessment (SEA)** procedure of the Development Plan offer ideas for handling environmental impact at the planning stage (for details of the consultation procedure adopted by Terna and the SEA, see page 68).

## SEA portal and the Environmental Report

In 2011, Terna created an interactive corporate portal, devoted to the **Strategic Environmental Assessment (SEA)** procedure of the NTG Development Plan, so as to implement its commitment to transparency with its stakeholders (portalevas.terna.it).
Through the "SEA Portal" users can consult not only the Environmental Report, with relative maps, but also the data on SEA monitoring of the implementation of the Plan.
The "**Environmental Report**" area of the SEA Portal is composed of environmental description sheets of the works covered by the Plan, providing information on the territorial, naturalistic and landscape aspects potentially affected by the development of the works area. Data and indicators are presented for each element (territory, nature and landscape), as well as information relative to parks, reserves, SCIs, SPZs in the works area. The data sheets, listing the main consultation documents as well as briefly describing the work, complete the picture.
Finally, in the "SEA Monitoring" section of the portal, it is possible to monitor, via the web, the gradual implementation of the Plan through developments works, including mapping; on the basis of specific indicators, it is possible to verify any changes that may occur between the plan agreed ("ex ante"), the project authorised ("in itinere") and the work done ("ex post") phases.

### Design

Terna can reduce the impact of power lines on the landscape, identifying routes in areas with good landscape compatibility and choosing pylons which integrate well with the surrounding area. For the construction of new electricity stations, similar considerations apply. Specific works on the grid for reducing visual impact are:

- **The burial of cables** eliminates or **reduces the negative impact on the landscape**, typical of stretches of overhead lines. However, burying cables, although appreciated and requested by local institutions, is problematic from a technical and economic point of view: underground lines are less reliable over time than overhead lines and take much longer to repair in the event of a malfunction. For this reason, often they do not ensure adequate safety of the electric system and service continuity. In addition, buried cables have a greater impact in the construction stage – for example, in terms of viability – and much higher construction costs (from five to ten times the cost of an overhead line).
- Choosing **pylons with a reduced visual impact**. Over the last few years, Terna has expanded the available alternatives and has also turned to internationally renowned architects to design new pylons (see the box on the following page).

EU13

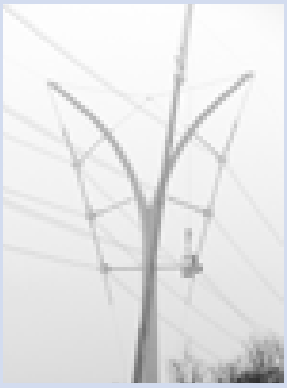
### Implementation

To manage the environmental impact of its construction sites, Terna has adopted operating guidelines – "Management of environmental aspects during plant construction" – to ensure observance of the environmental policy adopted by the Company. In particular, it is envisaged that **the construction site areas and the new access roads are positioned**, as far as is compatible with technical and planning needs, **in zones with less vegetation** (agricultural areas).
However, if the areas contain natural or semi-natural habitats, at the end of construction work, environmental regeneration and planning works and/or habitat reconstruction works are performed to restore the area to a condition as close as possible to that before the work.
As regards **environmental requirements** applying to contract work by other companies, these have been established according to the provisions of the applicable environmental laws and prescriptions of the ISO:14001 standard. This includes aspects such as preventive measures against contaminating groundwater, limiting damage to vegetation, managing accidents, minimising air and noise emissions and vehicle use, and correctly managing waste and excavated land (see page 105 on this subject).

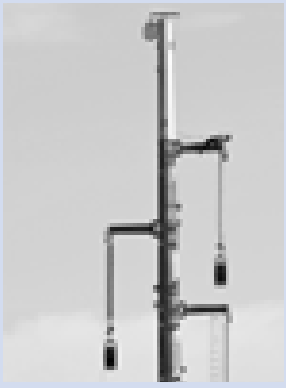
## Terna's new pylons

Terna increasingly considers pylons not just as necessary technical infrastructure but also as objects to blend in harmoniously with the landscape, limiting their visual impact and giving them new functions of safeguarding the environment and biodiversity.
For most of the overall layout of the main works under construction ("Trino – Lacchiarella", "Foggia – Benevento", "Sorgente – Rizziconi", "Italy – France" and "Italy – Montenegro"), Terna is already using low-environmental-impact pylons such as the single-stem poles or "Germoglio" pylons, specifically:

**The "Foster" pylon** – this is the "design" pylon which won Norman Foster, one of the major exponents of high-tech architecture, the international award "Pylons for the Environment", held by Terna in 1999 and which marked the transition from technical design to one blending in with the landscape. This pylon, in use along the "Tavarnuzze – Santa Barbara" line, has a maximum height of 46.5 metres and dimensions at the base of 8 m by 3.5 m.



**The "Germoglio" pylon** – winner of the "Pylons of the future" competition, launched by Terna in 2007 and concluded in 2009, to search for new design solutions for pylons, able to change the visual perception. Designed by architect Hugh Dutton (head of the Giorgio Rosenthal architecture group), this pylon has a variable height of 48-76 m and a width of 4 m; it has been in use between Piedmont and Lombardy since 2013, along a section of the 380 kV "Trino – Lacchiarella" line.



**The "single-stem" pylon** – this is the low-environmental-impact pylon which offers a reduction of up to 15 times the area occupied by the lines and the ground surface occupied by pylons (from 150 square metres of a pyramidal pylon to 10 square metres).
This pylon is already in use along some lines constructed by Terna, first among all the 380 kV "Chignolo Po – Maleo" line, in Lombardy (70% of the total route has single-stem pylons). This pylon offers further advantages both as regards assembly (just a few hours compared to an average of five days for a traditional pylon) and safety, given the reduction in work at height by blue-collar workers.

### Mitigation and compensation

EN13

On the basis of the requirements expressed during the authorisation procedure, Terna adopts **mitigation measures** aimed at **reducing the visual impact, and/or improving the integration into the environment, of the structures**. In particular, Terna develops camouflaging systems for fences and station plants, upgrades buildings, gives priority to line locations exploiting natural morphological backdrops and makes use of naturalistic engineering techniques. If the mitigation measures are not sufficient to reduce the interference to insignificant levels, **environmental compensation measures** are adopted, i.e. work on areas near the power line such as offsetting the cutting down of trees along the planned lines by planting individual trees of the same species in equivalent spots.

# Monitoring and supervision of electromagnetic fields

Protection from exposure to electromagnetic fields is precisely defined by law: the relative legislation (Prime Minister's Decree of 8 July 2003) establishes:

- **exposure limits:** in case of exposure to electric and magnetic fields at a frequency of 50 Hz generated by electricity lines, the limit is 100 microteslas for magnetic induction and 5 kV/m for the electric field, understood as effective values;
- **attention values:** as a precautionary measure protecting against the possible long-term effects of exposure to magnetic fields generated at the grid frequency (50 Hz), in children's play areas, residential areas, schools, and places where people stay for at least four hours a day, the "attention value" for magnetic induction is 10 microteslas, understood as the median value over 24 hours under normal operating conditions;
- **quality objectives:** in planning new power lines near "sensitive" areas as above, and in planning new settlements and areas in the vicinity of electric lines and installations already present, the quality objective is set at 3 microteslas for the value of magnetic induction, understood as the mean value over 24 hours under normal operating conditions. This is in order to gradually minimise exposure to electric and magnetic fields generated by power lines operating at a frequency of 50 Hz. To ensure that quality objectives are met, in agreement with the Regional Environmental Protection Agencies, electric and magnetic field measurements for new power lines are provided for in the Monitoring Plans, both in the pre- and post-construction stages.

The values of the three parameters, and in particular the "attention value" (10 microteslas) and the quality objective (3 microteslas) show that Italian legislator has adopted the precautionary approach expressed by Article 15 of the Rio Principles. Observance of the law in its work implicitly entails Terna's adoption of the same principle.
Terna carries out line inspections to ensure compliance with the limits set out by current legislation. In the event of any reports and requests by responsible bodies and administrations, Terna provides the data needed to assess the effective exposure to electric and magnetic fields generated by its plants.

EU13
EN26
EN12
EN11

# Biodiversity

## Identifying the impact on biodiversity

The relationship between the Terna grid and the surrounding natural environment and, consequently, its impact on biodiversity assume different features in the new-line construction phase and in the existing-line operation phase.
**In the construction stage, the impact on biodiversity is associated with site work**: opening passages so as to be able to erect pylons, excavate and remove residual materials. The construction of new lines and stations requires particular attention when near or in protected areas (see page 92).
**In the operating stage of existing lines**, the potential impact on biodiversity is twofold. On the one hand, **the line route may be a factor increasing biodiversity** and protecting certain species; the pylons and their bases constitute "islands" of concentrated biodiversity by sparing areas of land from intensive farming.
On the other hand, the lines potentially have negative effects on biodiversity, that concern birds in particular. While the risk of electrocution mainly affects low- and medium-voltage lines, the presence of high-voltage lines, such as those managed by Terna, is associated with a risk of collision.
This is particularly true of lines near protected areas or areas of natural interest.
The interaction between the lines and these areas is constantly monitored to limit the risk of negative impact on birdlife.
The main tool for identifying critical stretches of line is a highly exhaustive territorial database, populated with data provided by Regions and Ministries by means of which Terna has carried out an **inventory of the possible interferences between its lines and protected or highly biodiverse areas**. **10% of Terna's grid (amounting to 5,570 km) crosses protected areas** for stretches ranging from a few hundred metres to tens of kilometres.
Overall, net of overlaps, protected areas of land cover 22% of Italy's territory.

## Managing the impact on biodiversity

EN14

Terna manages its impact on biodiversity with a series of integrated instruments that consider such impact right from the planning stage and, whenever necessary, adopt appropriate mitigation and offsetting measures.
Biodiversity – and in particular the presence of protected areas – therefore constitutes an important input in the sustainability-based planning of grid development. The biodiversity characteristics of areas that could potentially host new infrastructure are carefully studied. The information collected becomes part of the criteria determining the final route and is available in the parts of the Environmental Report containing regional details that accompany the Grid Development Plan.
This approach was confirmed in the Memorandum of Understanding signed by Terna and the WWF, which provides, among other things, for the incorporation of environmental criteria consistent with the WWF's conservation strategy in the planning of new lines.
Despite the precautions taken in the planning stage, it is possible that interference may occur between the single works and certain species or habitats. To reduce this interference to a minimum, environmental mitigation measures, where necessary supplemented by environmental compensation measures, are adopted (see also page 107).
To reduce the risk of collision for birdlife to a minimum, **for stretches of line where birds frequently cross, special devices known as "dissuaders"** have been installed. Due to their size and the noise they **make when struck by the wind, they make electricity lines more easily perceivable to birds in flight. In 2013, there were 12,005 dissuaders compared to 11,146 in the previous year.**
Terna deals with biodiversity in partnership with leading national bodies which work to protect the environment and animal species.
In 2013, Terna continued to support the "**nests on pylons**" initiative, in cooperation with the *Ornis Italica* ornithological association (see box below), making it possible to collect various biological and ethological data, revealing a positive effect in terms of biodiversity; alongside this, the **"birdcam" project**, provides for the installation of television cameras on artificial nests to follow the birds' reproduction period online on Terna's website and on www.birdcam.it.

### "Nests on pylons": the Terna - *Ornis Italica* partnership continues

"Nests on pylons", the project which envisages the use of Terna's pylons as "bases" for housing artificial nesting boxes so as to encourage the repopulation of some bird species, continued successfully in 2013.
As usual, the ornithological association *Ornis italica* took care of maintaining the nests, installing new ones and replacing those which had been damaged, monitoring their use, the laying and hatching of the eggs, and tagging the young.
In the province of Rome, the species most inclined to use the nests were kestrels, laying 80 eggs between the beginning of April and end of May (average of 4.2 per pair), 60 chicks being born (average 3.2 per pair), of which 32 were tagged.
In Upper Lazio, in addition to the kestrels, the European Roller confirmed its presence, occupying all of the 25 available nests, from which 69 young took flight, of which 38 were tagged.
Thanks to the HD webcam, which covers life inside the nests around the clock, it was possible to read the ring number of a female which had been tagged just a year before. This observation reinforced previous evidence of the high degree of philopatry (the tendency to return to the original nesting ground to reproduce) of the species, in this case, at the third generation.
The surprising capacity of the pylons to interact positively with the reproductive dynamics of some bird species has been officially recognised, since the beginning of 2014, by a group of five Polish researchers. They published the article "A Paradox for Conservation: Electricity Pylons May Benefit Avian Diversity in Intensive Farmland" in the scientific journal "Conservation Letters – A journal of the Society for Conservation Biology".
This publication, as well as the complete version of Ornis Italica's "Report on Activities 2013", can be downloaded from the "Sustainability" section of Terna's website.

Further information, and indicators of Terna's commitment to preserving biodiversity, on the projects pursued with its partners and the main results are available in the "Sustainability" section of the website www.terna.it.

# Energy efficiency and climate change

Terna's business is electricity transmission and not production, which, in the electricity industry – and in business in general – are those most responsible for greenhouse gas emissions. For this reason, Terna is not subject to emission-reduction obligations according to the Kyoto targets, nor to emission-trading schemes of any kind. **Terna has, nonetheless, chosen to commit itself voluntarily to limiting its emissions.**
As well as monitoring and programmes to contain its emissions, some of **Terna's activities lead to significant reductions in $CO_2$ emissions in the overall electricity system**. The following are notable:

- the investments provided for in the Development Plan (page 101);
- the reduction of resources procured on the Dispatching Services Market, which also entail a lower demand for production with the same level of service (page 79).

## EN3 Energy consumption

EN4 The transmission of electricity only requires the **direct consumption** of energy for a few activities that support the service:

- fuel for the company's vehicles (used for line inspections, repairs, and other activities mainly connected with the maintenance of lines and stations); In 2013, there was a slight increase in fuel consumption (+4%), mainly attributable to variations in the perimeter of the plants (for details on company vehicles, see page 100);
- diesel oil for emergency generators, which are used only in cases where electricity – the normal energy source for equipment – is lacking, precisely to ensure that the electricity system is controlled and normal service restored;
- diesel and natural gas for heating, particularly in offices. The increase registered in 2013 for the item "Diesel oil for generators and heating" (+17%) is related to the consumption of diesel oil for heating, used in some offices as a result of the harsher temperatures.

The **indirect consumption** of energy consists of the electricity used to run stations and operating plants (87% of the total) and in offices and workshops. The increase in electricity consumption (+10% compared to 2012) is due to a number of factors. As regards the electricity used in the stations and operating plants, this was affected by both the increased perimeter and improved data collection methods; for the energy related to office and laboratory use, the increase recorded is related to some new offices being considered, for which annual consumption data were only available from 2013 (e.g. the new training centre "Campus").

DIRECT AND INDIRECT ENERGY CONSUMPTION BROKEN DOWN BY PRIMARY SOURCE – GIGAJOULES[1]

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| Direct consumption | | | |
| Petrol for vehicles[2] | 318 | 408 | 7,504 |
| EN29 Diesel for vehicles[2] | 80,718 | 77,570 | 75,731 |
| Natural gas for heating | 9,426 | 9,241 | 9,468 |
| Diesel oil for generators and heating | 12,884 | 11,058 | 11,289 |
| **Total direct consumption** | 103,345 | 98,277 | 103,993 |
| Indirect consumption | | | |
| Electricity for powering stations and offices[3] | 698,709 | 638,050 | 627,480 |

(1) The direct consumption data in tonnes and thousands of $m^3$ are shown in detail in the tables of indicators. To convert the volumes of primary resources into gigajoules, the parameters indicated in the GRI – Global Reporting Initiative – G3.1 protocols were used
(2) Only the consumption of operating vehicles, and not of managerial vehicles, is considered
(3) The reference for the division of the production mix is the "Monthly Report on the Electricity System" with the results for December 2013, available on the website www.terna.it.

## Direct and indirect $CO_2$ emissions

EN16

As well as direct and indirect energy consumption, direct greenhouse-gas emissions connected with Terna's activities are caused by:

- leaks of $SF_6$ (sulphur hexafluoride), a greenhouse gas used in station equipment for its highly insulating properties;
- leaks related to consumption of R22 refrigerant gas, used in air conditioning systems.

**$SF_6$ leaks are the main source of direct greenhouse-gas emissions** by Terna; in particular in 2013 they account for 88% of total direct emissions. In the last five-year period, the quantity of $SF_6$ present in the Terna Group's plants increased by 169 tonnes (+50%). This is a trend – common to many transmission operators – destined to continue in the next few years for technical reasons associated with the higher insulating properties of the gas and to the smaller size of stations built with equipment containing $SF_6$, compared with more traditional solutions. For this reason, the absolute $SF_6$ figures also tend to increase. Programmes to limit the proportion of $SF_6$ leaks are illustrated in the specific paragraph on page 99.

TOTAL DIRECT AND INDIRECT EMISSIONS OF GREENHOUSE GASES – $CO_2$ EQUIVALENT TONNES[1]

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| Direct emissions | | | |
| $SF_6$ leaks | 57,175 | 62,791 | 57,406 |
| R22 leaks | 90 | 110 | 25 |
| Petrol for vehicles | 22 | 28 | 520 |
| Diesel for vehicles | 5,974 | 5,741 | 5,605 |
| Natural gas for heating | 528 | 518 | 531 |
| Diesel oil for heating and generators | 954 | 818 | 836 |
| **Total direct emissions** | **64,743** | **70,007** | **64,922** |
| Indirect emissions | | | |
| Electricity | 73,170 | 70,008 | 71,463 |

EN29

(1) Direct consumption is converted into equivalent $CO_2$ emissions using the parameters indicated by the Greenhouse Gas (GHG) Protocol Initiative. Indirect consumption of electricity is converted taking into account the proportion of thermoelectric production in the total Italian electricity production for 2013. The reference for the division of the production mix is the "Monthly Report on the Electricity System" with the results for December 2013, available on the website www.terna.it.

## $CO_2$ emissions: comparative data

The figures used for comparison as regards the emission of greenhouse gases in thousands of tonnes of $CO_2$ are composed of the relative figures on direct and indirect emissions (aims 1 and 2).
In the absence of normalisation factors valid for all sectors, it was deemed of interest to present the company data on $CO_2$ emissions in absolute terms – despite the poor comparability. Such figures, which vary greatly in magnitude from one case to another, at least provide an indication of the importance of greenhouse gas emissions – and therefore of the practical need to contain and mitigate them from the point of view of sustainability – in the various sectors and companies.
The comparison was thus made with the companies of all three panels: TSO, RobecoSAM Super Sector Leaders and the FTSE MIB companies.
In 2013, Terna emitted 138 thousand tonnes of $CO_2$. In 2012, the year for which comparative data is available, the figure was 140 thousand tonnes, significantly lower than the average of all three panels.

| | $CO_2$ emissions (thousands of tonnes) 2012 | | |
|---|---|---|---|
| | TSO | FTSE-MIB[1] | RobecoSAM - Supersector Leaders |
| Figures available | 19 | 24 | 25 |
| Average | 9,825.3 | 9,253.0 | 3,853.5 |
| Max. | 122,000.0 | 127,870.0 | 28,210.0 |
| Min. | 3.1 | 11.0 | 22.7 |
| Terna | | 140.0 | |

[1] For the indicator of $CO_2$ emissions for two of the companies on the FTSE-MIB panel, the figure published in the document "CDP Italy 100 Climate Change report 2013" as part of the Carbon Disclosure Project was considered.

Details of the calculation of the "$CO_2$ emissions" benchmark are available in the "Sustainability" section of the website.

## EN17 Other indirect $CO_2$ emissions

In addition to the emissions corresponding to electricity consumption, Terna's most significant indirect emissions are related to grid losses. For the indicators relative to emissions produced by staff air miles, see page 136.

### EU12 Grid losses

Grid losses are defined as the difference between energy input by producers (including imported energy) and final consumption; the losses relevant for Terna are those associated with the transmission grid. The figure presented in the table below is based on the direct measurement of energy inputted and withdrawn from the transmission grid (approximately 7,500 measurers), to which corrective technical coefficients are then applied in cases in which the measuring point does not coincide with the boundaries of the transmission grid. It must be stressed that Terna is responsible for measuring the energy input into the NTG, while for the energy withdrawn out Terna may, on the basis of specific agreements, remotely read the measurements, which remain the responsibility of the distributor companies. This entails a margin of uncertainty on the correctness of the measurements of electricity withdrawn, which has reduced over the years thanks to the cross-checks and the gradual resolution of discrepancies with the distributors' data. For these reasons, starting from 2012, it was decided to use the arithmetic moving mean of losses with a three-year window (the three years 2010-2012 for the year 2012, the three years 2011-2013 for the year 2013) as the annual figure: in this way, the margin of error and the risk of interpreting the effect of measurement errors and relative corrections as real trends is reduced.

GRID LOSSES

| | 2013 | | 2012 | |
|---|---|---|---|---|
| | % proportion with respect to energy demand | GWh | % proportion with respect to energy demand | GWh |
| EHV and HV grid | 1.4 | 4,411 | 1.4 | 4,485 |

Terna can only contribute to determining the amount of losses, which are not completely under its control. Dispatching – needed to ensure the constant balance between injections and withdrawals, and to avoid grid-security and poor-service problems – takes place according to regulated criteria within the framework of production set-up determined by the energy market, and cannot therefore be conditioned by Terna so as to minimise losses.
Grid development, however, with equal production set-ups, would lead to greater efficiency and thus a reduction in losses; however, the real impact of grid development on losses cannot be predetermined, nor is it under the control of the grid operator, since it depends on the evolution of production capacity and the demand and supply of electricity on a local basis.
Considering the production mix of the Italian generation system, the $CO_2$ emissions associated with grid losses amounted to 1,662,890 tonnes for the year 2013 (1,771,477 in 2012).

## Other atmospheric emissions

EN19
EN20

As well as the emissions already described above, Terna monitors and controls other emissions into the atmosphere, relating mainly to:
- refrigerant gases
- nitrogen oxides

For details of the figures, see the indicator tables (page 130).

## Initiatives to reduce emissions

EN18

Terna focuses its attention on a number of voluntary action programmes aimed at reducing its main sources of greenhouse-gas emissions:
- **a programme to limit the proportion of $SF_6$ leaks:** Terna has launched several initiatives such as identifying leaks promptly by means of online monitoring systems and seeking technological solutions which improve the sealing of equipment and components;
- **a programme for reducing the consumption per km of the company vehicle fleet**, which entails a reduction of $CO_2$ emissions per km (g/km) based on replacing vehicles with better-performing equivalents;
- **a programme for energy-efficient** buildings (offices);
- **feasibility studies for initiatives on energy conservation** in electricity stations.

### Incidence of $SF_6$ leakage

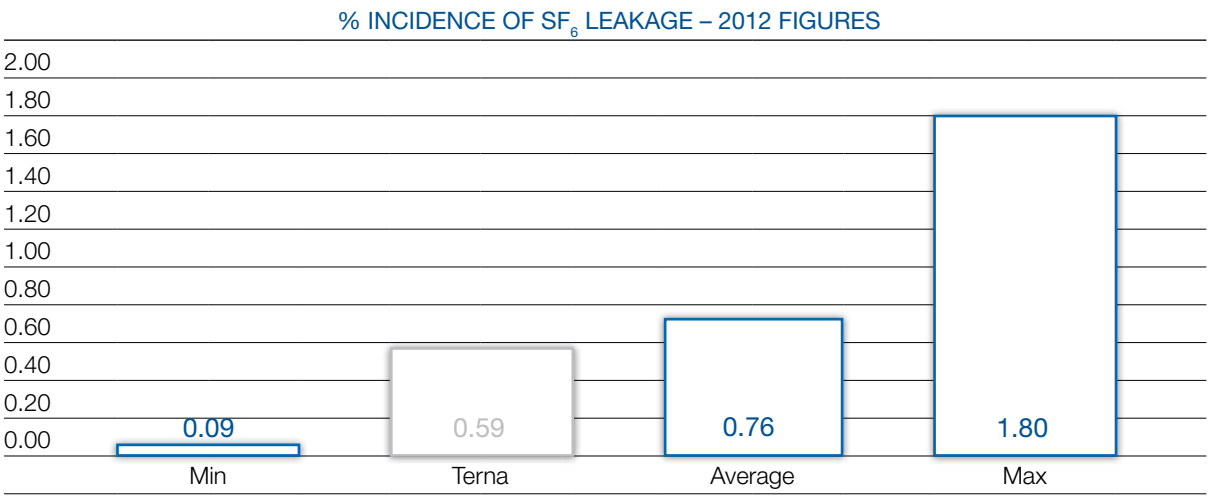
With particular reference to **$SF_6$** gas emissions, Terna operates so as to **keep leaks under control**, to limit and, if possible, reduce its **percentage ratio** in relation to the total gas used.
If leaks in absolute terms then increase, as recalled above (page 97), a reduction in the incidence of leaks would, precisely for this reason, have a significant impact in terms of emissions avoided.
In 2013, the proportion of leaks was 0.49%, down compared with the two previous years (2012: 0.59%; 2011: 0.60). Although in line with the intention of limiting the incidence of leaks, these results do not clearly show a reduction trend: the recorded values are in fact below average (see the international comparison below) and are thus greatly influenced by single accidental events.

## $SF_6$ leaks: comparative data

$SF_6$ gas has an extremely powerful greenhouse effect (22,800 times more than $CO_2$[(1)]) and is used by electricity transmission operators as a result of its excellent electrical insulation properties. On account of the specific nature of use of this gas, only the TSO panel was considered for the comparison.
The $SF_6$ figure is given as the leak rate with respect to the total quantity of gas in the station equipment.
In 2013, Terna recorded a leak rate of 0.49%, lower than in 2012 (0.59%), the year for which comparative data is available.
In 2012, Terna's performance was above average (0.76%).

(1) See the "IPCC Fourth Assessment Report: Climate Change 2007".

A graph of the data available for 2012 is shown below:




Details of the calculation of the "$SF_6$ leaks" benchmark are available in the "Sustainability" section of the website.

## Company fleet

EN29

**The company's vehicle fleet** is not concentrated in a few places, but used over a vast area; company vehicles are in fact used daily for line inspections and to reach operating plants scattered throughout the country. For this reason, in 2013 the "Company Car Sharing" scheme was launched on a trial basis, pursuing the following objectives:

- correct distribution of the corporate fleet around the country;
- optimisation of uses with consequent lower emissions and consumption;
- greater attention to operating management, including maintenance (with better performance in terms of quality, safety and respect for the environment).

The first results of the test relative to the 30 vehicles included in the project showed a reduction of 13.7% in the kilometres travelled and of 6.4% in consumption and in $CO_2$ emissions compared to equivalent periods in the previous year.
Specifically, for the vehicles relative to the Rome area (monitored since May 2013), the reductions were 15.8% of the kilometres travelled and 7.6% of the consumption and $CO_2$ emitted.
In 2014, the test will be continued to evaluate its worthiness and the extension of the project to the entire vehicle fleet.

## Energy saving in stations and offices

EN5

In 2011, the "Energy Consumed for Own Use Management System" project was launched, coordinated by the technician responsible for the conservation and rational use of energy for the Terna Group (Energy Manager). After the activities related to the "Initial Energy Analysis", in 2013 the Energy Policy, energy analyses of buildings with more than 100 employees, and indicators for monitoring were defined. The aim is to align the system with the UNI CEI EN ISO 50001 standard, which establishes the requisites for creating, launching, maintaining and improving an energy management system oriented towards energy efficiency.
It should be borne in mind, however, that the development of energy efficiency programmes relative to the **use of electricity** in stations and offices is experimental at this stage. This is due to the fact that Terna's electricity consumption falls within the "own transmission use" category which, from an accounting point of view, constitutes a pass-through item for Terna.
As regards **the electricity stations**, electricity is used to ensure functioning of the equipment and its remote control.
We are studying initiatives to assess savings opportunities in relation to the main sources of consumption:

- cooling power transformers;
- external lighting;
- air-conditioning and heating systems in technical rooms;
- auxiliary command, control, and protection circuits of all equipment and machinery.

In offices, the main sources of energy consumption are related to lighting, air-conditioning, heating and the use of computers and printers. Two initiatives relative to reducing such sources of consumption are described below:

- in 2013, the replacement of computers and printers continued. The new models enable savings in average energy consumption of 2.7% and a consequent reduction of carbon dioxide emissions. The reduction achieved in 2013 adds to that already recorded in the two years 2011-2012 (relating to replacing monitors and desktop computers with PCs with lower consumption), for a total of 80 tonnes of $CO_2$ for the three years;
- in 2013, a project was launched for replacing the current diesel boilers with two heat pumps and a series of geothermal probes, starting from the end of 2014, so as to reduce the costs and consumption of diesel for heating the offices of a plant unit. This investment will have an ROI of five years and will permit a reduction of costs to the Company. The new plant will permit a reduction of the $CO_2$ emitted into the atmosphere of approximately 60 tonnes per year.

## The Grid Development Plan and reduction of the electric system's $CO_2$ emissions

The construction of the new lines and stations provided for by the Development Plan will have positive effects not only in terms of service security and the final cost of electricity, but also in terms of reduced emissions from the electric system. This has three effects:

- reduction of grid losses;
- improvement of the production mix and interconnection with other countries;
- connection of plants using renewable energy.

Overall, the reduction of $CO_2$ emissions within the time horizon of the 2014-2023 Plan could reach approximately 13.5 million tonnes a year.

### Reduction of grid losses

Grid losses depend on, among other things, the distance the electricity travels on the transmission grid. In very simple terms, the further the point of consumption (of withdrawal from the NTG) is from the point of production (of delivery into the NTG), the greater the losses for the same consumption. In addition, for the same distance, the losses are greater on a lower-voltage line. Development work that improves the grid mesh brings withdrawal and consumption points closer: all other conditions being equal, the result is a reduction in grid losses. The same result is produced by upgrading a stretch of the grid, for example when a 380 kV line replaces one at 150 kV over the same route.

With the completion of the work set out in the 2014 Development Plan, the decrease in losses at the peak could reach a power value of approximately 180 MW, corresponding to a reduction in grid energy losses estimated at around 1,100 GWh/year. Assuming that the reduction of these losses is equivalent to a reduction in production from combustible sources, it can be considered that the work may also have the added positive effect of a decrease in $CO_2$ emissions, somewhere between 400,000 and 500,000 tonnes every year.

### Improvement of the production mix and interconnection with other countries

One of the main purposes of developing the electricity transmission grid is to overcome the transport limits between "electricity zones". The existence of these limits imposes a number of restrictions on the possibility of production by more efficient generation units, that is to say units which pollute less in terms of $CO_2$ emissions, and at the same time makes production by obsolete stations necessary for grid security.

The work envisaged in the Development Plan, together with the expansion of interconnection with other countries, would enable a more efficient production mix than the current one, with a larger proportion of production by plants with higher yields. The same quantity of final consumption would thus be covered with a smaller quantity of fuel: the benefits are quantifiable as a reduction in $CO_2$ emissions of up to approximately 5,500,000 tonnes a year.

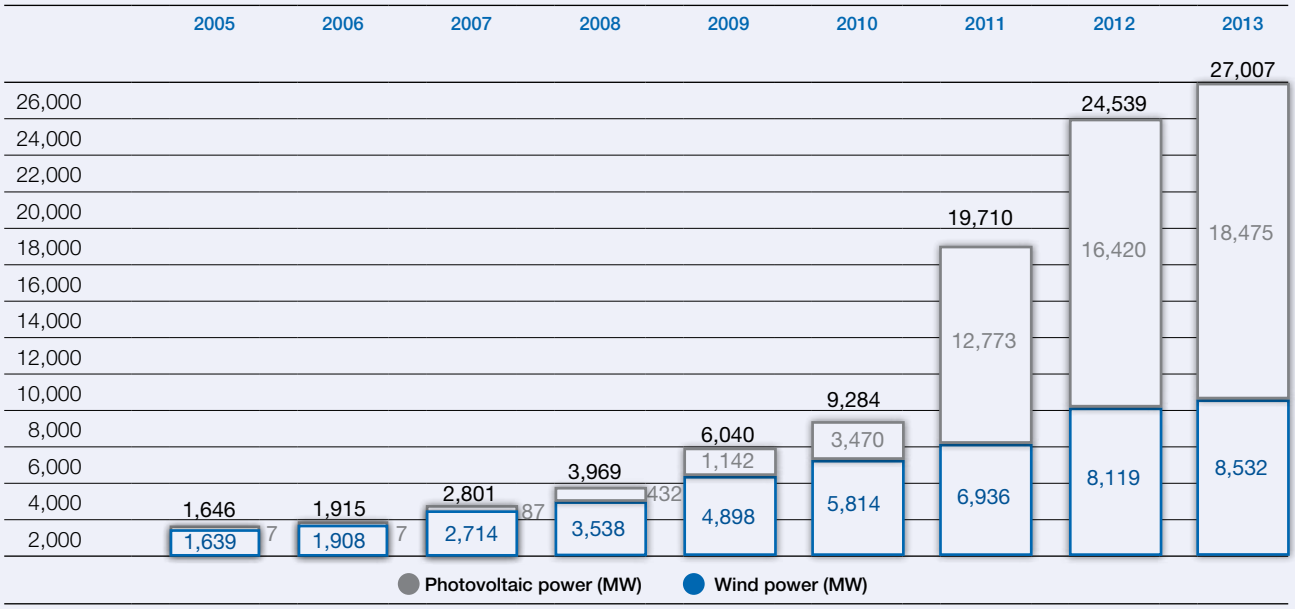
### Connection of plants using renewable energy

The main contribution to the reduction of $CO_2$ emissions comes from connecting production plants using renewable sources considered among the projects in the 2014 Development Plan. One of Terna's main tasks is to plan grid upgrading in order to encourage production of electricity from renewable energy sources; the aim is to try to overcome any grid and operating limitations that could impact renewable-energy input into the grid, which is entitled to dispatching priority. The development solutions planned include both actions to strengthen sections of the primary grid, which make it possible to indirectly reduce the influence of NPRS production on operation, and actions to locally expand the sub-transmission grids to which the NPRS generation is directly connected (see the relevant paragraph on page 67).

Besides this work, NPRS collection stations on the Extra-High-Voltage grid are planned, which will make it possible to limit the construction of new power lines which would otherwise be needed.

From 2005 to 2013, works on the transmission grid and connections have facilitated an increase in the production of energy from renewable sources (see graph below).

Photovoltaic and wind power installed 2005 - December 2013 (MW)




The works included by Terna in the 2014 Development Plan will release about 6,000 MW of power from renewable sources, thus obtaining a reduction of $CO_2$ emissions amounting to about 7,800,000 tonnes of $CO_2$/year.

### Reduction of $CO_2$ emissions in 2013

In 2013, the benefits in terms of reduction of $CO_2$ emissions were mainly due to the installation of new "zero-emission" production units. The provisional figure for power installed from renewable sources in 2013 is presented below.

| Energy source | power installed – MW |
|---|---|
| Wind | ~8,500 |
| Photovoltaic | ~18,500 |
| **Total** | **27,000** |

From the 2013 provisional figures, it can be seen that, in 2013, the gross production using wind and photovoltaic energy increased by approximately **5,000 GWh**; this figure corresponds to a reduction of approximately **2,900,000 tonnes of $CO_2$**[9].

# Resource use and waste management

The provision of the transmission service requires the construction and maintenance of a large endowment of capital assets: power lines (pylons, conductors, insulators), transformation stations (transformers, switches, other station equipment), and control systems are the main components.
The use of materials is related, in particular, to constructing electricity and ICT infrastructure. Terna's direct waste management primarily concerns maintenance of electricity infrastructure.

## EN1 Resources

Terna does not use raw materials but purchases finished products such as electrical equipment, conductors, devices and other elements which are used to develop and maintain the National Transmission Grid. An estimate of the materials contained in the primary products purchased by Terna is shown in the following table, where the quantities have been estimated considering the average material contents of the various products purchased by Terna in the years referred to. Information is not currently available on the use of recycled material by the suppliers of the materials and equipment used.

9 Considering a conversion coefficient of 0.567 t $CO_2$/MWh and assuming that the new renewable capacity installed replaces an equivalent thermoelectric capacity.

MAIN MATERIALS IN SUPPLIES - TONNES

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| Porcelain | 699 | 229 | 967 |
| Polymeric | 225 | 131 | 322 |
| Copper | 5,234 | 3,861 | 2,569 |
| Aluminium | 12,909 | 4,069 | 9,588 |
| Steel | 6,204 | 6,163 | 23,875 |
| Glass | 2,014 | 863 | 2,078 |
| Dielectric oil | 924 | 61 | 974 |
| $SF_6$ | 42 | 50 | 54 |

The quantities shown in the table reveal an overall increase in materials purchased. The increase is related to the increased construction of new lines in 2013 and to plant maintenance/renovation work. Specifically, the purchase of 17 new high-voltage transformers (HVT) is to be noted.

## LCA – Life Cycle Assessment

In 2013, Terna performed a life-cycle assessment (LCA) jointly with CESI (the research company in which Terna holds over 30% of the shares) on the standard cable lines with voltages of 380 kV.
The aim of the LCA decision-making instrument is to follow up a product, process, activity or management activity throughout its various phases, so as to identify its effects on the environment. The LCA method is a standardised procedure, making it possible to record, quantify and assess the environmental damage related to a product, procedure or service within a specific context, which must be defined beforehand.
Specifically, the study requested by Terna describes the assessment of the environmental performance of a 380 kV high-voltage alternating-current (HVAC) line performed in line with the standards of the ISO 14040 series.
For the purposes of the study, the following functional unit was taken into consideration: 1 km of double three-phase power line, in buried 380 kV cable, inclusive of joints and terminals, considering also the laying method forming an integral part of the functional unit (in the case in point, direct underground laying, on a level, on city and suburban roads); Below is a diagram of the various stages of the study:
The environmental indexes selected to estimate the environmental impact connected to the life cycle of the product in question were:

- carcinogens;
- non-carcinogens;
- respiratory inorganics;
- ionizing radiation;
- ozone layer depletion;
- respiratory organics;
- aquatic ecotoxicity;
- terrestrial ecotoxicity;
- terrestrial acidification & nutrification;
- land occupation;
- aquatic acidification;
- aquatic eutrophication;
- global warming;
- non-renewable energy;
- mineral extraction.

**Conclusions**
The result of the study showed in particular that:
- the operating phase proves dominant in the life cycle (examined in the impact categories related to the production of electricity needed to compensate grid losses);
- excluding grid losses, the operating phase proves dominant (in all impact categories, given the impact related to the production and copper-mining processes).

Details of the information obtained will be examined over the next year, with the aim of improving the environmental impact of the product examined through a review of the procurement specifications.

PAPER CONSUMPTION TONNES

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| FSC paper | 46 | 52 | 70 |

In the three-year period, paper consumption fell by 34%; it is worth noting that, since the value refers to the amount purchased, it could be influenced by the supply cycle.

EN2 **All the paper purchased since the end of 2009 has been made with TCF pulp** – that is, Totally Chlorine Free – and certified by the FSC (Forest Stewardship Council www.fsc.org) – which guarantees that the forests providing the cellulose are managed in accordance with sustainability criteria from the point of view of both the environment and human rights.

EN8 **Water is not used in the electricity transmission and dispatching production cycle.** Normally, the water used – for hygienic uses, to clean offices and for cooling systems – comes from connections to the water mains for civil use. The reduction in consumption in 2013, compared to 2012, relates to the problem which, in 2012, had caused a consistent leak in a local area being resolved.

WATER CONSUMPTION - CUBIC METRES

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| Water consumption per source | 198,191 | 219,311 | 176,525 |

## Water consumption: comparative data

The comparison of relative data on water consumption is made both in terms of absolute values and per capita consumption. The difficulties in terms of comparability are evident, since water consumption is related to the production process and is, therefore, high for companies producing tangible goods and, above all, for utilities using water in the cooling process; while it is low for companies supplying intangible goods or services such as banks. It should also be noted that consumption does not prove to be significantly influenced by the number of employees. Despite the poor comparability, comparison and disclosure of water consumption levels are considered of interest since it highlights the differences among sectors and emphasises the importance of limiting consumption for various sectors and companies.
In 2013, Terna's total water consumption was 198.2 thousand $m^3$ (equal to 57.6 $m^3$ per capita), a lower figure than 2012, the year for which comparative data is available in which consumption was 219.3 thousand $m^3$ (equal to 63.9 $m^3$ per capita).

**Water consumption[1] 2012**

| | TSO | | FTSE-MIB | | RobecoSAM | |
|---|---|---|---|---|---|---|
| Figures available | 12 | | 23 | | 12 | |
| Unit of measure | thousands of cubic metres | cubic metres/ employee | thousands of cubic metres | cubic metres/ employee | thousands of cubic metres | cubic metres/ employee |
| Average | 315,890.4 | 24,765.5 | 116,123.3 | 1,565.7 | 27,498.7 | 386.3 |
| Max. | 1,509,660.7 | 256,599.0 | 2,357,560.0 | 30,288.0 | 283,000.0 | 5,591.8 |
| Min. | 41.6 | 25.3 | 34.3 | 3.5 | 1.2 | 0.8 |
| Terna | 219.3 | 63.9 | 219.3 | 63.9 | 219.3 | 63.9 |

[1] No distinction was made between fresh water and sea water.

Details of the calculation of the "Water consumption" benchmark are available in the "Sustainability" section of the website.

## Waste

EN22

Most of Terna's waste is recovered to be sent for production recycling. Only some residues are sent to the waste-disposal sites and therefore have an environmental impact.
**The percentage of waste recovered is around 87%** (81% in 2012, 83% in 2011).
Such waste derives mainly from maintenance and modernisation works to the electricity infrastructure; activities which depend on technical considerations regarding the security and efficiency of the system. The quantity of waste may therefore change significantly from year to year.
As regards waste management operations, Terna's environmental policy prefers waste recycling over final waste disposal operations.
Actual recycling depends, however, on the materials which make up the waste. Some materials can easily be separated and consequently reused (for example the iron parts of pylons); however, in some cases, it is impossible or too costly to separate the parts, especially for equipment purchased some years ago.
**For these reasons, the annual changes in the percentage of waste recycled must not be interpreted as representing a trend.**

WASTE BY CATEGORY[1] TONNES

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| **Waste produced[1]** | **5,263.6** | **6,208.1** | **7,198.1** |
| of which hazardous | 3,467.6 | 3,297.4 | 3,887.3 |
| of which non-hazardous | 1,795.9 | 2,910.7 | 3,310.8 |
| **Recycled waste** | **4,554.9** | **5,015.5** | **5,997.3** |
| of which hazardous | 2,874.8 | 3,064.9 | 3,380.1 |
| of which non-hazardous | 1,680.1 | 1,950.6 | 2,617.2 |
| **Waste sent for disposal[2]** | **578.9** | **1,080.4** | **1,153.3** |
| of which hazardous | 439.6 | 215.6 | 450.7 |
| of which non-hazardous | 139.2 | 864.8 | 702.5 |

(1) This includes only the special waste from the production process, not that produced by service activities (urban waste). Sewage and waste from septic tanks from stations not connected to the drainage system are not included; the amount for sewage and septic tanks was 842 tonnes in 2013, 610 in 2012 and 675 in 2011.
(2) Waste sent for disposal may differ from the simple difference between waste produced and recovered, owing to the temporary storage of waste.

The main **non-hazardous special waste produced** by Terna's operating activities consists of non-contaminated **metal waste** (which accounts for approximately 70% of the total of non-hazardous waste produced), deriving from the decommissioning of transformers, electrical equipment and machinery (for example, generators) no longer used, more than 100% of which is recycled.
The main **hazardous special waste produced** by Terna's operating activities consists of:

- **metal waste** (which accounts for approximately 70% of the total of hazardous waste produced) which derives from the decommissioning of **transformers, electrical equipment and machinery** no longer used and contaminated by hazardous substances, more than 90% of which is recycled, after treatment by third parties;
- **batteries** (lead and nickel), which, in the event of a blackout, enable emergency generators to be turned on to keep the electricity transformation service and energy transportation operating during emergencies, 100% of which is recycled;
- **dielectric oils** for the insulation of transformers replaced following the regular checks carried out for transformer maintenance, and which constitute hazardous waste, 95% of which is recycled. This percentage drops to 87% when also including oil emulsions and dregs from collection tanks mixed with rainwater, substances which are hard to recycle.

**Waste sent for disposal** consists mainly of materials used in the maintenance and cleaning of plants (mud, oil emulsions and rags containing oils and solvents) and insulating materials containing asbestos for which no kind of recycling is available. All these items together account for just under 60% of the total destined for disposal (for details of the quantities and types see the tables of indicators).

## Production of waste: comparative data

The comparison of waste production by the various companies was made on absolute and per capita production of the total waste.
The quantity of waste produced depends largely on the sector in which the company operates and, to a lesser extent, on the number of employees. Despite the intrinsic limitations of the comparison and in the absence of more effective normalisation factors than the number of employees, it was deemed of interest to present the main figures on waste production. Such figures do at least provide an indication of the importance of waste – and therefore of its practical importance in terms of sustainability – in the various sectors and companies.
The companies with the biggest waste production in each panel (TSO, RobecoSAM and FTSE-MIB) present absolute values considerably higher than those of Terna; such companies respectively produce 177, 414 and 1,951 times the waste produced by Terna.
In 2013, Terna produced a total of 5,263.6 tonnes of waste,1.53 tonnes per capita. This is compared to the 6,208.1 tonnes in 2012, the year for which comparative data is available, implying 1.8 tonnes per capita. A figure, as stated below, which is the average of all three panels.

**Tonnes of waste produced and tonnes of waste produced per capita 2012**

| | TSO | | FTSE-MIB | | RobecoSAM | |
|---|---|---|---|---|---|---|
| Figures available | 14 | | 24 | | 19 | |
| Unit of measure | tonnes | tonnes/ employee | tonnes | tonnes/ employee | tonnes | tonnes/ employee |
| Average | 260,464.6 | 21.0 | 708,727.0 | 12.0 | 285,193.0 | 5.3 |
| Max. | 1,394,274.4 | 106.4 | 12,114.8 | 164.4 | 2,572,798.0 | 53.1 |
| Min. | 52.9 | 0.1 | 608.5 | 0.01 | 581.0 | 0.1 |
| Terna | 6,208.1 | 1.8 | 6,208.1 | 1.8 | 6,208.1 | 1.8 |

Details of the calculation of the "**Waste production**" benchmark are available in the "Sustainability" section of the website.

## EN30 Costs for the environment

Terna's commitment to the environment is reflected in the costs incurred for environmental reasons, both as investment and as operating expenses. Environmental costs were shown separately on the basis of the definitions presented below, by aggregating information deducible from the company's general and management accounting. Such definitions and the methodology described below have been taken from the operating guidelines of the Terna Group.

### Recording methods

Environmental costs are identified firstly on the basis of the available definitions, in particular those from ISTAT (the National Statistical Institute), Eurostat and the GRI, as well as on the European Commission's recommendation on the collection and disclosure of environmental information in annual accounts and annual reports (Recommendation 2001/453/EC). On the basis of this recommendation, "'the term environmental expenditure' includes the cost of steps taken by an organisation directly or on its behalf by others, to prevent, reduce or repair damage to the environment which results from its operating activities".
Secondly, the aforesaid definitions were applied to the environmental aspects considered significant (for example, the noise of stations, electromagnetic fields) in the Company's ISO 14001:2004 certified Environmental Management System to identify, in the main corporate processes, Terna's operating and investment activities of environmental importance.

Many of Terna's activities described in this Report entail environmental expenses. However, several limitations were introduced in determining the reporting boundary:

- exclusion of integrated costs, i.e. regarding activities whose purpose is not exclusively environmental (for example, the use of pylons with innovative features also from the point of view of environmental integration) because of the subjectivity of accounting for the solely environmental components;
- exclusion of the additional costs connected with the consideration of restrictions or requests for safeguarding the environment during the line planning and designing stages (detours, burials).

Other conditions were that the costs had to be:
a) significant;
b) consistent with the annual reporting of accounts (operating costs and investment clearly distinguished);
c) directly booked on the basis of the existing corporate accounting system.
This last condition fulfils the need to minimise recourse to estimates based on non-accounting analyses.

## Costs for the environment

In the light of the above, the following table constitutes the best possible representation of the costs incurred by the Terna Group for the environment.
These costs exclude expenses regarding internal resources and consider only expenses for external purchases. An exception is the "Environmental activities – existing plants" item, which includes the costs of internal personnel.
In accordance with the method adopted and the footnotes to the table, it should be noted that the environmental costs shown are a subset of the total environmental costs actually incurred, as defined above.

COSTS FOR THE ENVIRONMENT – INVESTMENT AND OPERATING COSTS - MILLIONS OF EURO

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| **Investments** | | | |
| Environmental Offsets | 8.4 | 4.1 | 1.1 |
| Environmental-impact studies | 3.9 | 1.3 | 1.4 |
| Environmental activities – new plants | 5.0 | 6 | 4.2 |
| Environmental activities – existing plants | 7.8 | 9.6 | 14.2 |
| Demolitions | 1.0 | 2.4 | 2.8 |
| **Total investments** | **26.1** | **23.4** | **23.8** |
| **Costs** | | | |
| Costs for environmental activities | 17.9 | 15.1 | 10.3 |
| **Total operating costs** | **17.9** | **15.1** | **10.3** |

**Environmental offsets:** these are amounts for offsetting the works set out in the Grid Development Plan, as determined by special agreements entered into with local institutions. The increase of the amount entered in the table reflects the progress of the work scheduled in the Development Plan.
**Environmental-impact studies:** these relate to plants provided for in the Grid Development Plan that are at the construction stage or in the process of being authorised by the relevant administrations.
**Environmental activities – new plants:** the amount shown is the result of an estimate. On the basis of an analysis of several large investment projects, at least 1% of the total project expense related to environmental items, usually determined by obligations (for example, camouflaging with trees, barriers against noise, installation of dissuaders for birdlife, environmental monitoring, analysis of excavated earth and rock). Therefore, a value of 1% of 2012-2013 investment costs for projects with similar features was considered.
**Environmental activities – existing plants:** expenses for upgrading existing plants in accordance with environmental provisions and new regulations (for example, noise, visual landscape issues).
**Demolitions:** costs for the definitive dismantling of lines as part of rationalisation projects.
**Costs for environmental activities:** cutting vegetation, cutting grass, waste management and demolitions/dismantling for small amounts not included in investments. These cost items, which can be determined directly from the management accounting, do not exhaust the year's total environmental costs, but represent the majority. The increase in 2013 reflects the increased scope both of the stations requiring grass cutting and of the lines requiring vegetation cutting.

2013

Terna
TERNA GROUP

# OUR PEOPLE

## Our approach

Terna sees its human resources as an essential part of corporate activities, while also being individuals who should be valued and whose rights should be respected. Its approach to relations with its collaborators is characterised by:

- **concern for safety** and the prevention of injuries to ensure the physical integrity of employees;
- the design of management and development systems to **improve performance and develop individual skills**;
- **investment in training**, ensuring the growth of the Company and its employees;
- **remuneration and welfare policies** aimed at aligning individual performance with the Company's goals and providing economic security for employees and their families;
- a well-organised system of **industrial relations based on trade-union involvement** in numerous aspects of company life;
- listening to employees by using staff surveys.

Staff policies are established by the Human Resource and Organisation Department, while staff management is entrusted, as well as to the HR Department, to the relevant department Heads. Safety issues are the responsibility of the Security Services Department. Both departments are part of the parent company's Corporate Affairs Division. For information on relations with employees and unions, please also see "Stakeholder engagement".

## An outline of the employees

LA1
LA2
LA13

PERSONNEL COMPOSITION BY CATEGORY

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| **Total** | **3,442** | **3,433** | **3,493** |
| Senior executives | 62 | 59 | 60 |
| Junior executives | 501 | 502 | 490 |
| White-collar workers | 1,922 | 1,925 | 1,966 |
| Blue-collar workers | 957 | 947 | 977 |

At the end of 2013, the Italian companies in the Group had 3,442 employees (+9% compared to 2012), in addition to the three employees of the Montenegrin subsidiary, Terna Crna Gora d.o.o.[10].

Retirement is by far the most common reason for employees leaving, and is concentrated in the highest age brackets. The turnover rate for spontaneous resignations is always very low (0.26% in 2013; 0.34% in 2012; 0.46% in 2011). The turnover rate of employees aged under 30 is consistently below 0.09% for the three-year period. The total turnover rate, therefore, essentially reflects terminations owing to retirement. The average length of service of employees who left the Company in 2013 was 32.6 years.

In 2013, Terna made use of 39 temporary workers (compared with 31 in 2012 and 34 in 2011), employees of agencies that provide a temporary employment service to Terna. The decrease in temporary workers (from 1.5% in 2012 to 0.9% in 2013) reflects **stabilisation thanks to the permanent recruitment** of 46 employees, previously employed with trial contracts that expired during the year.

10 Unless explicitly indicated, Terna Crna Gora d.o.o. employees are excluded from the data presented in this chapter.

PERSONNEL CHANGES

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| **Total employees** | **3,442** | **3,433** | **3,493** |
| Employees recruited during the year | 70 | 45 | 176 |
| Employees left during the year | 61 | 105 | 151 |
| Turnover rate on termination (%)[1] | 1.8 | 3.0 | 4.4 |

[1] The turnover rates report the termination flows with respect to the number of employees as at 31 December of the previous year.

PERSONNEL COMPOSITION

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| **Total employees** | **3,442** | **3,433** | **3,493** |
| By contract type | | | |
| - permanent | 3,412 | 3,383 | 3,350 |
| - temporary | 30 | 50 | 143 |
| By gender | | | |
| - men | 3,048 | 3,041 | 3,105 |
| - women | 394 | 392 | 388 |
| Average age of personnel (years) | | | |
| Average age | 46.2 | 45.7 | 45.2 |

Over time, the generational turnover the Company is experiencing, and its hiring policies, have led to an increase in the educational qualifications of the corporate population. Today, 70% of employees have a degree or high school diploma (69% in 2012).

## Management of generational turnover

EU15

The new Italian legislation regarding retirement (Art. 24 of Italian Law No 214/2011), which raised the age and years of contribution requisites necessary for entitlement to a pension, reduced the "catchment area" of potential leavers for Terna. A summary table of potential personnel leaving for retirement in the period 2014-2018 is shown below. The total of 549 people can be broken down as follows:

| | | |
|---|---|---|
| **People entitled (as at 31.12.2013) to a pension under the old legislation at 31.12.2011:** | | **87** |
| of whom: | senior executives, junior executives, white-collar workers | 63 |
| | blue-collar workers | 24 |
| **People entitled to a pension under the new legislation:** | | **462** |
| of whom: | senior executives, junior executives, white-collar workers | 284 |
| | blue-collar workers | 178 |

The probability of effective retirement in the five years considered is very high only for the first group of employees, for whom the reform guaranteed application of the previous requisites. Instead, for members of the second group, it is expected that more will opt to continue in employment and thus gain a higher pension. Some time ago, Terna began a series of initiatives to manage generational turnover. Among the most significant are:

- the transmission of knowledge and experience, often specific exclusively to Terna, by increasing use of training courses taught by in-house teaching staff;
- professional development projects aimed at creating and transmitting technical and managerial skills, enabling adequate performance of critical roles.

It should finally be considered that the entry of new, more highly-educated staff will make it possible to carry out the same tasks more efficiently.

## Personnel turnover: comparative data

Terna's staff turnover rate is defined as the ratio of employees leaving during the year to the number of employees as at 31 December of the previous year.
As the staff turnover rate is an indirect indicator of the internal company climate affecting all divisions, the figures for the transmission companies (TSO panel) and those of the large companies listed on the Italian stock exchange (FTSE-MIB) were taken into account, as well as those for the international leaders in sustainability (RobeoSAM – Supersector Leaders).
In **2013**, Terna's turnover rate was **1.8%.** In **2012**, the year for which comparative data is available, the turnover rate was **3.0%**, below the average of all the reference panels.

| | Turnover rate – percentage values 2012 | | |
|---|---|---|---|
| | TSO | FTSE-MIB | RobecoSAM - Supersector Leaders |
| Figures available | 20 | 24 | 14 |
| Average | 4.3 | 7.4 | 10.6 |
| Max. | 11.8 | 15.9 | 26.6 |
| Min. | 1.0 | 1.1 | 0.4 |
| Terna | | 3.0 | |

Details on the "staff turnover" benchmark figures are available in the "Sustainability" section of the website.

# EU14 The HR process

### Research and selection

The personnel recruited from the external labour market are above all graduates – in particular engineers – and qualified people with diplomas from professional institutes, most with an electrical specialisation. Once employed, the new recruits expand their knowledge and the necessary specific skills through dedicated introductory training courses.
The process of searching for and selecting personnel is managed by the Human Resources and Organisation Department, which also handles relations with schools, universities and employment agencies.
The preferred recruitment channel for candidates is the **"Working at Terna" section of the company website**.
At the end of the **selection process**, Terna always informs all candidates of the outcome of their application, whether positive or negative.
Terna is consolidating and expanding its relations with universities and the world of post-graduate training and institutional training in general, to support the process of finding new staff and create a virtuous circle of exchange between the Company and the outside world. The Company has entered into agreements with the leading Italian universities and business schools, funding the creation of specialised Master's courses.

Key figures 2013
- 35 agreements with universities and business schools (30 in 2012)
- 6 Sponsored master's (7 in 2012)
- 116 hours of teaching Terna employees at universities and business schools (100 in 2012)
- 677 students from university or Master's courses visiting the plants (550 in 2012)
- 52 internships, traineeships, project work activities (37 in 2012)
- 14 career days in which Terna took part (13 in 2012)

## Training

**Training at Terna** continuously embraces all aspects of professional life. It is aimed at creating value for our people through increasing and diversifying skills and employability, and creating value for the Company through developing human capital in line with the Company mission and the business strategy.
The main context for passing on specialised know-how is the **in-house "Campus" faculty**, which has been active since 2012 and can hold 200 employees involved in various training activities. Here, expert staff act as planners and teaching staff. These activities are combined with external partnerships with universities and business schools to ensure a varied and stimulating environment.
Terna's training model prioritises **active teaching methods in classroom training** and uses **on-the-job training** to support integration into the Company or into highly professional roles. **E-learning** is used in campaigns for the transfer of specific knowledge and information.
Training activities are subject to systematic assessment of the results by means of satisfaction questionnaires and tests to ascertain the learning achieved.
Training initiatives are categorised by subject area:

- **Context & Business Model** for knowledge of the internal and external business context in which Terna works and to promote development of the corporate identity.
- **Education** for managerial and staff development.
- **Training** for development of technical and professional skills and the acquisition of transversal skills (for example foreign languages, Office Automation).
- **Courses**, short, medium and long training courses, devoted to specific target addresses and made up of a mixture of initiatives belonging to the three previous subject areas. The proposals are designed for new recruits and staff in service belonging to uniform professional groups (e.g. shift workers in the control room).

The hours of training provided in 2013 reflect the continuation of a transitional phase for 2012-2013 which involved Terna going through corporate re-organisation (transformation into a Group) and, starting from July 2013, the reorganisation of Terna Rete Italia, its largest company. Classroom training activities were concentrated mainly in the first half of the year, while the second half was dedicated to planning and organisation teaching activities starting in 2014 for new roles and professional groups (e.g. multi-skill figures) needed as a result of the re-organisation. In addition, the continuation of a limited influx of new staff, affecting the number of hours of training provided, is to be noted. Despite a reduction in the total hours of training provided, indicators of the degree of coverage and distribution per category are in line with previous years.

LA10

Key figures 2013

- 89% of employees have attended at least one training course (86% in 2012)
- 120,115 hours of training provided (143,418 in 2012)
- 99.5% hours provided in the classroom (99% in 2012)
- 35 hours of training per capita (41 in 2012): 36 for men, 25 for women

As regards the Context & Business Model section, 13,851 hours were provided (compared with 6,352 in 2012). These can only be partially attributed to activities for new recruits and refer mainly to refresher courses on the Model 231 and the electricity market. A training event on sustainability funded by Fondirigenti and involving almost all senior executives is also to be noted.
On the subject of education, 12,782 hours were provided (a drop compared with 17,707 in 2012), inclusive of a managerial training event funded by Fondirigenti and involving almost all managers, with a significantly higher degree of coverage than 2012.
Training remains the area with the highest investment of 93,482 hours (119,359 in 2012); this fall was due mainly to the reduction in new recruits.
Within this, the Safety section recorded 37,940 hours (41,137 in 2012) showing a slight fall due to the lower number of new recruits and to the absence of widespread campaigns such as those organised in the last few years following significant legislative changes.
The grouping of many of the training activities for all the sections, for junior executives and white and blue-collar workers, into two relevant training plans funded by Fondimpresa is also to be noted. Further training indicators are available in the indicator tables (page 130).

## Training for employees: comparative data

The comparison of staff-training performance uses the per capita hours of training provided by companies as a reference.
Since per capita training does not depend on the size of the company or on the sector in which companies operate, figures for the companies on all three panels were examined.
In 2013, Terna provided an average of **35 hours of training per capita** compared to **41 hours in 2012** (the year for which comparative data is available). Compared to the other companies, Terna is in line with the average value for the RobecoSAM panel, below average for the TSO panel and above average for the FTSE-MIB panel.

| | Hours of training per capita – 2012 | | |
|---|---|---|---|
| | TSO | FTSE-MIB | RobecoSAM - Supersector Leaders |
| Figures available | 14 | 27 | 13 |
| Average | 48.7 | 30.8 | 42.0 |
| Max. | 71.0 | 64.7 | 143.2 |
| Min. | 36.3 | 3.6 | 10.0 |
| Terna | | 41.0 | |

Details on the "staff training" benchmark figures are available in the "Sustainability" section of the website.

## Developing human capital

Terna's system for staff development, and therefore professional growth of staff, is based largely on performance as the key indicator.
At the core is the **Global Performance System (GPS)**, based on a definition of performance comprising two aspects:
- the concrete achievement of pre-set targets;
- the organisational procedures implemented to achieve them.

Targets, conduct, assessments and feedback are collected using IT software accessible to all personnel involved, which guarantees traceability over time and constant monitoring of growth. Application of the GPS currently involves **all senior executives, all junior executives** (excluding the shift managers of the real-time network) **and some white-collar workers**.

LA12 In 2013, 756 employees were involved, equal to 30% of the managerial and white-collar workforce (38% of female employees and 29% of male employees). This number is destined to increase as part of new company programmes, including new target groups.
For blue-collar workers and other employees not included in the GPS, other forms of assessment are used such as periodic discussions between managers and representatives of the Human Resources and Organisation Department.
Measurement of performance is also related to **payment of the variable parts of remuneration**. Various tools are used to do so, according to the type of corporate figures involved and the time horizon of the results to which they:
- **Long-Term Incentive Plan (LTI)** 2011-2013 for multi-year corporate objectives, for senior executives who hold the most important positions in terms of achieving strategic objectives; for junior executives who hold key roles in the Company, a "Fidelity bonus" is provided.
- **MBO** (Management By Objectives) for the Company Management, which links individual bonuses to the of achievement of targets, both at the corporate and individual levels.
- **Balanced Scorecard** system to assess, quarterly, progress in achieving objectives – including sustainability objectives – related to the Strategic Plan and the MBO. The achievement of sustainability objectives then affects the attribution of variable pay components to the managerial roles.

Recognising the importance of the extensive involvement of employees in implementing programmes and plans regarding quality and productivity, Terna signed an agreement with the trade unions governing a **corporate-result bonus assigned to blue- and white-collar workers**, taking into account both general company trends and specific work-related employee targets to encourage productivity. (See the section on "Industrial relations" on page 121).

# Corporate welfare

As in other large electricity companies, the treatment of employees at Terna (pay, working hours, holiday, and other aspects of employment) is substantially better than the Italian average.
Benefits are available for all employees including part-time workers and those with trial contracts, specifically:

- supplementary health care;
- supplementary pensions (voluntary participation);
- insurance for non-occupational injuries;
- recreational associations;
- more favourable maternity-leave conditions than those provided for by the law;
- subsidised loans for purchasing a home, as well as for serious family needs;
- cafeteria service or meal coupons.

LA3

Terna's employees (excluding senior executives who have access to a different fund) are automatically signed up to the **supplementary health-care fund FISDE** for employees of the Enel Group).
The FISDE pays part of the cost of medical treatment of illnesses not only for its employee members, but also for their dependants.

LA8

| Beneficiaries | Information on and prevention of risks | Treatment |
|---|---|---|
| Workers | Yes | Yes |
| Families of workers | No | Yes |

Terna offers its employees a defined-contribution supplementary pension scheme on a voluntary basis. Senior executives may participate in the Fondenel pension fund (www.fondenel.previnet.it) which envisages contributions both from the senior executive and the Company. The other employees (blue-collar workers, white-collar workers, and junior executives) may sign up for the Fopen pension fund (www.fondopensionefopen.it). In addition to the pension plans, the employees of the Italian companies receive other defined-benefit payments.
Specifically, during their working life, all employees receive a contractual "loyalty bonus" when they reach their 25th and 35th year of employment in the Company. While, upon terminating their employment, they receive benefits due to all employees (severance pay), senior executives hired or appointed up to 28 February 1999 (allowance in lieu of notice), and blue- and white-collar workers and junior executives hired up to 24 July 2001 (an additional month's pay).
Further information on the composition/coverage of and changes to severance pay and other staff funds is available in the Annual Financial Report.

EC3

## Caring for children and family members

LA15

Italian law regulates maternity and parental leave, providing for a general coverage, with respect to which Terna offers more favourable conditions, in application both of the National Collective Labour Agreement (CCNL) for the electricity industry and of company agreements. The most important measures are:

- five months of paid maternity leave, awarded to the mother and distributed before and after the birth. Terna guarantees 100% of normal pay compared with the 80% provided for by law;
- six further months of maternity leave paid at 30%. Terna increases this to 45% and 40% respectively in the first and second month of use. The leave may be taken also by the father, within a maximum limit of ten months for the sum of both parents' leave. If not used in the first years of the child's life, the leave can also be used later, up to the age of eight years, but will be unpaid;
- unpaid leave (paid only in the case of serious disability), without limits on use, in the case of illness of children within their third year;
- three days a month, or two hours a day, of leave to care for children or other family members (paid in the case of serious disability);
- extraordinary leave of two years in the case of serious disability of children or other close relations.

The table below shows the number of employees who made use of parental leave for at least 29 days.

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| **Total** | **20** | **25** | **23** |
| - of whom women | 18 | 21 | 18 |
| - of whom men | 2 | 4 | 5 |

All 25 employees who made use of the leave in 2012 were still in service at the end of 2013; of the 23 employees who made use of the leave in 2011, 22 were still in service after 12 months (96%), one employee resigned in 2012.

## LA13 LA14 Diversity and equal opportunities

Terna adopts merit-based systems for selecting, developing and paying personnel that recognise and reward performance. All forms of discrimination, beginning with the selection and hiring process, are explicitly forbidden by the Group's Code of Ethics.
A large majority of employees are men because of the traditional scarcity of female labour supply in more technical occupations. However, the presence of women is increasing, partly as a result of the general trend in the labour market which has seen a greater participation of women.
**The percentage of female employees** at Terna in Italy was 9.0% at the end of 2005 (the year in which Terna gained operating autonomy) and **has grown continually to reach 11.5% at the end of 2013**. The increase also regards higher-qualified positions of responsibility (senior and junior executives).

Key figures 2013
- 11.5% of all employees are women (11.4% in 2012)
- 17.9% of all managerial positions are occupied by women (17.3% in 2012)
- 16.7% of all new employees, net of blue-collar workers, are women (31.3% in 2012)

The main indicators chosen by Terna to monitor the equal treatment of men and women show that the management and development systems adopted do not disadvantage women. The data on remuneration also show limited gaps for white-collar workers and junior executives and more significant, but decreasing, gaps for senior executives.

EQUAL OPPORTUNITIES FOR MEN AND WOMEN

| Percentage values | 2013 | 2012 | 2011 |
|---|---|---|---|
| **Gender pay gap**[1] | | | |
| Senior executives | 81.3 | 79.2 | 79.6 |
| Junior executives | 96.3 | 94.5 | 93.7 |
| White-collar workers | 95.1 | 94.0 | 93.9 |
| **Gender remuneration gap %**[2] | | | |
| Senior executives | 78.5 | 76.6 | 75.5 |
| Junior executives | 98.2 | 97.5 | 96.9 |
| White-collar workers | 91.3 | 89.9 | 90.2 |

(1) The figure is the result of the ratio between the annual basic pay for women for the different grades and the annual basic pay for men for the same grades. The figure was not calculated for blue-collar workers because there are no women in that category.
(2) The figure is the result of the percentage ratio between the total annual remuneration for women for the different grades and the total annual remuneration for men for the same grades. The total remuneration includes, besides basic pay, production bonuses, the different types of incentives and the value of the benefits received over the year.

EC7 Almost all employees are Italian citizens (only 13 employees have foreign citizenship).
As of 31 December 2013, **140 people belonging to protected categories** (131 in 2012 and 128 in 2011) were employed, in line with the regulations applying to Terna. Further indicators of equal opportunities are available in the indicator tables (page 130).

## Gender pay gap: comparative data

The comparison between Terna and other companies in terms of equal opportunities is conducted by taking as a reference the percentage gender pay gap, the result of the ratio between men's and women's basic annual salary for the same categories of work. On account of the difference between categories from one country to another, the comparison was only performed for the companies in the FTSE-MIB panel, where most of the companies use typical Italian categories to classify employees.
In 2013, the percentage gender pay gap at Terna was 81.3% for senior executives, 96.3% for the junior executives and 95.1% for white-collar workers; **in 2012**, the year for which comparative data is available, the pay gap was **79.2% for senior executives, 94.5% for junior executives and 94.0% for white-collar workers.** The difference was not calculated for blue-collar workers, because there are no women in that category at Terna.

| | Gender pay gap – percentage values 2012 – FTSE-MIB Panel | | |
|---|---|---|---|
| | Senior executives | Junior executives | White-collar workers |
| Figures available | 19 | 21 | 21 |
| Average | 87.0 | 90.3 | 87.7 |
| Max. | 103.0 | 101.0 | 97.9 |
| Min. | 74.0 | 80.0 | 43.0 |
| Terna | 79.2 | 94.5 | 94.0 |

Details on the "Gender pay gap" benchmark figures are available in the "Sustainability" section of the website.

# Health & safety and correct working practices

To work in safety, without putting health at risk is a fundamental worker's right; Terna invests greatly in ensuring this is respected with regard to its staff.
Safety is **part of the global corporate culture**, and those who play a key role in operations are encouraged to be involved in paying close attention to these issues and how to improve on them.
This is true more generally for **respect of human rights and workers' rights**: the Company undertakes to make sure that such rights are also guaranteed to those working for contractors.

## Ensuring employee safety

EU16

Terna's commitment to safety should be seen in the context of the existing legislative provisions. The Italian legislation on the subject of safety, (Italian Legislative Decree 81/2008 "Consolidated Act on Occupational Health and Safety") is one of the most stringent in Europe and obliges companies to carry out a detailed assessment of the risks relating to workers' health and safety. Terna specifically focuses on analysing the risks deriving from the interference of the work of contractors and subcontractors, for all operations that make up the working process at construction sites.

Terna's approach to safety at work hinges on a **system of instruments that apply to all company processes:**

- **Clear safety-policy guidelines**
  The importance of protecting people from physical harm is affirmed in Terna's Code of Ethics. The Company's Occupational Safety Policy specifies the guidelines in the Code of Ethics, for example with an explicit commitment to promoting accident prevention for all employees, including contractors.
- **Certified Management System BS OHSAS 18001:2007**
  The system, which covers 100% of company activities and is integrated with the quality-and-environment system, is based on scrupulous risk assessment, with particular focus on electrical risk (Rules for the Prevention of Electrical Risk – DPRET).
- **Organisational unit responsible for safety**
  The unit is composed of a central coordination office and local heads in the area offices and on construction sites. The unit also performs direct inspections of work places and construction sites, and continual analysis and monitoring of the risks deriving from corporate activities.
- **Thorough supervision**
  The correct and full application of the procedures is subject to thorough inspections by the Safety, Prevention and Protection Managers (twice a year for each, in the respective areas of responsibility), **internal compliance audits** of all the Terna Group Companies and **external audits** for confirmation of certification. An elected employee representative, responsible for verifying the application of regulations, is also present (workers' safety representatives, see indicator LA6).
- **Intranet site "Environmental Safety & Security" section**
  Within the corporate intranet there is a **database of legislation** on occupational safety (national and regional regulations, technical standards issued by competent bodies).
- **Thorough and ongoing information and training activities**
  All personnel have access to the key concepts and changes on the subject of safety through various channels including the corporate intranet and organised informative meetings. The equipment present in the **Viverone (Biella) training centre** makes it possible, in particular, **to carry out training** on safety for climbing pylons (through use of life-size pylons in the gym) and for live-wire work in a controlled environment. In 2013, 37,940 hours of training were devoted to health and safety, of which over half was aimed at the Company's blue-collar workers (further training indicators are available on page 113).
- **Occupational safety performance targets**
  The "**occupational safety index**" in the indicators system is made up of the injury rate and the lost-day rate linked to the variable remuneration of the departments involved.
- **Applied Research**
  A specific organisational unit of the Engineering Department experiments with safety materials and devices, testing their reliability through resistance trials in extreme conditions.

## Non-conventional storage system safety

In 2013, following authorisation for the construction of two non-conventional storage system sites (NCSS see page 73), specific analysis was carried out for such plants regulated by the "Seveso" Directive. Given the type of risk identified, the authorised plants do not require presentation of a "safety report" since the quantity of hazardous substances subject to the directive falls within the limits provided for by the Directive for art. 6. Subsequently, a risk analysis was prepared. The "Notification", the "Information Sheet on the Risk of Major Accidents for residents and workers," and the required annexes were prepared and sent to the relevant authorities for the authorised NCSS plants. In 2014, the further requirements provided for in the decree will be fulfilled before the effective introduction phase of the chemical risk on site.

## Occupational injuries

LA7

In 2013, as in the two previous years, there were no fatal occupational injuries of Group employees, nor were there cases of fatal or serious accidents, including those occurring in previous years, for which, in the three years considered, corporate liability was definitively ascertained. The total number of injuries fell by 20% compared to 2012, from 51 to 41 in 2013. Both the injury frequency rate and the lost-day rate showed a reduction compared to the previous year. The absentee rate confirmed the trend.
In 2013, for the first time in the three-year period considered two accidents occurred among Terna employees (for details of the injury rates divided according to type, see the indicator tables on page 130).

| OCCUPATIONAL INJURIES – TERNA EMPLOYEES, GRI-ILO DEFINITIONS[1] | 2013 | 2012 | 2011 |
|---|---|---|---|
| Injury Rate | 1.42 | 1.77 | 1.67 |
| Lost-Day Rate[2] | 46.57 | 63.03 | 46.35 |
| Absentee Rate[3] | 7,432.2 | 7,632.1 | 7,757.0 |
| Occupational Disease Rate[4] | 0 | 0 | 0 |
| Number of injuries | 41.0 | 51.0 | 49.0 |
| - of which serious | 2 | 3 | 1 |
| - of which fatal | 0 | 0 | 0 |

(1) As required by the GRI protocols, the definitions adopted are those provided for by the International Labour Organization (ILO). To facilitate comparison with other sources, the following notes show the figures of the same indicators calculated with alternative formulae. It was not considered necessary to further break down the data by region, because Terna operates only in Italy.
**Injury Rate.** This is the number of injuries with at least one day's abstention from work divided by the number of hours worked during the year and multiplied by 200,000 (corresponding to 50 working weeks x 40 hours x 100 employees). To facilitate comparison with other sources, this indicator was also calculated using a multiplication factor of 1,000,000 instead of 200,000 (consequently obtaining an injury rate five times that of the ILO). With this calculation method, the injury rate came out **at 7.1 in 2013, 8.8 in 2012, and 8.3 in 2011.**
**Lost-Day Rate.** This is the ratio between days not worked owing to injury and hours worked in the year, multiplied by 200,000. Days not worked are calendar days, counted from when the injury occurred. To facilitate comparison with other sources, this indicator was also calculated using a multiplication factor of 1,000. With this calculation method, the lost-day rate came out **at 0.2 in 2013, 0.3 in 2012, and 0.2 in 2011.**
**Absentee Rate.** This is the number of days of absence owing to illness, strikes and injuries out of the number of days worked in the same period, multiplied by 200,000. To facilitate comparison with other sources, this indicator was also calculated as a percentage of days worked. With this calculation method, the absentee rate came out **at 3.7 in 2013, 3.8 in 2012, and 3.9 in 2011.**
**Occupational Disease Rate.** This is the total number of cases of occupational disease divided by the hours worked in the year, multiplied by 200,000.

(2) In 2013, unlike previous years, when calculating the lost day rate only the days not worked relative to injuries occurring in 2013 were considered and not any continued absence related to injuries occurring in previous years.

(3) The reasons for absence considered do not include maternity leave, marriage leave, study leave, leave for trade union activities, other cases of paid leave, and suspensions.

(4) No hours of absence were ascribable to occupational disease because the type of activities carried out by Terna does not entail any work associated – on the basis of the official legal tables – with the possible onset of occupational diseases. Terna's occupational disease rate must therefore be considered to be always zero.

As shown in the table below, in 2013, two fatal accidents occurred among employees of contractors and subcontractors. For one of these, investigations are still in progress and the possibility of natural causes having been responsible has not been ruled out.

OCCUPATIONAL INJURIES – CONTRACTORS AND SUBCONTRACTORS

| GRI-ILO DEFINITIONS | 2013 | 2012 | 2011 |
|---|---|---|---|
| Occupational injuries – contractors' employees | 11 | 10 | 13 |
| - of which serious | 4 | 3 | 4 |
| - of which fatal | 2 | 2 | 0 |
| Injury rate[1] | 0.58 | 0.63 | 0.75 |

(1) This is the number of injuries with at least one day's abstention from work divided by the number of hours worked during the year and multiplied by 200,000 (corresponding to 50 work weeks x 40 hours x 100 employees). To facilitate comparison with other sources, this indicator was also calculated using a multiplication factor of 1,000,000 instead of 200,000 (consequently obtaining an injury rate five times that of the ILO). With this calculation method, the injury rate came out at **2.9 in 2013, 3.1 in 2012, and 3.7 in 2011.**

HR1

## Human rights

HR3
HR4
HR5
HR6
HR7
HR9
HR10
HR11

The Terna Group operates in Italy, where the legal framework and the level of civil development amply guarantee respect for human rights, freedom of association, and collective bargaining, thus making it non-critical for a company to take particular action on these issues with the implementation of specific management policies.
As regards the Group's work abroad, it is to be noted that, in the whole of 2013, Terna's projects abroad (in the Balkans and North Africa) did not involve operating activities (e.g. development of infrastructure, building works). The Company Terna Crna Gora founded under Montenegrin law in June 2011 (three employees with local contracts as at 31 December 2013), adopted the Group's Code of Ethics in February 2012.
Furthermore, since December 2009 Terna has been part of the Global Compact, adopting its principles as formal reference after already citing them since 2006 in its Code of Ethics.
Notwithstanding the above, and the fact that there are currently no critical issues, in principle, the managerial responsibility for human rights rests, above all, with the Human Resources and Organisation Department, the Audit Function for ensuring that Terna's Code of Ethics is correctly applied, and the Procurement and Contracts, and Security Services Departments for ensuring respect for human rights and workers' protection in contracted and subcontracted works performed on Terna's behalf. The Corporate Social Responsibility Unit tracks changes in external references (e.g. international conventions).

## Safeguarding health, safety and human rights in contractor companies

In 2013, the days worked by employees engaged by contractor companies in work carried out on Terna's behalf were 500,884, equivalent to 2,277 full-time employees (FTE – Full-Time Equivalent) working all over the country (mainly blue-collar workers constructing electricity lines and stations).

EU17

| CONTRACTORS AND SUBCONTRACTORS' EMPLOYEES[1] | 2013 | 2012 | 2011 |
|---|---|---|---|
| Days worked | 500,884 | 419,543 | 456,807 |
| Full-time equivalent | 2,277 | 1,907 | 2,076 |

[1] The data take into account the term of construction contracts and the variations in the workforce required, and relate to various types of Terna work contracts, from large construction sites to cutting trees under power lines. The days worked and the FTEs are estimated on the basis of the average daily presences at the largest construction sites and the amounts paid for contracted work on smaller sites. No further information is available on the types of contracts used by contractors.

The increase in the number of contractor and subcontractor employees in 2013 is related both to the increase in on-site activities and to a change in the scope of the data collected, which for 2013 also includes workers employed for the renovation of several offices and the Group's subsidiaries Terna Storage and Terna Plus.
Considering the significant use of external labour on Terna's construction sites, **work contracts** are subject to stricter rules regarding qualification and management in particular relative to occupational safety.
During the supplier qualification process, Terna requires that documented procedures for protecting the health and safety of workers be presented. For companies in categories considered most significant with regard to safety and the environment, an in-depth investigation of the management practices adopted is envisaged by means of a detailed questionnaire.

EU16

With the objective of further reducing the risks regarding contract work, Terna requires additional specific certifications concerning contractor employees such as:

- certification that they understand Italian, so as to ensure their access to information on construction-site safety;

EU18

- at sites for the construction of overhead electric power lines, certification that **all workers** (mainly blue-collar) have examined and have been appropriately instructed on the use of individual protection devices, the risks established in the Construction-site Safety Plan ("PSC") and the Operating Safety Plan ("POS") prepared by Terna, and the environmental-protection measures as established in the relevant operating procedure "Management of the environmental aspects during plant construction", which is attached to each contract;
- for several specific roles (e.g. workers installing and maintaining overhead lines, workers cutting vegetation, site foremen, and safety managers), an attendance certificate for specific training courses lasting between 24 and 32 hours;
- appointment of a Health, Protection, and Prevention manager ("RSPP"), a construction-site safety representative, an emergencies manager and substitute, and an assigned doctor;
- request in contracts drawn up with contractors to provide indexes relative to injuries occurring during the year.

The actual training of personnel is verified through a web platform – the Qualified Company Personnel project.
The costs of eliminating or limiting the risks of interference are excluded from the downward price competition for awarding the contract. HR2
To reduce to a minimum the risk of violations of human and labour rights to the detriment of contractor employees, Terna also requires:
- a declaration that the collective bargaining agreement is applied to all employees; LA4
- certification that all social-security and other contributions have been duly paid;
- a copy of an insurance policy covering damages to third parties, personal injuries and damage to property including the contractor's, for the entire duration of the work and in an amount appropriate to the type of work performed;
- a periodical copy of the payment of social-security and other contributions;
- certification by the competent doctor that the contractor's employees are fit for their jobs.

### Activities in 2013

In line with previous years, in 2013, 33 construction sites for building lines and stations entrusted to contractors were checked across the country. The construction sites were chosen on the basis of the duration of the work, considering that work that lasts longer is probably more complex.
Within the sphere of the **Terna – ANIE technical forums** (National Federation of Electro-technical firms) to harmonise and standardise safety rules at electricity construction sites, after preparing the document "Organisation of construction sites for the building, maintenance and demolition work on HV overhead power lines under the terms of Italian Legislative Decree 81/08", in 2013 preparation of the document "Methods of Climbing, Accessing, Moving, and Positioning when working at height" was completed. Furthermore, the following documents are currently being prepared:
- the list of equipment and machinery managed and required in the qualification stage, necessary to perform work on the grid from 132 kV to 420 kV;
- methods of working on high-voltage lines.

Lastly, on 31 October 2013 Terna presented the new "**Pact for safety at work**". The initiative involved about 2,000 company suppliers and aims to promote an innovative safety instrument for the sustainable, vigorous growth of the companies taking part.
The ten rules in the Pact were presented during an event attended by Terna's Chairman and Head of Corporate Affairs, as well as the Minister for Employment and Social Policies, the President of INAIL, the Vice-President for Industrial Relations of Confindustria and the Chief of the Special Fire Brigade Corps.
The three principles inspiring the new Pact are:
1. Terna's wish to share increasingly challenging objectives, strategies and practices on the matter of workers' safety, including through interactive means of participation.
2. The need to increase training and awareness of all the workers involved.
3. The promotion of forms of collaboration with bodies and institutions aimed at minimising risks.

## Industrial relations

All Terna's employees[11] are covered by a **collective bargaining agreement** ("CCNL") adopted by the companies in the **electricity industry**, which governs many aspects of employee terms and conditions. Terna participates in establishing industry rules because it is part of the employer delegation that negotiates the renewal of the contract with the Trade Unions. LA4
The current CCNL expired on 31 December 2012, and was renewed in February 2013.
Relations with Trade Unions in the industry also give rise to the **regulation of indispensable tasks** that must be performed, **in the event of a strike**, to ensure service continuity. At Terna, the National Trade Union Agreement signed in February 2013 is applied. As workers responsible for NTG transmission and operating activities, the following shift workers are exempt from strikes: HR5
- operators responsible for real-time control of the national electricity system, remote control of transmission plants, verifying production plans and procuring the production resources necessary for dispatching;
- workers with the task of checking, coordinating and operating the computer systems, auxiliary services and infrastructure governing the dispatching of electricity nationwide;
- Security Operations Centre workers.

11 Employees of the subsidiary Terna Crna Gora d.o.o., operating in Montenegro, are covered by an individual secondment contract which, although not being expressly governed by the CCNL for the electricity sector, refers to the same.

LA9 As for personnel on call, the agreement establishes that, although they have the right to suspend normal performance during the strike, they are obliged to be on call throughout the duration of said strike. The CCNL provides for the establishment of a bilateral body – at the electricity industry level – on "Health, safety and the environment", to pro-actively verify, monitor and coordinate training on environmental and safety matters.

LA6 **Employee involvement in matters of health and safety** is currently regulated by law, which provides for the election of Employee Safety Representatives (ESRs) by all the employees, thus representing 100% of the workforce. During the aforementioned renewal of the CCNL, the role of the ESRs was expanded to also include environmental issues, so they are now known as ESERs.

The relations between Terna and the trade unions **at the company level** are governed by the "Protocol on the industrial relations system", which defines a system of relations divided into contract negotiation, discussions, consultation and advance and/or periodic information exchange.

Terna's **employee union membership rate in 2013 was 62.7%**, which is high compared to the industry average and slightly up on previous years; membership is concentrated in the largest unions. Management of the "Protocol on the industrial relations system" has enabled the parties to develop and consolidate an effective network of relations at all levels, thus allowing the processes of change of significant corporate interest to be governed.

In February 2013, industrial relations at the corporate level saw the conclusion of preliminary talks with the Secretariat of National Trade Unions regarding the new organisational and geographical structure of the Terna Rete Italia Group. In subsequent months, the appropriate consultations with Regional Trade Union Secretariats took place in order to examine the effect on staff.

During the latter stages of the year, as part of the Terna Bilateral Commission on Training, the "multi-skill training" project was presented. This project aims to support the development of multi-skilled professionals (white- and blue-collar workers) with line and station multi-skill expertise, as established by the new Terna Rete Italia Group organisational structure.

LA5 The **involvement of the Trade Unions in the event of organisational changes** is one of the central aspects of industrial relations: it is regulated both by legal provisions, industry-wide contracts, and company agreements. In accordance with the union agreements in effect at Terna, in the event of significant organisational changes, preliminary discussions with the unions must take place, to be concluded within three months. In these discussions, the Company should make available the documentation necessary to ensure a complete overview of the organisational project, enabling observations and proposals to be formulated. At this stage, advance information remains at the collective level. Individual employees are informed in advance only if the organisational change entails their transfer to a different office. In this case, workers must be informed in writing at least thirty days in advance.

## Internal communication

Internal communication plays a key role in facilitating the exchange of information, creating integration, promoting teamwork and improving processes; Terna uses instruments to this end such as the company intranet and the in-house publication "Terna News", as well as events and special projects, with the annual We:Me convention, meetings between the senior management and executives, and the "CreativInTerna" competition.

Among the initiatives in 2013, we note:

**New organisational structure of Terna Rete Italia**

The new organisational structure of the subsidiary Terna Rete Italia was backed up by a dedicated communication plan, with the aim of promptly and continuously providing all the information needed to accompany the changeover, expressing the Company's commitment to professional quality for its staff.

**Sustainability Roadshow countrywide**

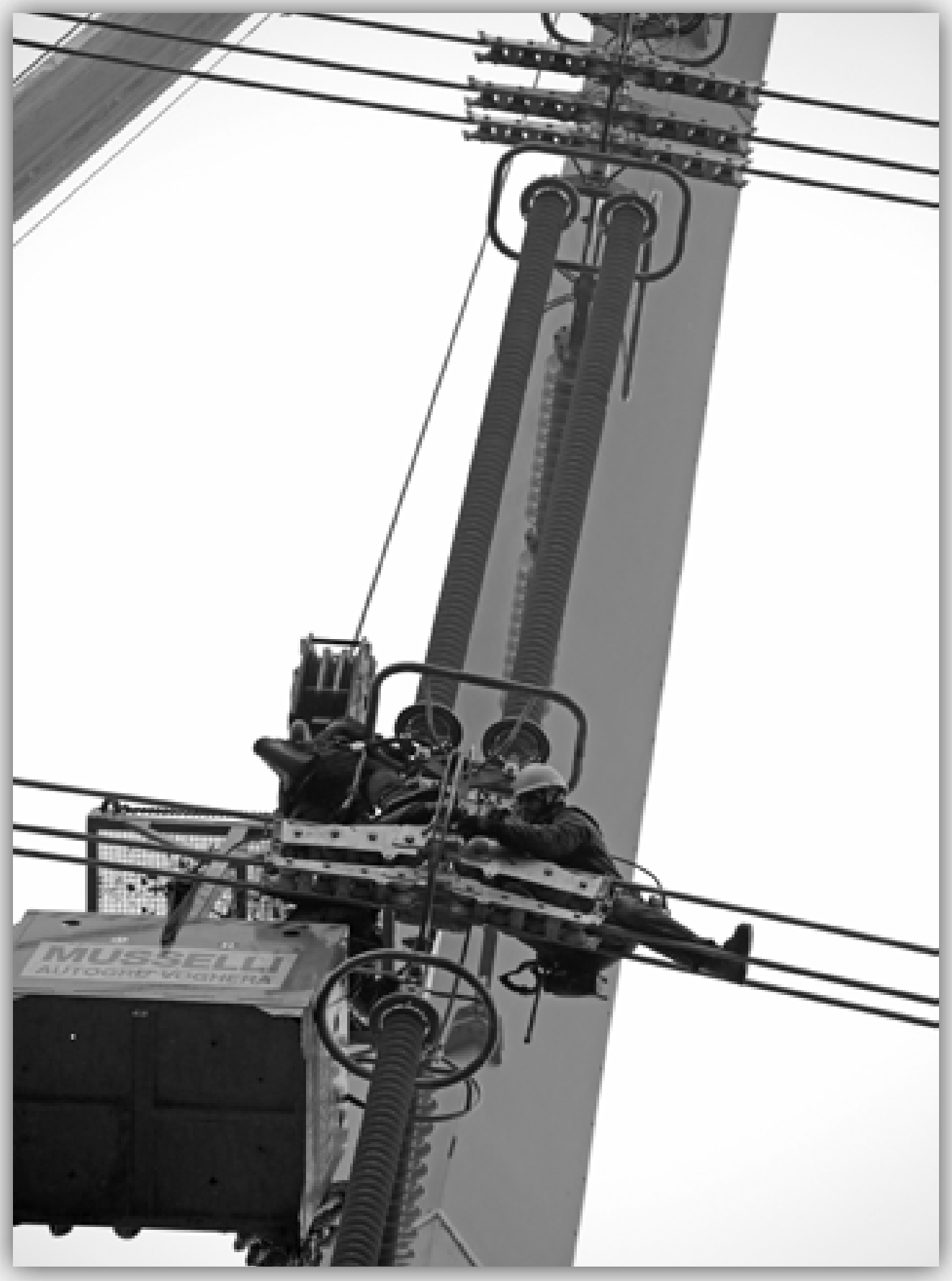
Terna's commitment in the social sphere and the recent launch of the Company's new Social Action Plan were presented to area heads in a series of meetings organised locally, with senior management present. This provided an opportunity to reaffirm the importance of each person's role in this important strategic move for Terna.

**Sixth edition of the "CreativInTerna" internal photography and drawing competition**

In the light of the significant corporate changes involving the Company over the last two years, the 2013 edition of the "CreativInTerna" art competition chose "identity" as its theme, a strong point to build on to achieve future objectives together. Given this theme, the social cause related to the initiative this year was the FAI – Italian Environmental Fund, committed to preserving Italy's cultural identity by safeguarding its artistic heritage.

**New "Terna News"**

The new "Terna News" was launched in December 2013. Five years since its creation, the company in-house publication has grown, thanks to joint collaboration efforts. The new edition gives more space to employee contributions, with improved graphics and editorial comments on news, and more pages in each issue.


MUSSELLI

# SOCIETY

## Our approach

S01 S09 Terna provides a service in the general interest; society – whether understood in a general sense as the user of Terna's service or in a local-community sense as the communities most directly affected by investment projects to develop the transmission grid – is a key stakeholder.

The most significant impact of Terna's work on local communities is that on the visual landscape. Terna's approach to this is addressed in the chapter "Environmental Responsibility". The following section discusses other possible effects on individuals and society.

EU20 The construction of new power lines involves the use of between approximately 30 and 250 square meters of land – usually agricultural land – for each pylon.

Although Terna is authorised by law (Italian Law No. 1775 of 1933 and Presidential Decree 327/2001 Consolidated Act on Expropriations) to use an expropriation procedure to obtain land, Terna prefers solutions based on mutual consent, paying one-off compensation for the right of way of the line through private property. The pursuit of a consensual solution only fails in a minority of cases, making coercive measures necessary. In the three-year period 2011-2013, Terna constructed

EU22 power lines which entailed obtaining easements from 24,734 land owners (10,179 in 2013; 7,463 in 2012; 7,092 in 2011); only in 6% of cases it was necessary to use a coercive easement procedure.

When Terna constructs a station which occupies much more land, the Company normally purchases the necessary land.

## Participation in Associations

In accordance with the commitments assumed in the Code of Ethics, Terna cooperates with the associations to which it belongs, discussing and supporting their work in order to contribute to the general improvement of the electricity industry and its regulations and technical standards.

Terna takes an active part in the **CEI (Italian Electro-technical Committee)**, a body entrusted with setting the industry's technical standards. Technical staff at Terna often belong to professional associations such as the **CIGRE (Conseil International des Grands Réseaux Électriques)** and the **AEIT (Italian Federation of Electrotechnics, Electronics, Automation, Information Technology, and Telecommunications)**. These associations aim to keep members up to date and bring together electrical engineers and other industrial specialists.

Since November 2011, Terna has been a member of the **Renewables Grid Initiative (RGI)**, an association of European grid operators and non-governmental organisations that promotes 100% integration of electricity generated by renewable sources.

RGI, coordinates BESTGRID (also see www.bestgrid.eu), a project supported by the European Commission launched on 1 April 2013. It consists of four pilot projects in Belgium, Germany and the United Kingdom to increase acceptance amongst citizens of electricity grid development projects. They aim to increase transparency and opportunities for public participation in energy infrastructure authorisation procedures and speeding up the process in accordance with European environmental protection standards.

In addition to the coordinator RGI, the BESTGRID partners are: National Grid, Elia, TenneT, 50 Hertz, Terna Rete Italia, BirdLife Europe and Germanwatch.

As part of this project, Terna contributes to developing new ways to share best practices and test the efficacy and transferability of certain aspects of the pilot projects.

Terna is also a member of international and national corporate social responsibility associations, collaborating actively to spread a sustainability culture, and to promote its experience with a view to sharing best practices.

In particular, Terna actively supports the following organisations:

- **IRC – The International Integrated Reporting Council**, an international organisation which published the first framework for the integration of financial, environmental, social and governance information in a single report in December 2013, after two years of work (also see page 18). Terna is an active participant in the IIRC Pilot Programme which involves around 100 companies and organisations worldwide.
- **LBG - The London Benchmarking Group, Corporate Citizenship,** the international benchmark organisation for measuring the contribution and impact of Corporate Community Investments. Terna employs the LBG monitoring model. (see also page 126).
- **Global Compact Network Italy Foundation**, Terna has been a member of the Steering Committee of the Italian Network since 2011, and contributed to the Committee's work in 2013 mainly as the promoter and founder of the Global Compact Network Italy Foundation. The Foundation, set up in June 2013, works to increase awareness of the Global Compact, promoting the commitment to corporate sustainability and helping to create a more inclusive, sustainable global economy. For the third year running Terna produced an "advanced" Communication on Progress (CoP), the most complete version provided for by the Global Compact.
- ***Fondazione Sodalitas*,** an organisation committed to promoting the spread of corporate sustainability and dialogue between businesses and the not-for-profit sector. Terna is one of the founders of *Fondazione Sodalitas*.
- ***Anima per il sociale nei valori d'impresa*,** since 2010, Terna has a been a member of *Anima per il sociale nei valori d'impresa* (the spirit of social responsibility within corporate values), a not-for-profit association which brings together managers and companies united by the desire to spread an entrepreneurial culture which combines profit with the creation of well-being within the community.
- **Foundation for Sustainable Development**, in 2011 Terna became a member of the Foundation for Sustainable Development. Its principle activities consist in studying sustainable development issues – from a cultural and technical perspective – through research, seminars and meetings.
- **CSR Manager Network**, the reference association for professionals who deal with sustainability and Corporate Social Responsibility in their roles as company managers, consultants and researchers. Throughout 2013, Terna supported the "Board of Directors and sustainability policies" research which aimed to investigate how sustainability and CSR relate to the Boards' agendas in Italian listed companies.

## Community initiatives

EC1

In keeping with the desire to contribute to Italy's civil growth beyond its infrastructural role, in 2013, Terna again confirmed its support for social, cultural and environmental initiatives.
Terna's corporate giving work consists mainly in providing financial support to charitable initiatives. In addition, resources are allocated to organising Terna's own initiatives for the benefit of the community; corporate assets which are no longer useful in the production cycle are donated and support is provided in the form of working time devoted to various initiatives by Terna's employees. In particular, paid hours are assigned to volunteering.
In all cases, as established by Terna's Code of Ethics, contributions are never made to political parties or their representatives.

SO6

As outlined in the "Participation in Associations" section above, Terna is a member of the London Benchmarking Group (LBG) and has adopted an LBG model - developing a customised variation of it - for defining, classifying and booking company charitable initiatives. Accounting for contributions sometimes requires recourse to non-accounting criteria and is therefore subject to interpretation. However, it has the advantage of correlating the costs and benefits of the charitable initiatives in a coherent manner, meaning that corporate giving can be strategically planned and rationally managed.

EC8

The following below shows the aggregate community initiatives, classified according to the LBG model, carried out by Terna in 2013.

COMMUNITY INITIATIVES

| Values in Euro | 2013 | 2012 | 2011 |
|---|---|---|---|
| Total value of contributions (excluding internal overhead costs) | 1,207,507 | 1,223,987 | 1,923,500 |
| **Breakdown by contribution type** | | | |
| - In cash | 1,050,670 | 1,095,888 | 1,833,550 |
| - In kind (donation of corporate property) | 36,888 | 46,120 | 42,414 |
| - Working time | 83,878 | 81,979 | 47,536 |
| **Breakdown by initiative type*** | | | |
| - Donations | 510,015 | 563,510 | 1,338,914 |
| - Investment in the community | 445,144 | 300,205 | 244,336 |
| - Commercial initiatives in the community | 216,277 | 360,272 | 340,250 |
| **Breakdown by purpose** | | | |
| - Education and young people | 410,790 | 469,300 | 498,936 |
| - Health | 35,000 | 21,800 | 22,404 |
| - Economic development | 161,300 | 38,687 | 479,000 |
| - Environment | 160,100 | 18,600 | 21,000 |
| - Art and culture | 283,767 | 492,590 | 545,900 |
| - Social well-being | 2,629 | 53,820 | 30,000 |
| - Support for emergencies | 53,100 | 35,000 | 61,850 |
| - Other | 64,750 | 94,190 | 264,410 |

(*) **Donations:** occasional contributions, typically in response to requests for funds from worthy charities.
**Investment in the community:** expenses for initiatives coordinated/organised by the Company as part of a medium-long term programme, often in partnership with an NGO.
**Commercial initiatives in the community:** charitable marketing initiatives (only the part of the expenditure which constitutes a charitable contribution is booked).

Support for environmental causes was not included in this table because, as a rule, it is associated with the construction of new lines and was, therefore, classified under environmental expenses (please see the relevant paragraph under "Environmental Responsibility").
This year once again work on monitoring the effects of corporate giving initiatives continued. A Terna - LBG questionnaire was sent out to a sample group for the most important initiatives. In relation, please note:

### Education and young people

- **Intervita's "Frequenza 200"** - Terna has been supporting this project since the end of 2012, initially through "CreativInTerna", the photography and art competition for employees of the Group and their children, later combining it with the activities of its Campus training centre in 2013.
  "Frequenza 200" is a national network extending from Milan to Naples and Palermo. It was formed by teachers, young people and their families to address the problem of school drop-outs.
  This three-year project is aimed at three districts of these three large cities and involves 14 schools (2 in Milan, 6 in Palermo, 6 in Naples). Around 4,060 people are taking part in the project including 2,500 young people, 800 teachers, 600 mothers and 160 informal operators.
  The LBG survey revealed that, among the 500 young people who received support from the network, there was a general improvement in their relationships with teachers and in learning conditions.

- **AiBi** - Terna supports the Ai.Bi. (*Amici dei bambini*) or "Friends of the Children" association through its solidarity initiatives at Christmas time.
  The contribution donated at Christmas 2012 led to a dual operation in 2013: the first in support of "Pan di Zucchero" in Rome, a centre providing services to children in difficulty, also open to their families. The second, consisted in opening a new children's home in Pavia.
  An impact analysis using the LBG methodology has shown that, with regard to the "Pan di Zucchero" family services centre, 95 children aged between 4 and 11 took part, involving a total of eight schools in the area.
  The new children's home in Pavia opened its doors in October 2013. To date, three children have received assistance from the facility.

### Environment

- **FAI – *Fondo Ambiente Italiano* (Italian Environmental Fund).** In 2013, Terna supported the FAI – *Fondo Ambiente Italiano* through two separate initiatives: the photography competition for Group employees and donations at Christmas 2013. In both cases, the choice of FAI projects was based not just on their consistency with Terna's projects (where the area is a strongly identity element in the company and in the country as a whole, and there is a desire to do something to safeguard it) but also on the fact that they are in line with the aims of the "Social Action Plan" (see page 53). Given that these projects will end in 2014, for the purposes of LBG monitoring, the effects on the beneficiaries will be monitored and reported in the 2014 Sustainability Report.

## From support to joint project design: Terna and Arci Milan work together on the "Here Come Grandma and Grandpa" project

In line with its "Social Action Plan" (see page 53), Terna has set up a two-year partnership with ARCI Milan to implement the project entitled "Here Come Grandma and Grandpa". This project was a finalist in the "Sodalitas Social Innovation 2013" competition.
"Here Come Grandma and Grandpa" is an initiative which aims to encourage real opportunities for exchanges between generations: volunteers (the "grandparents") and young children from preschools in Milan. It allows valuable interaction and learning for both parties through "Talent workshops".
The project thus creates a network made up of four groups: the volunteers, who bring experience, time and skills, but not educational techniques; educational staff from the nursery schools equipped with professional educational experience and desire to expand the range of stimuli and ideas offered to children; the children and their families; and, finally, organisations dedicated to volunteering development such as *Ciessevi* and the Milan Volunteering Office.
During the 2013/2014 school year, around 30 volunteer "grandparents" will organise at least 40 "Talent workshops", in 40 preschools in Milan, involving at least 2,000 children.
In line with its policy for measuring corporate giving and with its support for the *Fondazione Sodalitas*, Terna has introduced a programme for monitoring the impact on the final beneficiaries. The SDA Bocconi School of Management has been appointed to provide academic supervision and has developed a replicable assessment framework based on performance indicators and other measurement tools.
The monitoring scheme, which will run for the entire duration of the partnership, was presented during a public event in December 2013. The results of the first year of operation will be announced at the beginning of the 2014/2015 school year.

### Solidarity street market

For the first time, Terna hosted the "Christmas Solidarity Street Market" in its headquarters in Viale Galbani: four non-profit organisations, which are partners of the Company or run projects in line with Terna's mission, were thus able to raise funds through their products to support some of their projects. The associations Libera, Agape, Ora d'Aria and Apurimac were involved. There are plans to repeat the format next year involving non-profit associations working locally near Terna's offices.

## The Terna 05 Award, special solidarity edition

The special 2013 edition of the **Terna Award for Contemporary Art**, focused on solidarity and dynamic organisation, in line with the continuous evolution of the contemporary art scene.
**"To be or not to be, with others. The social network, to a fine art"**: this was the theme of the Terna 05 Award which invited artists to reflect on the ever present need for a renewed focus on and proximity to others, showcasing the less obvious aspects of solidarity.
Terna's invitation was taken up by more than 1,500 artists in one month, who joined the 9,000 who had participated in previous editions of the competition.
In keeping with the proposed theme, the Company wished to combine the Terna Award with a concrete initiative and therefore decided to donate the bulk of the prize money from this year to Arci Milan's solidarity project "Here Come Grandma and Grandpa" (please see the previous box).
Over 30,000 people visited the free traditional exhibition of the 15 finalist works of art at the Temple of Hadrian in Rome during the Christmas season.
The works of art, artist profiles and all other information about the Terna Award can be found at www.premioterna.it.

2013

# Indicator tables

Terna
TERNA GROUP

# INDICATOR TABLES

The following tables present the indicators provided for by the G3.1 “Sustainability Reporting Guidelines”, together with additional indicators which Terna believes it is important to publish in order to show its Corporate Social Responsibility performance. Some data already presented in the body of the Report are also shown for completeness.
For each indicator, the tables show:

- the unit of measure;
- the figures for 2013, 2012 and 2011;
- if significant, the absolute change between 2013 and 2011;
- if significant, the percentage change between 2011 and 2012. It is possible that this change does not correspond to that calculable from the tabulated figures which are generally rounded to one decimal place.

Data is usually calculated as of 31 December and flow indicators regard the entire year.
To facilitate reading the indicators, the following table shows the units of measure in which they are expressed. See also the table of acronyms and the glossary after the indicators.

## UNITS OF MEASUREMENT LEGEND

| | |
|---|---|
| **#** | Category |
| **%** | Percentage |
| **€** | Euro |
| **€/000** | Thousands of Euro |
| **€/Mln** | Millions of Euro |
| **GJ** | Gigajoule |
| **GWh/year** | Gigawatt hours per year |
| **GWh** | Gigawatt hours |
| **H** | Hours |
| **Kg** | Kilograms |
| **Km** | Kilometres |
| **Min** | Minutes |
| **MW** | Megawatt |
| **MWh** | Megawatt hour |
| **no.** | Number |
| **Tonne** | tonnes |
| **Tonnes of $CO_2$** | Tonnes of carbon dioxide |
| **Y** | Years |

# Terna Company Profile

## Corporate Governance

LA13

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **BOARD OF DIRECTORS** | | | | | | |
| Total members of BoD | no. | 9 | 9 | 9 | - | - |
| Presence of independent Directors in the BoD | no. | 6 | 6 | 6 | - | - |
| Presence of Directors chosen by minority shareholders | no. | 3 | 3 | 3 | - | - |
| BoD meetings | no. | 6 | 7 | 10 | -1 | -14.3% |
| Remuneration Committee meetings | no. | 3 | 4 | 5 | -1 | -25.0% |
| Audit and Risk Committee meetings[1] | no. | 4 | 6 | 4 | -2 | -33.3% |
| Committee meetings on transactions with related parties | no. | 1 | 1 | 4 | - | - |
| **COMPOSITION OF THE BOARD OF DIRECTORS** | | | | | | |
| Men | no. | 100 | 100 | 100 | - | - |
| Women | no. | 0 | 0 | 0 | - | - |
| Under 30 years old | no. | 0 | 0 | 0 | - | - |
| Between 30 and 50 years old | no. | 33 | 33 | 33 | - | - |
| Over 50 years old | no. | 67 | 67 | 67 | - | - |

## Ethical Auditing

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **IMPLEMENTATION OF THE CODE OF ETHICS** | | | | | | |
| Total reports received[1] | no. | 3 | 3 | 3 | - | - |
| - Areas of reports received[2] | | | | | | |
| - Employee management | no. | 2 | | 1 | 2 | |
| - Supplier management | no. | 1 | 1 | | - | - |
| - Environment and Safety | no. | | | 1 | | |
| - Corruption/Corporate loyalty | no. | | 1 | 1 | -1 | -100% |
| - Terna's/Other compliance | no. | | 1 | 1 | -1 | -100% |
| Outcome of reports | | | | | | |
| - Unfounded | no. | 3 | 2 | 3 | 1 | 50% |
| - Provisions[3] | no. | 0 | 1 | 0 | -1 | -100% |
| - Under assessment | no. | 0 | 0 | 0 | - | - |

(1) Of the three reports received in 2013, two were submitted to the Ethical Committee and one to the Audit Committee; in 2012, two were submitted to the Audit Committee and one to the Ethical Committee; in 2011, two were submitted to the Audit Committee and one to the Ethical Committee.

(2) Each report or violation may regard more than one management area.

(3) The provision may consist in applying a sanction and/or in other action – such as reviewing procedures, internal controls, etc. – aimed at avoiding that the event that caused the report reoccurs

# Responsibility for the electricity service

## The Grid

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **POWER STATIONS**[1] | | | | | | |
| **380 kV** | | | | | | |
| stations | no. | 152 | 150 | 147 | 2 | 1% |
| power transformed | MVA | 105,698 | 103,648 | 93,448 | 2,050 | 2% |
| **220 kV** | | | | | | |
| stations | no. | 150 | 154 | 153 | -4 | -3% |
| power transformed | MVA | 30,171 | 30,227 | 30,084 | -56 | - |
| **Lower voltages (≤150 kV)** | | | | | | |
| stations | no. | 173 | 164 | 154 | 9 | 6% |
| power transformed | MVA | 2,992 | 3,077 | 3,234 | -85 | -3% |
| **Total** | | | | | | |
| stations | no. | 475 | 468 | 454 | 7 | 2% |
| power transformed | MVA | 138,861 | 136,952 | 126,765 | 1,910 | 1% |
| **POWER LINES**[1] | | | | | | |
| **380 kV** | | | | | | |
| length of three-phase power lines | km | 11,824 | 11,810 | 11,808 | 14 | - |
| line length | km | 10,908 | 10,894 | 10,893 | 14 | - |
| **220 kV** | | | | | | |
| length of three-phase power lines | km | 11,915 | 11,987 | 12,058 | -71 | -1% |
| line length | km | 9,569 | 9,638 | 9,710 | -69 | -1% |
| **Lower voltages (≤150 kV)** | | | | | | |
| length of three-phase power lines | km | 39,855 | 39,652 | 39,760 | 204 | 1% |
| line length | km | 37,064 | 36,908 | 37,047 | 156 | - |
| **Total** | | | | | | |
| length of three-phase power lines | km | 63,595 | 63,448 | 63,626 | 147 | - |
| in underground cable | km | 1,514 | 1,369 | 1,328 | 145 | 11% |
| in submarine cable | km | 1,348 | 1,348 | 1,348 | 0 | |
| in 200, 400 and 500 kV direct current | km | 2,066 | 2,066 | 2,066 | 0 | - |
| line length | km | 57,541 | 57,440 | 57,651 | 101 | - |
| in underground cable | km | 1,514 | 1,369 | 1,328 | 145 | 11% |
| in submarine cable | km | 1,348 | 1,348 | 1,348 | 0 | - |
| in 200, 400 and 500 kV direct current | km | 1,746 | 1,746 | 1,746 | 0 | - |
| **Incidence DC connections** | | | | | | |
| - three-phase power lines | % | 3.2 | 3.3 | 3.3 | -0.1 | -2% |
| - lines | % | 3.0 | 3.0 | 3.0 | 0.0 | -1% |
| **GRID EFFICIENCY** | | | | | | |
| Power supplied | GWh/year | 317,144 | 328,220[2] | 334,640 | -11,076 | -3% |
| **TECHNICAL QUALITY** | | | | | | |
| **Service continuity indexes** | | | | | | |
| ASA (Average System Availability)[3] | % | 99.32 | 99.32 | 99.33 | - | - |
| SAIFI + MAIFI (System Average Interruption Frequency Index) | no. | 0.17 | 0.23 | 0.14 | -0.06 | -26% |
| AIT (Average Interruption Time)[4] | min | 0.75 | 0.57 | 0.49 | 0.18 | 32% |
| ENSR (Regulated Energy Not Supplied)[5] | MWh | N.A. | N.A. | 1,210.00 | - | - |

(1) The data refers to the entire scope of the Group including, in addition to the plants belonging to Terna S.p.A. and Terna Rete Italia S.r.l., lower voltage installations (<150 kV) belonging to Terna Plus.

(2) The 2012 figure was recalculated using the final data of the same year, and thus is different from the one reported in the previous edition of the Sustainability Report, amounting to 325,259, which was calculated according to the provisional data for 2012.

(3) The indicator is the total ASA % (used in international benchmarks), calculated with regard to individual Local Areas or for the entire country taking into account: Planned Unavailability, Occasional Unavailability, Unavailability due to Malfunctioning, Unavailability due to External Events, and Unavailability due to Development Work.
As at the reporting date, the 2013 data for the ASA index is provisional.

(4) Average interruption time of the National Transmission Grid (NTG) in a year, calculated as the ratio between the energy not supplied in a certain period (ENS value) and the average power consumed by the NTG in the period considered.

(5) The index also includes energy not supplied to users directly connected, due to events on other connection grids that are not part of the NTG, and a share of the energy not supplied due to force majeure events or significant incidents ("significant incident" includes any interruption during which the net energy not supplied amounts to more than 250 MWh. The share affecting the ENSR index is a decreasing percentage of energy not supplied in the individual significant incident. The lower the level of the indicator, the better the service performance. The final calculation, at the time of publishing, by the AEEG, of the ENSR indicator for 2012 and for 2013 is not yet available.

# Economic responsibility

## Shareholders

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **COMPOSITION OF SHAREHOLDER BASE** | | | | | | |
| Cassa Depositi e Prestiti S.p.A. | % | 29.85 | 29.85 | 29.85 | - | - |
| Other Institutional + Retail Investors | % | 70.15 | 70.15 | 65.75 | - | - |
| Main Institutional Investors[1] | % | 0.00 | 0.00 | 4.40 | - | - |
| **SOCIALLY RESPONSIBLE INVESTMENTS[2]** | | | | | | |
| % of SRI of share capital held by institutional investors | % | 10.0 | 8.4 | N.A. | 1.7 | 20% |
| **SHARE PERFORMANCE** | | | | | | |
| Financial share performance | % | 20.1 | 16.1 | -17.6 | 4.0 | 25% |
| Dividend Yield[3] | % | 5.69 | 6.73 | 8.12 | -1.04 | -16% |
| **Terna in the stock exchange indexes** | | | | | | |
| FTSE Italia ALL SHARE | % | 1.9 | 1.8 | 1.8 | 0.1 | 8% |
| FTSE MIB | % | 2.2 | 2.1 | 1.8 | 0.1 | 4% |
| **SHAREHOLDER'S RETURN** | | | | | | |
| EPS (Earnings per share) | € | 0.256 | 0.231 | 0.219 | 0.025 | 11% |
| DPS (Dividend per share) | € | 0.200 | 0.200 | 0.210 | - | - |
| **Total Shareholder Return (TSR)** | | | | | | |
| - from IPO | % | 283.5 | 200.6 | 140.6 | 83.0 | 41% |
| - from beginning of the year | % | 27.6 | 24.9 | -11.4 | 2.7 | 11% |
| **COMMUNICATION TO THE SHAREHOLDERS** | | | | | | |
| Meetings/conference calls with investors ("buy-side") | no. | 138 | 214 | 197 | -76 | -35.5% |
| Meetings/conference calls with investors ("sell-side") | no. | 235 | 283 | 468 | -48 | -17.0% |
| Meetings with dedicated investors and/or with space for CSR issues | no. | 15 | 5 | 3 | 10 | 200.0% |
| Retail shareholders' requests for information[4] | no. | 20 | 21 | 28 | -1 | -4.8% |
| **ECONOMIC PERFORMANCE[5]** | | | | | | |
| Revenue | €/mln | 1,896 | 1,806 | 1,554 | 91 | 5% |
| EBITDA | €/mln | 1,481 | 1,390 | 1,122 | 91 | 7% |
| EBIT | €/mln | 1,038 | 970 | 773 | 68 | 7% |
| EBT | €/mln | 938 | 876 | 764 | 61 | 7% |
| Net profit | €/mln | 514 | 464 | 454 | 50 | 11% |
| ROACE | % | 11 | 11 | 10 | - | - |

(1) Shareholders who – on the basis of the available information and on the communications received from Consob – have a stake in Terna S.p.A. share capital above the thresholds indicated in Consob Resolution No 11971/99.

(2) Investments made on the basis of ethical/ESG (Environmental, Social and Governance) criteria, as well as on the basis of traditional criteria. Further details on socially responsible investors are given on page 32 in the "Profile" chapter of this Report.

(3) The value was calculated as the ratio between the dividend relative to the financial year and the average reference price in December.

(4) The figure includes the requests received via e-mail.

(5) Since 2012, in view of the corporate changes within the Terna Group during the year, the data for the Terna Group has been provided, while for 2011 the figures relate to the parent company Terna.

## Lenders

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **DEBT** | | | | | | |
| Financial debt | €/mln | 6,625 | 5,855 | 5,123 | 770 | 13% |
| Equity | €/mln | 2,941 | 2,794 | 2,751 | 146 | 5% |
| Debt to Equity | % | 225 | 210 | 186 | 16 | 8% |
| **EUROPEAN INVESTMENT BANK (EIB) LOANS** | | | | | | |
| Residual debt relative to EIB loans | €/mln | 1,216 | 1,286 | 1,345 | -69 | -5% |

EC6

## Suppliers

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **NUMBER AND QUALIFICATION OF SUPPLIERS** | | | | | | |
| Number of suppliers | | | | | | |
| - number of contracted suppliers | no. | 2,026 | 1,951 | 2,314 | 75 | 4% |
| Procurement of materials and services | | | | | | |
| - supplies | €/mln | 406.2 | 1,257.5 | 454.6 | -851.3 | -68% |
| - works | €/mln | 233.6 | 261.2 | 516.5 | -27.6 | -11% |
| - services | €/mln | 117.0 | 115.4 | 201.2 | 1.6 | 1% |
| Provenance of suppliers (% of total procurement) | | | | | | |
| - italian suppliers | % | 77 | 64 | 91 | 13 | 21% |
| - foreign suppliers | % | 23 | 36 | 9 | -13 | -36% |
| Awarding procedures adopted[1] | | | | | | |
| - european tenders | % | 46 | 71 | 51 | -25 | -35% |
| - non-European tenders | % | 41 | 23 | 35 | 17 | 75% |
| - fixed | % | 14 | 6 | 14 | 8 | 125% |
| Qualification | | | | | | |
| - companies qualified for entry in supplier register | no. | 369 | 373 | 353 | -4 | -1% |
| - qualified categories | no. | 44 | 41 | 41 | 3 | 7% |
| - % purchases from qualified suppliers[2] | % | 50 | 64 | 43 | -14 | -22% |
| - instances of monitoring | no. | 715 | 508 | 749 | 207 | 41% |
| **SUPPLIER LITIGATION** | | | | | | |
| Pending litigation | no. | 13 | 22 | 24 | -9 | -41% |
| Existing litigation | no. | 1 | 0 | 2 | 1 | - |
| Settled litigation | no. | 0 | 2 | 0 | -2 | -100% |

(1) This is the percentage on the amounts awarded; for 2011, the figure did not include non-traditional activities related to the photovoltaic project.
(2) The figure refers to the percentage of the total of contracted suppliers for an amount ordered of over 500,000 Euro.

## Regulated-market customers

EU3

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **CUSTOMER PORTFOLIO** | | | | | | |
| Interruptible users | | 322 | 234 | 171 | 88 | 38% |
| Distributors directly connected to the NTG | no. | 24 | 24 | 20 | - | - |
| Input dispatching users (Producers and Traders) | no. | 102 | 88 | 91 | 14 | 16% |
| Withdrawal dispatching users (Traders and end customers, including the Single Buyer) | no. | 140 | 130 | 110 | 10 | 8% |
| **CUSTOMER LITIGATION** | | | | | | |
| Pending litigation | no. | 14 | 14 | 14 | - | - |
| Existing litigation | no. | 0 | 0 | 3 | - | - |
| Settled litigation | no. | 0 | 0 | 1 | - | - |

## Value Added

EC1

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **DETERMINATION AND REDISTRIBUTION OF VALUE ADDED[1]** | | | | | | |
| Non-subordinate personnel | € | 2,314,044 | 2,222,526 | 1,957,413 | 91,518 | 4% |
| Employees: direct remuneration | € | 216,983,787 | 209,498,296 | 217,415,063 | 7,485,491 | 4% |
| Employees: indirect remuneration | € | 63,293,832 | 64,045,853 | 63,744,420 | -752,021 | -1% |
| **A – Staff Remuneration** | **€** | **282,591,663** | **275,766,675** | **283,116,896** | **6,824,988** | **2%** |
| Direct taxes | € | 423,935,663 | 412,696,487 | 387,281,919 | 11,239,176 | 3% |
| Indirect taxes | € | 9,855,050 | 24,701,769 | 6,133,331 | -14,846,719 | -60% |
| **B – Remuneration of public authorities** | **€** | **433,790,713** | **437,398,256** | **393,415,250** | **-3,607,543** | **-1%** |
| Short-term loan expense | € | 230 | 468 | 45,248 | -238 | -51% |
| Interest on bank loans | € | 78,682,981 | 82,220,620 | 92,634,544 | -3,537,639 | -4% |
| Interest on bonds | € | 112,084,212 | 129,226,227 | 89,522,207 | -17,142,015 | -13% |
| **C – Return on borrowed capital** | **€** | **190,767,423** | **211,447,315** | **182,201,999** | **-20,679,892** | **-10%** |
| Dividends[2] | € | 401,998,400 | 401,998,400 | 422,098,320 | - | - |
| **D – Return on risk capital** | **€** | **401,998,400** | **401,998,400** | **422,098,320** | **-** | **-** |
| Allocations to reserves | € | 111,606,710 | 61,541,976 | 17,906,390 | 50,064,734 | 81% |
| E – Remuneration of the Company | € | 111,606,710 | 61,541,976 | 17,906,390 | 50,064,734 | 81% |
| **total net global value added** | **€** | **1,420,754,909** | **1,388,152,622** | **1,298,738,855** | **32,602,287** | **2%** |
| **of which net global net value added of ongoing activities** | **€** | **1,420,754,909** | **1,388,152,622** | **1,186,035,046** | **32,602,287** | **2%** |
| **of which value added of discontinued operations and activities destined for sale** | **€** | **-** | **-** | **112,703,809** | **-** | **-** |

(1) The amounts relative to the creation and distribution of the Value Added are taken from the Consolidated Financial Statements, which were prepared according to the international accounting principles IFRS/IAS. Specifically, the Terna Group has used the IFRS/IAS International Accounting Standards since 2005.

(2) The 2013 dividends refer to the advance distributed in November 2013 (140.7 million Euro) and to the balance proposed to the Meeting of the BoD in the session on 25 March 2014 (261.3 million Euro).

EN16 EN17

# Environmental responsibility

EN19 EN20 EN29

## Emissions and quantities

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **$SF_6$ QUANTITY AND EMISSIONS** | | | | | | |
| Percentage of $SF_6$ leakage out of total | % | 0.49 | 0.59 | 0.6 | -0.10 | -16% |
| $SF_6$ greenhouse gas emissions | kg | 2,507.7 | 2,754.0 | 2,517.8 | -246.3 | -9% |
| Amount of $SF_6$ | kg | 508,463.6 | 466,652.1 | 416,553.1 | 41,811.5 | 9% |
| - in operating equipment | kg | 466,438.3 | 427,175.9 | 367,523.6 | 39,262.5 | 9% |
| - in cylinders | kg | 42,025.3 | 39,476.3 | 49,029.5 | 2,549.1 | 7% |
| **TOTAL DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS[1]** | | | | | | |
| Direct emissions | | | | | | |
| $SF_6$ leaks | tonnes of $CO_2$ | 57,175 | 62,791 | 57,406 | -5,615 | -9% |
| R22 leaks | tonnes of $CO_2$ | 90 | 110 | 25 | -21 | -19% |
| Petrol for vehicles | tonnes of $CO_2$ | 22 | 28 | 520 | -6 | -22% |
| Diesel for vehicles | tonnes of $CO_2$ | 5,974 | 5,741 | 5,605 | 233 | 4% |
| Natural gas for heating | tonnes of $CO_2$ | 528 | 518 | 531 | 10 | 2% |
| Diesel oil for heating and generators | tonnes of $CO_2$ | 954 | 818 | 836 | 135 | 17% |
| **Total direct emissions** | tonnes of $CO_2$ | **64,743** | **70,007** | **64,922** | **-5,264** | **-8%** |
| Indirect emissions | | | | | | |
| **Electricity** | tonnes of $CO_2$ | **73,170** | **70,008** | **71,463** | **3,162** | **5%** |
| **INDIRECT EMISSIONS OF $CO_2$ RELATED TO STAFF AIR MILES** | | | | | | |
| Type of flight | | | | | | |
| - domestic | tonnes of $CO_2$ | 1,072 | 1,046 | 1,048 | 25 | 2% |
| - international | tonnes of $CO_2$ | 382 | 329 | 367 | 52 | 16% |
| - intercontinental | tonnes of $CO_2$ | 206 | 99 | 109 | 107 | 108% |
| **Total emissions** | **tonnes of $CO_2$** | **1,659** | **1,475** | **1,523** | **184** | **13%** |
| **NITROGEN OXIDE EMISSIONS[2]** | | | | | | |
| $NO_x$ | kg | 5,130 | 4,920 | | 210 | 4% |
| **COOLANT GAS – LEAKS** | | | | | | |
| R22 | kg | 50 | 61 | 14 | -11 | -18% |
| **COOLANT GAS – QUANTITIES** | | | | | | |
| R22 | kg | 1,762 | 1,965 | 2,972 | -203 | -10% |
| R407C | kg | 1,293 | 1,434 | 2,470 | -141 | -10% |
| R410A | kg | 4,828 | 3,449 | 2,973 | 1,379 | 40% |
| Other coolant gases | kg | 938 | 828 | 686 | 110 | 13% |
| **TERNA VEHICLE FLEET[3]** | | | | | | |
| HYBRIDS | no. | 9 | 9 | 9 | | |
| EURO 5 | no. | 1,226 | 1,148 | 138 | 78 | 7% |
| EURO 4 | no. | 14 | 15 | 985 | -1 | -7% |
| EURO 3 or lower | no. | 146 | 169 | 219 | -23 | -14% |
| **Total vehicles** | **no.** | **1,395** | **1,341** | **1,351** | **54** | **4%** |

(1) Direct consumption is converted into equivalent $CO_2$ emissions using the parameters indicated by the Greenhouse Gas (GHG) Protocol Initiative. Indirect consumption of electricity is converted taking into account the proportion of thermoelectric production in the total Italian electricity production for 2013. The reference for the division of the production mix is the "Monthly Report on the Electricity System" with the results for December 2013, available on the website www.terna.it.

(2) The figure is calculated on the basis of the values provided by car manufacturers in logbooks and on the mileage estimates of said vehicles. The value expressed in the table represents 62.7% of the company fleet for 2013 (in 2012, it referred to 59% of the fleet).

(3) The table shows the vehicles in the Terna fleet which, in the period in question, filled up at least once as recorded on the fuel card. Only operating vehicles are considered. For information on the consumption of the car fleet, see the following fuel consumption tables.

# Consumption

EN1 EN2 EN3 EN8

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **DIRECT AND INDIRECT ENERGY CONSUMPTION BROKEN DOWN BY PRIMARY SOURCE** | | | | | | |
| Petrol for vehicles[1] | tonnes | 7.1 | 9.1 | 167.5 | -2.0 | -22% |
| Diesel for vehicles[1] | tonnes | 1,862.9 | 1,790.2 | 1,747.8 | 72.7 | 4% |
| Diesel oil for generators and heating | tonnes | 297.3 | 255.2 | 260.5 | 42.1 | 17% |
| Natural gas for heating | thousands of cubic metres | 241.7 | 237.0 | 242.8 | 4.8 | 2% |
| **Indirect consumption** | | | | | | |
| Own consumption of electricity[2] | GWh | 194.1 | 177.2 | 174.3 | 16.9 | 10% |
| **DIRECT AND INDIRECT ENERGY CONSUMPTION BROKEN DOWN BY PRIMARY SOURCE – GIGAJOULES[1]** | | | | | | |
| Direct consumption | | | | | | |
| Petrol for vehicles[1] | GJ | 318 | 408 | 7,504 | -91 | -22% |
| Diesel for vehicles[1] | GJ | 80,718 | 77,570 | 75,731 | 3,148 | 4% |
| Natural gas for heating | GJ | 9,426 | 9,241 | 9,468 | 185 | 2% |
| Diesel oil for generators and heating | GJ | 12,884 | 11,058 | 11,289 | 1,826 | 17% |
| **Total direct consumption** | **GJ** | **103,345** | **98,277** | **103,993** | **5,068** | **5%** |
| Indirect consumption | | | | | | |
| Electricity for powering stations and offices[2] | GJ | 698,709 | 638,050 | 627,480 | 60,659 | 10% |
| **WATER CONSUMPTION** | | | | | | |
| Water consumption per source | cubic metres | 198,191 | 219,311 | 176,525 | -21,121 | -10% |
| **PAPER CONSUMPTION** | | | | | | |
| FSC paper | tonnes | 46 | 52 | 70 | -6 | -12% |
| **MAIN MATERIALS IN SUPPLIES** | | | | | | |
| Porcelain | tonnes | 699 | 229 | 967 | 470 | 205% |
| Polymeric | tonnes | 225 | 131 | 322 | 94 | 72% |
| Copper | tonnes | 5,234 | 3,861 | 2,569 | 1,373 | 36% |
| Aluminium | tonnes | 12,909 | 4,069 | 9,588 | 8,840 | 217% |
| Steel | tonnes | 6,204 | 6,163 | 23,875 | 41 | 1% |
| Glass | tonnes | 2,014 | 863 | 2,078 | 1,151 | 133% |
| Dielectric oil | tonnes | 924 | 61 | 974 | 863 | 1,415% |
| $SF_6$ | tonnes | 42 | 50 | 54 | -8 | -16% |
| **PCB CONCENTRATION** | | | | | | |
| PCB > 500 ppm[3] | tonnes | 0.22 | 0.00 | 0.00 | 0.22 | - |
| 50 ppm < PCB < 500 ppm | tonnes | 3.79 | 3.81 | 7.62 | -0.02 | -1% |

(1) Only the consumption of operating vehicles is considered.
(2) The reference for the division of the production mix is the "Monthly Report on the Electricity System" with the results for December 2013, available on the website www.terna.it.
(3) The 2013 value of PCB concentration > 500 ppm refers to an appliance analysed during decommissioning.

## EN22 Waste

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **WASTE MANAGEMENT[1]** | | | | | | |
| Waste produced | tonnes | 5,263.6 | 6,208.1 | 7,198.1 | -944.5 | -15% |
| Waste recovered | % | 87 | 81 | 83 | 6 | 7% |
| **Non-hazardous special waste** | | | | | | |
| Machines, equipment, pylons, conductors, cables | | | | | | |
| - quantity produced | tonnes | 1,283.3 | 1,559.5 | 1,737.4 | -276.2 | -18% |
| - quantity delivered for recycling | tonnes | 1,315.7 | 1,451.0 | 1,671.6 | -135.3 | -9% |
| Packing | | | | | | |
| - quantity produced | tonnes | 208.3 | 252.0 | 354.3 | -43.7 | -17% |
| - quantity delivered for recycling | tonnes | 206.7 | 207.7 | 333.9 | -1.0 | -1% |
| Other | | | | | | |
| - quantity produced | tonnes | 294.3 | 1,092.1 | 902.3 | -797.8 | -73% |
| - quantity delivered for recycling | tonnes | 147.7 | 292.0 | 294.9 | -144.3 | -49% |
| **Total non-hazardous special waste** | tonnes | | | | | |
| - quantity produced | tonnes | 1,795.9 | 2,910.7 | 3,310.8 | -1,114.8 | -38% |
| - quantity delivered for recycling | tonnes | 1,680.1 | 1,950.6 | 2,617.2 | -270.6 | -14% |
| **Hazardous special waste** | | | | | | |
| Machines, equipment, pylons, conductors, cables | tonnes | | | | | |
| - quantity produced | tonnes | 2,386.4 | 2,404.0 | 2,789.5 | -17.6 | -1% |
| - quantity delivered for recycling | tonnes | 2,159.5 | 2,277.1 | 2,680.7 | -117.6 | -5% |
| Oils | tonnes | | | | | |
| - quantity produced | tonnes | 698.4 | 744.5 | 736.6 | -46.1 | -6% |
| - quantity delivered for recycling | tonnes | 611.1 | 661.2 | 563.6 | -50.1 | -8% |
| Lead batteries | | | | | | |
| - quantity produced | tonnes | 64.4 | 118.7 | 125.9 | -54.2 | -46% |
| - quantity delivered for recycling | tonnes | 64.6 | 118.7 | 125.9 | -54.1 | -46% |
| Waste deriving from materials containing asbestos | | | | | | |
| - quantity produced | tonnes | 0.0 | 0.0 | 0.5 | - | - |
| Other | tonnes | | | | | |
| - quantity produced | tonnes | 318.4 | 22.2 | 234.8 | 296.2 | 1,337% |
| - quantity delivered for recycling | tonnes | 39.6 | 7.8 | 10.0 | 31.8 | 408% |
| **Total hazardous special waste** | | | | | | |
| - quantity produced | tonnes | 3,467.6 | 3,297.4 | 3,887.3 | 170.2 | 5% |
| - quantity delivered for recycling | tonnes | 2,874.8 | 3,064.9 | 3,380.1 | -190.1 | -6% |

(1) This includes only the special waste from the production process, not that produced by service activities (urban waste). Sewage and waste from septic tanks from stations not connected to the drainage system are not included; the amount for sewage and septic tanks was 842 tonnes in 2013, 610 tonnes in 2012 and 675 tonnes in 2011. Waste sent for disposal may differ from the simple difference between waste produced and recovered, owing to the temporary storage of waste.

## EN14 Biodiversity

## EN11

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **DISSUADERS FOR BIRDLIFE PRESENT ON THE NTG** | | | | | | |
| Lines affected | km | 186 | 172 | 171 | 15 | 8% |
| Total number of dissuaders | no. | 12,005 | 11,146 | 9,116 | 859 | 8% |
| **LINES IN PROTECTED AREAS** | | | | | | |
| Lines interfering with protected areas | km | 5,570 | 4,950 | 5,385 | 620 | 13% |
| Lines interfering as a total of lines managed | % | 10 | 9 | 9 | 1 | 12% |

## EN30 Costs for the environment

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **COSTS FOR THE ENVIRONMENT – INVESTMENT AND OPERATING COSTS[1]** | | | | | | |
| Environmental offsets | €/mln | 8.4 | 4.1 | 1.1 | 4 | 105% |
| Environmental-impact studies | €/mln | 3.9 | 1.3 | 1.4 | 3 | 200% |
| Environmental activities – new plants | €/mln | 5 | 6 | 4.2 | -1 | -17% |
| Environmental activities – existing plants | €/mln | 7.8 | 9.6 | 14.2 | -2 | -19% |
| Demolitions | €/mln | 1 | 2.4 | 2.8 | -1 | -58% |
| **Total investments** | **€/mln** | **26.1** | **23.4** | **23.8** | **3** | **12%** |
| **Costs** | | | | | | |
| Costs for environmental activities | €/mln | 17.9 | 15.1 | 10.3 | 3 | 19% |
| **Total operating costs** | **€/mln** | **17.9** | **15.1** | **10.3** | **3** | **19%** |

(1) For details on the accounting method, see page 106.

# Social responsibility

LA1
LA2
LA13
EU17

## Number and composition of employees

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **PERSONNEL CHANGES** | | | | | | |
| **Total employees** | **no.** | **3,442** | **3,433** | **3,493** | **9** | **-** |
| Employees recruited during the year | no. | 70 | 45 | 176 | 25 | 56% |
| Employees left during the year | no. | 61 | 105 | 151 | -44 | -42% |
| - men | no. | 56 | 99 | 139 | -43 | -43% |
| - women | no. | 5 | 6 | 12 | -1 | -17% |
| - under 30 years old | no. | 3 | 3 | 2 | 0 | 0% |
| - between 30 and 50 years old | no. | 7 | 9 | 13 | -2 | -22% |
| - over 50 years old | no. | 51 | 93 | 136 | -42 | -45% |
| Turnover rate on termination[1] | | | | | | |
| **Total** | **%** | **1.8** | **3.0** | **4.4** | **-1** | **-41%** |
| - men | % | 1.6 | 2.8 | 4.0 | -1 | -42% |
| - women | % | 0.2 | 0.2 | 0.4 | 0 | -12% |
| - under 30 years old | % | 0.1 | 0.1 | 0.1 | 0 | 0% |
| - between 30 and 50 years old | % | 0.2 | 0.3 | 0.4 | 0 | -23% |
| - over 50 years old | % | 1.5 | 2.7 | 3.9 | -1 | -44% |
| **PERSONNEL COMPOSITION** | | | | | | |
| **Total employees** | **no.** | **3,442** | **3,433** | **3,493** | **9** | **-** |
| By contract type | | | | | | |
| - permanent | no. | 3,412 | 3,383 | 3,350 | 29 | 1% |
| - temporary | no. | 30 | 50 | 143 | -20 | -40% |
| By employment type | | | | | | |
| - full-time | no. | 3,412 | 3,401 | 3,463 | 11 | |
| - part-time | no. | 30 | 32 | 30 | -2 | -6% |
| By gender | | | | | | |
| - men | no. | 3,048 | 3,041 | 3,105 | 7 | |
| - women | no. | 394 | 392 | 388 | 2 | 1% |
| By age | | | | | | |
| - under 30 years old | no. | 415 | 464 | 522 | -49 | -11% |
| - between 30 and 50 years old | no. | 1,412 | 1,487 | 1,496 | -75 | -5% |
| - over 50 years old | no. | 1,615 | 1,482 | 1,475 | 133 | 9% |
| Average age of personnel (years) | | | | | | |
| Average age | y | 46.2 | 45.7 | 45.2 | 0.5 | 1% |
| Average corporate age[2] | y | 20.8 | 20.4 | 20.0 | 0.4 | 2% |
| **PERSONNEL COMPOSITION BY CATEGORY** | | | | | | |
| **Total** | **no.** | **3,442** | **3,433** | **3,493** | **9** | **-** |
| Senior executives | no. | 62 | 59 | 60 | 3 | 5% |
| Junior executives | no. | 501 | 502 | 490 | -1 | - |
| White-collar workers | no. | 1,922 | 1,925 | 1,966 | -3 | - |
| Blue-collar workers | no. | 957 | 947 | 977 | 10 | 1% |
| **PERSONNEL COMPOSITION BY SCHOOLING** | | | | | | |
| University degree | % | 22.5 | 22.2 | 21.6 | 0.35 | 2% |
| High school diploma | % | 47.2 | 46.8 | 46.6 | 0.37 | 1% |
| Vocational school diploma | % | 15.6 | 15.9 | 15.8 | -0.25 | -2% |
| Elementary/Middle school | % | 14.7 | 15.2 | 16.0 | -0.48 | -3% |
| **FLEXIBLE EMPLOYMENT CONTRACTS AND TERMS** | | | | | | |
| Diffusion of temporary contracts | % | 0.9 | 1.5 | 4.1 | -0.6 | -40% |
| Expiring trial contracts converted to permanent contracts during the financial year | no. | 46 | 114 | 54 | -68 | -60% |
| Trainees and interns working at Terna | no. | 52 | 37 | 38 | 15 | 41% |
| Diffusion of part-time employment | % | 0.9 | 0.9 | 0.9 | -0.1 | -7% |
| Incidence of overtime | % | 8.3 | 8.9 | 8.2 | -0.7 | -7% |
| **CONTRACTORS AND SUBCONTRACTORS' EMPLOYEES[3]** | | | | | | |
| Days worked | no. | 500,884 | 419,543 | 456,807 | 81,342 | 19% |
| Full-time equivalent | no. | 2,277 | 1,907 | 2,076 | 370 | 19% |

(1) The turnover rates report the termination flows with respect to the number of employees as at 31 December of the previous year.
(2) The average corporate age takes into account previous employment in the case of employees joining Terna following acquisitions of business units.
(3) The data take into account the term of construction contracts and the variations in the workforce required, and relate to various types of Terna work contracts, from large construction sites to cutting trees under power lines. The days worked and the FTEs are estimated on the basis of the average daily presences at the largest construction sites and the amounts paid for contracted work on smaller sites. No further information is available on the types of contracts used by contractors.

LA10 LA12 S03 HR3

# Personnel development

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **TRAINING** | | | | | | |
| House of training | | | | | | |
| - per employee | h | 35 | 41 | 51 | -6 | -15% |
| By category | | | | | | |
| - senior executives | h | 38 | 12 | 19 | 26 | 217% |
| - junior executives | h | 34 | 50 | 30 | -16 | -33% |
| - white-collar workers | h | 34 | 39 | 55 | -5 | -14% |
| - blue-collar workers | h | 37 | 55 | 55 | -18 | -32% |
| By gender | | | | | | |
| - men | h | 36 | 44 | 51 | -8 | -18% |
| - women | h | 25 | 25 | 44 | 0 | - |
| Coverage of employees[1] | % | 89 | 86 | 97 | 3 | 3% |
| Hours provided | | | | | | |
| Total | h | 120,115 | 143,418 | 178,734 | -23,303 | -16% |
| - hours of internal teaching | h | 79,876 | 86,227 | 132,190 | -6,351 | -7% |
| Hours of training by type of course | | | | | | |
| - education | h | 12,782 | 17,707 | 21,664 | -4,925 | -28% |
| - context and Business Model | h | 13,851 | 6,352 | 31,919 | 7,499 | 118% |
| - training | h | 93,482 | 119,359 | 125,151 | -25,877 | -22% |
| Model 231 Course | | | | | | |
| - participants in model 231 course | no. | 489.00 | 6.00 | 97.00 | 483.00 | 8,050% |
| **COMPENSATION** | | | | | | |
| Average cost per employee[2] | € | 78,124 | 77,591 | 79,432 | 533 | 1% |
| Executive employees with stock options[3] | no. | 0 | 0 | 9 | - | - |
| Executive employees with Long-Term Incentives (LTI) | no. | 45 | 46 | 46 | -1 | -2% |
| Variable remuneration as % of fixed pay[4] | % | 9.3 | 10.0 | 9.4 | -0.7 | -7% |
| MBO | no. | 187 | 184 | 185 | 3 | 2% |
| **CORPORATE CLIMATE** | | | | | | |
| Total spontaneous resignations | no. | 9 | 12 | 16 | -3 | -25% |
| Absences per employee[5] | h | 57 | 59 | 59 | -2 | -3% |
| Absentee Rate[6] | % | 7,432.2 | 7,632.1 | 7,757.0 | -199.9 | -3% |
| **AVERAGE YEARS OF EMPLOYMENT FOR EMPLOYEES LEAVING THE COMPANY[7]** | | | | | | |
| Total terminations | h | 32.4 | 32.8 | 32.3 | -0.4 | -1% |
| - men | h | 32.6 | 33.5 | 32.1 | -0.9 | -3% |
| - women | h | 29.4 | 22.0 | 34.4 | 7.4 | 34% |
| - under 30 years old | h | 3.3 | 2.3 | 3.5 | 1.0 | 42% |
| - between 30 and 50 years old | h | 6.4 | 11.9 | 6.7 | -5.5 | -46% |
| - over 50 years old | h | 37.6 | 35.6 | 35.1 | 2.0 | 6% |
| **LITIGATION WITH EMPLOYEES** | | | | | | |
| Pending litigation with employees | no. | 10 | 16 | 25 | -6 | -38% |
| Existing litigation with employees | no. | 10 | 1 | 3 | 9 | 900% |
| Settled litigation with employees | no. | 16 | 10 | 10 | 6 | 60% |

(1) % of employees who took at least one training course during the year.
(2) "Per employee" includes all company employees, including executives.
(3) The figures relating to managers with stock options refer to a single plan resolved on 21 December 2005 and concluded as of today.
(4) The figures regard the incentives paid to all employees, including executives. Fringe benefits are excluded.
(5) This figure regards the number of non-contractual absences during the year (illness, accident, leave of absence, strike, unpaid absence).
(6) This is the number of days of absence owing to illness, strikes and injuries out of the number of days worked in the same period, multiplied by 200,000. To facilitate comparison with other sources, this indicator was also calculated as a percentage of days worked. With this calculation method, the absentee rate came out at 3.7 in 2013, 3.8 in 2012, and 3.9 in 2011. The reasons for absence considered do not include maternity leave, marriage leave, study leave, leave for trade union activities, other cases of paid leave, and suspensions.
(7) The duration of employment takes into account previous employment, in the case of employees joining Terna following acquisitions of business units.

# Equal opportunities

LA13
LA14

| EQUAL OPPORTUNITIES FOR MEN AND WOMEN | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| Women out of total employees | | | | | | |
| - women out of total | % | 11.5 | 11.4 | 11.1 | - | - |
| - women out of total net of blue-collar workers | % | 15.9 | 15.8 | 15.4 | 0.1 | 1% |
| - female senior executives out of total senior executives | % | 16.1 | 15.3 | 16.7 | 0.9 | 6% |
| - female senior and junior executives out of total senior and junior executives | % | 17.9 | 17.3 | 17.1 | 0.7 | 4% |
| Employment growth | | | | | | |
| - annual change: women | % | 0.5 | 1.0 | 4.0 | -0.5 | -50% |
| - annual change: men | % | 0.2 | -2.1 | 0.3 | 2.3 | 111% |
| Outflows | | | | | | |
| - outflows: women | % | 1.3 | 1.6 | 3.2 | -0.3 | -17% |
| - outflows: men | % | 1.8 | 3.2 | 4.5 | -1.4 | -42% |
| Inflows[1] | | | | | | |
| - inflows: women | % | 1.8 | 2.6 | 7.2 | -0.8 | -31% |
| - inflows: men | % | 2.1 | 1.1 | 4.8 | 0.9 | 83% |
| Managerial positions | | | | | | |
| - female senior executives out of total women | % | 2.5 | 2.3 | 2.6 | 0.2 | 10% |
| - male senior executives out of total men (excluding blue-collar workers) | % | 2.5 | 2.4 | 2.4 | 0.1 | 4% |
| Grade promotions[2] | | | | | | |
| - promotions to junior executive as % of previous grade: women | % | 0.3 | 1.4 | 0.4 | -1.0 | -75% |
| - promotions to junior executive as % of previous grade: men | % | 0.4 | 3.7 | 0.6 | -3.3 | -88% |
| Gender pay gap[3] | | | | | | |
| - senior executives | % | 81.3 | 79.2 | 79.6 | 2.1 | 3% |
| - junior executives | % | 96.3 | 94.5 | 93.7 | 1.9 | 2% |
| - white-collar workers | % | 95.1 | 94.0 | 93.9 | 1.1 | 1% |
| Gender remuneration gap[4] | | | | | | |
| - senior executives | % | 78.5 | 76.6 | 75.5 | 1.9 | 2% |
| - junior executives | % | 98.2 | 97.5 | 96.9 | 0.7 | 1% |
| - white-collar workers | % | 91.3 | 89.9 | 90.2 | 1.4 | 2% |

(1) The outflows (inflows) for women and men show the ratio of employees divided by gender who left (joined) in the year to total employees divided by gender at 31 December of the previous year.

(2) The figure is obtained from the ratio between promotions to junior executive that occurred during the year and employees categorised as white-collar workers in the previous year, calculated by gender. Promotions from blue-collar worker to white-collar worker and from junior executive to senior executive were not considered, because the number was not significant on an annual basis.

(3) The figure is the result of the percentage ratio between the annual basic pay for women for the different grades and the annual basic pay for men for the same grades. The figure was not calculated for blue-collar workers because there are no women in that category.

(4) The figure is the result of the percentage ratio between the total annual remuneration for women for the different grades and the total annual remuneration for men for the same grades. The total remuneration includes, besides basic pay, production bonuses, the different types of incentives and the value of the benefits received over the year.

LA7
EU16

## Health and safety

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **OCCUPATIONAL INJURIES – TERNA EMPLOYEES, GRI-ILO DEFINITIONS** | | | | | | |
| Injury rate(1) | % | 1.42 | 1.77 | 1.67 | -0.4 | -20% |
| Lost-Day Rate(2) | % | 46.57 | 63.03 | 46.35 | -16.5 | -26% |
| Occupational Disease Rate(3) | % | 0 | 0 | 0 | | |
| Number of injuries | no. | 41.0 | 51.0 | 49.0 | -10.0 | -20% |
| - of which serious | no. | 2 | 3 | 1 | -1.0 | -33% |
| - of which fatal | no. | 0 | 0 | 0 | | |
| **OCCUPATIONAL INJURIES, EMPLOYEES BROKEN DOWN BY GENDER(4)** | | | | | | |
| Number of injuries | no. | 41 | | | | |
| - of whom men | no. | 39 | | | | |
| - of whom women | no. | 2 | | | | |
| Injury rate – male employees | % | 1.5 | | | | |
| Injury rate – female employees | % | 0.07 | | | | |
| Lost-Day Rate – male employees | % | 51.88 | | | | |
| Lost-Day Rate – female employees | % | 0.97 | | | | |
| **INSPECTIONS AND INVESTIGATIONS** | | | | | | |
| Periodic health inspections | no. | 2,624 | 2,490 | 2,983 | 134 | 5% |
| Examinations by assigned doctor | no. | 301 | 244 | 228 | 57 | 23% |
| Inspections and checks(5) | no. | 130 | 157 | 133 | -27 | -17% |
| **HOURS OF TRAINING ON WORKERS' HEALTH AND SAFETY** | | | | | | |
| **Total** | **h** | **37,940** | **41,137** | **61,033** | **-3,197** | **-8%** |
| Senior executives | h | 648 | 0 | 206 | 648 | - |
| Junior executives | h | 4,343 | 1,908 | 2,536 | 2,435 | 128% |
| White-collar workers | h | 14,191 | 16,292 | 25,737 | -2,101 | -13% |
| Blue-collar workers | h | 18,757 | 22,937 | 32,554 | -4,180 | -18% |
| **OCCUPATIONAL INJURIES – CONTRACTORS AND SUBCONTRACTORS** | | | | | | |
| Occupational injuries – contractors' employees | no. | 11 | 10 | 13 | 1.0 | 10% |
| - of which serious | no. | 4 | 3 | 4 | 1.0 | 33% |
| - of which fatal | no. | 2 | 2 | 0 | - | - |
| Injury rate(6) | % | 0.58 | 0.63 | 0.75 | -0.1 | -8% |

(1) This is the number of injuries with at least one day's abstention from work divided by the number of hours worked during the year and multiplied by 200,000 (corresponding to 50 working weeks x 40 hours x 100 employees). To facilitate comparison with other sources, this indicator was also calculated using a multiplication factor of 1,000,000 instead of 200,000 (consequently obtaining an injury rate five times that of the ILO). With this calculation method, the injury rate came out at 7.1 in 2013, 8.8 in 2012, and 8.3 in 2011.

(2) This is the ratio between days not worked owing to injury and hours worked in the year, multiplied by 200,000. Days not worked are calendar days, counted from when the injury occurred. To facilitate comparison with other sources, this indicator was also calculated using a multiplication factor of 1,000. With this calculation method, the lost-day rate came out at 0.2 in 2013, 0.3 in 2012, and 0.2 in 2011.
In 2013, unlike previous years, when calculating the lost-day rate only the days not worked relative to injuries occurring in 2013 were considered and not any continued absence related to injuries occurring in previous years.

(3) This is the total number of cases of occupational disease divided by the hours worked in the year, multiplied by 200,000.
No hours of absence were ascribable to occupational disease because the type of activities carried out by Terna does not entail any work associated – on the basis of the official legal tables – with the possible onset of occupational diseases. Terna's occupational disease rate must therefore be considered to be always zero.

(4) 2013 was the first year in the three-year period considered during which employees of the Terna Group suffered injuries.

(5) Inspections performed by the SPPM (Safety, Prevention and Protection Managers) and the Operational Transmission Area Managers.

(6) This is the number of injuries with at least one day's abstention from work divided by the number of hours worked during the year and multiplied by 200,000 (corresponding to 50 working weeks x 40 hours x 100 employees). To facilitate comparison with other sources, this indicator was also calculated using a multiplication factor of 1,000,000 instead of 200,000 (consequently obtaining an injury rate five times that of the ILO). With this calculation method, the injury rate came out at 2.9 in 2013, 3.1 in 2012, and 3.7 in 2011.

## Relations with trade unions

| | Units | 2013 | 2012 | 2011 | Change 2012-13 | % Change 2012-13 |
|---|---|---|---|---|---|---|
| **EMPLOYEE TRADE UNION MEMBERSHIP** | | | | | | |
| Trade union membership rate | % | 62.7 | 61.7 | 60.6 | 1.0 | 2% |
| **TRADE UNION AGREEMENTS** | | | | | | |
| Trade union agreements signed during the year | no. | 14 | 13 | 14 | 1 | 8% |

# Acronyms

| | |
|---|---|
| **ACEA** | Azienda Comunale Energia e Ambiente [Municipal Energy and Environment Company] |
| **AEEG** | Autorità per l'Energia Elettrica e il Gas [Italian Electricity and Gas Regulatory Authority] |
| **AGCM** | Autorità Garante della Concorrenza e del Mercato [Italian Antitrust Authority] |
| **AIT** | Average Interruption Time |
| **AOT** | Area Operativa Trasmissione [Operational Transmission Area] |
| **ASA** | Average System Availability |
| **AU** | Acquirente Unico [Italian Single Buyer] |
| **BoD** | Board of Directors |
| **CdP** | Cassa Depositi e Prestiti |
| **CEI** | Comitato Elettrotecnico Italiano [Italian Electro-technical Committee] |
| **CESI** | Centro Elettrotecnico Sperimentale Italiano [Italian Electro-technical Testing Centre] |
| **CIGRE** | Conseil International des Grands Réseaux Électriques à Haute Tension |
| **CONSOB** | Commissione Nazionale per le Società e la Borsa [National Commission for Companies and the Stock Exchange] |
| **CSR** | Corporate Social Responsibility |
| **DAM** | Day Ahead Market |
| **DP** | Development Plan of the National Transmission Electricity Grid |
| **DPS** | Dividend Per Share |
| **DSM** | Dispatching Services Market |
| **DT** | Distance training |
| **EBIT** | Earnings Before Interest and Taxes |
| **EHV** | Extremely-High Voltage |
| **EIA** | Environmental Impact Assessment |
| **EMO** | Electricity Market Operator |
| **EMS** | Energy Management System |
| **ENS** | Energy Not Supplied |
| **EPS** | Earnings Per Share |
| **EPSES** | Emergency Plan for the Security of the Electricity System |
| **ERPA** | Exclusion, Repulsion, Problems, Attraction |
| **ETSO** | European Transmission System Operators |
| **GAAP** | Generally Accepted Accounting Principles |
| **GIS** | Geographic Information System |
| **GRI** | Global Reporting Initiative |
| **GRTN** | Gestore della Rete di Trasmissione Nazionale [National Transmission Grid Operator] |

| | |
|---|---|
| **GSE** | Gestore del Sistema Elettrico [Electricity System Operator] |
| **HV** | High Voltage |
| **IBA** | Important Bird Areas |
| **IEA** | International Energy Agency |
| **IPO** | Initial Public Offering |
| **ISPRA** | Istituto Superiore per la Protezione e la Ricerca Ambientale [Italian Institute for Environmental Protection and Research] |
| **ISTAT** | Italian National Statistics Institute |
| **MBI** | Maintenance and Business Intelligence |
| **MBO** | Management By Objectives |
| **MED** | Italian Ministry for Economic Development |
| **MEF** | Italian Ministry of Economy and Finance |
| **MELS** | Italian Ministry for the Environment, Land and Sea |
| **MPA** | Italian Ministry for Productive Activities (now the Ministry for Economic Development – MED) |
| **N.A.** | Not applicable |
| **NCC** | National Control Centre |
| **NTG** | National Transmission Grid |
| **OECD** | Organization for Economic Cooperation and Development |
| **PCB** | Polychlorinated biphenyls |
| **PCT** | Polychlorinated terphenyls |
| **PPE** | Personal Protective Equipment |
| **ROACE** | Returns On Average Capital Employed |
| **S&P** | Standard & Poor's |
| **SCADA** | Supervisory Control and Data Acquisition |
| **SEA** | Strategic Environmental Assessment |
| **SETSO** | South-East Europe Transmission System Operators |
| **SISTAN** | Italian National Statistics System |
| **SPZ** | Special Protection Zone |
| **SRI** | Socially Responsible Investment |
| **TFR** | Trattamento di Fine Rapporto [Staff severance indemnity] |
| **TSO** | Transmission System Operator |
| **TSR** | Total Shareholder Return |
| **UCTE** | Union for the Co-ordination of Transmission of Electricity |

The glossary is available on the site www.terna.it on the "Tools" page using the following link: www.terna.it/default/home_en/sustainability/Tools_sustainability.aspx.

2013

Report

Terna
TERNA GROUP

**TERNA SPA**

# INDEPENDENT REPORT ON THE LIMITED ASSURANCE ENGAGEMENT OF THE SUSTAINABILITY REPORT 2013

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**INDEPENDENT REPORT ON THE LIMITED ASSURANCE ENGAGEMENT OF THE SUSTAINABILITY REPORT 2013**

To the Shareholders of
Terna S.p.A.

1 We have carried out the limited assurance engagement of the Sustainability Report as of 31 December 2013 (hereafter the "Report") of the Terna Group (hereafter the "Group") following the verification procedures summarized in paragraph 3 of the present document. The Directors of Terna S.p.A. are responsible for the preparation of the Report in accordance with "Sustainability Reporting Guidelines & Electric Utilities Sector Supplement" (EUSS), issued in 2009 by the GRI – Global Reporting Initiative, and with the GRI 3.1 Guidelines updated in March 2011, that are detailed in paragraph "Methodological note" of the Report. The Directors are also responsible for the definition of the Group objectives regarding the sustainability performance and the reporting of the achieved results. We are responsible for the preparation of this report on the basis of the work performed.

2 Our work has been conducted in accordance with the principles and guidelines established by the "International Standard on Assurance Engagements 3000 - Assurance Engagements other than Audits or Reviews of Historical Financial Information" (ISAE3000), issued by the International Auditing and Assurance Standards Board. ISAE3000 requires the compliance with ethical principles ("Code of Ethics for Professional Accountants"), including professional independence. It also requires that our work is planned and performed with the aim of obtaining a limited assurance, rather than a reasonable assurance, that the Report is free of material errors.
A limited assurance engagement of the sustainability report consists in interviews, primarily with company's personnel responsible for the preparation of the information included in the sustainability report, in the analysis of the sustainability report and in other verification procedures.

3 The verification procedures performed on the Report are summarized as follow:

a) comparison between the economic and financial information and data included in the Report with those included in the Group consolidated financial statements as of 31 December 2013;
b) analysis of design and implementation of governance and management system of sustainability topics related to strategy and operation of the Group;
c) analysis of processes underlying the generation, recording and management of quantitative data included in the Report. In particular, we have carried out the following procedures:

- meetings and discussions with management representatives of Terna S.p.A to achieve a general understanding of the information, accounting and reporting systems in use to prepare the Report, as well as of the internal control processes and procedures

***PricewaterhouseCoopers Advisory SpA***

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supporting the collection, aggregation, processing and transmission of data and information to the department responsible for drawing it up.;
- on-site verifications at Transmission Operational Area (AOT) - Turin.

d) analysis, on a sample basis, of the documentation supporting the Report, in order to confirm the reliability of data and information collected through meetings, interviews and on-site verifications and to confirm they were properly managed;
e) verification of processing of data and information generated by the audited local site and afterwards aggregated and consolidated;
f) analysis of the completeness and internal consistency of qualitative information included in the Report in comparison with the reporting guidelines referred to in paragraph 1 of this report;
g) obtaining a representation letter, signed by the legal representative of Terna S.p.A. relating to the completeness and reliability of the Report and of the information and data included in it, as well as to the compliance with the guidelines identified in paragraph 1 of the present document.

Regarding the comparative data relating to the Sustainability Report 2012, reference should be made to our assurance statement dated 23 May 2013.
A limited assurance engagement is less in scope than a reasonable assurance engagement carried out in accordance with ISAE3000 and, as a consequence, it provides a lower level of assurance that we became aware of all the significant events and circumstances that a reasonable assurance engagement could have identified.

4 Based on the procedures carried out, nothing came to our attention that causes us to believe that the Sustainability Report as of 31 December 2013 of the Terna Group is not in compliance, in all material respects, with "Sustainability Reporting Guidelines & Electric Utilities Sector Supplement" (EUSS), issued in 2009 by the GRI – Global Reporting Initiative, and the GRI 3.1 Guidelines updated in March 2011 that are detailed in paragraph "Methodological note" of the Report.

Turin, 17 April 2014

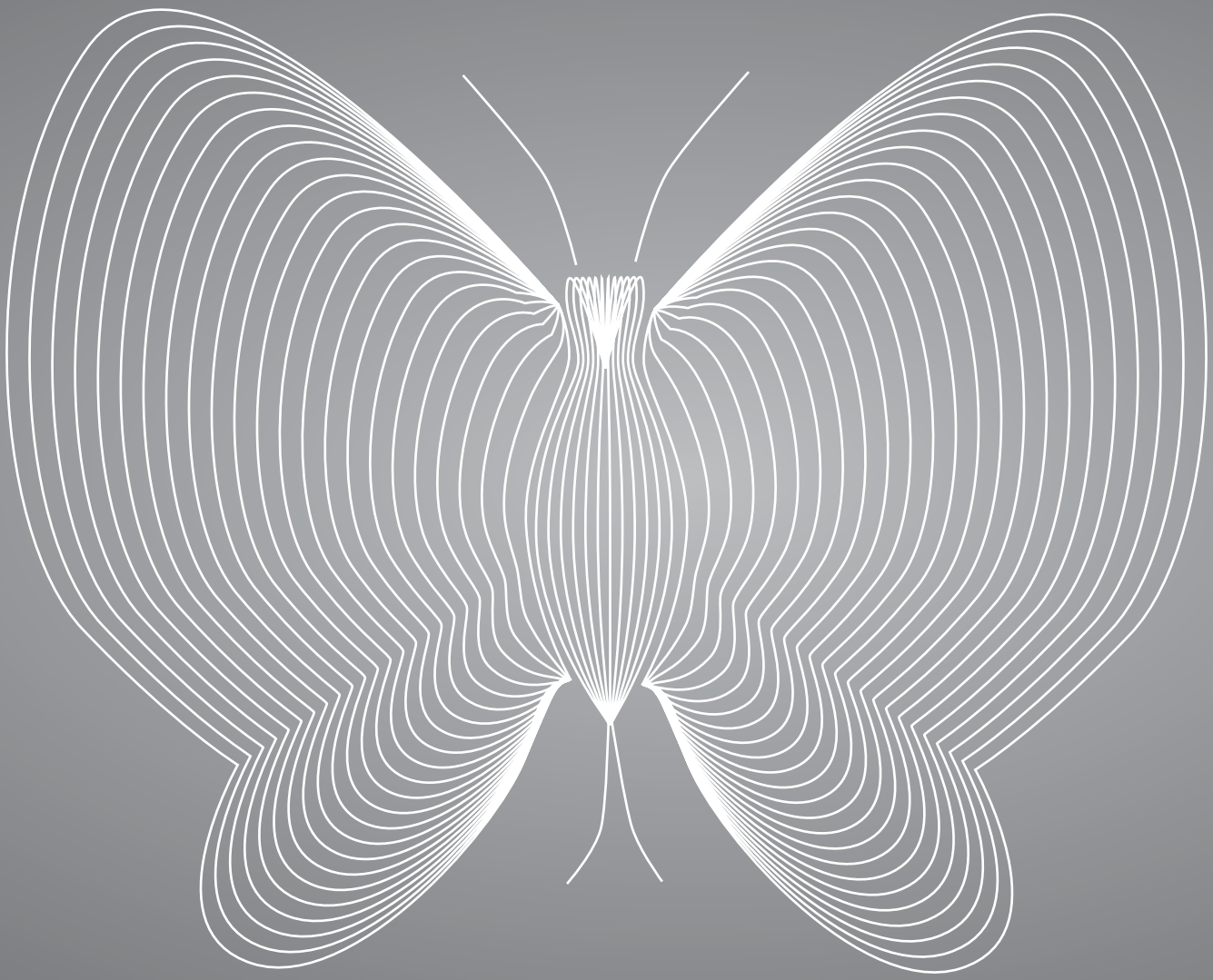
PricewaterhouseCoopers Advisory S.p.A.

*Signed by*

Paolo Bersani
(Partner)

*This report has been translated from the original, which was issued in Italian, solely for the convenience of international readers.*

# WE WORK FOR A **GRID** THAT'S **LIGHT** FOR THE ENVIRONMENT



WORKING FOR SUSTAINABLE DEVELOPMENT
ALSO MEANS TRANSMITTING ENERGY RESPONSIBLY.
THIS IS TERNA'S JOB.

Terna
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