

# SUSTAINABILITY REPORT

2015





# Transmitting energy



# SUSTAINABILITY REPORT

# 2015





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## Letter of the Chairwoman and the Chief Executive Officer



The Sustainability Report that we are presenting provides further information about the positive results achieved by the Terna Group in 2015 in terms of sustainability and displayed in the Group's Integrated Report. In line with last year, the contents of this Letter are similar to those which introduce the Financial Statements, in the belief that performance in sustainability, as well as in operations and financial and economic aspects is central for stakeholders in understanding and evaluating Terna's progress and prospects.

As a whole, the Integrated Report and the Sustainability Report are not limited to providing a picture of performance, but illustrate the factors underlying the results achieved and detail new initiatives. First of all, there is the organisational restructuring of the Parent Company, with improved oversight on strategies and on innovation, with the aim of giving Terna the dynamism and flexibility necessary to continue to create value also in the coming years. The company's future will be characterised by an evolution of the electricity system which will entail a new market design and which will increasingly focus on the development of innovative services and new technologies, with attention to benefits for electricity users and to the problems of climate change.

From this comes the need for Transmission Operators to play a new role in the electricity system, taking grid security as a point of reference and continuing to guarantee high levels of service quality.

During 2015 we achieved all the targets provided for in the previous Plan. Besides acquiring the Ferrovie dello Stato electricity grid, with which Terna consolidated its role as leader among European grid operators, we managed to very successfully complete an important generational turnover project, which enabled us to recruit more than 300 young talents and equip ourselves with a more efficient structure.

The 2015 results confirm the Group's solid growth trend. Revenue was more than € 2 billion, with 4.3% growth compared to the previous year. EBITDA came out at more than € 1.5 billion, up 3.2% compared to the previous year. Net profit reached € 600 million, up by 9.4%. The investments are in line with the National Transmission Grid Development Plans and with the Strategic Plan and amounted to € 1.1 billion.

Terna was able to make its contribution also to the reduction in the costs of the electricity system, visible in the containment of expenses incurred on the dispatching service market and in further convergence of the zonal prices, keeping the system secure. Proof of this ability was provided on 21 July 2015, when Terna managed to cope with the highest demand ever (59.4 GW, +15.1% compared to the 2014 peak), managing at the same time the production of the approximately 700 thousand renewable plants connected and active in Italy, without losing a single kW of energy.

During 2015, Terna consolidated its cooperation with other grid operators both in the context of international bodies (ENTSOE), and at the bilateral level, with the signing of a mutual collaboration agreement between Terna and the operator of the French grid RTE. In February 2015, "market coupling" also began on three

Italian borders (France, Austria and Slovenia), which simplifies access to the market for the operators and guarantees efficient allocation of the transfer capacity between countries. The operating focus for the creation of the new interconnections provided for in the development plan is also continuing. Their entry into operation will increasingly facilitate the process of integration and coordination with the large continental electricity grids.

Moreover, the Group achieved environmental and social results which were, in some cases, the best ever. Among these, the 14% reduction in direct CO<sub>2</sub> emissions (down to 66,799 tonnes) and the growth in the percentage of recyclable waste to 92%. The grid development work enabled the removal from the territory of 98 km of obsolete lines (more than 613 km in the period 2010-2015). Investments in the development of human resources and in workplace safety found expression in the 30% increase in training hours (56 hours per capita in 2015, 43 in 2014), which involved 97% of employees, and in the reduction in occupational injuries, down both in absolute terms and in terms of injury rate and lost-day rate. The gradual improvements on all the sustainability fronts recorded over the last few years earned Terna – on the occasion of the annual revision of the Dow Jones Sustainability indices – recognition as Industry Leader among all the companies of the electric utilities sector.

In 2015 solid foundations were laid for the coming years. In fact, last December the tariff revision process was completed and this will guarantee a visibility of eight years. From 2016 to 2019, the regulatory framework is characterised by substantial methodological continuity with the past and from 2020 provides for the introduction of a new approach, based on the recognition of costs against total expenses (TOTEX).

Terna's team will be focused in the coming months on achieving the targets of the 2016–2019 Strategic Plan. Above all focused on strengthening the core business with electricity grid development – € 3.3 billion the total commitment, of which € 2.6 billion to increase the regulated assets (RAB) – and to integrate the grid acquired from Ferrovie dello Stato.

In addition, the Group will concentrate on the development of Non-Regulated Activities in Italy, on the Interconnector projects and on identifying new opportunities for investment abroad.

The commitment to cost excellence will also continue, with the aim of generating further benefits with respect to the previous Plan. We shall pay great attention to cash generation: a cumulative Free Cash Flow of approximately € 2 billion over the period of the Plan will enable us to service the cost of the debt, the dividends and international expansion, with a financial structure which will remain solid.

At the same time, the commitment to sustainability will continue. In particular, we shall continue to enhance our ability to relate positively with all stakeholders, both at the central level and around the country, and we shall continue to invest in training, in safety and in the improvement of our environmental performance, also in line with our commitment to the United Nations' Global Compact and consistent with our commitment as founding members of the Global Compact Network Italy Foundation. As the Sustainability Report for 2015 already displays with its presentation of correspondence between the published GRI-G4 indicators and the Sustainable Development Goals approved by the United Nations in September 2015, our sustainability initiatives will be displayed from now on also in relation to their contribution towards the major global objectives of Agenda 2030 on sustainable development.

In the context of future challenges, we are reassured by being able to count on the professional quality and values of Terna's people, who have provided an irreplaceable contribution to past results and who will be fundamental for seizing future opportunities.

The Chairwoman  
CATIA BASTIOLI



The Chief Executive Officer  
MATTEO DEL FANTE





# THE 2015 REPORT: INTRODUCTION AND SUMMARY

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## 2015 report: introduction and summary

The Terna Group has its headquarters in Rome and is the owner of the Italian National Transmission Grid (NTG), with 57,893 km of electricity lines (more than 63,900 km of three-phase power lines), 500 transformer substations, and 21 lines interconnecting with foreign grids (data at 31 December 2015). In December 2015 the Terna Group acquired the Ferrovie dello Stato railway grid adding approximately 8400 km to its network and cementing a European independent operator record. It is responsible for transmitting and managing electricity flows on the high-voltage and very-high-voltage grid throughout the whole of Italy to maintain balance between the demand and supply (dispatching), as well as for planning, constructing and maintaining the grid.

It acts as the Italian TSO (Transmission System Operator) with a monopoly under a government licence in accordance with the regulations of the Italian Regulatory Authority for Electricity, Gas and Water (AEEGSI) and the guidelines of the Ministry of Economic Development.

It guarantees the security, quality and cost-effectiveness of the national electricity system and pursues grid development and integration with the European grid. It ensures equal conditions of access for all grid users. The Terna Group also undertakes infrastructural activities and services under the market system or regulated by foreign authorities, pursuing new business opportunities with its experience, technical expertise and ability to innovate, all gained managing complex systems.

Terna manages its business by placing great importance on the possible economic, social and environmental consequences and adopts a sustainable approach in order to create, maintain and strengthen a relationship of mutual trust with its stakeholders, which is able to create value for the business and for the stakeholders themselves.

The Terna S.p.A. holding company is listed on the Borsa Italiana electronic market and with € 9,400 million is one of the leading Italian companies in terms of stock-market capitalisation.

## Sustainability aspects related to Terna

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. 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 described in the methodological note on page 150.

From this analysis the following issues emerged as being relevant: the quality, safety and continuity of energy supply, the responsible planning of the NTG, the development of interconnections with other countries, and integrity and transparency in all business. These issues, together with others more directly related to environmental and social issues, are dealt with in this Report and are partly discussed, together with those of an economic and financial nature, in the Report on Operations, which forms the Group's Integrated Report.

The construction and development of relationships of trust with stakeholders, useful in creating value for the company and for the stakeholders, is a fundamental theme of sustainability in Terna, enshrined in its Code of Ethics.

This leads to concern upstream of the possible environmental and social impacts of Terna's activities and advocates taking all necessary measures to prevent and minimise such impacts.

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 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 initiatives of social, humanitarian and cultural value, which serve as a concrete sign of participation in the growth of civil society.

For stakeholders, investment in this attention translates into the social and relational capital growth necessary for the sustainability of the Terna business model. More generally, investment in intangible capital is another central theme in Terna's sustainability approach and is also critical to its ability to create value in the long run. In particular, the role of human capital is important to Terna.

**Renewing** specific technical **skills** of human resources, which are often rare or unique in the electricity industry, constitutes an important part of Terna's sustainability approach. Another element, 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.

## Sustainability plan, results and objectives

The Sustainability Plan is a tool that organises the Group's business into sustainable streams.

The Plan systematises and clarifies the relevant activities in order to support business growth from a sustainability perspective, with the aim of:

- **ensure a gradual and continuous long-term improvement of Terna Group sustainability performance to integrate and support the business objectives** set forth in its Strategic Plan, within a given timeframe;
- **protect and consolidate the reputational capital of the Group**, with specific reference to investors attentive to aspects of sustainability and, more generally speaking, in line with Model 231 and Italian Law 262.

The sustainability plan 2015-2016 also invokes the main objectives stated in other documents, particularly the Plan of Engagement, which collects the initiatives to be achieved in order to structure awareness of stakeholders' opinions and expectations, assess the fulfilment thereof and maintain an appropriate level of dialogue.

In accordance with the recommendations of the Sustainability Plan, in 2015 the following results in particular were achieved:

- the finalisation and adoption of the "Stakeholder Management Model" Guidelines (October 2015). For more details see page 38;
- the organisation of 10 "Open Days" information meetings aimed at the population of areas affected by grid-development projects (see the box on page 44);
- the continuation of active participation in the International Integrated Reporting Council Business Network (IIRC), to consolidate and refine the experience gained in preparing the Integrated Report;
- attainment of UNI CEI EN ISO/IEC 50001:2011 certification.

Other goals reached are shown in the following table. We note in particular, in the context of the review of social action projects, the signing of a Memorandum of Understanding with Fondazione Cariplo for initiatives in support of employment and youth enterprise. The table also lists the main objectives for 2016, including those not completely achieved in 2015.

Area of responsibility	2015 Objectives	2015 Results	2016 Objectives
<b>Governance and general considerations</b>	Definition of a stakeholder management and engagement model.	●●●	The first annual monitoring of the state of relations with stakeholders.
	Participation in IIRC programmes and refinement of the Integrated Report.	●●●	Review of the Materiality Matrix.
	Establishment of information events for citizens affected by grid-development projects (meetings open to the public).	●●●	Definition of a standard of involvement for local communities affected by grid development projects and its first implementation.
	Review of the matrix used to identify significant areas for ESG purposes.	●●○	Review of the matrix used to identify significant areas for ESG purposes.
<b>Environmental Responsibility</b>	Definition of targets for key environmental impact KPIs.	●●○	Definition of targets for key environmental impact KPIs.
	Start of cooperation with RSE to research the impacts of climate change on infrastructure and transmission management.	●●●	Conclusion of the LCA study on overhead power lines.
	Obtainment of certification according to the UNI CEI EN ISO/IEC 50001:2011 standard.	●●●	Construction of the Turin site with high standards of energy performance.
<b>Social responsibility</b>	Revision of social-action projects.	●●○	Implementation of social project with Fondazione Cariplo.
	Education and awareness-raising campaign on the subject of environmental near misses and safety.	●●○	Conclusion of education and awareness-raising campaign on environmental near misses and safety.
	Energy efficiency awareness initiative for employees.	●●●	Series of seminars on sustainability aimed at senior managers and an online course on sustainability.
<b>Key</b>			
Objective achieved	●●●		
Partly achieved	●●○		
Postponed or suspended	●○○		



## Highlights

Over the course of 2015, Terna achieved environmental and social results which in some cases were better than ever. Among these, the impact of SF<sub>6</sub> leakage of the total installed fell to 0.44% (compared to 0.55% in 2014), direct CO<sub>2</sub> emissions dropped by around 14% (66,799.4 tonnes equivalent compared to 77,361 in 2014) and the percentage of recycled waste rose to 92% (81% in 2014). In the social sphere, training hours per capita hit the historic ceiling (56 hours compared to 43 in 2014).

Area	Topic	Performance
<b>Relations with stakeholders</b>	Consultation	275 encounters involving about 160 local authorities
	Stakeholder engagement	More than 500 citizens took part in Terna's "Open Days" throughout Italy
<b>Electricity service</b>	Security Plan	€ 75 million invested
	New lines in operation	Around 73 km
	Lines removed (*)	98.03 km
	Checks	74,600 km of three-phase power lines subject to visual inspections of which 31,400 by helicopter, and 17,000 instrumental
	Live-line works	Approximately 1,150 checks and 1,100 maintenance operations
<b>Economic responsibility</b>	Employment	3,333 Group employees as at 31.12.2015 (**)
	Indirect employment	2,503 full-time equivalent
	Total investments:	€ 1,103.1 million
	Total Shareholder's Return (TSR)	32.5%
	Suppliers active during the year	1,857
<b>Environmental Responsibility</b>	Direct CO <sub>2</sub> emissions	66,799.4 equivalent tons (-14% compared to 2014)
	Waste management	92% recycled (81% in 2014)
	Environmental offsets	€ 1.2 million
<b>Social responsibility</b>	Training	190,807 hours provided, 56 hours per capita
	Equal opportunities	11.5% of total employees women; 17.6% of total management positions held by women (***)

(\*) Demolitions are defined as overhead lines removed from the ground (or replaced by cable lines) and do not include declassified or enhanced lines.

(\*\*) This Group figure has the same scope as 2014 and does not include employees of the Tamini group or Terna Crna Gora.

(\*\*\*) The percentage refers to the number of female senior and junior executives out of the total number of senior and junior executives in the company.

## Sustainability indices

Terna's commitment to measuring and improving its ESG (Environmental, Social and Governance) performance shows in its sustainability ratings as reported by specialist companies, its inclusion in the main international stock exchange sustainability indexes and the appreciation of socially responsible investors. During the course of 2015, Terna's inclusion in all of the main international sustainability indices was confirmed and in September, for the annual review conducted by the Swiss sustainability rating agency RobecoSAM, which also confirmed the Company's place within the World and Europe indices, it was also recognised as the Industry Leader within the Electric Utilities Sector.

In its "Sustainability Yearbook 2016" published in January 2016, RobecoSAM assigned Terna, as Industry Leader, a place in the Gold Class.

### TERNA'S PRESENCE IN SUSTAINABILITY INDICES (AS OF 31.12.2015)

INDEX	INDEX FEATURES
<b>DOW JONES SUSTAINABILITY INDICES</b>	<p>The DJSI indices select the companies with the best sustainability performance among those most highly capitalised (the top 317 out of 2,500 in the world for the World Index and the top 162 out of 600 European companies for the European index) according to the ratings calculated by the agency RobecoSAM. This index was considered more reliable by the "Rate the raters" survey conducted in 2013 by GlobeSCAN SustainAbility on a group of around 700 qualified sustainability experts representing 70 countries.</p> <p>Terna has been included in the DJSI World since 2009 and has also been present in the DJSI Europe since 2010.</p>
<b>ECPI</b>	<p>Carried out by ECPI – an Italian agency founded in 1997 specialising in ratings, sustainability indices and research for integrating non-financial information into investment processes – based on its own analyses of the sustainability performance of European companies.</p> <p>Terna has been present on the ECPI since 2007.</p>
<b>ETHIBEL SUSTAINABILITY INDEX (ESI)</b>	<p>The indices are calculated on the basis of ratings provided by the Vigeo agency. Inclusion is subject to approval by the Ethibel Forum, a panel of independent experts on the different aspects of sustainability.</p> <p>Terna has been included in the ESI since 2009.</p>
<b>FTSE ECPI</b>	<p>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.</p> <p>Terna has been present on the FTSE ECPI since 2010.</p>
<b>FTSE4Good</b>	<p>The FTSE4Good indices include the best companies in terms of sustainability performance on the basis of FTSE analyses conducted with the companies' support. The index is reviewed twice a year, in March and September, in order to include any new firms and to exclude those which have not maintained the required sustainability standards. This index was considered among the most reliable by the "Rate the raters" survey conducted in 2013 by GlobeSCAN SustainAbility on a group of around 700 qualified sustainability experts representing 70 countries.</p> <p>Terna has been continually present on the index (Global and Europe baskets) since 2005.</p>
<b>MSCI</b>	<p>MSCI has integrated the original 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 - with other sustainability indexes.</p> <p>Terna stock has been continually present on the index since 2007.</p>



<b>STOXX® ESG</b>	Launched in 2011, these indices are calculated on the basis of the assessments of the rating agency Sustainalytics and select the 348 best stocks for ESG performance from among the 1,800 present in the general STOXX® Global index. 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). Terna is the only Italian utility company included in all three. Terna has been included on the index since 2011.
<b>STOXX® LOW CARBON</b>	Launched in February 2016, the STOXX® Low Carbon Indices aim to provide a selection of firms characterised by low CO <sub>2</sub> emissions. The selection of firms is based on data collected by CDP (Carbon Disclosure Project). The Index components are selected from the STOXX® Global 1800 basket based on their carbon intensity data (Scope 1 and Scope 2 of the GHG Protocol on revenues).
<b>VIGEO</b>	Presented in 2012 by the Vigeo rating agency, these indices 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 indices are prepared on the basis of a methodology using more than 330 key indicators and 38 sustainability criteria. Terna is present in the World 120, Eurozone 120 and Europe 120 baskets. Terna has been present on the index since 2012.
<b>UNITED NATIONS GLOBAL COMPACT ("GC100")</b>	Established in 2013 from the United Nations Global Compact in partnership with the research firm Sustainalytics, this index includes 100 companies that have distinguished themselves on the world stage for their focus on sustainability issues and their performance in the financial sector and which adhere to the ten fundamental principles of the United Nations on human rights, labour, the environment and anti-corruption issues. Terna has been present on the index since 2013.

Terna was also selected in some "Investment registers" based on selective sustainability criteria; especially when public, these act as a reference for investors concerned with ESG performance. These registers include those compiled by: Ethibel, ASN Bank, TRIODOS Bank and Storebrand.

## Structure of the Report

The chapter divisions in the Report are almost identical to previous years. After the "2015 Report: Introduction and Summary", the "Terna Company Profile" and "Relations with Stakeholders" comes the standard division of the contents 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 opens with an illustration of the management approach taken to the area in question and continues with thematic sections that integrate precise information, in keeping with the requirements of the GRI Guidelines, which are explored in more detail. 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.

Finally, this year saw the first ever publication of environmental data (consumption of electricity, natural gas, water and fuel) and social statistics (injuries) regarding the Tamini Group. This information supplements the employee figures published last year. The data are shown in the key indicator tables on page 187.

The Report concludes with an annex section that includes the "Key indicator tables" with a summary of the GRI indicators supplemented by additional indicators, the "GRI Content Index" with a joint table including the GRI indicators and the Global Compact indicators, as well as the "methodological note"; For the meaning of technical terms specific to the electricity industry, see the Glossary on the website [www.terna.it](http://www.terna.it) on the "Tools" page using the following link: <http://www.terna.it/en-gb/sostenibilit /strumenti.aspx>.

## Reading approaches

This year, once again, the interests of the various Terna stakeholders regarding the passages in the Report that concern them most directly has guided some editorial choices, the most important information being found in the boxes and comparisons. Sections, or in some cases, entire chapters dedicated to stakeholder issues permits an alternative layout compared to the normal division of the Report. In particular, we note:

### Stakeholder

- Regulators of licensed activities page 39
- Public decision-makers and authorities page 39
- Shareholders page 40
- Lenders page 40
- Electricity service operators page 40
- Media and opinion-makers page 41
- Customers (non-traditional activities) page 41
- Suppliers pages 40; 86-92
- Business partners pages 24; 40; 72
- People in the organisation pages 40; 124
- The wider community pages 42; 54-66
- Local communities pages 40; 44-46

### Global Compact Principles

- Human rights Principle I pages 35; 44-46; 48-49; 61-62  
86-92; 99-102; 135; 140; 185
- Human rights Principle II pages 86-92; 135
- Employment Principle III pages 86-92; 135
- Employment Principle IV pages 31; 89; 135
- Employment Principle V pages 31; 89; 135
- Employment Principle VI pages 105; 124; 128; 130; 135; 136-137; 184; 185; 186
- Environment Principle VII pages 61; 99; 103-104; 107; 109; 111  
116; 179; 181; 183; 118-119
- Environment Principle VIII pages 48; 60; 61; 86-92; 98; 99; 101-103; 104; 107; 109  
111; 112; 116-117; 118; 118-119; 134; 179; 181; 183
- Environment Principle IX pages 61; 99; 103-104; 107; 112; 113; 118-119; 181; 183
- Anti-corruption Principle X pages 34-35; 48; 144; 185

### Information boxes

- Terna's "Open, transparent works" online page 35
- "Open Day": Terna meets local citizens page 44
- Terna in ENTSO-E page 67
- The three-year innovation, research and development plan page 69
- The new regulatory framework for 2016-2023 page 84
- Cataloguing of protected species in areas of high biodiversity page 104
- Terna anticipates generational turnover and hires 300 young people page 126
- Terna Holds the International Workshop "Grid Aesthetics" in Milan on page 142
- "Here Come Grandma and Grandpa": presentation of the two-year monitoring results page 146
- The Jus Vitae "Social Farm" project is ready to get under way in Sicily page 147

## Comparisons

- SF<sub>6</sub> leaks: comparative data page 108
- CO<sub>2</sub> emissions: comparative data page 110
- Staff turnover: comparative data page 127
- Training for employees: comparative data page 128

## Webography

The links for the main corporate documents referred to in the Report can be found below.

- Development Plan:  
<http://www.terna.it/en-gb/sistemaelettrico/pianodisviluppodellarete.aspx>
- Grid Code:  
<http://www.terna.it/en-gb/sistemaelettrico/codicedirete.aspx>
- European Network Codes:  
[http://www.terna.it/default/Home/SISTEMA\\_ELETRICO/codice\\_rete/Codici\\_rete\\_europei.aspx](http://www.terna.it/default/Home/SISTEMA_ELETRICO/codice_rete/Codici_rete_europei.aspx)
- Strategic Environmental Assessment (SEA):  
[http://www.terna.it/default/home\\_en/electric\\_system/sea.aspx](http://www.terna.it/default/home_en/electric_system/sea.aspx)



## TERNA COMPANY PROFILE

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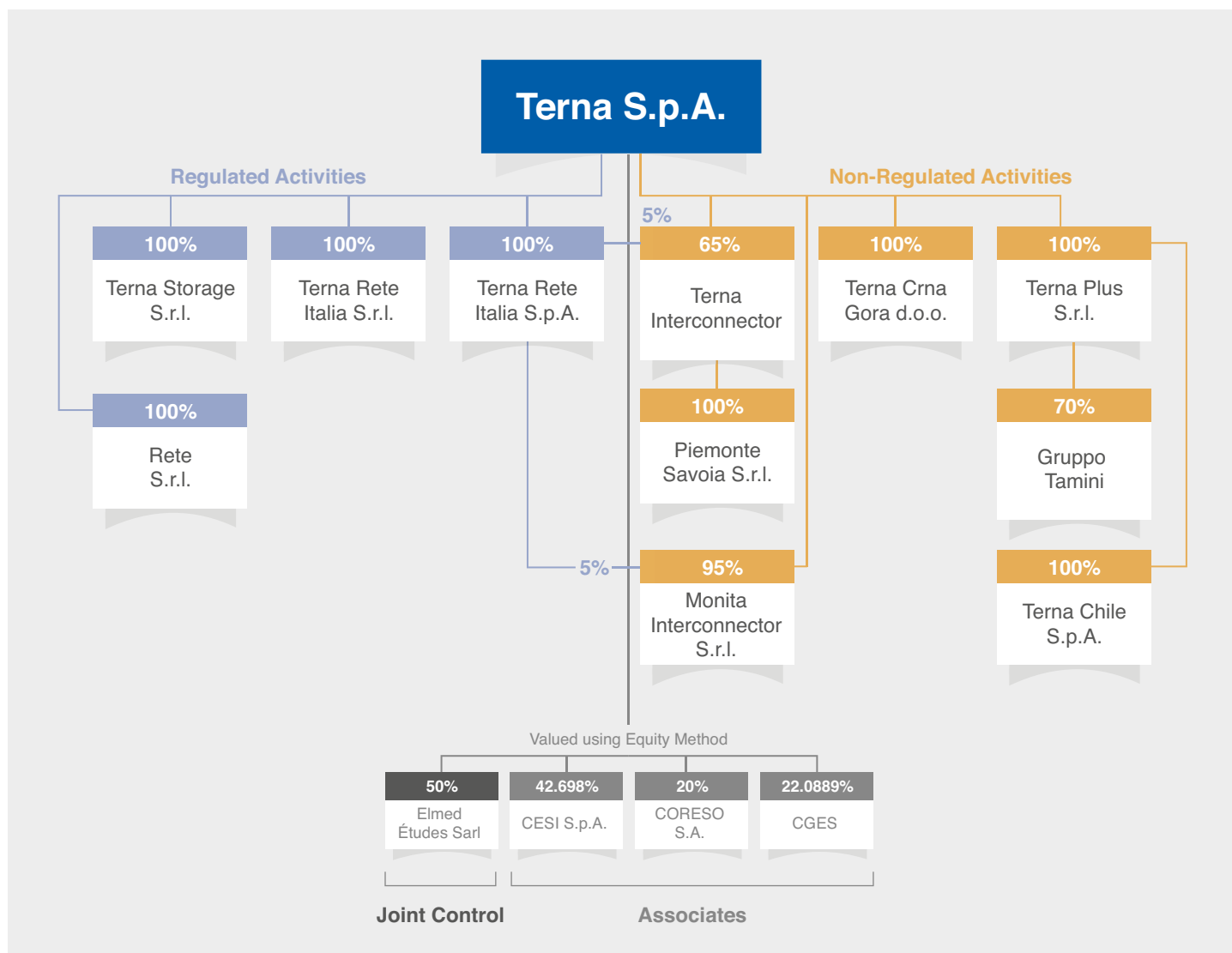
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<b>34</b>	<b>Respecting the law and preventing corruption</b>



# Terna Company Profile

## The Terna Group



The parent company Terna S.p.A. holds the government concession on the transmission and dispatch of electricity, owns the capital assets and is responsible for defining the NTG Development Plan and its Defence Plan. In regards to other companies:

- three wholly controlled Italian companies operate within regulated activities;
- four directly or indirectly controlled companies operate within non-traditional activities;
- four associated or jointly controlled companies engaged in service and research or other activities.



## ASSOCIATES OPERATING IN REGULATED ACTIVITIES

Company	Activities
<b>Terna Rete Italia S.p.A.</b>	It is responsible for all traditional business activities, for ordinary and extraordinary maintenance of the grid, and managing and implementing developments to the NTG, as set out in the Parent Company's Development Plan. A business unit rental contract was drawn up with the parent company with consequent ad hoc intergroup contracts for regulating business. Approximately 90% of the Group's human resources are concentrated within Terna Rete Italia and Terna, including Tamini.
<b>Terna Rete Italia S.r.l.</b>	It owns approximately 12% of the NTG infrastructure. The design, construction, management, development, running and maintenance of high-voltage electricity lines fall within its corporate purpose.
<b>Terna Storage S.r.l.</b>	It constructs diffused energy storage system projects and conducts coordination, study and research activities. The storage systems aim to promote the dispatching of plants powered by non-programmable renewable sources.
<b>Rete S.r.l.</b>	Responsible for the design, construction, operation, development and maintenance of high voltage power lines.

## ASSOCIATES OPERATING IN NON-REGULATED ACTIVITIES

Company	Activities
<b>Interconnector S.r.l.</b>	Group company tasked with the development and construction of infrastructures for interconnection between Italy and France.
<b>Terna Plus S.r.l.</b>	Company that, given the experience and technical expertise acquired by the Terna Group, develops new activities and business opportunities on the non-regulated market, in particular in the construction and management of infrastructures for the high-voltage line in Italy and abroad.
<b>Tamini Group</b>	The Group operates in the production and sale of industrial and power electricity transformers using 4 manufacturing facilities, all situated in Italy, in Legnano, Melegnano, Novara and Valdagno.
<b>Terna Crna Gora d.o.o.</b>	Montenegrin company that is engaged in authorising, constructing and managing the Italy-Montenegro electricity interconnection on the Montenegrin side. It also promotes new investment opportunities in the transmission sector for lines between Montenegro and neighbouring countries and of infrastructure to connect renewable energy plants in these Countries.
<b>Piemonte Savoia S.r.l.</b>	A company that handles the design, construction, management, development, operation and maintenance, also on behalf of third parties, of grid lines and structures and other related infrastructures, of plants and equipment functional to the said activities in the electricity transmission sector or in analogous, related or connected sectors. It is instrumental to the Italy-France interconnection.
<b>Monita Interconnector S.r.l.</b>	A company that handles the design, construction, management, development, operation and maintenance, also on behalf of third parties, of grid lines and structures and other related infrastructures, of plants and equipment functional to the said activities in the electricity transmission sector or in analogous, related or connected sectors. It is instrumental to the Italy-Balkans interconnection.
<b>Terna Chile</b>	A company responsible for the design, construction, administration, development, operation maintenance of any type of structure, plant, equipment and electrical infrastructure, including those of interconnection; production of all kinds of products and services, constructions, electrical and civil engineering works; research, consulting and assistance on questions related to the core business; conduction of any other activity that can improve the use and development of plants, resources and skills. It is instrumental to regulated activities in Chile.

## ASSOCIATE OR COMPANY UNDER JOINT CONTROL

Company	Activities
<b>CESI S.p.A.</b>	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.
<b>Elmed Études Sarl<sup>1</sup></b>	A Tunisian company, which initially focused on preliminary research work for a tender for the construction and operation of an electricity generation plant in Tunisia and the subsequent execution of the work necessary to connect the Tunisian and Italian electricity grids. This programme was not completed due to changes in the political and economic climate.
<b>Crnogorski Elektroprenosmi Sistem Ad (CGES)</b>	A Montenegrin company. It is the Montenegrin TSO.
<b>CORESO S.A.</b>	Belgian service company. The shareholding structure includes Terna and the operators of France (RTE), Belgium (Elia) and Great Britain (National Grid), each with a 20% share, as well as the German operator, 50Hertz Transmission, with 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.

## STAFF AND REVENUES ACCORDING TO COMPANY (AS AT 31.12.2015)

Regulated Activities			Non-Regulated Activities		
Company	Employees	Revenue (€ million)	Company	Employees	Revenue (€ million)
<b>Terna S.p.A</b>	427	1,800.9	<b>Terna Plus S.r.l.</b>	12	9.9
<b>Terna Rete Italia S.p.A.</b>	2,893	371.8	<b>Terna Crna Gora d.o.o.</b>	3	0.0
<b>Terna Rete Italia S.r.l.</b>	0	195.8	<b>Monita Interconnector S.r.l.</b>	0	0.3
<b>Terna Storage S.r.l.</b>	1	1.2	<b>Tamini Group</b>	431	125.9
<b>Rete S.r.l.</b>	0	7.8	<b>Interconnector S.r.l.</b>	0	3.6
			<b>Piemonte Savoia S.r.l.</b>	0	0.4
			<b>Terna Chile S.p.A.</b>	0	10.3

Associates		
Company	Employees	Revenue (€ million)
<b>CESI</b>	482	119
<b>CORESO</b>	31	8.6
<b>Elmed Études</b>	2	0
<b>CGES</b>	329	27.4

(1) Subject to joint control together with the Tunisian company STEG.

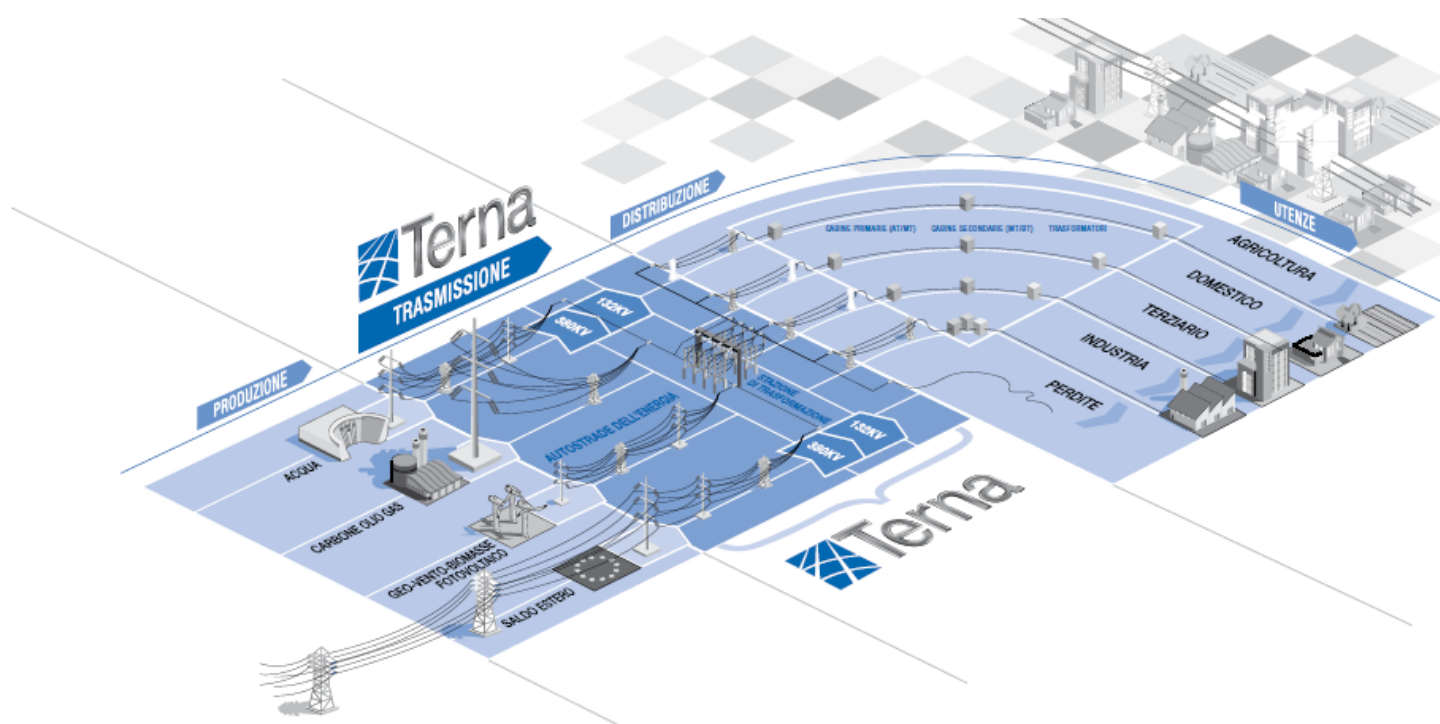
## Core business and sustainability: electricity transmission

In Terna's view, business and sustainability matters are closely linked, which is substantiated by the adoption of a **responsible approach to management of the NTG**.

Although the end users of the electricity service are not direct customers of Terna, but rather are 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**.

**The Terna Group's core business is electricity transmission and dispatching services in Italy**, in the role of Italian TSO (Transmission System Operator), a monopoly position through government concession. The Italian electricity system consists of four stages: producing, transmitting, distributing and selling electricity.

### TERNA'S ROLE IN THE ITALIAN ELECTRICITY SYSTEM



Terna is responsible for transmitting, or rather managing the electricity system by:

- operating the High-Voltage grid;
- maintaining infrastructure;
- planning grid development;
- constructing the grid.

The management of electricity transmission is divided into the activities listed below:



## ELECTRICITY DISPATCH AND TRANSMISSION IN ITALY

**Grid operation and dispatching**

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 called **dispatching** and is performed by Terna Rete Italia.

The major development of renewable sources has made the activity more complex, above all when the supply of renewables is very high and the need for energy low, thereby requiring greater flexibility in managing dispatching resources. 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.

Terna manages the Dispatching Services Market (MSD), through which it procures the resources for dispatching services. For details, please see page 54, "Service quality and continuity".

**Maintaining infrastructure**

The **maintenance of the power lines of the plants and storage systems** is carried out by Terna Rete Italia through three area offices structured into eight Operational Transmission Areas, which employ more than 75% of the Group's human resources. For details, please see page 59-60, "Plant maintenance".

**Grid development planning**

Analysing electricity flows in the grid and producing supply and demand projections allow Terna **to identify the critical points and, consequently, schedule the new work to be carried out in order to ensure that the system is adequate**, including in the medium (+5 years) and long-term (+10 years) in terms of meeting demand, safety of operations, reducing congestion, and improving service quality and continuity.

In recent years, the Italian electrical sector has been characterised by the rapid, major development of electrical production from renewable, non-programmable sources, which makes it essential to have all the regulatory resources existing available, including export trade and renewable source generation control tools. Grid planning must therefore be coherent with the aim of maximising the integration of renewable sources in safe conditions.

New works to be carried out are detailed in the National Transmission Grid Development Plan, which is presented every year to the Ministry of Economic Development for approval, subject to completion of the VAS procedure and a public consultation headed by the AEEGSI. Terna then follows the authorisation process, from prior consultation with local government through to construction authorisation. For details, please see page 60-66, "Grid development".

### Carrying out development projects

Terna prepares projects for constructing the authorised works. More specifically, it defines the need for external resources and the budget for the projects, establishing the working methods and technical specifications of components and materials to be used in the construction of new lines or substations.

Electricity storage systems using batteries are included within the development projects, as they help to resolve electricity system regulation problems created by the development of renewable energies and allow full benefit to be taken from these source, as well as the construction of foreign interconnection grids.

New plants are generally constructed through outsourcing agreements, maintaining close control over the social and environmental aspects assigned to contractors.

Finally, by analysing the grid, Terna also identifies the best ways of connecting to the transmission grid for all operators who wish to connect their plants.

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 power line components. For details, please see page 62, "Completed work".

## Other activities

In keeping with its strategic objectives, the Terna Group pursues new business opportunities and undertakes infrastructural activities and services under the market system or regulated by foreign authorities.

In 2015, these activities concerned:

- initiatives abroad;
- development and implementation of interconnection infrastructures by entities distinct from network operators (Interconnectors);
- services for third parties;
- producing transformers - Tamini Group.

## OTHER ASSETS

## Activities

## Description

## Initiatives abroad

**Chile**

Chile associates a high rate of economic and infrastructural growth with a low country risk profile. On 4 June 2015 Terna Plus established the Chilean-law company "Terna Chile S.p.A." to carry out design, construction, administration, development, operation and maintenance activities relating to electrical structures, plants, equipment and infrastructures, including those of interconnection. In 2015 Terna Chile developed an order for the connection of a 90 MW photovoltaic plant to the electricity grid. The procurement processes were managed from Italy in line with the regulations of the parent company, Terna S.p.A.

**MoU with ENEL**

On 11 May 2015, Terna signed a Memorandum of Understanding with Enel for electricity transmission projects worldwide. The agreement has a term of three years and will allow the two companies to cooperate in order to develop electricity transmission initiatives abroad, with the construction of new plants or the acquisition of existing assets. Terna will provide its technical collaboration with respect to the analysis of the electricity system, to grid planning, to design, to the operation and maintenance of transmission assets and will assess the acquisition or development of transmission assets.

**International tenders for technical assistance**

With a view to making the most of its skills, Terna has taken part in international tenders for technical assistance for operators that tackle complex challenges associated with grid operation and development activities, especially in emerging countries. In 2015 technical assistance projects were launched in the Mediterranean and Africa.

**Business in North Africa**

As concerns this area, a study is currently under way through the jointly controlled subsidiary Elmed Etudes, a joint venture with the Tunisian TSO STEG, regarding the connection between Europe and North Africa, via Italy and Tunisia.

The Italy-Tunisian project involves the creation of a HVDC link (largely undersea) between Tunisia and Sicily with an interconnection capacity of approximately 600 MW and is included in the projects found in the Terna Development Plan and in the ENTSO-E's TYNDP list of projects.

## Interconnector

**Interconnector**

To support the development of a single electricity market by expanding the infrastructure for interconnection with other countries, a community law was introduced which laid down guidelines for the creation of interconnections with other countries by subjects other than grid operators.

Italian legislation transposed the European indications in Law 99/2009, which assigned Terna the task of carrying out public tenders to select the subjects willing to finance specific interconnections, in exchange for the benefits deriving from the allocation of transfer capacity for a pre-established number of years.

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### “Italy-France Interconnector” Project

The new “Italy-France” interconnection, combined with the projects to strengthen existing lines, will make the French electricity border the most important for Italy, significantly increasing the cross-border interconnection capacity.

The power line, which is 190 km long, will be the longest underground line in the world and will be characterised by very low impacts on the environment and the territory.

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### “Italy-Montenegro Interconnector” Project

The interconnection project between Italy and Montenegro creates a new electrical border between Italy and the Balkan country; as of now they are not electrically interconnected. The line will make it possible to increase the security of Italian and Montenegrin electrical procurement and to connect the Italian market and the other Balkan countries, beyond Montenegro itself.

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### Services for third parties

In Italy, throughout the year, Terna continued to perform activities for third parties in the area of engineering services (developing technical solutions and supplying innovative services), telecommunications (*housing* of telecommunication equipment and maintenance services involving fibre optic networks) and operating third-party plants (operating and maintaining high- and very-high-voltage plants). In regards to telecommunications services, the acquisition of the high voltage grid from the Gruppo Ferrovie dello Stato, completed in December 2015, included the transfer of a contract for the passage of optical fibre belonging to BasicTel (which generated € 5.6 million in revenues in 2014).

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### Tamini

In 2015 the Tamini Group ended the supply of transformers for the US, Canadian and South African markets and began another one in Algeria, for completion in 2016.

In July 2015 Tamini signed an exclusive ten-year agreement with South African company Tenova Minerals PTY Ltd to develop a technology for application in the Tenova plants. At the end of October Tamini was merged with TES Transformer Electro Service S.r.l., a company operating in the production of electricity transformers for industrial use and for the production and transmission of electricity. On 22 December 2015 Tamini signed a partnership agreement with Elec and Djazair to construct power transformers in Algeria, which includes Sonelgaz's commitment to supply the data required to draw up a ten-year business plan.

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## The Strategic Plan

On 17 February 2016, Terna approved the Strategic Plan for 2016-2019. In light of the new regulatory framework and the evolution of the market context, the Plan envisages strategies that are aimed at reinforcing the core business, ensuring growth of Non-Regulated Activities, improving operative efficiency and developing internationally. More specifically, the strategic initiatives identified regard:

- in terms of **Regulated Activities**, the increased commitment to developing the National Electricity Grid and the integration of the High Voltage grid acquired from Ferrrovie dello Stato;
- the promotion of new business under the scope of **Non-Regulated Activities**, in Italy and abroad;
- the identification of **international opportunities** in Regulated areas, coherent with the Group's current risk profile;
- the increase in **operating efficiency**;
- **technological innovation**;
- the improvement of **Free Cash Flow** and the maintenance of a solid financial structure.

These initiatives have allowed for the identification of a **new dividends policy**.

### PROVISIONS OF THE 2016-2019 STRATEGIC PLAN

Activities	Description
<b>Regulated Activities</b>	In the next 4 years, the Terna Group plans a commitment to develop the national electricity grid that will reach around € 3.3 billion, with a limited impact on the tariff and net debt. Of this amount, € 2.6 billion is for investments that will feed into the electricity tariff, to which will be added EU financing totalling € 300 million, and around € 400 million for the Italy-France Interconnector project. Over the same time frame, the new Plan includes a commitment for around € 400 million more than in the previous plan, also thanks to the integration of the FS grid and an acceleration of strategic projects.
<b>Non-Regulated Activities</b>	The Plan envisages a greater focus on the development of Non-Regulated Activities. These activities are expected to yield an average EBITDA margin of around 50% and make a contribution to EBITDA estimated as approximately € 200 million, cumulative over the Plan period. The Terna Group will also be involved in the incorporation of TES into Tamini, a process that will give rise to business that is forecast to generate cumulative EBITDA of around € 40 million over the course of the Plan with a target EBITDA margin of around 10%.
<b>International development</b>	The 2016-2019 Strategic Plan foresees an economic commitment of around € 150-200 million for regulated activities abroad to support growth and creation of value over the long-term. These initiatives will be selected through assessment processes that can guarantee a low risk profile, an optimisation of the industrial role played by Terna and may also be developed as part of a partnership.

### Operating efficiency

Over the Plan period the Terna Group will maintain its focus on the cost excellence programmes launched in 2015, continuing its improvement of operational processes and cost rationalisation, which also refers to the FS grid.

Over the next four years, Terna estimates further cost efficiencies in the amount of € 10 million per year for the cost of labour and up to € 5 million per year for external costs; these additional efficiencies increase the savings envisaged by the previous Plan, announced as being up to € 30 million per year at end 2019 with respect to the period 2014-2018.

### Technological innovation

Terna intends to support research into innovative technological solutions in support of environmental sustainability and will continue to develop storage systems and smart systems, above all for the large islands and southern Italy. The Group has completed development of storage systems for approximately 50 MW on the 75 MW envisaged as a total, to help protect the system (security) and reduce grid congestion caused by the new sources of renewable production.

### Improvement of Free Cash Flow

The evolution of the breakdown of Terna's revenue, together with the measures taken in the field to further increase operating efficiency, will successfully generate considerable benefits for the Group's EBITDA, which is expected to come in at more than € 1.6 billion in 2019 and will help generate around € 2 billion of Free Cash Flow in the Plan period.

These actions, together with rigorous investments, will help guarantee the flexibility necessary to support an attractive dividends policy. Terna's financial structure remains solid and the net debt/RAB ratio will remain below 60% with debt expected to reduce as from 2018-2019.

### New dividend policy

Upon completion of the definition of the regulatory variables for the next 4 years, in addition to by virtue of the action already taken and that envisaged by the Plan, the new dividend policy sees annual growth of the dividend of 3% throughout the Plan, up to € 22.5 cents per share in 2019, with an increase in line with the forecast evolution of profits and main equity parameters. This policy reflects an overall payout that, during the Plan period, will remain below 75%.

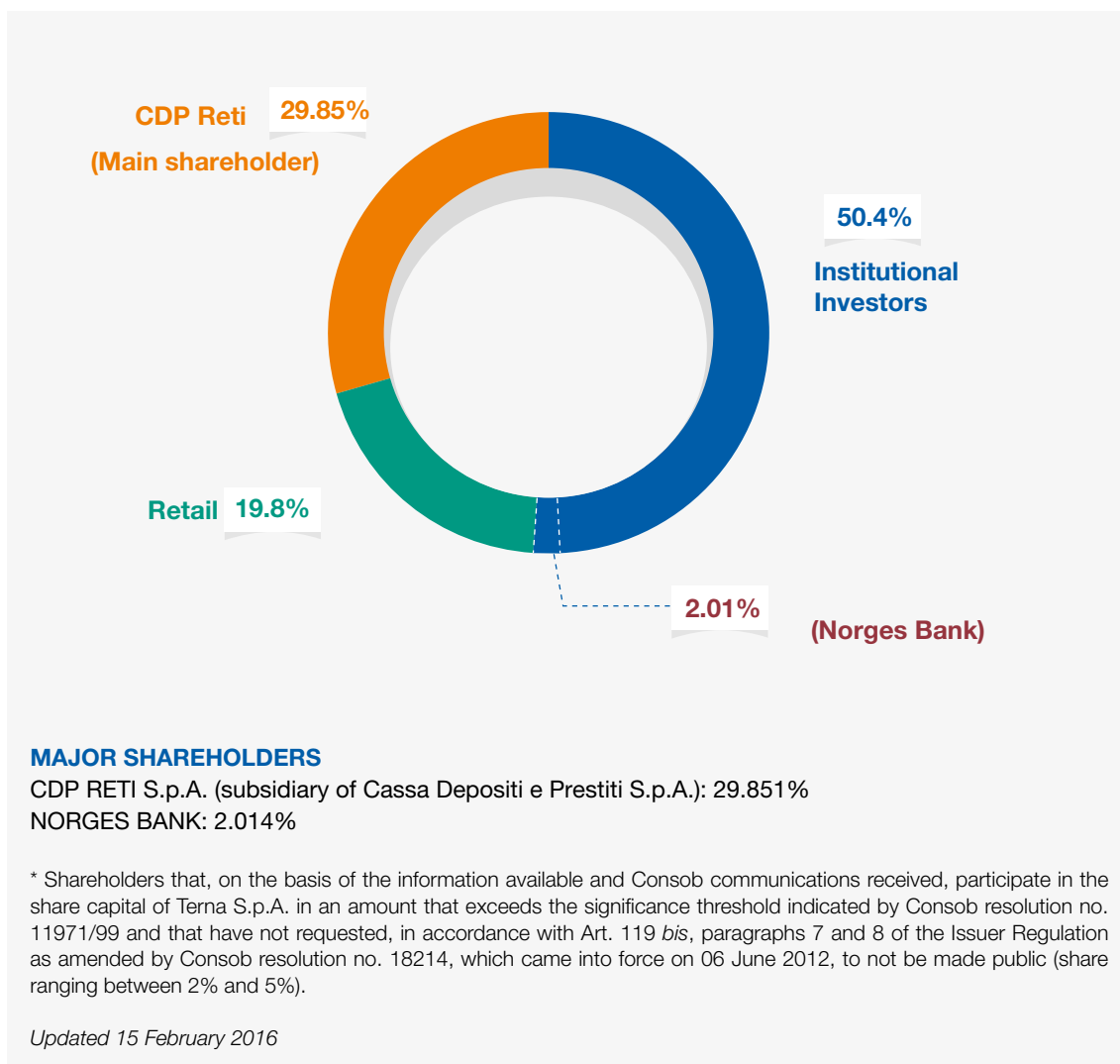
## Ownership structure

As of reporting date, Terna S.p.A.'s share capital amounted to € 442,198,240, represented by 2,009,992,000 ordinary shares, with a par value of € 0.22 each fully paid-up.

On the basis of the shareholder register and other information gathered when this Report was prepared, ownership of Terna S.p.A. is shown in the graph below. The main shareholder is CDP Reti S.p.A., a subsidiary of Cassa Depositi e Prestiti S.p.A.

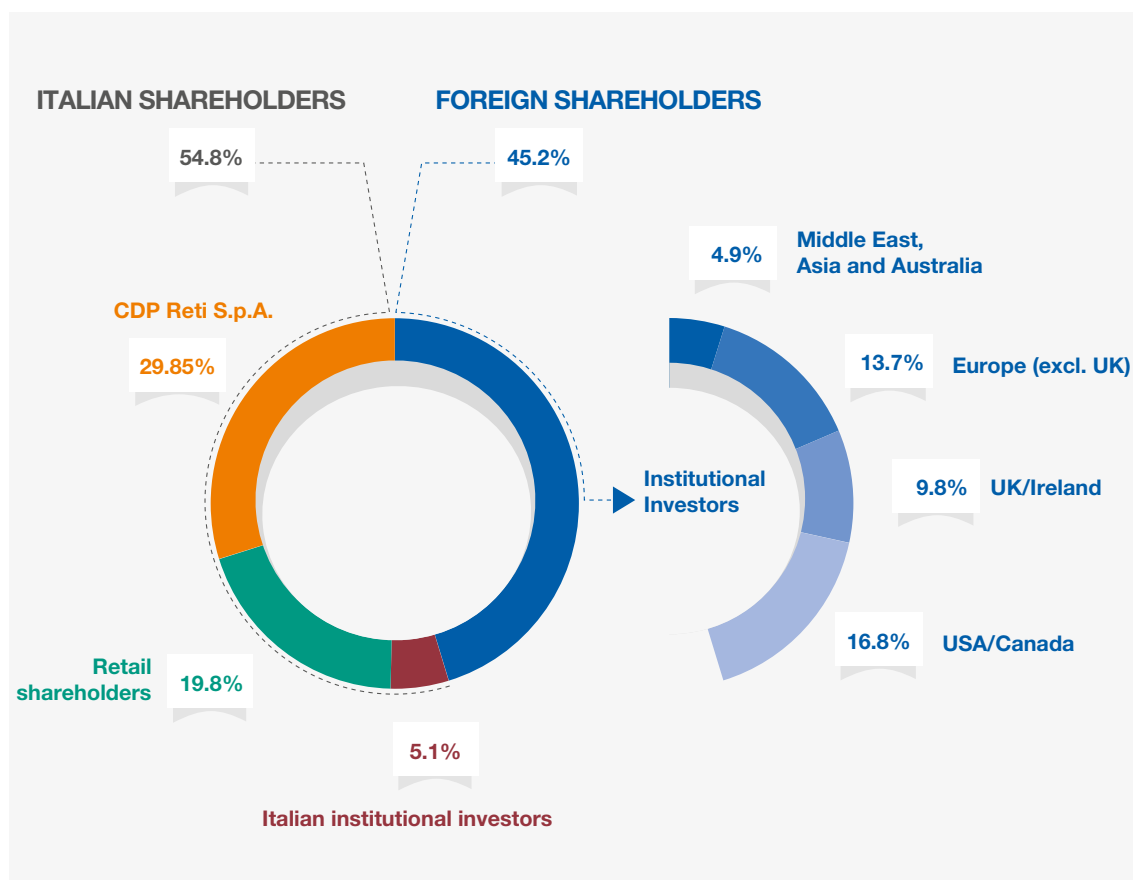
- CDP Reti S.p.A.: 29.85%
- Institutional Investors: 50.4%
- Retail: 19.8%

### SHAREHOLDING STRUCTURE BY TYPE



On the basis of the periodic surveys carried out by Terna, it is believed that 54.8% of Terna shares are held by Italian investors and the remaining 45.2% by foreign institutional investors, primarily American and European.

#### SHAREHOLDING STRUCTURE BY GEOGRAPHIC AREA AND TYPE



At end 2015, there were 100 SRI (Socially Responsible Investors) who invested in Terna with a sustainable approach in mind, based on the consideration of ESG (Environmental, Social and Governance) aspects, of whom 33 asset owners (32 at end 2014), i.e. pension funds, sovereign funds and other institutional investors, representing the vast majority of SRI investment in Terna; the other component, which instead has only a marginal weighting, is represented by 67 mutual investment funds (65 at end 2014). As a whole, at end 2015, SRI investors accounted for 6.24% of Terna's float (6.1% at end 2014) and around 10% of the capital held by identified institutional investors, substantially in line with the figures of 2014.

Information on ownership structures, restrictions on share transfer and shares granting special powers and restrictions on voting rights, as well as on shareholder agreements, is given in the "Report on Corporate Governance and Ownership Structures" relative to FY 2015, published as part of the Terna and Terna Group Annual Financial Report.



## Corporate governance

Terna's corporate governance system aims to create value for its shareholders. This objective is pursued while being aware of the social and environmental importance of the activities carried out by the Group and the subsequent requirement to adequately consider all the interests involved when performing said activities. In this regards, the most authoritative reference concerning sustainability is the Code of Ethics (please see the "Code of Ethics" section on page 31).

The governance system is essentially in line with the principles found in the Corporate Governance Code<sup>2</sup> (issued by the Corporate Governance Committee of listed companies promoted by ABI, ANIA, Assonime, Assogestioni, Borsa Italiana and Confindustria) which Terna has adopted, with the recommendations drawn up by CONSOB on the subject and, more generally, with international best practices that the Company adheres to.

Further actions to improve the Group's governance system are being evaluated or will be evaluated, in adherence with the provisions of the new edition of the Corporate Governance Code from July 2015, described to the Terna Board of Directors on the 28 July 2015 which, while applicable following the year in question, have already found concrete application in part.

The current structure of the Board of Directors provides for a sole Chief Executive Officer to whom the Board attributed the mandates in a resolution on 27 May 2014 defining their content, limitations and any specific methods.

The activities of the Board of Directors are co-ordinated by the Chairman. In its resolution on 27 May 2014, the Board of Directors assigned the Chairwoman, Catia Bastioli, the official role of representing the Company, guiding and directing the activities of the Board, and promoting and acting as advisor for CSR (corporate social responsibility), as well as supervising the activities relative to the holding in "CESI - Centro Elettrotecnico Sperimentale Italiano Giacinto Motta S.p.A.", jointly with its Chief Executive Officer.

The Board of Directors is comprised of nine members, whose mandate will expire upon approval of the budget for the 2016 financial year.

### BOARD OF DIRECTORS IN OFFICE AT 04/03/2015

Office	Members	Executive	Non-executive	Independent	Audit, Risk and Corporate Governance Committee	Remuneration Committee	Appointments Committee	Related-Party Transactions Committee
Chairwoman	Catia Bastioli		•					
Chief Executive Officer	Matteo Del Fante	•						
Director	Cesare Calari			•	•			
Director	Carlo Gandolfo Cerami			•	•	•	•	
Director	Fabio Corsico			•		•		•
Director	Luca Dal Fabbro			•	•		•	
Director	Yunpeng He *		•					
Director	Gabriella Porcelli			•		•		•
Director	Stefano Saglia			•			•	•

\* Co-opted by the BoD on 21/1/2015 to replace the resigning Director Simona Camerano and confirmed by the Shareholders Meeting on 9/6/2015.

(2) December 2011 edition as updated in July 2014 and accessible on the Borsa Italiana S.p.A. website at <http://www.borsaitaliana.it/comitato-corporate-governance/codice/2014clean.pdf>.

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 21/03/2016 and is available on the Company's website [www.terna.it](http://www.terna.it) in the "Investor Relations" section.

## Sustainability governance

### The Code of Ethics

The Code of Ethics, approved by the Board of Directors on 21 December 2006, is the most authoritative reference for identifying sustainability issues important 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 each year of the implementation of the Company's environmental and social policy, as well as the consistency between the objectives and results achieved.

In February 2015, considering the changes made over time to the Group's organisational structure, Terna developed a guideline for the adoption of the Code of Ethics by the companies of the Group, which contains interpretation instructions on the connection between the specific contents of the Code and the operational context of the Parent Company and its subsidiaries.

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

### The Global Compact

When it joined the Global Compact – the United Nations' multi-stakeholder network – in 2009, Terna further cemented its commitment to observing the ten principles of the Global Compact on human rights, labour, 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.

Terna has been on the Steering Committee for the Italian network since 2011 and contributed to the work done in 2015 by taking part in the working group on integrated reporting. For the fifth year running, Terna also submitted a Communication on Progress (CoP) at the Global Compact advanced level.

G4-HR4

G4-HR5

G4-HR6

## Management policies and systems

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

### Internal organisation

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

- the presence of a Sustainability Steering Committee, the members of which are the Chairman of Terna S.p.A. – to whom the Board of Directors on 27 May 2014 gave, in addition to institutional duties, the role of promoting and advising on CSR – the CEOs of Terna Rete Italia S.p.A. and Terna Plus S.r.l.; and a number of Directors who share the responsibility for determining strategic guidelines and sustainability objectives for the Terna Group, and for monitoring their progress and implementation. The Group's CSR Manager is the Secretary of the Steering Committee, which also decides on the Group's annual and long-term sustainability plans, to support and add to the Strategic Plan. It supervises company activities related to sustainability;

- the presence of a Corporate Social Responsibility Unit within the CSR and External Relations 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 Sustainability Team, a permanent working group that guarantees application of the guidelines and achievement of the objectives defined by the Sustainability Steering Committee, and serves as the "drive belt" between the Steering Committee and the various company departments responsible for implementing its decisions;
- the use of SDM (Sustainability Data Manager) software to manage the sustainability IT system, which currently collects more than 1,500 indicators corresponding to more than 350,000 items, over 10 years, including 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.

### Integrated Management System, Accreditations and Certifications

Activities concerning environment, occupational safety, energy, security of information and testing laboratories – crucial in Terna's vision of sustainability – are coordinated and guided in the Integrated Management System for Quality, Environment, Occupational Safety, Energy Management, Information Security and Quality of Test Laboratories, which has the following certifications: **ISO 9001:2008, ISO 14001:2004, ISO 50001:2011, ISO 27001:2013, ISO 17025:2005 and BS OHSAS 18001:2007. The integrated system covers 100% of Terna's activities in Italy and abroad, except the Tamini Group, which is controlled by Terna Plus.** However, in 2015 the Tamini Group initiated a process of environmental certification of its production sites.

Type	Scope	1st year issued	Issue year	Expiry year
ISO 9001:2008	Terna Group	2002	2014	2017
ISO 14001:2004	Gruppo Terna (*)	2007	2014	2017
BS OHSAS 18001:2007	Gruppo Terna (*)	2007	2014	2017
ISO 50001:2011	Gruppo Terna (*)	2015	2015	2018
ISO 9001:2011	Tamini Group - All manufacturing plants	1993	2015	2018
ISO 14001:2004	Tamini Group – Legnano plant	2015	2015	2018
ISO 27001:2005	Terna S.p.A only for TIMM applications (Amended Text on the Monitoring of the Electricity System)	2011	2015	2017
ISO 17025	Terna Rete Italia for multi-site testing laboratories in Viverone (Biella), Civitavecchia (Rome) and Frattamaggiore (Naples)	2014	2014	2018
Established in Legislative Decree 344/99 (the "Seveso Directive")	Terna Rete Italia – SANC sites (**)	=	=	=

(\*) Excluding the Tamini Group, a subsidiary of Terna Plus.

(\*\*) Related to regulatory compliance; unlike the certifications there are no dates of issue and expiry.

## Balanced Scorecard

Company activities are monitored and controlled with a Balanced Scorecard (BSC) system, a control panel of indicators used to evaluate, at quarterly intervals, the progress made in achieving the objectives, including those related to sustainability, linked to the Strategic Plan.

## Risk Management

Electricity transmission is the core business of Terna, regulated primarily through government concession and by the provisions established by the Authority for Electricity, Gas and Water (AEEGSI), which include the definition of remuneration of the Terna service and of the corresponding tariff system.

As a result, Terna is exposed not to common price- and market-related risks (or is so only to a limited extent in regard to Non-Regulated Activities), but to a regulatory and normative risk.

The regulatory risk derives from potential changes in the parameters used to determine regulated revenue (in 2015 amounting to 92.5% of total Group revenue), particularly following the multi-year review of the regulatory framework (see the paragraph on outcomes from the latest review, taking effect as of 2016). The normative risk is related to possible changes in Italian and European tax laws in relation to environmental, energy and social (work and contract) matters.

These aspects, like all types of risk, are closely analysed by Terna, which has identified the main risks connected to its activities and has provided for specific safeguards, instruments and organisational measures with a view to minimising such risks by reducing any impacts to within tolerable limits.

The Board of Directors has set up an Audit and Risk Committee, which has a direct relationship with the Chief Risk Officer (CRO), appointed by the Director in charge of the Internal Audit and Risk Management System, after consulting with the Committee. The Chief Risk Officer supports senior executives in the efficient handling of risk management processes at Group level, with reference to all financial, operational and business risks and is entrusted with drawing up policies for the analysis, management and control of business risks, as well as coordinating all subjects involved in the Internal Audit and Risk Management System, in order to maximise their efficiency and reduce any overlapping of activities. In line with this arrangement, the Risk Management department of the Company Protection Division pursues the goal of continuous improvement of its work in order to ensure that all activities are carried out in accordance with the mandate and are run effectively and efficiently, thereby creating added value and improving company operations through Enterprise Risk Management (ERM). This methodology integrates and systematises risk management with structural management tools and prevention measures. For more details on these safeguards, please refer to the Report on Operations / Integrated Report; risks linked to climate change are dealt with in this Report on pages 105-106.

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).



## G4-SO3

## Respecting the law and preventing corruption

For Terna, the prevention of corruption is a strategic activity which is intrinsically linked to internal audit 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.

The safeguards and systems in the company have enabled the attribution since 2013 of **legality ratings** to the parent company, with maximum points awarded by the Italian Antitrust Authority (NCA).

## G4-SO5

In 2015, there was no pending litigation, nor were any penal cases concluded in regards to corruption. Since 2005 (the year in which ownership and management of the transmission grid was combined and Terna – Rete Elettrica Nazionale S.p.A. was established) and through the entirety of 2015, no significant monetary fines, or definitive administrative or judicial penalties have imposed a “do/not do” obligation on Terna, or criminally convicted its employees.

Since 2014 Terna has been associated with Transparency International, the largest worldwide organisation concerned with preventing and combating corruption (see also page 34 and page 143).

As part of the initiatives promoted by the Association, in early 2016 the Terna Group joined the Business Integrity Forum (BIF) together with 11 other major Italian companies already active on issues of integrity and transparency and committed to supporting the fight against corruption in business practices by collaborating with the network on joint projects of cultural dissemination, communication and the adoption of counteraction tools.

### Organisational Model 231

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, in order 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 and 10 special, plus the compliance regulation. The task of keeping the model up to date is assigned to the Project Coordination and Model 231 Monitoring Unit, within the Corporate Affairs Division.

To guarantee adequate awareness, understanding and application of the Model by all workers, ad hoc training campaigns were prepared for Terna employees who had not been able to participate in previous training initiatives. A new edition of the 231 Manual was distributed in 2015, which aimed to increase understanding concerning issues connected to the Model and, more generally, Legislative Decree 231/01. 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 <http://www.terna.it>. (<http://www.terna.it/en-gb/investorrelations/corporategovernance/modelloorganizzativo.aspx>).

### Fraud Management

In the management of corporate fraud, Terna adopts a constituent element of its approach to business management. An effective approach against fraud has three primary goals: prevention, detection and reaction.

Terna has sought to protect its reputation and image by adopting a Fraud Management structure in order to ensure that corporate assets (tangible and intangible resources, direct and upstream benefits) are protected with regard to all illegal events that could compromise them, through activity aimed at preventing and managing corporate fraud.

In order to identify potential internal vulnerabilities and then act to remove them, Terna has developed a reference methodological model based on the systematic analysis of preconditions that can be associated with fraudulent events, identifying "critical areas" in which fraudulent phenomena are more likely and tracing the triggers back to any organisational and operational problems in the processes.

This is accompanied by a constant monitoring of its internal regulations and their application, in order to assess and enhance the efficacy of the Internal Audit and Risk Management System with regard to fraud.

## Terna's "Open, transparent works" online

In line with its culture of transparency and legality, in November Terna published "Open, transparent works", becoming the first to do so among Italian companies.

It is a web space that can be accessed from [www.terna.it](http://www.terna.it) and is entirely dedicated to the works. Here all information concerning contracts and how they are awarded and contractors and subcontractors of works that are under way to construct electrical infrastructure within Italy is published and regularly updated.

This is an act of transparency that includes around 750 companies and 4,000 people every day in the more than 200 open works throughout Italy: indeed, data concerning the works in terms of location and technical-descriptive features is available, as well as information that defines the organisation, the companies present, the development stage and the economic focus. Using this tool, anyone is able to verify the progress of large infrastructural works, the number of companies that took part in the tender and the names of the contractors to whom the works have been assigned.

The link to go directly to "Open, transparent works" is <http://www.terna.it/en-gb/azienda/opentransparentworks.aspx>

## Employee Awareness

All new employees attend training courses which aim in part to ensure awareness and dissemination of the rules on conduct and procedures established to prevent crime at all levels of the company within their objectives. 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 Organisational Model 231 are also provided (see the key indicator tables on page 172).

In 2015 two courses on the specific Organisational Model 231 were given to a selection of employees at Terna Crna Gora and Tamini.

G4-SO4

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## RELATIONS WITH STAKEHOLDERS

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## Relations with stakeholders

Building a relationship based on mutual trust with our stakeholders begins with taking their interests into account and analysing their compatibility with those of the Company, in order to be able to adopt a consistent and transparent approach.

The stakeholder map for the Terna Group was revised in 2014. The eight categories of the previous map, divided into 48 subcategories, were rearranged to provide more evidence to stakeholders previously merged with others. The current map is divided into 12 categories and 73 subcategories.

Following the latest revision completed in February 2015, Terna drew up a "Stakeholders management model", which is described in the relevant Guidelines adopted in October.

The method used to formulate the model is based on the AA1000 Stakeholder Engagement Standard (SES) developed by AccountAbility<sup>3</sup>.

The Guidelines set out the model, which defines Terna's relations with its stakeholders, supporting the Company in building correct relations based on mutual trust, which is closely linked with the Company's success and ability to generate value for its shareholders.

The "Stakeholders management model" outlined in the Guidelines consists of a few basic parts, such as:

- stakeholder map;
- the ranking of importance of stakeholders, defined on the basis of the mutual dependence and influence each of them hold with Terna;
- the matrix of optimal relationship procedures, defined according to the various stakeholders' importance to the company's ability to realise its strategy and create value;
- the Stakeholder Engagement Plan, which identifies the actions required (in terms of stakeholder involvement and internal processes that ensure the monitoring of relations) to align the actual relationship procedures with the optimal ones identified by the matrix;
- the system for monitoring important issues as well as the opinions and expectations of stakeholders regarding Terna.

The 2016-2017 Plan of Engagement was drawn up and approved at the end of 2015. This outlines certain priorities, while taking into consideration the impact that relations with specific stakeholders has in the implementation of the Strategic Plan.

The following table shows the specific engagement tools, such as monitoring and checking expectations and opinions, as well as 2015 activities, for every category of stakeholder. Below only the categories of stakeholders that require a dedicated discussion are described.

(3) The 2011 version of the AA1000SES standard was taken into account when drafting the model, because the most recent update to the standard was published in November 2015, when the Guideline had already been adopted.

STAKEHOLDERS - Category	
Stakeholders - Subcategories	
Relationship format and monitoring procedures	Activities in 2015
<b>REGULATORS OF LICENSED ACTIVITIES</b>	
<i>AEEGSI, Ministry of Economic Development, European Regulatory Institutions.</i>	
<p>Ongoing relations with the AEEGSI offices and Committee.</p> <p>Ongoing relations with the Ministry of Economic Development.</p> <p>Formal communications and reports within regulated processes.</p> <p>Transmission of information and evaluations in response to specific requests or on the initiative of Terna.</p>	<p>30 November 2015 - Launch of the public consultation promoted by the AEEGSI on the scheme of the ten-year National Transmission Grid Development Plan, 2015 Edition (pursuant to art. 36, paragraph 13 of Italian Legislative Decree 93/2011).</p> <p>In 2016:</p> <p>20 January 2016 - At the AEEGSI headquarters in Milan, Terna presented the scheme of its 2015 ten-year plan to major electricity sector associations and gave feedback to initial comments received on about 10 issues related to the planning and development of the NTG.</p> <p>31 January 2016 - Operators concluded the consultation regarding all comments received. At the request of the AEEGSI, Terna will prepare a document of responses/rebuttals, to be published on the Authority's website no later than 45 days after the date of conclusion of the consultation.</p>
<b>PUBLIC DECISION-MAKERS AND AUTHORITIES</b>	
<i>Ministries with responsibilities relevant to the electricity supply chain, Other Government Bodies, Regions and their Bodies, Parliament and Commissions, EU Institutions, Other regulation and audit institutions, the Judiciary, Strikes Information Commission, National institutions of other countries of interest, International institutions.</i>	
<p>Regular meetings.</p> <p>Formal communications and reports within regulated processes.</p>	<p>Hearings in Parliament:</p> <p>18 March 2015 - Chamber of Deputies Production Commission hearing: interruptions in electrical service within the Emilia-Romagna and Lombardy regions;</p> <p>7 May 2015 - Senate of the Republic Commissions for Industry and Territory hearing: a joint review of community measures 60 (A Framework Strategy for a Resilient Energy Union), 61 (The Paris Protocol - Plan to Combat Climate Change) and 62 (An Electricity Grid Ready for 2020) - EU Energy Package;</p> <p>12 May 2015 - Chamber of Deputies Production and Environmental Commissions hearing: a joint review of community measures 60 (A Framework Strategy for a Resilient Energy Union), 61 (The Paris Protocol - Plan to Combat Climate Change) and 62 (An Electrical Grid Ready for 2020) - EU Energy Package;</p> <p>12 November 2015 - Chamber of Deputies Production Commission hearing: Commission communication to the European Parliament, the Council, the European Economic and Social Committee and the European Committee of the Regions of a "New Deal" for Energy Consumers COM (2015) 339 final and a Commission Communication to the European Parliament, the Council, the European Economic and Social Committee and the European Committee of Regions: "Launching the public consultation process on a new energy market design" COM (2015) 340 final.</p>

## SHAREHOLDERS

*Controlling shareholders, Institutional equity investors, Retail investor, Financial analysts, Proxy advisers, SRI Investors, ESG rating analysts and agencies.*

Road shows, conference calls, presentations, dedicated meetings, website ("Investor Relations" Section of <http://www.terna.it/en-gb/homepage.aspx>); contact numbers (for institutional investors: +39 06 8313.9041; for shareholders' details: + 39 06 8313.8136) and dedicated email (for institutional investors: [investor.relations@terna.it](mailto:investor.relations@terna.it); for shareholders' details: [azionisti.retail@terna.it](mailto:azionisti.retail@terna.it)).  
Sustainability rating.

Requests for information sent via e-mail by retail investors amounted to 7 (11 in 2014 and 20 in 2013) and concerned dividends (policy and any effect caused by the regulatory framework), meeting documentation and the results of the shareholder register on the individual shareholder structure.

At the ordinary Shareholders' Meeting held at 9 June 2015, 1,024 shareholders (13 of which in person and 1,011 by proxy) were present, for a total of 1,243,709,737 ordinary shares (61.87% of the share capital), all entitled to vote.

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 necessary information to assess the company's ESG performance. In 2015, the following organisations requested and obtained information: Blackrock, Legal & General Investment Management, Amundi Asset Management, Natixis Asset Management, Hermes Investment Management, CalPERS, APG, Etica SGR, UBS Global Asset Management, Inarcassa, Frontis Governance, ISS and RobecoSAM.

## LENDERS

*Banks, Ratings agencies, Debt investors, International financial institutions, National and international public lenders.*

Regular meetings.  
Dedicated informative documentation.  
Ratings.

Terna maintains an ongoing relationship with all potential lenders. In particular, within the space of a year, over 100 formal encounters (conference calls and meetings) take place to exchange information with banks and institutional investors. Each year the company meets once with each rating agency (there are three that assess Terna's credit rating: S&P's, Fitch and Moody's) during the management meeting. Finally, around 30 conference calls are organised to discuss the financial strategies of the group, to reconcile/reclassify the financial statements in accordance with the criteria of the agencies and to provide details on financial ratios that the agencies take into account in order to assign the rating.

## ELECTRICITY SYSTEM OPERATORS

*Distributors, Producers Potential users requesting connection to the NTG, Wholesalers, Associations representing industry operators, Other electricity supply chain organisations, Interruptible customers, Other transmission system operators (TSO), Industry bodies, Other NTG owners.*

Grid Code Consultation Committee.  
Dedicated meetings.  
Participation in structured working panels.  
"Operator Consulting" section on Terna's website.  
Reports provided and regulated by the Grid Code.  
"My Terna" platform for dispatching users, with dedicated call centre.  
GAUDI Portal for integrated management of plant and production units.

See the paragraph concerning "Operators of the Electricity Service" on pages 43-44.

## MEDIA AND OPINION-MAKERS

*National and international media, National and international opinion groups, Web users, Universities, Other scientific and research organisations, National and international study and steering groups.*

Presenting and distributing the Sustainability Report and the Development Plan.	<p>In 2015 Terna issued 82 press releases and 200 memos and copies, and created and managed 44 events, 15 of which had media coverage, both locally and nationally. Overall, Terna has totalled over 22,000 releases including articles and quotations across traditional media (newspapers, magazines, radio and TV) and online media, with an increase of over 15% for nationally distributed publications and an increase of 32% in positive articles compared with 2014.</p> <p>The corporate site <a href="http://www.terna.it">www.terna.it</a> has totalled over 5 million page views (4,500,000 in 2014) and was ranked within Webranking Italia's Top Ten of 100 of the largest listed companies. Social media is also growing: at the end of 2015 the Facebook profile had 5,210 fans (+54% compared to 2014), Twitter 1,927 (+61%) and LinkedIn 20,329 (+ 58%).</p>
Organising seminars, workshops and targeted surveys.	
Collaboration and partnership initiatives.	
Participation in structured working panels.	
Mailbox and profiles on social networks.	

## CUSTOMERS (non-regulated activities)

*Non-regulated business customers, potential customers.*

Dedicated meetings.	<p>In line with the initial phase that characterises the development of Non- Regulated Activities, the canvassing of stakeholder expectations and satisfaction is being defined for this category of stakeholders, referred to in the company through the new Strategy And Development Department and by Terna Plus.</p>
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## SUPPLIERS

*Core suppliers, Non-core suppliers, Trade associations representing suppliers, potential suppliers.*

Procurement portal.	<p>See the paragraph concerning "Procurement" on pages 86-92.</p>
Direct meetings.	
Post-tender feedback.	
Discussion panels with associations.	

## BUSINESS PARTNERS

*Business partners, Investee companies, Purchasers of interconnection lines, Public safety organisations, Applied research institutions, Business developers.*

Partnership agreements.	<p>Over the years, Terna has entered into partnership agreements with institutions (e.g. Guardia di Finanza - Tax Police), which develop forms of cooperation to support the activities of the group.</p> <p>In 2015 an agreement was signed with ANIE for the management of environmental safety on construction sites.</p> <p>Terna has signed an MoU with ENEL (see page 24) and an agreement with IBM (see page 72).</p>
Protocols.	
Meetings for specific projects.	
Structured collaboration.	

## PEOPLE IN THE ORGANISATION

*Employees, Governance bodies, External staff, Trade unions, Educational system, Workers' representatives.*

Direct surveys, on a sampling basis.	<p>See chapter concerning "Social Responsibility/People" on page 124.</p>
Internal communication initiatives.	
Focus groups on specific subjects.	
Consultations, discussions and negotiation with the Trade Unions.	



## THE WIDER COMMUNITY

*Current and future end-users of the electrical service.*

Terna conducts its relations with the wider community using a variety of information tools: the website <http://www.terna.it/Default.aspx?tabid=101>, social networks and dedicated e-mail addresses ([info@terna.it](mailto:info@terna.it)). Detailed information on development projects for the Terna grid are available on the dedicated SEA portal, ([www.portalevas.terna.it](http://www.portalevas.terna.it)).

Information on contracts, tenders and sub-contracting of electricity infrastructure being constructed is available on the portal “Open & Transparent construction sites” <http://www.terna.it/it-it/azienda/cantieritrasparenti.aspx>

Open channels for alerts (post, e-mail).

Public consultation.

Periodic sample population surveys.

See paragraphs on pages 54-66.

## LOCAL COMMUNITIES

*Landowners affected by grid development, Associations representing local interests, Local media, Local administrators, Local suppliers and subcontractors, Owners of property and land close to existing lines, Territorial committees, Local politicians, Local opinion-makers, Infrastructural sector operators, Other citizens affected by grid development, Other local authorities, Other citizens affected by existing lines.*

Consultation process in planning the electricity grid.  
 Formal communications and reports within regulated processes.  
 Meetings with the general public.  
 “Open day” illustrating initiatives underway in the territory.

See the paragraphs concerning “Local Communities” on page 44 and the “Open Day: Terna meets local citizens” on pages 44-45 and “A responsible approach to grid development: consultation” on pages 61-62.  
 It continued its efforts to build and manage local consensus through the “Terna Information Campaign – Consumer Associations” project with Codici, Lega Consumatori, UNC, MDC, Assoutenti, Adoc and Movimento Consumatori. The campaign aims to achieve maximum information-sharing with the localities affected by the implementation of planned infrastructure in order to increase awareness of the usefulness and benefits of the new infrastructure. After an initial phase of training involving the senior executives of all CNCU Consumer Associations (National and Regional Secretariats), the local information phase took place concerning the works and their benefits at a regional level in Campania and Puglia. A total of 8 associations facilitated 5 meetings with local communities and one meeting with the public administration and produced 6 action reports.

## Electricity service operators

Terna maintains relations with grid users and electricity industry operators through various communication channels. These relations are largely defined by the regulations that govern the processes of development and management of the electricity grid. Terna has also developed additional channels, including the portals My Terna (the platform through which Terna manages contracted dispatching users, with an associated dedicated call centre) and GAUDÌ (see “The Gaudi Portal” below).

### Consultation Committee

**The Committee is a technical body that represents the permanent base for consultation with companies involved in the electricity industry** and includes representatives from the various user categories, namely: distributors, producers (from both conventional and renewable sources), large industrial customers, wholesalers, and consumers. The Regulatory Authority for electricity, gas and water and the ministry of economic development participate as observers.

The Committee has an advisory role regarding the general criteria for the development of the grid and interconnections, maintenance of grid security, general criteria for the classification of sensitive information and access to the same.

The Committee may also advocate changes to current rules and propose conciliatory regulations since, at the request of the parties, it may facilitate the resolution of any disputes between grid users resulting from the application of the rules of the Terna Grid Code.

In 2015, the Committee has been involved in the consultation process for the update and revision of the Grid Code with regard to procedures for the connection of plants to the NTG, connection technical regulations, steering of connection schemes, contract types for NTG connection, regulation of the guarantee system and contract types for input and withdrawal dispatching.

The Committee was also provided with precise information concerning the progress of the activities referred to in previous Development Plans, with particular reference to the 2015 Development Plan, and the possible development of system scenarios and lines for developing the 2016 Development Plan. In 2015 the Consultation Committee met 5 times.

### The Gaudi Portal

Gaudi is the Unique Plants Data Management system for the electricity generated by Terna at a national level, pursuant to the resolution of the AEEGSI ARG/elt 124/10, in order to streamline the flow of information and simplify the processes that affect companies in the electricity generation sector.

All production plants within Italy are identified within Gaudi, no matter their size or fuel source (conventional, renewable, cogeneration, etc.).

The system uses a unique code at national level to identify the production plants and individual units contained therein in order to facilitate the alignment of databases managed by institutional and systemic organisations within the sector (AEEGSI, Terna, GSE, distributors) and provide feedback concerning the stored data. The Gaudi also monitors the plant qualification process in the market. The development stage of each production plant can be followed, from the authorisation phase to connection to the grid and when it comes into commercial operation.

For regulatory reasons, the functions of Gaudì have been extended over time and, consequently, two new modules have been developed on the platform: the GEDI (Distributed Generation) and the SSPC (Simple Production and Consumption Services).

In 2015 another new feature was developed allowing the classification of plants by the Single Form, in accordance with the requirements of the MD of the MED published in the Official Gazette on 28 May 2015 (simplified connection process) and with resolution 400/15.

The continued alignment of the system with current legislation and its interoperability with distributors, the GSE and institutional counterparts require an equally firm commitment to the communication of changes and alignment of procedures: for this reason, the entry into force of the Single Form was marked by the organisation of three seminars on this subject in conjunction with the electricity sector associations AEIT and Utilitalia. The events were attended by more than 200 employees in the field of distribution.

## G4-SO1

## Local communities

Terna's approach to local areas, which is especially important when new lines are being constructed, consists of a voluntary process of prior engagement with local institutions (regional and local administrations, park authorities, etc.) and, in the last few years, particularly in 2015, the citizens of local communities directly affected by the work. This process involves the sharing of NTG development needs with local institutions, a willingness to listen to stakeholder opinions and the search for a shared solution regarding the positioning of new infrastructure or the reorganisation of existing structures.

In this way, the conditions are created in which to develop and "build" the grid together, thus making it more sustainable and acceptable.

Terna's engagement with local areas envisages a voluntary pre-authorisation procedure illustrated in detail in the section on consultation, on pages 61-62.

During 2015, Terna held a total of 275 meetings with local administrations, involving around a 160 bodies. Terna has also held 10 public events, described in the box below, involving more than 500 citizens and has strengthened its commitment to communication in local areas.

### "Open Day": Terna meets local citizens

Consistent with the approach it took to discussion and sharing with local areas, Terna developed a new stakeholder engagement tool for citizens. Drawing from a European regulation (347/2013) on the interoperability of trans-European energy networks, Terna chose to engage the citizens who live in the areas which are destined to be the sites of the main NTG development works.

Before beginning the authorisation procedure for its works, Terna organises public meetings, referred to as "Open Days" in order to meet the local communities and explain the need to develop the grid which necessitated the work, explaining the implementation methods, as well as alternatives that had been identified and above all making itself available to receive comments and clarification requests. Thus Terna extended the direct engagement approach that it had already adopted with public administrations to individual citizens. The details of the "Open Days" held throughout the year can be found in the table below.

Project	Bodies met (no.)	Open Day (no.)	Date	Registered office	Citizens attended (no.)
Italy - Montenegro	3	1	06/02/2015	Pescara	200
Villanova - Gissi	10	1	02/03/2015	Lanciano	200
Italy - France	6	6	27/05/2015	Salbertrand	32
			28/05/2015	Exilles	9
			29/05/2015	Chiomonte	13
			09/06/2015	Gravere	23
			10/06/2015	Susa	15
			11/06/2015	Bussoleno	24
Magenta Rationalisation	1	1	14/10/2015	Milan	22
Italy – Austria (Resia Pass - Venosta Valley)	3	1	22/12/2015	Malles	23
<b>TOTAL</b>	<b>23</b>	<b>10</b>			<b>561</b>

Finally, Terna participated in international organisation work to identify new forms of development for this approach, especially in terms of direct contact with the community (see the “Terna Holds the International “Grid Aesthetics” Workshop in Milan” box, 19-20 May 2015, page 142).

### Management of opposition to the construction of new electricity infrastructure

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 the 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 a drawn-out process. The results are normally positive, but local opposition may persist throughout. Please note, in particular, the following cases from 2015:

- **“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 with over 100 meetings. From February to July 2015, the Prosecutor's Office of Messina sequestered pylon no. 40 in the Municipality of Saponara, for presumed breach of the Provincial Landscape Protection Plan, which was approved after landscape authorisation for the work.
- **“Rationalisation in the Middle Piave Valley”**. The project was authorised in February 2011 and is now in the environmental-impact assessment phase. Some municipalities including Belluno and Soverzene are opposed to the route proposed. In August 2015 an alternative project was submitted and is currently being evaluated.



- **“Villanova – Gissi”**. The project became part of Terna business after authorisation had been obtained from third parties. The opening of the worksites was marked by protests, which intensified when the land designated for the power line was taken over. On 31 January the work was commissioned.
- **“Rearrangement of the 380 and 132 kV grid in the Lucca area”**. The project was authorised in January 2014 for the construction of a new electrical substation, a new line and the demolition of other obsolete plants. Initially coordinated with the municipalities involved, the project was later rejected by them as a result of protests by the local population. Terna then prepared four alternative solutions and presented them to the local population during an Open Day held on 28 January 2016 at Nozzano Castello, near Lucca.

## Inquiries, litigation and penalties

### Preliminary inquiries of the Regulatory Authority for Electricity, Gas and Water

At no time in 2015 did the Regulatory Authority for Electricity, Gas and Water (hereinafter: Authority) begin any formal preliminary enquiries of potential interest for Terna.

However, we note the fact-finding enquiry in relation to interruptions in the electrical service that occurred on 6 February 2015 and on the following days in vast areas of the Emilia-Romagna and Lombardy regions, which was launched with Resolution 96/2015/E/eel. This enquiry was closed with Resolution 644/2015/E/eel, through which the Authority approved the "Final Report" and provided for certain stipulations regarding some distribution companies involved in the fact-finding enquiry.

The Authority ordered the closure of the enquiry with Resolution 413/2015/E/eel "*Closure of the fact-finding enquiry related to provision of the electricity measurement service*" which aimed to verify the application of the Authority's provisions concerning electricity measurement, launched with Resolution 475/2013/E/eel". With reference to previous fact-finding enquiries and investigations, the following proceedings are still pending.

#### *Resolution 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 managing 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. The closure measure of this fact-finding enquiry has not been implemented.

#### *Resolution 256/2014/E/com at 6 June 2014 – Launch of a fact-finding enquiry on investments of regulated companies*

With this provision the Authority enabled the launch of a fact-finding enquiry on regulated-business investment, intended to verify the correctness of the information disclosed to the Authority and to provide useful elements for the evaluation of the appropriateness and consistency of investments in relation to the industry context. Within the framework of this survey, the Authority intends to prioritise further investigation into the information submitted to determine electricity distribution reference tariffs.

With Resolution 412/2015/E/eel of 6 August 2015 the Authority also extended the fact-finding inquiry on investments of regulated companies to the costs of grid plants for connection made by electricity producers, providing in-depth analysis of specific features to be implemented by 30 June 2016.

Lastly, following the evidence which emerged from the fact-finding enquiry, a series of disciplinary proceedings for violating disclosure obligations relating to tariff regulation of the electricity distribution were launched.

### **Environmental litigation**

Environmental litigation originates from the installation and operation of electricity plants, and primarily involves damages which could derive 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 of the method of operation 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 a very small number of cases include claims for damages 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 concerning licensed 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 AEEGSI and/or MED and/or Terna itself, relating to such activities. Only in those cases in which the plaintiffs not only claim defects in the contested measures, 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 the AEEGSI Resolutions struck down in the first and/or second-level court, 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 activities, the measures taken by the Parent Company Terna when applying the Resolutions adopted by the Authority are sometimes the subject of challenges. In appropriate circumstances, the economic 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 the temporary suspension of their use. Examination of the above legal disputes, having regard for the information provided by the external legal consultants, suggests that the likelihood of adverse outcomes is remote, with the exception of a number of proceedings for which, considering their status, it is not currently possible to carry out reliable assessments of their outcome.

More details on the different categories of dispute are shown in the indicator tables on page 172.

## Penalties

During the period 2013-2015:

EU 25

- there were no definitive criminal convictions or plea bargaining for injuries to third parties caused by Terna's assets;

G4-SO5

- as of 31 December 2015 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.

G4-SO7

G4-SO8

G4-EN29

In the three-year period 2013-2015, no significant penalties were imposed regarding the provision of the service, the environment or, more generally, compliance with the law.

G4-PR9

Since 2005 (the year in which ownership and management of the transmission grid was combined and Terna – Rete Elettrica Nazionale S.p.A. was established) and through the entirety of 2015, no significant monetary fines, or definitive administrative or judicial penalties have imposed a "do/not do" obligation on Terna, or criminally convicted its employees.

G4-HR12

## Reporting tools

G4-SO11

For Terna, management of relations with the main stakeholders also involves the preparation of dedicated communication channels to gather information requests, suggestions, notifications and complaints of various types.

G4-EN34

G4-LA16

The easiest and most accessible tool is e-mail, with a number of issue-specific addresses (e.g. [info@terna](mailto:info@terna), [csr@terna](mailto:csr@terna), etc). Promotion of this tool is done through the institutional site [www.terna.it](http://www.terna.it) and, in the case of employees, also through the intranet.

On the homepage menu, through the "Contacts" section, a number of questions guide users who want to contact Terna. This page also gives the certified e-mail accounts for all communication that requires this feature.

For electricity operators and suppliers, Terna has three separate portals (Gaudi, MyTerna and the Procurement Portal), as well as a dedicated call centre, which can be reached through a toll-free number (800-999333).

From the website homepage it is also possible to access Terna's social media profiles on Facebook and Twitter particularly, which represent for the company a growing opportunity for interaction. In 2015 the Facebook profile totalled 2,136,591 views (+134%) and 33,585 interactions (clicks, shares, likes), an increase of 90% compared to 2014; Twitter 128,300 shares (+165%) and 1,090 interactions (+ 163%). During the year, the Facebook page private mailbox folder received 104 messages (photos of electrical infrastructure sent, support requests for CV submissions, information requests on consumption and collaboration proposals) with a private response rate by Terna of 81.7% (85 posts).

These tools are also supported by dedicated reporting tools and mechanisms for ethical and environmental issues (see the sections below).

## Code of Ethics clarifications and reporting violations

Terna employees who require clarifications or want to report an issue can contact the Ethics Committee or the Audit Unit. These structures are also responsible for handling any reports of violations of the Code by external stakeholders. Contact information (addresses, e-mail, and telephone numbers) can be found and are kept up to date on the intranet and website. Specifically: [comitato.etico@terna.it](mailto:comitato.etico@terna.it) and [audit.codiceetico@terna.it](http://audit.codiceetico@terna.it).

The Ethics Committee was created to offer a specific channel for both external and internal stakeholders to be used for communications on the Code of Ethics. This body consists of three members, appointed by the Chief Executive Officer, who have the task of:

- responding to requests for clarifications regarding the Code of Ethics;
- receiving and examining reports of violations;
- deciding whether to open an investigation regarding the report and providing a response.

On the other hand, the Audit Unit is Terna's internal audit unit, and is responsible for investigating any reports of violations of the Code of Ethics. Reports collected by the Ethics Committee and the Audit Unit are published on page 172.

## Environmental reports and complaints

In line with the ISO 14000 Environmental Management System, Terna monitors and classifies complaints received regarding significant environmental issues.

Any written communication from stakeholders can be presented to a Group office or organisational unit with the aim of reporting that an activity carried out by Terna is causing or has caused damage. It is filed by the office and managed by the relevant operating unit.

Complaints received are classified on the basis of the relevant environmental aspects – defined by the Environmental Analysis – using the following categories: waste, noise, biodiversity, landscape, electrical and magnetic fields, lighting, vegetation control, and other.

The majority of reports concerned electrical lines and referred to noise emitted during operation, electromagnetic field measurement and the cutting of vegetation along power line corridors.

Terna responds as soon as possible and, in any case, within 30 days of receiving the request, or within 60 days if the size and complexity of the request make it impossible to resolve within the first 30 days.

In this case, Terna informs the requesting party of the extension in a timely manner, indicating the reasons behind it. Details of reports received and managed during the last three-year period are published on page 172.



## RESPONSIBILITY FOR THE ELECTRICITY SERVICE

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# Responsibility for the electricity service

## Our approach

Terna's core business is the provision of electricity transmission and dispatching services in Italy. These services are in the general interest of society and performed 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.

In accordance with the principle of non-discriminatory grid access, Terna is actively participating in the transition process towards electricity production from predominately renewable sources, which affects all of Europe.

**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.

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

- service continuity measurements. Terna's performance in this area in recent years has been in line with the targets set;
- grid-development and security goals, set out in 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;
  - **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.

Terna, as operator of the electricity system, has the task of management of producer registers, management of data on inputs and withdrawals for the determination of economic items and preparation of Italian statistics in the electricity sector. 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.

## Energy context

### Demand for electrical energy in Italy

After three consecutive years of decline, in 2015 the electrical energy demand in Italy increased. The demand for electrical energy in Italy was 315,234 million kWh (provisional data), reporting an increase of 1.5% in comparison with 2014, which ended with a decline of 2.5%. When comparing 2015 results with the same number of working days from the previous year, the aforementioned increase is 1.3%.

#### ELECTRICITY BALANCE SHEET FOR ITALY

GWh	2015*	2014**	2013
Net production	270,703	269,148	278,832
From foreign suppliers	50,846	46,747	44,338
Sold to foreign clients	4,465	3,031	2,200
For pumping	1,850	2,329	2,495
<b>Total demand in Italy</b>	<b>315,234</b>	<b>310,535</b>	<b>318,475</b>

(\*) Provisional data.

(\*\*) Definitive data; in the 2014 Sustainability Report, the data published was still provisional.

### Electricity generation

In 2015, national net production was 270,703 million kWh (provisional data), showing an increase of 0.6% from the previous year.

When identified by source, production shows a marked reduction in hydroelectric production compared to the previous year, due to the exceptional nature of water resources recorded in the previous two years. An increase in thermal production was also seen, partly attributable to the increase in demand, and the positive trend in renewables<sup>4</sup> - wind, solar and geothermoelectric - was confirmed (see the following table).

#### PRODUCTION OF ELECTRICAL ENERGY IN ITALY

GWh	2015*	2014**	2013
Net hydro production	44,751	59,575	54,068
Net thermal production <sup>5</sup>	180,871	167,080	183,404
Net wind, photovoltaic and geothermal production	45,081	42,493	41,360
<b>Total net production</b>	<b>270,703</b>	<b>269,148</b>	<b>278,832</b>

(\*) Provisional data.

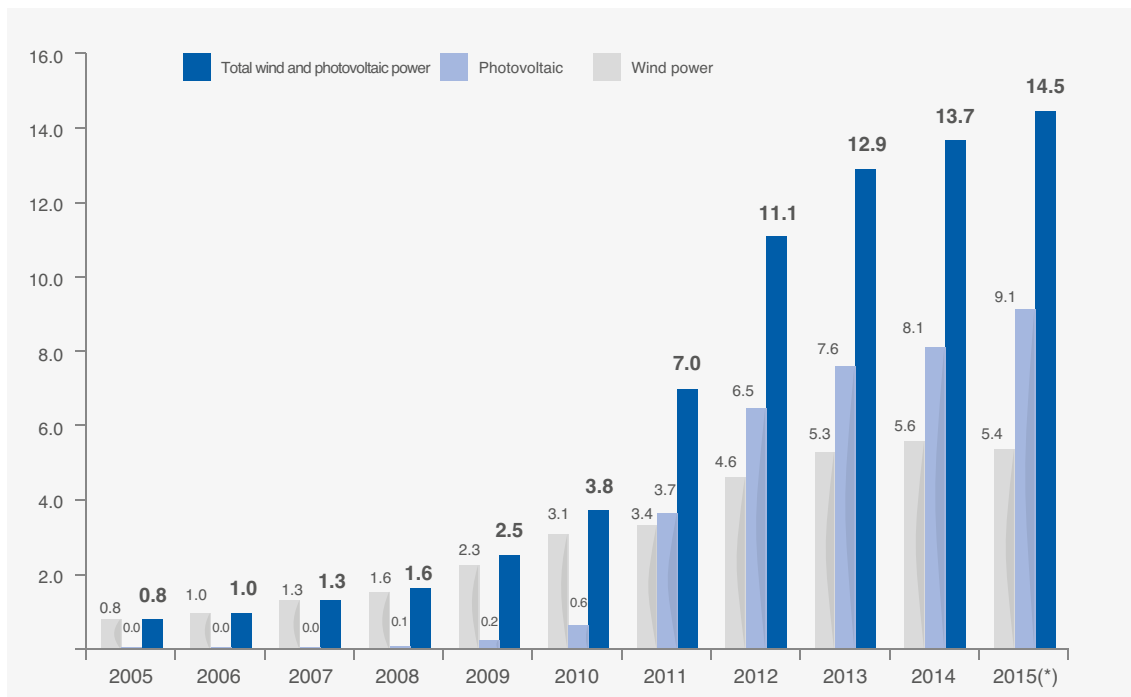
(\*\*) Definitive data; in the 2014 Sustainability Report, the data published was still provisional.

(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.

(5) A proportion of thermoelectric production, amounting to approximately 18,000 GWh, was attributable to biomass, a renewable source.

From 2005 to 2015, works on the transmission grid and new connections have facilitated an increase in the production of energy from renewable sources (see graph below).

**2005-2015 WIND AND SOLAR PRODUCTION (% OF TOTAL)**



(\*) 2015 data is provisional.

## The efficiency and security of the electricity system

Guaranteeing a continuous, secure and high quality electricity service at the lowest possible cost is, for Terna, both a concession obligation and a responsibility to the entire nation. With a view to ensuring increased safety, efficiency, savings and greater integration of the grid in the Mediterranean area and Europe, Terna in December 2015 acquired from the Gruppo Ferrovie dello Stato the company S.EL.F. (Società Elettrica Ferroviaria S.r.l.) and added approximately 8,400 km of lines and 350 substations that will become part of the NTG.

EU28

### Service quality and continuity

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, guaranteeing appropriate standards of quality and outages that remain below pre-set thresholds. Terna monitors service continuity through various indices that are defined by the AEEGSI (Resolution 250/04) and the Terna Grid Code. The portions of the NTG monitored are those owned by Terna S.p.A. and, from 2012, also those controlled by Terna Rete Italia S.r.l.

CONTINUITY INDICES USED		
Contents	What it measures	How it is calculated
<b>SAIFI+MAIFI<sup>(6)</sup></b>	Average number of short and long interruptions	Ratio between the number of users directly connected to the NTG involved in interruptions and the number of users of the National Transmission Grid. The lower the level of the indicator, the better the service performance.
<b>AIT<sup>(7)</sup></b>	Average system interruption time	Ratio between the energy not supplied (ENS value) and the average power consumed by the electricity system. The lower the level of the indicator, the better the service performance.
<b>ENS<sup>(8)</sup></b>	Energy not supplied following events that originate on the NTG	The sum of energy not supplied to users connected to the NTG (following events that originate on the NTG). The lower the level of the indicator, the better the service performance.
<b>RENS<sup>(9)</sup></b>	Energy not supplied following events that originate on the relevant grid	The sum of energy not supplied to users connected to the NTG (following events that originate on the relevant grid). The lower the level of the indicator, the better the service performance.

These continuity indices are relevant for the system as they monitor the frequency and impact of events that occur on the electricity grid caused by faults or external factors, such as meteorological events.

We note that at the time of the publishing of this Report the AIT, ENS and RENS indices are not available for 2015, pending the final calculation by the AEEGSI.

For the purposes of impact on regulated revenue, the relevant index is RENS (Regulated Energy Not Supplied). In fact, the AEEGSI has regulated the quality of the service provided by Terna using an incentive/penalty mechanism set out by Resolution AEEGSI 197/11. It is applicable to the 2012-2015 regulatory period and relates to the Regulated Energy Not Supplied (RENS) index referring to the Terna S.p.A. grid and the subsidiary Terna Rete Italia S.r.l. grid separately.

The performance of the indices is shown below, starting from 2002, with the exception of RENS, which starts from 2008.

(6) Short Average Interruption Frequency Index + Medium Average Interruption Frequency Index.

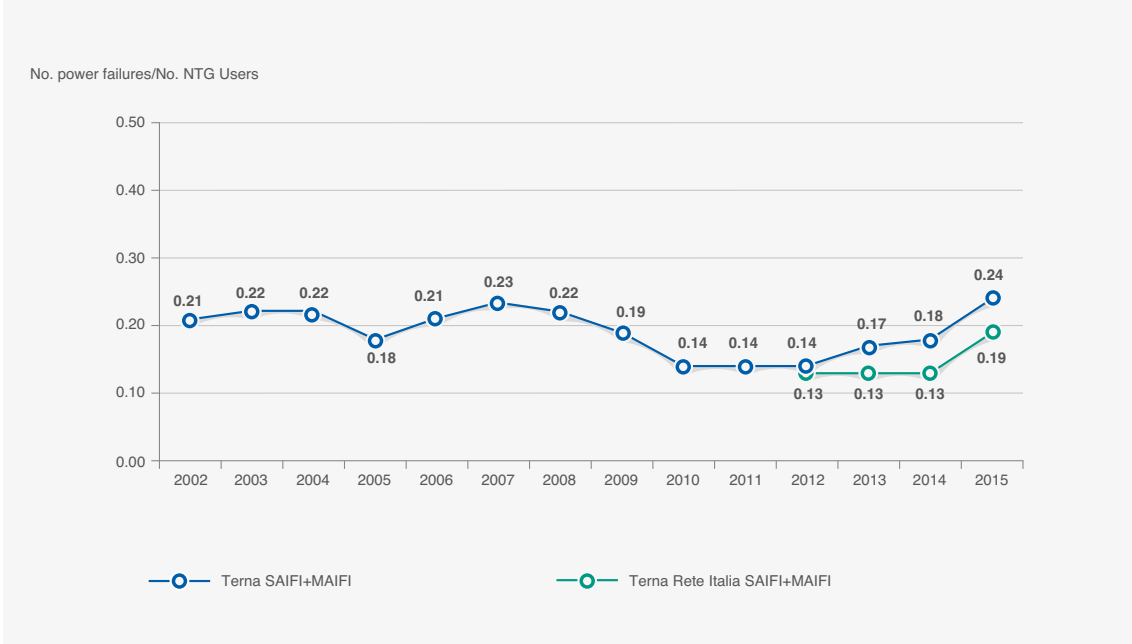
(7) Average Interruption Time.

(8) Energy Not Supplied.

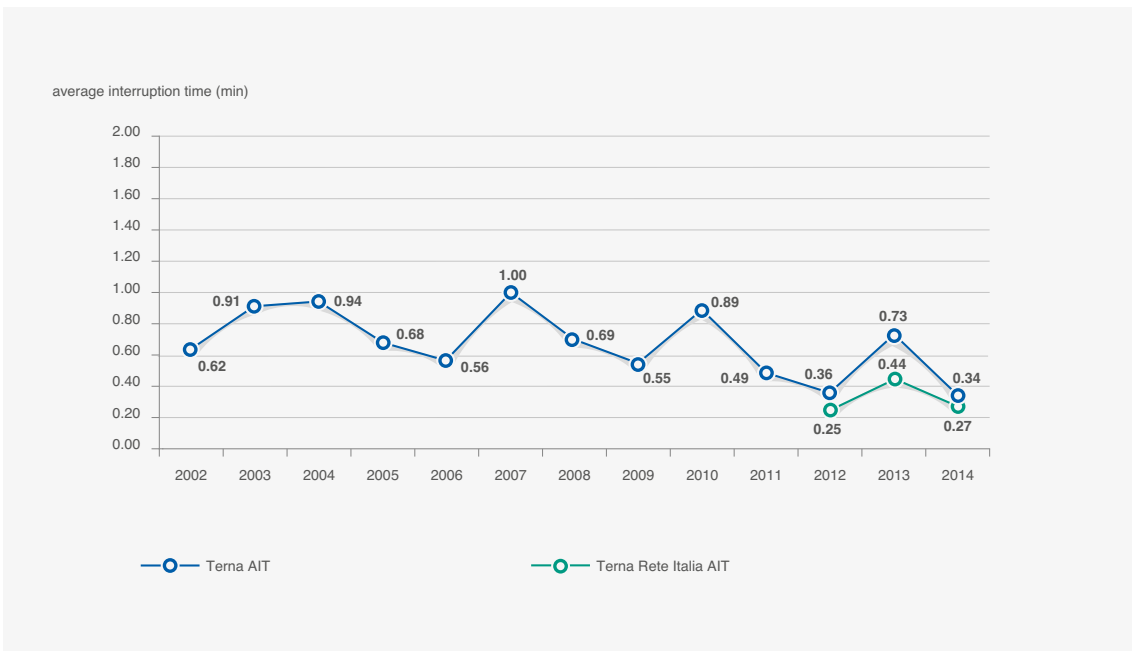
(9) Regulated Energy Not Supplied.



### SAIFI+MAIFI INDICATOR

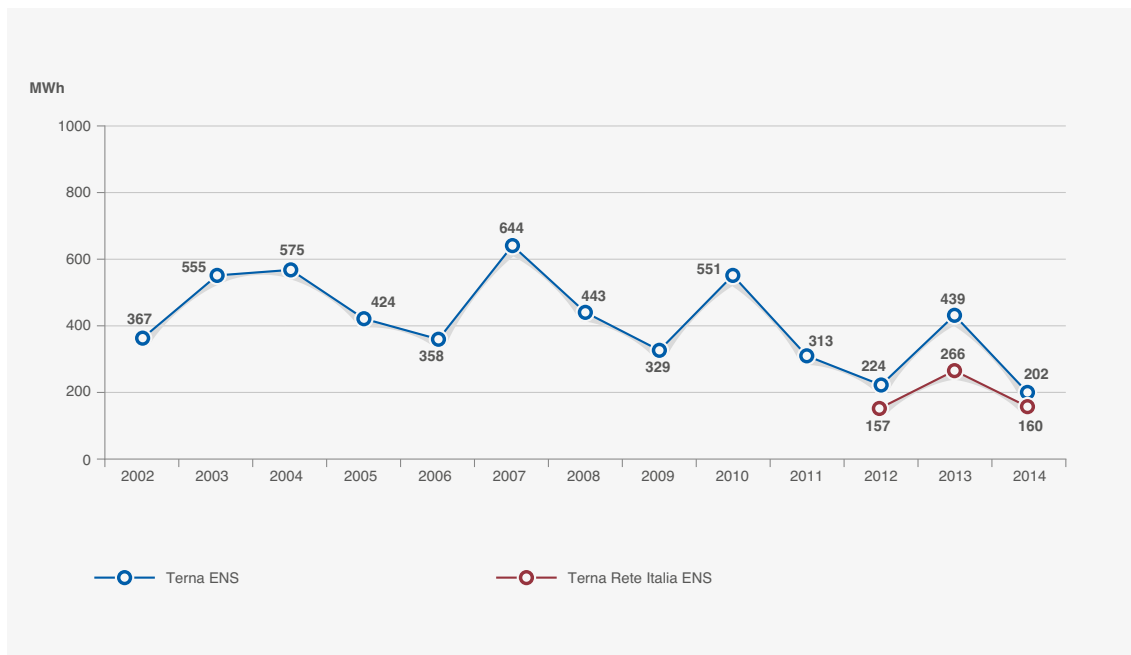


### AIT INDICATOR\*

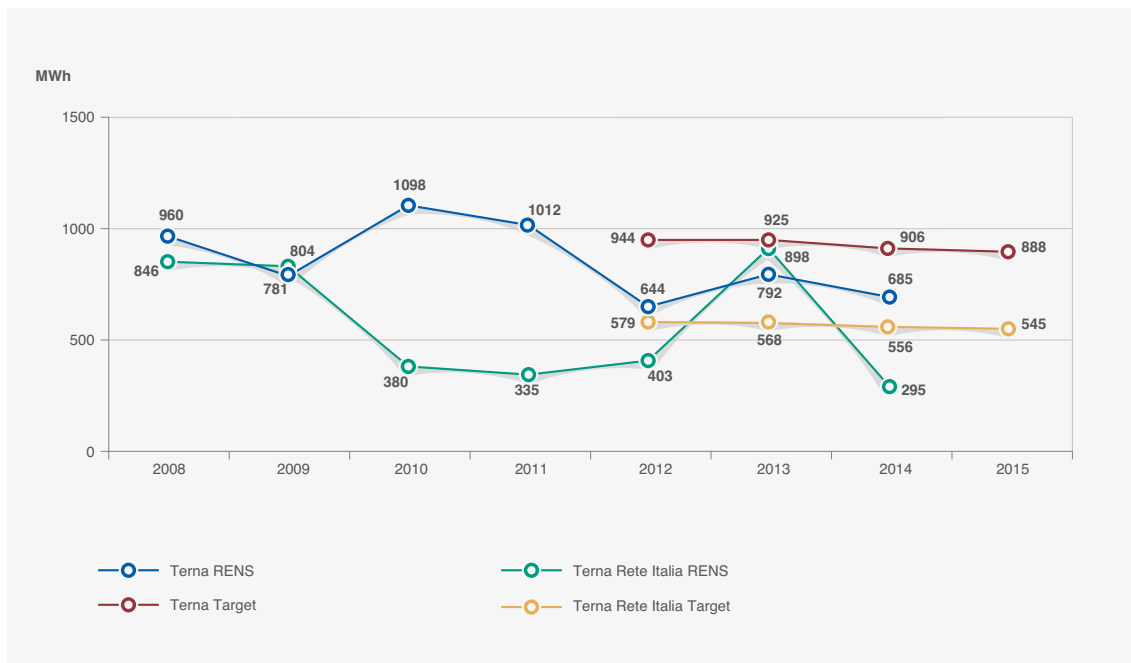


(\*) Net of the amount attributable to relevant incidents. 2015 figure not available at the moment of publication of this report.

### ENS INDICATOR



### RENS INDICATOR<sup>10</sup>



(10) For the RENS indicator, the targets for 2012-2015 have been set as an average of the RENS 2008-2011 indicator, referred to in AEEGSI Resolution 197/11, with a 2% improvement in performance required for each year compared with the previous one.

## The security of the electricity service

Ensuring the security of the Italian electricity system, which is interconnected with the European grid, is a difficult task that Terna carries out through a series of actions based on a scrupulous assessment of operational risks.

**The objective is to keep within pre-set limits the probability of interruption of service and to minimise the negative consequences of disservices should they occur.**

For Terna, preventing and reducing the risk of significant disservice means monitoring and protecting the physical integrity of the plants, arranging defence plans that limit the consequences of possible disservices, carrying out the preventive scheduling of the operation, improving control capacity in real time, training staff, developing new methods of support for the scheduling and control process, enhancing the reliability of the means of support, and coordinating the management of systems interconnected with neighbouring TSOs.

The 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, which reached its twelfth edition in 2015, is drawn up every year and has a four-year programming period. The approach to electricity system security has become increasingly structured in successive editions of the Plan.

The current structure of the Security Plan envisages 8 different areas for scheduling, control, regulation and protection, restarting and monitoring of the electricity system, and an area for the secure and optimal management of renewable sources.

In the context of the aforementioned areas of intervention, the 2015 Security Plan confirms the short/medium-term initiatives already identified in the previous edition, which also includes innovative projects (in particular, power intensive electrochemical storage systems for ultra-rapid frequency regulation and equipment to compensate for reactive power), aimed at securely managing the system, in particular on the larger islands, in the expected operating scenarios characterised by increasing production from non-programmable renewable sources.

Lastly, the 2015 Security Plan introduces new initiatives aimed at guaranteeing the security of the electricity system and increasing grid resilience in the case of extreme weather events, such as ice and snow.

**In 2015 investments made in relation to projects provided for in the Security Plan amounted to approximately € 75 million. The twelfth edition of the Security Plan for the years 2015-2018 provides for investments of around € 224 million.**

## Information security and cyber security

Terna adopts an "Information Security Governance" model based on a regulatory framework of policies and procedures, in line with the "National Framework for Cybersecurity", supported by an Information Risk Management ("IRM") operating programme.

This programme considers the all risk factors (organisational, technical and technological, physical, environmental and cyber-threat etc.) that may threaten the Group's complex ICT system, including compliance with laws relating to the processing of data and the fight against cybercrime.

The model and programme have the primarily goal of preventing events against the company's information assets and counteracting any impacts on the company's business or image resulting from interruptions to grids or information services critical to electricity system operation and/or with potential damage to the NTG, confidentiality loss, theft or tampering with sensitive, strategic and confidential information, in particular if relating to the electricity market.

A process that identifies and contains security incidents in a timely manner was implemented by the Security Operation Centre (SOC), the centre for the prevention, identification and management of cyber incidents.

ACTIVITIES CARRIED OUT IN RELATION TO IT SERVICE INTERRUPTION/DATA THEFT RISKS	
Activities	Description
<b>Strengthening of controls for the security of information assets</b>	Controls and countermeasures aimed at guaranteeing the necessary security and resilience features for ICT assets have been fine-tuned and consolidated, prioritising those considered most critical or even vital for the proper functioning of Critical Infrastructure (CI), such as the grids and control/defence systems of the NTG and the Italian electricity system. The control is also aimed at increasing the logical security of databases that store “business sensitive” company information and of the segregation of grids belonging to different security domains. Measures were taken to further strengthen the process to reduce the risk posed by third party staff who work on company networks and IT systems. These steps include new Information Security requirements that bind the third party and its staff to specific obligations when performing contracts.
<b>Institutional cooperation for cyber-security</b>	Alongside internal initiatives aimed at preventing and managing cyber risks, Terna has also increased cooperation with the Italian institutional organisations (MED-CERT, CNAIPIC and DIS) which serve as the strategic framework for national cyber security, in order to establish the necessary synergies in managing extended emergencies and crises associated with cyber attacks. The overall picture has benefited from operational growth in institutional structures due to specific Memorandums of Understanding with Terna, which are now in force.
<b>Information measures for electronic security</b>	The SOC produces monthly reports on the Information Security structure, which contains primary performance indicators on company logical security, including the number of security events with a summary of the reports by month combined with related groupings by source and type, graphics on Spam/Phishing/Malware trends, a summary of cases on confirmed breaches of use of local administration credentials, Port Scans detected on perimeter defence systems, etc. In addition, senior management receives a daily dispatch of the main indicators of Cyber Risk, as well as significant Cyber events occurring in the last 24 hours.

The centre constantly monitors and correlates millions of events per day on different ICT platforms and, depending on the individual cases, minimises information loss and/or promotes the recovery of the services involved. The SOC also has an operational role in combating forms of cyber-threat to which the corporate networks and interconnected IT assets are increasingly exposed.

Finally, as in previous years, there were no complaints received for breach of privacy, or for inappropriate or unauthorised use of personal data entrusted to the Group's companies, either through the email address ([privacy@terna.it](mailto:privacy@terna.it)) created specifically for such notifications or through the other channels used for notification or identification.

G4-PR8

### Plant maintenance

Plant maintenance is essential for ensuring service quality and continuity. The main actions taken in 2015 with regard to electrical substations and lines are listed below: We note the new forms of overhead line monitoring using helicopters that became operational.

MAINTAINING INFRASTRUCTURES	
<b>Plant monitoring and inspection</b>	<ul style="list-style-type: none"> <li>• 22,700 periodical technical and surveillance checks on substations at different voltage levels.</li> <li>• Inspections with visual checks on around 74,600 km of three-phase lines, approximately 31,400 km of which were carried out by helicopter (visual + infra-red), with a total average frequency of around 1.2 inspections per year for each power line.</li> <li>• 17,000 instrumental checks, conducted both from the ground and using thermal imaging cameras to identify hot spots, DayCor UV cameras to pinpoint the corona effect on insulators and conductors and climbing pylons with LLW (Live-Line Working) techniques, as well as by helicopters using specific flights with infra-red detection (with Terna staff on board) and LIDAR surveying technology to ascertain interferences, with particular reference to those created by trees.</li> </ul>
<b>Ordinary maintenance</b>	<p>Terna identifies the action to be taken on the basis of indications of deterioration coming from the integrated remote-management system, the online sensors and the results obtained from the plant monitoring process, using Maintenance and Business Intelligence (MBI), the expert system which optimises maintenance activities, active since 2005.</p>
<b>Vegetation control</b> <b>G4-EN12</b>	<p>The correct operation of the lines requires continual monitoring of vegetation growth to prevent it getting too close to the energy conductors and causing possible short circuits and line interruption. In 2015, vegetation was cut along approximately 14,000 km of power lines.</p>
<b>Activity with live-line working (LLW)</b>	<p>Approximately 1,150 monitoring inspections and 1,100 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.</p>
<b>Extraordinary maintenance</b>	<p>In 2015, Terna reconstructed 11 km of overhead lines and 8 km of underground cables, and replaced approximately 2,500 km of energy and guard wires.</p>

## Grid development

The transmission grid must evolve consistently with developments in the generation and consumption of electricity, which grow at uneven rates in different areas of Italy and change the flows of electricity in the system, thereby causing congestion in the existing grid.

In response to these needs, Terna prepares a National Transmission Grid Development Plan (DP) every year containing the grid development projects envisaged for the next ten years and the progress made on development works planned in previous years.

The 2016 Development Plan (DP) is concerned with NTG development investments for 2016-2025. The document describes the framework of reference, the objectives and criteria of the transmission grid planning



process, new development needs identified throughout 2015 and the priorities and results expected from the DP's implementation. The plan is accompanied by a closer examination of analyses carried out on the economic sustainability of the main development plans. The document is available on the Terna website (<http://www.terna.it/en-gb/sistemmaelettrico/pianodisviluppodellarete.aspx>).

Every Development Plan is assessed and approved by the Ministry of Economic Development, subject to public consultation,<sup>11</sup> as well as by the Regulatory Authority for Electricity, Gas and Water, and is also subjected to evaluation by the Grid User Consultation Committee.

Furthermore, the Plan is also subject to the Strategic Environmental Assessment (SEA)<sup>12</sup> process carried out by the Ministry of the Environment and Protection of Land and Sea in collaboration with the Ministry for Cultural Heritage with the purpose of integrating environmental considerations into the process of preparing the plan, in order to guarantee environmental sustainability.

## 2016 Development Plan

The 2016 Development Plan foresees investments totalling € 6.6 billion, thanks to which efficiencies will be achieved for the electricity system, as well as benefits, such as:

- reduction of energy losses of approximately 1.6 billion kilowatt-hours per year;
- reduction of CO<sub>2</sub> emissions of approximately 15 million tonnes/year;
- reduction of congestions for an amount of more than 5,000 MW;
- greater overall foreign exchange capacity, estimated at more than 6,000 MW;
- greater power capacity generated by renewable sources of around 5,500 MW.

## A responsible approach to grid development: consultation

Since 2002 Terna has chosen to **voluntarily bring discussions with local stakeholders forward to the project planning stage** (for power lines and electrical substations) within its Development Plan to improve the quality of the relationship with public administrations which, in this way, are involved in sharing the electricity grid development needs and can work alongside Terna to find sustainable solutions which accommodate those needs.

The aim of this method is the **optimal localisation of new installations**: Terna and the public authorities find shared solutions, in terms of local **corridors**, based on area criteria (known as "ERPA criteria") and ratified in specific agreements. Through constant discussion with local stakeholders, considerations concerning the environment and the local area are integrated into the electricity grid planning process.

This approach preceding involvement which would subsequently be outlined by the Strategic Environmental Assessment (SEA), subject to an EC Directive (2001/42/EC), which was 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. Further information on SEA is available in the "Electric System" section of the website:

<http://www.terna.it/en-gb/sistemmaelettrico/valutazioneambientalestrategicadelpianodisviluppo.aspx> which can also be accessed from the dedicated map portal, known as the "SEA Portal" (<http://portalevas.terna.it/>).

In addition to dialogue with local institutions, in 2015 Terna increasingly made use of another mode of dialogue and discussion with citizens directly affected by the move to new infrastructures: "Open Days", public meetings during which the company describes the requirements for developing the grid that led to the need for work, explaining the implementation methods, as well as alternatives that had been identified and, above all, gathering comments and clarification requests and providing immediate feedback (For further details, see the specific box on pages 44-45).

(11) Pursuant to article 36.13 of Legislative Decree 93/11.

(12) It may also be subject to screening to check whether it should undergo SEA pursuant to Legislative Decree No 1 of 24 January 2012.

G4-SO1

G4-EC7

G4-EN27

## Area criteria

Agreement on **location criteria** is the instrument used for selecting local corridors with least impact. These criteria are used to identify the greater or lesser degree of suitability of an area to host new electrical infrastructure.

Terna and the Regions have agreed on a system of criteria (**ERPA**), based on four classes, to be adopted when locating new electrical works:

- **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 (corridors) 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 to identify possible locations which are the most compatible with the area concerned.

## Main 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 2015, Terna increased **its transformation capacity by about 2,307 MVA of power and put approximately 73 km of new high-voltage and very-high-voltage lines into operation**. For details on work which has been completed concerning both projects of primary interest and plants needed to implement collection and the use of production from renewable sources in the south of Italy, consult the Development Plan summary available in the “Electricity Service” section of the website [www.terna.it](http://www.terna.it).

### Progress on construction sites

The major works that began in 2015, and which are still in progress, aim to reduce grid congestion, connect new power plants (particularly those based on renewable sources) and make the national transmission grid more reliable, with a greater emphasis on the environment and safety. For details on the status of these works, please consult the website.

### Authorised work and authorisation procedures in progress

In 2015, authorisation procedures were initiated for works shown in the figure below, which also show authorised works. For details on these works, please consult the website [www.terna.it](http://www.terna.it).

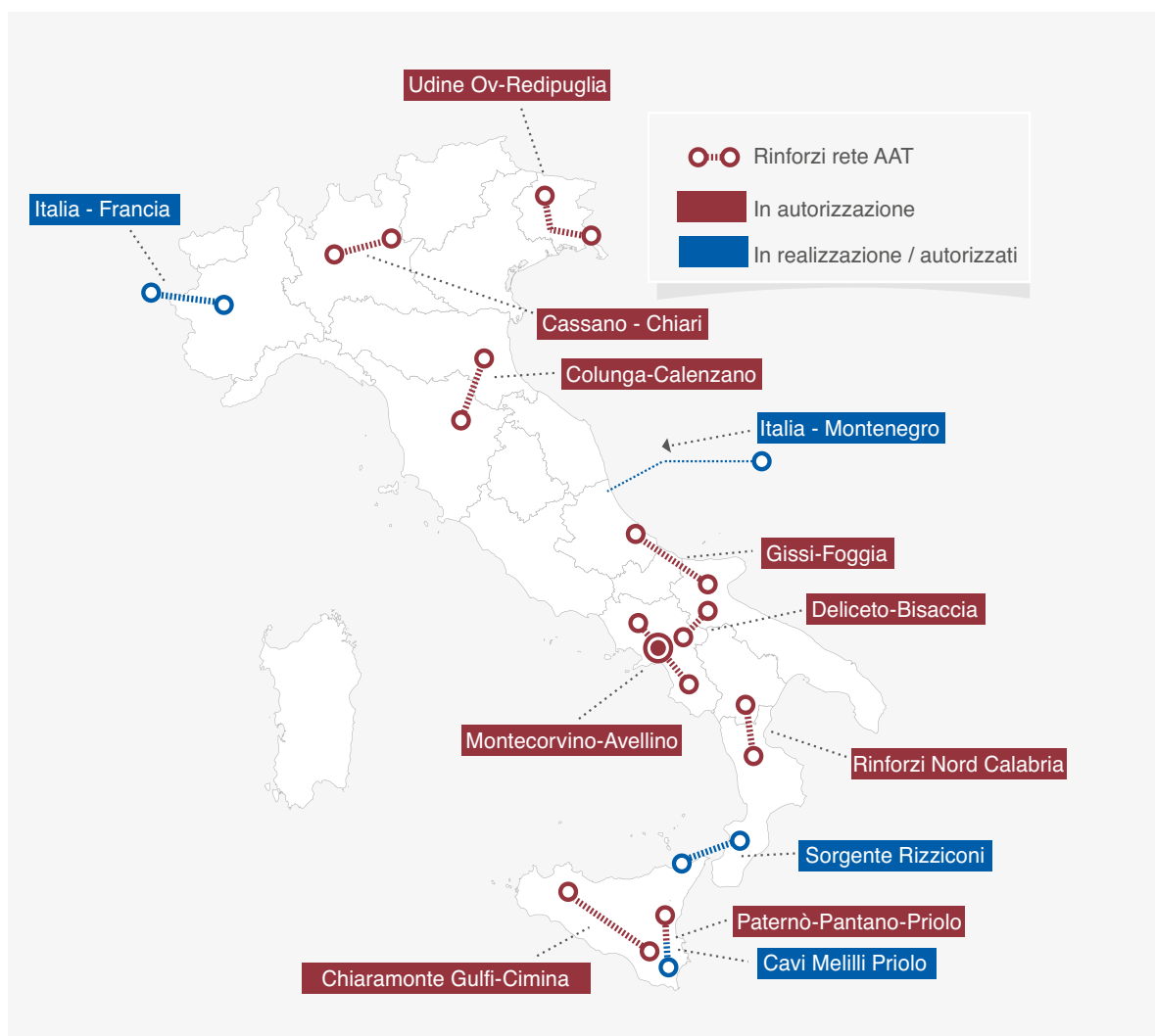


Figure 1 – Main Development Plan projects which have been/are being authorised.

### Projects set out for use of energy produced from renewable sources

Terna has implemented Directive 2009/28/EC and the National Action Plan (NAP) prepared by the Ministry of Economic Development, as well as included a specific section in the Development Plan dedicated to the actions needed for full use of the energy deriving from the production of renewable source systems. The grid analyses 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.

The figure below shows an overview of the main development work carried out on the 380 kV very-high-voltage grid, aimed at fully using the energy produced by renewable sources.



Figure 2 - Main action on the 380 kV grid aimed at greater production from RES.

## Connecting new plants

Terna has an obligation to connect all potential users that request connection to the Grid<sup>13</sup> based on criteria that allow for continuity and security in operating the grid to which the new user plant is to be added.

Specifically, Terna is responsible for connection to the National Transmission Grid (NTG) at high-voltage and very-high voltage for plants with a power of 10MW or more.

The technical, procedural and economic terms and conditions for supplying the NTG connection service are regulated by provisions issued by the Regulatory Authority for Electricity, Gas and Water (AEEGSI). These resolutions are implemented in the Grid Code, which describes the transparent and non-discriminatory rules for grid access and its technical regulations.

Connection requests managed by Terna, which correspond to around 2,400 active connection requests, amount to a capacity of around 139,000MW.

The trend in connection requests has been almost constant over the last three years.

In regard to production plants (renewables and thermoelectric) on the NTG, we note that in 2015:

- 17 plants became operational for a total capacity of around 400MW;
- 11 connection requests were made, for which the requesting party presented the authorisation to the relevant authorities and for which the Detailed Minimum Technical Solution (STMD) was accepted for a total of 368 MW;
- 25 connection contracts were signed (for a capacity of 572 MW) to regulate the relationship between Terna and the applicant for the purpose of providing the connection service.

In regard to plants from renewable energy sources (RES), there are 1,507 active connection requests, with a solution on the NTG, for a capacity of 63,086 MW.

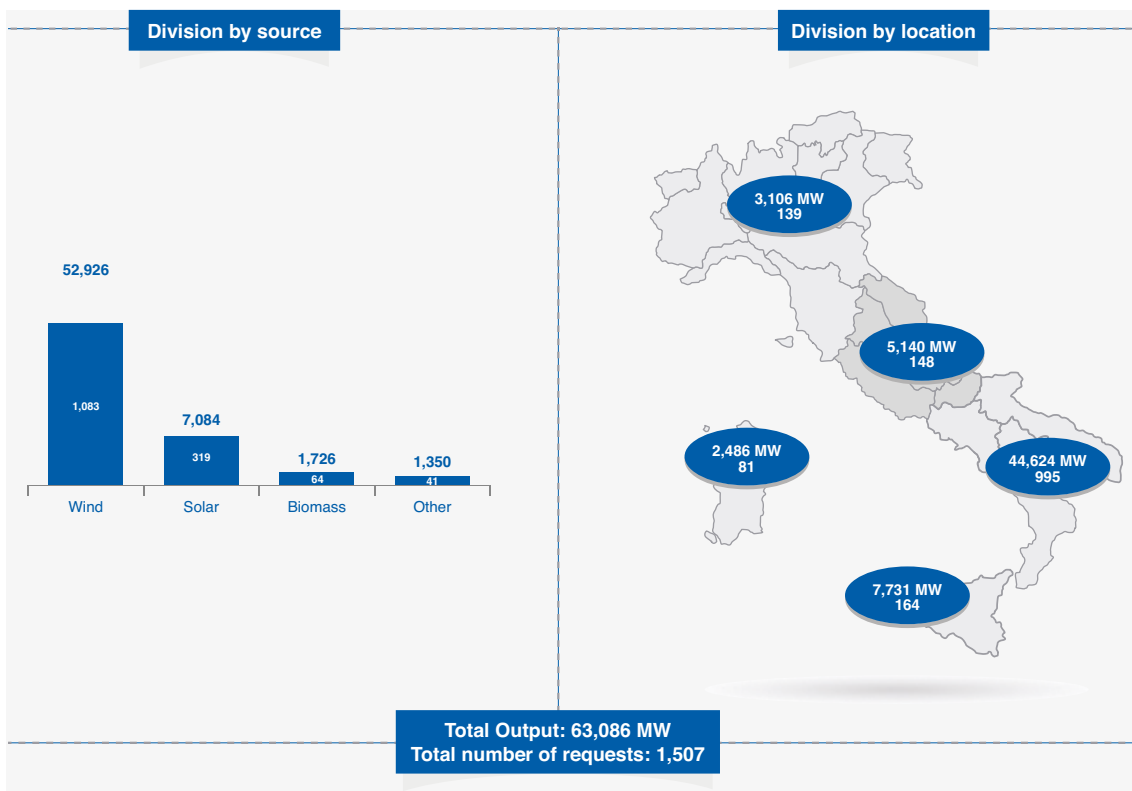
The figure below, which summarises these requests by source and geographical distribution, shows:

- wind energy takes prime position among renewable sources on the NTG, in view of the continuous decline in connection requests from photovoltaic sources;
- there were more requests for the connection of generation plants from renewable energy in Southern Italy and the Islands, which are more favourable in terms of the availability of primary sources.

(13) Legislative Decree no. 79 of 16 March 1999 - Article 3, paragraph 1: *"the operator must connect to the national transmission grid all those who request the same, without compromising service continuity and provided that the technical rules pursuant to paragraph 6 of this article are respected, as well as the technical and economic conditions for access and interconnection established by the Regulatory Authority for Electricity and Gas [now the Regulatory Authority for Electricity, Gas and Water]"*.

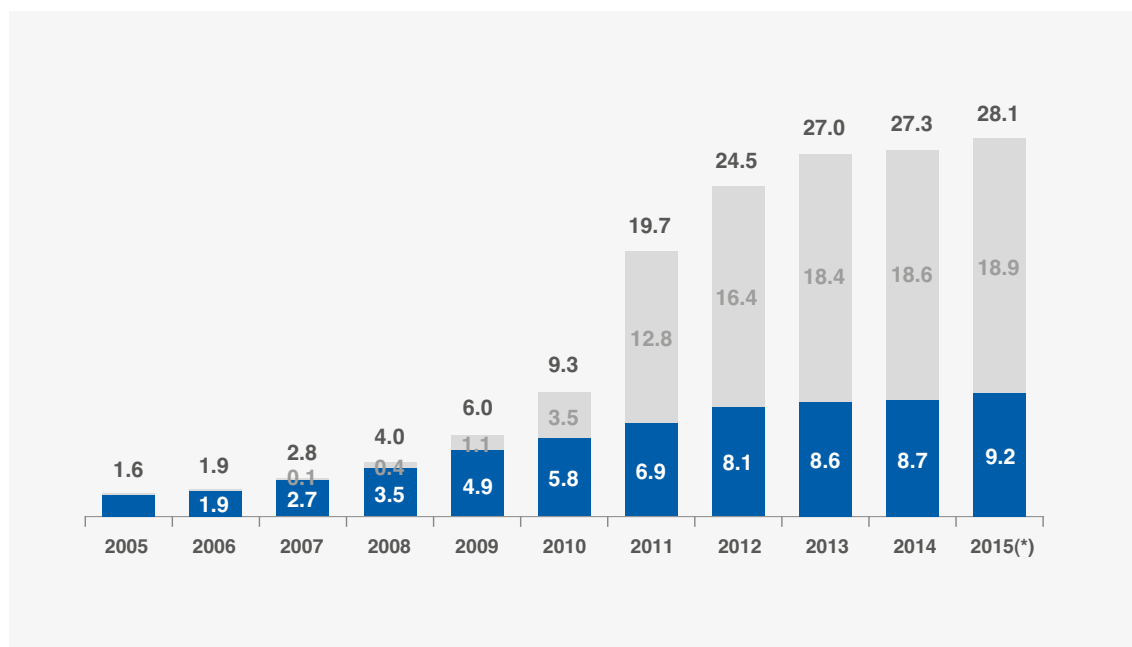


### ACTIVE REQUESTS BY SOURCE AND GEOGRAPHICAL DISTRIBUTION



Data at 31.12.2015

### PHOTOVOLTAIC AND WIND POWER INSTALLED 2005 - DECEMBER 2015\* (GW)



(\*) Terna 2015 provisional data.

## TERNA WITHIN ENTSO-E



Terna is part of the European Network of Transmission System Operators for Electricity (ENTSO-E), which was created in 2009 and includes 41 network operators from 34 countries in Europe (Iceland, Macedonia, Montenegro, Norway, Serbia and Switzerland are also members, in addition to 28 EU countries). In June 2015, Terna CEO Matteo Del Fante was appointed the Vice Chairman of ENTSO-E for a two-year period.

ENTSO-E is based in Brussels and acts as the **body for obligatory cooperation of all grid operators at a European level** in synergy with the European Commission and ACER, the Agency for the Cooperation of Energy Regulators.

The main purpose of the ENTSO-E is to promote the reliable operation, the optimal management and the development of the European transmission grid in order to:

- ensure the increased use of renewables in line with energy and environmental objectives contained in the Climate and Energy package for 2030 and the "Energy Roadmap 2050";
- promote and support the creation of the internal energy market, reducing congestion on the transmission grid;
- guarantee security of supply and the reliability of the interconnected transmission system which connects 525 million citizens throughout the entire ENTSO-E area.

### European Network Codes

The ENTSO-E is also tasked with preparing European Network Codes on cross-border issues that cover market issues and the operation of the electricity system on the generator, distributor and end user side. These codes, which are prepared by ENTSO-E via a consultation process with the reference stakeholders, are adopted by the European Commission via a supra-national and binding legislative act.

In 2011, the European Commission, together with ENTSO-E and ACER, adopted a three-year work programme for the composition of twelve European Network Codes for the electricity industry, which takes into account the political conclusions of the European Council which had fixed 2014 as the term for completing the integration of the national and regional electricity markets.

For this reason, between 2013 and 2015 ENTSO-E prepared ten network codes and submitted them to ACER for its assessment and the subsequent adoption by the European Commission and the member states. On 24 July 2015, with EU Regulation no. 2015/1222, the first European grid code was adopted, known as CACM (Capacity Allocation and Congestion Management), while the remaining nine codes are awaiting the authorisation process defined by European Institutions and the member states.

### **Market transparency and integrity**

ENTSO-E contributes to energy market transparency by establishing a centralised platform for the publication of essential data for the electricity market. In June 2013, the European Commission adopted EU Regulation 543/2013 on transparency: to this end, the ENTSO-E implemented a new European central platform which, as of 5 January 2015, publishes (as established in the Regulation) the data of the 41 European grid operators.

Lastly, in implementing 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**

In accordance with EU Regulation no. 714/2009, the ENTSO-E defines the non-binding Ten-Year European Network Development Plan (TYNDP) every two years, in order to plan investment needs for grid development and interconnections in line with National Development Plans and taking account of European guidelines for trans-European energy networks.

ENTSO-E's TYNDP provides representation at a European level for the development of electricity transmission systems and more significant investments that contribute to achieving the objectives of the European energy policy. The ENTSO-E's TYNDP is also the reference for identifying projects of common interest based on that which is laid down in EU Regulation no. 347/2013.

The most recent version of the European plan was published in December 2014, while the 2016 TYNDP is still being defined, with its publication expected later this year. The 2014 TYNDP, made up of six regional investment plans from the 2014 plan, includes infrastructural projects of pan-European significance, and the report on the forecast scenarios and adequacy of the European electricity system, which was integrated with the forecasts on the state of the European grid in 2030 for the first time.

## Technology and Innovation

In July 2015, following on from the reorganisation of the Group's organisational structure, the new Strategy and Development Department was established, which answers to the Innovation Lab and R&D division in charge of:

- defining the approaches to research and development in order to reach the Terna Group's strategic objectives;
- conducting research, also in collaboration with the Engineering and Asset Management Departments;
- monitoring research results.

The Group continues to use the specialised 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 particular, in 2015 the Terna Group incurred costs of € 23.7 million in respect of the associate CESI S.p.A., of which € 20.6 million were capitalised.

### The three-year innovation, research and development plan

The current structure of the electricity system is distinguished by significant **paradigm shifts** with a sharp penetration in intermittent renewable sources, a fragmentation and distribution of production points and the simultaneous movement of the value axis from energy production to the provision of service, a crucial element for managing the quality and security of the system.

These shifts represent important changes in the roles and interactions between operators, thereby creating the conditions for an **active role of demand** that is able to provide services and flexibility.

It was within such a rapidly evolving scenario that Terna developed its first **Three-Year Innovation, Research and Development Plan** in 2015, which structures the company's innovative development strategy.

The Plan covers a wide array of themes, such as: **Smart Grids, Environmental Sustainability and Start-ups**. Lastly, Terna adopts an **Open Innovation** approach, aimed at creating a network of companies and universities of excellence that are committed to identifying innovative and intelligent integrated solutions. Below are the details for each area provided for in the Plan.

## Smart Grids

The initiatives within the Smart Grid project regard development work on electricity grids, connected or otherwise to the electricity system, aimed at an "intelligent" management of electrical resources therein, both on the production side (renewables and others) and the load side (domestic and industrial users), also including any storage systems. The initiative objectives include:

- the optimal usage of the available resources;
- the introduction and testing of new services;
- creation and testing of aggregation tools for production and loading, with possible involvement in the electricity market;
- the management of intermittent renewable sources, more flexible management of the grid;
- an increase in efficiency and a reduction in electricity cost;
- a reduction in polluting emissions with a lower use of traditional local generation (diesel).

Additional sub-areas are included within this area: Active Demand, Smart Islands and, more generally, New Smart Technologies.

## Environmental sustainability

The company's commitment to sustainability is divided into three areas with the purpose of:

- reducing the impact of company assets on the environment;
- strengthening the grid with the aim of supporting the transition towards renewables and towards a more efficient and rational consumption model;
- pre-empting and correcting the impact of climate change on electrical infrastructures in order to optimally plan future development.

## Start-ups

Terna is a large Italian industrial enterprise that aims to favour the growth of the country through innovation. In this light, it believes that a focus on start-ups is crucial as they are the modern expression of business innovation and it intends to take part in ad hoc initiatives created by other important companies within the financial sector.

## Open innovation

The corporate development strategy is based on innovation, research and development, which are all key factors in identifying future approaches to technologies and, therefore, investments.

In Terna's case, it would be reductive to limit itself exclusively to its own scope of action since the ability to intelligently integrate processes and areas forms the basis of Smart Grid development, which increases overall efficiency and maximises potential.

It is within this context that Terna will take the route of Open Innovation with companies featuring strong strategic importance in future grid development.

These collaborations will be open to sharing objectives and ideas, with the aim of creating a network of national and international excellences able to ensure a result that is greater than the sum of its parts.



## Transmission technologies

Electricity transmission continues to experience great evolutions, in terms of research into efficient and effective systems to meet the paradigm shifts taking place across Europe, in line with the prescriptions of the Energy Union concerning the strengthening of the interconnection between systems and markets.

The challenge lies in not only creating the capacity to allocate substantial volumes of renewable energy, while guaranteeing satisfactory margins of adequacy, quality and security at the same time, but also the conditions to meet ambitious targets set for eco-compatibility for the next few decades.

## Storage

The rapid and impressive development of the Non-Programmable Renewable Sources (NPRS) requires new adequacy solutions and the development of systems that can reduce the impact of the related critical issues in the most effective and prompt manner possible, and also reach the objective of promoting the efficient use of electricity from renewable sources. In order to continually monitor technologies that are undergoing deep-seated changes, Terna has centralised its "Storage Lab" in Codrongianos (Sardinia), where seven different technologies are currently being tested, in conjunction with leading sector companies. In 2011, Terna undertook an ambitious storage systems testing programme, which is sub-divided into two macro-projects, "Power Intensive" and "Energy Intensive". The primary objective for each of these is to demonstrate the value of these innovative systems and test their capacities and potential.

## MAIN ACTIVITIES DURING THE YEAR

Research field	Description
<b>Smart Grids</b>	<p>Project launched for the modernisation of the electricity grid of the <b>island of Giglio</b> with ICT solutions that integrate green sources, energy storage and urban mobility, respecting the territory. Terna Plus and IBM signed a Memorandum of Understanding with the Municipality of Isola del Giglio (GR), the Tuscan Archipelago National Park Authority, the Fiora Water Company and SIE- the licensee company for the production and distribution of electricity on the island. Renewable sources, energy storage systems, electric vehicles and Active Demand solutions will become a mix of innovative solutions that could make the island of Giglio a genuine "smart island". The agreement signed also concerns the island of Giannutri. The construction work will begin in 2016.</p>
<b>Environmental sustainability</b>	<p>As part of the "<b>TSO-DSO</b>" project, development and construction of new dispatching functions continue which could be implemented in automation and control systems installed in substations and at NTG control and operation centres, with the aim of favouring the integration of distributed generation plants from non-programmable renewable energy sources, thereby improving operational security and safety.</p> <p><b>The LCA (Life Cycle Assessment) study on 380 kV</b> overhead lines continues. LCA studies have also been launched for direct-current converter facilities.</p> <p>The trial project into innovative solutions for <b>mitigating</b> low-frequency EMC (electromagnetic fields) has begun. The first trial will take place on the 150 kV Collaramele-Castelmadama line and subsequently on a 220 kV line.</p> <p>The trial of <b>noise mitigation systems</b> has begun. A noise mitigation prototype system has been tested at the Rome North electrical substation with good preliminary results. A trial with passive dampers on 230 kV single-phase reactors is under way.</p>
<b>Transmission technologies</b>	<p>Research and the implementation of <b>high-temperature low-sag (HTLS) conductors</b> on the NTG continues, which are capable of withstanding higher temperatures without suffering mechanical degradation during operating life.</p> <p>As part of the development project into re-ignition practices on isolated grids in the absence of local generation, a successful <b>operating test on an island</b> of the Synchronous Condensers at Codrongianos using Storage Lab storage systems was undertaken.</p> <p>Testing continues, in the laboratory and in the field, on <b>innovative instrument transformers</b>, which are intrinsically safe, both from an environmental perspective (no oil or SF<sub>6</sub>) and in terms of the physical safety of people and objects.</p> <p>As part of the <b>Mitigating Outage Risks caused by snow and ice</b> project, important introductions have been gradually put in place, which include prevention, maintenance, research and zoning in order to identify the most critical areas, as well as the installation campaign of the anti-rotation devices for conductors and the Wolf-TRASM system (predicts the formation of "sleeves" of ice on overhead lines). A collaboration with the Politecnico of Milano has also been established in order to develop strategies and innovative anti-icing/de-icing systems to mitigate the risk of ice and snow.</p>

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The installation of **advanced monitoring systems for HV equipment and machinery** at the NTG's electrical substations continue.

The initial stages of the **MOSAICO project** have been completed. It aims to define a new operational maintenance model that will allow, within the plants units, for operational stages in the processes of defining demands, planning, scheduling, allocating activities to teams and final accounting to be simplified.

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## ECONOMIC RESPONSIBILITY

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# Economic responsibility

## 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 through the following measures:

- 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.

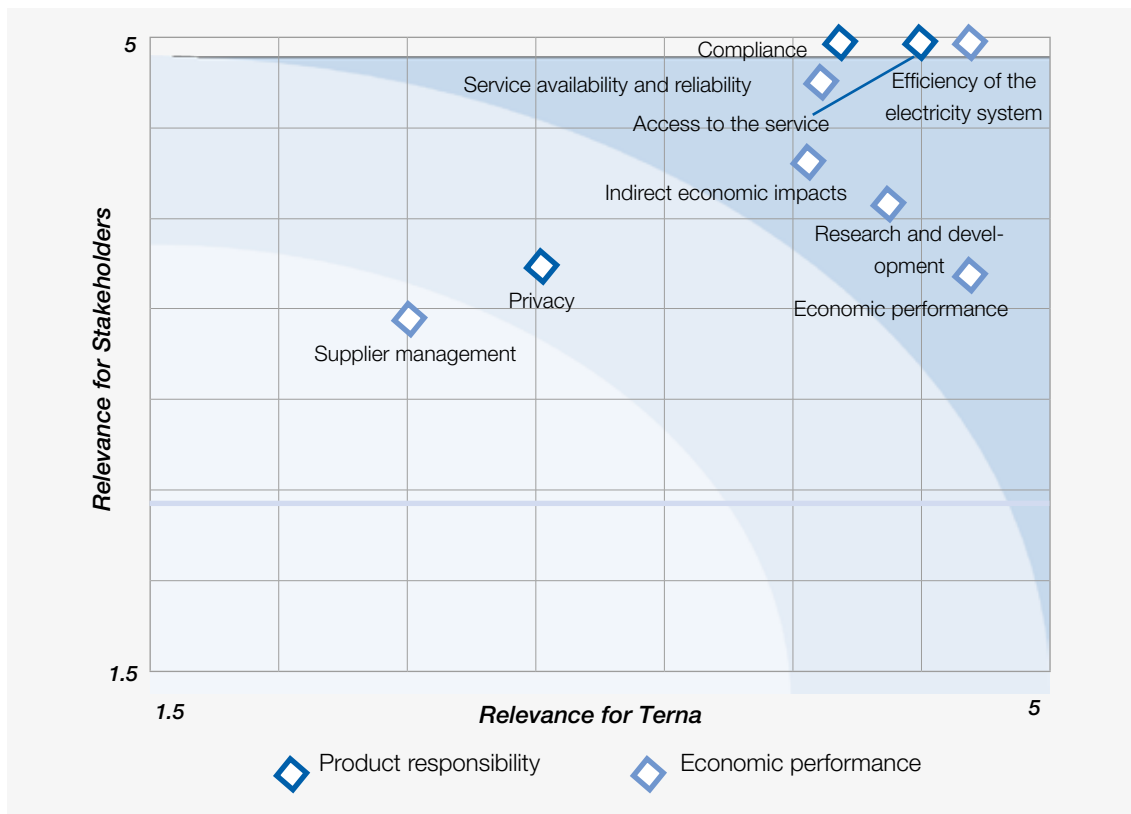
Terna has launched a business diversification process (Non-Regulated Activities), in Italy and abroad, focused on:

- 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 <http://www.terna.it/Default.aspx?tabid=101> in the "Investor Relations" section and, in particular, the 2015 Annual Financial Report. The main results of the last three years are, however, discussed in this chapter.

Below is a visual representation of the materiality assessment of the economic and electricity-service aspects of G4 with indication of the materiality threshold (for more details, please see the methodological note on pages 151-153).

**MATERIALITY MATRIX – PRODUCT AND ECONOMIC RESPONSIBILITY ASPECTS OF G4**



Access to the service	pages 23-25; 54-57; 67-68
Compliance	pages 31-35; 46-48
Service availability and reliability	pages 54-58; 59-60; 173
Electricity service efficiency	pages 54-61; 173
Supplier management	pages 86-92; 176
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Economic performance	pages 78-79; 130; 144-145; 174; Integrated Report
Privacy	pages 52; 58-59
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## G4-EC1 Terna's economic impact

### Value added<sup>14</sup>

Value-added is a measurement of a the income of a company, and that of a whole economy, during a given period (usually one year). In corporate accounting terms, value added is calculated by subtracting costs incurred for procuring intermediary goods and services necessary for production from the value of production itself (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 <sup>(1)</sup>

	Financial year 2015	Financial year 2014	Financial year 2013
A – Staff Remuneration	303,071,673	340,455,415	282,591,663
B – Remuneration of public authorities	309,537,047	355,659,934	433,790,713
C – Return on borrowed capital	179,544,713	189,666,491	190,767,423
D – Return on risk capital <sup>(2)</sup>	401,998,400	401,998,400	401,998,400
E – Remuneration of the Company	193,314,279	142,535,590	111,606,710
<b>TOTAL NET VALUE ADDED</b>	<b>1,387,466,112</b>	<b>1,430,315,830</b>	<b>1,420,754,909</b>

(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 standards IFRS/IAS. Specifically, the Terna Group has used the IFRS/IAS international accounting standards since 2005.

(2) Return on capital for 2015 refers to the advance distributed in November 2015 (€ 140.7 million) and to the balance proposed to the Meeting of the BoD in the session on 21 March 2016 (€ 261.3 million).

(14) This section, including the table, includes the values associated with the subsidiaries Terna Crna Gora and the Tamini Group.

The 2013-2015 period shows a decrease equal to 2.3% of the value added generated by the Group, in the context of which the incidence of return of borrowed capital remained essentially stable (averaging 13.2 %), as did incidence of personnel remuneration (averaging 21.8%)

With regard to direct and indirect taxes, tax incidence on total net added value (averaging 25.9%) dropped 8.2% compared to 2013 essentially because of the reduction of the IRES rate to 27.5% from 2015, following the declaration of unconstitutionality of the surcharge introduced by Decree Law No. 112/2008 ( Robin Hood Tax) and of the deductibility of permanent personnel expenses for IRAP purposes introduced by the 2015 Stability Law starting from the current year.

## Taxes paid abroad

With regard to the taxes paid abroad by the subsidiaries of the Group in 2015, we note the following:

- **Terna Plus:** the initiatives conducted abroad by the Group subsidiary responsible for Non-Regulated Activities include foreign payments relating to the tax on gains from the sale of the Chilean company Hello Atacama (€ 186,525) and also for the transfer of the Pampa Norte order (€ 136,971) arising from the sale of "Helio Atacama Neuve S.p.A." finalised by Terna Plus in 2014.
- Investments carried out by **Terna Crna Gora** in 2015 in Montenegro territory amounted to € 23,473,000 for design, supplies and labour, in line with forecasts of the construction contracts for the implementation of the project. In particular, full ownership was acquired for the land adjacent to the conversion station (€ 4,596,000) and that related to the terrestrial cable tract (€ 641,000). At the end of 2015, the company did not record any revenue and posted losses of € 1,751,000. Therefore, no taxes were paid to the Montenegro state on Montenegro territory.
- **Tamini Group:** with reference to services rendered on transformers supplied abroad, "Tamini Trasformatori S.r.l." paid € 6,600 in taxes abroad.
- **Terna Chile:** the foreign subsidiary paid taxes in 2015 amounting to about € 700,000 for activities conducted abroad in connection with Non-Regulated business.

Return on risk capital, in relation to total net added value, is substantially in line with 2013 (+0.7%), while the effect of provisions increased from around 8% to around 14%.

## Other economic effects

G4-EC8

Terna's economic impact does not end with the production and distribution of value added. Indeed, **the economic repercussions of the electricity service** must also 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, as well as to have an additional power reserve and 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 increased greatly over the last few years.

#### OVERALL INVESTMENTS – TERNA GROUP

	2015	2014	2013
Millions of Euro	1,103.1	1,096.1	1,212.3

The above table shows the Terna Group's total investments in 2015, equal to € 1,103.1 million, of which € 1,050.7 million are related to investments in Regulated Activities, i.e. remunerated by the AEEGSI.

#### G4-EC4

#### CONTRIBUTIONS

	2015	2014	2013
To the plant account from the P.A (*)	1,753,945.19	39,399.32	1,972,121.42
In relation to projects financed by the MED	-	60,535,918.26	-

(\*) These contributions are a direct reduction in the value of the plants.

The second aspect to consider is the **creation of jobs and procurement expenses**. The Terna Group excluding Tamini had a workforce of **3,333 employees** (data as at 31 December 2015), of which 959 were located in Rome and the rest distributed evenly throughout the whole of Italy.

In 2015, Terna indirectly employed labourers from **contractors and subcontractors totalling the equivalent of 2,503 full-time employees** to perform building works – above all the construction and maintenance of power lines.

In 2015, the **economic value of Terna's procurement** of services, supplies and works came to **€ 894 million**. For details, please see the paragraph on pages 86-88.

#### Share performance

Within a still unstable macroeconomic context, the main European stock exchanges ended 2015 with contrasting performances: Milan reported an increase of 12.7%, London and Madrid recorded -4.5% and -6.2% respectively, while Frankfurt earned 6.9% and Paris closed at +9.5%.

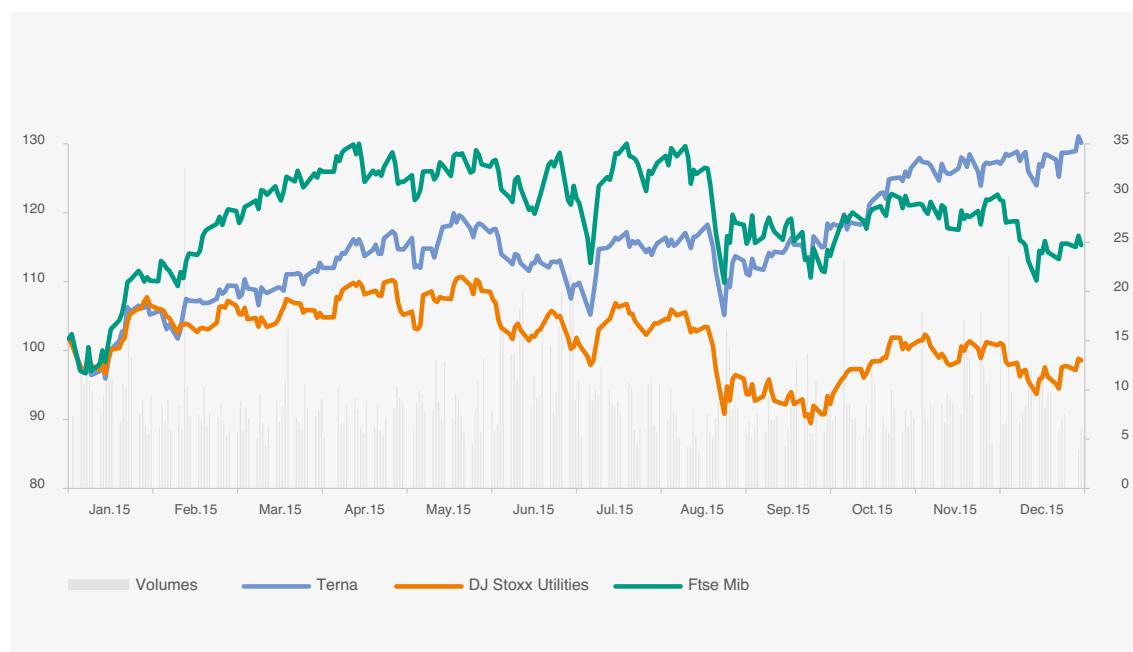
Terna recorded a 26.5% rise in contrast to the European benchmark sector index (DJ Stoxx Utilities -3%) and guaranteed a Total Shareholder's Return (TSR) of 32.5% (vs 1.7% of DJ Stoxx Utilities). The average daily volume traded in 2015 on Terna stock stood at approximately 8.4 million shares daily.

It should also be noted that, since its listing on the stock exchange (23 June 2004), the stock has increased in value by 179.8% with a TSR of 453.3%, outperforming both the Italian reference index (TSR FTSE MIB +17%) and the European sector index (TSR DJ Stoxx Utilities +135%).



Terna has adopted a policy which provides for the payment of dividends twice a year. The 2015 dividend advance payment was € 0.070 (coupon detachment date 23/11/2015, payment on 21/03/2016), while the balance proposed to the Meeting of the Board of Directors (session 17/02/2016) was € 0.130. Further information on share performance and dividend trends can be found on the site ([http://www.terna.it/default/home\\_en/investor\\_relations\\_en.aspx](http://www.terna.it/default/home_en/investor_relations_en.aspx)).

## TREND OF TERNA STOCK AND THE FTSE MIB AND DJ STOXX UTILITIES INDEXES



Source: Bloomberg. Data at 31 December 2015

## Revenue

Terna has begun a revenue diversification process, developing, in particular, market activity in Italy and abroad. The revenue share that the Terna group generates in Italy through its regulated activities, however, is still largely predominant. In 2015 total revenue amounted to € 2,082.1 million, 1,849.7 of which came from regulated activities.

### Revenue structure and the regulatory framework

#### Regulated revenue

The regulated revenue from transmission and dispatching activities amounts to around 92.5% of Terna's total revenue and is determined on the basis of the regulations of the Regulatory Authority for Electricity, Gas and Water (AEEGSI).

## FEES FOR TRANSMISSION AND DISPATCHING

<b>Transmission service fee (CTR)</b>	<p>Remunerates the transmission business and is invoiced by Terna to distributors. All the income is collected by Terna and shared among all NTG holders in accordance with physical amounts – the Terna Group receives more than 99%. The Authority updates the fee annually in accordance with the rules defined at the beginning of every regulatory period which, until 2015, lasted four years (2012-2015). In particular, with Resolution No. 653/14 the Authority updated the fees for electricity transmission, distribution and metering services for 2015.</p>
<b>Dispatching Service Fee</b>	<p>Remunerates Terna for the connected activities and is invoiced by Terna to withdrawal dispatch users. The related revenues are entirely due to Terna, as the only subject responsible for this service. With Resolution No. 658/14 the Authority updated the dispatching fee for 2015.</p>

With reference to the multi-year regulatory periods, the Authority establishes the structure and parameters for determining revenue and every year intervenes to update the parameters, if necessary.

The transmission fees – the main item of regulated revenues – are calculated as the sum of three components highlighted below:

## TRANSMISSION FEES

Component	Description
<b>Remuneration for Invested Capital</b>	<p>The invested capital to be remunerated, the Regulatory Asset Base (RAB), is revalued annually on the basis of ISTAT data regarding the change in the gross-fixed-investment deflator and is updated to account for investments, depreciation and amortisation.</p> <p>The remuneration rate for the RAB, known as the Weighted Average Cost of Capital (WACC), is defined by the Authority on the basis of the Capital Asset Pricing Model. In 2014 and 2015, the recognised WACC amounted to 6.3%; investments made after 31 December 2011 also benefited from an additional 1% to compensate for the two-year delay between when tariffs are calculated and when they are applied.</p> <p>Remuneration with incentives apply for some kinds of investment, which are defined on the basis of the investment classification, which takes account of their relevance to the Italian economic system. In some cases the incentive applies for 12 years from the start date of the investment, yet some strategic investments can take effect from the plant construction phase, subject to the condition that Terna achieves certain efficacy benchmarks.</p> <p>In 2015, RAB remuneration (base + incentives) constituted approximately 52% of Terna's recognised costs.</p>

### Recognised depreciation and amortisation

Recognised depreciation and amortisation are adjusted in accordance with the useful life of assets and of new investments which have come into operation. They are re-evaluated annually according to changes in the gross-fixed-investment deflator.

In 2015, amortisation/depreciation remuneration constituted approximately 31% of Terna's recognised costs.

### Recognised operating expenses

These are the recognised revenue to cover operating expenses (mainly the costs of external resources, including the cost of staff and purchased materials). The component covering the operating expenses of around 17% for 2015, is determined by the AEEGSI at the beginning of the regulatory period and is based on the operating expenses of the reference year (which for the regulatory period 2012-2015 was 2010) supplemented by residual portions – temporarily left to Terna – of the extra-efficiency achieved in the two previous regulatory periods. The value obtained is revalued annually on the basis of inflation and reduced by an efficiency factor aimed at completing, over time, the transfer to the final users of the extra-efficiency achieved.

One of the outcomes of the regulatory context in force until 2015 was a significant link between the return performance of 10-year government securities and the performance of regulated revenue, with an average delay of around three years. Thus the performance of official interest rates significantly affected the regulated revenue of the Terna Group, due to its impact on the yields of Italian government securities. The amendments in regulations concerning regulated revenue for the 2016-2023 regulatory period are summarised in the box on pages 84-85.

### Pass-through items

With regard to dispatching operations, Terna manages cost and revenue items connected to the transactions, completed with electricity market operators, to buy and sell the energy: these are the "pass through" items, i.e. those which do not influence the profitability of the Terna Group, as revenue is equal to cost.

These items include payments such as the capacity payment which Terna collects from withdrawal dispatching users and passes on 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 passes on to the operators which supply the load interruption service.

A significant proportion of pass-through items consists of uplift, a tariff component which includes various system costs, including covering the net expenses incurred to procure resources on the Dispatching Service Market (DSM).

In 2015, pass-through revenues and costs for the Terna Group totalled € 5,059.1 million.

### 2015 Incentive schemes

The Authority has introduced specific bonus and penalty schemes aimed at encouraging service improvement, both in terms of technical reliability and cost. The criterion that is implicitly considered with incentive mechanisms, upon reaching objectives, is that the benefit to service users will be a multiple of the incentive paid to Terna. In particular, in 2015 incentive mechanisms were provided for:

- the quality of the transmission service (non-tariff incentive mechanism, Resolution 197/11, valid 2012-2015);
- the promotion of investments considered to be strategic for the development of the NTG (tariff incentive mechanisms: additional WACC and investment acceleration, Resolution 199/11, valid 2012-2015).

The bonuses/penalties connected to whether or not the objectives are achieved as established in the incentive schemes are included in Terna's regulated revenue.

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

In accordance with current regulations, the majority 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 AEEGSI it can be estimated that the transmission costs have a weight of about 3.8% on the electric bill of an average domestic user<sup>15</sup>.

## The new regulatory framework for 2016-2023

With Resolutions No. 583/15, No. 653/15, No. 654/15 and 658/15, the Regulatory Authority for Electricity, Gas and Water (AEEGSI) established the remuneration for the supply of electricity transmission, distribution and metering services and how the quality of the transmission service should be regulated for the 2016-2023 regulatory period.

The new **regulatory period** for electricity transmission lasts 8 years, from 2016 to 2023, and is made up of two sub-periods of 4 years each: the first (NPR1), from 2016 to 2019, is distinguished by substantial methodological continuity with the past, while the second (NPR2), from 2020 to 2023, envisages the introduction of a new approach, based on the recognition of expenses in relation to total expenditure (TOTEX).

#### WACC

The basic rate of return on recognised invested capital (WACC), **falls from 6.3% to 5.3%, with a regulatory period of 6 years (2016-2021)**. WACC will be updated by November 2018, which will apply to the 2019-2021 regulatory period, in accordance with predetermined rules.

#### Investments with incentives

Category I2 (1.5%) and I3 (2%) incentives for new projects have been done away with in the new regulatory framework and an incentive of 1% has been introduced for both the new categories, I-NPR1 and O-NPR1. In order to benefit from these incentives, the works must have obtained the Decree of authorisation by 2015, registered economic or contractual progress amounting to at least 25% of the foreseen costs by the end of 2015 and, lastly, become operational by 2019. To have these works mapped, they must be placed in the 2017 Grid Development Plan. AEEGSI has provided for a gradual introduction of incentives centred on an output-based approach.

#### Works in progress

They are excluded from the value of recognised net invested capital for the future 2016-2019 period, however the option of capitalising interest expense while works are under way has been introduced. This is combined with a safeguard clause that recognises, in the first 4 years of the new regulatory framework (NPR1), the remuneration of the base rate (WACC) with exclusive reference to Works in Progress that have been entered into the budget at 31/12/2015, until the entry into operation of the related assets, as well as new Works in Progress related to investments that will continue to benefit from increased remuneration over the course of the first 4 years within the limit of the specific amount of Work in Progress at 31/12/2015, net of the Sorgente-Rizziconi line.

(15) 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 3kW of committed power and 2,700kWh of annual consumption); Terna calculations using AEEGSI data.

### Time-lag

So-called time-lag, i.e. the delay with which the tariffs remunerate investments made by Terna and which have come into operation, is reduced by 12 months (for the depreciation rate remains unchanged) and the compensation provided in the 2012-2015 regulatory period is removed (yet is confirmed for projects that entered into operation in the 2012-2014 period).

### Useful life of transmission lines

The new regulation increases the recognised useful life of transmission lines from the current 40 years to 45, for regulatory purposes. This will lead to a reduction in recognised depreciation and amortisation, compared to a slower decline in RAB.

### Recognised Operating Expenses (OPEX)

The calculation method, starting from effective costs in 2014, was largely confirmed, including some adjustments and increases related to greater efficiency achieved in the third and fourth quarters of the regulatory period and temporarily left to Terna.

The initial level of recognised operating expenses for 2016 will be updated every year on the basis of inflation and with a gradual return on extra-efficiency of the 1% (X-factor), which is valid for both transmission and dispatching services.

### Transmission Tariffs

The transmission tariff will move from being monomial to binomial, with an energy tariff component ( $CTR_e$ ) to cover 10% of the service cost and a power component ( $CTR_p$ ) to cover the remaining 90%. The pre-existing revenue guarantee mechanism was abolished but, due to the new regulation, the overall exposure of transmission revenue to the so-called volume-effect appears to be reduced overall compared to the previous regulation and therefore wholly marginal.

### Service quality

The service quality will be governed, as in the previous regulation, by bonus/penalty mechanisms, yet with even more challenging objectives.



G4-EC9

## Procurement

G4-EN32

G4-HR11

G4-EN33

G4-SO9

G4-LA14

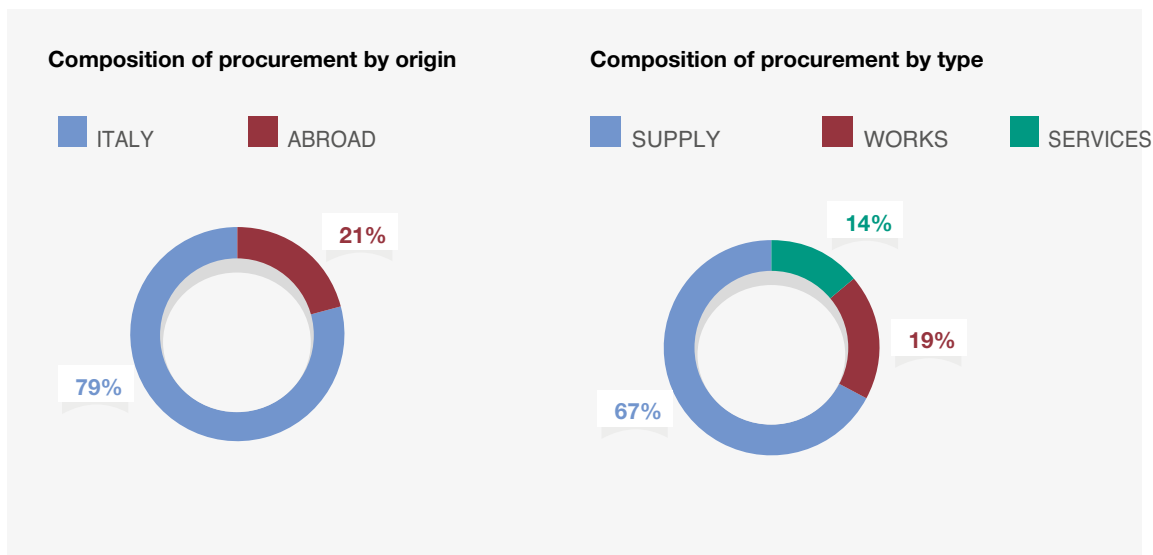
G4-SO10

G4-HR10

G4-LA15

As well as ensuring a service of general interest, Terna's business activities contribute to generating upstream activities of significant economic value and social impact.

**In 2015, total spending to procure services, supplies and labour amounted to over € € 894 million, distributed among 1,857 suppliers with whom contracts applied during the year.**



The predominance of national and local suppliers is a consequence of the specific nature of the business, and in particular of the need to perform fast maintenance work on plants to ensure the utmost security of the electrical system. Suppliers located in geographical proximity to the plants also guarantee more competitive transport costs for heavy and bulky supplies, contributing in this way also to reducing the related environmental impact.

With a view to expanding the supplier portfolio, the market is continuously scouted; this implies rigorous meetings with both Italian and overseas potential suppliers.

In the various stages of the procurement cycle, Terna analyses the suppliers' characteristics as regards legality, technical and organisational capacity, and environmental sustainability and social responsibility issues. As far as the latter are concerned, monitoring to guarantee correctness is based on various tools, which create more stringent conditions when the product categories are more significant for Terna or owing to the potential social and environmental impact of the suppliers' businesses.

All suppliers are required to commit contractually to behave in compliance with the provisions of Terna's Code of Ethics and Model 231; sanctions are imposed for any misconduct. Although a preponderant proportion of suppliers are Italian, in the other cases the supplier is always subject to screening in relation to country of origin. In cases of countries at risk as regards respect for human rights or corruption, specific further investigations are carried out.

For procurement that regards the performance of activities linked to Terna's core business (**instrumental contracts**), and which mainly comprise supplies of electrical materials and equipment, work contracts, and services in the sectors of electricity transmission, telecommunications and Information Technology, the legal regulations provided for in the Contracts Code apply. Numerous requirements for contractualisation involve environmental and social aspects (human rights, working conditions): among these, for example, checks on regular payment of contributions, no breaches of workplace safety laws and no environmental

crimes. The Integrity Pact, validated in its most recent form in 2014 by Transparency International, entails commitments in relation to integrity and combating corruption. Finally, for certain sectors, specific social and environmental requirements are introduced at the **qualification stage**.

## SUPPLIERS ACTIVE IN 2015 AND APPLICATION OF ENVIRONMENTAL AND SOCIAL REQUIREMENTS

	Suppliers active in 2015				Amount procured from suppliers subject to specific requirements (% of respective total amount procured)			
	Number	% of total	Amount procured (€ millions)	% of total	Basic requirements <sup>(1)</sup>	Additional social and environmental requirements <sup>(2)</sup>	Social <sup>(3)</sup> and environmental <sup>(4)</sup> qualification requirements	Country risk assessment <sup>(5)</sup>
Total active suppliers	1,857	100	894.0	100	100	98.5	33.6	100
Core suppliers (instrumental contracts)	1,629	87.7	881	98.5	100	100	34.1	100
Suppliers of significant sectors for ESG purposes	232	12.5	432.1	48.3	100	99.7	69.6	100

(1) In observance of principles and conduct provided for in Terna's Code of Ethics and Model 231.

(2) Integrity Pact (validated by Transparency Italy), anti-Mafia certification, check on: national collective bargaining agreement used, regular contributions and tax payments, absence of environmental crimes, absence of serious breaches of workplace safety laws, compliance in the area of employment of protected categories, medical suitability certificate for the task issued by the assigned doctor (for work contracts), and the absence of impediment to public contracts.

(3) Work safety management system certified OHSAS 18001 or similar (required only of suppliers of specific qualification product categories).

(4) Environmental management system certified ISO 14001 or similar (required only of suppliers of specific qualification product categories).

(5) Assessment of risks of corruption and respect for human rights associated with the supplier's headquarters.

The table shows the coverage ensured by the different instruments, in terms of percentage of procurement, for significant groups of suppliers active in 2015.

The coverage is 100% or just a little less for most of the social and environmental requirements. Where there are the more stringent social and environmental requirements for qualification, the coverage is higher for suppliers belonging to significant sectors for ESG purposes. These latter are periodically identified on the basis of the product categories, of which we assess the significance for the business (amount procured, critical nature for the core business) and for social aspects (health and safety, and safety and working conditions) and the environmental aspects (significant environmental impacts in the supply chain, in use by Terna, and at the end of the useful life stage). This activity entails particular attention at the qualification stage and in finalising the technical specifications, and the commitment to adopt particular precautions in the case of sectors not subject to qualification. Finally, additional specific health and safety measures have been added to work contracts. For more information, please refer to the section "Monitoring of safety, the environment and human rights at contractor sites" on pages 89-91. The table below is focused on new suppliers in 2015.

## NEW CONTRACTED SUPPLIERS

	2015
% of new suppliers - checked for basic requirements <sup>(1)</sup>	100
% of new suppliers - checked for additional social and environmental requirements <sup>(2)</sup>	89

(1) In observance of principles and conduct provided for in Terna's Code of Ethics and Model 231.

(2) Integrity pact (validated by Transparency Italy), anti-mafia certification, check on: applicable collective bargaining agreement, regular contributions and tax payments, no environmental crimes, no serious breaches of workplace safety laws, compliance in the area of employment of protected categories, no impediment to public contracts.

G4-HR4

### Assessment of ESG criteria in qualifying suppliers

G4-HR5

Most of the product categories that are most significant for the core business from a technical and economic point of view are subject to qualification. Only companies with the requisites of legislative compliance in line with that of the Contracts Code, and of technical and organisational quality and financial solidity are admitted to the relevant register.

G4-HR6

In areas at greater risk from the point of view of sustainability, an adequate level of environmental management and the ability to protect worker health and safety are also required. **They are both represented by documented corporate procedures that outline the significant elements in accordance with the international of UNI EN ISO 14001 and BS OHSAS 18001 standards.**

Of all the qualified suppliers, **76%** have acquired or are acquiring BS OHSAS 18001:2007 safety certification, and **78%** possess or are acquiring ISO 14001:2004 environmental certification.

## QUALIFIED COMPANIES 2015

	2015
Number of suitable companies	403
- of which new suitable companies in the year	71
Companies required to have the Environment and Safety Management System	226

## Assessing ESG risks in foreign supplies

G4-HR4

G4-HR5

G4-HR6

Within the context of procurement activities, country risk is understood as the possibility of suffering damage on the occurrence of circumstances or events which can be linked to the economic, social and political context of the country in which the supplier normally operates. It is a much lower risk than that associated with environmental and health and safety matters and is currently negligible given the prevalence of domestic suppliers, but it could assume greater significance as the procurement markets expand and, more generally, because of Terna's foreign expansion strategy. To analyse and assess the most significant risk factors, which relate to the macro-areas of economic and political governance of the various countries, and to observance of the human rights established at the international level, objective elements are used, including ratification of the UN and ILO conventions, combined with the assessments expressed by the main international non-governmental organisations and by the most important ratings agencies working in the fields in question. These assessments are updated in general every year and therefore constitute a source of constant monitoring of the effective evolution of the situation. These assessments are combined with reporting of the restrictive measures issued by the Italian and European authorities, which entail limitations on the free circulation of goods (trade embargoes) or rules of conduct in the case of transactions with countries offering tax advantages (tax havens).

## Monitoring of safety, the environment and human rights at contractors' sites

The increase in workers employed by contractors and subcontractors in 2015 is linked to the increase in the number of construction sites.

### CONTRACTORS AND SUBCONTRACTORS' EMPLOYEES<sup>(1)</sup>

EU17

	Units	2015	2014	2013
Days worked	no.	550,661	547,660	500,884
Full-time equivalent	no.	2,503	2,489	2,277

(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 vegetation under power lines. The days worked and the FTE units 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.

Considering the significant use of external labour on Terna's construction sites, **work contracts** are subject to stricter rules regarding not only qualification, but also management, particularly with reference to occupational safety. **The costs of eliminating or limiting the risks of interference are excluded from the downward price competition for awarding the contract.**

During the 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.

## EU18

For contractor employees Terna requires additional certifications:

- that they understand Italian;
- that all workers on overhead power line construction sites (mainly blue-collar) have examined and have been appropriately instructed on the use of personal protective equipment, the risks established in the Construction-site Safety Plan (CSP) and the Operating Safety Plan (OSP) 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;
- attendance at training courses, lasting between 24 and 32 hours for several specific roles (e.g. workers installing and maintaining overhead lines, workers cutting vegetation, site foremen, team leaders and safety managers);
- appointment of a Safety, Prevention and Protection Managers (RSPP), a construction-site safety representative, a crisis manager and substitute, and an assigned doctor;
- a request in contracts drawn up with contractors to provide injury rates for the year.

The actual training of personnel is verified through a web platform – the Qualified Company Personnel project.

To reduce to a minimum the risk of violations of human and labour rights to the detriment of contractor employees, in addition to the specific instrumental-contract documentation, Terna also requires 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, as well as a periodical copy of the payment of social-security and other contributions.

## Activities in 2015

In line with previous years, in 2015, 40 construction sites for building lines and substations entrusted to contractors were thoroughly checked across the country, with additional controls beyond those required by law. The construction sites were chosen on the basis of the duration of the work, considering that work that lasts longer is probably more complex. During the inspections not only aspects closely associated with workplace safety were analysed, but also those associated with environmental protection, such as pollution, waste management and interference with the surrounding environment.

In December, a second workshop was organised on applying workplace safety regulations at Terna construction sites, which was attended by the Execution Health and Safety Coordinators (EHSCs) currently included in the qualified segment of Terna suppliers. Terna outlined the characteristics of its construction sites and the experience it has gained during the execution of its work to the over 80 professionals who attended the workshop, focusing on activities conducted at height and risk management of falls from a height.

Collaboration activities with foreign Associations and Bodies concerning environmental and occupational safety continued throughout the year.

At the end of the TERNA - ANIE technical forum (National Association of Electrical Enterprises), which led to the drafting of the Guidelines on managing the safety aspects for activities on HV overhead power lines, in January 2015, a public event was organised in which the Terna CEO took part, together with the representatives of the ANIE Federation enterprises.

During this event the memorandum of understanding was signed for the application of safety procedures regarding work at heights. The Guidelines contain the following technical documents:

- organisation of safety at construction sites for building, maintenance and demolition work on overhead power lines under the terms of Italian Legislative Decree 81/08 and subsequent amendments and additions;



- methods of climbing and rescue at heights;
- methods for working on tubular and lattice supports were sent to the Ministry for Labour and Social Policies for the approval of good practice pursuant to Article 6 of Legislative Decree 81/08 and subsequent amendments. The document is intended to be a reference point for all companies involved in the electricity sector and the bodies involved in security surveillance over the whole country.

In 2015 the activities of the “Inter-Company Environmental, Health and Safety Forum” continued, to which the leading Italian operators of network plants and infrastructure take part. The aim is to facilitate discussions among companies, identify the best safety practices, discuss interpretations of laws and create a virtuous path of continuous improvement on the subjects of health, safety and the environment. In particular, two technical workshops on occupational safety were organised at the forum, which concerned organisational well being and management of psychosocial risks at work.

### Equal opportunities and transparency in contractual relationships

Access to tender procedures is guaranteed for all suitable companies according to the principle of equal opportunities, and is governed by the “Regulation on Procurement”. The regulation represents the corporate reference document for Terna's procurement activity and was prepared on the basis of the Contracts Code (Legislative Decree 163/2006) which, in turn, transposes the EU legislation on the subject.

Another essential tool for guaranteeing transparency in procurement is the “Procurement Portal”, the section of the institutional website based on criteria of simplicity, effectiveness and efficiency, through which it is possible to find out about competitive tenders and take part in online tenders, as well as to complete the qualification procedure for access to the register, moving towards paperless management. In 2015, approximately 1,500 requests for online assistance were received from suppliers, 100% of which were resolved in the times provided for in the corporate procedures.

### CONTRACTED SUPPLIERS

	2015	2014	2013
Number of contracted suppliers	1,857	2,003	2,026
<i>Tender awarding procedures adopted (% of amounts awarded)</i>			
European tenders	75	62	46
Non-European tenders	13	17	41
Fixed	10	19	13
Atypical contracts <sup>(1)</sup>	2	1	1

(1) Atypical contracts include: sponsorships and donations, payments to public bodies and mandatory contracts for Terna Plus. In previous years the amount of atypical contracts was within the mandatory category.

## Continual improvement and auditing tools

Dialogue with suppliers remains the most important tool to guide their growth, from the point of view of ethics, environmental sustainability and social responsibility.

From an operational point of view, the existence of the supplier's ESG requisites after the first qualification stage is verified over the three years for which the qualification is valid through constant work on checking the supplies, which during **2015** translated into **768 audits**. If conduct is found to no longer be in line with the qualification requirements, the supplier may be warned or suspended temporarily from the register and, in the most serious cases, removed altogether.

### QUALIFICATION MONITORING

	2015	2014	2013
Suppliers removed from the register	0	0	0
Suspensions	2	6	3
Warnings	8	14	4

The auditing system within the company also provides for other checks, according to the activities performed by the suppliers and the type of risks assessed as predominant in a certain segment:

- constant checks, ex ante, of requests for awarding consultancy services, professional appointments and IT services, and of procedures for awarding contracts to predetermined suppliers;
- **on-site checks** at suppliers who are qualified/or seeking qualification during the year. In particular, in **2015 87%** of these inspections were concentrated on companies that belong to the relevant segments from an ESG point of view;
- inspections at construction sites of lines and substations managed by contractors, to check safety and environmental aspects.

### AUDITS IN 2015

	2015
Qualification monitoring	768
On-site qualification checks	24
of which relevant segments for ESG	21
Ex-ante checks (assignments, IT, predetermined)	734
Environmental and safety inspections at contractors' sites	22

Terna, finally, promotes the settlement of any disputes that arise with suppliers.

### DISPUTES WITH SUPPLIERS

	2015	2014	2013
Pending litigation	24	23	13
Existing litigation	3	2	1
Settled litigation	2	2	0

## Economic relations with electricity service operators

Terna, in providing the various public services entrusted to it under concession, comes into contact with different categories of entity that may be summarised thus:

- dispatching users, i.e. parties (manufacturers, wholesalers or end customers) to whom Terna ensures at all times the supply of dispatching services, i.e. synthetically keeping the transmission system in equilibrium;
- distribution companies in close proximity to the transmission grid, to whom Terna delivers energy needed to meet customer demand.

Terna has economic relations also with two other categories of entity: interruptible customers, i.e. customers willing to undergo sudden suspension of electricity supply, and those that require from Terna a connection to the NTG (these may be producers or consumers).

The most important of these services provided by Terna is the dispatching service, i.e. as mentioned, all the activities necessary at any time to ensure a balance between the consumption and production of electricity. To do this, Terna buys resources on a market run by the Electricity Market Operator (GME) in which Terna is the only operator: the so-called Dispatching Services Market (MSD).

On this market, Terna buys and sells electricity and other essential services such as the reserve, with the sole purpose of ensuring a moment-by-moment balance of the system. In 2015 the economic items related to the MSD amounted to about € 1.2 billion.

Another key Terna function is to compare the final programmes of operators (both producers and consumers) with their actual behaviour: deviations between programmes and actual measures are regarded as imbalances and attract the invoicing of so-called imbalance charges, i.e. entities are billed for the costs that their behaviour has generated for the system.

Most of the interactions with electricity operators are managed through the **MyTerna portal**, a platform created to optimise the commercial relationship with counterparts. This portal is the main access channel for services dedicated to operators, including management of the database for requests for connection to the NTG; stipulation of withdrawal contracts; management of contacts; and viewing of the main data for each operator.

In 2015, 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 2015, there were 275 assignees of the interruptibility and instant-load-reduction service for about 3,296 MW of power and the related economic liability amounted to about € 0.3 billion on an annual basis.

### ELECTRICITY INDUSTRY OPERATORS COLLABORATING WITH TERNA – NUMBER OF USERS

EU3

Users	2015	2014	2013
Interruptible users	275	290	322
Distributors directly connected to the NTG	25	25	24
Input dispatching users (Producers and Traders)	120	107	102
Withdrawal dispatching users (Traders and end customers, including the Single Buyer)	185	164	140

## ENVIRONMENTAL RESPONSIBILITY

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107	SF <sub>6</sub> leaks
109	Direct and indirect CO <sub>2</sub> emissions
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# Environmental responsibility

## Our approach

Terna recognises the importance of the right balance between energy requirements and protecting the environment and local communities. In carrying out its business, it therefore seeks appropriate solutions to ensure Italy has 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 created not so much in using natural resources or in emitting pollutants, but rather the **physical presence of power lines and electrical substations**, and their interaction with the surrounding natural and urban environment.

The **most significant environmental aspects** of Terna's work are thus:

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

**Terna has established an Environmental Policy** which describes 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 it is obliged to protect. Among Terna's main environmental commitments, the following should be noted:

- in the planning of grid development investments, listening 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 local institutions (see pages 44-45; 61-62)**;
- in the construction, management and maintenance of the grid, adopting procedures in accordance, where possible, with reducing the environmental impact. Terna has adopted an **ISO 14001:2004 certified Environmental Management System which covers 100% of the national transmission grid (substations and lines) and offices**; since 2013, the Environmental Management System of the company Terna Crna Gora has also been ISO 14001:2004 certified (see pages 32-33);
- with regard to magnetic fields, strict compliance with regulations and close monitoring of the development of scientific studies, as well as a contribution 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 - with mitigation activities to be identified and finalised, including programmes agreed upon with environmental associations;
- with regard to climate change and energy efficiency, a recognition of the importance of the problem and a commitment to take action, as far as is operationally possible, to reduce the emission of greenhouse gases. Specifically, Terna's commitment to energy efficiency was consolidated in 2015 with the adoption of an ISO 50001:2008 certified Energy Management System;
- in relations with suppliers, the requirement to gradually adapt to the environmental standards adopted by Terna (see pages 86-89).

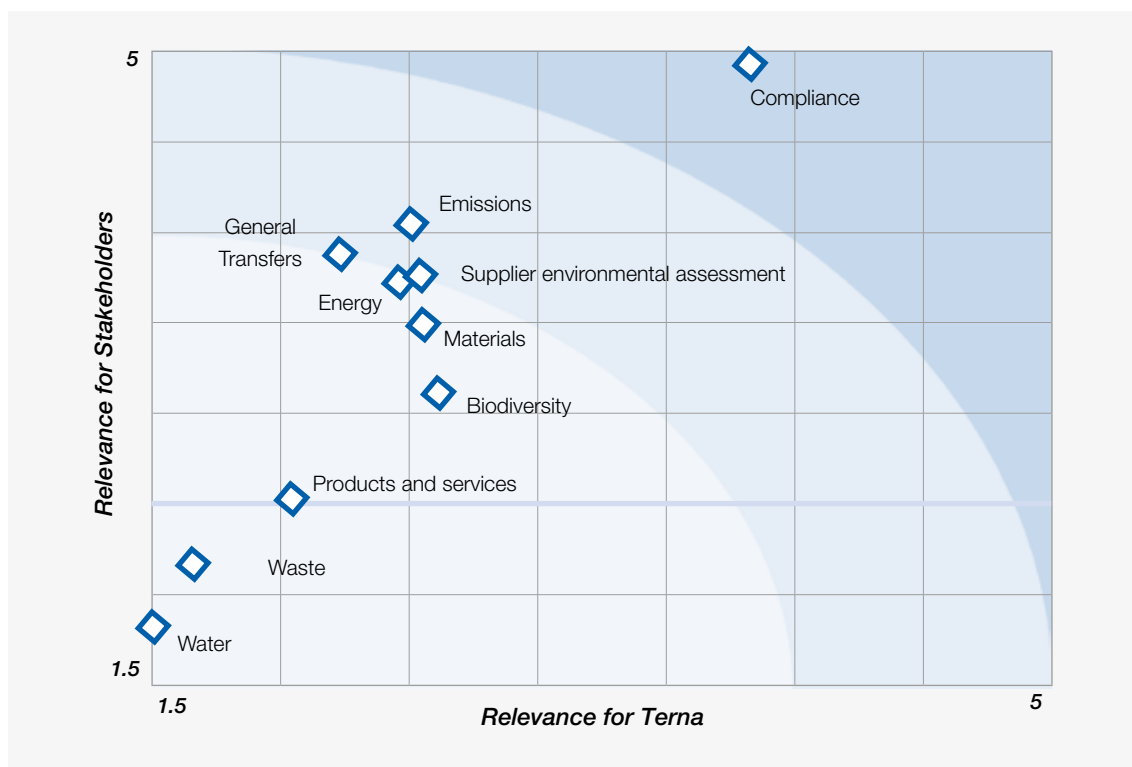
In organisational terms, these aspects are overseen by several departments, responsible for specific aspects, which are coordinated by the Sustainability and Environment Steering Committee.



This chapter outlines the environmental aspects related to grid development and the management of a few specific impacts, such as magnetic and electrical fields, biodiversity, power consumption, emissions, the use of resources and waste.

On the other hand, a visual representation of the materiality assessment of the environmental aspects of G4 with indication of the materiality threshold is given. For completeness of information, this Report also indicates the aspects below such threshold (for more details, please see the methodological note on pages 151-153).

**MATERIALITY MATRIX – ENVIRONMENTAL ASPECTS OF G4**



Water	pages 116; 165; 181
Biodiversity	pages 98; 101; 103-105; 181; 187
Compliance	pages 31-33; 46-48; 96; 98; 99-102; 166; 167; 180-181
General (costs for the environment)	pages 118-119; 181
Emissions	pages 96; 109-115; 177-178
Energy	pages 52; 53-54; 105-107; 113-115; 166; 179
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Transport	pages 112; 179
Supplier environmental assessment	pages 88-89; 176

## Compliance with regulations and management systems

Terna has made it a priority to ensure that its commitment to the environment coincides with its compliance with the law, but pro-actively extends to actions intended to improve its Environmental Management System.

G4-EN29

During the 2013-2015 period it received no administrative or judicial sanctions, monetary or non-monetary, for non-compliance with environmental laws or regulations (the "Tables of indicators" and the paragraph "Disputes" contain additional data on disputes and complaints received in the area of the environment).

G4-EN24

In 2015, as in the previous two years, no spills of contaminating liquids were recorded. There were three machinery explosions at electrical substations and damage occurred to the "Italy-Greece" HDVC undersea cable (on the Greek side): no environmental damage was recorded during any of these incidents.

The main activities conducted in 2015 to adjust to regulations and to improve Terna's Environmental Management System were as follows:

- the drafting of a technical specification for procuring equipment for the recovery and processing of SF<sub>6</sub> gas;
- preventative checks when constructing new electrical substations concerning possible interferences of an archeological nature, conducted via magnetometric surveys and using ground penetrating radar;
- the introduction of an "Environmental Officer" role to manage work sites who is tasked with overseeing compliance with environmental laws and, during the construction phase of the project, compliance with legal obligations concerning excavated rock and dirt, waste, temporary deposits, environmental accidents and vegetation control, also with regards to the activities assigned to the contractor;
- training on environmental issues for the staff involved, particularly the specialised course "Waste Management with SISTRI".

With regard to biodiversity, we also note:

- the preparation of guidelines for installing nesting boxes for birdlife;
- monitoring the effectiveness of said nesting boxes;
- a study on the installation of "bat boxes" as a mitigation activity for the impact caused by new lines on bats;

and in regard to energy efficiency:

- 20 Energy Audits carried out to comply with Legislative Decree 102/2014 concerning corporate electrical substations and offices;
- the appointment of 44 "Energy Officers" tasked with ensuring the implementation of the requirements set forth in the Energy Management System on all sites and electrical substations for which they are responsible;
- the provision of an online energy efficiency course for all Terna staff.

## Managing the environmental impact of grid development

### Lines and local communities

G4-EN27

G4-SO2

The **construction of new lines** responds to the technical needs of the electricity system – such as removing congestion and eliminating risks of overload – and to increasing energy production and consumption, which accompanies the economic growth of specific areas or of the entire country. Terna adds the required new projects to the Grid Development Plan which involves a complex authorisation process every year.

While grid development caters to society's general interest, the environmental impact of 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 other parts make planning more complex and construction more difficult.

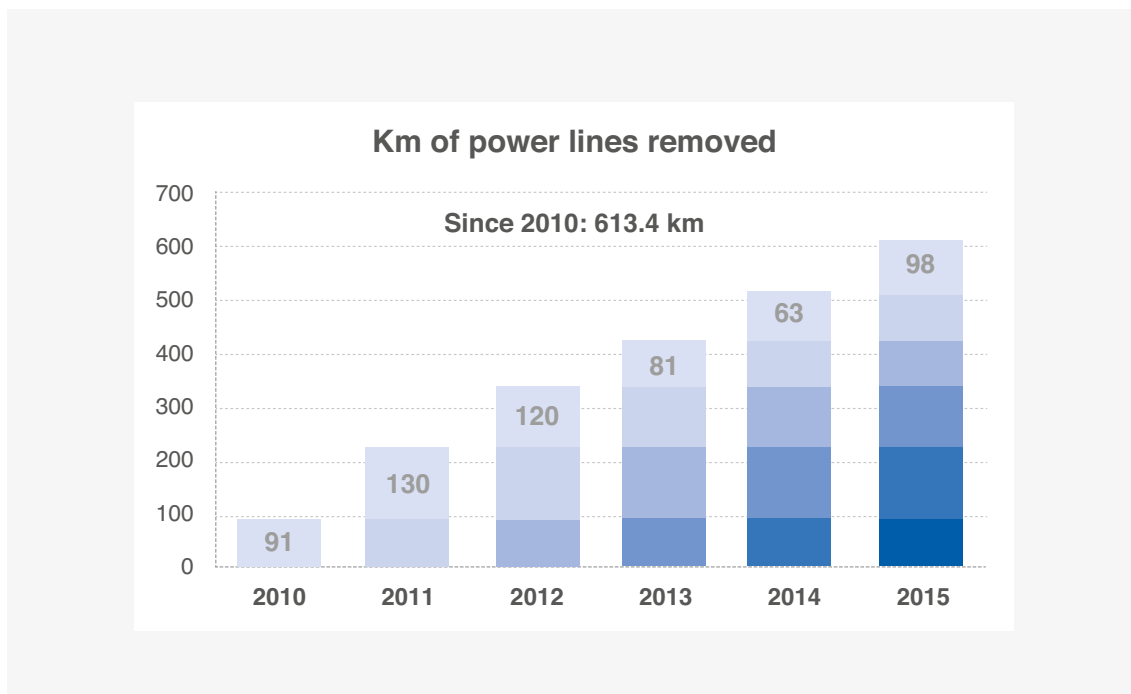
As regards **existing lines**, on the other hand, the need to intervene is usually due to the fact that many of these lines were built some decades ago. The gradual urbanisation of rural areas and the adoption of new legal regulations, modifying parameters already in force regarding the interaction between power lines and the land, mean that changes to portions of the existing grid become necessary.

The environmental actions preceding the coming into operation of grid development investments are described below.

### Planning

During the grid planning phase, Terna can reduce the impact of power 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 of replacing some plants with better systems, eliminating the parts of the grid which are of negligible use following new constructions, or adding new grid elements to avoid having to upgrade saturated lines.
- **Reclassification**, that is converting existing power lines to a higher voltage by 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, compared with constructing a new line, has the advantage of **generally using pre-existing infrastructural corridors, avoiding taking over new land.**



### Consultation

Since 2002 Terna has voluntarily brought 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 and the public initiatives for citizens of the local communities that are directly affected by the move to new infrastructures, offer indications for handling the environmental impact at the design stage (see pages 44-45 and pages 61-62).

### Design

The search for the route for the construction of a power line is the most delicate design stage because it is the route that determines and conditions interferences with the surrounding landscape and community. Therefore, Terna researches design solutions that minimise, as far as is possible, the amount of land used, interference with areas of environmental, natural, landscape and archaeological value, whether urbanised or urban development areas, and the sacrifice required by the properties involved. This is with the exception of where a route is needed to enable the regular operation and maintenance of the power line. Great attention is paid to minimising visual impact, in particular through the following actions:

- **Burying cables** which eliminates or **reduces the visual impact** typical of overhead stretches of line, negatively perceived above all in built-up areas. 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 require more time for repairs in the event of a malfunction. For this reason, they often do not ensure adequate security for the electrical system or service continuity. In addition, buried cables cause a greater impact in the construction stage – for example, in terms of road traffic – and much higher construction costs (from five to ten times the cost of an overhead line).

- Choosing **pylons with a reduced visual impact**. In recent years Terna has expanded the available alternatives, also turning to new "single-stem" pylons with a low environmental impact (occupying 10 square metres of ground surface compared to the 150 square metres for truncated pyramidal pylons) and to internationally renowned architects to design new pylons that blend in better with the landscape. For the construction of new electrical substations, similar considerations apply.

#### NUMBER OF PYLONS INSTALLED AS AT 31.12.2015

Type of Pylon	Line
Single-stem pylon	Chignolo Po – Maleo
	Trino - Lacchiarella
	Foggia – Benevento (I route)
	Laino - Rizziconi
	S. Fiorano - Robbia
	Villanova - Gissi
<b>TOTAL</b>	<b>342</b>
“Germoglio” and “Foster”	Trino - Lacchiarella
	S. Barbara – Tavarnuzze -Casellina
<b>TOTAL</b>	<b>15</b>

### Construction

EU13

Terna manages the environmental impacts of its construction sites via the “Management of the environmental aspects during plant construction” operating guidelines that ensure compliance with the environmental policy.

One aspect to which particular attention has been paid is identifying **construction site areas and access routes**, which are located, where compatible with the technical and planning needs, **in areas of less naturalistic value**. When the project is complete, Terna provides for the restoration of the sites involved back to their original state. If these areas involve natural or semi-natural habitats, further "green" work is also carried out.

Terna's **environmental policies**, which are applied also at construction sites, were formulated according to the provisions of the applicable environmental laws and the prescriptions of the ISO 14001 standard. This includes aspects such as preventive measures against contaminating aquifers, limiting damage to vegetation, managing accidents, minimising air and noise emissions and vehicle use, and correctly managing waste and excavated land (see page 101 on this subject). In January 2016 new operating instructions were prepared for "Site Management" in order to provide instructions for the management of construction sites from a technical, authorisation, security and environmental perspective. In regards to environmental issues, the main changes introduced concern:

- the environmental officer, a role which is tasked with overseeing the environmental requirements (contained in the EIA Decrees and the opinions of environmental bodies) and respecting legal obligations, also in reference to the activities conducted by contractors;
- environmental monitoring (conducted by site assistants) concerning complaints/reports, environmental accidents, waste and the consumption of energy and natural resources.

### Mitigation and compensation

G4-EN13

In compliance with the requirements expressed during the authorisation procedure, Terna adopts **mitigation measures to reduce the impact, and/or improve integration into the environment, of the electrical structures**.



In particular, Terna creates **systems to hide** electrical substations from places frequented by tourists or those of landscape-environmental interest; redevelops buildings; prefers to locate lines where they take advantage of natural morphology and makes use of naturalistic engineering techniques for managing water and forestry systems and stabilising slopes.

If the mitigation measures are not sufficient to reduce the interference to insignificant levels, **environmental offsetting measures are** adopted, that is environmental regeneration or habitat reconstruction work on areas close to the power line such as balancing out the trees cut along the lines in the projects by planting individual trees of the same species over equivalent areas. Throughout 2015, 3 vegetation redevelopment projects were carried out and 4 executive designs were completed, which will be implemented in 2016.

### 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 50Hz generated by power lines, the limit is 100 microteslas for magnetic induction and 5 kV/m for the electric field, understood as effective values;
- **caution values:** as a precautionary measure protecting against the possible long-term effects of exposure to magnetic fields generated at the grid frequency (50Hz), in children's play areas, residential areas, school sites, and places where people stay for at least four hours a day, the "caution 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 lines and installations already present, the quality objective is set at 3 microteslas for the value of magnetic induction, understood as the median 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 50Hz. 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 "caution value" (10 microteslas) and the quality objective (3 microteslas) show that the Italian legislator has adopted the precautionary approach expressed by Article 15 of the Rio Principles. These parameters are the lowest in Europe<sup>16</sup>. In order to comply with the law, Terna must adopt the same principle in its work.

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.

Finally, with the objective of providing accurate but easily comprehensible information on the subject, Terna has provided a further explanation of electromagnetic fields (EMFs) in the "Sustainability" section of its website.

(16) Source: "Comparison of international policies on electromagnetic fields", National Institute for Public Health, Netherlands, May 2011.

## Safeguarding biodiversity

The relationship between the Terna grid and the surrounding natural environment and, consequently, its impact on biodiversity can assume different features.

**In the grid construction stage, the impact on biodiversity is associated with site work:** opening up routes so as to be able to erect pylons, excavate and remove residual materials.

In this phase, the potential disturbances at the site areas and any access routes are temporary and reversible.

**In the operating stage of existing lines,** the potential impact on biodiversity is twofold. On the one hand, **the line route may contribute to increasing** biodiversity and protecting certain species because the pylons and their bases constitute “islands” of concentrated biodiversity, sparing areas of land from intensive farming. On the other hand, the lines potentially have negative effects on biodiversity, in particular on birds and in protected areas or areas of natural interest.

The main tool used to identify critical line sections is a comprehensive regional database, populated with data from the Regions and Ministries: the Geographic Information System (GIS), which allows for integrated analysis of all layers of information for various types of land use and protection constraints (regional, naturalistic, cultural, landscape, etc.). Using this tool, Terna has put together an **inventory of all possible interference between its lines and areas with protected or high levels of biodiversity, which is found in the table below.**

### LINES IN PROTECTED AREAS<sup>17</sup>

	Units	2015	2014	2013
Lines interfering with protected areas	km	5,541	5,625	5,570
Lines interfering as a total of lines managed by Terna	%	10	10	10

On this basis, potential threats deriving from the risk of collision concerning bird species included in the "IUCN Red List" were explored (see the specific box on page 104).

## Electrical lines and birdlife

The presence of lines may cause potentially negative effects for birdlife.

While the risk of electrocution affects low- and medium-voltage lines, and therefore does not affect Terna plants, high-voltage lines are associated with the risk of collision.

To minimise this risk, **for stretches of line where birds frequently cross, special devices known as “dissuaders” have been installed.** Due to their visual impact and the noise they make when struck by the wind, they **make electricity lines more easily perceivable to birds in flight.**

### DISSUADERS FOR BIRDLIFE PRESENT ON THE NTG

	Units	2015	2014	2013
Lines affected	No.	53	51	47
Length of lines affected	km	205	193	186
Total number of dissuaders	No.	13,866	13,397	12,005

(17) The percentage of lines located in protected areas is calculated using the “ATLARETE” database, which may present non-significant misalignments with the data in the indicator tables showing the number of plants.

EU13

G4-EN27

G4-EN11

G4-EN12

G4-EN13

Over the years Terna has initiated research and scientific studies to investigate this issue and identify increasingly effective solutions (for example, see the 2010 Sustainability Report, page 116, "Terna-LIPU Agreement: study on the interaction between birdlife and the national electricity transmission grid"). Following on from an additional investigation into the interaction between electrical lines and birdlife in areas with a particular concentration of biodiversity in 2015, Terna identified the protected species included in the "IUCN Red List" that were potentially affected by electrical infrastructures. For further details, see the specific box on page 104.

Finally, Terna has been creating projects aimed at finding alternative uses for electrical lines in partnership with environmental associations for some time. The most important was carried out in collaboration with *Ornis italica* and is called "Nests on Pylons". It consists of placing nesting boxes and conducting annual monitoring of the species occupying the nests and the outcome of their nesting season. The project includes many species, such as the kestrel, peregrine falcon, horned owl, common cuckoo, European roller, bat and stork. Overall, around 500 nests have been installed.

Throughout 2015 the installed nesting boxes and their location were surveyed using satellite coordinates. The collected data was loaded onto the GIS data bank.

#### GEOREFERENCED NESTS AT 31.12.2015

Location	Nests		Species concerned <sup>18</sup>
	Number of Nests	Of which in Protected Areas	
Piedmont	26	22	European Roller
Lombardy	14	-	-
Emilia-Romagna	57	28	kestrel, horned owl, common cuckoo, European roller
Lazio	47	14	horned owl, European roller

The "birdcam" project completes this project, which 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](http://www.birdcam.it). For further details see the "Sustainability" section of the website <http://www.terna.it/en-gb/homepage.aspx>.

#### G4-EN14

### Terna lines and bird species protected by the "IUCN Red List"

As part of its birdlife protection initiatives, Terna has conducted a study to identify the protected species included on the "IUCN Red List", which may be affected by its infrastructures.

The IUCN Red List is the largest existing database at a national level concerning the conservation status of thousands of plant and animal species, which are catalogued on the basis of their risk of extinction. When conducting its analysis, Terna specifically considered the presence of bird species belonging to the "IUCN Red List" and "Natura 2000"<sup>19</sup> sites, protected areas with high levels of biodiversity (approximately 3,000 between SPAs and SCI).

The study selected the Natura 2000 areas affected by Terna's lines, thereby verifying the protected species that had chosen said areas as their habitat, including those contained on the Red List and classified as Vulnerable, Endangered, Critically Endangered and Extinct in the Wild<sup>20</sup>. These species are a conservation priority, as without targeted interventions aimed at neutralising the threats in their regard and increasing their populations in some cases, their extinction is a real possibility. The analysis showed that Terna's electrical infrastructures could interfere with the habitats of the following 8 species.

(18) The species concerned are identified according to the type of nest installed and the subsequent monitoring. However, it cannot be ruled out the nests may be used by other species that have not been identified.

(19) Natura 2000 is the main tool in the European Union's policy on the conservation of biodiversity. It is an ecological network that is spread across the entire European Union, established in accordance with the "Habitats" Directive no. 92/43/EEC to guarantee the long-term maintenance of natural habitats and plant and animal life that are at risk or are rare, throughout the European Union. The Natura 2000 network is made up of Sites of Community Importance (SCI), identified by Member States in accordance with that which is established in the Habitat Directive,

Scientific Grouping		Common name	Red List Category
Species	Family		
ACCIPITRIFORMES	Accipitridae	Greater spotted eagle	VU
ANSERIFORMES	Anatidae	Ferruginous duck	EN
CHIROPTERA	Vespertilionidae	Barbastelle	EN
GRUIFORMES	Rallidae	Corn crake	VU
FALCONIFORMES	Falconidae	Lesser kestrel	LC
CHIROPTERA	Vespertilionidae	Long-fingered bat	EN
ANSERIFORMES	Anatidae	White-headed duck	RE
CHIROPTERA	Rhinolophidae	Mediterranean horseshoe bat	VU

In regards to the species that belong to the bat (Chiroptera) family, their biology excludes the risk of collision with fixed structures. The initial results from a field research project conducted by Terna has demonstrated the absence of line interference on the bats' movements, which fly through the spaces below power lines and even nest in the bat boxes installed on the pylons.

After checking scientific publications and targeted consultation, no particular issues with the bird species became apparent, with the exception of the "Corn crake, a species found in the alpine area between Friuli-Venezia Giulia and Lombardy, which has a potential collision risk.

For Terna this classification is the starting point for additional study and for defining further actions to reduce the risk of collision with electrical lines for birds. For additional information on the subject, see the "Sustainability" section of the website <http://www.terna.it/en-gb/homepage.aspx>.

## Climate change and energy efficiency

Terna transmits electricity and has no production activities which, in the electricity industry – and among all business activities in general – are those most responsible for greenhouse gas emissions: Therefore, Terna is not subject to emission-reduction obligations according to the Kyoto targets, nor to emission-trading schemes of any kind, but **it has still chosen to commit itself voluntarily to containing emissions**. In this light, in 2014 Terna responded to the urging of the international CDP organisation (originally "Carbon Disclosure Project") and adhered to the international "CDP Road to Paris" initiative, subscribing to three commitments (emission data transparency, elimination from the supply chain of procurement leading to deforestation, and public support for the objective of reducing greenhouse gases). As well as monitoring and programmes to contain its emissions, the investments included in the Grid Development Plan of Terna lead to significant reductions in CO<sub>2</sub> emissions in the overall electricity system.

### Climate change risks and opportunities

G4-EC2

In line with the interest of stakeholders to assess the possible impact of climate change on Terna's business, risks connected with certain overarching trends can be assessed, specifically those risks that are derived from regulatory/legislative frameworks, physical risks and other risks connected to the role and activities of Terna.

which were subsequently designated as Special Areas of Conservation (SACs) and also includes Special Protection Areas (SPAs) that were established pursuant to the 2009/147/EC "Birds" Directive concerning the conservation of wild bird species.

(20) There are 11 risk categories, ranging from Extinct (EX), which is applied to species for which there is definitive proof that the last member has died, to the Least Concern (LC) category, which is adopted for species that are not at risk of extinction in the short or medium term. Between the categories of Extinction and Least Concern lie the endangered categories, which identify the species that are at an increasing risk of extinction in the short or medium term: VU - Vulnerable, EN - Endangered, CR - Critically Endangered and EW - Extinct in the Wild.

## CLIMATE CHANGE RISKS AND OPPORTUNITIES

## Regulatory Risks

**Reduction of emissions (emission trading/carbon tax)**

Terna is not involved in the generation of electricity and thus is not subject to any obligation to reduce emissions or to any emission-trading schemes, therefore the fiscal or regulatory measures connected to these features (for example, carbon tax or emission-reduction targets) do not concern Terna, nor do they have direct consequences on its business and financial performance.

**Changes in consumption and generation systems intended to achieve energy efficiency**

Research into greater energy efficiency has already lowered the elasticity in electricity demand compared to GDP growth. The consequences for Terna are very few: the current regulatory framework significantly limits the risk of repercussions on Terna income from a below-trend growth in energy demand.

## Physical risks

**Extreme weather conditions (water shortages or extreme heat or freezing conditions)**

These could make it more difficult to maintain a balanced input/withdrawal of electricity to/from the transmission grid and increase the probability of critical situations and temporary disconnection of users in certain areas of the country. In order to address these risks, Terna is carrying out research initiatives in two directions. The first is oriented towards increasing knowledge of the potential consequences of extreme weather scenarios – in line with the IPCC (Intergovernmental Panel on Climate Change) data – on grid infrastructure and on transmission operations, so as to increase the resilience of the system; the second is aimed at developing technological solutions for securing the service in specific adverse weather conditions (see the section “Technology and Innovation”).

## Other risks

**Development of the production of electricity from renewable sources**

This poses various operational and technological challenges to Terna connected to the need to resolve grid congestion problems and for efficient and safe management of non-programmable production. For example, intermittent wind production makes dispatching more difficult.

**Reputational**

The probability of critical situations due to extreme weather conditions which can result in the temporary disconnection of users draws the attention of the public authorities and the mass media towards Terna.

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, if successful, may actually encourage the use of renewable sources, while resolving grid regulation problems. These investments may open up a new business avenue for Terna which is indirectly linked to climate change.

## Energy consumption

G4-EN3

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

- fuel for company operating vehicles, helicopters and vehicles used for line inspections, repairs, and other activities mainly connected with the maintenance of lines and substations (see the "Plant maintenance" paragraph on pages 59-60);
- diesel for emergency generators, which are used only in cases where electricity is lacking. It is estimated that across Italy generators were used for a total of 2,549 hours (consumption of 0.8 GJ per hour);
- heating oil and natural gas for heating offices.

G4-EN5

The **indirect consumption** of energy consists of the electricity used to run substations and operating plants (approximately 85% of the total) and in offices and workshops. The figure for office consumption is 124,533 GJ, which, as a ratio to Terna's total employees (net of blue-collar workers), corresponds to per capita consumption of 50.5 GJ per year. The energy efficiency management system implemented in 2015 will enable an improvement in this efficiency indicator in the medium term.

### DIRECT AND INDIRECT ENERGY CONSUMPTION BROKEN DOWN BY PRIMARY SOURCE – GIGAJOULES<sup>(1)</sup>

	2015	2014	2013
<i>Direct consumption in GJ</i>			
Petrol for vehicles <sup>(2)</sup>	455.0	90.6	317.8
Diesel for vehicles <sup>(2)</sup>	80,513.6	85,237.6	80,717.6
Jet fuel for helicopters <sup>(3)</sup>	7,134.4	-	-
Natural gas for heating	10,022.3	8,659.3	9,426.0
Oil for generators and heating	10,454.5	9,849.6	12,883.6
<b>Total direct consumption</b>	<b>108,579.8</b>	<b>103,837.0</b>	<b>103,345.0</b>
<i>Indirect consumption in GJ</i>			
Electricity for powering substations and offices	687,968.2	668,808.0	698,708.5

(1) The direct consumption data in tonnes and thousands of m<sup>3</sup> are shown in detail in the key indicator tables. To convert the volumes of primary resources into gigajoules, the parameters indicated in the Global Reporting Initiative (GRI) protocols were used.

(2) Only the consumption of operating vehicles, and not of managerial vehicles, is considered.

(3) The Terna helicopter fleet has been operational since 2015.

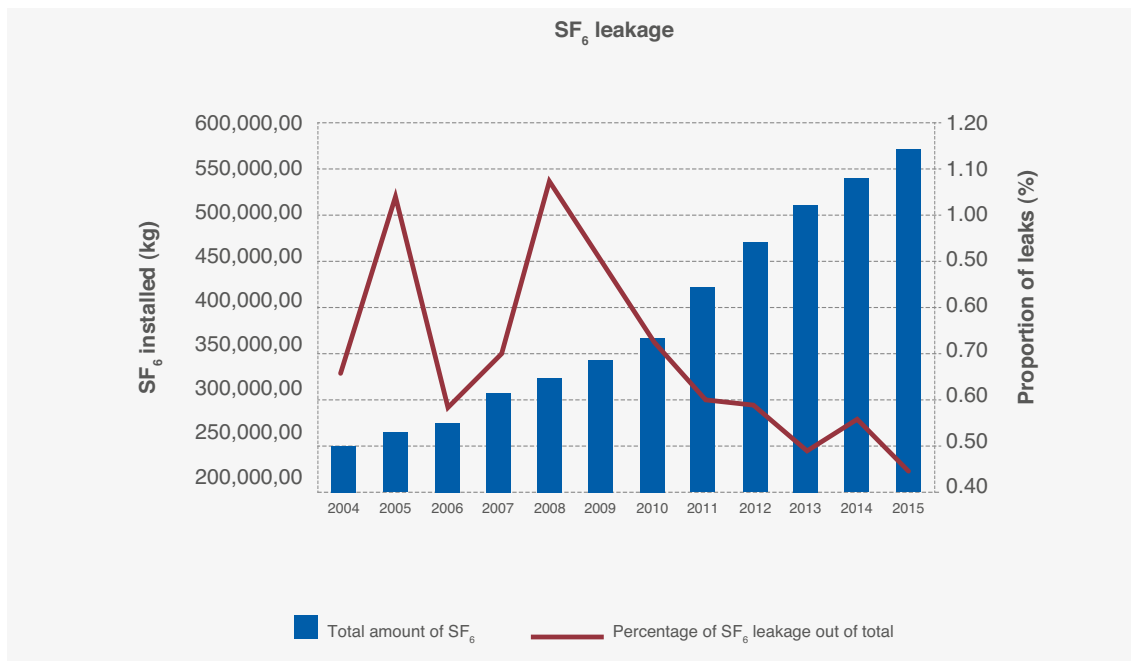
## SF<sub>6</sub> leaks

Thanks to its chemical and physical properties, the gas SF<sub>6</sub> (sulphur hexafluoride) is used as insulation in certain electrical devices such as switches, current transformers and armoured systems. Part of the gas present in the devices is dispersed into the atmosphere owing to defective seals, faults and sometimes also during operations to restore pressure. SF<sub>6</sub> gas has an extremely powerful greenhouse effect, equal to 23,500 times that of CO<sub>2</sub>.

**SF<sub>6</sub> leaks are the main source of direct greenhouse-gas emissions** by Terna. In the last five-year period, the quantity of SF<sub>6</sub> present in the Terna Group's plants increased by 151 tonnes (+36%): This is a trend –common to many transmission operators – associated with the higher insulating properties of the gas and with the smaller size of substations built with equipment containing SF<sub>6</sub>, compared to more traditional solutions.



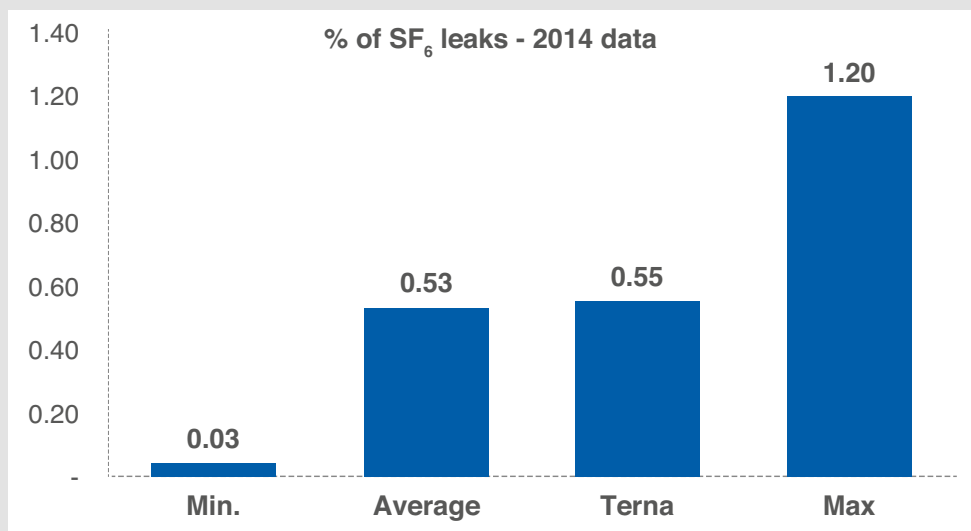
In 2015, thanks to programmes to limit the proportion of SF<sub>6</sub> leaks (shown in the relevant paragraph on page 112) and the absence of significant accidents, leaks fell by 16% compared to the previous year (-483kg). The leak rate out of the total installed in 2015 was 0.44%, a record low (0.55%<sup>(21)</sup> in 2014 and 0.49% in 2013).



## SF<sub>6</sub> leaks: comparative data

SF<sub>6</sub> gas is used by electricity transmission operators because of its excellent electrical insulation properties. It has an extremely powerful greenhouse effect, 23,500 times higher than that of CO<sub>2</sub><sup>(1)</sup>. On account of its specific nature of use, only other TSOs were compared.

The SF<sub>6</sub> figure is given as the proportion of leaks to the total quantity of gas in substation equipment. In 2015, Terna recorded a proportion of leaks of 0.44%. For 2014, the year to which the comparison refers, SF<sub>6</sub> leaks were equal to 0.55% (0.41% net of the accident that occurred in an operational transmission area).

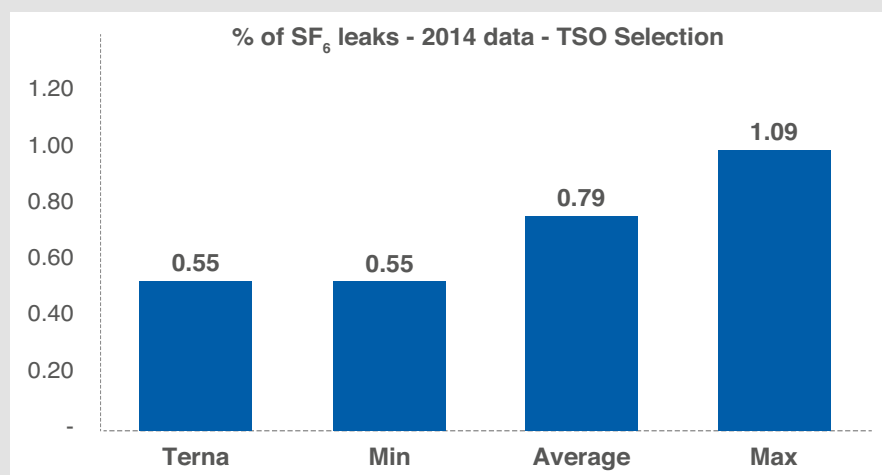


(21) In 2014, the impact from leakage included an event that occurred in a substation which resulted in the loss of 784.1 kg of SF<sub>6</sub>, equivalent to 26% of the total losses recorded.

In the comparison with other transmission operators, for the year 2014 Terna showed a slightly above-average proportion of SF<sub>6</sub> leaks.

In order to better understand the phenomenon, the comparison between the SF<sub>6</sub> leak rates for TSOs with a quantity of gas that is comparable with that of Terna (RTE, REE, Tennet) is given. The average of SF<sub>6</sub> gas in this limited panel, which includes Terna, is equal to 408 tonnes. Despite the fact that Terna has the greatest amount installed (536 tonnes), it reports the lowest leakage incidence rate.

The figure for the compared TSOs confirms the evidence that emerged in 2014 (compared to 2013 data).



(1) See the "IPCC Fifth Assessment Report: Climate Change 2013"

Details of the calculation of the "SF<sub>6</sub> leaks" benchmark are available in the "Sustainability" section of the [www.terna.it](http://www.terna.it) website.

## Direct and indirect CO<sub>2</sub> emissions

G4-EN15

Direct greenhouse-gas emissions connected with Terna's work are mainly caused by SF<sub>6</sub> leaks, which in 2015 accounted for 88% of the total.

G4-EN16

### TOTAL DIRECT AND INDIRECT EMISSIONS OF GREENHOUSE GASES – CO<sub>2</sub> EQUIVALENT TONNES<sup>(1)</sup>

	2015	2014	2013
<i>Direct emissions</i>			
SF <sub>6</sub> leaks	58,478.3	69,831.4	58,930.5
Refrigerant gas leaks (R22, R407C, R410A) <sup>(2)</sup>	488.3	0	87.1
Petrol for vehicles	31.5	6.3	22.0
Diesel for vehicles	5,958.8	6,308.4	5,973.9
Jet fuel for helicopters <sup>(3)</sup>	506.9	0.0	0.0
Natural gas for heating	561.9	485.4	528.4
Oil for heating and generators	773.7	729.0	953.5
<b>Total direct emissions</b>	<b>66,799.4</b>	<b>77,360.5</b>	<b>66,495.5</b>
<i>Indirect emissions</i>			
Electricity <sup>(4)</sup>	70,325.6	66,323.5	73,170.3

(1) The conversion of direct energy consumption and SF<sub>6</sub> (sulphur hexafluoride) and refrigerant gas leaks to equivalent CO<sub>2</sub> emissions is calculated this year using the parameters indicated in the IPCC Fifth Assessment Report (AR5) and Greenhouse Gas Protocol (GHG) Initiative. This led to a change in the equivalent tonnes of SF<sub>6</sub> and refrigerant gas and total direct emissions compared to that which was previously published.

(2) Until 2014, data on refrigerant gas leaks was only collected for R22. Data collection for R407C and R410A began in 2015 (it is estimated that the percentage of coverage for the total data is equal to 85%). In 2015 there were no R22 leaks.

(3) The Terna helicopter fleet has been operational since 2015.

(4) Indirect consumption of electricity is converted taking into account the proportion of thermoelectric production in the total Italian electricity production for 2015. The reference for the division of the production mix is the "Monthly Report on the Electricity System" with the results for December 2015, available on the website <http://www.terna.it/en-gb/homepage.aspx>.

The carbon intensity value can be found below, which is the ratio between direct and indirect emissions of CO<sub>2</sub> equivalents and an important metric for the company's business. In Terna's case, the ratio is measured on revenue. The data is given for a three-year period with the dual purpose of measuring corporate performance and facilitating comparisons with other businesses.

## G4-EN18

**CARBON INTENSITY – EQUIVALENT TONNES OF CO<sub>2</sub> / REVENUE (MILLION OF EURO)**

	2015	2014	2013
Total emissions (direct and indirect) compared to revenues	65.9	72.0	73.6

**CO<sub>2</sub> emissions: comparative data**

The figures used for comparison as regards the emission of CO<sub>2</sub> are composed of the relative figures on direct and indirect emissions (aims 1 and 2).

The unit of measure used for the comparison is equivalent CO<sub>2</sub>, expressed in thousands of tonnes, where equivalent CO<sub>2</sub> means the total contribution of the greenhouse gases to the greenhouse effect.

The analysis was done by comparing Terna's emission values with those of three corporate panels: companies listed on the FTSE-MIB, the Electric Utilities on the Dow Jones Sustainability World Index, and the TSOs.

In the absence of normalisation factors valid for all sectors, it was deemed of interest to present the company data on CO<sub>2</sub> 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 extent 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.

For 2015, CO<sub>2</sub> emissions attributed to Terna's activities amounted to 136.7 thousand tonnes. On the other hand, for 2014 (the year with which a comparison can be made) emissions were measured at 141.6 thousand tonnes of CO<sub>2</sub><sup>(1)</sup>.

When compared with all three panels, Terna is significantly below the average for 2014. The data confirms the trend for the previous three-year period.

CO <sub>2</sub> emissions (thousands of tonnes) - 2014			
	TSO	FTSE-MIB	DJSI – Electric Utilities
Available data <sup>(2)</sup>	11	26	8
Average	14,372.1	8,918.8	26,072.4
Max	122,700.0	116,116.0	116,116.0
Min	11.8	0.4	87.0
Terna		141.6	

(1) The comparison data for 2014 does not take into account the changes made following the review of the conversion factors indicated by the IPCC AR5 and the Greenhouse Gas Protocol (GHG) Initiative (see the "total direct and indirect emissions of greenhouse gases - CO<sub>2</sub> equivalent tonnes" table).

(2) In the absence of figures published by the company, or directly comparable values, for the FTSE MIB companies and the ELC panel, it was decided that the figures in the "CDP Climate Change Report 2015" could be used for the analysis. In total, CDP figures were used for four companies.

Details of the calculation of the "CO<sub>2</sub> emissions" benchmark are available in the "Sustainability" section of the website, <http://www.terna.it/en-gb/homepage.aspx>.

## Other indirect CO<sub>2</sub> emissions

G4-EN17

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 178.

### Grid losses

EU12

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 metres), to which corrective technical coefficients are applied in cases in which the measuring point does not coincide with the boundaries of the transmission grid. Terna is responsible for measuring the energy input into the NTG, while for the energy withdrawn, on the basis of specific agreements, Terna may read the measurements remotely, which however remain the responsibility of the distributor companies. This entails a margin of error concerning the correctness of the measurements of electricity withdrawn which, moreover, has tended to reduce over the years, thanks to cross-checks and the gradual resolution of discrepancies with the distributors' data.

In order to reduce the margin of error and the risk of interpreting the effect of measurement errors and related corrections as real trends, starting from 2012 it was decided to use the simple moving average of losses with a three-year window (2011-2013 for the year 2013; 2012-2014 for the year 2014; 2013-2015 for the year 2015) as the annual figure.

### GRID LOSSES

	2015		2014		2013	
	% proportion with respect to energy demand	GWh	% proportion with respect to energy demand	GWh	% proportion with respect to energy demand	GWh
VHV and HV grid	1.5	4,622	1.5	4,579	1.4	4,412

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 service-disruption problems – takes place according to regulated criteria within the scope of production set-up determined by the energy market, and cannot 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<sub>2</sub> emissions associated with grid losses amounted to 1,700,916 tonnes for the year 2015 (they were 1,646,235 in 2014 and 1,662,890 in 2013).

## G4-EN19 Initiatives to reduce emissions

Terna focuses its attention on a number of voluntary action programmes aimed at reducing its main sources of greenhouse-gas emissions, in particular on:

- **a programme to limit the proportion of SF<sub>6</sub> 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 energy-efficient buildings;**
- **feasibility studies for energy conservation initiatives** in electrical substations.

### Limiting SF<sub>6</sub> leakage

Terna works to **keep SF<sub>6</sub> leaks under control**, limit and, where possible, reduce their **percentage as a ratio** to the total gas used. In fact, if leaks in absolute terms increase owing to the greater use of gas, a reduction in the proportion of leaks would, precisely for this reason, have a significant impact in terms of emissions avoided.

The identification of a reduction target is affected by several elements of uncertainty:

- the growth of awareness of and attention to the issue has been reflected in an improvement in measuring leaks, entailing – precisely in the years when limiting activity began (2009-2010) – worse performance, in all probability only apparent;
- the occurrence of faults with significant gas leaks – the probability of which is growing given the increasing use of SF<sub>6</sub> gas in equipment at large substations – can alter the trend considerably;
- while on the one hand installing equipment with better sealing performance tends to reduce the proportion of leaks, on the other the ageing of equipment already installed could entail an increase in leaks.

Net of exceptional faults and any effect deriving from the ageing of the equipment in operation, it is estimated that installing new devices with better seals (such as more highly reliable transformers), which began in 2009 and continued in the years 2010-2012, may determine a reduction in the proportion of leaks of approximately 0.1% over the period of five years of the installation campaign. On the basis of this estimate, and again net of the factors mentioned, we expect the proportion of leaks to converge - until 2017 - towards figures oscillating around 0.6%, considering that the average proportion in the period 2007-2008 was 0.7% (net of exceptional faults). The effective proportion recorded, both as an average for the three years 2013-2015 (0.49%), and in 2015 (0.44%) represents a better result than the expected target.

## G4-EN30 Company fleet

The company's operating vehicles are used throughout Italy to carry out line inspections generally to reach plants and sites.

The fleet of vehicles used by Terna is made up of:

- 3 helicopters acquired in 2015 for scheduled and occasional inspections of Terna power lines;
- a car fleet, 92% of which is made up of cars with Euro 5 engines (see the key indicator tables on page 178).

## Energy Management System

In line with its sustainable business approach, Terna promotes energy efficiency and saving.

In 2012 the company launched the “Energy Consumed for Own Use Management System” project to provide the Group with a corporate Management System that complies with the ISO 50001 standard.

In order to achieve this objective, energy analyses were carried out at relevant sites (Rome, Milan, Padua, Florence, Palermo and Cagliari), some electrical substations (Rondissone, Dugale and North Rome), the Ginestra site for non-conventional energy storage systems, the physical-chemical laboratory in Rome and the Genzano di Lucania construction site.

Energy analyses have been carried out in compliance with current legislation (Legislative Decree 102/2014) and guidelines issued by the MED, which oblige large companies to carry out, by 2015, a series of energy audits of a significant sample of company sites. Factors examined in these analyses included the use and consumption of all energy carriers (electricity, diesel oil for generators, natural gas, heating oil and car fuel), on account of their being relevant aspects for the group.

In 2015:

- the Initial Energy Analysis was completed;
- 20 Energy Audits were carried out at sites and electrical substations;
- the Energy Management System certification was obtained for the entire Terna Group in accordance with the UNI CEI EN ISO/IEC 50001:2011 standard.

Among Terna group companies, the subsidiary, Terna Plus Tamini Trasformatori S.r.l fell within the definition of "large enterprise" and therefore had to adhere to Legislative Decree 102/2014, implementing 3 energy audits at its plants in Melegnano, Legnano and Novara.

The main objectives for 2016 include additional energy analyses for other sites owned by the Terna Group and the actions provided for in the improvement plan for the UNI CEI EN ISO 50001 Energy Management System.

For 2016 Terna has planned training on energy issues to form the roles required by the Energy Management System and to enhance awareness and corporate culture. In this regard, the Energy Manager and a specific employee have already obtained the "EGE" qualification - Energy Management Expert - in the civil and industrial sectors.

## Energy efficiency in substations and offices

G4-EN6

At Terna the development of energy efficiency programmes relative to the **use of electricity** in substations and offices is experimental at this stage, as electricity consumption falls within the "own transmission use" category which, in accordance with the provisions of the sector Authority, are not included within Terna's operating expenses.

In **offices**, the main sources of energy consumption are related to lighting, air-conditioning, heating and the use of computers and printers. Two initiatives launched in 2014 related to reducing such sources of consumption should be noted:

- the replacement of computers and printers continued. The new models enable savings in average energy consumption of around 0.6% and a consequent reduction of carbon dioxide emissions. The reduction achieved in 2015 adds to the one already recorded in 2012 for a total of 164 tonnes of CO<sub>2</sub> emissions;
- a project was completed for replacing the heating oil boilers with two heat pumps and a series of geothermal probes in 2014, in order to reduce the costs and consumption of heating oil for heating the offices of the Friuli-Venezia Giulia Plants Unit. The investment, which has a payback period of five



years, has allowed for a reduction in CO<sub>2</sub> emissions into the atmosphere of around 60 tonnes for the current year. In total, the plant has already enabled a reduction of approximately 90 tonnes of CO<sub>2</sub>.

The **renovation and new construction of Terna sites** should also be noted, which - on the basis of a multi-year programme - tend to raise the energy class of Group owned properties, thereby accompanying construction with an improvement in energy efficiency standards.

**The renovation of the Naples site was completed in 2015**, which brought the building up to the **A3 energy efficiency class** – the second in terms of performance – from its original D standard. The installation of solar panels contributed to this result, as they made the building partially autonomous in covering its energy demand, leading to a reduction in the supply of external electricity.

In general it is estimated that the electricity consumption of the site could fall by 8.9% compared to the previous situation.

### The Development Plan and reduction of CO<sub>2</sub> emissions from the electricity system

The construction of the new lines and substations 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 in CO<sub>2</sub> emissions could reach approximately 15.6 million tonnes a year.

#### Reduction of grid losses

Grid losses depend, among other things, on the distance the electricity travels on the transmission grid. In simple terms, the further the point of consumption (of withdrawal from the NTG) 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 structure brings withdrawal and consumption points closer and, 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 2016 Development Plan, the decrease in grid losses is estimated at being around 1,650 GWh/year. Assuming that the reduction of these losses is equivalent to a reduction in production from combustible sources, a decrease in CO<sub>2</sub> emissions should follow, somewhere between 600,000 and 700,000 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, namely units which pollute less in terms of CO<sub>2</sub> emissions, and at the same time makes production by obsolete substations 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, with a larger proportion of production by plants with higher yields. The same final consumption quantity would thus be fulfilled with a smaller quantity of fuel: the benefits are quantifiable as a reduction in CO<sub>2</sub> emissions of up to 6,900,000 tonnes a year.

## Connection of plants using renewable energy

The main contribution to the reduction of CO<sub>2</sub> emissions comes from connecting production plants using renewable sources considered among the projects in the 2016 Development Plan. The production of energy from renewable sources has represented an energy potential that has seen strong growth in recent years. Specifically, wind and photovoltaic generation plants have increased substantially, especially in Italy's southern regions and islands.

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 actions to strengthen sections of the primary grid, which make it possible to indirectly reduce the influence of non-programmable renewable-source (hereinafter referred to as 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 65).

NPRS collection substations on the very-high-voltage grid are also planned, which will make it possible to limit the construction of new power lines which would otherwise be needed. The works included by Terna in the 2016 Development Plan will release about 5,500MW of power from renewable sources, thus obtaining a reduction of CO<sub>2</sub> emissions amounting to about 8,000,000 tonnes of CO<sub>2</sub>/year.

## Reduction of CO<sub>2</sub> emissions in 2015

In 2015, the benefits in terms of reduction of system CO<sub>2</sub> emissions were mainly due to the installation of new “zero-emission” production units. The provisional figures for installed power from renewables in 2015 is as follows:

Energy source	Power installed – MW
Wind	~9,200
Photovoltaic	~18,900
<b>Total</b>	<b>28,100</b>

From the 2015 provisional figures, it can be seen that the gross production using wind and photovoltaic energy increased by approximately 2,300GWh; this figure corresponds to a reduction of approximately 1,340,000 tonnes of CO<sub>2</sub><sup>22</sup>.

(22) Considering a conversion coefficient of 0.587 tCO<sub>2</sub>/MWh and assuming that the new installed renewable capacity replaces an equivalent thermoelectric capacity.

## 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), transformer substations (transformers, switches, other substation equipment), and control systems are the main components.

The use of materials is related, in particular, to constructing new electricity and ICT infrastructure.

G4-EN8

Water is not used in the electricity transmission and dispatching production cycle. Normally, the water used – for hygienic use, to clean offices and for cooling systems – comes from connections to the water mains for civil use (water consumption is shown in the key indicator tables on page 179).

The production and direct waste management primarily concerns the maintenance of electricity infrastructure.

G4-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.

#### MAIN MATERIALS IN SUPPLIES

tonnes	2015	2014	2013
Porcelain	336	327	699
Polymeric	102	114	225
Copper	1,380	1,019	5,234
Aluminium	5,077	2,946	12,909
Steel	13,275	29,675	6,204
Glass	1,474	3,525	2,014
Dielectric oil	682	408	924
SF <sub>6</sub>	31	28	42

The quantities shown in the table illustrate an overall increase in purchased materials for conductors and dielectric oil for the insulation of electrical equipment. Paper consumption - entirely certified - is shown in the key indicator tables on page 179.

G4-EN23

### Waste

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 stood at around 92% in 2015 (81% in 2014 and 87% in 2013).**

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, which therefore may change significantly from year to year.

Actual recycling depends 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<sup>(1)</sup>

tonnes	2015	2014	2013
<b>Waste produced<sup>(1)</sup></b>	<b>5,112.1</b>	<b>4,489.9</b>	<b>5,263.6</b>
of which hazardous	2,906.7	2,651.0	3,467.6
of which non-hazardous	2,205.4	1,838.9	1,795.9
<b>Recycled waste</b>	<b>4,680.2</b>	<b>3,652.7</b>	<b>4,554.9</b>
of which hazardous	2,643.1	2,136.2	2,874.8
of which non-hazardous <sup>(2)</sup>	2,037.1	1,516.6	1,680.1
<b>Waste sent for disposal<sup>(3)</sup></b>	<b>427.3</b>	<b>780.3</b>	<b>578.9</b>
of which hazardous	259.7	458.2	439.6
of which non-hazardous	167.6	322.2	139.2

(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 substations not connected to the sewage system are not included; the figure for sewage and septic tanks was 680 tonnes in 2015; 383 tonnes in 2014; 842 tonnes in 2013. In 2014, waste identified as "Other emulsions" (amounting to 857 tonnes) produced during an accident that occurred in an operating area was also excluded.

(2) They consist of uncontaminated metal waste, deriving from the decommissioning of transformers, electrical equipment and machines (for example, generators) no longer in use, with a recovery percentage that averages 100%.

(3) Waste sent for disposal may differ from the simple difference between waste produced and recovered, owing to the temporary storage of waste.

The main **hazardous special waste** produced by Terna's operating activities consists of:

- **metal waste** 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 on average, 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 energy transportation and transformation service operating during emergencies, 100% of which are recycled;
- **dielectric oils** for the insulation of transformers replaced following the regular checks carried out for transformer maintenance, and which constitute hazardous waste.

**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.

## G4-EN31 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 definitions available, in particular those of the ISTAT (the Italian National Institute of Statistics), Eurostat and the GRI as well as on the European Commission's recommendation on the recognition, measurement and disclosure of environmental issues 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 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 substations, electromagnetic fields, etc.) in the Company's ISO 14001-certified Environmental Management System to identify, in the main corporate processes, Terna's operating and investment activities of environmental significance.

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 only environmental components;
- exclusion of the additional costs connected with the consideration of restrictions or requests for safeguarding the environment during planning and designing new lines (detours and burials).

Other conditions were that the costs had to be:

- significant;
- consistent with the annual reporting of accounts (operating costs and investment clearly distinguished);
- 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.

### Investment and operating costs

The table below best shows the investments and operating costs incurred by Terna for the environment (see below for more details on the accounting method used).

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**

€ million	2015	2014	2013
<i>Investments</i>			
Environmental offsets <sup>(1)</sup>	1.2	12.7	8.4
Environmental-impact studies <sup>(2)</sup>	5.0	2.1	3.9
Environmental activities – new plants <sup>(3)</sup>	5.8	4.4	5.0
Environmental activities – existing plants <sup>(4)</sup>	7.1	9.8	7.8
Demolitions <sup>(5)</sup>	1.2	4.7	1.0
<b>Total investments</b>	<b>20.3</b>	<b>33.7</b>	<b>26.1</b>
<i>Operating expenses</i>			
Costs for environmental activities <sup>(6)</sup>	19.4	19.2	17.9
<b>Total operating expenses</b>	<b>19.4</b>	<b>19.2</b>	<b>17.9</b>

(1) **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 decrease from 2014 reflects the 2015 to 2016 slippage in commissioning of some lines.

(2) **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.

(3) **Environmental activities - new plants:** the amount shown is based on 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, and analysis of excavated earth and rock). Therefore, a value of 1% of investment costs for projects with similar features was considered.

(4) **Environmental activities - existing plants:** the expenses for upgrading existing plants in accordance with environmental provisions and new regulations (for example noise and visual/landscape aspects).

(5) **Demolitions:** the costs for the definitive dismantling of lines as part of rationalisation projects.

(6) **Costs for environmental activities:** cutting trees, cutting grass, waste management and demolitions/dismantling for small amounts not included in investments. These cost items, which can be determined directly from the industrial accounting, do not exhaust the year's total environmental costs, but represent the majority of them.



## SOCIAL RESPONSIBILITY OUR PEOPLE

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# SOCIAL RESPONSIBILITY

## OUR PEOPLE

### Our approach

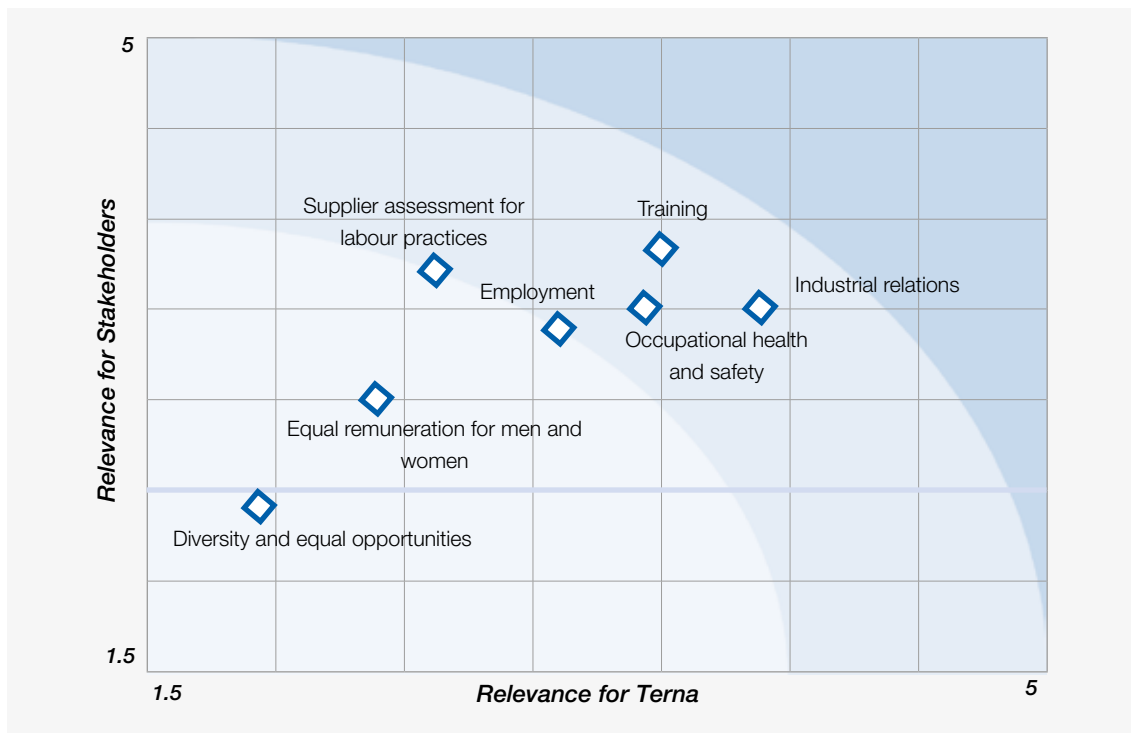
Human resources are an essential part of corporate business but they are also individuals who should be valued and whose rights should be respected. Terna's approach to relations with its collaborators is characterised by:

- 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 to the relevant department Heads as well as the HR Department. Workplace health and safety issues are the responsibility of the Corporate Protection Department. Both departments are part of the Parent Company's Corporate Affairs Division. For information on relations with employees and unions, please consult the subsequent pages.

Below a visual representation is given of the materiality assessment of the aspects of G4 related to labour issues with indication of the materiality threshold. In order to provide comprehensive information, this Report also indicates the aspects below such threshold (for more details, please see the methodological note on pages 151-153).

**MATERIALITY MATRICES - G4 ASPECTS CONCERNING WORKING PRACTICES**



Diversity and equal opportunities	pages 124-125; 136-137; 165; 166; 171;182; 184
Training	pages 122; 127-129; 165; 183
Employment	pages 86-92; 124-130; 166; 182-183
Equal remuneration for men and women	pages 136-137; 165; 183-184
Industrial relations	pages 135-136; 186
Occupational health and safety	pages 89-91; 132-134; 166; 185
Supplier assessment for labour practices	pages 86-92; 135

G4-LA1

## An outline of the employees

G4-LA12

The following tables show data for the Group, with the same scope as 2014. Therefore, the data for the 431 Tamini Group employees (see methodological note on page 153) are not included. For the sake of visual uniformity, we have also excluded the three employees on local contracts with the Montenegrin subsidiary Terna Crna Gora d.o.o.. Including the Tamini Group and Terna Crna Gora, employees at 31/12/2015 totalled 3,767.

### PERSONNEL COMPOSITION BY CATEGORY

	2015	2014	2013
<b>Total</b>	<b>3,333</b>	<b>3,437</b>	<b>3,442</b>
Senior executives	63	61	62
Junior executives	498	541	501
White-collar workers	1,813	1,887	1,922
Blue-collar workers	959	948	957

Retirement is by far the most common reason for employees leaving. The leaving rate for spontaneous resignations has remained very low (0.35% in 2015; 0.32% in 2014; 0.26% in 2013). The turnover rate of employees aged under 30 was 1.1% in 2015, while the three-year average was around 0.6%.

The change compared with 2014 for incoming and outgoing employees can be attributed to the generational turnover project launched by the Terna Group in 2015.

In 2015, Terna made use of 37 temporary workers (compared with 54 in 2014 and 39 in 2013), employees of agencies that provide a temporary employment service to Terna.

### PERSONNEL CHANGES

	2015	2014	2013
<b>Total employees</b>	<b>3,333</b>	<b>3,437</b>	<b>3,442</b>
Employees recruited during the year	369	68	70
Employees who left during the year	473	73	61
Turnover rate on termination (%) <sup>(1)</sup>	13.8	2.1	1.8
Turnover rate on termination (%) under 30 <sup>(1)</sup>	1.1	0	0.7

(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

	2015	2014	2013
<b>Total employees</b>	<b>3,333</b>	<b>3,437</b>	<b>3,442</b>
<i>By contract type</i>			
- permanent	3,331	3,382	3,412
- temporary	2	55	30
<i>By gender</i>			
- men	2,942	3,042	3,048
- women	391	395	394
<i>Average age of personnel (years)</i>			
Average age	43.5	46.6	46.2

The generational turnover project launched in 2015 led to a reduction in the average age and an increase in the educational qualifications of the corporate population. Today, 79% of the total corporate population has a degree or high school diploma (71% in 2013).

### Management of generational turnover

Cost excellence has been identified by management as a strategic priority among factors that will allow the Group to become a top performer in the European context. Therefore, programmes aimed at obtaining efficiency and reduced costs have been implemented. Of particular note is the management of generational turnover.

The company concluded the initiative in 2015, which was launched in the last quarter of 2014 and aimed at bringing forward generational turnover through incentives for the voluntary retirement of employees close to pension age. Terna has therefore implemented staff rationalisation and reorganised corporate procedures with the aim of rebalancing the professional and demographic composition of the workforce. To this end it has made use of the following tools:

- A. early consensual termination of the employment relationship, focusing on employees that have the requirements to receive an early or old-age pension or that have accrued these rights by the set dates in 2015, namely 31 March, 30 June, 30 September and 31 December;
- B. facilitated termination of service for employees that are close to acquiring the right to an early or retirement pension (Art. 4, paragraphs 1-7 *ter* of Law 92/2012). In particular, the plan implemented by the Terna Group aimed to retire employees that had acquired the prerequisites for a retirement or early pension by and no later than the 31 December 2017, with the employment contract terminating on the 1 January 2016.

The redundancy and retirement initiatives were countered by intensive personnel selection and hiring initiatives, which lead to generational turnover in the workforce of the Terna Group. In summary:

- Total terminations: 473 employees of which 199 owing to mutually-agreed early termination, 239 owing to recourse to Art. 4 and 35 other terminations
- Total hired: 369 new hires.



Prior to the implementation of this generational turnover plan, the Terna Group launched several initiatives to allow for better management of the Group. The most significant include the transmission of knowledge and experience, which are often exclusive, by increasing use of training courses taught by in-house teaching staff and professional development projects aimed at creating and transmitting technical and managerial skills, enabling adequate performance of critical roles.

## Terna brings forward generational turnover and hires 300 young people

Terna completed its generational turnover project in line with the provisions of the 2015-2019 Strategic Plan that was presented in March 2015. 452 staff members subscribed to the voluntary redundancies programme aimed at personnel that had acquired the prerequisites for retirement and those that would go on to acquire them in the next two years, 438 of which were actually accepted after checking with INPS. In view of these redundancies, a recruitment plan was conducted that involved 300 young people (approximately 9% of all employees, net of the Tamini Group), with an average age of 25 years, distributed in the following way:

Naples, Palermo, Cagliari and Bari sites: 106

Rome site: 48

Florence, Milan, Turin and Padua sites: 152

The composition of new-hires (98% men and 2% women) is as follows:

Junior executives: 1

White-collar workers: 111

Blue-collar workers: 194

The appointments referred to newly qualified electrical engineers and electricians, who according to the Jobs Act were offered permanent employment contracts with growing protections. The ability to work in a group, good communication and problem solving skills, as well as excellent academic records are just some of the prerequisites that Terna verified via assessments, interviews and practical tests for the selected operational staff. The new recruits will follow a relevant training plan when they join the company in 2016.

The Italian legislation regarding retirement (Art. 24 of 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. The summary table of potential personnel leaving for the 2016-2020 and 2016-2025 periods respectively is as follows:

EU15

**296** employees as at 31.12.2015 potentially retiring in the 2016-2020 period (8.88% of all employees at 31.12.2015) of which:

• Senior executives:	7
• Junior executives:	44
• White-collar workers:	158
• Blue-collar workers:	87

**765** employees as at 31.12.2015 potentially retiring in the 2016-2025 period (22.95% of all employees at 31.12.2015) of which:

• Senior executives:	18
• Junior executives:	136
• White-collar workers:	387
• Blue-collar workers:	224

## Staff turnover: comparative data

Terna's staff turnover rate is defined as the ratio of employees leaving during the year against 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 companies in the Electric Utilities sector included in the Dow Jones World Sustainability Index.

In **2015** Terna's turnover rate was **13.8%**, in line with the generational turnover programme implemented during the year. Net of the 438 incentivised redundancies, the turnover rate on termination was 1%.

In **2014**, the year for which comparative data is available, the turnover rate was **2.1%**, below the average of all the reference panels and lower than the panel of the listed companies. The data confirms the trend for the previous three-year period.

Turnover rate (%) – 2014			
	TSO	FTSE-MIB	DJSI – Electric Utilities
Figures available	18	25	8
Average	4.5	7.9	4.6
Max	11.0	14.8	9.0
Min	1.2	2.1	1.5
Terna		2.1	

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

## The HR process

### Research and selection

The personnel recruited from the external labour market are 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 preferred recruitment channel for candidates is the "Working at Terna" section of the company website. The process of looking for and selecting personnel is managed by the Human Resources and Organisation Department, which also handles relations with schools, universities and employment agencies in order to support the process of finding new staff and create a virtuous circle of exchange between the Company and the outside world. In this perspective the Company has entered into agreements with the leading Italian universities and business schools, funding the creation of specialised master's courses.

In 2015 Terna implemented 28 agreements with Italian universities and business schools (28 in 2014), funded 4 master's courses (3 in 2014) and secured 75 hours of teaching by Terna employees in external courses (119 in 2014). It also took part in 6 career days (7 in 2014), received 471 students from university or master's courses visiting its plants (679 in 2014) and launched 16 traineeships, internships and work projects (32 in 2014).

## G4-LA9

## Training

**Training at Terna** continuously embraces all aspects of professional life. It is aimed at creating value for our people through increasing and diversifying their skills and employability, and creating value for the Company through the development of human capital in line with the Company mission and the business strategy. "Campus - Esperienze in Rete" (Grid Experiences) is the umbrella scheme for all the training, which is provided via a training scheme that is based on the transfer of specialist know-how entrusted to the most experienced staff (Faculty) and on external collaborations (with universities and business schools) to ensure multiple teaching inputs. A dedicated office at an operating site of the Company in Rome has been active since 2012 and can accommodate up to 200 employees involved in training activities at the same time. Training initiatives are categorised into four subject areas:

- **Context and business model**, for basic skills and to promote the 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, etc.);
- **Pathways** consisting of short-, medium- or long-term training processes involving a mix of initiatives from the three previous subject areas, designed for new recruits and staff in service belonging to uniform professional groups (e.g. shift workers in the control room).

In 2015:

- **190,807 hours of training** were provided (148,955 in 2014, +28%), 99% of which took place in the classroom (99.8% in 2014).
- **97% of employees** have attended at least one training course (91% in 2014).
- **There were 56 hours of training per capita** (43 in 2014, +30%), 54 for men and 26 for women.

## 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 2015, Terna provided 56 hours of training per employee, increasing by 30% compared to the 43 hours provided in 2014, the year for which comparative data are available.

Compared to the other companies, Terna is above the average value for all three panels: TSO, Electric Utilities for the Dow Jones Sustainability Index and companies on the FTSE-MIB (data above the average for the previous three-year period).

Hours of training per capita – 2014			
	TSO	FTSE-MIB	DJSI – Electric Utilities
Figures available	11	28	8
Average	41	33	42
Max	74	56	74
Min	12	10	12
Terna		43	

Details on the "staff training" benchmark figures are available in the "Sustainability" section of the website <http://www.terna.it/en-gb/homepage.aspx>.

## Developing human capital

Terna's system for staff development, and therefore for their professional growth, is based largely on performance as the key indicator.

The new Terna Group Professional System is currently being implemented to support development activities aimed at ensuring that positions are effectively covered and guarantee an adequate succession planning process, which promotes:

- professions ("professional families"), identified according to the main core-business corporate processes and staff;
- macro-roles ("duties"), that are transversal to the organisation, identified on the basis of the type and complexity of the contribution, broken down according to the level of seniority.

The Professional System represents the framework on which HR strategies and policies are introduced, and comprises an integrated management and development system that makes it possible, *inter alia*, to:

- respond effectively and promptly to developments in business and the organisation, making the "duties" independent of the organisational structure;
- oversee and develop corporate know-how;
- optimise the mobility process for resources.

Measurement of performance is also related to **payment of the variable parts of remuneration**. Various tools are used for this purpose, according to the type of company figures involved and the results term to which they refer:

- **Long-Term Incentive Plan**, linked to multi-year corporate objectives, for senior executives who hold the most important positions in terms of achieving strategic objectives;
- **MBO** (Management By Objectives) for company management, which links the amount of individual bonuses to the degree of achievement of both company and individual targets, some of which coincide with the Sustainability Plan or are related to Terna's environmental and social commitments (e.g. occupational safety index).

In order to encourage productivity, Terna also signed an agreement with the trade unions governing a **corporate-result bonus assigned to blue- and white-collar workers**, which takes account of general company trends and specific work-related employee targets.

## 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 law;
- subsidised loans for purchasing a home, as well as for serious family needs;
- cafeteria service or meal coupons.

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

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 (<http://fondenel.previnet.it>) which envisages contributions both from the senior executive and the Company. Other employees (blue-collar workers, white-collar workers, and junior executives) may sign up for the Fopen pension fund ([www.fondopensioneopen.it](http://www.fondopensioneopen.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 25<sup>th</sup> and 35<sup>th</sup> year of employment at the Company. While, upon terminating their employment, they receive the 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 (additional months' pay).

#### G4-EC3

Further information on the composition/coverage of and changes to severance pay and other staff funds is available in the Annual Financial Report.

#### G4-LA3

### Caring for children and family members

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.

	2015	2014	2013
<b>Total</b>	<b>23</b>	<b>21</b>	<b>20</b>
- of whom women	19	19	18
- of whom men	4	2	2

All employees who made use of parental leave over the three-year period returned to work and were still at the company 12 months after their return.

### Internal communication

Internal communication has a fundamental 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 special events and projects, including the annual "We:Me" convention, and meetings with senior management and executives.

Event	Type of Employees Involved	Number
10 years of being a listed company	Senior executives, junior executives and white-collar workers that work for listing.	60
We:Me Meeting	Unit manager senior executives and junior executives	450
Fedeltà Aziendale (Company Loyalty)	25 and 35 years of service	900
Luncheons with the CEO	Selection of employees	30
Terna for sport: ScilnTerna, Terna Running Team, Open Day	Selection of employees from all over Italy	500
Company Easter Egg Initiative	Employees from the three offices in Rome	700
Christmas Speciality Food Market (Mercatino della Bontà)	Employees from the main offices in Rome and throughout Italy	1,500

Tool	Number	Coverage
Intranet/Featured news	260	Entire company
Intranet/Terna news	320	Entire company
Terna News (issues published during the year)	5	Entire company
- total circulation (no. copies)	22,500	
"A Year of Terna" published	4,500	Entire company
"Terna Territory Special" Calendar	4,500	Entire company
"TernaInforma" series	250	Frontline managers



## Health & safety and correct working practices

Working in safety, without putting health at risk is a fundamental worker's right and 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 applies more generally to **respect for human and workers' rights**: the Company undertakes to ensure that such rights are also guaranteed for those working for contractors.

### Ensuring employee safety

Terna's commitment to safety should be seen in the context of existing legislative provisions. The Italian legislation on safety, (Legislative Decree 81/2008 "Consolidated Law on Occupational Health and Safety") is among the most stringent in Europe and obliges companies to carry out a detailed assessment of the risks for 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**.

<b>Clear safety-policy guidelines</b>	<p>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.</p>
<b>Certified Management System BS OHSAS 18001:2007</b>	<p>The system covers 100% of company activities and is integrated with the quality and environment system. It is based on scrupulous risk assessment, with a particular focus on electrical risk (Rules for the Prevention of Electrical Risk – DPRET).</p>
<b>Organisational unit responsible for safety</b>	<p>The unit is composed of a central coordination office and local heads in the area offices and on construction sites. It performs direct inspections of workplaces and construction sites, and continual analysis and monitoring of the risks deriving from corporate activities.</p>
<b>Supervisory activities</b>	<p>The correct and full application of the procedures is subject to thorough inspections by the Safety, Prevention and Protection Managers <b>internal compliance audits</b> for all the Terna Group Companies <b>and external audits</b> for confirmation of certification. An elected employee representative, responsible for verifying the application of regulations, is also present (Employee Safety Representatives, see indicator LA6).</p> <p>In regard to activities conducted on contract, Terna carries out inspections on its construction sites in order to verify the proper application of accident prevention rules by the responsible security professionals and the contractors.</p>
<b>Company Intranet "Environmental Safety &amp; Security" section</b>	<p>Within the corporate intranet there is a <b>database of legislation</b> on occupational safety (national and regional regulations, technical standards issued by competent bodies).</p>

### Awareness 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. In 2015, more than 75,000 hours of training were devoted to health and safety, of which over half were aimed at the Company's blue-collar workers (further training indicators are available on page 128).

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 training pylons) and for live-line work in a controlled environment.

### 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 tests safety materials and devices, measuring their reliability through resistance trials in extreme conditions (see also the paragraph “Technology and innovation” on page 69).

### Safety Improvement Plan: near miss

In regards to integrated environmental-safety security and the continuous safety improvement plan, in 2015 the “Near Miss: safety and environment” project was launched with the aim of identifying and analysing all unusual events, near misses and environmental accidents that occurred during working activities and that, although they had the potential to do so, did not harm people or the environment.

This project is an extremely important tool for prevention activities as it allows for corrective and improvement strategies and actions to be prepared which are necessary to prevent the recurrence of potentially damaging events in the future.

Significant targeted training and guidance concerning the introduction of the corporate procedure is an integral part of the project. It aims to raise awareness and promote the culture of reporting unusual events and foster the transition from a passive approach to safety, consisting exclusively of regulations, procedures and technical rules, to an active approach, which sees the human element at the centre of the safety system.

## Occupational injuries

In 2015, as in the two previous years, there were no fatal occupational injuries among 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 33.3% compared to 2014, from 36 to 24. In 2015 no serious injuries befell any Terna employees, as was also the case in 2014. Both the injury rate and the lost-day rate therefore declined with respect to the previous year. In addition, the absentee rate confirmed the downward trend (for more details on safety information and injury rates divided by type, please see the Key Indicator Tables on page 185).

G4-LA6

G4-LA7

**OCCUPATIONAL INJURIES – TERNA EMPLOYEES, GRI-ILO DEFINITIONS<sup>(\*)</sup>**

	2015	2014	2013
Injury Rate	0.84	1.27	1.42
Lost-Day Rate <sup>(1)</sup>	36.13	44.16	52.94
Absentee Rate <sup>(2)</sup>	7,186.1	7,092.3	7,432.2
Occupational Disease Rate <sup>(3)</sup>	0	0	0
Number of injuries	24	36	41
- of which serious	0	0	2
- of which fatal	0	0	0

(\*) As required by 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 abstinence 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 **4.2 in 2015, 6.3 in 2014, and 7.1 in 2013.**

**Lost-Day Rate.** This is the ratio between the 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 2015, 0.2 in 2014 and 0.3 in 2013.**

**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 **3.6 in 2015, 3.6 in 2014, and 3.7 in 2013.**

**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.

- (1) To calculate the lost-day rate, the days not worked related to injuries occurring in 2015 were considered together with any continued absence related to injuries occurring during the previous years, following the criterion of annual accrual of days of absence.
- (2) 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.
- (3) In 2015, as in previous years, no cases of work-related illness for Terna employees was ascertained. 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 demonstrated in the following table, in 2015 no fatal accidents occurred among employees of contractors and subcontractors. The only serious incident occurred during tree cutting activities.

**OCCUPATIONAL INJURIES – CONTRACTORS AND SUBCONTRACTORS, GRI-ILO DEFINITIONS**

	2015	2014	2013
Occupational injuries – contractors' employees	9	16	11
- of which serious	1	3	4
- of which fatal	0	2	2
Injury rate <sup>(1)</sup>	0.43	0.77	0.58

- (1) This is the number of injuries with at least one day's abstinence 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 **2.2 in 2015, 3.8 in 2014, and 2.9 in 2013.**

The health and safety systems in contractors' firms are described in the "Procurement" section on pages 89-90.

## Respect for human rights

The Terna Group operates in Italy, where the legal framework and the level of civil development largely 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.

Since December 2009, Terna has been part of the Global Compact, adopting its principles as a formal point of reference, after already having cited them since 2006 in its Code of Ethics. In virtue of this role, in 2014 the Audit Unit carried out a survey to gauge the employees' perception on the application of human rights within the company and towards suppliers. The survey investigated observance of the principles of the Global Compact by the Group companies, following the indications of the United Nations Ruggie Report in regard to human rights (see also page 52 of the 2014 Sustainability Report).

Without affecting 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 Resource and Organisation, Procurement and Contracts, and Corporate Protection Departments for guaranteeing respect for human rights, and workers' protection in contracted and subcontracted activities (see the "Procurement" paragraph on pages 86-92), and the Audit Unit for ensuring that Terna's Code of Ethics is correctly applied. The Corporate Social Responsibility Unit, finally, tracks changes in external references (e.g. international conventions).

G4-HR1

G4-HR2

G4-HR3

G4-HR4

G4-HR5

G4-HR6

G4-HR8

G4-HR9

G4-HR12

## Industrial relations

All Terna employees<sup>23</sup> are covered by the **collective labour agreement** adopted by companies in the **electricity industry**.

The National Collective Employment Contract (CCNL) provides for the establishment of a bilateral body – at the electricity industry level – on "Health, safety and the environment", to make proposals, verify, monitor and coordinate training on environmental and safety matters.

**Employee involvement in matters of health, safety and the environment** is currently regulated by law and by collective bargaining, which provide for the election of Employee Health, Safety and Environment Representatives (ESERs) by all the employees, thus representing 100% of the workforce.

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.

Trade union involvement in 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.

The **rate of unionisation of Terna employees in 2015 was equal to 49.6%**, down compared to previous years; union membership is concentrated in the biggest groups. 87.1% of those entitled to vote did so in the TUR-ESER elections on the 25-26 November 2015.

**During the three-year period 2013-2015**, negotiations with industry trade unions resulted in the **signing of 45 written agreements**.

In 2015, the company's industrial relations work saw the signing on 29 April of the regulatory framework agreement pursuant to Art. 4 of the Fornero law, which defined the new regulatory and economic framework at a national level, as well as the signing of the agreement that regulated the election of new Trade Union Representatives (TUR) and the appointment of Employee Health, Safety and Environment Representatives (ESERs) on 20 July.

G4-LA8

G4-LA5

G4-LA4

(23) Employees of the subsidiary Terna Crna Gora d.o.o., operating in Montenegro, are covered by an individual secondment contract. For any matters not expressly covered, reference should be made to the CCNL [national collective bargaining agreement] for the electricity sector. The national collective bargaining agreement for the metalworkers sector applies to Tamini Group employees.

#### G4-HR4 Regulation of strikes within the electricity service

Relations with trade unions in the industry also give rise to the **regulation of indispensable services** 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:

- 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.

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.

#### G4-LA12 Diversity and equal opportunities

##### G4-LA13

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** of Terna within Italy was 9.0% at the end of 2005 (the year in which Terna gained operating autonomy) and **has grown continually to reach 11.7% at the end of 2015**, which was matched by **18.2% of women holding managerial positions out of the total** (17.6% in 2014). 16.2% of all new employees, net of blue-collar workers, are women (27.1% in 2014).

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. Remuneration figures also show limited gaps between white-collar workers and junior executives, with wider gaps for senior executives where, however, fewer individuals are considered and the differences in salary are therefore more influenced by individual figures.

## EQUAL OPPORTUNITIES

Percentage values	2015	2014	2013
<i>Gender pay gap %<sup>(1)</sup></i>			
Senior executives	73.5	72.5	81.3
Junior executives	96.9	97.1	96.3
White-collar workers	97.0	95.3	95.1
<i>Gender remuneration gap %<sup>(2)</sup></i>			
Senior executives	67.5	71.2	78.5
Junior executives	100.1	100.9	98.2
White-collar workers	93.9	91.9	91.3

(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.

Almost all employees are Italian citizens (only 10 employees have foreign citizenship).

As of 31 December 2015, **131 people belonging to protected categories** (140 in 2014 and 140 in 2013) were employed, in line with the regulations applying to Terna. Further indicators of equal opportunities are available in the key indicator tables (page 184).

G4-EC6



## SOCIAL RESPONSIBILITY SOCIETY

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<b>144</b>	<b>Community initiatives</b>

# SOCIAL RESPONSIBILITY

## SOCIETY

### Our approach

Society understood in a general sense as the user of Terna's service, and the local communities more directly affected by grid investment projects, are key stakeholders.

#### G4-SO2

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

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

#### EU22

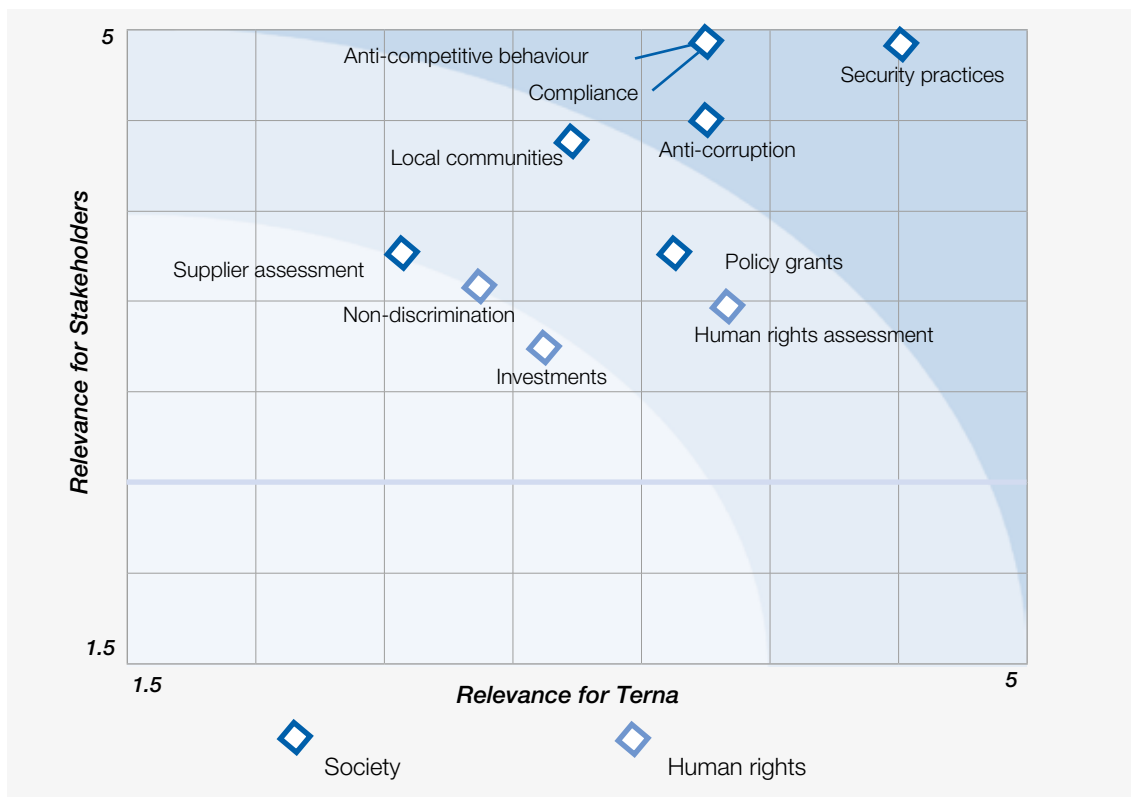
Although Terna is authorised by law to use an expropriation procedure (Italian Law No. 1775 of 1933 and Presidential Decree 327/2001, the "Consolidated Law on Expropriations") to obtain land, Terna prefers solutions based on mutual consent, paying one-off compensation for the right of way of the line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

#### POWER LINE EASEMENT

<i>Owners of land affected by the construction of new power lines (n)</i>	2015	2014	2013
<b>Total easements</b>	<b>10,962</b>	<b>12,072</b>	<b>10,179</b>
of which friendly	10,836	11,162	9,444
of which coercive	126	910	735

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

**MATERIALITY MATRIX – SOCIETY AND HUMAN RIGHTS ASPECTS OF G4**



Anti-corruption	pages 34-35; 48; 144-145; 183
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## Participation in associations

In line 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.

Internationally, Terna's commitment and influence within the ENTSO-E, the European body of grid operators committed to the process of integrating and coordinating electricity grids, were further strengthened by the appointment of Chief Executive Officer Matteo Del Fante as the Deputy Chairman (June 2015).

Terna is also involved in **GO15 (Reliable and Sustainable Power Grids)**, the international association that brings together the world's 18 largest electricity transmission grid operators in order to study issues concerning the safe operation of electricity networks, as well as **EASE (European Association for Storage of Energy)**, the European association that promotes research and industrial development in the field of applications of energy storage systems.

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, in turn, coordinates **BESTGRID** (see [www.bestgrid.eu](http://www.bestgrid.eu)), a project supported by the European Commission aimed at improving the acceptance of electricity grid development activities by citizens, by increasing transparency and opportunities for public participation in authorisation procedures (see the section "Consultation" on pages 61-62 and the box "Open Day: Terna meets local citizens" on pages 44-45 and the following box).

### Terna Holds the International Workshop "Grid Aesthetics" in Milan (19-20 May 2015)

The Italian version, organised in Milan by Terna, for BESTGRID: the project co-funded by the European Commission and coordinated by the RGI (Renewables Grid Initiative) was actually the setting for two days of discussion between TSOs, NGOs and academics on the theme of "Grid Aesthetics: how to engage stakeholders in landscape planning, design and aesthetics of grid infrastructure".

The workshop was organised in collaboration with Inspire-Grid, the European research project that aims to identify an interdisciplinary approach to increasing responsible stakeholder engagement in electricity grid development projects.

The first day of work involved sharing experience, methods and projects, provided visibility to Inspire-Grid and concluded with a public debate between architects Hugh Dutton, the creator of Terna's "Germoglio" pylon, and Henrik Skouboe, who made the "T-Pylon" used in France.

The second day, however, was entirely dedicated to visiting the sites of some works that were carried out by Terna in accordance with criteria that are consistent with the creation of greater acceptance of electrical works by local communities. The delegation was able to see the "Germoglio" pylons and the single-stem pylons up close along the 380 kV Trino-Lacchiarella and Chignolo Po-Maleo power lines. They also had the opportunity to visit Maleo power station and appreciate its integration within a hollow of an area designed for rice cultivation and the minimisation of its visual impact thanks to a masking initiative using vegetation that includes native trees and plant species on the embankments constructed around the station.

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:

- **IIRC – 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. Following on from its participation in its Pilot Programme, Terna is now part of the Business Network, which works with various companies and organisations at the global level to exchange experiences and best practices.
- **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 model for monitoring and assessing expenses for the community (see also pages 144-145).
- **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 2015 mainly as the promoter and founder of the Global Compact Network Italy Foundation (see also page 31).
- **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.
- **Anima per il sociale nei valori d'impresa** [the spirit of social responsibility within corporate values]: since 2010, Terna has been a member of this 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:** Terna became a member in 2011. The Foundation's 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. During 2014, Terna supported the research on “The role of the CSR manager: professional experiences and future prospects”, which studied career paths, current jobs and the expected developments for 45 CSR managers in Italian companies.
- **Procurement and Sustainability,** an association which carries out studies and makes it easier for companies to compare experiences to improve awareness of sustainability tools for responsible management of the supply chain.
- **GEO – The Green Economy Observatory:** IEFE observatory - Bocconi University that is developing the main themes on the green economy debate through research and development, dialogue, comparison and collaboration with institutions and enterprises.
- **Kyoto Club,** the non-profit organisation made up of businesses, bodies, associations and local administrations engaged in reaching greenhouse gas reduction targets set by the Kyoto Protocol and promoting awareness-raising and information initiatives and training within the fields of energy efficiency, renewable energy sources and sustainable mobility.
- **Transparency International Italia,** the Italian arm of the international organisation which works to fight corruption (see also page 34).



## G4-EC1 Community initiatives

In keeping with the desire to contribute to Italy's civil growth beyond its infrastructural role, Terna again in 2015 confirmed its support for social, cultural and environmental initiatives.

Terna's corporate giving work consists mainly in providing financial support to projects with social goals. 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. Each single *corporate giving* request is managed in keeping with the Group's "Corporate Giving Policy" and assessed by a specific commission made up of the Corporate Protection, External Relations and Communications, and Human Resource and Organisation Directors.

G4-SO6 In all cases, as established by Terna's Code of Ethics, contributions are never made to political parties or their representatives.

G4-EC7 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. The model is oriented to accounting for what is done by companies through initiatives that generate real external benefits; such initiatives may involve contributions in cash (gifts, portion of sponsorships that translates into a real benefit, membership of associations that promote CSR), in kind (e.g. transfer of corporate property at the end of its useful life) and working time. Accounting for contributions requires, in some cases, recourse to non-accounting criteria and is therefore subject to interpretation. However, it also 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. The following table shows the aggregate community initiatives, classified according to the LBG model, carried out by Terna in 2015.

## COMMUNITY INITIATIVES

Values in Euro	2015	2014	2013
<b>Total value of contributions (excluding internal overhead costs)</b>	<b>957,720</b>	<b>1,315,628</b>	<b>1,171,435</b>
<i>Breakdown by contribution type</i>			
In cash	873,124	1,064,850	1,050,670
In kind (donation of corporate property)	9,471	35,445	36,888
Working time	75,125	215,333	83,878
<i>Breakdown by initiative type (*)</i>			
Donations	370,687	452,949	511,015
Investment in the community	233,396	320,505	445,144
Commercial initiatives in the community	353,637	542,174	216,277
<i>Breakdown by purpose</i>			
Education and young people	165,024	400,545	410,790
Health	0	21,500	35,000
Economic development	204,138	245,355	161,300
Environment	74,000	98,800	160,100
Art and culture	361,489	443,083	283,767
Social welfare	40,000	20,000	2,629
Crisis support	5,682	27,445	53,100
Other	107,387	58,900	64,750

(\*) 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-to-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 continued on monitoring the effects of *corporate giving* initiatives. A Terna-LBG questionnaire was sent out for the most important initiatives. In this regard, please note:

Project	Partner	Area	Geographical area	Persons involved/ Beneficiaries	Results
<b>Frequenza 200</b>	We Word Intervita Onlus	Education and young people: tackling early school leaving	Piedmont, Lombardy, Lazio, Basilicata, Puglia, Sicily and Sardinia (14 centres in Milan, Turin, Rome, Naples, Palermo, Bari and Cagliari).	Throughout the year: 500 direct beneficiaries (young persons at risk of dropping out of school); 2,500 indirect beneficiaries.	Since the project was launched, 1,420 young people (amounting to 80% of the school pupils involved) completed the school year and continued their studies.
<b>Emergenza freddo 2015</b>	Fondazione Caritas Roma Onlus	Disadvantaged social groups	Rome	3,000	Distribution of basic provisions to homeless individuals in Rome.
<b>"Vittorio Emanuele II" Boarding School</b>	China Project 2015	Education and young people	Italy - China	188 students over the age of 16 (1-year stay in China).	Reinforce their knowledge of the language and Chinese culture.

## “Here Come Grandma and Grandpa”: presentation of the two-year monitoring results

The two-year partnership between Terna and ARCI Milan in support of the "Here Come Grandma and Grandpa" social project came to a close in December 2015 with the presentation of the final results of the monitoring of the effects on the beneficiaries, which was carried out by the SDA Bocconi School of Management.

"Here Come Grandma and Grandpa" is a regional welfare initiative run by the social promotion association ARCI Milan, which promotes active ageing for the elderly by engaging them in the organisation and management of creative and fun workshops at preschools in Milan. More specifically, throughout the 2013-2014 and 2014-2015 school years (the period in which Terna gave its support), 19 grandparents donated their services in 20 preschools, reaching over 2,000 children.

The monitoring verified the degree of achievement of the project's programme objectives and identified possible areas for improvement and their actual impacts, also with a view towards replicating them.

To this end, the following were carried out: questionnaires (at the start-up stage) with the grandparents and school headmistresses, focus groups (at the start-up stage, the development stage and at the end of the first project period) with school headmistresses, teaching staff, grandparents and children and in-depth interviews (at the end of the project) with the grandparents, school headmistresses and the project stakeholders (ARCI Milan, Terna, the City of Milan and Fondazione Sodalitas).

Monitoring found that:

- 71% of grandparents stated that they felt their skills had been enhanced – with particular reference to relational competences (80%) – over the course of the entire project. However, the relationships formed with the children were only able to extend beyond the specific school setting in 14% of cases;
- teaching staff felt that they were given help and support by the grandparents, who proved to be competent and sensitive participants;
- the children, whose opinion was gathered via a focus group conducted by a psychologist using a narration technique, identified the grandparents as being positive role models, of whom they retained a clear memory, followed their example and spoke about at home.

In terms of critical issues, the monitoring demonstrated a lack of definition concerning the integration of the grandparents within the schools and allowed for action to be taken in this regard in order to make the grandparents' recruitment, motivation and training stages more effective in particular, as well as the standardisation of the workshops.

The analysis conducted by the SDA Bocconi highlighted the following aspects that could be improved within the project: its visibility, which is still low, in order to increase the number of grandparents taking part; integration with other similar initiatives in the area and the involvement of new partners able to support the project, not only economically, but also in terms of skills and material donations.

In addition to the areas for improvement that are still outstanding, the project has established a replicability and scalability perspective that could, in the future, make its impact on the area even more significant.

## The Jus Vitae "Social Farm" project is ready to get under way in Sicily

The "Social Farm", the project aimed at socially enhancing the areas of land that Terna has given over to the Jus Vitae non-profit organisation on a free-loan basis for ten years, will become operational in spring 2016.

The "Social Farm" consists in a sustainable business integrated with cultural, educational, caring, training and employment services for the less fortunate.

A year after the agreement with Jus Vitae was signed, Terna completed the necessary preparatory work for the non-profit organisation to take over the land in Partinico (PA), Ciminna (PA) and Fulgatore (TP) in December 2015.

The work concentrated on the Partinico plot which, with its 8.5 hectares out of the overall 15 given on a free-loan basis to Jus Vitae, will be the main location of the farm. Here Terna renovated and extended the pre-existing property and made arrangements for utilities to be connected, renovated the rural storehouses and set up the entire area, road access and lightening. In addition, the sports field, play area and pool have almost been completed.

The other two plots will be used for agriculture (Fulgatore) and livestock farming (Ciminna), to which ends Jus Vitae has already began inspections to ascertain the best operational solutions.



## METHODOLOGICAL NOTE AND INDEX OF THE GRI-G4 CONTENTS

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## Methodological note

The Sustainability Report as at 31 December 2015 (hereinafter “Sustainability Report 2015”) of the Terna Group was prepared according to the **GRI-G4 guidelines** and the G4 “Sector Disclosure-Electric Utilities” update issued in 2013 by GRI - Global Reporting Initiative. 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 GRI-G4 guidelines were applied according to the **"CORE" option**.

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 2015; all data refer to the financial year ending on 31 December 2015. At the descriptive level, the significant changes occurring up to 15 March 2016 have also been indicated. In compliance with the principles outlined by the International Integrated Reporting Council (IIRC), Terna has published, with reference to 2015, the Integrated Report coinciding with the Report on Operations in the Annual Financial Report. 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.

## 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.

In 2013, Terna launched a process of identification of relevant issues for the company and its stakeholders. The analysis followed the principal of materiality, as described in the GRI-G4 standard and allowed for a materiality matrix to be prepared, as well as a thematic tree (topics grouped together with several levels of detail) on the basis of the parameters of "Relevance for the company" (issues that reflect the significant economic, social and environmental impacts of the organisation) and "Relevance for stakeholders" (issues that substantially affect stakeholders' assessments and choices).

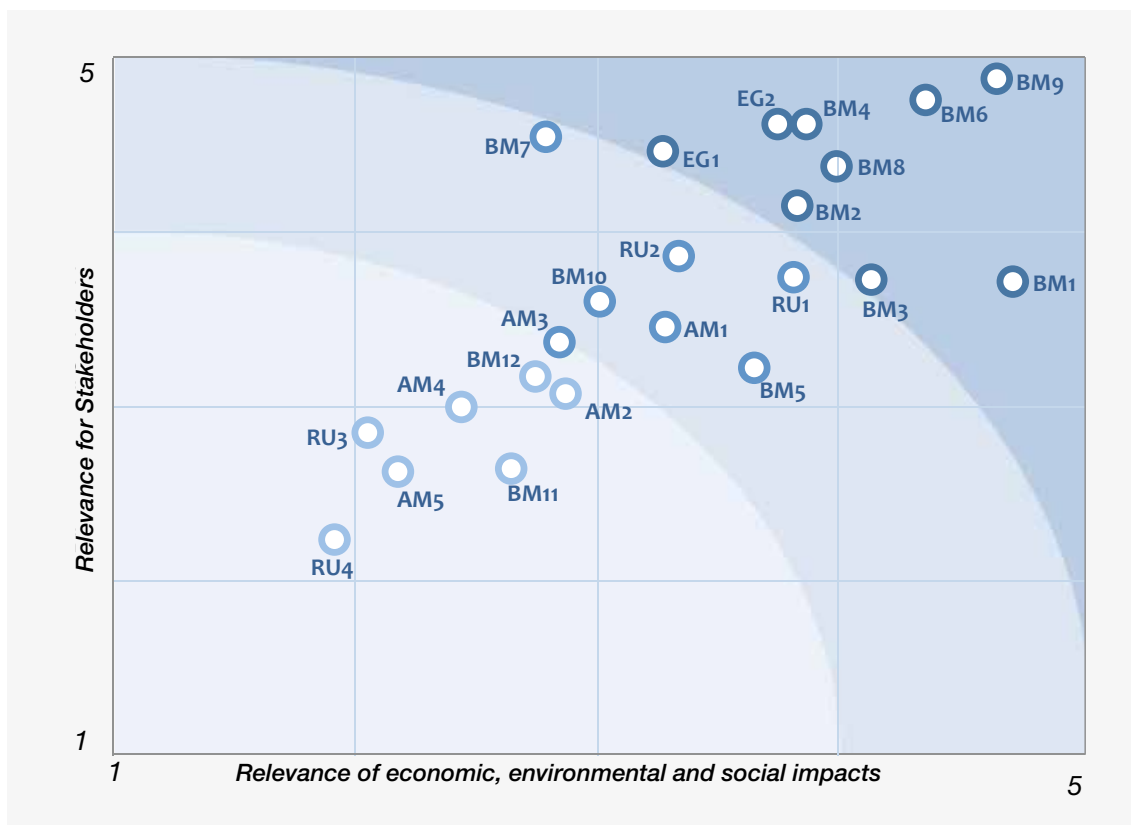
In 2014, the matrix was updated, considering new information on relevant issues, as well as their importance to stakeholders and for achieving corporate objectives. In particular, the following activities were undertaken.

- Updating the prioritisation of issues 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 update was prepared via the analysis of documentation relating to 2014 (e.g. internal policies, the Development Plan and appropriate consultations, the Strategic Plan, press reviews, in-house publications, the Sustainability Plan, BSC and sustainability rating agency questionnaires, etc.), integrating the changes with the evidence that emerged in 2013, to achieve the "**Relevance for Terna**" aspect.
- Updating the prioritisation of the issues for the "**Relevance for Stakeholders**" aspect. The update was prepared via the analysis of revised documentation (e.g. the AEEGSI Strategic Plan, ANIE Annual Report, AGCM Annual Report, ASSOELETRICA Report, Greenpeace Report, local and national press reviews, evidence from Terna interviews carried out as part of the new mapping of stakeholders). A qualitative-quantitative model was subsequently developed which allows for the issues to be prioritised via three variables:
  - the relevance of the issue for every category of stakeholder;
  - the influence of each category of stakeholder which considers the new mapping and the stakeholder importance ranking conducted in 2014;
  - the number of categories of stakeholders interested in the topic.

After having validated the results obtained for the two dimensions, the 2014 Materiality Matrix was calculated, which highlights the relevant issues and their position in relation to the relevance for corporate strategies (Relevance for Terna) and to the relevance that the company's reference stakeholders attribute to them (Perceived relevance).

Terna implemented a Stakeholders' Management Model in 2015 (for details, please see page 38) which includes a thorough review of the 2016 Materiality Matrix and its subsequent annual updates. Given the substantial continuity to the strategic business approach, the **2015 Materiality Matrix** is the same as the one published the previous year.

### THE TERNA GROUP'S MATERIALITY MATRIX



#### Key

##### 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
- AM5** 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

##### 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

In order to clarify the relationship between the materiality matrix (in which the Terna's key priorities are found) and the handling of the G4 indicators and aspects in the Sustainability Report, one or more Terna key priorities of 2nd or 3rd level has been attributed to each G4 indicator, with the respective values for "Relevance for Terna" and "Relevance for Stakeholders". The rating for each G4 indicator was then calculated and, by grouping the indicators by aspect, a relevance evaluation for each G4 aspect was obtained.

This allowed for the "G4 Materiality Matrices" to be calculated for each GRI-G4 information context (economic, environmental and social), which illustrate the position of the various aspects on the axes of "Relevance for Terna" and "Relevance for Stakeholders" (please see pages 77; 97; 123 e 141). Lastly, we note that the "Aspects" relative to management of the "reporting mechanisms" are not shown in the individual matrices but dealt with together in the relative paragraph on pages 48-49.

### Structure of the Report

The chapter divisions in the Report are the same as in previous years. After the Terna Company profile and relations with stakeholders 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 are integrated into a single text, giving 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](http://www.terna.it) on the "Tools" page using the following link: <http://www.terna.it/en-gb/sostenibilita/strumenti.aspx>.

### Scope and indicators

The data and information in the 2015 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 2015, except – except where explicitly mentioned – the Tamini Group, acquired by the subsidiary Terna Plus on the 20 May 2014. However, this year certain environmental and social indicators are available for the Tamini Group, which are shown in the key indicator tables.

In accordance with the principle of materiality, 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 S.p.A. 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 work abroad – including that of the Montenegrin Terna Crna Gora d.o.o. – did not involve operating activities for the whole of 2015 with significant external impacts (e.g. activities involving construction infrastructure). For this reason, foreign activities 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-G4 Content Index, which also includes any limitations relative to the requirements.

Concerning the 2014 Report, we note the presence of 3 new indicators:

- G4-EN14 (Number of species included on the IUCN International Red List whose habitat is within the business' areas of operation, divided by extinction risk level);
- G4-EN18 (Carbon intensity);
- G4-LA7 (Employees at a high risk of work-related illness).

## Comparative Analysis of Sustainability Performance

Convinced that a comparison of environmental, social and governance performance is of interest, not only to the Company itself, but also to its stakeholders, certain comparisons between Terna's results and those of other companies are included in the 2015 Sustainability Report, as was the case in previous years. For 2015, the comparisons were focused on four indicators: CO<sub>2</sub> emissions, SF<sub>6</sub> leakage incidence rate, hours of training per capita provided to employees and the turnover rate on termination.

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: the first was composed of the European transmission system operators and the major non-European operators in terms of kilometres of lines managed; the second, multi-sectoral in nature, is made up of large Italian companies (the 40 listed companies of the FTSE-MIB at 21 January 2015); the third formed by the best international performers in the "Electric Utilities - ELC" sector (identified by the RobecoSAM sustainability rating agency and included in the Dow Jones Sustainability World Index of September 2015). 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 a comparison with top international performers in the same sector;
- the companies considered from among those in the three panels were those which publicise the information necessary for comparisons either 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 number of companies in the starting panel;
- the comparative analysis entails reference to 2014 data, since the comparisons were drafted when the 2015 Reports were still being prepared, as was the case for Terna.

It must be noted that, despite the exclusion of data which were explicitly not consistent, in numerous cases doubts remain as to the actual comparability between companies, especially in instances where significant discrepancies exist between the declared data of some companies and the average value of the reference Group.

In the CO<sub>2</sub> emissions comparison, the data 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 this case, 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, please see the Terna website (where the comparisons regarding water consumption, waste production and the gender pay gap are also published) and the note "Comparing sustainability performance: Terna's experience" in the study "Beyond the financial figures: companies and collective well-being", drafted by the CSR Manager Network and ISTAT, and available on their respective websites.

## GRI-G4 content index

The GRI-G4 content index is a table in which each indicator is associated with a page reference within the document where the information relating to it can be found.

	Page
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G4-36	30-31; 31-32; Report on Corporate Governance and Ownership Structures
G4-37	Report on Corporate Governance and Ownership Structures
G4-38	Report on Corporate Governance and Ownership Structures
G4-39	Report on Corporate Governance and Ownership Structures
G4-40	Report on Corporate Governance and Ownership Structures
G4-41	Report on Corporate Governance and Ownership Structures
G4-42	30-31; 31-32; Report on Corporate Governance and Ownership Structures
G4-44	Report on Corporate Governance and Ownership Structures
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G4-46	Report on Corporate Governance and Ownership Structures
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G4-48	31-32; 153
G4-51	Report on Corporate Governance and Ownership Structures
G4-52	Report on Corporate Governance and Ownership Structures
G4-53	Report on Corporate Governance and Ownership Structures
<b>7. Ethical Integrity</b>	
G4-56	31-33; Report on Corporate Governance and Ownership Structures
G4-57	48-49; 44-45 <sup>(1)</sup>
G4-58	48-49; 44-45 <sup>(1)</sup>

(1) These pages refer to the Code of Ethics, which is available online at [www.terna.it](http://www.terna.it)



## LIST OF G4 MATERIAL PERFORMANCE ASPECTS AND INDICATORS

### Economic aspects

Code	ASPECT/Indicator	Page	Limitation and notes
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G4-EC1	Direct economic value generated and distributed.	78; 144; 176	
G4-EC2	Economic-financial implications connected to climate change.	105	
G4-EC3	Coverage of the organization's defined benefit plan obligations.	130; Integrated Report	
G4-EC4	Significant governmental economic aid.	80	
	INDIRECT ECONOMIC IMPACTS	76-77; 79-80 144-147	
G4-EC7	Impacts of infrastructure investments and supported services.	61; 144	
G4-EC8	Understanding and describing significant indirect economic impacts, including the extent of impacts.	79	
	SUPPLIER MANAGEMENT	76-77; 86-92	
G4-EC9	Proportion of spending on locally-based suppliers.	86; 178	

### Environmental aspects

Code	ASPECT/Indicator	Page	Limitation and notes
	MATERIALS	96-97; 116-117	
G4-EN1	Materials used by weight or volume.	116; 181	
G4-EN2	Percentage of materials used that are recycled input materials.	181	
	ENERGY	96-97; 53; 105	
G4-EN3	Energy consumption within the organisation divided by primary energy source.	107; 181	
G4-EN5	Energy intensity.	107	Available as of 2014.
G4-EN6	Reduction in energy consumption.	113	
	BIODIVERSITY	96-97; 103-105	
G4-EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	103; 183	
G4-EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	60; 103-105	
G4-EN13	Habitats protected or restored.	101; 103	
G4-EN14	Number of species included on the IUCN International Red List whose habitat is within the business' areas of operation, divided by extinction risk level.	104	Available as of 2015.
	EMISSIONS	96-97; 105	
G4-EN15	Total direct greenhouse gas emissions by weight (aim I).	109; 179	
G4-EN16	Indirect greenhouse gas emissions by weight (aim II).	109; 179	
G4-EN17	Other indirect greenhouse gas emissions (aim III).	111; 179	
G4-EN18	Carbon intensity.	110; 179	Available as of 2015.
G4-EN19	Initiatives to reduce greenhouse gas emissions and reductions achieved.	112	

Code	ASPECT/Indicator	Page	Limitation and notes
G4-EN20	Emissions of ozone-depleting substances by weight.	179	
G4-EN21	NO <sub>x</sub> , SO <sub>x</sub> , and other significant air emissions by type and weight.	179	
	WASTE	96-97; 116-117	
G4-EN23	Total weight of waste by type and disposal method.	116-117; 180	
G4-EN24	Total number and volumes of significant spills.	98	
	PRODUCTS AND SERVICES	96-97; 98	
G4-EN27	Environmental impact mitigation of products and services.	61; 99; 103-104	
	COMPLIANCE	96-97; 31-33 34-35	
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	48; 98	
	TRANSPORT	96-97; 112	
G4-EN30	Significant environmental impacts of transporting other goods and materials used for the organization's operations, and transporting members of the workforce.	112; 179	
	GENERAL (COSTS FOR THE ENVIRONMENT)	96-97; 118-119	
G4-EN31	Total environmental protection expenditures and investments by type.	118-119; 183	
	SUPPLIER ENVIRONMENTAL ASSESSMENT	86-92	
G4-EN32	Proportion of new suppliers assessed on environmental criteria.	86-92	Available as of 2014.
G4-EN33	Proportion of critical existing suppliers in terms of environmental impacts analysed for performance and corrective actions taken.	86-92	Available as of 2014.
	ENVIRONMENTAL REPORTING MECHANISMS	49	
G4-EN34	Number of disputes concerning environmental impacts recorded, addressed and managed through formal resolution mechanisms.	48	

## Social aspects

### Appropriate working practices and conditions

Code	ASPECT/Indicator	Page	Limitation and notes
	EMPLOYMENT	86-92; 122-123 124-126	
G4-LA1	Total number of employee hires and employee turnover by age group, gender and region.	124; 182 183	
G4-LA2	Benefits provided to permanent employees that are not provided for temporary or part-time employees.	129	
G4-LA3	Return rate after parental leave by gender.	130	
	INDUSTRIAL RELATIONS	122-123 135-136	
G4-LA4	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	135	
	OCCUPATIONAL HEALTH AND SAFETY	122-123; 130 132-134	
G4-LA5	Percentage of total workforce represented in the health and safety committee.	135	
G4-LA6	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities, by region.	133-134; 187	
G4-LA7	Employees at a high risk of work-related illness.	133-134; 187	Available as of 2015.
G4-LA8	Health and safety trade union agreements.	135	

Code	ASPECT/Indicator	Page	Limitation and notes
	TRAINING	122-123 128; 185	
G4-LA9	Average hours of training per year per employee by gender and by employee category.	128; 185	
	DIVERSITY AND EQUAL OPPORTUNITIES	122-123 136-137	
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	124; 136-137 173; 184; 186	
	EQUAL REMUNERATION FOR MEN AND WOMEN	122-123 136; 137	
G4-LA13	Ratio of basic salary of women to men by employee category for each significant country.	136-137 186	
	SUPPLIER ASSESSMENT FOR LABOUR PRACTICES	86-92	
G4-LA14	Proportion of new supplier partners analysed in terms of labour practices and actions taken.	86-92	Available as of 2014.
G4-LA15	Proportion of critical existing suppliers analysed in terms of labour practices and actions taken.	86-92	Available as of 2014.
	REPORTING MECHANISMS FOR LABOUR PRACTICES	48-49	
G4-LA16	Number of disputes concerning labour practices recorded, addressed and managed through formal resolution mechanisms.	48-49; 174	

## Human rights

Code	ASPECT/Indicator	Page	Limitation and notes
	INVESTMENTS	33; 83-84; 89 122-123; 135	
G4-HR1	Number and proportion of investments that include clauses concerning human rights.	135	
G4-HR2	Total hours of employee training on policies and procedures concerning human rights and percentage of employees trained.	35; 135; 185	
	NON-DISCRIMINATION	122-123; 135 136-137	
G4-HR3	Total number of incidents of discrimination and actions taken.	135	
	ASSESSMENT	122-123; 135	
G4-HR9	Identification and proportion of operations that were subject to assessments concerning human rights.	135	
	SUPPLIER HUMAN RIGHTS ASSESSMENT	86-92	
G4-HR10	Proportion of new suppliers analysed in terms of labour practices concerning human rights.	86-92	Available as of 2014.
G4-HR11	Proportion of critical existing suppliers analysed in terms of human rights and actions taken.	86-92	Available as of 2014.
	REPORTING MECHANISMS FOR HUMAN RIGHTS	48-49	
G4-HR12	Number of disputes concerning human rights recorded, addressed and managed through formal resolution mechanisms.	48-49; 135 174	

**Company**

<b>Code</b>	<b>ASPECT/Indicator</b>	<b>Page</b>	<b>Limitation and notes</b>
	LOCAL COMMUNITIES	140-141; 42 44-46; 61-62 142	
G4-SO1	Proportion of operations that implemented engagement programmes, impact assessments and local development programmes.	44-46; 61-62	
G4-SO2	Operations with potential or actual negative impacts on local communities.	99-102; 140	
	ANTI-CORRUPTION	140-141; 34-35 144-145	
G4-SO3	Proportion of business units analysed for the risk of corruption and risks identified.	34-35	
G4-SO4	Notification on policies and staff training on anti-corruption.	35; 185	
G4-SO5	Actions taken in response to incidents of corruption.	34; 48	
	POLITICAL CONTRIBUTIONS (APPROACH TO POLITICS/INSTITUTIONS)	140-141; 39	
G4-SO6	Total value of financial and in-kind contributions to political parties, politicians, and institutions by country and beneficiary.	144	
	ANTI-COMPETITIVE BEHAVIOUR	140-141 18-20; 93	
G4-SO7	Total legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcomes.	48	
	COMPLIANCE	140-141; 31-33 34-35	
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	48	
	SUPPLIER ASSESSMENT FOR IMPACT ON SOCIETY	86-92	
G4-SO9	Proportion of new suppliers analysed in terms of social performance.	86-92	
G4-SO10	Proportion of existing suppliers and other critical business partners analysed in terms of social performance and actions undertaken.	86-92	
	REPORTING MECHANISMS FOR IMPACTS ON SOCIETY	48-49	
G4-SO11	Number of disputes concerning social impacts recorded, addressed and managed through formal resolution mechanisms.	48-49; 174	

**Product responsibility**

<b>Code</b>	<b>ASPECT/Indicator</b>	<b>Page</b>	<b>Limitation and notes</b>
	PRIVACY POLICY	76-77; 52; 59	
G4-PR8	Number of complaints regarding breaches of customer privacy and losses of customer data.	59	
	COMPLIANCE	76-77; 31-33 34-35	
G4-PR9	Amount of fines for the violation of regulations concerning supply and the use of products and services.	48	

## LIST OF G4 MATERIAL PERFORMANCE INDICATORS PUBLISHED IN THE ELECTRIC UTILITIES SECTOR SUPPLEMENT (EUSS)

Code	ASPECT/Indicator	Page	Limitation and notes
	ORGANISATIONAL PROFILE	8; 18-20 21-26; 30-31	
EU3	Number of residential, industrial and commercial customer accounts.	93; 178	
EU4	Length of above and underground transmission and distribution lines by regulatory regime.	175	
	AVAILABILITY AND RELIABILITY	76-77; 23-25 54-58; 58 69-71	
	RESEARCH AND DEVELOPMENT	76-77; 69-71	
	SYSTEM EFFICIENCY	52; 76-77	
EU12	Transmission and distribution efficiency (grid losses) as a percentage of total energy.	111	
	BIODIVERSITY	96-97 103-105	
EU13	Biodiversity of offset habitats compared to the biodiversity of the affected areas.	101; 103	
	EMPLOYMENT	86-92; 122- 123 124-125; 127	
EU15	Percentage of employees eligible to retire in the next 5 and 10 years broken down by job category and by region.	125	
EU17	Days worked by contractor and subcontractor employees involved in construction, operation & maintenance activities.	89; 184	
EU18	Percentage of contractor and subcontractor employees that have undergone relevant health and safety training.	90	
	LOCAL COMMUNITIES	140-141; 42 44-46; 61-62 142	
EU22	Number of people physically or economically displaced, broken down by type of project, generation plants or transmission lines.	140	
	SECURITY PRACTICES	140-141 58-59	
	CUSTOMER HEALTH AND SAFETY (COMMUNITY)	96-97; 102	
EU25	Number of injuries and fatalities to the public involving company assets, including legal judgements, settlements and pending legal cases of diseases.	48	
	ACCESS TO THE SERVICE	8-9; 67-68	
EU28	Interruption frequency index (SAIFI).	54-56	
EU29	Average power outage duration (AIT).	54-56	

## LIST OF OTHER G4 PERFORMANCE INDICATORS PUBLISHED

In line with previous years, it has been decided to publish some indicators despite the aspects they illustrate being assessed as under the materiality threshold (see the section on the materiality analysis on pages 140-142).

Code	ASPECT/Indicator	Page
G4-EC6	Proportion of senior management hired from the local community.	137
G4-EN8	Total water withdrawal divided by source.	181
G4-HR4	Operations and 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.	31; 89; 135; 36
G4-HR5	Operations and suppliers identified as having significant risk for incidents of child labour and the measures taken regarding labour rights and the rights that contribute to the elimination of child labour.	31; 89; 135
G4-HR6	Operations and 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.	31; 89; 135
G4-HR8	Total number of incidents of violations involving rights of indigenous people and actions taken.	135



## Correspondence between the GRI-G4 indicators and the Global Compact principles

This table shows the correlation between the GRI G4 performance indicators applicable to Terna and each of the ten principles of the Global Compact. This is to facilitate the search for relevant information for stakeholders interested in evaluating Terna's implementation of the principles.

AREA	Global Compact Principle	GRI G4 Aspect and Indicators	Page of the Report
HUMAN RIGHTS	<b>Principle 1</b> Businesses should <b>support and respect</b> the protection of internationally proclaimed <b>human rights</b> .	<b>Human rights</b>	
		"Investment" Aspect	G4-HR2 35; 135; 185
		"Indigenous Rights" Aspect	G4-HR8 135
		"Assessment" Aspect	G4-HR9 135
		<b>Company</b>	
	"Grievance Mechanisms" Aspect	G4-HR12 48-49; 135; 174	
	"Local Communities" Aspect	G4-SO1 44-46; 61-62	
	G4-SO2 99-102; 140		
	G4-SO10 86-92		
	LABOUR	<b>Principle 2</b> Businesses should <b>make sure they are not complicit in human rights abuses</b> .	<b>Human rights</b>
"Investment" Aspect			G4-HR1 135
"Supplier Human Rights Assessment" Aspect			G4-HR10 86-92
<b>Principle 3</b> Businesses should <b>uphold the freedom of association and the effective recognition of the right to collective bargaining</b> .		<b>Human rights</b>	
		"Investment" Aspect	G4-HR1 135
		"Supplier Human Rights Assessment" Aspect	G4-HR10 86-92
		G4-HR11 86-92	
<b>Labour</b>			
"Labour/Management Relations" Aspect		G4-LA4 135	
<b>Principle 4</b> Businesses should uphold the <b>elimination of all forms of forced and compulsory labour</b> .		<b>Human rights</b>	
	"Forced or Compulsory Labour" Aspect	G4-HR6 31; 89; 135	
	<b>Principle 5</b> Businesses should uphold the <b>effective abolition of child labour</b> .	<b>Human rights</b>	
"Child Labour" Aspect		G4-HR5 31; 89; 135	
<b>Principle 6</b> Businesses should uphold the <b>elimination of discrimination</b> in respect of employment and occupation.	<b>Economic</b>		
	"Market Presence" Aspect	G4-EC2 105	
	<b>Labour Practices and Decent Work</b>		
	"Employment" Aspect	G4-LA1 124; 184; 185	
	G4-LA3 130		
	"Training and Education" Aspect	G4-LA9 128; 185	
	"Diversity and Equal Opportunity" Aspect	G4-LA12 124; 136-137; 173; 184; 186	
	"Equal Remuneration for Women and Men" Aspect	G4-LA13 136-137; 186	
<b>Human rights</b>			
"Non-discrimination" Aspect	G4-HR3 135		

AREA	Global Compact Principle	GRI G4 Aspect and Indicator	Page of the Report
		<b>Environment</b>	
		“Materials” Aspect	G4-EN1 116; 181
		“Energy” Aspect	G4-EN3 107; 181
		“Water” Aspect	G4-EN8 181
		“Emissions” Aspect	G4-EN15 109; 179
	<b>Principle 7</b>		G4-EN16 109; 179
	Businesses should support a precautionary <b>approach to environmental challenges.</b>		G4-EN17 111; 179
			G4-EN20 179
			G4-EN21 179
		“Products and Services” Aspect	G4-EN27 61; 99
			103-104
		“Overall” Aspect	G4-EN31 118-119
			183
		<b>Environment</b>	
		“Materials” Aspect	G4-EN1 116; 181
			G4-EN2 181
		“Energy” Aspect	G4-EN3 107; 181
		“Water” Aspect	G4-EN8 181
		“Biodiversity” Aspect	G4-EN11 103; 183
			G4-EN12 60; 103-105
			G4-EN13 101-103
			G4-EN14 104
		“Emissions” Aspect	G4-EN15 109; 179
			G4-EN16 109; 179
			G4-EN17 111; 179
			G4-EN18 134
			G4-EN19 112
	<b>Principle 8</b>		G4-EN20 179
	Businesses should undertake initiatives to promote <b>greater environmental responsibility.</b>		G4-EN21 179
		“Waste” Aspect	G4-EN23 116-117;
			G4-EN24 175
		“Products and Services” Aspect	G4-EN27 98
			61; 99
		“Compliance” Aspect	G4-EN29 103-104
		“Transport” Aspect	G4-EN30 48; 98
		“Overall” Aspect	G4-EN31 112; 179
			118-119
		“Supplier Environmental Assessment” Aspect	G4-EN32 183
			G4-EN33 86-92
			86-92
		“Grievance Mechanisms for Environmental Issues”	G4-EN34 48
		<b>Environment</b>	
		“Energy” Aspect	G4-EN3; 107; 181
			G4-EN5 107
			G4-EN6 113
	<b>Principle 9</b>		G4-EN19 112
	Businesses should encourage the <b>development and diffusion of environmentally friendly technologies.</b>	“Emissions” Aspect	G4-EN19 112
		“Products and Services” Aspect	G4-EN27 61; 99
			103-104
		“Overall” Aspect	G4-EN31 118-119;
			183
		<b>Company</b>	
	<b>Principle 10</b>	“Anti-corruption” Aspect	G4-SO3 34-35
	Businesses should work <b>against corruption in all its forms</b> , including extortion and bribery.		G4-SO4 35; 185
			G4-SO5 34; 48
		“Public Policy” Aspect	G4-SO6 144

Source: Official site Global Compact (<http://www.unglobalcompact.org/resources/306>) “*Making the Connection: Using the GRI G4 Guidelines to Communicate Progress on the UN Global Compact Principles*”, May 2013.

## The United Nations Sustainable Development Goals (SDGs)

Approved in September 2015 by the 193 member states of the United Nations, the 17 Sustainable Development Goals (SDGs) form the core of the 2030 Agenda, the global plan intended to eliminate poverty and promote economic prosperity, social development and environmental protection within the next 15 years.

Compared to the 8 Millennium Development Goals (MDGs) contained in the previous Agenda published in 2000, and which concluded in 2015, this new universal pact summarises the "5P" formula - People, Planet, Prosperity, Peace and Partnership - the major priorities of mankind: to eliminate the main causes of poverty and focus on lasting development for all via a sustainable route that is able to integrate economic, social and environmental aspects and to identify new opportunities for growth at the same time.

It is important to note that, unlike for the MDGs, the countries that adhered to the SDGs are required to formulate national support strategies. Therefore companies can also measure themselves against national targets, with which they can compare their undertakings. To that effect, an additional important change in regards to the past is constituted by Global Compact's active role in urging companies to accept the common challenge presented by the SDGs, thereby combining the capacity for identifying new business opportunities with responsible practices.

The 17 SDGs are divided into 169 sub-objectives that touch on many sustainability issues (see "Transforming our World: the 2030 Agenda for Sustainable Development"<sup>(24)</sup>). The following table shows the relationship between the issues and the GRI indicators published within this Report, which is the result of the adoption of the "SDG Compass" guide prepared by GRI, UN Global Compact and the World Business Council for Sustainable Development (WBCSD)<sup>(25)</sup>.

(24) <https://sustainabledevelopment.un.org/post2015/transformingourworld>.

(25) [http://sdgcompass.org/wp-content/uploads/2015/12/019104\\_SDG\\_Compass\\_Guide\\_2015.pdf](http://sdgcompass.org/wp-content/uploads/2015/12/019104_SDG_Compass_Guide_2015.pdf)

## RELATIONSHIP BETWEEN SDGs AND GRI INDICATORS

<b>GOAL 1 – No poverty</b> End poverty in all its forms everywhere.	
Topic	GRI Indicator
Access to the land	G4-SO2
The availability of products and services for people on a low income	G4-SO8
Earnings, salaries and benefits	G4-EC5
Economic development in high-poverty areas	G4-EC8
Economic inclusion	G4-DMA-b – Procurement Practices Guide
Access to electricity	EU28; EU29
<b>GOAL 2 – Zero hunger</b> End hunger, achieve food security and improved nutrition and promote sustainable agriculture.	
Topic	GRI Indicator
Access to the land	G4-SO2
Change the productivity of organisations, sectors or the entire economy	G4-EC8
Investments in infrastructure	G4-EC1; G4-EC7
Physical or economic relocation	EU22
<b>GOAL 3 – Health and well-being</b> Ensure healthy lives and promote well-being for all at all ages.	
Topic	GRI Indicator
Access to medicine	G4-EC8
Air quality	G4-EN15; G4-EN16; G4-EN17; G4-EN20 G4-EN21
Occupational health and safety	G4-LA6; G4-LA7
Spills	G4-EN24
<b>GOAL 4 – Quality education</b> Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	
Topic	GRI Indicator
Professional education and training	G4-LA9
<b>GOAL 5 – Gender equality</b> Achieve gender equality and empower all women and girls	
Topic	GRI Indicator
Economic inclusion	G4-DMA-b – Procurement Practices Guide
Equal remuneration for men and women	G4-LA13
Gender equality	G4-LA1; G4-LA9; G4-LA12
Investments in infrastructure	G4-EC1; G4-EC7
Non-discrimination	G4-HR3
Parental leave	G4-LA3
Women holding managerial positions	G4-38; G3-40; G4-LA15
Harassment and violence at work	G4-LA14; G4-LA15
<b>GOAL 6 – Clean water and sanitation</b> Ensure availability and sustainable management of water and sanitation for all.	
Topic	GRI Indicator
Spills	G4-EN24
Sustainable water withdrawal	G4-EN8; G4-EN27
Waste	G4-EN23
Water-related ecosystems and biodiversity	G4-EN11; G4-EN12; G4-EN13; G4-EN14 G4-EN24; EU13

**GOAL 7 – Affordable and clean energy**

Ensure access to affordable, reliable, sustainable and modern energy for all.

Topic	GRI Indicator
Access to electricity	EU28; EU29
Energy efficiency	G4-EN3; G4-EN5; G4-EN6; EU12
Investments for the environment	G4-EN31
Investments in infrastructure	G4-EC1; G4-EC7
Renewable energy sources	G4-EN3

**GOAL 8 – Decent work and economic growth**

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Topic	GRI Indicator
Elimination of child labour	G4-HR5
Availability of a skilled workforce	EU15
Change the productivity of organisations, sectors or the entire economy	G4-EC8
Change the productivity of organisations, sectors or the entire economy	G4-EC8
Diversity and equal opportunities	G4-LA12
Earnings, salaries and benefits	G4-EC5; G4-LA2
Economic inclusion	G4-DMA-b – Procurement Practices Guide
Economic performance	G4-EC1
Elimination of forced or compulsory labour	G4-HR6
Professional education and training	G4-LA9
Employment	G4-10; G4-EC6; G4-LA1
Energy efficiency	G4-EN3; G4-EN5; G4-EN6; EU12
Equal remuneration for men and women	G4-LA13
Freedom of association and collective bargaining	G4-11; G4-HR4
Indirect impact on the creation of new jobs	G4-EC8
Jobs within the supply chain	G4-EC8
Labour practices within the supply chain	G4-LA14; G4-LA15
Industrial relations	G4-LA4
Efficiency of materials used	G4-EN1; G4-EN2
Non-discrimination	G4-HR3
Occupational health and safety	G4-LA5; G4-LA6; G4-LA7; G4-LA8
Parental leave	G4-LA3
Improve the efficiency of resources for products and services	G4-EN27
Youth employment	G4-EC1

**GOAL 9 – Industry, innovation and infrastructure**

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

Topic	GRI Indicator
Investments for the environment	G4-EN31
Investments in infrastructure	G4-EC1; G4-EC7
Research and development	G4-EC1; G4-EN31

**GOAL 10 – Reduce inequalities**

Reduce inequality within and among countries.

Topic	GRI Indicator
Economic development in high-poverty areas	G4-EC8
Equal remuneration for men and women	G4-LA13
Direct investments abroad	G4-EC8

**GOAL 11 – Sustainable cities and communities**

Make cities and human settlements inclusive, safe, resilient and sustainable.

Topic	GRI Indicator
Investments in infrastructure	G4-EC1
Sustainable transport	G4-EN30

**GOAL 12 – Responsible consumption and production**

Ensure sustainable consumption and production patterns.

Topic	GRI Indicator
Air quality	G4-EN15; G4-EN16; G4-EN17; G4-EN20; G4-EN21
Energy efficiency	G4-EN3; G4-EN5; G4-EN6; EU12
Investments for the environment	G4-EN31
Efficient utilisation/material recycling	G4-EN1; G4-EN2
Tender practices	G4-EC9
Improve the efficiency of resources for products and services	G4-EN27
Spills	G4-EN24
Transport	G4-EN30
Waste	G4-EN23; G4-EN27

**GOAL 13 – Climate action**

Take urgent action to combat climate change and its impacts.

Topic	GRI Indicator
Energy efficiency	G4-EN3; G4-EN5; G4-EN6; EU12
Investments for the environment	G4-EN31
GHG emissions	G4-EN15; G4-EN16; G4-EN17; G4-EN18 G4-EN19; G4-EN27; G4-EN30
Climate change risks and opportunities	G4-EC2

**GOAL 14 – Life below water**

Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

Topic	GRI Indicator
Investments for the environment	G4-EN31
Marine biodiversity	G4-EN11; G4-EN12; G4-EN13; G4-EN14; EU13
Ocean acidification	G4-EN15; G4-EN16; G4-EN17; G4-EN18 G4-EN19; G4-EN21; G4-EN27; EU12
Spills	G4-EN24

**GOAL 15 – Life on land**

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Topic	GRI Indicator
Investments for the environment	G4-EN31
Forest degradation	G4-EN15; G4-EN16; G4-EN17; G4-EN18 G4-EN19; G4-EN21; G4-EN27
Mountain ecosystems	G4-EN11; G4-EN12; G4-EN13; G4-EN14; EU13
Degradation of natural habitats	G4-EN11; G4-EN12; G4-EN13; G4-EN14; EU13
Spills	G4-EN24
Terrestrial ecosystems and fresh water	G4-EN11; G4-EN12; G4-EN13; G4-EN14; EU13

**GOAL 16 – Peace, justice and strong institutions**

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

Topic	GRI Indicator
Elimination of child labour	G4-HR5
Anti-corruption	G4-SO3; G4-SO4; G4-SO5; G4-SO6
Compliance with laws and regulations	G4-EN29; G4-SO7; G4-SO8; G4-PR8; G4-PR9
Effective, responsible and transparent governance	G4-39; G4-41
Ethics and integrity	G4-56; G4-57; G4-58
Reporting mechanisms	G4-EN34; G4-LA16; G4-HR12; G4-SO11
Inclusive decision-making process	G4-37; G4-38; G4-40; G4-45; G4-53
Non-discrimination	G4-HR3
Privacy policy	G4-PR8
Harassment and violence at work	G4-LA14; G4-LA15

**GOAL 17 – Partnerships for the goals**

Strengthen the means of implementation and revitalize global partnership for sustainable development.

Topic	GRI Indicator
Investments for the environment	G4-EN31
Direct investments abroad	G4-EC8



## KEY INDICATOR TABLES

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## KEY INDICATOR TABLES

The following tables present the indicators provided for by the G4 “*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 2015, 2014 and 2013;
- if significant, the absolute change between 2015 and 2013;
- if significant, the percentage change between 2015 and 2014. 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 are 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 found after the indicators.

### UNITS OF MEASURE KEY

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#	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
no.	Number
Tonnes	Tonnes
Tonnes of CO <sub>2</sub>	Tonnes of carbon dioxide
y	Years

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## Terna Company Profile

### Corporate governance

G4-LA12

BOARD OF DIRECTORS	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
<b>Total members of BoD</b>	<b>no.</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>0</b>	<b>-</b>
Presence of independent Directors in the BoD	no.	6	6	6	0	-
Presence of Directors chosen by minority shareholders	no.	3	3	3	0	-
BoD meetings	no.	9	10	6	-1	-10
Remuneration Committee meetings	no.	4	4	3	0	-
Audit, Risk and Corporate Governance Committee Meetings <sup>(1)</sup>	no.	5	3	4	2	67
Related-Party Transactions Committee Meetings	no.	3	3	1	0	-
Appointments Committee Meetings <sup>(2)</sup>	no.	5	1	0	4	400

COMPOSITION OF THE BOARD OF DIRECTORS	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Men	%	77.78	77.78	100	0	-
Women	%	22.22	22.22	0	0	-
Under 30 years old	%	0	0	0	0	-
Between 30 and 50 years old	%	77.78	77.78	33.33	0	-
Over 50 years old	%	22.22	22.22	66.67	0	-

<sup>(1)</sup> On the 27 May 2014, the Board of Directors of Terna S.p.A. added responsibilities concerning the system of Corporate Governance to the previous responsibilities of the "Audit and Risk Committee". Therefore, the Committee took on the name of "Audit, Risk and Corporate Governance Committee".

<sup>(2)</sup> The Appointments Committee was established by Terna S.p.A. with the resolution of 27 May 2014.

## Relations with stakeholders

Reports and complaints			G4-LA16	G4-EN34	G4-SO11	G4-HR12
IMPLEMENTATION OF THE CODE OF ETHICS	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
<b>Total reports received<sup>(1)</sup></b>	<b>no.</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>100</b>
<i>Areas of reports received<sup>(2)</sup></i>						
- Employee management	no.	1	1	2	0	0
- Supplier management	no.	0	0	1	0	-
Environment and Safety	no.	1	0	0	1	-
- Corruption/Corporate loyalty	no.	0	0	0	0	-
- Terna's/Other compliance	no.	0	0	0	0	-
<i>Outcome of reports</i>						
- Unfounded	no.	0	1	3	0	-
- Provision <sup>(3)</sup>	no.	0	0	0	0	-
Under assessment	no.	2	1	0	1	100

ENVIRONMENTAL COMPLAINTS	Units	2015		2014		2013		Change 2015-14	Change % 2015-14
		Received	Processed	Received	Processed	Received	Processed		
<b>Total complaints received</b>	<b>no.</b>	<b>19</b>	<b>16</b>	<b>36</b>	<b>31</b>	<b>34</b>	<b>28</b>	<b>-17</b>	<b>-47</b>
<i>Environmental aspect of complaints received</i>									
- Waste	no.	0	0	1	1	1	1	-1	-100
- Noise	no.	9	7	9	6	7	6	0	0
- Biodiversity	no.	0	0	0	0	0	0	0	-
- Landscape	no.	0	0	1	1	1	0	-1	-100
- Electrical and magnetic fields	no.	3	2	17	17	12	11	-14	-82
- Lighting	no.	0	0	0	0	0	0	0	-
- Vegetation control	no.	5	5	5	4	7	5	0	0
- Other	no.	2	2	3	2	6	5	-1	-33

<sup>(1)</sup> The 2015 complaints were submitted to the Code of Ethics; the complaint in 2014 was submitted to the Ethics Committee; out of the 3 complaints in 2013, 2 were submitted to the Ethics Committee and 1 to the Audit Committee.

<sup>(2)</sup> Each report or violation may regard more than one management area.

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

## Legal disputes

ENVIRONMENTAL LEGAL DISPUTES	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Pending litigation	no.	107	117	131	- 10	-9
Existing litigation	no.	5	8	16	- 3	-38
Settled litigation	no.	15	22	17	- 7	-32

SUPPLIER LITIGATION	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Pending litigation	no.	24	23	13	1	4
Existing litigation	no.	3	2	1	1	50
Settled litigation	no.	2	2	0	-	0

CUSTOMER LITIGATION	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Pending litigation	no.	16	14	14	2	14
Existing litigation	no.	2	0	0	2	-
Settled litigation	no.	0	0	0	-	-

LITIGATION WITH EMPLOYEES	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Pending litigation with employees	no.	3	6	10	-3	-50
Existing litigation with employees	no.	3	4	10	-1	-25
Settled litigation with employees	no.	6	8	16	-2	-25

## Responsibility for the electricity service

The Grid						EU4	
ELECTRICAL SUBSTATIONS <sup>(1)</sup>	Units	2015	2014	2013	Change 2015-14	Change % 2015-14	
<i>380 kV</i>							
Substations	no.	159	157	152	2	1.3	
Power transformed	MVA	109,508	108,098	105,698	1,410.00	1.3	
<i>220 kV</i>							
Substations	no.	149	150	150	-1	-0.7	
Power transformed	MVA	30,492	29,826	30,171	666	2.2	
<i>Lower voltages (≤150 kV)</i>							
Substations	no.	192	184	173	8	4.3	
Power transformed	MVA	3,319	3,152	2,992	167	5.3	
<i>Total</i>							
Substations	no.	500	491	475	9	1.8	
Power transformed	MVA	143,190	141,076	138,861	2,114	1.5	
POWER LINES <sup>(1)</sup>	Units	2015	2014	2013	Change 2015-14	Change % 2015-14	
<i>380 kV</i>							
Length of three-phase power lines	km	12,118	12,099	11,824	19	0.2	
Line length	km	11,105	11,086	10,908	19	0.2	
<i>220 kV</i>							
Length of three-phase power lines	km	11,710	11,700	11,915	10	0.1	
Line length	km	9,471	9,456	9,569	15	0.2	
<i>Lower voltages (≤150 kV)</i>							
Length of three-phase power lines	km	40,090	40,094	39,855	-4	0.0	
Line length	km	37,318	37,330	37,064	-12	0.0	
<i>Total</i>							
Length of three-phase power lines	km	63,918	63,893	63,595	25	0.0	
in underground cable	km	1,664	1,567	1,514	97	6.2	
in undersea 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	57,894	57,872	57,541	22	0.0	
in underground cable	km	1,664	1,567	1,514	97	6.2	
in undersea cable	km	1,348.00	1,348.00	1,348.00	0	-	
in 200, 400 and 500 kV direct current	km	1,746.00	1,746.00	1,746.00	0	-	
<i>Proportion of direct-current connections</i>							
- three-phase power lines	%	3.2	3.2	3.2	0.0	-	
- lines	%	3.0	3.0	3.0	0.0	-	
GRID EFFICIENCY	Units	2015	2014 <sup>(2)</sup>	2013	Change 2015-14	Change % 2015-14	
Power supplied	GWh/year	315,234	309,006	318,475	6,228	2.0	

<sup>(1)</sup> The data refer 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.

<sup>(2)</sup> The 2014 figure was recalculated with the final data from the same year, for this reason it is different from the one given in the 2014 Sustainability Report. The data on power supplied for 2015 should be considered as provisional.



## Economic responsibility

Value Added						G4-EC1	
DETERMINATION AND REDISTRIBUTION OF VALUE ADDED <sup>(1)</sup>	Units	2015	2014	2013	Change 2015-14	Change % 2015-14	
A – STAFF REMUNERATION	€	303,071,673	340,455,415	282,591,663	-37,383,742	-11	
B – REMUNERATION OF PUBLIC AUTHORITIES	€	309,537,047	355,659,934	433,790,713	-46,122,887	-13	
C – RETURN ON BORROWED CAPITAL	€	179,544,713	189,666,491	190,767,423	-10,121,778	-5	
D – RETURN ON RISK CAPITAL <sup>(2)</sup>	€	401,998,400	401,998,400	401,998,400	0	0	
E – REMUNERATION OF THE COMPANY	€	193,314,279	142,535,590	111,606,710	50,778,689	36	
<b>TOTAL NET VALUE ADDED</b>	<b>€</b>	<b>1,387,466,112</b>	<b>1,430,315,830</b>	<b>1,420,754,909</b>	<b>-42,849,718</b>	<b>-3</b>	

<sup>(1)</sup> The amounts related to the creation and distribution of the Value Added are taken from the Consolidated Financial Statements, which were prepared according to the IFRS/IAS international accounting standards. Specifically, the Terna Group has used the IFRS/IAS international accounting standards since 2005.

<sup>(2)</sup> Return on capital for 2015 refers to the advance distributed in November 2015 (€ 140.7 million) and to the balance proposed to the Meeting of the BoD in the session on 21 March 2016 (€ 261.3 million).

<b>Shareholders</b>						
<b>G4-EN23</b>						
<b>COMPOSITION OF SHAREHOLDER BASE</b>	<b>Units</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>Change 2015-14</b>	<b>Change % 2015-14</b>
CDP Reti S.p.A. <sup>(1)</sup>	%	29.85	29.85	29.85	0	-
Other Institutional + Retail Investors	%	70.15	70.15	70.15	0	-
of which Main Institutional Investors <sup>(2)</sup>	%	2.01	2.01	0	0	-
<b>SOCIALLY RESPONSIBLE INVESTMENTS<sup>(3)</sup></b>	<b>Units</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>Change 2015-14</b>	<b>Change % 2015-14</b>
% of SRI of share capital held by the institutional investors identified.	%	10	10	10	0	0
<b>SHARE PERFORMANCE</b>	<b>Units</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>Change 2015-14</b>	<b>Change % 2015-14</b>
Financial share performance	%	26.5	3.5	20.1	23.0	652.8
Dividend yield <sup>(4)</sup>	%	4.2	5.3	5.7	-1.1	-20.3
<i>Terna in the stock exchange indices</i>						
FTSE MIB	%	2.1	2.1	2.2	0	-
<b>SHAREHOLDER'S RETURN</b>	<b>Units</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>Change 2015-14</b>	<b>Change % 2015-14</b>
EPS ( <i>Earnings Per Share</i> )	€	0.296	0.271	0.256	0.03	9.2
DPS ( <i>Dividend Per Share</i> )	€	0.200	0.200	0.200	0	-
<i>Total Shareholder Return (TSR)</i>						
- from IPO	%	453.3	317.7	283.5	135.6	42.7
- from the beginning of the year	%	32.5	8.92	27.59	23.58	264.3
<b>COMMUNICATION WITH SHAREHOLDERS</b>	<b>Units</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>Change 2015-14</b>	<b>Change % 2015-14</b>
Meetings/conference calls with investors (buy-side)	no.	258	100	138	158	158.0
Meetings/conference calls with investors (sell-side)	no.	230	233	235	-3	-1.3
Meetings with dedicated investors and/or with space for CSR issues	no.	16	20	15	-4	-20.0
Retail shareholders' requests for information <sup>(5)</sup>	no.	7	11	20	-4	-36.4
<b>ECONOMIC PERFORMANCE<sup>(6)</sup></b>	<b>Units</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>Change 2015-14</b>	<b>Change % 2015-14</b>
Revenue	€/mln	2,082.1	1,996.4	1,896.4	85.7	4.3
EBITDA	€/mln	1,539.2	1,491.5	1,488.1	47.7	3.2
EBIT	€/mln	1,022.4	1,010.9	1,037.7	11.5	1.1
EBT	€/mln	881.3	883.0	937.5	-1.7	-0.2
Net profit	€/mln	595.5	544.5	513.6	51	9.4

<sup>(1)</sup> Subsidiary of Cassa Depositi e Prestiti S.p.A.

<sup>(2)</sup> 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.

<sup>(3)</sup> 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 29 in the "Profile" chapter of this Report.

<sup>(4)</sup> The value was calculated as the ratio between the dividend relative to the financial year and the end-of-year price.

<sup>(5)</sup> The figure includes the requests received via e-mail.

<sup>(6)</sup> The data refers to the Group's 2015 Reclassified Income Statement.

## Lenders

DEBT	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Financial debt	€/mln	8,003	6,966*	6,698	1,037	13
Equity	€/mln	3,346	3,093	2,941	253	8
Debt to Equity	%	239	225	225	14	6

EUROPEAN INVESTMENT BANK (EIB) LOANS	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Residual debt relative to EIB loans	€/mln	1,725	1,707	1,216	18	1

(\*) We must specify that some equity balances of the financial statements at 31 December 2014, provided for comparison, have been restated, without, however, altering the equity figures at 31 December 2014.

## Suppliers

G4-EC9

NUMBER AND QUALIFICATION OF SUPPLIERS	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
<i>Number of suppliers</i>						
- Number of contracted suppliers	no.	1,857	2,003	2,026	-146.0	-7.3
<i>Procurement of materials and services</i>						
- Supplies	€/mln	600.23	260.01	406.21	340.2	130.8
- Works	€/mln	168.05	235.06	233.64	-67.0	-28.5
- Services	€/mln	125.76	136.06	117	-10.3	-7.6
<i>Provenance of suppliers (% of total procurement)</i>						
- Italian suppliers	%	78.5	91.92	76.79	-13.4	-14.6
- Foreign suppliers	%	21.5	8.07	23.21	13.4	166.4
<i>Awarding procedures adopted<sup>(1)</sup></i>						
- European tenders	%	75.3	62.3	45.6	13.0	21
- Non-European tenders	%	13.0	16.7	40.4	-3.7	-22
- Fixed <sup>(2)</sup>	%	10.0	19.2	13.4	-9.2	-48
Atypical contracts <sup>(3)</sup>	%	1.7	1.8	0.6	-0.1	-7
<i>Qualification</i>						
- Companies qualified for entry in supplier register	no.	403	360	369	43.0	11.9
- Qualified categories	no.	44	44	44	0.0	-
- Instances of monitoring	no.	768	703	715	65.0	9.2

<sup>(1)</sup> This is the percentage on the amounts awarded.

<sup>(2)</sup> The 2014 and 2013 data concerning fixed contracts has been revised following on from the introduction of the atypical contracts category.

<sup>(3)</sup> The atypical contracts category includes: sponsoring and donations, payments to public bodies and subcontracting.

## Regulated-market customers

EU3

CUSTOMER PORTFOLIO	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Interruptible users	no.	275	290	322	-15	-5.2
Distributors directly connected to the NTG	no.	25	25	24	0	-
Input dispatching users (Producers and Traders)	no.	120	107	102	13	12.1
Withdrawal dispatching users (Traders and end customers, including the Single Buyer)	no.	185	164	140	21	12.8

## Environmental responsibility

Quantities and emissions				G4-EN18	G4-EN15	G4-EN16
SF <sub>6</sub> <sup>(1)</sup> QUANTITY AND EMISSIONS	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Amount of SF <sub>6</sub>	kg	567,563.0	536,094.2	508,463.6	31,468.8	5.9
- in operating equipment	kg	518,474.4	492,064.1	466,438.3	26,410.4	5.4
- in cylinders	kg	49,088.6	44,030.1	42,025.3	5,058.4	11.5
Percentage of SF <sub>6</sub> leakage out of total SF <sub>6</sub> greenhouse gas emissions	%	0.44	0.55	0.49	-0.12	-20.9
	kg	2,488.4	2,971.6	2,507.7	-483.1	-16.3
TOTAL DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS <sup>(2)</sup>	Units	2015	2014 <sup>(3)</sup>	2013	Change 2015-14	Change % 2015-14
<i>Direct emissions</i>						
SF <sub>6</sub> leaks	tonnes of CO <sub>2</sub>	58,478.3	69,831.4	58,930.5	-11,353.1	-16.3
Refrigerant gas leaks (R22, R407C, R410A)	tonnes of CO <sub>2</sub>	488.3	0	87.1	488.3	-
Petrol for vehicles	tonnes of CO <sub>2</sub>	31.5	6.3	22.0	25.2	402.4
Diesel for vehicles	tonnes of CO <sub>2</sub>	5,958.8	6,308.4	5,973.9	-349.6	-5.5
Jet fuel for helicopters <sup>(3)</sup>	tonnes of CO <sub>2</sub>	506.9	0.0	0.0	506.9	-
Natural gas for heating	tonnes of CO <sub>2</sub>	561.9	485.4	528.4	76.4	15.7
Oil for heating and generators	tonnes of CO <sub>2</sub>	773.7	729.0	953.5	44.8	6.1
<b>Total direct emissions</b>	<b>tonnes of CO<sub>2</sub></b>	<b>66,799.4</b>	<b>77,360.5</b>	<b>66,495.5</b>	<b>-10,561.1</b>	<b>-13.7</b>
<i>Indirect CO<sub>2</sub> emissions (tonnes)</i>						
Electricity	tonnes of CO <sub>2</sub>	70,325.6	66,323.5	73,170.3	4,002.2	6.0
CARBON INTENSITY – EQUIVALENT TONNES OF CO <sub>2</sub> / REVENUE (MILLION OF EURO)	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Total emissions (direct and indirect) compared to revenues	tonnes of CO <sub>2</sub> / (million euro)	65.9	72.0	73.6	-6.1	-8

<sup>(1)</sup> In 2014, the impact from leakage included an event that occurred in a substation which resulted in the loss of 784.1 kg of SF<sub>6</sub>, equivalent to 26% of the total losses recorded.

<sup>(2)</sup> The conversion of direct energy consumption and SF<sub>6</sub> (sulphur hexafluoride) and refrigerant gas leaks to equivalent CO<sub>2</sub> emissions is calculated this year using the parameters indicated in the IPCC Fifth Assessment Report (AR5) and Greenhouse Gas Protocol (GHG) Initiative. This led to a change in the equivalent tonnes of SF<sub>6</sub> and refrigerant gas and total direct emissions compared to that which was previously published. Until 2014, data on refrigerant gas leaks was only collected for R22. Data collection for R407C and R410A began in 2015 (it is estimated that the percentage of coverage for the total data is equal to 85%). In 2015 there were no R22 leaks.

Indirect consumption of electricity is converted taking into account the proportion of thermoelectric production in the total Italian electricity production for 2015. The reference for the division of the production mix is the "Monthly Report on the Electricity System" with the results for December 2015, available on the website <http://www.terna.it/en-gb/homepage.aspx>.

<sup>(3)</sup> The Terna helicopter fleet has been operational since 2015.

Quantities and emissions		G4-EN17	G4-EN20	G4-EN21	G4-EN30		
<b>COOLANT GAS - QUANTITY AND EMISSIONS<sup>(1)</sup></b>		Units	2015	2014	2013	Change 2015-14	Change % 2015-14
R22 quantity	kg	250.3	539.2	1761.9	-288.9	-53.6	
R22 leaks	kg	0.0	0.0	82.5	0.0	-	
R407C quantity	kg	2677.2	3133.2	1292.6	-456.0	-14.6	
R407C leaks	kg	186.6	0.0	0.0	186.6	-	
R410A quantity	kg	7484.1	5866.6	4828.4	1617.4	27.6	
R410A leaks	kg	96.3	0.0	0.0	96.3	-	
Other coolant gases quantity	kg	895.7	1206.0	937.5	-310.4	-25.7	
<b>INDIRECT EMISSIONS OF CO<sub>2</sub> RELATED TO STAFF AIR MILES<sup>(2)</sup></b>		Units	2015	2014	2013	Change 2015-14	Change % 2015-14
<i>Type of flight</i>							
- domestic	tonnes of CO <sub>2</sub>	853.2	898.9	1071.6	-45.7	-5.1	
- international	tonnes of CO <sub>2</sub>	250.0	248.7	381.7	1.3	0.5	
- intercontinental	tonnes of CO <sub>2</sub>	193.9	119.9	205.9	74.0	61.7	
<b>Total emissions</b>	<b>tonnes of CO<sub>2</sub></b>	<b>1297.2</b>	<b>1267.5</b>	<b>1659.2</b>	<b>29.7</b>	<b>2.3</b>	
<b>QUANTITIES AND EMISSIONS OF MOTOR VEHICLES<sup>(3)</sup></b>		Units	2015	2014	2013	Change 2015-14	Change % 2015-14
HYBRIDS	no.	10	10	9	0	0	
EURO 5	no.	1,243.00	1,246	1,226	-3	-0.2	
EURO 4	no.	11	13	14	-2	-15.4	
EURO 3 or lower	no.	87	157	146	-70	-44.6	
<b>Total vehicles</b>	<b>no.</b>	<b>1351</b>	<b>1,426</b>	<b>1,395</b>	<b>-75</b>	<b>-5.3</b>	
Nitrogen oxide emissions (NOx) <sup>(4)</sup>	kg	8,980	9,100	5,130	-120	-1.3	

<sup>(1)</sup> Until 2014, data on refrigerant gas leaks was only collected for R22. Data collection for R407C and R410A began in 2015 (it is estimated that the percentage of coverage for the total data is equal to 85%).

<sup>(2)</sup> In order to evaluate CO<sub>2</sub> deriving from the air travel of employees, the conversion factors indicated by the Greenhouse Gas Protocol Initiative have been used.

<sup>(3)</sup> 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 company fleet, see the following fuel consumption tables.

<sup>(4)</sup> 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 **68.2% of the company fleet for 2015** (in 2014, it referred to 66.2 % of the fleet and, in 2013, 62.7%).

<b>Consumption</b>		<b>G4-EN1</b>	<b>G4-EN2</b>	<b>G4-EN3</b>	<b>G4-EN8</b>		
<b>DIRECT AND INDIRECT ENERGY CONSUMPTION BROKEN DOWN BY PRIMARY SOURCE</b>		<b>Units</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>Change 2015-14</b>	<b>Change % 2015-14</b>
<i>Direct consumption</i>							
Petrol for vehicles <sup>(1)</sup> (2)	tonnes	10.2	2.0	7.1	8.1	402.4	
Diesel for vehicles <sup>(1)</sup>	tonnes	1858.2	1967.2	1862.9	-109.0	-5.5	
Jet fuel for helicopters <sup>(3)</sup>	tonnes	160.0	0.0	0.0	160.0	-	
Natural gas for heating	thousands of cubic metres	257.0	222.0	241.7	35.0	15.7	
Oil for generators and heating	tonnes	241.3	227.3	297.3	14.0	6.1	
<i>Indirect consumption</i>							
Electricity	GWh	191.1	185.8	194.1	5.3	2.9	
<b>DIRECT AND INDIRECT ENERGY CONSUMPTION BROKEN DOWN BY PRIMARY SOURCE – GIGAJOULES</b>		<b>Units</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>Change 2015-14</b>	<b>Change % 2015-14</b>
<i>Direct consumption</i>							
Petrol for vehicles <sup>(1)</sup>	GJ	455.0	90.6	317.8	364.4	402.4	
Diesel for vehicles <sup>(1)</sup>	GJ	80,513.6	85,237.6	80,717.6	-4,724.0	-5.5	
Jet fuel for helicopters <sup>(3)</sup>	GJ	7,134.4	0.0	0.0	7,134.4	-	
Natural gas for heating	GJ	10,022.3	8,659.3	9,426.0	1,363.1	15.7	
Oil for generators and heating	GJ	10,454.5	9,849.6	12,883.6	605.0	6.1	
<b>Total direct consumption</b>	<b>GJ</b>	<b>108,579.8</b>	<b>103,837.0</b>	<b>103,345.0</b>	<b>4,742.8</b>	<b>4.6</b>	
<i>Indirect consumption</i>							
Electricity for powering substations and offices <sup>(4)</sup>	GJ	687,968.2	668,808.0	698,708.5	19,160.2	2.9	
<b>WATER CONSUMPTION</b>		<b>Units</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>Change 2014-15</b>	<b>Change % 2015-14</b>
Water consumption per source	m <sup>3</sup>	171,263.5	173,692.2	198,190.5	-2,428.7	-1.40	
<b>PAPER CONSUMPTION</b>		<b>Units</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>Change 2015-14</b>	<b>Change % 2015-14</b>
Certified paper (100% recycled)	tonnes	62.8	57.6	46.2	5.2	9.0	
<b>MAIN MATERIALS IN SUPPLIES</b>		<b>Units</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>Change 2015-14</b>	<b>Change % 2015-14</b>
Porcelain	tonnes	336	327	699	9	2.8	
Polymeric	tonnes	102	114	225	-12	-10.5	
Copper	tonnes	1,380	1,019	5,234	361	35.4	
Aluminium	tonnes	5,077	2,946	12,909	2131	72.3	
Steel	tonnes	13,275	29,675	6,204	-16400	-55.3	
Glass	tonnes	1,474	3,525	2,014	-2051	-58.2	
Dielectric oil	tonnes	682	408	924	274	67.2	
SF <sub>6</sub>	tonnes	31	28	42	3	10.7	
<b>PCB CONCENTRATION</b>		<b>Units</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>Change 2015-14</b>	<b>Change % 2015-14</b>
PCB > 500ppm <sup>(5)</sup>	tonnes	0	0.7	0.218	-0.7	-100.0	
50ppm < PCB < 500ppm	tonnes	0.46	0.35	3.785	0.11	31.4	

<sup>(1)</sup> Only the consumption of operating vehicles is considered.

<sup>(2)</sup> The increase in petrol consumption is attributable to the increased utilisation of hybrid vehicles.

<sup>(3)</sup> The Terna helicopter fleet has been operational since 2015.

<sup>(4)</sup> The reference for the division of the production mix is the "Monthly Report on the Electricity System" with the results for December 2015, available on the website <http://www.terna.it/en-gb/homepage.aspx>.

<sup>(5)</sup> The 2013 and 2014 values are relative to the PCB concentration > 500ppm, which refer to appliances analysed during decommissioning.



Waste						
G4-EN23						
WASTE MANAGEMENT <sup>(1)</sup>	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Waste produced	tonnes	5,112.10	4,489.90	5,263.60	622.22	13.90
Waste recovered	%	92	81	87	11	13.58
<i>Non-hazardous special waste</i>						
Machines, equipment, pylons, conductors, cables						
- quantity produced	tonnes	1,338.84	1,042.21	1,283.31	296.63	28.50
- quantity delivered for recycling	tonnes	1,348.58	1,044.23	1,315.68	304.35	29.10
Packing						
- quantity produced	tonnes	248.21	322.81	208.31	-74.6	-23.10
- quantity delivered for recycling	tonnes	239.6	318.81	206.69	-79.21	-24.80
<i>Other</i>						
- quantity produced	tonnes	618.34	473.86	294.31	144.48	30.50
- quantity delivered for recycling	tonnes	448.96	153.52	147.69	295.44	192.40
<b>Total non-hazardous special waste</b>						
- quantity produced	tonnes	2,205.39	1,838.90	1,795.90	366.51	19.90
- quantity delivered for recycling	tonnes	2,037.10	1,516.60	1,680.10	520.58	34.30
<i>Hazardous special waste</i>						
Machines, equipment, pylons, conductors, cables						
- quantity produced	tonnes	1,956.89	1,427.14	2,386.43	529.75	37.10
- quantity delivered for recycling	tonnes	1,932.83	1,416.09	2,159.51	516.74	36.50
<i>Oils</i>						
- quantity produced	tonnes	716.61	936.9	698.43	-220.29	-23.50
- quantity delivered for recycling	tonnes	617.02	524.67	611.11	92.35	17.60
<i>Lead batteries</i>						
- quantity produced	tonnes	47.29	110.67	64.43	-63.38	-57.30
- quantity delivered for recycling	tonnes	47.28	110.78	64.6	-63.49	-57.30
<i>Waste deriving from materials containing asbestos</i>						
- quantity produced	tonnes	0	0	0	0	-
<i>Other</i>						
- quantity produced	tonnes	183.67	176.3	318.35	7.36	4.20
- quantity delivered for recycling	tonnes	45.94	84.64	39.6	-38.7	-45.70
<i>Total hazardous special waste</i>						
- quantity produced	tonnes	2,906.71	2,651.01	3,467.64	255.71	9.60
- quantity delivered for recycling	tonnes	2,643.08	2,136.18	2,874.82	506.9	23.70

<sup>(1)</sup> 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 substations not connected to the sewage system are not included; the figure for sewage and septic tanks was 680 tonnes in 2015, 383 tonnes in 2014 and 842 tonnes in 2013. In 2014, waste identified as "Other emulsions" produced during an accident that occurred in an operating area was also excluded, the quantity of which was 857 tonnes. The quantity of waste sent for disposal may differ from the simple difference between waste produced and waste recovered, owing to the temporary storage of waste.

**Biodiversity**

G4-EN11

DISSUADERS FOR BIRDLIFE PRESENT ON THE NTG	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Lines affected	km	205	193	186	12	0.06
Total number of dissuaders	no.	13,866	13,397	12,005	469	0.04

LINES IN PROTECTED AREAS <sup>(1)</sup>	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Lines interfering with protected areas	km	5,541	5,625	5,570	84	-1.5
Lines interfering as a total of lines managed by Terna	%	10	10	10	-	0.0

<sup>(1)</sup> The percentage of lines located in protected areas is calculated using the "ATLARETE" database, which may present non-significant misalignments with the data in the indicator tables showing the number of plants.

**Costs for the environment**

G4-EN31

COSTS FOR THE ENVIRONMENT - INVESTMENT AND OPERATING COSTS <sup>(1)</sup>	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Environmental offsets	€/mln	1	13	8	-12	-1200
Environmental-impact studies	€/mln	5	2	4	3	60
Environmental activities – new plants	€/mln	6	4	5	2	33
Environmental activities – existing plants	€/mln	7	10	8	-3	-43
Demolitions	€/mln	1	5	1	-4	-400
<b>Total investments</b>	<b>€/mln</b>	<b>20</b>	<b>34</b>	<b>26</b>	<b>-14</b>	<b>-70</b>
<i>Costs</i>						
Costs for environmental activities	€/mln	19	19	18	0	0
<b>Total operating costs</b>	<b>€/mln</b>	<b>19</b>	<b>19</b>	<b>18</b>	<b>0</b>	<b>0</b>

<sup>(1)</sup> For details on the accounting method, see pages 118-119.

## Social responsibility

Number and composition of employees							EU17	G4-LA12	G4-LA1
<b>PERSONNEL CHANGES</b>	Units	2015	2014	2013	Change 2015-14	Change % 2015-14			
<b>Total employees</b>	no.	<b>3,333</b>	<b>3,437</b>	<b>3,442</b>	<b>-104</b>	<b>-3.0</b>			
Employees recruited during the year	no.	369	68	70	301	442.6			
Employees who left during the year	no.	473	73	61	400	547.9			
- men	no.	441	64	56	377	589.1			
- women	no.	32	9	5	23	255.6			
- under 30 years old	no.	4	0	3	4	-			
- between 30 and 50 years old	no.	18	9	7	9	100.0			
- over 50 years old	no.	451	64	51	387	604.7			
<i>Turnover rate on termination<sup>(1)</sup></i>									
<b>Total</b>	%	<b>13.8</b>	<b>2.1</b>	<b>1.8</b>	<b>11.6</b>	<b>548.9</b>			
- men	%	12.8	1.9	1.6	11.0	590.1			
- women	%	0.9	0.3	0.2	0.7	256.1			
- under 30 years old	%	0.1	0.0	0.1	0.1	-			
- between 30 and 50 years old	%	0.5	0.3	0.2	0.3	100.3			
- over 50 years old	%	13.1	1.9	1.5	11.3	605.7			
<b>PERSONNEL COMPOSITION</b>	Units	2015	2014	2013	Change 2015-14	Change % 2015-14			
<b>Total employees</b>	no.	<b>3,333</b>	<b>3,437</b>	<b>3,442</b>	<b>-104</b>	<b>-3.0</b>			
<i>By contract type</i>									
- permanent	no.	3,331	3,382	3,412	-51	-1.5			
- temporary	no.	2	55	30	-53	-96.4			
<i>By employment type</i>									
- full-time	no.	3,303	3,404	3,412	-101	-3.0			
- part-time	no.	30	33	30	-3	-9.1			
<i>By gender</i>									
- men	no.	2,942	3,042	3,048	-100	-3.3			
- women	no.	391	395	394	-4	-1.0			
<i>By age</i>									
- under 30 years old	no.	586	375	415	211	56.3			
- between 30 and 50 years old	no.	1,412	1,506	1,412	-94	-6.2			
- over 50 years old	no.	1,335	1,556	1,615	-221	-14.2			
<i>Average age of personnel (years)</i>									
Average age	y	43.46	46.58	46.18	-3.12	-6.7			
Average corporate age <sup>(2)</sup>	y	17.6	21.2	20.75	-3.6	-17.0			
<b>PERSONNEL COMPOSITION BY CATEGORY</b>	Units	2015	2014	2013	Change 2015-14	Change % 2015-14			
<b>Total</b>	no.	<b>3,333</b>	<b>3,437</b>	<b>3,442</b>	<b>-104</b>	<b>-3.0</b>			
Senior executives	no.	63	61	62	2	3.3			
Junior executives	no.	498	541	501	-43	-7.9			
White-collar workers	no.	1,813	1,887	1,922	-74	-3.9			
Blue-collar workers	no.	959	948	957	11	1.2			
<b>PERSONNEL COMPOSITION BY SCHOOLING</b>	Units	2015	2014	2013	Change 2015-14	Change % 2015-14			
University degree	%	25.9	23.1	22.5	2.9	12.4			
High school diploma	%	53.4	47.6	47.2	5.7	12.0			
Vocational school diploma	%	12.0	15.4	15.6	-3.4	-22.0			
Elementary/Middle school	%	8.7	13.9	14.7	-5.2	-37.3			
<b>FLEXIBLE EMPLOYMENT CONTRACTS AND TERMS</b>	Units	2015	2014	2013	Change 2015-14	Change % 2015-14			
Diffusion of temporary contracts	no.	0.1	1.6	0.9	-1.5	-96.3			
Expiring trial contracts converted to permanent contracts during the financial year	no.	0.0	2.0	46.0	-2.0	-100.0			
Trainees and interns working at Terna	no.	16	32	52	-16	-50.0			
Diffusion of part-time employment	%	0.0	1.0	0.9	-1.0	-100.0			
Incidence of overtime	%	8.0	8.0	8.3	0.0	0			
<b>CONTRACTORS AND SUBCONTRACTORS' EMPLOYEES<sup>(3)</sup></b>	Units	2015	2014	2013	Change 2015-14	Change % 2015-14			
Days worked	no.	550,661.5	547,660.5	500,884.3	3,001.0	0.5			
Full-time equivalent	no.	2,503.0	2,489.0	2,277.0	13.6	0.5			

<sup>(1)</sup> The turnover rates report the termination flows with respect to the number of employees as at 31 December of the previous year.

<sup>(2)</sup> The average corporate age takes into account previous employment in the case of employees joining Terna following acquisitions of business units.

<sup>(3)</sup> 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 vegetation under power lines. The days worked and the FTE units 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.

Personnel development		G4-HR2	G4-LA9	G4-LA1	G4-SO4	
TRAINING	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
<i>Hours of training</i>						
- per employee <sup>(1)</sup>	h	56	43	35	13	30.2
<i>Per category <sup>(2)</sup></i>						
- executives	h	20	16	38	4	25.0
- junior executives	h	3	29	34	-26	-89.7
- office staff	h	49	34	34	15	44.1
- blue-collar workers	h	87	70	37	17	24.3
<i>By gender <sup>(3)</sup></i>						
- men	h	53	45	36	8	17.8
- women	h	26	19	25	7	36.8
Coverage of employees <sup>(1)</sup>	%	97	91	89	6	6.6
Hours provided						
<b>Total</b>	<b>h</b>	<b>190,807</b>	<b>148,955</b>	<b>120,115</b>	<b>41,852</b>	<b>28.1</b>
- hours of internal teaching	h	133,042	98,212	79,876	34,830	35.5
<i>Hours of training by type of course</i>						
- education	h	3,429	3,283	12,782	146	4.4
- context and Business Model	h	47,055	8,602	13,851	38,453	447.0
- training	h	140,323	137,070	93,482	3,253	2.4
Participants in Model 231 courses	no.	128	103	489	25	24.3
Participants in sustainability courses	no.	748	333	76	415	124.6

<sup>(1)</sup> Ratio between total training hours and average number of employees.

<sup>(2)</sup> Ratio between total training hours per category and average number of employees per category.

<sup>(3)</sup> Ratio between total training hours by gender and the total number of employees throughout the year (including those employed by the company for a period of less than a year) by gender.

COMPENSATION	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Average cost per employee <sup>(2)</sup>	€	80,116	79,848	78,124	268.1	0.3
Executive employees with Long-Term Incentives (LTI)	no.	44	46	45	-2	-4.3
Variable remuneration as % of fixed pay <sup>(3)</sup>	%	10.0	9.5	9.3	0.6	5.8
MBO	no.	184	199	187	-15	-7.5

CORPORATE CLIMATE	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Total spontaneous resignations	no.	12	11	9	1	9.1
Absences per employee <sup>(4)</sup>	h	55.0	53.8	56.9	1.2	2.2
Absentee Rate <sup>(5)</sup>	%	7,186.1	7,092.3	7,432.2	93.8	1.3

AVERAGE YEARS OF EMPLOYMENT FOR EMPLOYEES LEAVING THE COMPANY <sup>(6)</sup>	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
<b>Total terminations</b>	<b>y</b>	<b>36.6</b>	<b>32.8</b>	<b>32.4</b>	<b>3.8</b>	<b>11.6</b>
- men	y	36.9	33.1	32.6	3.8	11.5
- women	y	31.9	30.8	29.4	1.1	3.7
- under 30 years old	y	2.0	0.0	3.3	2.0	-
- between 30 and 50 years old	y	8.7	6.8	6.4	1.9	27.9
- over 50 years old	y	38.0	36.5	37.6	1.5	4.1

<sup>(1)</sup> Percentage of employees who took at least one training course during the year.

<sup>(2)</sup> "Per employee" includes all company employees, including executives.

<sup>(3)</sup> The figures regard the incentives paid to all employees, including executives. Fringe benefits are excluded.

<sup>(4)</sup> This figure regards the number of non-contractual absences during the year (illness, accident, leave of absence, strike, unpaid absence).

<sup>(5)</sup> 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 3.6 in 2015, 3.6 in 2014, and 3.7 in 2013. 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.

<sup>(6)</sup> The duration of employment takes into account previous employment, in the case of employees joining Terna following acquisitions of business units.

## Equal opportunities

G4-LA12

G4-LA13

EQUAL OPPORTUNITIES FOR MEN AND WOMEN	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
<i>Women out of total employees</i>						
- women out of total	%	11.7	11.5	11.5	0.2	2.1
- women out of total net of blue-collar workers	%	16.5	15.9	15.9	0.6	3.8
- female senior executives out of total senior executives	%	15.9	16.4	16.1	-0.5	-3.2
- female senior and junior executives out of total senior and junior executives	%	18.2	17.6	17.9	0.6	3.2
<i>Employment growth</i>						
- annual change: women	%	-1.0	0.3	0.5	-1.3	-499.0
- annual change: men	%	-3.3	-0.2	0.2	-3.1	-1570.0
<i>Outflows<sup>(1)</sup></i>						
- outflows: women	%	8.1	2.3	1.3	5.8	254.7
- outflows: men	%	14.5	2.1	1.8	12.4	590.4
<i>Inflows<sup>(1)</sup></i>						
- inflows: women	%	7.1	2.5	1.8	4.6	179.3
- inflows: men	%	11.2	1.9	2.1	9.3	489.1
<i>Managerial positions</i>						
- female senior executives out of total women	%	2.6	2.5	2.5	0.0	1.0
- male senior executives as % of male employees (excluding production workers)	%	2.7	2.4	2.5	0.2	9.7
<i>Grade promotions<sup>(2)</sup></i>						
- promotions to junior executive as % of previous grade: women	%	0.0	2.1	0.3	-2.1	-100.0
- promotions to junior executive as % of previous grade: men	%	0.0	2.7	0.4	-2.7	-100.0
<i>Gender pay gap<sup>(3)</sup></i>						
- executives	%	73.5	72.5	81.3	1.0	1.4
- junior executives	%	96.9	97.1	96.3	-0.2	-0.2
- office staff	%	97.0	95.3	95.1	1.6	1.7
<i>Gender remuneration gap<sup>(4)</sup></i>						
- executives	%	67.5	71.2	78.5	-3.7	-5.2
- junior executives	%	100.1	100.9	98.2	-0.8	-0.8
- office staff	%	93.9	91.9	91.3	1.9	2.1

<sup>(1)</sup> 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.

<sup>(2)</sup> 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.

<sup>(3)</sup> 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.

<sup>(4)</sup> 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.

## Health and safety

G4-LA6

G4-LA7

OCCUPATIONAL INJURIES - TERNA EMPLOYEES, GRI-ILO DEFINITIONS	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Injury rate <sup>(1)</sup>	%	0.84	1.27	1.42	-0.42	-33.3
Lost-Day Rate <sup>(2)</sup>	%	36.13	44.16	52.94	-8.03	-18.2
Occupational Disease Rate <sup>(3)</sup>	%	0	0	0	-	-
Number of injuries	no.	24	36	41	-12	-33.3
- of which serious	no.	0	0	0	0	-
- of which fatal	no.	0	0	2	0	-

OCCUPATIONAL INJURIES, EMPLOYEES – BROKEN DOWN BY GENDER	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Number of injuries	no.	24	36	41	-12	-33.3
- of whom men	no.	24	35	39	-11	-31.4
- of whom women	no.	0	1	2	-1	-100.0
Injury rate – male employees	%	0.94	1.37	1.5	-0.43	-31.4
Injury rate – female employees	%	0	0.35	0.07	-0.35	-100.0
Lost-Day Rate – male employees	%	40.23	49.08	51.88	-8.85	-18.0
Lost-Day Rate – female employees	%	0	0.69	0.97	-0.69	-100.0

INSPECTIONS AND INVESTIGATIONS	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Periodic health inspections	no.	2,692	2,744	2,624	-52	-1.9
Examinations by assigned doctor	no.	278	374	301	-96	-25.7
Inspections and checks <sup>(4)</sup>	no.	104	111	130	-7	-6.3

HOURS OF TRAINING ON WORKERS' HEALTH AND SAFETY	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
<b>Total</b>	<b>h</b>	<b>73,613</b>	<b>66,627</b>	<b>37,940</b>	<b>6,986</b>	<b>10.5</b>
Senior executives	h	202	80	648	122	152.5
Junior executives	h	3,623	4,889	4,343	-1,266	-25.9
White-collar workers	h	25,100	26,315	14,191	-1,215	-4.6
Blue-collar workers	h	44,688	35,343	18,757	9,345	26.4

OCCUPATIONAL INJURIES – CONTRACTORS AND SUBCONTRACTORS	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Occupational injuries – contractors' employees	no.	9	16	11	-7	-43.8
- of which serious	no.	1	3	4	-2	-66.7
- of which fatal	no.	0	2	2	-2	-100.0
Injury rate <sup>(5)</sup>	%	0.43	0.77	0.58	-0.34	-44.1

<sup>(1)</sup> 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 **4.2 in 2015, 6.3 in 2014, and 7.1 in 2013**.

<sup>(2)</sup> This is the ratio between the 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 2015, 0.2 in 2014, and 0.3 in 2013**. To calculate the lost-day rate, the days not worked related to injuries occurring in 2015 were considered together with any continued absence related to injuries occurring during the previous years, following the criterion of annual accrual of days of absence.

<sup>(3)</sup> This is the total number of cases of occupational disease divided by the hours worked in the year, multiplied by 200,000. In 2015, as in previous years, no cases of work-related illness for Terna employees was ascertained. 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.

<sup>(4)</sup> Inspections performed by the SPPM (Safety, Prevention and Protection Managers) and the Operational Transmission Area Managers.

<sup>(5)</sup> 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 **2.2 in 2015, 3.8 in 2014, and 2.9 in 2013**.



## Relations with trade unions

Employee trade union membership	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Trade union membership rate	%	49.6	55.3	62.7	-5.7	-10.3

TRADE UNION AGREEMENTS	Units	2015	2014	2013	Change 2015-14	Change % 2015-14
Trade union agreements signed during the year	no.	11	20	14	-9	-45.0

## Tamini Group

Data concerning the Tamini Group, which was acquired on 20 May 2014 by the subsidiary Terna Plus, has been published in this Report for the first time, divided by plant.

The merger agreement between the Tamini Group and TES Transformer Electro Service S.r.l. was concluded on the 30 October 2015.

### Environmental data

#### CONSUMPTION

	Units	Melegnano	Legnano	Novara	Valdagno*	TES **	TOTAL
Electricity	kWh	1,350,948	2,040,683	1,066,075	334,993	1,042,415	5,835,114
Methane gas	cubic metres	163,500	373,828	214,952	68,688	327,494	1,148,462
Water	cubic metres	12,639	12,808	11,530	1,433	641	39,051

(\*) The Valdagno plant is related to V.T.D. Trasformatori S.r.l., a subsidiary of Tamini.

(\*\*) Data concerning TES refers to the Ospitaletto and Rodengo plants.

#### WASTE

	Units	Melegnano	Legnano	Novara	Valdagno*	TES **	TOTAL
Total special waste produced	kg	668,031	320,549	182,589	103,204	74,870	1,349,243
- of which special hazardous waste produced	kg	10,177	42,979	18,986	19,644	60,440	152,226
- of which non-hazardous special waste produced	kg	657,854	277,570	163,603	83,560	14,430	1,197,017

(\*) The Valdagno plant is related to V.T.D. Trasformatori S.r.l., a subsidiary of Tamini.

(\*\*) Data concerning TES refers to the Ospitaletto and Rodengo plants.

### Social data

#### PERSONNEL COMPOSITION AT 31.12.2015

TAMINI GROUP	
Senior executives	13
Junior executives	16
White-collar workers	155
Blue-collar workers	247
<b>Total</b>	<b>431</b>

#### OCCUPATIONAL INJURIES - TERNA EMPLOYEES, GRI-ILO DEFINITIONS

	Units	Tamini	V.T.D.	TES	Tamini Group Total
Injury rate <sup>(1)</sup>	%	5.90	2.11	1.31	4.50
Lost-Day Rate <sup>(2)</sup>	%	161.96	29.60	19.67	116.68
Injuries	no.	15	1	1	17
- of which fatal	no.	0	0	0	0

(1) This is the number of injuries with at least one day's abstinence 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 **29.48 for Tamini; 10.57 for V.T.D.; 6.56 for TES and 22.49 for the Tamini Group.**

(2) This is the ratio between the 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 **0.81 for Tamini; 0.15 for V.T.D.; 0.10 for TES and 0.58 for the Tamini Group.**

# Acronyms

<b>VHV</b>	Very High Voltage
<b>ACEA</b>	Azienda Comunale Energia e Ambiente [Municipal Energy and Environment Company]
<b>AEEGSI</b>	Italian Regulatory Authority for Electricity, Gas and Water
<b>AGCM</b>	Autorità Garante della Concorrenza e del Mercato [Italian Antitrust Authority]
<b>AIT</b>	Average Interruption Time
<b>AOT</b>	Area Operativa Trasmissione [Operational Transmission Area]
<b>ASA</b>	Average System Availability
<b>HV</b>	High Voltage
<b>AU</b>	Acquirente Unico [Italian Single Buyer]
<b>BoD</b>	Board of Directors
<b>CDP</b>	Cassa Depositi e Prestiti
<b>CEI</b>	Comitato Elettrotecnico Italiano [Italian Electro-technical Committee]
<b>CESI</b>	Centro Elettrotecnico Sperimentale Italiano [Italian Electro-technical Testing Centre]
<b>CIGRE</b>	Conseil International des Grands Réseaux Électriques à Haute Tension
<b>NCC</b>	National Control Centre
<b>CONSOB</b>	Commissione Nazionale per le Società e la Borsa [National Commission for Companies and the Stock Exchange]
<b>CSR</b>	Corporate Social Responsibility
<b>PPE</b>	Personal Protective Equipment
<b>DPS</b>	Dividend per share
<b>EBIT</b>	Earnings Before Interest and Taxes
<b>EMS</b>	Energy Management System
<b>ENS</b>	Energy Not Supplied
<b>ENTSO-E</b>	European Network Transmission System Operators for Electricity
<b>EPS</b>	Earnings per share
<b>ERPA</b>	Exclusion, Repulsion, Problems, Attraction
<b>DT</b>	Distance training
<b>GAAP</b>	Generally Accepted Accounting Principles
<b>GIS</b>	Geographic Information System
<b>EMO</b>	Electricity Market Operator
<b>GRI</b>	Global Reporting Initiative
<b>GRTN</b>	Gestore della Rete di Trasmissione Nazionale [National Transmission Grid Operator]
<b>GSE</b>	Gestore del Sistema Elettrico [Electricity System Operator]
<b>IBA</b>	Important Bird Areas

<b>IEA</b>	International Energy Agency
<b>IPO</b>	Initial Public Offering
<b>ISPRA</b>	Istituto Superiore per la Protezione e la Ricerca Ambientale [Italian Institute for Environmental Protection and Research]
<b>SRI</b>	Socially Responsible Investment
<b>ISTAT</b>	Italian National Statistics Institute
<b>MPA</b>	Italian Ministry for Productive Activities (now the Ministry for Economic Development – MED)
<b>MELS</b>	Italian Ministry for the Environment, Land and Sea
<b>MBI</b>	Maintenance and Business Intelligence
<b>MBO</b>	Management By Objectives
<b>MEF</b>	Italian Ministry of Economy and Finance
<b>DAM</b>	Day Ahead Market
<b>MED</b>	Italian Ministry of Economic Development
<b>DSM</b>	Dispatching Services Market
<b>N.A.</b>	Not applicable
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>PCBs</b>	Polychlorinated biphenyls
<b>PCTs</b>	Polychlorinated terphenyls
<b>DP</b>	Development Plan of the National Transmission Electricity Grid
<b>EPSES</b>	Emergency Plan for the Security of the Electricity System
<b>ROACE</b>	Returns On Average Capital Employed
<b>NTG</b>	National Transmission Grid
<b>SCADA</b>	Supervisory Control and Data Acquisition
<b>SETSO</b>	South-East Europe Transmission System Operators
<b>SISTAN</b>	Italian National Statistics System
<b>S&amp;P</b>	Standard&Poor's
<b>TFR</b>	Termination benefits
<b>TSO</b>	Transmission System Operator
<b>TSR</b>	Total Shareholder Return
<b>UCTE</b>	Union for the Co-ordination of Transmission of Electricity
<b>SEA</b>	Strategic Environmental Assessment
<b>EIA</b>	Environmental Impact Assessment
<b>SPZ</b>	Special Protection Zone

## EXTERNAL ASSURANCE

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**TERNA S.P.A.**

**INDEPENDENT REPORT ON THE LIMITED ASSURANCE  
ENGAGEMENT OF THE SUSTAINABILITY REPORT 2015**



## INDEPENDENT REPORT ON THE LIMITED ASSURANCE ENGAGEMENT OF THE SUSTAINABILITY REPORT 2015

To the Shareholders of  
Terna S.p.A.

We have carried out a limited assurance engagement on the Corporate Social Responsibility Report (hereinafter the “Report”) of Terna Group (hereinafter the “Group”) for the year ended 31 December 2015.

### Responsibility of the Directors for the Report

The Directors are responsible for preparing the Report in compliance with the *G4 Sustainability Reporting Guidelines* defined in 2013 by the *GRI - Global Reporting Initiative* and by the *G4 Sector Disclosure - Electric Utilities* defined in 2013, as indicated in the paragraph “Methodological note” of the Report, and for that part of internal control that they consider necessary to prepare a sustainability report that is free from material misstatement, whether due to fraud or unintentional behaviours or events. The Directors are also responsible for defining the sustainability performance targets of Terna Group, for reporting the sustainability results, as well as for identifying the stakeholders and the significant aspects to be reported.

### Auditor’s responsibility

We are responsible for the preparation of this report on the basis of the work performed. We conducted our engagement in accordance with *International Standard on Assurance Engagements 3000 – Assurance Engagements other than Audits or Reviews of Historical Financial Information (ISAE 3000)*, issued by the International Auditing and Assurance Standards Board for limited assurance engagements. The standard requires that we comply with applicable ethical requirements, including professional independence, and that we plan and perform our work to obtain limited assurance that the Report is free from material misstatement. The procedures consisted in interviews, primarily of company personnel responsible for the preparation of the information presented in the Report, analysis of documents, recalculations and other verification procedures.

The procedures we performed on the Report consisted in verifying its compliance with the principles for defining the content and the quality of a sustainability report set out in the *G4 Sustainability*

#### PricewaterhouseCoopers Advisory SpA

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*Reporting Guidelines* and in the *G4 Sector Disclosure - Electric Utilities*, and are summarised as follows:

- comparing the financial information reported in chapter “Economic responsibility” and in the attachment “Indicator tables – Economic responsibility” of the Report with the information included in the Group’s consolidated financial statements as of 31 December 2015 on which we issued our audit opinion, in accordance with articles 14 and 16 of legislative decree n° 39 of 27 January 2010, on 22 April 2016;
- analysing, through inquiries, the governance system and the process for managing the sustainability issues relating to the Group strategy and operations;
- analysing the process aimed at defining the significant reporting areas to be disclosed in the Report, with regard to the methods for their identification, in terms of priority for the various stakeholders, as well as the internal validation of the process findings;
- analysing the processes underlying the generation, recording and management of quantitative data included in the Report. In detail, we carried out:
  - meetings and interviews with the 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 supporting the collection, aggregation, processing and submission of the information to the function responsible for the Report preparation;
  - a sample-based analysis of the documents supporting the preparation of the Report, in order to obtain evidence of the reliability of processes in place and of the internal control system underlying the treatment of the information relating to the objectives disclosed in the Report;
- analysing the internal consistency of the qualitative information described in the Report and its compliance with the guidelines identified in the preceding paragraph “Responsibility of the Directors for the Report”;
- analysing the engagement of stakeholders and its results through the existing documentation concerning the significant matters arisen during the Group dialogue initiatives;
- obtaining a representation letter, signed by the legal representative of Terna S.p.A., on the compliance of the Report with the guidelines identified in the paragraph “Responsibility of the Directors for the Report”, as well as the reliability and completeness of the disclosed information.

Our limited assurance work was less in scope than a reasonable assurance engagement performed in accordance with ISAE 3000 (*reasonable assurance engagement*) and, consequently, it does not provide us with a sufficient level of assurance necessary to become aware of all significant facts and circumstances that might be identified in a reasonable assurance engagement.



### **Conclusion**

Based on the work performed, nothing has come to our attention that causes us to believe that the Sustainability Report of Terna Group as of 31 December 2015 has not been prepared, in all material respects, in compliance with the *G4 Sustainability Reporting Guidelines* defined in 2013 by the GRI - *Global Reporting Initiative* and by the *G4 Sector Disclosure - Electric Utilities* defined in 2013 as disclosed in the paragraph "Methodological note" of the Report.

Turin, 9 May 2016

PricewaterhouseCoopers Advisory SpA

*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.*

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