



This section presents Terna:  
Group's structure, its **ownership, governance, business model** and the relevant Sustainable Development Goals (SDGs). The description of Terna's activities introduces a distinction between Regulated Activities and Non-regulated Activities, which is key to understanding the financial and sustainability disclosures provided, and gives guidance on the content to be found in the following sections. The section ends with key details of the **economic impacts** generated during the year.

SRI  
(SOCIALLY RESPONSIBLE INVESTORS)

9.52%

OF THE FREE FLOAT  
(8.32% IN 2017)

CAPEX

€ 1,091 million

(UP 5.5% VERSUS 2017)

PROCUREMENT

€ 1,183 million

(UP 80% VERSUS 2017)





# 2

Profile





# About us

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The Terna Group's main activities are electricity transmission and dispatching in Italy, where, under a government concession, it performs the role of TSO (Transmission System Operator).

Terna is thus responsible for the planning, construction and maintenance of the transmission grid, as well as management of the electricity that flows through it. These activities are carried out under a monopoly regime, in accordance with the regulations defined by the Regulatory Authority for Energy, Networks and the Environment (ARERA) and in implementation of the guidelines established by the Ministry for Economic Development (the MED).

Based in Rome, the Terna Group owns 99.7% of the National Transmission Grid (NTG), which is among the most modern and technologically advanced transmission grids in Europe. We are the largest independent electricity transmission network operator in Europe and one of the world's leading operators in terms of the number of kilometres of overhead line managed, with around 72,900 kilometres of high-voltage lines.

The Group is responsible for the long-term safety, quality and cost-effectiveness of the national electricity system, pursuing its development and integration with the European system. We ensure that all network users have equal access.

Alongside these activities (Regulated Activities), the Group also operates in a number of non-regulated sectors in Italy, leveraging the technical expertise acquired from operation of its core business and innovation (Non-regulated Activities).

Finally, the Group offers its expertise and services to overseas customers, including in collaboration with energy operators that have an established international presence. These initiatives focus on countries that require investment in transmission plant, and which also have stable political and regulatory frameworks and a risk-return profile in line with that of the Company.

In managing all its businesses, Terna pays great attention to the possible economic, social and environmental impacts, and adopt a sustainable approach to business in order to establish, maintain and consolidate relationships with its stakeholders that are based on mutual trust, with a view to creating shared value.

The Parent Company, Terna S.p.A., is listed on Borsa Italiana's screen-based trading system (*Mercato Telematico Azionario*) and, at approximately €9.9 billion, ranks among Italy's leading companies by market capitalisation.

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<sup>1</sup> Market capitalisation at the close of trading on 28 December 2018.



# Terna and the SDGs

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Approved by 193 member states of the United Nations in September 2015, the 17 Sustainable Development Goals (SDGs) form the heart of the 2030 Agenda. This global plan aims to eradicate poverty and promote economic prosperity, social development and protection of the environment, via a sustainable path that brings together economic, social and environmental aspects and, at the same time, identifies new opportunities for growth.

They cannot be achieved without the commitment of governments, civil society, non-governmental organisations (NGOs) and companies.

The activities and mission of Terna, which plays a vital enabling role in the transformation of the energy system towards one based on forms of production using renewable energy sources, coincide almost entirely with a number of the SDGs and the related targets. These are SDG 7 (“Affordable and clean energy - Ensure access to affordable, reliable, sustainable and modern energy for all”), SDG 9 (“Industry, innovation and infrastructure - Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”) and SDG 13 (“Climate action - Take urgent action to combat climate change and its impacts”), whose implementation depends primarily on delivery of the National Transmission Grid Development Plan.

For this reason, the section on the “Electricity service and innovation” is structured in such a way as to highlight Terna’s activities that contribute to implementation of the relevant SDGs, starting with preparation of the 2019 Development Plan and the description of the progress made with respect to the previous Plans.

The SDGs, especially Goal 8 (“Decent work and economic growth”), Goal 12 (“Responsible consumption and production”), Goal 15 (“Life on land”), Goal 16 (“Peace, justice and strong institutions”) and Goal 17 (“Partnership for the Goals”), are also a benchmark for the approach Terna adopts in managing its activities. This is founded on objectives such as the efficient use of natural resources, respect for the environment, cuts in emissions, waste reduction and recycling, respect for human rights, efforts to foster innovation, partnerships to combat corruption, and transparent reporting.

Other links between Terna’s activities and the SDGs are described in the section on “Community initiatives”.

## BENCHMARK SDGs FOR TERNA

			SDGs
Ensure access to affordable, reliable, sustainable and modern energy for all.	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.	Take urgent action to combat climate change and its impacts.	Target

## BENCHMARK SDGs FOR THE MANAGEMENT OF TERNA'S ACTIVITIES

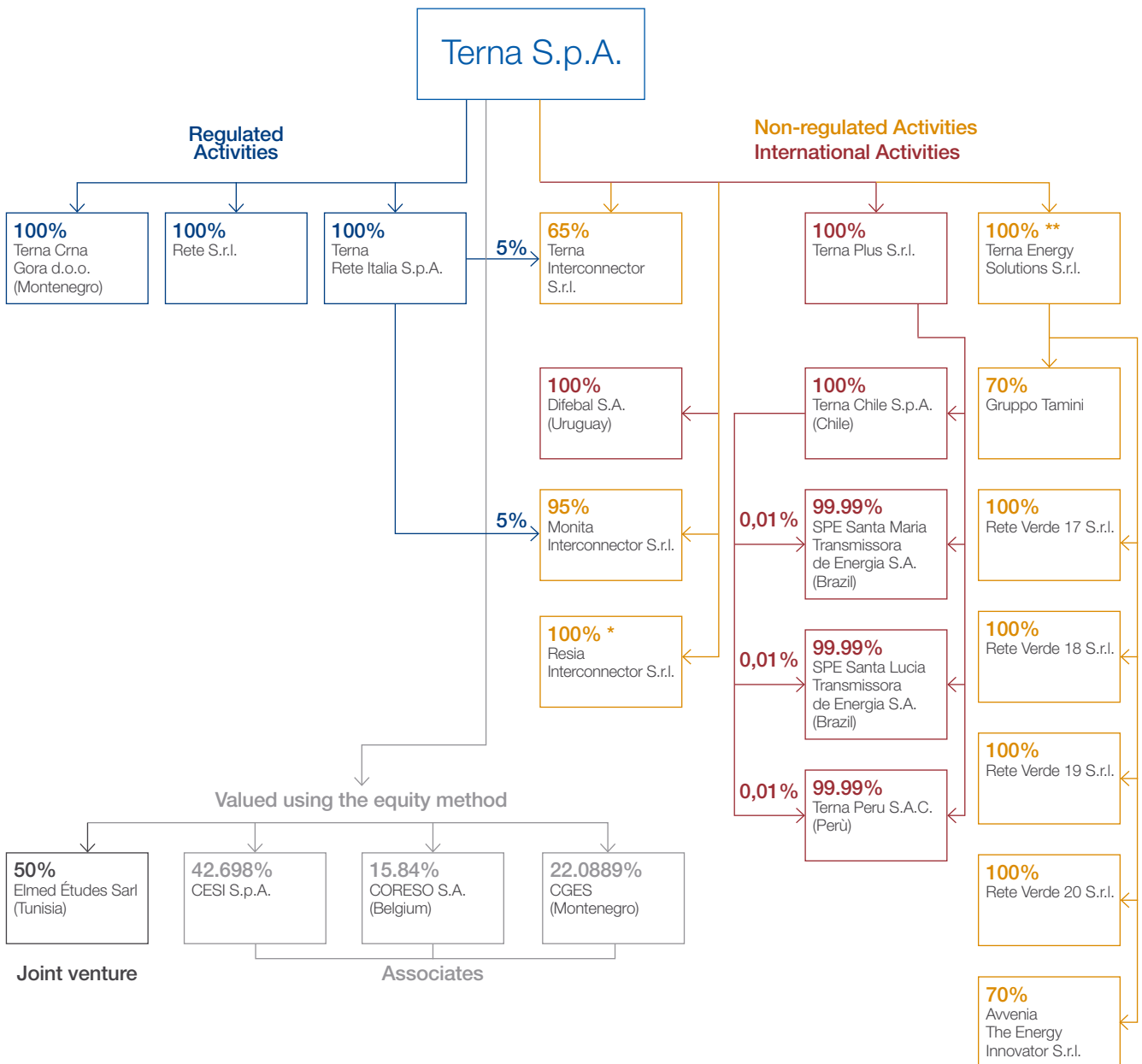
					SDGs
Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.	Ensure sustainable consumption and production patterns.	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	Promote peaceful and more inclusive societies for sustainable development; provide access to justice for all and build effective, accountable and inclusive institutions at all levels.	Promote peaceful and more inclusive societies for sustainable development; provide access to justice for all and build effective, accountable and inclusive institutions at all levels.	Target







# Structure of the Group



Compared with 31 December 2017:

\* On 16 July 2018, Resia Interconnector S.r.l. was incorporated. This company will be involved in construction of the private Italy-Austria interconnector, for which the process of obtaining the necessary consents for the Passo Resia - Glorenza cable section is currently underway.


\*\* On 2 August 2018, the partial demerger of Terna Plus S.r.l. (a wholly-owned subsidiary of the parent, Terna S.p.A.), and the transfer of the demerged assets to a newly established company named Terna Energy Solutions S.r.l., came into effect. The demerged business is focused on Non-regulated Activities and on the energy solutions activities already carried out by Terna Plus which, following the demerger, is responsible for the Group's South American activities. The transaction also resulted in the transfer of equity interests in the companies that carry out Non-regulated Activities in Italy: Tamini Trasformatori S.r.l., Rete Verde 17 S.r.l., Rete Verde 18 S.r.l., Rete Verde 19 S.r.l., Rete Verde 20 S.r.l. and Avenia The Energy Innovator S.r.l. (acquired on 15 February 2018).




## SUBSIDIARIES WITH REGULATED ACTIVITIES


Company	Business		Revenue
<b>Terna Rete Italia S.p.A.</b>	All regulated activities related to operation, routine and extraordinary maintenance, management and development of the National Transmission Grid.	3,150	€445.5m
<b>Rete S.r.l.</b>	Acquired in 2015 from Ferrovie dello Stato Italiane (Italian State Railways) group, the company owns 8.3% of the National Transmission Grid infrastructure.	0	€139.2m
<b>Terna Crna Gora d.o.o.</b> <i>Company incorporated under Montenegrin law</i>	Management of construction of the Italy-Montenegro interconnector, on the Montenegrin side.	9	€0.0m

## SUBSIDIARIES WITH NON-REGULATED ACTIVITIES IN ITALY

Company	Business		Revenue
<b>Terna Energy Solutions S.r.l.</b>	Development of new activities and business opportunities in the Italian Non-regulated market.	45	€3.7m
<b>Tamini Trasformatori S.r.l.</b>	Production and marketing of industrial and power transformers via six production plants located in Italy in Legnano (MI), Melegnano (MI), Novara, Valdagno (VI), Ospitaletto (BS) and Rodengo (BZ).	355	€120.8m
<b>Rete Verde 17 S.r.l.</b>	Development of renewable energy initiatives.	0	€0.0m
<b>Rete Verde 18 S.r.l.</b>	Development of renewable energy initiatives.	0	€0.0m
<b>Rete Verde 19 S.r.l.</b>	Development of renewable energy initiatives.	0	€0.0m
<b>Rete Verde 20 S.r.l.</b>	Development of renewable energy initiatives.	0	€0.0m
<b>Avvenia The Energy Innovator S.r.l.</b>	Implementation of energy efficiency projects, including via EPC (Energy Performance Contract) solutions.	16	€10.7m
<b>Terna Interconnector S.r.l.</b>	Development and construction of private infrastructure for interconnections with other countries.	0	€94.6m
<b>Monita Interconnector S.r.l.</b>	Construction and management of the Italy-Balkans interconnection as part of the Interconnector Project	0	€0.0m
<b>Resia Interconnector S.r.l.</b>	Construction and operation of the Italy-Austria interconnector as part of the Interconnector Project.	0	€0.0m



SUBSIDIARIES WITH NON-REGULATED ACTIVITIES OVERSEAS			
Business		Revenue	Company
Development of new activities and business opportunities in the non-regulated international market, in particular in South America.	0	€7.0m	<b>Terna Plus S.r.l.</b>
Management of activities involved in the design, construction and maintenance of electricity infrastructure.	0	€19.1m	<b>Terna Chile S.p.A.</b> <i>Company incorporated under Chilean law</i>
Management of activities involved in the design, construction and maintenance of electricity infrastructure.	4	€19.1m	<b>SPE Santa Maria Trasmisora de Energia S.A.</b> <i>Company incorporated under Brazilian law</i>
Company incorporated under Brazilian law	13	€73.8m	<b>SPE Santa Lucia Trasmisora de Energia S.A.</b> <i>Company incorporated under Brazilian law</i>
Management of activities involved in the design, construction and maintenance of electricity infrastructure.	5	€1.2m	<b>Terna Perú S.A.C.</b> <i>Company incorporated under Peruvian law</i>
Management of activities involved in the design, construction and maintenance of electricity infrastructure.	7	€38.7m	<b>Difebal S.A.</b> <i>Company incorporated under Uruguayan law</i>

ASSOCIATES OR JOINT VENTURES			
Business		Revenue	Company
Pure and applied scientific research aimed at making advances in the electro technical, energy, electronic and IT sectors.	665	€121.8m	<b>CESI S.p.A.</b>
Management of daily forecasting and real-time analysis of energy flows in central and western Europe, identifying possible critical issues and promptly informing the TSOs concerned.	35	€9.2m	<b>CORESO S.A.</b> <sup>2</sup> <i>Company incorporated under Belgian law</i>
TSO for Montenegro's electricity market. Investment acquired as part of the Italy-Balkans interconnector project	311	€29.0m	<b>CGES</b> <sup>3,4</sup>
Jointly controlled by Terna and the Tunisian company, STEG, the company is engaged in carrying out preparatory studies for construction of the infrastructure required to connect the Tunisian and Italian electricity systems.	2	€0.0m	<b>Elmed Études Sarl</b>

<sup>2</sup> Although the stake is less than 20%, the investment remains relevant based on the assumption that the Parent Company exerts significant influence. The shareholders include Terna and the operators in France (RTE), Belgium (Ela) and the UK (National Grid), each with 15.84% interests, in addition to the German operator, 50 Hertz Transmission, with 7.90%.

<sup>3</sup> In full, "Crnogorsk Elektroprenosmi Sistem Ad".

<sup>4</sup> Data refer to 2017.

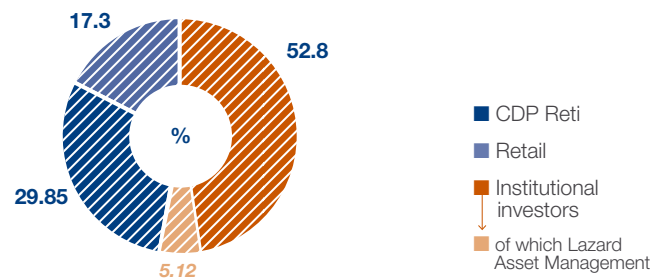


## Ownership structure

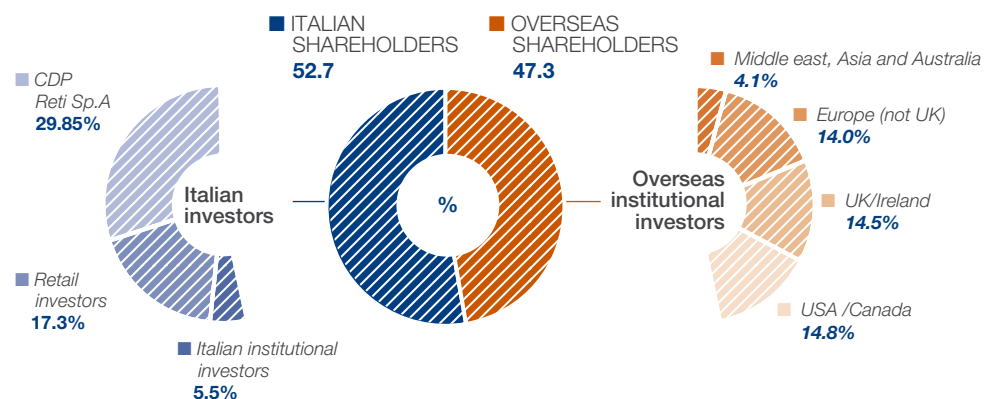
Terna S.p.A.'s share capital amounts to €442,198,240, comprising 2,009,992,000 fully paid-up ordinary shares with a par value of €0.22 each.

Based on information from the shareholders' register and other data collected as at February 2019, Terna's shareholder structure breaks down as follows.

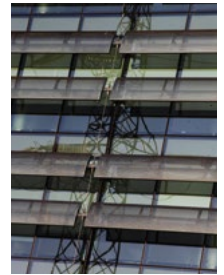
### SHAREHOLDERS BY CATEGORY



### SHAREHOLDERS BY GEOGRAPHICAL AREA AND CATEGORY







At the end of 2018, 109 socially responsible investors (SRIs), compared with 103 in 2017, had invested in Terna's shares using an approach that takes into account ESG (Environmental, Social, Governance) aspects. Overall, at the end of 2018, SRIs represented 9.52% of Terna's free float (8.32% at the end of 2017) and 12.86% of the capital held by identifiable institutional investors (approximately 11% at the end of 2017).

#### Socially responsible investors

Terna has adopted a policy that envisages payment of dividends twice a year. The interim dividend for 2018 was 7.87 euro cents (paid on 21 November 2018), while the final dividend to be proposed to shareholders by the Board of Directors at the Annual General Meeting on 8 May 2019 is 15.45 euro cents. Further information on the dividend history may be found at [www.terna.it](http://www.terna.it).

The Annual General Meeting of 4 May 2018 was attended by 1,448 shareholders (of which 8 in person and 1,440 by proxy), holding a total of 1,301,488,973 shares, equal to 64.750953% of the share capital, all of which bearing voting rights.

Information on the ownership structure, restrictions on the transfer of shares, securities that grant special rights, and restrictions on voting rights, as well as on shareholder agreements, is provided in the "Report on Corporate Governance and Ownership Structures" for 2018, published together with the Annual Report of Terna and the Terna Group. This is available in the "Investor Relations" section of Terna's website.

Fourteen requests for information were received by e-mail from non-institutional shareholders (12 in 2017 and 12 in 2016), regarding information on the dividend policy, the share price performance, information on the dates and availability of Terna's corporate documents and/or documents relating to General Meetings and/or other information material on the Company.

## Corporate governance

The governance system is substantially in line with the principles contained in the Code of Conduct<sup>5</sup> for listed companies adopted by Terna, with the related recommendations made by the CONSOB and, more generally, with the international best practices the Company uses as a benchmark.

The current structure of the Board of Directors requires the presence of one Chief Executive Officer, to whom the Board granted the necessary authority via a resolution approved on 27 April 2017, in which the Board defined the scope, limitations and means by which to exercise such authority.

The activities of the Board of Directors are coordinated by the Chairman. The Board of Directors consists of nine members, whose terms of office will end with approval of the financial statements for the year ended 31 December 2019. On 10 August 2018, the Director Stefano Saglia, resigned and, on 15 February 2019, Paolo Calcagnini was co-opted on to the Board as his replacement. On 20 March 2019, the date on which this document was approved, the Board of Directors made changes to the composition of the Committees.

### Board of Directors

#### Chairwoman

Catia Bastioli

#### Chief Executive Officer

Luigi Ferraris

#### Directors

Paolo Calcagnini (dal 15/2/2019)

Fabio Corsico

Luca Dal Fabbro

Paola Giannotti

Yunpeng He

Gabriella Porcelli

Stefano Saglia (fino al 10/8/2018)

Elena Vasco

### Board of Statutory Auditors

#### Chairman

Riccardo Enrico Maria Schioppo

#### Standing Auditors

Vincenzo Simone

Maria Alessandra Zunino de Pignier

#### Alternates

Davide Attilio Rossetti

Cesare Felice Mantegazza

Renata Maria Ricotti

### Independent Auditors

PricewaterhouseCoopers S.p.A.

### Board Committees

#### Audit, Risk, Corporate Governance and Sustainability Committee

Luca Dal Fabbro<sup>6</sup> (Chairman, independent)

Elena Vasco (independent)

Paola Giannotti (independent)

#### Remuneration Committee

Fabio Corsico (Chairman, independent)

Gabriella Porcelli (independent)

Elena Vasco<sup>7</sup>

#### Nominations Committee

Gabriella Porcelli (Chairwoman, independent)<sup>8</sup>

Yunpeng He

Fabio Corsico (independent)

#### Related Party Transactions Committee

Paola Giannotti (Coordinator, independent)<sup>9</sup>

Luca Dal Fabbro (independent)

Gabriella Porcelli (independent)

<sup>5</sup> Edition last revised in July 2018 and available on Borsa Italiana S.p.A.'s website at the following link: <https://www.borsaitaliana.it/comitato-corporate-governance/codice/2018clean.pdf>. The Code was drawn up by the Corporate Governance Committee for listed companies established by ABI, Ania, Assonime, Assogestioni, Borsa Italiana and Confindustria.

<sup>6</sup> Following the resignation of the Director, Stefano Saglia, from the positions he held on the Board of Directors of Terna S.p.A., the Board of Directors on 9 November 2018 appointed the independent, non-executive Director, Luca Dal Fabbro, representing minority shareholders, as Chairman of the Audit, Risk, Corporate Governance and Sustainability Committee.

<sup>7</sup> Following the previously mentioned resignation of Stefano Saglia as a Director, on 20 March 2019, the Board of Directors appointed the Director, Elena Vasco, to the Remuneration Committee.

<sup>8</sup> On 20 March 2019, the Board of Directors appointed the Director, Gabriella Porcelli, as Chairwoman of the Nominations Committee in place of the Director, Luca Dal Fabbro.

<sup>9</sup> Whilst leaving the composition of the Related Party Transactions Committee unchanged, on 20 March 2019, the Board of Directors appointed Paola Giannotti as the Committee's Coordinator.



**COMPOSITION OF THE BOARD OF DIRECTORS AS AT 20 MARCH 2019**

	Unità	
<b>Men</b>	%	55.6
<b>Women</b>	%	44.4
<b>Under 30</b>	%	-
<b>Between 30 and 50</b>	%	22.2
<b>Over 50</b>	%	77.8

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Aspects worthy of note include:

- the high level of attendance of Directors;
- the presence of sustainability goals in the remuneration packages of the Chief Executive Officer and management.

Further information on Terna's corporate governance may be found in:

- the "Report on Corporate Governance and Ownership Structures", which was approved by the Board of Directors on 20 March 2019, and is available in the "Investor Relations" section of Terna's website;
- the "Remuneration Report".

The Group's new organisational structure, in place from 1st July 2018, aims to support Terna's central role in the integrated electricity system, with the aim of:

- optimising and integrating real-time dispatching activities and long-term planning;
- optimising the management of tangible assets and maximising operational excellence in their design, construction, operation and maintenance.

In particular, the following two organisational units which report directly to the Chief Executive Officer were redefined:

- "Strategy, Development and Dispatching", which includes system strategy, grid planning, dispatching and regulatory affairs;
- "National Transmission Grid", which includes asset management and plant design, construction, operation and maintenance, as well as procurement and ICT.

The new organisational structure also strengthens the Group's innovation capabilities through the creation of a new department reporting directly to the Chief Executive Officer, called "Innovation, Digital and Energy Solutions".

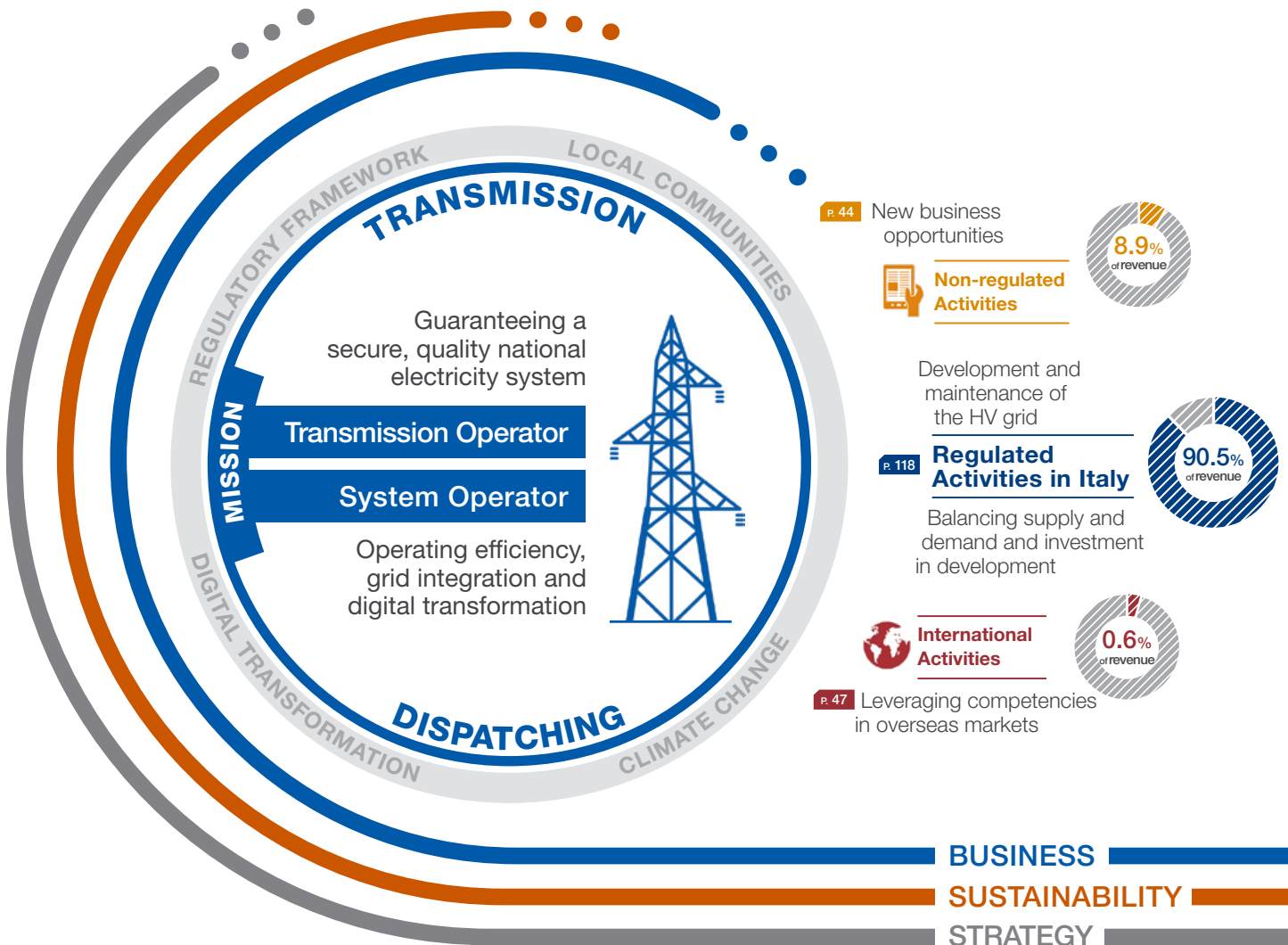
Finally, the "External Relations and Sustainability" function has been expanded in view of the Group's growing role at international and European level in the development of energy strategies.

[Group's new organisational structure](#)

# Business model and activities

ROLE

ACTIVITIES





Terna plays a central role in the energy transition process underway: in a context of radical change with decarbonisation emerging as a global objective, the electricity grid is one of the main enabling factors.

ENABLERS

VALUE CREATION

SYSTEM EFFECTS

**PEOPLE**



at the centre of our business

- Competencies
- Integrity & Values
- Safety

**INNOVATION**



in response to the growing complexity of the system

- Digital solutions
- New technologies
- Open innovation

**P. 99 Shareholder value with constant**, predictable growth in returns over a five-year period

**P. 20 Risk control** through prevention and real-time response

**P. 60 Value for money** of the prices charged to end users

**P. 57 Quality of service** to provide the community with a reliable electricity supply, minimising outages

**P. 48 Resilience** in the face of the increasingly complex challenges posed by climate change

**P. 46 Checks on the impact of our activities** in our approach to every stakeholder

**P. 48 Grid development and maintenance** to maximise the reliability of the service



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**PROGRESSIVE DECARBONISATION**



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**GROWING INTEGRATION OF RENEWABLES**



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**CONTRIBUTION TO ACHIEVING THE UN'S SDGs**

A key role in  
**ENERGY TRANSITION**

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## Terna's business

**Terna's business model** focuses primarily on its **Regulated Activities in Italy**, consisting of the transmission and dispatching of electricity. By leveraging the expertise developed in managing its core business, the Company's **Non-regulated Activities** and **International Activities** help to boost growth, taking advantage of the opportunities resulting from innovation and from energy sector trends in Italy and abroad.

**Terna's Strategic Plan**, which focuses on the long term, sets out targets, priorities and investments in line with medium- and long-term trends and identifies sustainable solutions capable of creating value over time. Good examples are bringing the electricity transmission grid into line with changing energy scenarios, and the increasing integration of grid operation at European level (see page 128).

The **Regulated Activities in Italy**, **Non-regulated Activities** and **International Activities** **benefit** from Terna's financial resources and the technical expertise of its personnel, which is often unique in the electricity sector and represents an example of distinctive human capital. Against a rapidly changing external environment (e.g. economic conditions, the evolution of the electricity system, technological upgrades, social issues and environmental challenges), **innovation, quality of service and the minimisation of environmental impacts** play a key role in driving the Group's performance.

As well as avoiding the risk of failing to become aware of potential problems in a timely manner, stakeholder engagement, based on reciprocal trust and transparency, strengthens the Group's social capital and enhances the sustainability of the business model over both the medium to long term.

## Electricity transmission

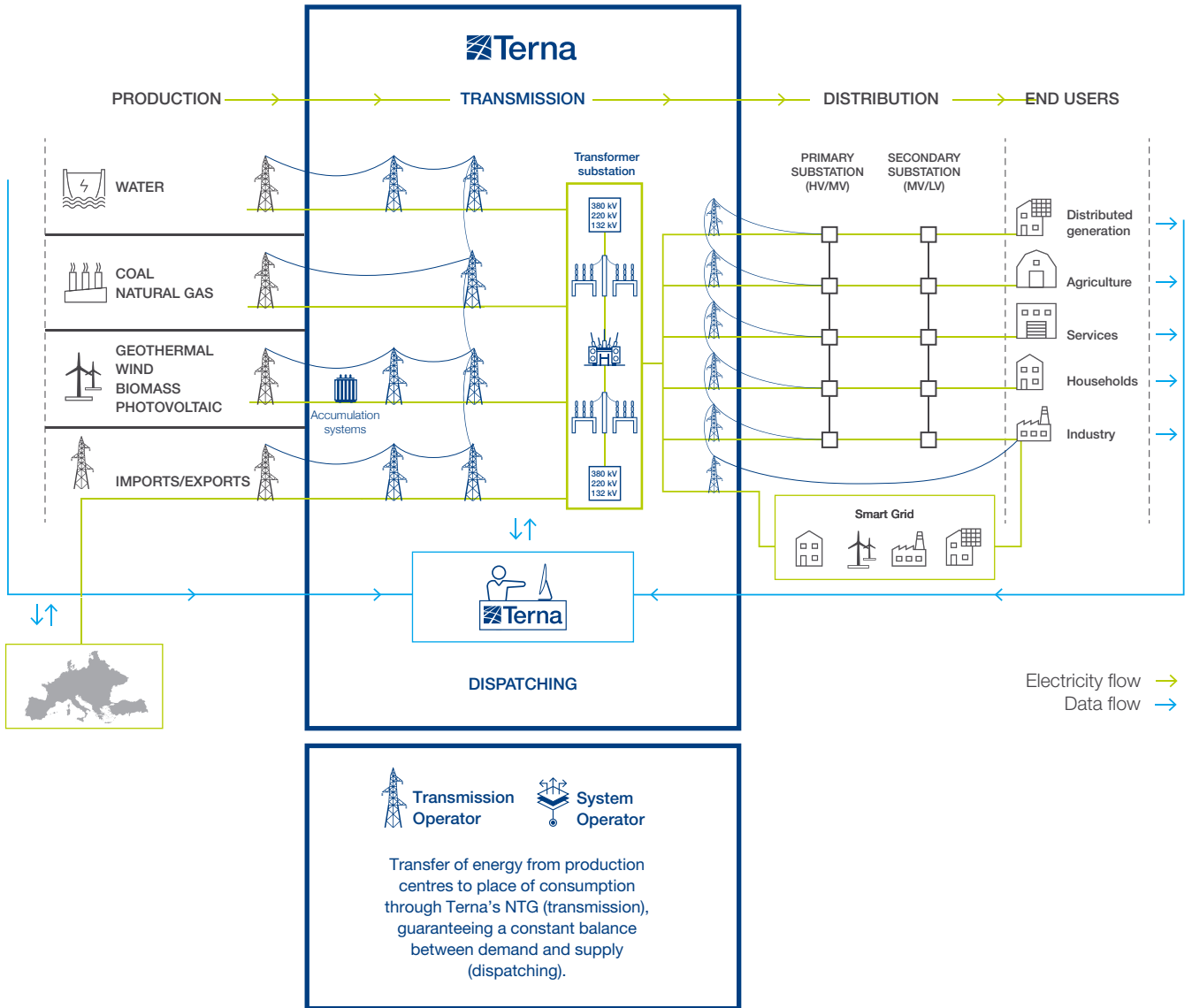
The Italian electricity supply chain consists of four segments: production, transmission, distribution and the sale of electricity.

This chart illustrates Terna's core business, to which most of this Report is dedicated: transmission. This is a vital segment of the electricity service which, while not perceived as such by end users, the customers of companies that distribute and sell electricity, makes it ethically responsible towards the whole community.

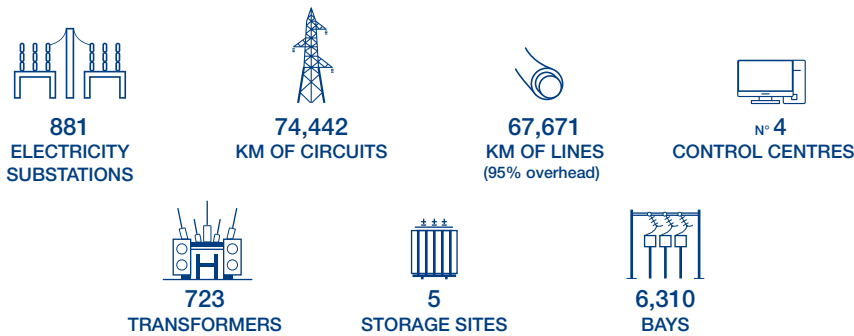
For Terna, this requires a sustainable approach to its businesses, which is primarily expressed through responsible management of the NTG.



## NATIONAL ELECTRICITY SYSTEM CHAIN



### Terna's infrastructure



Electricity transmission breaks down into the following activities:

#### Planning

Close analysis of electricity flows through the grid, and the development of supply and demand projections, allow Terna to prevent the occurrence of problems and to schedule new projects needed to ensure that the system is fit for purpose over the medium and long term, in relation to the safety of operations, reducing congestion and improving quality and continuity of service.

Network planning must be consistent with the objective of maximising the safe and secure integration of renewable energy sources. This means that all existing regulatory resources, including exports and imports and power generation controls, must be taken advantage of. The new works to be carried out are included in the NTG Development Plan, presented annually to the Ministry for Economic Development for approval, also taking into account the consultation process carried out by ARERA. Terna follows the complex authorisation process (see pages 84 and 170).

#### Implementation of development initiatives

Responsibility for the design and construction of the works included in the Development Plan has been assigned to Terna Rete Italia S.p.A., which decides on the need for external resources and establishes the related solutions and the technical specifications for the components and materials to be used, in compliance with the technical regulations in force. Terna Rete Italia also defines the engineering standards for plants connected to the grid, above all standards of construction and the performance standards for equipment, machinery and substation and power line components. The construction of new plants is usually outsourced, whilst maintaining strict control over contractors' approaches to environmental and social concerns. Development initiatives also include the construction of interconnectors with other countries (see page 128).

#### Dispatching

Dispatching ensures a balance between the quantity of electricity injected into and withdrawn from the system, between energy supply and demand, round the clock, 365 days a year. This activity has become more complex over time, partly due to significant growth in non-programmable renewable sources, requiring greater flexibility, especially in situations where the supply from renewable sources is very high and demand for energy is low (see page 40).

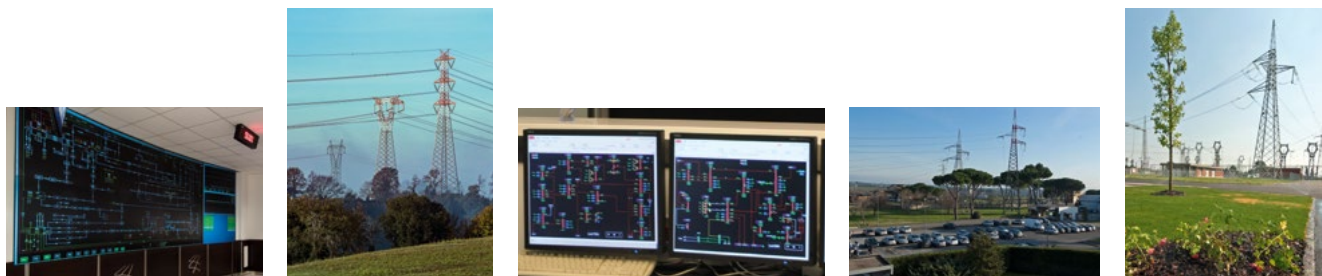
#### Infrastructure maintenance and renewal

The maintenance of power lines, substations and storage systems is carried out by Terna Rete Italia, which is also responsible for defining the technical criteria and standards for the maintenance and the renewal of assets (see pages 61 and 130).

As the TSO, Terna is also responsible for managing producers' registers, handling the data on injections and withdrawals for use in determining the related revenues and costs, and for processing statistics on the Italian electricity industry. This entails having access to confidential data regarding operators in the system, especially electricity producers. To protect this data, Terna has adopted the best data protection practices in order to prevent the information it holds from being accessible or disclosed to unentitled third parties.







## Dispatching of electricity

Dispatching is the set of activities necessary to ensure that there is a balance between supply and demand in the country's electricity system.

The high degree of complexity and coordination necessary to guarantee the correct operation of the system require the presence of a central coordinator, the provider of the dispatching service. This coordinator has control over a high number of both supply-side and demand-side players, and in the last few years also over production from non-programmable renewable sources.



Dispatching includes planning for the unavailability of the grid and of production plants over different time-scales, forecasting national demand for electricity, comparing demand for consistency with planned production in the free energy market (the Power Exchange and over-the-counter contracts), the acquisition of resources for dispatching and monitoring power transported for all the power lines that make up the grid.

This area of operation also includes management of the Dispatching Services Market (DSM), through which the resources for dispatching services are procured.

In particular, “real-time” control of the National Electricity System is ensured by the National Control Centre, the nerve centre for Italy's National Electricity System, which coordinates the other centres around the country, monitors the system and dispatches electricity. The Centre intervenes, by issuing instructions to producers and Remote Centres, in order to modify supply and capacity on the grid. To avoid the risk of prolonged power outages, it may also intervene in an emergency to reduce demand.



## KEY EVENTS IN 2018

On 1<sup>st</sup> January 2019, the new zonal configuration came into force. Compared to the past, the new arrangement has combined the production nodes with limited capacity in Brindisi, Foggia and Priolo with neighbouring zones (the South and Sicily zones, respectively), as well as transferring the Gissi node from the South to the Central-South zone. This change was made in accordance with the European CACM Regulation, which all the regulatory authorities and TSOs of European Union member states must comply with. In particular, the changes made are aimed at ensuring safe operation of the transmission system, as well as boosting the efficiency and cost-effectiveness of the electricity market. In Resolution 386/2018/R/eel, ARERA has approved Terna's proposed revision of the zonal configuration following the review process carried out in 2018 pursuant to the European CACM Regulation and ARERA Resolution 22/18/R/eel.

[Review of market zones](#)

The TERRE (Trans-European Replacement Reserve Exchange) project began in 2013 as an early implementation of the Electricity Balancing Guideline (EB GL) regarding the design, development, implementation and management of a platform to share balancing resources among European countries.

The project involves 11 countries of which nine are full members (France, the UK, Switzerland, the Czech Republic, Poland, Spain, Portugal, Romania and Italy) and two are observers (Bulgaria and Hungary).

The platform that will manage the TERRE process, called Libra, will enable the sharing of Replacement Reserves (RR) among participating countries which, in the current Italian dispatching market, corresponds to the share of the tertiary reserve that can be activated in more than 15 minutes.

Access to Libra is only granted to TSOs, which will be responsible for collecting offers from their respective local operators and then submitting them to the platform, together with the capacity available among the market zones and the TSO's own RR needs. The introduction of Libra will contribute to the creation of a single European balancing market, thereby increasing the security of the electricity system in terms of the availability of reserves that may be activated.

[TERRE project](#)

Following the approval by ARERA of Resolution 300/2017/R/eel, in 2017, two pilot projects regarding UVAC (Aggregate Virtual Consumption Units) and UVAP (Aggregate Virtual Production Units) were launched in order to diversify the type of enabled resources for the Dispatching Services Market (DSM), in line with the principle of technological neutrality, and to increase the amount of resources available to ensure greater reliability and security of supply. On 1 November 2018, the two projects were merged into a new pilot project relating to UVAM (Aggregate Virtual Mixed Units) which enables aggregate participation in the DSM, not only regarding electricity demand and distributed generation, but also storage systems (including charging stations for e-mobility).

The dispatching services for which the authorisation of UVAMs may be requested, both upstream and downstream, are: congestion resolution, the "rotating" tertiary reserve, the "replacement" tertiary reserve and balancing.

[UVAC/UVAM](#)



**KEY EVENTS IN 2018** *(continued)*

**Black start simulations**

Black start simulations are needed to check that the electricity system is working properly and to improve its efficiency by ensuring a rapid reboot of the system in the event of a blackout. In 2018, four blackouts were successfully simulated, followed by the related black starts. The simulations involved all of Terna's regional areas; two were carried out in the North-west Area (including one in Sardinia), one in the North-east Area and one in the Central-South Area.

**Dynamic Rating**

With a view to ensuring ever greater flexibility in the management of our assets, in line with the activities carried out in 2017, the National Dispatching department and the North-west and Central-South Offices studied new Dynamic Thermal Rating (DTR) applications in 2018.

By exploiting the cool conditions of the lines concerned, above all during the winter when loads are highest, the DTR is able to increase load capacity so as to meet demand in the short term. The increase in capacity also has the advantage of supporting increased production from renewables plants.

Therefore, as with other DTR applications already in service, a system for recording weather and temperature conditions has been installed.



## Regulated revenue

Regulated revenue in Italy of €1,989.6 million represents approximately 86% of Terna's total revenue. It is determined on the basis of ARERA resolutions establishing the structure and criteria to be used. Each year, the regulator revises the criteria, if necessary.

### THE THREE MAIN TYPES OF ALLOWED COST

Determined on the basis of the Regulated Asset Base (RAB) and the Weighted Average Cost of Capital (WACC). The RAB represents net invested capital for regulatory purposes. It is revalued annually on the basis of data from ISTAT (Italy's Office of National Statistics) on the change in the deflator applied to gross fixed investment and revised on the basis of the performance of investment and disposals. The WACC represents the weighted average cost of equity and debt. The methods of determining and revising the WACC are established by the regulator.

To cover the return on capital (RAB)

Allowed depreciation (calculated on the basis of an asset's useful life for regulatory purposes) is revalued annually based on the change in the deflator applied to gross fixed investment.

To cover depreciation

Allowed costs are determined by the regulator at the beginning of the regulatory period, based on operating costs recognised during the relevant year (which, in the case of the first regulatory sub-period 2016-2019 - NPR1 - was 2014) and increased by any remaining portions of additional efficiencies achieved in the previous two regulatory periods. The resulting amount is revalued annually on the basis of inflation and reduced by an efficiency factor designed to ensure that additional efficiencies are, over time, passed back to end users in full.

To cover operating costs

For further details regarding the main types of costs recognised and the fees for transmission and dispatching services, reference should be made to the "Annual Report 2018".

In 2018, the Ministry for Economic Development paid Terna €47,053,291 as an advance on grants for projects financed from the National Operational Programme (*Programma Operativo Nazionale* or PON). A further €14,499,449.49 was received from the Sicily Regional Authority, again as advances on grants for projects financed from the Regional Operational Programme (*Programma Operativo Regionale* or POR). Terna has also received government grants of €4,627,096 to fund required modifications to its infrastructure.

GOVERNMENT GRANTS	2018	2017	2016
Grants related to assets received from the Public Sector (*)	19,126,545	6,699,644	134,139
MED-funded projects (*)	47,053,291	11,311,452	9,564,389.65
EU-funded projects (*)	0	76,996,616	33,000,000

< 201-4

(\*) These grants are deducted directly from the carrying amount of the related assets.

## Pass-through items

As part of its dispatching operations, Terna manages the cost and revenue items relating to the purchase and sale of energy from and to operators in the electricity market. These are the so-called “pass-through” items that do not affect the Terna Group’s profitability, as the revenues equal the costs.

In 2018, the Terna Group’s pass-through revenues and expenses amounted to a total of €5.171.8 million. For further details, reference should be made to the “Annual Report 2018”.

## Incentive mechanisms

Terna monitors continuity of the service provided through a range of indicators, as defined by ARERA (Resolution 250/04) and in Terna’s Grid Code. These continuity indicators are important to the system, as they record the frequency and impact of events on the electricity network and linked to faults or external factors, such as weather events. All of the indicators are shown over a four-year period, in which there were no significant changes, providing confirmation of the high level of quality achieved (see also page 114).

The principal continuity indicators are Regulated Energy Not Supplied (RENS) and Average Service Availability (ASA).

## Other activities in Italy

The Terna Group pursues business opportunities that go beyond its Regulated Activities. Exploitation of these opportunities depends on establishing relations with a specific category of stakeholder: the customers of Non-regulated Activities who are the source of the Group’s revenue diversification.

These Italian activities regard services for external customers, private interconnector projects with other countries and transformers.

### SERVICES FOR THIRD PARTIES

During 2018, Terna continued to provide its services to external customers in the areas of **Energy Solutions** (the development of technical solutions and the supply of innovative services), **Telecommunications** (IRU - Indefeasible Right of Use, the housing of telecommunications equipment and maintenance services for fibre networks) and **O&M** (operation and maintenance of high-voltage and very high-voltage infrastructure).

As regards Engineering services, Terna obtained several **EPC** (Engineering, Procurement and Construction) contracts: this model involves the design, development and implementation of solutions to meet the growing demand for infrastructure and grid connections.

### Energy Solutions

Key events during 2018 include:

- The inauguration in October, of the first heat recovery plant belonging to Laterlite (a leading company in the production of light, premixed and insulating expanded clay for the construction industry), which was designed and built in collaboration with Avenia at the Rubbiano di Solignano plant (Parma). This innovative energy efficiency project, aimed at improving environmental sustainability, will enable optimisation of the qualitative and environmental performance of the production of light expanded clay aggregate (LECA), allowing up to 83% of heat to be reused in the production cycle, with a reduction in the consumption of natural gas and a corresponding reduction in atmospheric emissions of approximately 1,400 tonnes of CO<sub>2</sub> per year.
- “Smart Island” is the innovative solution devised by Terna for providing power to small islands not connected to the national transmission grid. Through “Smart Island”, Terna has made the energy transition from a diesel production system (generators) to a decarbonised one by integrating renewable energy sources, using energy storage systems, boosting energy efficiency, the use of electric vehicles and the adoption of other hi-tech solutions to manage active demand. This enables islands to progressively and sustainably move towards energy independence. In 2018, the “Smart Island” solution was rolled out for the first time on the island of Giannutri (Grosseto). At the Ecomondo Expo, the leading event organised to promote the green and circular economy in Europe and the Mediterranean area, the project was named “Good Practice of the Year 2018 - Environmental Protection”.

Key activities during 2018 include:

• **IRU fibre optic project:**

- This project involves Terna's concession of an IRU (Indefeasible Right of Use) to the customer, Open Fiber, for a minimum volume of 21,000 km in the period 2017-2024 and the provisions of ancillary services, namely Housing and Maintenance. The backbones connecting the 13 national PoPs has been delivered, whilst the 41 regional rings that will connect the regional PoPs (cluster A&B) have been designed and in part delivered. With respect to the terms of the contract, envisaging that Open Fiber would purchase a minimum of 2,500 km of fibre in 2018, a total of 5,200 km of regional rings have been delivered to the customer. The most significant portion of the fibre optic regional ring requirements have been met by using Terna's overhead power lines, which were also set up during the year, and through the selected acquisition of fibre optic sections from third parties (swap transactions with RETELIT and FASTWEBF).
- For Fastweb: long-distance fibre-optic infrastructure was designed and made available to Fastweb along 760 km of Terna's overhead lines.
- For Retelit: long-distance fibre-optic infrastructure was designed and made available to Retelit along 1,150 km of Terna's overhead lines.

• **Rai Way tender:** Terna was awarded Lot 2 of the dual carrier tender.

• **Smart Tower Innovation project:** implementation of the experimental project to extract value from high voltage pylons by using them for environmental monitoring (smart towers) was completed with installation of the first seven smart tower pylons in Sicily and the acquisition of computer systems that were set up at two substations. Another smart tower has been set up in the province of Belluno to meet the needs of the electricity system, while completion of the four remaining installations in Sicily including the activation of computer systems, as well as the installation of a smart tower in Abruzzo to meet the needs of the electricity system, are expected at the beginning of 2019.

• **Extracting value from pylons by installing antennae:** in 2018, preparations began for the testing of new business models designed to extract value from pylons by using them to support mobile network operators. In particular, negotiations were concluded regarding the installation of antennas on Terna pylons to cover remote areas (a contract with Open Fiber for up to a maximum of 500 pylons in the three-year period 2019-2021). Negotiations with TIM and Fastweb regarding mobile radio solutions have also begun (the trialling of 5G solutions). The related contracts are being finalised, in preparation for the conclusion of broader framework agreements.

Telecommunications

Key O&M activities during 2018 include:

- Non-regulated Activities Control Centre: implementation of a platform that gathers and processes data deriving from the assets managed by Terna in the Energy Solutions segment, which optimises their performance and maintenance processes. The software development and supply contract was finalised in September 2018. The system has been configured, in collaboration with the ICT department, in compliance with the defined technical and functional specifications. The software is running in parallel with the current photovoltaic management system.
- Renegotiated plant maintenance contracts with RTR were signed in October.
- Contracts are being drawn up with Eolica Cancellara regarding the O&M service for the final Cancellara wind farm substitution.

Plant operation for third parties (O&M)

Key EPC activities during 2018 include:

- A subcontract agreement was signed with Macchiareddu Energy regarding the design and "turnkey" construction of the HV/MV substation and the connection line to the future substation and the National Transmission Grid of the "Cilea" and "Tosti" photovoltaic plants located in the municipality of Civita Castellana (VT).
- The HV/MV substation for the final connection of a 42 MW wind farm to the National Transmission Grid for Eolica Cancellara S.r.l., and the HV/MV substation for connection of a 27 MW wind farm to the National Transmission Grid for AM Renewable Energy, have been energised.

EPC (Engineering, Procurement, Construction)





### PRIVATE INTERCONNECTORS

Since 2009, with Law 99/2009 (“Provisions for the Development and Internationalisation of Enterprises and Energy”), Italy has implemented the EU requirement to give undertakings other than grid operators the possibility of creating interconnections with other countries, with the aim of promoting the development of a single electricity market. A total of five interconnectors are currently planned for the borders with France, Montenegro (both nearing completion), Austria, Switzerland and Slovenia (currently awaiting the necessary consents). Details of the state of progress are provided on page 131.

### TRANSFORMERS (TAMINI)



FIRST  
TRANSFORMER  
USING VEGETABLE  
OIL TO BE  
MANUFACTURED  
IN ITALY

Tamini Trasformatori S.r.l. operates in the electromechanical sector and is a leader in the design, production, commercialisation and repair of power transformers for electricity transmission and distribution grids, of industrial transformers for the steel and metals industry and of special transformers for convertors used in electrochemical and electrolytic production. In 2018, Tamini acquired transformer orders amounting to approximately €123 million, up 12% on 2017, in line with expectations. As regards “sustainable” transformers using vegetable oil, two 250 MVA transformers were installed during the year. Finally, Tamini was awarded a contract to manufacture a 400 MVA transformer using vegetable oil. For further information see the section “Focus on the Tamini Group” on page 194.

### ACQUISITIONS

In February 2018, Terna - via its subsidiary, Terna Plus - completed the acquisition of 70% of a New. Co. to which Avvenia's principal assets are to be transferred. Avvenia, a strategic consulting company classified as an Energy Service Company (ESCO) and certified UNI CEI 11352, is a leader in the energy efficiency sector, with one of the highest numbers of efficiency projects completed and operated in Italy, including in the form of EPC (Energy Performance Contract) solutions.

## International activities

In line with the guidelines in the Strategic Plan, and also in collaboration with energy operators that have an established overseas presence, the Terna Group takes advantage of opportunities for international expansion by leveraging its core competencies developed in Italy as a TSO. These opportunities are sought in countries with a stable political and regulatory framework that need to build electricity infrastructure.

Terna has set itself three strategic priorities with regard to its International Activities:

- **Europe:** to strengthen its presence (assessing and monitoring M&A opportunities and developing merchant interconnector projects);
- **Latin America:** To complete ongoing projects in Brazil, Uruguay and Peru and consolidate its position in the countries of interest;
- **To give priority to “capital-light”** services developed to take advantage of the technical expertise Terna has acquired in Italy.

Overseas initiatives of interest to the Terna Group are:

- **Concessions:** this model envisages the acquisition and operation of transmission systems abroad by taking part in international concession and/or secondary market awards, leveraging the core competencies and experience developed in the international arena;
- **Technical assistance:** this involves the provision of consulting and technical assistance services regarding a TSO's core activities, as well as the definition and implementation of regulatory and market frameworks in the local energy context, with a view to exporting and taking advantage of the distinctive expertise acquired in Italy;
- **Energy Solutions:** this includes all high value-added non-traditional activities aimed at exporting the experience Terna has in Italy in the fields of Energy Storage and Smart Solutions;
- **EPC Management:** Engineering, Procurement, Construction Management (EPCM) activities enable leveraging of infrastructure management expertise and implementation of projects overseas.

### ACTIVITIES IN 2018

The project to connect a 90 MW photovoltaic plant to the electricity grid was completed with the delivery of the additional works in February 2018, in line with expectations.



During 2018, work continued on the construction of the 213 km Melo-Tacuarembò 500 kV transmission line.



The engineering activities were completed and load testing of all types of pylons was successfully completed. The process of receiving and obtaining customs clearance for materials, with a special focus on pylon structures, is still in progress.

As regards construction, civil works are underway on the Melo-Tacuarembó line. At the end of the year more than 60% of the foundations had been completed, and assembly of the pylons began during the second half of the year.

In October 2018, the status of *Proyecto de Inversion* (Investment Project) was obtained, in order to qualify for the related tax benefits.

Over 50% of the works have been carried out, with completion expected by the end of 2019.

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**ACTIVITIES IN 2018 (continued)**
**Brazil**

Construction of the lines and substations for the two concessions, Santa Maria Transmissora de Energia (SMTE) in the State of Rio Grande do Sul and Santa Lucia Transmissora de Energia (SLTE) in the State of Mato Grosso, continued in 2018.

In October 2018, the concessions' entry into commercial service was formally authorised by ONS (Operador Nacional Do Sistema Eletrico - the Brazilian regulator), and operation and maintenance activities regarding the concessions are in progress. 80% of the 158 km line was built using single-pole cable-stayed pylons with a low environmental impact. In February 2019, two months ahead of schedule, the line was inaugurated by the CEO of Terna, Luigi Ferraris, at a corporate event attended, among others, by Italy's ambassador to Brazil and representatives from leading Brazilian energy sector organisations.

**Peru**

Work began in 2017 on construction of 132 km of new 138 kV lines between Aguaytia and Pucallpa and continued in 2018.

The structural engineering works begun in 2017 were completed in 2018 and the environmental certification process has been launched. This is expected to be completed by the end of the first quarter of 2019.

As far as permits and consents are concerned, the final socio-environmental public hearing with the local population was successfully held, and the documentation relating to the environmental impact study for the authority responsible for issuing the environmental certification (Senace) was completed.

In terms of the acquisition of easements, all the land forming part of the line's buffer zone has been surveyed and recorded, and the process of acquiring easements and land along the route has begun (see page 87).

Procurement of transmission line materials has also begun.

The project is expected to be completed by the end of 2020.

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**Revenue from other Italian and international activities**

In 2018, the other activities carried out by the Group generated revenue of €194.9 million from Non-regulated Activities (including €103.4 million generated by the Tamini Group) and €12.5 million from International Activities (directly including the margin earned on overseas concessions), which primarily reflect investment in assets operated under concession in Brazil.





# Strategic Plan 2019-2023

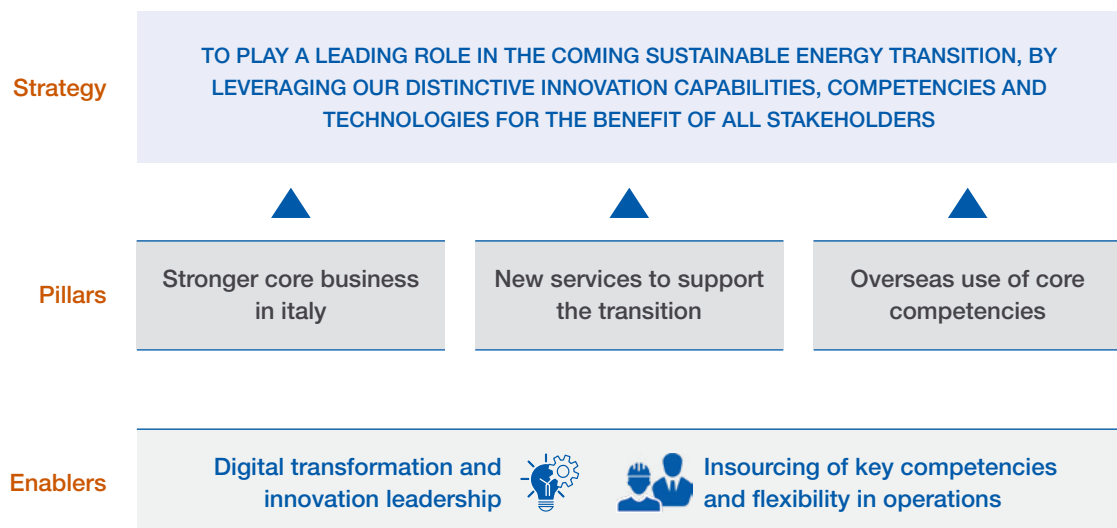
On 21 March 2019, Terna approved the Strategic Plan for the five-year period 2019-2023, which sets out this mission: “to play a leading role in the sustainable energy transition, by leveraging our distinctive innovation capabilities, competencies and technologies for the benefit of all stakeholders”.

The electricity sector is rapidly evolving as a result of the radical transition underway, which aims to achieve challenging objectives linked to sustainability, competitiveness and security. In particular, the expected increase in global electricity consumption, in a context of progressive decarbonisation, will see strong development of renewables, resulting in measures designed to integrate them within the electricity system. The pursuit of energy security by strengthening interconnections, the development of power grid resilience and, finally, greater competitiveness in the market, will be the determining factors in the management of complex trading relations between TSOs and other parties operating within the system.

In this context, Terna has redesigned the strategy set out in the 2018-2022 Plan by further stepping up infrastructure investment to meet the new requirements of the electricity system, as part of an integrated approach based on sustainability values, community engagement, skills development and the promotion of innovation.

Consequently, the strategic guidelines for the various areas of the Group have been strengthened:

- **Regulated Activities in Italy:** to give top priority to all the activities that enable Italy to tackle its energy challenges in a safe, efficient and sustainable way by leveraging the specific characteristics of local areas;
- **Non-regulated Activities:** to launch new services to support the energy transition, taking advantage of opportunities beyond our core activities, to be pursued in line with Terna’s mission, and if distinctive and/or of high added value;
- **International Activities:** to leverage the core competencies developed in Italy as a TSO through growth opportunities overseas.



A key driver of this strategy will be investment in the innovation and digital solutions needed to facilitate proactive management of the system. Attention will also be paid to the development and insourcing of the strategic skills required to cope with projects of growing size and complexity.

The guidelines identified for the Group's various strategic business areas have been divided into appropriate priority actions to be carried out over the life of the Plan.

With reference to **Regulated Activities in Italy**, the system needs a new investment drive to respond to developing needs, with a focus on maximising long-term use and sustainability. The role of proactive system operator in defining the grid's structure and in digitally managing assets should also be strengthened by combining Terna's specialist expertise with the experience gained in the most advanced markets.

**Non-regulated Activities** will be geared towards supporting the energy transition, especially as an energy solutions provider, involving the development of a portfolio of solutions for companies in the energy efficiency and grid infrastructure sectors, and taking advantage of value added market opportunities for traditional and renewable energy customers.

The connectivity business will continue to be aimed at pursuing opportunities based on leveraging the Group's infrastructure assets.

**International Activities** will focus on the execution of projects in progress and the management of projects in operation, taking advantage of the Group's specialist expertise by leveraging the new organisational structure. Among the priority actions, the main focus will be on selecting international growth opportunities with a high technological content (a key aspect for Terna) and involving potential agreements/partnerships, including the management of assets without the need to tie up large amounts of capital.

Maintenance of a strong capital structure through robust cash generation will also help to support an attractive dividend policy.

	Plan 2019-2023	Plan 2018-2022	
Net capex	~ €6.2bn	~ €5.3bn	 <b>Regulated Italy</b>
RAB (end of Plan)	~ €18.5bn	~ €17.5bn	
CAGR RAB*	> 4%	> 3%	
EBITDA	> €400m	~ €350m	 <b>Non-regulated</b>
Capex	> €300m	~ €300m	 <b>International</b>
EBITDA**	€150m	~ €150m	
Capex**	~ €700m	~ €600m	 <b>Digital transformation and innovation</b>
CAGR EBITDA	> 4%	> 3%	 <b>Efficiency and value creation</b>
CAGR EPS	> 3%	~ 3%	

(\*) Calendar RAB, including work in progress.

(\*\*) Includes financial income on Uruguay project.

(\*\*\*) Investment already included in Development Plan for Regulated Activities in Italy.



# Main economic impacts

201-1 >

## Value added<sup>10</sup>

Value added measures the value created by an enterprise, but also by an entire economy, over a certain period, usually a year. In corporate accounting terms, value added is calculated by subtracting the costs of purchasing the intermediate goods and services used in operations from the value of production (revenue attributable to the goods and services produced during the year). These costs do not include personnel expenses, which instead form part of the value added by the enterprise to the intermediate goods and services as a result of its operations. The difference between revenue generated by the sale of the final product and the cost of the raw materials (and the related support services) is the value added, which, in addition to personnel expenses, also includes any profit and the share of income used to pay the interest on any debt and income taxes.

### MEASUREMENT AND REDISTRIBUTION OF VALUE ADDED <sup>(\*)</sup>

	UNIT	2018	2017	2016	CHANGE 18-17	% CHANGE 18-17
A - Remuneration of employees	€	313,038,619	322,058,429	327,152,165	-9,019,810	-3
B - Payments to the government	€	302,842,820	301,533,096	320,643,092	1,309,724	0
C - Payments to credit providers	€	104,044,756	97,746,883	105,508,004	6,297,873	6
D - Payments to providers of risk capital (**)	€	468,730,134	442,198,240	414,058,352	26,531,894	6
E - Retained by the Company	€	242,888,183	252,011,601	213,870,808	-9,123,418	-4
<b>TOTAL NET VALUE ADDED</b>	€	<b>1,431,544,513</b>	<b>1,415,548,249</b>	<b>1,381,232,421</b>	<b>15,996,264</b>	<b>1</b>

(\*) Amounts relating to the creation and distribution of value added have been taken from the consolidated financial statements prepared in accordance with IFRS/IAS. In particular, the Terna Group has used IFRS/IAS since 2005.

(\*\*) Payments to capital providers in 2018 regard the interim dividend paid in November 2018 (€158.2 million) and the final dividend that the Board of Directors decided on 21 March 2019 to propose to shareholders at the Annual General Meeting (€310.5 million).

<sup>10</sup> This section, including the table, shows the values regarding Terna Crna Gora and the Tamini Group.

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## Taxes paid overseas

With regard to taxes paid overseas by the Group's subsidiaries in 2018, the following should be noted:

- **Terna:** with reference to the activities relating to the Italy-Greece interconnector<sup>11</sup>, income taxes totalling €2,775,999 paid in Greece.
- **Terna Crna Gora:** during the year, the company paid property taxes totalling €29,675 (of which €26,201 in the municipality of Kotor relating to plots of land owned, and the remainder in the municipality of Podgorica in relation to the company's headquarters).
- **Gruppo Tamini:** €10,389 was paid, primarily including taxes on services and withholding tax.
- **Terna Chile:** the Group's Chilean subsidiary paid municipal tax of 6,254,430 Chilean pesos.
- **Difebal S.A.:** the company paid 13,542,056 Uruguayan pesos, primarily in the form of value added tax of 8,780,713 Uruguayan pesos and income tax on non-residents of 4,127,360 Uruguayan pesos.
- **Terna Perù** paid value added tax of US\$796,116 and income tax on non-residents of US\$26,314.
- **Brazil:** the Brazilian subsidiaries, Santa Maria Transmissora de Energia (SMTE), in the state of Rio Grande do Sul, and Santa Lucia Transmissora de Energia (SLTE), in the state of Mato Grosso, paid total income tax of 1,010,660 Brazilian reais in 2018, in addition to financial transaction tax totalling 415,934 Brazilian reais.

## Procurement

As well as providing a service of general importance, Terna's activities help to generate downstream supply chain activity, creating significant economic value and social benefits.

In 2018, total expenditure on the procurement of services, supplies and works amounted to over €1,183<sup>12</sup> million, spread across 2,148 suppliers contracted during the year. In terms of a breakdown of procurement by origin, 93% of the Group's suppliers are Italian and the remaining 7% are overseas.

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<sup>11</sup> Terna's presence in Greece consists of a series of plants and infrastructure assets that provide the DC interconnection between the Italian and Greek electricity systems (the section of submarine cable in Greek territorial waters, as well as the terrestrial connection from the terminal for the Greek cable to the Arachthos substation, which is also owned by Terna). As there is a production facility in Greece, a permanent company (or branch) has been established in that country.

<sup>12</sup> The figure refers to the amount ordered during the year. This means the sum of the amounts allocated for all contracts (works, supplies and services) signed during the year.

## Economic impact on the community

By developing the electricity network, Terna provides a strategic service that contributes towards Italy's economic growth.

The development of interconnections between grids in neighbouring countries facilitates the importation of electricity at competitive prices compared with domestic production, enables additional power reserves, and ensures greater energy market competition. Reducing grid congestion improves the exploitation of power generation resources to meet demand and enables the use of more competitive plants, with positive impacts on competition in the power generation segment and on final prices.

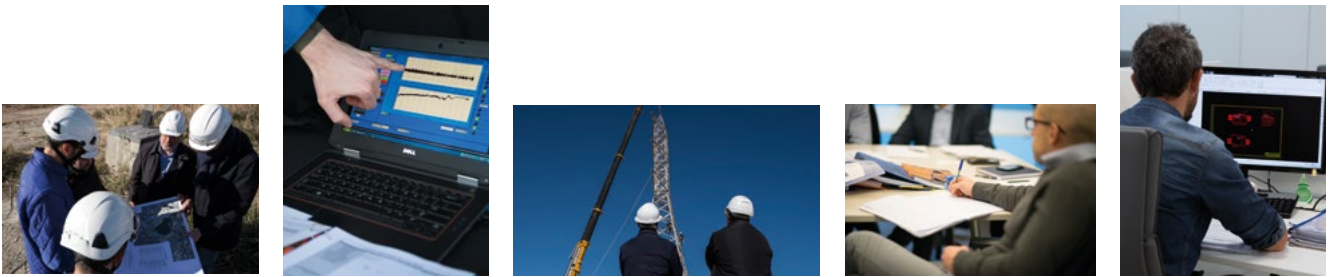
In accordance with the legislative and regulatory framework, all Terna's grid development investments are assessed from a technical and economic point of view by comparing the estimated cost of implementing a project with the related benefits in order to maximise the cost/benefit ratio. As a result, every euro invested by Terna generates, on average, multiple savings for grid users, as ultimately reflected in the bills paid by the end customer. It is therefore significant that 2018 saw strong growth in Terna's capital expenditure, most of which was earmarked for grid development.

The Terna Group's total investment in 2018 amounted to €1,091.1 million, compared with €1,033.9 million in the previous year (up 5.5%), and was ahead of target. Investment incentives amount to €99.5 million.

### INVESTMENTS - TERNA GROUP

(€M)	2018	2017	2016
Total investment	1,091.1	1,033.9	854.3



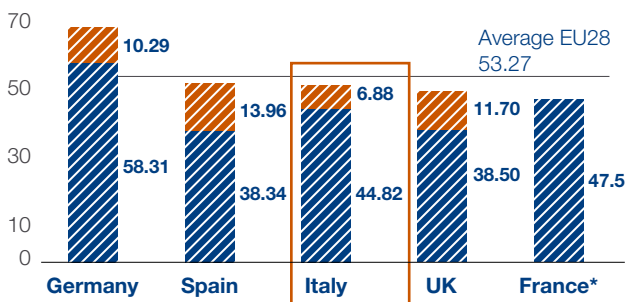


## Transmission costs in end users' bills

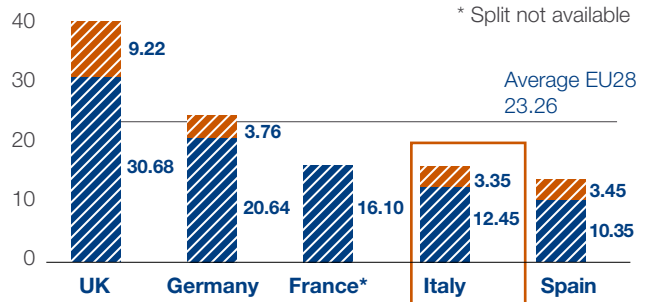
On the basis of data published by ARERA, the estimated portion of a typical electricity bill for domestic use covering the cost of the transmission service<sup>13</sup> is approximately 3.3%<sup>14</sup>.

A survey conducted by the European Commission, based on data for 2015<sup>15</sup> shows that, in both the household and industrial segments, the so-called “network costs”<sup>16</sup> incurred by Italian consumers are below the European average. In particular, regarding the transmission segment only, Italian costs are lower than those in some of the most representative countries from the sample analysed, as shown in the graphs below.

**NETWORK COSTS (€Mwh)  
HOUSEHOLDS**



**NETWORK COSTS (€Mwh)  
BUSINESSES**



<sup>13</sup> Household with 3 kW of subscribed demand and annual consumption of 2,700 kWh.

<sup>14</sup> Terna processing of ARERA data, regarding the first quarter of 2018.

<sup>15</sup> Eurostat and European Commission data for 2015, “Energy prices and costs in Europe” [http://ec.europa.eu/energy/sites/ener/files/documents/com\\_2016\\_769.en\\_.pdf](http://ec.europa.eu/energy/sites/ener/files/documents/com_2016_769.en_.pdf)

<sup>16</sup> “Network costs” include transmission and distribution costs, losses, metering and system costs.