





# SUSTAINABILITY REPORT 2018

Consolidated Non-Financial Statement drawn up pursuant to Italian Leg. Decree 254/2016

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# LETTER TO STAKEHOLDERS

1938 - 2018: 80 years in the energy world, 80 years of dynamism and sustainability. A path which, concluding in 2018 with the sale of TotalErg and the company's entry in the photovoltaic market, has seen us completely reinvent ourselves in the last ten years, transforming from an oil industry operator into Europe's leading energy producer in the renewable energy sector.

Today ERG is the leading wind energy operator in Italy and in continual expansion in Europe. A position that will see additional developments in the next few years thanks to a 5-year Business Plan (2018-2022) which will involve around 1.7 billion euro of investments and an increase in our green capacity of over 30%.

A plan consistent with national and European energy policy choices and with the 2030 sustainable development goals defined by the United Nations (UN SDGs), confirmation of the validity of our business model in terms of sustainability and our desire to play a leading and informed role in the new challenges of the energy transition.

Our growth in the renewable energy sector will take place abroad, particularly in France, Germany and the United Kingdom, and through the technological upgrading of our wind farms in Italy via repowering and reblading projects.

By repowering - replacing old wind turbines with more powerful next-generation turbines - we will be able to treble our output, reducing the number of towers by over half while occupying roughly the same amount of land. By reblading, which involves the replacement of existing blades with more innovative models, we will be able to enjoy significant increases in production.

We believe that training and the development of our technological expertise are key factors in which to invest: in October of last year we opened our Technical Training Centre in Caraffa near Catanzaro, an educational hub for the development of tailor-made training modules, which will see the company increasingly focus on the in-house management of the specialist skills needed for the operation & maintenance of our plants.

This commitment to training is backed up by the numbers: this year we dedicated 5.9 man/days to training, 83% of which focused on technical and managerial topics, with 92% of our people taking part.

Our sustainability goals, defined in accordance with the Business Plan, will see us focus particular attention on the development of electricity production from renewable sources (UN SDG 7), the environment (UN SDG 6 and 15), working conditions (UN SDG 8) and welfare (UN SDG 4).

In 2018 the new versions of the Sustainability Policy and Human Rights Policy were approved, two key documents for guiding the Group's activities according to a business approach not limited to respecting the regulations in force in the countries in which we operate but proactively aimed at protecting the environment, health, safety, communities and human rights according to the founding principles of moral integrity, personal honesty, fairness and transparent relations.

Our commitment to sustainable development was recognised at international level as we came 16th in the world and first in Italy - in fact we were the only Italian company in the top 50 - in the "Corporate Knights Global 100 Most Sustainable Corporations in the World Index" and were awarded a B rating in the Climate Change programme promoted by the Carbon Disclosure Project (CDP): higher than both the average of the Utilities sector and the European average.

In 2018 we continued to work on behalf of the communities in which we operate, running training initiatives for youngsters, supporting start-ups in the energy world and promoting important cultural events. Our initiatives dedicated to the next generations involved over 10,000 students throughout the year.

As a contribution to the land where the Group was founded, which in 2018 was seriously affected by the collapse of the Morandi bridge, we donated 1 million euro to the Municipality of Genoa to support redevelopment and sustainable development projects in the lower Val Polcevera.

For many years our environmental, social and governance goals have been central to our business model and our development strategy, based on the trusting relationship we have established over time with all our stakeholders and our ability to generate shared value. The financial market also recognises this and so it was no coincidence when in November our Group became one of the first in the sector to be granted access to two ESG (Environmental, Social and Governance) loans for a total of 240 million euro. These innovative, typical green finance tools measure the sustainability and ethical impact of investments, introducing a bonus mechanism connected with  $\mathrm{CO}_2$  avoided, calculated on the basis of the quantity of renewable energy generated throughout the duration of the Plan.

A lot was done in 2018. And there is still lots to do. But challenges are part of our DNA, they are the energy that has brought us this far and the impetus that spurs us to help construct a renewable and sustainable future for us and the future generations.

Hope you enjoy it!

Edoardo Garrone

Chairman

Luca Bettonte

Chief Executive Officer

# **OUR HISTORY: 1938-2018**

Production begins at the refinery in Genoa San Quirico.





ERG is listed on the Italian Stock Exchange.



ERG enters the renewable energy sector by acquiring EnerTAD.

1947

1997

2006

1938

1975

2000

2008

Edoardo Garrone establishes ERG in Genoa.





Production begins at the ISAB Refinery in Priolo.

ERG - through ISAB Energy - begins to produce and market electricity from the gasification of heavy refinery residues.



ERG sells 49% of the ISAB refinery to LUKOIL.



FRG Power's combined cycle power plant starts up (480 MW) fuelled by natural gas.



Launch of TotalErg, a joint venture to market petroleum products.

ERG sells the ISAB Energy plant and its ERG Oil Sicilia fuel networks





ERG enters the UK wind power market with a 47.5 MW project. Installed wind power at the end of 2016 totals 1.721 MW. ERG enters the solar sector: 30 photovoltaic plants acquired totalling 89 MW.



Definitive exit from the Oil sector with the sale of TotalErg. Installed wind power at the end of 2018 totalled 1,822 MW.

2010 2014 2016 2018

2013

ERG becomes the leading wind power operator in Italy with 1,087 MW of installed capacity, and among the top ten in Europe (overall 1,340 MW). It purchases a company for the running and maintenance activities of the wind farms.



ERG sells the ISAB refinery and completes its exit from refining.

2015

ERG enters the hydroelectric business. with plants in Umbria, Marche and Lazio (527 MW).



ERG acquires 6 wind farms in France (64 MW) and builds 3 wind farms in Poland totalling 82 MW. Installed wind power at the end of 2015 totals 1.506 MW.

2017



ERG continues to grow in the wind sector: 48 MW in operation in Germany; 16 MW in operation in France. Installed wind power in Europe at the end of 2017 totals 1,814 MW.

# **ERG IN 2018**

# **JANUARY**

# **10 JANUARY**

Sale of TotalErg and definitive exit from the Oil sector.

# 12 JANUARY

Entry into the solar sector: acquisition of 30 photovoltaic plants (89 MW).

# **15 JANUARY**

Acquisition of Windpark Linda, a company that holds authorisations for the construction of a wind farm in Germany (21.6 MW).

# **MARCH**

# **7 MARCH**

Sale of Brockaghboy wind farm in the UK.

# **8 MARCH**

Presentation of the Strategic Plan to the Financial Community.

# 21 MARCH

Acquisition of a 75% equity interest in two companies that own two wind farms in France: Parc Eolienne de la Voie Sacrée (12 MW) and Parc Eolienne d'Epense (4.25 MW).

# **APRIL**

# 23 APRIL

The Shareholders of ERG S.p.A. appoint the new Board of Directors, confirm Edoardo Garrone as Chairman and resolve on the payment of a dividend of EUR 1.15 per share of which EUR 0.40 as a non-recurring component.

The Board of Directors confirms Alessandro Garrone as Executive Deputy Chairman, Giovanni Mondini as Deputy Chairman and Luca Bettonte as Chief Executive Officer.

# **27 APRIL**

Agreement for the acquisition of WP France, a company that holds the rights, permits and authorisations for a wind farm project in the North of France (6.9 MW).

# **MAY**

# **15 MAY**

Acquisition of two wind farms (Parc Eolien du Melier, 8 MW, and Parc Eolien de la Vallée de Torfou, 18 MW) and of Epuron Energies Renouvelables, a company that owns a pipeline of approximately 750 MW in France.

# **18 MAY**

Windpark Linda wins the auction for 21.6 MW of new wind power in Germany.





# **AUGUST**

# 1 AUGUST

Acquisition of the project for a wind farm in Scotland (Creag Riabhach, 79.2 MW).

# **3 AUGUST**

Acquisition of the remaining 25% equity interest in Parc Eolienne de la Voie Sacrée and Parc Eolienne d'Epense (75% acquired on 21 March).

# **OCTOBER**

# 20 OCTOBER

ERG celebrates 80 years of energy history.
The Garrone and Mondini families, through the family holding, offer and financially support the gratuitous assignment of 80 ERG treasury shares in favour of each employee.
Furthermore, ERG decides to allocate an extraordinary award of EUR 1,500 to the employees of all the

Group's companies.

Again as part of ERG's 80th anniversary celebrations, the Group offers to donate a contribution of EUR 1 million to the Municipality of Genoa towards the requalification and sustainable development projects in Val Polcevera following the collapse of the Morandi bridge.

# **NOVEMBER**

# **20 NOVEMBER**

ERG signs two unsecured medium-term ESG loan agreements ("ESG Loans"), each for the amount of up to EUR 120 million, respectively with Credit Agricole Corporate and Investment Banking ("CACIB") and with BNL - BNP Paribas Group.

# **DECEMBER**

# 19 DECEMBER

ERG finalises a programme for non-convertible medium/ long-term bond issues (Euro Medium Term Notes Programme - EMTN) up to the overall maximum amount of EUR 1,000 million.

The rating agency Fitch Ratings ("Fitch") assigns to ERG an Issuer Default Rating of BBB- with stable outlook and to the EMTN programme a "BBB-" rating.





# AT THE HEART OF ENERGY FOR THE PAST 80 YEARS

2018 was a truly important year for us.

ERG celebrated 80 years of history in the energy sector and, with the sale of TotalErg and its entry into the solar market, it completed its transformation from a leading Italian oil company to a leading European operator in the production of energy from renewable sources.

A history of development and innovation, focused on combining growth and value creation with the broader needs expressed by the system, always focusing on sustainability.

A highly appreciated and recognised business model, as demonstrated by ERG's 16th place (and first Italian company) in the Corporate Knights Global 100 Most Sustainable Corporations in the World Index; the B rating of the Climate Change programme promoted by the Carbon Disclosure Project (CDP), higher than both the average of the Utilities sector and the European average; and confirmation of its entry in the ECPI Global Clean Energy Index, which groups together

the 80 best listed companies in developed countries, dealing with the production and sale of renewable energies, assessed on the basis of ESG (Environmental, Social and Governance) criteria.

The new five-year Strategic Plan (2018-2022) calls for approximately EUR 1.7 billion in investments in order to increase installed capacity by roughly 850 MW, as a result of the organic development of wind power abroad through greenfield and codevelopment projects, of technological updating of its Italian wind fleet through repowering and reblading projects, and of growth through M&A operations.

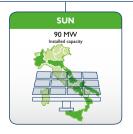
Together with the presentation of the Strategic Plan, we also launched our new logo: a stylised, dark blue, light blue and green "E", highlighting the forces of nature that shape its line and clearly expressing where we draw energy from, together with a pay-off - "evolving energies" - which summarises our past and our future, marked by relentless dynamism.

As forecast in the Plan, we continued our process











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INDICATORS

of expansion in the wind sector abroad, in the following target countries: France, Germany and United Kingdom.

In France we increased installed capacity by 55 MW, achieving over 300 MW. We also acquired a pipeline of around 750 MW and strengthened our local structure with a team of people with a sound experience in the development of greenfield projects and an important network of local relationships.

In Germany, we won the auction for the construction of a 21.6 MW wind farm, while in the United Kingdom we acquired a project with authorisations for the construction of a wind farm in the north of Scotland, with an authorised capacity of 79.2 MW.

In February 2019, we acquired a further 51.4 MW of solar power in Italy, reaching an installed capacity of over 140 MW and positioning ourselves among the first five photovoltaic operators in Italy.

Today ERG is a leading European producer of electricity, mainly from renewable sources, with an overall installed capacity of almost 3,000 MW

and a generation portfolio based on four different technologies including non-programmable (over 1,800 MW in the wind sector and 140 MW in the solar sector) and programmable (527 MW in the hydroelectric sector and 480 MW in the high-yield thermoelectric sector) sources.

A balance that together with geographical diversification, which is characterised by extensive coverage across the nation and a significant presence in the wind sector in five other European countries, makes our portfolio unique in terms of sustainability, reliability and complementarity.

# WIND

We are active in the generation of electricity from wind sources, with 1,822 MW of overall installed capacity. We are the leading operator in the sector in Italy with 1,093 MW and among the top ten in Europe, where we continue to grow. We are active in France (307 MW), Germany (216 MW), Poland (82 MW), Romania (70 MW), Bulgaria (54 MW) and the United Kingdom with projects in progress.

In 2018 we continued the in-sourcing process for

## FRG AND THE SDGs





































Operation & Maintenance with benefits in terms of higher plant productivity and increased cost effectiveness. At present, we directly manage over 1,200 MW, equal to around 68% of our total portfolio.

## **SOLAR**

In 2018 we entered the solar market and acquired thirty photovoltaic plants throughout Italy, for a total of 89 MW and, following a further acquisition in February 2019, we reached 141 MW of installed capacity, located in 9 Italian regions.

# **HYDROELECTRIC**

We produce hydroelectric power in the Terni complex: an integrated asset portfolio which presently includes 19 power plants, 7 dams, 3 reservoirs and a pumping station, located in the Umbria, Marche and Lazio regions, and reaching 527 MW of total capacity.

# NATURAL GAS

We are present in Sicily, at the Priolo Gargallo (SR) industrial estate, with a natural gas-fuelled thermoelectric power plant (480 MW). This high-yield cogeneration plant is based on modern combined-cycle technology: a programmable, flexible and efficient source of energy, with low environmental impact, which just like hydroelectric power guarantees continual and flexible production.

# **ENERGY MANAGEMENT**

Through Energy Management, which is a unified system for all the generation technologies we work with, we sold a total of approximately 13 TWh, 7 TWh of which are directly produced by our plants, allowing us to optimise production according to the demand of the electricity market.



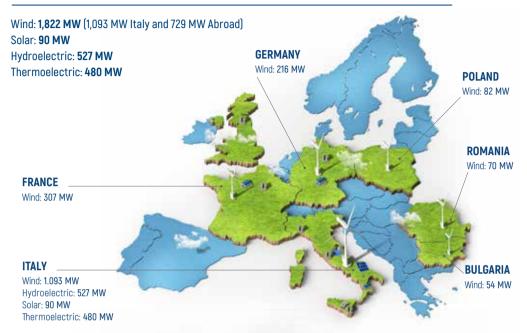
ECONOMIC

RESPONSIBILITY

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# **ERG LOCATIONS**





# **2018-2022 BUSINESS PLAN**

Our strategy continues to be to anticipate the trends of the sector and for this reason we approved the 2018-2022 Business Plan in March 2018, a year early.

In recent years there has been a radical and profound change in Europe in the industry of energy generation from renewable sources: while on one hand Governments are pushing ever harder for decarbonisation in favour of renewable sources, on the other hand there has been a radical change in the competitive scenario, with

the gradual introduction of competitive auctions for the awarding of new renewable capacity and the consequent abandonment of the incentive systems.

Thus, renewables have changed from being a business with strong infrastructural connotations to a business with purely industrial characteristics.

Within the changed competitive environment, our strategy is to continue growing in renewable energies, now leveraging our own industrial



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know-how, our territorial presence, the quality of our own assets, our operating efficiency and the flexibility of the integrated Energy Management portfolio.

The target in the 2018-2022 time interval is to increase the installed capacity by approximately 850 MW through three channels:

- greenfield (new plants) and co-development: continue our growth strategy through internal growth or co-development agreements in France, Germany and United Kingdom.
- 2) repowering and reblading in Italy: in consideration of the technological evolution of the wind power sector, the objective we have set is to carry out repowering (entire replacement of plants) and reblading (replacement of turbine blades with other next-generation and aerodynamically more efficient blades) on wind farms equipped with obsolete technologies (with turbines below 1 MW), with incentives already expired

- or expiring, but at the same time in the windiest sites, hence with very high expected profitability even in the absence of incentives.
- 3) M&A (mergers and acquisitions): we intend to seize the opportunities for growth in renewable energy in the countries of interest, leveraging the experience acquired along our journey of transformation and the synergies deriving from consolidation of our portfolio.

During 2018, ERG made several steps forward in the growth outlined in the Business Plan; it added almost 200 MW from M&A in the solar sector (with particular reference to the acquisition of Forvei for 89 MW and the recent acquisition of Andromeda for 51 MW) and from greenfield development (entry into service of the Torfou and Valleé de l'Aa farms in France) and continued the repowering project with the presentation of the authorisation requests for all the MW included in the Plan. ERG is therefore on track to reaching the goals outlined in the Plan.

# **ERG GROUP GEOGRAPHICAL location**

# Location: 7 countries, Installed capacity: 2,8 GW, 4 Technologies

# GEOGRAPHICAL PRESENCE

# COUNTRY/BUSINESS ATTRACTIVENESS FOR ERG



operating efficiency

16

# **ERG'S SUSTAINABILITY IN NUMBERS**



# 5.9 days/man

of training for 92% of our people

83%

of training on technical and managerial topics



# 3,029 kt of CO<sub>2</sub> avoided

thanks to the production of energy from renewable sources

0.14 kgCO<sub>2</sub>/kWh

Carbon index of electricity production



86%

of indirect consumption covered by "green" energy

64.8%

CCGT plant CAR performance index\*



# 2,439 MW

installed capacity in renewable energy plants

89.7%

capital invested in renewable energy plants



# CDP rating B

Climate Change questionnaire

# ESG rating & indexes

Corporate Knights, ECPI, ETHIBEL, IGI, MSCI, OEKOM, Sustainalytics, vigeoeiris

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INDICATORS

# 80 YEARS OF ERG

On 2 June 2018, ERG celebrated 80 years. A long and fascinating journey into energy interlaced with the history of our country. Over these years we have combined growth and creation of value with sustainable development.

Our 80th anniversary coincided with the completion of our change of business: we sold our last asset in the oil sector (TotalErg) and, after the wind and hydroelectric sectors, we entered the solar energy sector. Our 2018-2022 Business Plan, with which we presented our new logo, outlined the new guidelines for the company's "renewable" development.



The event to celebrate our 80 years included the exhibition "Evolving Energies", during which the Palazzo Ducale in Genoa was transformed into the "Palace of Energy". The exhibition traced the key landmarks in the history of ERG, from 1938

to 2018, against the backdrop of the Italian and international events that took place at the same time.

The arcade of the Palazzo Ducale also hosted a 3D virtual reality space "The Power of Change", where visitors used special visors to explore some of the most evocative locations of ERG plants: from the Marmore waterfalls, which powers one of its hydroelectric power plants, to the countryside of Puglia and Sicily, where some of its wind farms and photovoltaic plants are located.

The arcade of the Palazzo Ducale also hosted the "ERG for Young" area, dedicated to younger visitors with workshops and content designed specifically for children, thanks to the contribution of the Edoardo Garrone Foundation, Festival della Scienza and Flying Angels.

The plaque dedicated to Riccardo Garrone was unveiled in the foyer of the Teatro Carlo Felice in Genoa; Riccardo Garrone was a passionate supporter of the theatre and financed its reconstruction at the end of the 1980s following its



damage by bombing during the Second World War. During the event, after Chairman Edoardo Garrone's speech, the book "ERG. Da sempre un passo avanti" (ERG. Always One Step Ahead) was presented. This photographic book is dedicated to the history of ERG: a true journey through the most important pages of the company, against the background of the events that took place in Italy during this period (a pdf version of the book may also be downloaded on ERG's website).

Antonella Clerici, hostess of the evening, and Alessandro Plateroti, Vice Director of II Sole 24 Ore, interviewed Alessandro Garrone and Luca Bettonte on the most significant moments of ERG's history. After an exciting performance by pianist Elisa Tomellini with the Teatro Carlo Felice Orchestra, the showman Rosario Fiorello took the stage and entertained the guests with his show "Stasera Fiorello".

2018 was also the 80<sup>th</sup> anniversary of the Istituto Gaslini in Genoa, a centre of excellence for the treatment of childhood diseases at international level. To celebrate this important anniversary, ERG gave its support to the Cilla Liguria Non-Profit Association for the construction of an Accommodation Centre for families with children hospitalised at the Istituto Gaslini, inside the Convent of the Capuchin Sisters of Quarto dei Mille. The Accommodation Centre has 16 small flats, service rooms and common areas made

available to the families of children coming from all over Italy and the world. The construction of these facilities is also funded by Fondazione Carige and Duferco Energia.

To mark the celebration of ERG's 80th anniversary, the parent San Quirico S.p.A. and ERG S.p.A. signed an agreement providing for the gratuitous assignment of 80 ERG treasury shares in favour of each employee of the ERG Group's Italian companies.

Furthermore, ERG decided to allocate to the employees of all the Group's companies an extraordinary award of EUR 1,500 which, as regards the overseas company employees, will be increased by a sum corresponding to the value of the shares assigned to individual Italian company employees. The overall amount of this award is estimated at around EUR 1.1 million.

Lastly, as a tribute to the community where the Group was created and developed, ERG decided to donate EUR 1 million to the Municipality of Genoa, to be allocated to the requalification and sustainable development projects in Val Polcevera following the collapse of the Morandi bridge in August 2018.

The celebrations for our  $80^{\text{th}}$  anniversary highlight how our Group's commitment towards the local area where we operate continues to inspire the way we do business.



**FCONOMIC** 

**ENVIRONMENTAL** 

RESPONSIBILITY

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GOVERNANCE

New logo

In the year of its  $80^{\text{th}}$  anniversary and during the presentation of the Business Plan 2018-2022 held on 8 March in Milan, ERG presented its new logo, which visually represents its new green positioning.



Inauguration of the accommodation centre for the families of the children hospitalised at the Istituto Gaslini

ERG supported the Cilla Liguria Non-Profit Association for the construction of an Accommodation Centre for families with children hospitalised at the Istituto Gaslini of Genoa, inside the Convent of the Capuchin Sisters of Quarto dei Mille.



"ERG. Always one step ahead"

A photographic book dedicated to the history of ERG: a true journey through the most important pages of the company, against the background of the events that took place in Italy during this period. A pdf version of the book may also be downloaded on ERG's website.



19 October: **ERG Square**  In the heart of the city, the Palazzo Ducale and Piazza de Ferrari turned respectively into the "Palace of Energy" and "ERG Square", where the public could walk along an exciting green carpet.



20-21 October: The Palazzo Ducale becomes the "Palace of Energy"

The Palazzo Ducale was transformed for this special occasion into the "Palace of Energy", open to the public with free admission on Saturday 20 and Sunday 21 October. In addition to the "Evolving Energies" exhibition dedicated to the key landmarks of ERG's history, the arcade of the Palazzo Ducale also hosted a 3D virtual reality space "The Power of Change", and the "ERG for Young" area, thanks to the contribution of Fondazione Edoardo Garrone, Festival della Scienza and Flying Angels.

Employee bonuses

The parent San Quirico S.p.A. and ERG S.p.A. signed an agreement providing for the gratuitous assignment of 80 ERG treasury shares in favour of each employee of the ERG Group's Italian companies.

ERG also decided to allocate an extraordinary award of EUR 1,500 to the employees of all the Group's companies.

Overseas company employees will be granted a sum corresponding to the value of the shares assigned to their Italian colleagues.



Donation for Val Polcevera ERG donated EUR 1 million to the Municipality of Genoa towards requalification and sustainable development projects in Valpolcevera following the collapse of the Morandi bridge.

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# THE GOVERNANCE OF SUSTAINABILITY

### **OUR POLICIES**

The sustainable management of a company means not only creating value and complying with laws and regulations, but also being attentive in the relations we hold with whoever is directly or indirectly affected by our actions: our "stakeholders". To ensure our transparency and accountability towards them, we have put down in black and white our guiding principles.

Our way of doing business is based on our Code of Ethics. It was adopted for the first time in 2004, and the fifth updated edition was approved by the companies' Boards of Directors in 2018. Also in 2018 the Sustainability Committee approved the updated Sustainability Policy (first edition published in 2015) and the new Human Rights Policy.

# **GOVERNANCE**

To coordinate and monitor all sustainability activities, we established a Sustainability Committee to:

- define the Group's sustainability orientations and promote corporate social responsibility projects;
- approve, monitor and evaluate sustainability objectives and priority areas for actions related to CSR:
- approve the materiality analysis, timing and media for the Non-financial statement and for CSR initiatives

The Sustainability Committee includes The Chairman, the CEO, the Executive Deputy Chairman and all first reporting lines to the CEO. In 2018, the Sustainability Committee focused its work on defining new sustainability commitments, in line with the 2018-2022 Business Plan, and on approving the new materiality analysis for non-financial reporting.

The committee also provided guidelines for sustainability reporting and for the preparation of the Non-financial statement (NFS).

Full transparency towards stakeholders and the breadth of already existing reporting made it possible to keep the document substantially unchanged, highlighting the coherence between the previous one and the current materiality analysis.

The Committee receives support from the Sustainability department, which is tasked with:

- collecting all the inputs coming from the lines, representing them in the Sustainability Report set up according to international benchmark standards;
- supporting the Committee in carrying out its tasks, in particular in monitoring, reporting and operationally implementing the goals (via the CSR Working Groups);
- operationally implementing the CSR-related orientations identified by the Sustainability Committee within the Group.

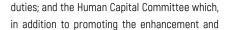
The CSR Working Groups involve all of the organisational units and are tasked with:

- · identifying the reporting areas of the report;
- defining the Key Performance Indicators (KPIs) to represent the Group's activities and identifying new ones, if necessary;
- identifying initiatives and collecting requests from the main stakeholders, so that they are given the right importance, also in the Sustainability Report.

The Sustainability management system also includes: the Supervisory Body, established pursuant to Model 231 and set up in all of the Group's Italian companies with Ethic Committee

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development of ERG People, verifies any reports on possible violations of the Human Rights Policy.

# SUSTAINABILITY POLICY AND HUMAN RIGHTS POLICY

In order to respond effectively to and make all our principles consistent with the changes in the people's common feelings, in 2018 we updated the Code of Ethics and Sustainability and created a new Group Human Rights Policy.

The Sustainability Policy directs the Group's activities, combining the objective of creating sustainable value over time with environmental responsibility and attention to all stakeholders.

The Human Rights Policy implements the principles sanctioned for the first time in 1948 by the UN in the Universal Declaration of Human Rights and subsequently included in the Declaration on Principles and Fundamental Rights of Labour issued by the International Labour Organization (ILO) and in the Ten Principles of the Global Compact. The Policy formally expresses an 80-year long approach that will allow us to request its application and compliance by all those who work with the ERG Group, both as employees and as suppliers, contractors or commercial partners.

We have put down on paper our commitment to respect human rights and equal opportunities: what has been a practice until now and has always been part of our DNA, has been formally confirmed and will become a further training topic within the company and drive all of our stakeholders towards socially responsible behaviour.

# **TOP 100 MOST SUSTAINABLE CORPORATIONS**

We are one of the two Italian companies included in the Corporate Knights Global 100 Most Sustainable Corporations in the World, the index that ranks the companies most committed to environmental, social, ethical and business issues.



The selection, based on the Thomson Reuters data stream, analysed around 7,500 companies and ERG ranked 16th place in the world, the leading Italian company.

The companies - listed and with a turnover of at least US\$1billion - are evaluated preliminarily based on four screens (sustainability reporting, financial soundness, category of products sold and financial sanctions incurred) and, subsequently, on an additional 21 indicators, specific to each industry: management of natural resources, employee management, clean revenue and supplier performance.

# THE GOVERNANCE OF SUSTAINABILITY



# DOARS OF BIREOTORS

Defines the Group's principles of conduct summarised in the Code of Ethics and approves the Non-financial statement.



### SUSTAINABILITY COMMITTEE

Comprised of the Chairman, Executive Deputy Chairman, the CEO and CFO of ERG S.p.A., and by all first line managers reporting to the CEO, it is tasked with the following duties:

- Defining the Group's orientations on sustainability;
- Approving, monitoring and assessing the sustainability-related objectives and the priority action areas relating to CSR;
- Approving the timing and media for the Sustainability Report and for CSR initiatives.



### SUPERVISORY BODY

It is tasked with:

- Monitoring the effectiveness of the Model and compliance with the Code of Ethics;
- Verifying the adequacy of the Model to prevent the commission of the crimes referred to in Italian Legislative Decree 231/01:
- · Overseeing the updating the Model;
- Providing training on the Code of Ethics and on 231 issues;
- · Assessing the information received.



### **HUMAN CAPITAL COMMITTE**

Deals with the development of personnel. Assesses and checks the reports of possible violations of the Human Rights Policy.



# SUSTAINABILITY DEPARTMENT

Its task is to implement the guidelines and periodically monitor their performance. The set of inter-functional monitoring actions leads to the annual drafting of the Non-financial statement which is initially reviewed by the Sustainability Committee and approved by the Board of Directors.



# CSR WORKING GROUP

This is a working group involving all of the organisational units and is tasked with:

- Identifying the areas to report on and collecting KPIs;
- Developing and proposing sustainability objectives and monitoring their achievement;
- Identifying CSR initiatives and collecting CSR-related concerns from key stakeholders;
- Proposing CSR-related initiatives to raise the Group staff's awareness.



# CSR INITIATIVES EVALUATION COMMITTEE

Working group composed of personnel of the operating companies, of the Communication department and of the Sustainability department. Analyses all the initiatives coming from the community and then selects them based on the values they express and the positive impact they have in that area.

# FRG'S CERTIFICATIONS IN 2018

Up to the start of 2017, the ERG Group had an organisational structure divided according to business area. The management systems, while building on the same general principles of the Group, were structured according to mixed logics.

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The ONE Company project, focused on the centralisation of the operational activities within ERG Power Generation, generated a concentration of risks related to the management of assets in the companies themselves. It became necessary, therefore. to rationalise the management system for the protection of both the Group and the stakeholders. This was achieved by adjusting and harmonising the health, safety and environmental management procedures with a view to providing to ERG Power Generation with an integrated environmentalsafety system covering the different operational areas (Hydro, Wind&Solar and Thermo).

In this respect, we are gradually simplifying and streamlining the general structure of the procedures through the issue of document sets valid for the entire organisation which will ensure the harmonization of principles and guidelines for the entire Group. Operational activities, which are specific to every area, will not be changed.

therefore, we continued to Durina 2018.

100%

ITALIAN SITES CERTIFIED ACCORDING TO THEIR ACTIVITIES

implement, integrate and update the various management systems, while respecting the operational and technological differences of the various areas.

Specifically, in 2018 we:

- · achieved environmental and safety certification for the operational activities pertaining to the photovoltaic plants acquired in 2018;
- · completed transition to the 2015 version of ISO 14001 standard for all certified Units (Thermo, Wind&Solar, Hydro);
- published a manual on the integrated functioning of management systems, together with a new framework of Group guidelines and procedures. This allowed us to make the management criteria of key aspects transparent and uniform, for example, risk management in activities with third parties, and health, safety and environmental risk assessment methods in internal activities;
- launched an environmental and safety certification process for new foreign legal entities, starting from Germany;
- identified a single Certification Body for the entire ERG Group, in order to harmonise processes and begin to reduce the number of Group certificates.

The following benefits were achieved:

- · the coordinated management by the Group's HSE department, in line with the "ONE Company" project, of specific responsibilities for the various activities envisaged by the Management System, with the creation of a team made up of the current Management System managers of the single Units;
- structuring and simplification of the document management system based on two levels: the first relating to "Group" management procedures

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to ensure uniform management processes, the second relating to the operational procedures drawn up by the Units which reflect the specific features of the 3 business areas.

In Italy, by the end of 2020, we will comply with the latest ISO 45001 safety standard, which will replace the current certification OHSAS 18001. A further objective of the project is to extend (by 2021) the ISO 14001 and ISO 45001 certifications to the legal entities recently established in France, Germany and UK, thus applying a single system for the management of wind farms.





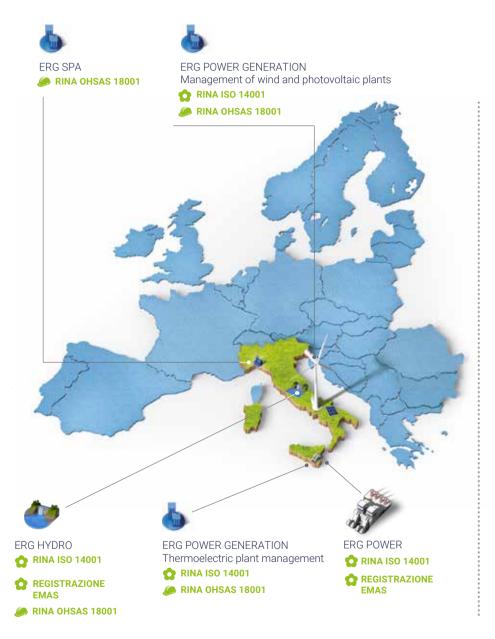
# **ERG GROUP'S EMAS REGISTRATIONS**

The thermoelectric plant of ERG Power and the ERG Hydro hydroelectric complex, in addition to holding ISO 14001 (Environmental) and OHSAS 18001 (Safety) certifications, obtained EMAS registration (Eco-Management and Audit Scheme) pursuant to European Regulation EC 1221/2009. These registrations entail updating our Environmental Declarations every year and, therefore, maintaining constant dialogue with the local community.

We truly believe that active dialogue and a sustainable development model are essential for our growth while respecting the environment and bringing value to our community.

ERG AND SUSTAINABILITY

# **ERG GROUP'S ENVIRONMENTAL AND SAFETY CERTIFICATIONS**









# DIALOGUE WITH OUR STAKEHOLDERS

We have grown over the years, pursuing our mission as an independent power producer and expanding throughout Europe.

We currently operate in seven different countries in Europe and in fourteen regions in Italy, with a portfolio of activities ranging from the development and creation of new farms (so-called greenfield) to the management and optimization of existing plants, including sale of the energy produced, up to their complete repowering.

In Italy, we are renowned and appreciated for our repositioning from the oil sector to renewables. In other countries, such as France, Germany and the United Kingdom, we are in a phase of growth and consolidation; great attention is required when developing relationships with stakeholders,

especially institutional stakeholders and the media. The methods and types of relationships with stakeholders vary depending on the length and strength of the relationship in the various countries and on the development goals of our Business Plan.

Although following different relational strategies, our methodological approach and our way of doing business remain firm, based on improving our relations with the local areas in which we operate and with the authorities, customers, suppliers, shareholders, employees and all our stakeholders. Lawfulness, honesty, fairness, equality, confidentiality, equity, integrity, transparency, responsibility and sustainability are the principles that inspire us and guide us towards the implementation of CSR initiatives.



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Finally, the entry into force of Italian Legislative Decree 254/2016 on the preparation of the Consolidated Non-Financial Statement for Public Interest Groups, led us to further structure our stakeholder communication and dialogue process. Through this process, we built and approved the new materiality matrix in 2018: the analysis defines the scope of non-financial reporting, in the light of the interests highlighted by various stakeholders.

# ERG AND ITS INSTITUTIONAL STAKEHOLDERS

The industrial sector where we operate is regulated by an ever-evolving system of European and national regulations. The relations held with institutional stakeholders allow the participation and contribution to this process. In this dynamic

context, constant dialogue with Business Associations (for example, Confindustria, Elettricità Futura, ANEV, AIGET, Wind Europe, foreign associations of the wind energy sector) and with the main players of the sector, allows us to plan and strengthen our position as an industrial operator of renewable energies, while at the same time to support decarbonisation policies of key importance to our business.

We took part in many workshops in 2018 by making our industrial skills and sector knowhow available. The most important dealt with the following issues:

 the Clean Energy Package, issued by the European Commission, including approval of the new Directive on renewable sources and setting

# **ERGLAB**

ERGLab is a think-tank created by us to examine issues related to the energy and environmental challenges of Europe and Italy, and to imagine the possible evolutions in the sector through dialogue with selected stakeholders. In 2018 - the fifth year of ERGLab - we organised four events focusing on current issues for the energy sector.

The aim of the first meeting was to initiate a dialogue on the 2030 electricity decarbonisation target, with focus on wind and photovoltaic energy. In the second meeting we focused on the dissemination of Power Purchase Agreements as a tool to further develop generation



capacity from renewable sources. In the third meeting we explored a crucial issue for the penetration of renewables in energy consumption: the reform of electricity dispatching and any critical implementation issues in Italy featuring distinctive project- and system-related characteristics.

Finally, shortly before Italy presented its proposal for the National Energy and Climate Plan to the European Commission, we discussed the contents that the Plan should include in order to implement the European decarbonisation programme outlined by the Commission with the Clean Energy Package for all Europeans at the end of 2016.

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# **OUR STAKEHOLDERS: EXPECTATIONS AND TERMS OF ENGAGEMENT**

|  | OUR STAKEHOLDERS: EXPECTATIONS AND TERMS OF ENGAGEMENT  Stakeholder Stakeholder expectations   |   |  |  |  |
|--|--|---|--|--|--|
|  | Institutions European Union, Governments, Ministries, Regulatory bodies, Public Administration, Business associations.                             | Collaboration, technical support and sharing of information.<br>Participation in the territorial planning of activities.<br>Respect for the legislation in all countries in which the Group operates. |  |  |  |
| THE STATE OF THE S | Shareholders   | Creation of value. Corporate Governance and Risk Management. Representation of minorities. Transparency and timeliness with regard to economic and financial information.                             |  |  |  |
|  | Financial community  | Creation of value. Corporate Governance and Risk Management. Transparency and timeliness with regard to economic and financial information.   |  |  |  |
| , ©,   | People and trade union organisations<br>Workers with employee contracts,<br>workers without employee contracts,<br>trade unions.                   | Equal opportunities. Workplace safety. Professional development for all employee categories. Participation in company life and all related initiatives. Private life/work balance Stability.          |  |  |  |
|  | Local Community Cultural, religious and research associations, health service, NGOs, Committees of citizens, residents close to production plants. | Consideration of their requirements. Contribution to and support for local initiatives and local communities. Access to information. Safeguarding of assets and environment. Health and safety.       |  |  |  |
| 00   | Future generations<br>Schools and Universities.  | Prevention and environmental respect. Training and sharing expertise. Business strategy aimed at reducing the consumption of natural resources.   |  |  |  |
|  | Media  | Complete, timely and transparent information.   |  |  |  |
|  | Suppliers  | Compliance with all competition and antitrust laws in the countries where ERG operates. Accessibility to Vendor List. Safety of on-site activities.   |  |  |  |
| & &  | Partner  | Creation of value.<br>Acceptance of common values in the development of the strategy<br>and business management.  |  |  |  |
|  | Customers  | Maximising value for the customer.<br>Quality and continuity in the supply of electricity and steam (site<br>customers).  |  |  |  |

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customers and development of ad hoc design

solutions.

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**Engagement activities 2018** Involvement methods - Wind Europe - Hamburg Dedicated meetings, round tables and conferences. Salon des maires – Paris Colloque National Eolien - Paris - Forum Energie France-Italie - Paris - Scottish Ren. Onshore Wind Conference - London Renewable UK Onshore Wind Event - Edinburgh - Key Wind - Rimini - events and round tables on the topics of energy and environment. Accreditation from central and local institutions in countries where we operate. Shareholders' Meeting. Shareholders' Meeting. Presentation of 2018-2022 Business Plan. Webcasts. Webcast to present quarterly results.
Ongoing information about the Group's activities (press releases and Press releases. Roadshows. news on website/social media). Events related to the presentation of the business plan. Celebration of our 80 years. Webcasts. Press releases. Presentation of 2018-2022 Business Plan. Webcast to present quarterly results. Roadshows Press releases CEO and CFO roadshows in the main European financial centres. Events related to the presentation of the business Italian Sustainability Day - Milan. Management of relations with ESG rating companies. Activities and tools for training, assessment and Training of our personnel. Internal communication events for employees and their families. internal communication. Events during the year. Company volunteering project for preserving the local area. Protocol for Industrial Relations. Team building. Advanced training for trade union representatives. Corporate welfare projects. Celebration of our 80 years. Financial and organisational support to social, cultural and health Meetings with local communities in line with ERG's activities in the areas served CSR initiatives on the territory for "environment and health", "promotion of culture", "youth and sports". Calls for ideas at national and international level (ERG ReGeneration Challenge and CDI Labs) Meetings with the local communities for development projects in the UK and in France. Educational projects (Vai col Vento!, A tutta Acqua!, Progetto Scuola, Training and information projects. Electricity Day) CSR initiatives on the territory for "promotion of Collaboration with Universities (MAGER project, classroom lessons). culture" and "youth and sports". Press releases to disclose our financial statements, Relations with the Press Office for the dissemination of our business plan and extraordinary transactions. periodical results and extraordinary transactions, and of news about Events with local press. the Group's activities. Event with local press. Web platform. Competitive tendering procurement procedures Involvement and monitoring on "occupational Implementation of a new supplier qualification platform. On-site HSE audits and activities for the control of suppliers' safety" and sustainability issues. performance. Infrastructure Day - Milan. Meetings. Analysis and sharing of requirements with site

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- of a target of 32% of gross energy consumption from renewable sources by 2030;
- the Emission Trading Scheme reform, which strengthened the value of CO<sub>2</sub> emission quotas, one of the most important tools in the European strategy for combating climate change;
- initiatives regarding the review of the National Energy Strategy, the reform of the Energy Market and the implementation of the Capacity Market;
- systems to encourage the development of renewable sources and, in particular, the repowering of existing plants.

The active participation in processes aimed at

defining decarbonisation policies in the country of interest allows us to continually increase our reputation. In order to guarantee utmost linear management of the relations held with institutional stakeholders, we adopted an internal control system based on procedures integrated into the Organisational Model (formerly Italian Legislative Decree 231/01 as amended) and a specific disciplinary sanctions system. We also adopted a special Policy, under which no direct or indirect contributions are paid, in any form, to political parties, movements, committees, political organisations or trade unions, to their representatives or candidates.

# MAIN ITALIAN ASSOCIATIONS WHICH ERG IS A MEMBER OF

| Association                        | Purpose  | ERG Participation   |
|------------------------------------|--|---|
| Confindustria                      | Together with the local associations, national trade associations, regional Confindustria federations and national trade federations, it is the main association representing manufacturing and service companies in Italy.  | Governance Bodies<br>(Chairmanship<br>Genoa Confindustria)<br>and Technical Groups. |
| Confindustria<br>Energia           | Federation of associations representing companies that produce and distribute energy [ANEV, ANFIDA, ANIGAS, Assocarboni, Assocostieri, Assogasliquidi, Assomineraria, Assosolare and Unione Petrolifera].  | Governance Bodies and Technical Groups.   |
| Elettricità Futura                 | IT IS the main Italian association of the electricity sector, comprising over 700 operators that employ over 40,000 people and holding more than 76,000 MW of installed electrical power (conventional and renewable) and around 1,150,000 km of lines. Over 70% of electricity consumed in Italy is supplied by its member companies.   | Governance Bodies and Technical Groups.   |
| ANEV                               | Associazione Nazionale Energia del Vento (National Wind Energy Association) brings together about 70 companies in the wind power sector and more than 5,000 parties, including producers and traders of electricity and technologies, installers, designers, engineering and environmental offices, electricity traders and developers.  | Governance Bodies and Technical Groups.   |
| AIGET                              | Associazione Italiana di Grossisti di Energia e Trader (Italian Association of Energy Suppliers & Traders) is an association of about 50 companies which operate in the sale of electricity and gas. It promotes competition and transparency in the energy markets, supporting the development and standardisation of tradable energy products and contracts, including derivatives, and the related markets. | Governance Bodies and Technical Groups.   |
| WEC Italia                         | A multi-energy network of industrial, institutional and academic members in the Italian energy sector: from research to production, from transformation to distribution and marketing of all energy sources.   | Governance Bodies.  |
| IEFE                               | The Research Centre at Bocconi University, dedicated to the study of energy economics and policy, also focusing on technology issues.  | Technical Groups.   |
| Assonime                           | Association of Italian Joint Stock Companies that works towards improving industrial, commercial, administrative and tax legislation in Italy.   | Governance Bodies.  |
| Sustainable Development Foundation | Association focused on the promotion of green economy. Includes around 120 members: companies, consortia and specialists dealing with sustainable economy.   | -   |
| Civita<br>Foundation               | Organisation established by a group of public and private companies, public research institutions and universities which, with over 160 members, is engaged in the "promotion of culture" through research, conferences, events, publications and projects.  | Governance Bodies.  |

### **ERG AND INTERNATIONAL RELATIONS**

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In order to strengthen our presence internationally, we continually monitor the main European institutions in Brussels, in particular on energy and on the environment, also with the support of sector associations (Wind Europe).

At the same time, the follow-up of political, regulatory and legislative change in the Member States where we are present (France, Germany, UK, Poland, Romania and Bulgaria) is strictly monitored both through the participation in national business associations and through direct dialogue with the national institutions.

The 2018-2022 Business Plan particularly focuses on the French, German and UK markets, where we will expand more significantly over the next few years. For this reason, we have set up a targeted stakeholder engagement programme for each of these countries, in order to improve and increase our profile and our identification as a reliable and trustworthy green operator, actively involved in energy transition.

This allows us to establish partnerships and significant relationships with other operators, the media and institutional stakeholders, in support of the Group's corporate development.

# MAIN FOREIGN ASSOCIATIONS WHICH ERG IS A MEMBER OF

| Association                                       | Purpose   | ERG Participation                             |
|---|---|---|
| Wind Europe                                       | Representing the interests of the wind industry and sector in Europe, it is a European branch of WWEA, the World Wind Energy Association.   | Governance Bodies<br>and Technical<br>Groups. |
| CCE - Conseil de<br>Cooperation Economique        | Advisory committee under the patronage of the governments from Spain, France, Italy and Portugal, dealing with economic issues within the scope of European Councils and bilateral economic Summits.  | Governance Bodies.                            |
| SER - Syndacate des Energie<br>Renouvelables      | It brings together several thousand companies and professionals specialised in the different sectors of renewable energy. Its goal is to promote their development and respond to the growth of eco-sustainable energy demands.   | Technical Groups.                             |
| FEE - France Energie<br>Eolienne                  | French association of wind energy operators. It represents over 90% of wind turbines installed throughout France and over 85% of wind energy production.  | Technical Groups.                             |
| RenewableUK                                       | Leading association in the UK renewable energy sector, specialised in on and off-shore wind energy and in tidal power. It counts on a large number of members ranging from small independent businesses to large companies and international producers.                           | Technical Groups.                             |
| SR - Scottish Renewables                          | Association for the development of the renewable energy sector in Scotland; its members work across all renewable energy technologies.  | Technical Groups.                             |
| BWE - Bundesverband<br>WindEnergie                | Association of German wind energy operators. It has over 20,000 members and is one of the leading associations in the world. It is affiliated to the European Wind Energy Association (EWEA), the Global Wind Energy Council (GWEC) and the World Wind Energy Association (WWEA). | Technical Groups.                             |
| PWEA - Polish Wind<br>Energy Association          | National Polish association of wind energy operators.   | Technical Groups.                             |
| RWEA - Asociatia Romana<br>pentru Energie Eoliana | National Romanian association of wind energy operators.   | Technical Groups.                             |

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# INTERNATIONAL EVENTS



Wind Europe Hamburg, 25-28 September This is the main continental event on wind energy; the 2018 edition was held in Hamburg on 25-28 September. ERG attended this year also, with a stand in the exhibition space where the leading players in the wind power market were located.



9<sup>th</sup> "Colloque National Éolien" Paris, 17-18 October This is the most important event in the wind power sector in France. ERG, together with Epuron, took part in the 2018 edition organised by the "France Energie Éolienne" Association; the topic of the event was energy transition seen as an opportunity for strengthening the industrial fabric and as a stimulus towards economic dynamism.



**Key Wind**Rimini,
6-9 November

Key Energy, the Trade Fair for Energy and Sustainable Mobility, is the event held in conjunction with Ecomondo, the large Green Economy and circular economy platform. During Key Energy, ERG was one of the leading players of Key Wind, the Italian event for companies operating in the wind sector. The exhibition hosts the leading operators and technology producers for large, medium and small-sized wind plants, both on-shore and off-shore. ERG also took part in the international plenary session of the General States of Green Economy dedicated to "The role of green companies for growth and employment", describing ERG's transition from oil to renewables.



**Salon des Maires** Paris, 20-22 November ERG, together with Epuron, took part in the 18th edition of the exhibition that every year puts local public service (energy, waste, commodities) companies in contact with local institutions, providing institutional decision makers (mayors, councillors, service general managers, technical managers, local officials) with answers and effective solutions to the problems they encounter in the daily running of their activities.

# **ACTIVE PARTICIPATION IN ROUND TABLES**

We take part actively in round tables with Institutions, either directly or through business associations.

During the year we signed a number of quideline documents: of particular relevance

is the document submitted to the European Community to support the development of renewable energies and the document to support the dissemination of long-term PPAs (Power Purchase Agreements).

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In April 2018, together with Wind Europe - the association of European leaders in the wind energy sector which we are a member of - and other wind and renewable operators such as ENEL, Iberdrola, Acciona, EDP Renewables, Siemens/Gamesa, Vestas, General Electric, Nordex, Enercon, RES and Falck Renewables, we called on the European Council to set more ambitious goals for the development of renewable sources for 2030.

The Clean Energy Package for all Europeans adopted by the European Union at the end of 2016 had in fact set a target of 27% of energy consumption from renewable energy sources at EU level. In our opinion, this objective was too precautionary and not in line with the growing competitiveness of renewables, especially in the production of electricity.

We also pointed out how raising this target was

# **CSR WORKING GROUPS**

The main CSR bodies and working groups we actively take part in are the following:

- CSR Manager Network Italia, a working group covering Corporate Social Responsibility issues;
- EticLab, a working group for the promotion of the culture of Corporate Social Responsibility in Liguria;
- Sustainable Development Foundation, leading organisation in Italy in Green Economy promotion and development;
- CSR Working Group of Wind Europe, European association representing the wind sector.

crucial for the fight against climate change and would have also brought substantial economic benefits for the EU, through increased investments in the renewable energy supply chain: from the production of generation plants to components, and from engineering services to wind farm management.

The institutions of Brussels evidently took into account our call when officially defining the 2030 binding targets, since they reviewed this requirement in the new Renewable Energy Directive and increased the target to 32% energy from renewable sources at EU level for 2030.

# Call for the dissemination of long-term PPA

In November 2018, the 2018 RE-source event was held in Amsterdam. This leading European event is an occasion for renewable energy buyers and sellers to connect, with the prospect of long-term "green" procurement contracts (Corporate PPA).

During the event, ERG, the other RES producers, consumers and business associations signed a declaration to raise awareness in European and national institutions of the importance in disseminating PPAs as contractual tools capable of promoting the construction of RES plants and energy decarbonisation.

Specifically, the call submitted requests to:

- eliminate regulatory and administrative obstacles to the long-term procurement of RES energy (as required by the Renewable Energy Directive):
- confirm the long-term ownership of Guarantees of Origin (GOs), confirming the renewable origin of electricity;
- encourage the exchange of electricity from renewable sources among EU member countries to maximise agreement efficiency and competitiveness;

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expand the range of contractual solutions and commercial products that can be delivered through Corporate PPAs, by optimising business risk distribution, with the aim of maximising its dissemination.

Alongside ERG, the main signatories of the declaration were Amazon, ENEL, Engie, Facebook, Google, Iberdrola, Ikea, Microsoft, Novartis, RES,

Adobe, Decathlon, DOW, Nike, Philips, Acciona, BayWa RE, E.On, EDP Renewables, Enercon, General Electric, H&M, BP, Innogy, Nordex, Oersted, Shell Royal Dutch, Siemens/Gamesa, Vestas, Danish Wind Industry Association, Elettricità Futura, Eurelectric, France Energie Eolienne, NorWEA, NWEA.

# RATING AND SUSTAINABILITY INDICES

As a result of our activity, we have rightly gained a place among the low carbonisation companies and, therefore, of direct interest to whoever regards decarbonisation as an investment criterion. It is exactly with these parties that we strive to strengthen dialogue.

We have been included in some of the most important Sustainability indices that group together listed companies on the basis of a number of ESG criteria, which are used by investors to guide their choices, such as:

- · ECPI Global Clean Energy Equity Index;
- FTSE Environment Renewable and Alternative Energy Index;
- · FTSE Environment Renewable and Alternative Energy 50 Index;
- · Corporate Knights 2019 Global 100 Most Sustainable Corporations in the World Index;
- · Integrated Governance Index 2018.

In 2018, we were assessed by Corporate Knights, Etica SGR, ECPI, MSCI, Sustainalytics and Vigeo, and our presence in the Ethibel Excellence Investment Register was also confirmed.









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# ERG AND THE FINANCIAL COMMUNITY

Our Company is constantly committed to reporting in a timely and transparent manner to the Financial Community all the information that can help to assess investment opportunities in our shares. Constant and prompt updating on the status of our business commitments helps maintain the trust of the markets; furthermore, clear communication of our development strategies is essential to sustain the value of a Company that is making important investments in renewable energy in Italy and Europe.

2018 was a crucial year for us, for two reasons. The first is that we celebrated 80 years of investments in the generation of energy and sustainable growth, starting as oil operators and evolving into a leading industrial company in the production of electricity from renewable sources.

The other key event of 2018 was the presentation of the 2018-2022 Business Plan to the financial community. The Plan was presented a year early not only because the objectives of the previous one had already been achieved, but also to adapt our goals in the light of the recent and significant changes in the competitive and regulatory

context. Stretching over five years (from 2018 to 2022), the Plan focuses on growth abroad and on the technological renovation of our wind fleet in Italy.

This envisages an increase in installed capacity of around 850 MW through three different channels: organic development and co-development agreements in Europe, new acquisitions in target countries and a Repowering & Reblading plan for part of our wind farms in Italy. Industrial excellence, asset flexibility and strong Energy Management skills are the aspects we will focus on to achieve these goals.

### Financial communication tools

ERG deals with communication with the Financial Community by setting up one-to-one meetings and specific roadshows, both in Italy and abroad. After the presentation of the Business Plan, the Group's Top Management was involved in important roadshow activities, aimed at illustrating the Business Plan and the new targets to institutional investors.

The roadshow activities of 2018 touched leading European financial cities (Milan, London, Paris,

# A PROJECT WITH UNIVERSITÀ BOCCONI

Five students from the Bocconi MaGER Master (Green Management, Energy and Corporate Social Responsibility) worked with us on a project to analyse the benefits for local communities (SROI), with regard to the repowering of the Mineo/Militello/Vizzini wind farm.

During the four months of the project, the students were able to gain thorough knowledge of the onshore wind power sector, the challenges it is facing, and the opportunities and benefits that it brings to local communities. They also gained professional experience in the management of a complex project for a leading company.

Representatives from different company areas took part in the final presentation of the project, including Engineering, Communication, Institutional Affairs and Sustainability.

Geneva and Oslo) and involved 115 investors, 10 of which were ethics oriented, that is, they base their investment choices on ESG (Environmental, Social, Governance) criteria: the attention towards ERG by investors interested in CSR is indeed constantly increasing.

As proof of this, on 2 July 2018 we participated in the Sustainability Day organised by Borsa Italiana: during the event, management explained in detail the Group's transformation process and its ESG (Environmental, Social and Governance) commitments. This is a key appointment for investors, because they have the opportunity to get to know the Company not only in terms of strategy and financial targets, but also of increasingly relevant CSR issues.

Financial analysts kept in close contact with the Investor Relations department also through

frequent teleconferences, allowing them to better implement the transformation of our business in relation to the evolving international context in their evaluation models.

IR activities are available not only to the financial analysts and investment funds, but also to retail investors that at www.erg.eu can access the same documentation provided to the analysts and follow online the teleconferences and the presentation of the financial results.

The IR team may also be directly contacted for any clarifications by using the contact details indicated on the website and in all financial press releases.

Lastly, we can also be contacted through the most popular social networks: Twitter, LinkedIn and YouTube.

# THE EVENT WITH THE BUSINESS PRESS

On the occasion of the celebrations for our 80<sup>th</sup> anniversary, we also organised a press conference, mainly with business press journalists, to update them on the progress of the 2018-2022 Business Plan, with the participation of the Chairman Edoardo Garrone, the Executive Deputy Chairman Alessandro Garrone and CEO Luca Bettonte.



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#### **ERG AND THE COMMUNITY**

FRG AND

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Our activities in the local area aim at increasing the value of the local area and promoting the development of local communities. All of our investments are assessed for the positive results they can achieve over time and they are developed by involving local communities: from the design phase to the construction work, for which we prefer to select local contractors.

This is the approach we used for the fifth edition of "Vai col vento!" (Go with the Wind!), an environmental education project that involved students from the third year of middle school (stakeholders playing a double role as "future generation" and "local communities") from the areas where our wind farms are present.

This successful format led to the creation in 2017 of a similar project "A tutta acqual" (Water at full speed!) for secondary schools in the areas where our hydroelectric plants are located. Furthermore, again with a view to generating value for the area, we launched the "ERG Re-Generation Challenge", a call for ideas in cooperation with local institutions and the Universities of Perugia and Macerata. The competition aimed at finding projects to be implemented in the area, related to renewable energy and energy innovation.

Lastly, in Sicily, where our natural gas thermoelectric plant is located, we developed the "Progetto Scuola" (School Project), a set of training activities on the respect of the environment, on road safety and sports initiatives.

To celebrate the 80<sup>th</sup> anniversary of the ERG Group, we demonstrated our commitment to supporting social initiatives in Genoa for both the local communities affected by the collapse of the Morandi bridge and for the Gaslini Hospital.

For detailed information about these initiatives, see paragraph "The main community initiatives".

#### **ERG AND THE MEDIA**

The Media Relations office promotes the correct representation of the Group's position and its strategic guidelines, providing full and timely information at national, international and local level, both through traditional and social media.

News, press releases, events, reports, photo galleries, conversations and posts on social channels (LinkedIn, Twitter, YouTube): this is how we tell the story of ERG using different languages that meet the information needs of our main stakeholders and of a broader and more diversified audience. The frequency of our communications and the different media we use, strictly in compliance with existing legislation for listed companies, has enabled us to increase – gradually but constantly – the visibility of our activities, our way of doing business and our values.

Furthermore, news about our Group, the operating and financial results achieved, press releases, press kits, photos and institutional videos are easily available in the Media area of our company website. A "social media room" connected to our social accounts (ERGnow and ERGcareers on Twitter, ERG S.p.A. on LinkedIn, ERGnow on Youtube) is also available.



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## METHODOLOGICAL NOTE

The 2018 edition is the twelfth Sustainability Report of the ERG Group and the second edition of the Consolidated Non-financial statement [hereinafter "Non-financial statement", "NFS" or "Sustainability Report") drawn up pursuant to art. 3 and art. 4 of Italian Legislative Decree 254/2016 (hereinafter also "Leg. Decree 254/16" or "Decree 254"). It contains information about environmental, social and personnel-related issues, about the respect for human rights and the fight against corruption, to the extent considered useful to ensure that the activities carried out by the ERG Group, its progress, results and impact are fully understood. The formal acknowledgement of how important this information is must be taken as a confirmation of what we have done for our stakeholders until now

This document therefore is the Non-financial statement of the Group comprising ERG S.p.A. and its fully consolidated subsidiaries (hereinafter also "ERG Group" or "Group"), referring to the year ended 31 December 2018 (reporting period from 1 January to 31 December 2018).

In these past years we have explained how we transitioned from being an oil sector operator into independent energy producers specialised in the generation of electricity from renewable sources. How we have implemented an industrial approach in a sector characterised by financial investors. How we have diversified our geographical presence and have invested in other European countries. How we have diversified our technology and entered complementary sectors.

Although the NFS is subject to legislation, our approach has not changed: this is why our report must be read together with our previous Sustainability Reports as a continuum which outlines the evolution of our business and its continuous technical, methodological and organisational changes. Whenever possible, we try to add figures and indicators in our texts, so as to make them easier to understand and compare and to assess the actions taken.

In this report, we focus on aspects more strictly related to our Group's CSR (Corporate Social Responsibility). The economic and governance issues, of which we provide an overview herein, are covered in depth in other official documents, published and available on the Group's website www.erg.eu (ERG Group Consolidated Financial Statements, Report on Corporate Governance and Ownership and other public documents).

The gathering of data and information is carried out under the supervision of the Sustainability Committee through the Corporate Social Responsibility Department and involves all the Group's companies and departments.

The NFS was submitted to the Control and Risk Committee on 28 February 2019 for examination and assessment, and was then approved by ERG S.p.A.'s Board of Directors on 6 March 2019. This document was subject to an opinion of conformity ("limited assurance engagement" in accordance with the criteria of principle ISAE 3000 Revised) by KPMG S.p.A. The audit was conducted according to the procedures indicated in the "Independent Auditors' Report", included in this document.

**ENVIRONMENTAL** 

**RESPONSIBILITY** 

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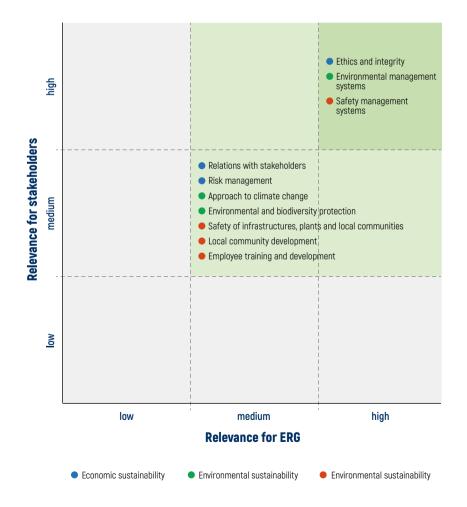
#### MATERIALITY ANALYSIS

The need to respond to legal requirements, the awareness that the document is receiving closer attention from financial analysts and the entry into the sector of electricity generation from photovoltaic sources, required a new update of the process for analysing potentially relevant topics for the Group.

GOVERNANCE

The process was followed by the Corporate Social Responsibility department which, during an initial documentation analysis phase, identified the most relevant aspects for the Group's sustainable development based on literature, the topics most frequently covered by sector companies, the demands arising during annual ESG (Environmental, Social, Governance) assessments, the issues discussed with stakeholders and, in general, the regulatory context of reference including Decree 254.

The set of topics (57) were then grouped into macro-themes (22) in order to analyse them in a manner not too widespread and detailed. The analysis was carried out through interviews with external stakeholders and an on line survey



with 100 employees, to identify the topics that in their opinion could better represent the ERG Group outside; with management to identify the areas which are considered to be of greater impact in relation to the Group's industrial and sustainability strategy.

**FCONOMIC** 

**RESPONSIBILITY** 

The results of the materiality analysis (presented in this document) were submitted for assessment and approval by the Sustainability Committee.

This assessment allowed us to develop a new materiality matrix containing the relevant topics reported in this document, and to assess them according to the principles set out in the "GRI sustainability reporting standards 2016": stakeholder involvement, context of operations, materiality and completeness of data.

In this respect, the NFS was drawn up to the extent necessary to ensure the understanding of the Group's business, its performance, its results and of the impact it generates, covering the relevant topics referred to in art. 3 of Decree 254 (concerning the fight against active and passive corruption, the environment, personnel management, social aspects and the respect for human rights).

#### METHODOLOGICAL PRINCIPLES

This Consolidated Non-financial statement was drawn up in compliance with the "GRI sustainability reporting standards 2016" published by the GRI (Global Reporting Initiative) according to the «Core» option, and includes the information required by the GRI-G4 "Electric Utilities Sector Disclosures", specifically for companies in the utilities sector.

The connecting matrix between the material themes identified and the reporting elements,

as well as the list of standard GRI indicators for full reporting is available in the "Content Index" section of this document.

In drawing up the NFS, reference was also made to the European Commission's "Guidelines for the communication of non-financial information".

The scope of the financial data is the same as ERG Group's Consolidated Financial Statements as at and for the year ended 31 December 2018, whereas the scope of the social and environmental data and information refers to all of the companies belonging to the ERG Group on 31 December 2018 consolidated on a line-by-line basis.

If quantitative data are expressed in a manner that differs from the above, this will be expressly indicated in specific notes.

No significant changes are indicated relating to the scope and the ownership structures during the reporting period. In any case, for details regarding these two aspects reference may be made to ERG Group's Consolidated Financial Statements at 31 December 2018 and to the Report on Corporate Governance and Ownership. Data on the personnel and work organisation refer to the workforce as at 31 December 2018. Any exceptions are reported below in the tables.

With regard to the quantitative information illustrated in this document, the following is pointed out:

- data on personnel training refer to managerial, technical-specialist and HSE (Health, Safety and Environment) training organised, managed and provided during the year by the "talent management" department of the holding company or by the respective Business Units;
- · the main atmospheric emissions are determined

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by continuous measurements at emission points and, where necessary, by spot measurements combined with estimates that take into account both the combustion systems and the types of fuel used:

- CO<sub>2</sub> emissions are certified by an independent third party, as required by law;
- "CO<sub>2</sub> avoided" an indicator used to show the positive contribution of production from renewable sources to environmental improvement - was defined using a conversion factor aligned with common practice: the emission factor of the specific thermoelectric plants in the country of reference and published by Terna in the "electricity/statistics/ international comparisons" section of their website, with reference to 2016;
- the operating parameters of plants are taken from their management and reporting systems.

NFS information was provided by comparing it with financial year 2017: the figures are presented in a 3-year context to make it easy to compare them over time and to assess the performance of the Group's activities.

Furthermore, for the purposes of correctly representing the Group's performance and of guaranteeing reliable data, estimates were used as little as possible. Any estimates are based on the best available methods and are appropriately pointed out.

The Non-financial statement is published annually. This document is also available on the Group's website under the Sustainability section (www.erg.eu).

In terms of sustainability, the ERG Group has begun an ongoing improvement process and defined its Sustainability commitments for 20182022, which were approved by the Sustainability Committee at the start of 2018.

These commitments, which are reported in accordance with the SDGs established by the UN, define the Group's strategic vision with regard to sustainability and represent an operational tool guiding its actions in accordance with the new business plan presented in March 2018.

Inthis respect, in the "Sustainability Commitments" section of this document, a summary is provided of the main areas involving the Group's commitment to sustainability and their status as at 31 December 2018. For information regarding the Non-financial statement, please write to sustainability@erg.eu.

## **OUR SUSTAINABILITY COMMITMENTS**

In March 2018, we presented the new 2018-2022 Business Plan, updating the previous plan ahead by one year. For this reason, the three-year sustainability commitments 2016-2018 were "closed" with the reporting as at 31 December 2017 and replaced by new five-year commitments 2018-2022.

The consistency of the new Business Plan with

the previous sustainability strategies ensures substantial continuity between the previous goals and the new ones, which were approved by the Sustainability Committee in July 2018. These goals stem from:

- · the Business Plan:
- the continuous improvement goals set out in the certifications;
- entry into the hydroelectric and solar sectors;

**UN SDGs** 

#### Areas of commitment - Period 2018-2022

#### Status as at 31/12/2018











#### GOVERNANCE, ETHICS AND SUSTAINABILITY APPROACH

Pursue the internal and/or external dissemination of the Group's principles expressed in the Code of Ethics, in the Sustainability Policy and in the new Leadership Model.

Code of Ethics and Sustainability Policy updated. Human Rights Policy approved.

Training on sustainability issues continued at schools in the areas where the Group operates.



Update the Enterprise Risk Management (ERM) risk catalogue with the analysis referring to the

new 2018-2022 Business Plan. Implement an ERM risks and specific Key Risk Indicators (so-called KRIs) dashboard for their Group Risk Catalogue updated following risk assessment on 2018-2022 Business Plan.

ERM risk dashboard implemented to monitor any changes in the risk profiles set out in the Risk Catalogue.

Keep the Models 231 of Italian companies updated. Implement an Anti-corruption Policy within the Group, by making the control system fully operational and continuously monitoring and

Risk assessment on regulatory changes that occurred during the year.

The Model 231 was drawn up for solar technology companies.

An "Integrated Anti-Corruption Model" was adopted for all Italian and foreign companies in line with best practices.

Anti-corruption policy and "key third-party due diligence" procedure approved.

Implement an Environment - Safety certification in all Italian and foreign operating companies, in line with the One Company organisational structure.

Implementation of the project for integrating existing certifications in the Italian companies.

Project for extending certifications to foreign companies was defined





#### **BUSINESS STRATEGY**

ongoing monitoring.

training employees.

Consolidate the Group's business leadership in the production of electricity from renewable sources and increase the efficiency of all of its plants according to the development lines of the 2018-2022 Business Plan.

The increase in installed power continues thanks to the start-up of new plants in France (55 MW) and the acquisition of 30 photovoltaic plants (89 MW). An additional 51 MW of photovoltaic plants has been acquired in 2019.

Support the Group's strategies through scouting activities by identifying and assessing innovative technologies, and developing partnerships with Universities and Research Institutes.

The second cycle of scouting activities was started in 2018 with ERG Regeneration Challenge.



#### **SUPPLIERS**

Consolidate a supplier qualification and assessment system, with particular attention to Health, Safety, Environment and Sustainability.

Over 50% of new suppliers qualified according to HSE parameters.

Project for the qualification of suppliers according to sustainability parameters started.

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the increasingly prominent diversification in European countries.

This makes it possible to achieve the alignment between development strategy and sustainability commitments.

Our new commitments were also analysed in

the light of the SDGs (Sustainable Development Goals) defined by the United Nations in 2015. This allows us to show how the activities of our Group contribute to achieving broader sustainability goals, capable of significantly improving the world we live in for the benefit of future generations.

#### **UN SDGs** Areas of commitment - Period 2018-2022 Status as at 31/12/2018 **EMISSIONS AND WASTE** Group decarbonisation: During 2018 3,029 kt of emissions avoided. avoid CO, emissions for 15 Mtons in the plan Continual reduction in the Group's energy production period; carbonisation factor: -42% over the past four years. reduce carbon index of electricity production by 86% of energy requirements covered with energy produced 14% from renewable sources. cover energy requirements with energy produced from renewable sources. Implement activities to protect biodiversity in the Bird monitoring in our wind farms. areas where our plants are located. Support to the activities performed at the Oasis of Alviano (WWF). Reduce the amount of waste produced by A recovery procedure for the waste produced by the grate processes by maximising the percentage of cleaners and used as a resource for the timber from Lago di waste sent to be recycled also through the use Corbara, was implemented in our hydroelectric plants. of materials and substances ensuring better environmental compatibility.

| UN SDGs                                      | Areas of commitment - Period 2018-2022  | Status as at 31/12/2018  |
|--|---|--|
| DECENT WORK AND ECONOMIC GROWTH              | SAFETY  |  |
| <b>M</b>                                     | Consolidate the Safety culture inside and outside the company, pursuing the goal for absence of accidents caused by safety shortfalls in the plants and in the offices. | Following the injuries in 2018, corrective actions were implemented to prevent the recurrence of similar events.  A near-miss reporting system was promoted to increase prevention levels.                                     |
| 4 much 5 seems                               | FLOFEL  |  |
|  | Define and implement training and development plans to increase the value of Human Capital Coverage (+3% at the end of the plan period).                                | In 2018, around 35 thousand hours of training provided at an average of approximately 6 days per employee.  92% of company staff took part in training courses.  Around 83% of training is on technical and managerial topics. |
|  | Improve working environments and welfare systems for employees.   | "ONE health" project. Opening of a gym for Group employees.  |
| PEACE, JUSTICE<br>AND STRONG<br>DISTITUTIONS | COMMUNICATION   |  |
| <b>Y</b>                                     | Make contact with and inform the Group's stakeholders in a complete, transparent and timely manner.   | ERG received B rating from CDP. ERG included in some sustainability indices. 4th position in the Potentialpark Italy ranking (online talent communication) and 2nd position in Italy for the section "Careers".                |
| AFFORDABLE AND CLEAN ENGRY  8 DECEM          | WORK AND COMMUNITY  |  |
| <b>O</b> -                                   | Contribute to the development of legal  | Activities were developed in least communities in keeping wit  |





Contribute to the development of local communities through training activities at schools and universities and through social responsibility initiatives at a local level.

Activities were developed in local communities in keeping with Sustainability Policy principles.

"A tutta acqua!" and "Vai col vento!" were our leading projects for students living in the communities where our plants are located.

# GOVERNANCE

The values and ethical principles that guide the Group and our business approach are rooted in a legacy that has been consolidated over time.

Robust corporate governance thanks to the work of the board and internal committees.

A structured system of procedures and an integrated risk management system for better business practices and the protection of the rights of minority shareholders.

**64**RESOLUTIONS
ADOPTED IN 2018

5
INTERNAL COMMITTEES
SUPPORTING THE CEO

WOMEN PARTICIPATING IN THE BOARD OF DIRECTORS

## **OUR PRINCIPLES**

The presence of different expertise, values and points of view within the Board of Directors and the Board of Statutory Auditors is essential for building open dialogue and for making collective, well-thought-out, informed and well-balanced decisions.

Since the Company's administrative, management and control bodies are appointed on the basis of lists of candidates submitted by the shareholders, the outgoing Board of Directors submits specific recommendations to the latter on the diversity of corporate bodies before their appointment, in line with the provisions of the Corporate Governance Code. These recommendations are always reported in the agenda for appointments.

#### **COMPOSITION OF BOARD OF DIRECTORS**

The policy proposed by the Board of Directors provides that all Board members - as part of the self-assessment process on the operation of the Board of Directors and the Board Committees - must express, prior to the appointment of a new Board, their views regarding the diversity of managerial and professional figures, whose presence on the Board is considered appropriate, also taking into account aspects such as educational and professional features, experience (including managerial experience), gender and age.

Since the current Board of Directors, composed of twelve members, was appointed at the Shareholders' Meeting on 23 April 2018 and its mandate will expire on the date of the Shareholders' Meeting called to approve the Financial Statements as at and for the year ending 31 December 2020, this assessment process is expected to be carried out again in the first quarter of 2021, so that its outcome be included in the recommendations to the Shareholders' Meeting which will be called for the appointment of the new Board of Directors.

The results of the assessments made by the current Board of Directors and the recommendations expressed by the previous Board of Directors are indicated below.

#### **EDUCATIONAL AND PROFESSIONAL EXPERTISE**

Regarding the expertise of the Board of Directors, the 2018 self-assessment process showed - in keeping with results of the self-assessment carried out by the previous Board of Directors - a balanced distribution of expertise, gained mainly through business and professional experience.

With regard to expertise considered appropriate for the Directors, the self-assessment process of the previous Board of Directors had confirmed the expertise already represented in the Board of Directors, possibly increasing the importance of international experience in the energy sector and introducing specific skills in administrative and regulatory law, in line with the evolution of the Group's portfolio of activities.

## DIVERSITY POLICY IN RELATION TO THE COMPOSITION OF THE ADMINISTRATIVE. MANAGEMENT AND CONTROL BODIES

#### **GENDER COMPOSITION**

With regard to gender balance, the previous Board of Directors had not considered it necessary to recommend more restrictive provisions than those required for by the law.

#### AGE

With reference to age, no need for specific recommendations was identified.

#### **RESULTS**

The composition of the current Board of Directors is considered substantially in line with the Group's Policy.

#### COMPOSITION OF THE BOARD OF STATUTORY AUDITORS

The Policy proposed by the Board of Directors provides that the Board itself - on the basis of the information provided by the Board of Statutory Auditors regarding the self-assessment process on the operation of the Board itself - must express, prior to the appointment of a new Board of Statutory Auditors, its views regarding the diversity of the professional figures, whose presence on the Board is considered appropriate, also taking into account aspects such as educational and professional features, experience, gender and age.

Since the Board of Statutory Auditors was appointed at the Shareholders' Meeting on 3 May 2016 and its mandate will expire on the date of the Shareholders' Meeting called to approve the Financial Statements as at and for the year ended 31 December 2018, the Board's assessment process was carried out again in the first quarter of 2019, so that its outcome may be included in the recommendations to the Shareholders' Meeting which will be called for the appointment of the new Board of Statutory Auditors.

The Board of Directors' assessments and recommendations regarding 2018 are summarised below.

#### **EDUCATIONAL AND PROFESSIONAL EXPERTISE**

With reference to the skills within the Board of Statutory Auditors, the Board of Directors acknowledged the findings of the self-assessment of the Board of Statutory Auditors, which, also in the light of the balanced allocation of skills within the Board of Statutory Auditors, gained mainly through professional experience (as shown below), considered it necessary to indicate that the skills represented in the current Board of Statutory Auditors should be present in the Board of Statutory Auditors that will be appointed by the Shareholders' Meeting called to approve the Financial Statements at 31 December 2018.

## DIVERSITY POLICY IN RELATION TO THE COMPOSITION OF THE ADMINISTRATIVE, MANAGEMENT AND CONTROL BODIES

#### **GENDER COMPOSITION**

With regard to gender balance, following the self-assessment process carried out on the basis of the information provided by the Board of Statutory Auditors, the Board of Directors does not consider it necessary to recommend more restrictive provisions than those required for by the law.

#### AGE

With reference to age, no specific recommendations were needed following the self-assessment process carried out on the basis of the information provided by the Board of Statutory Auditors.

#### **RESULTS**

The results of this Policy may be assessed following the appointment of the new Board of Statutory Auditors by the Shareholders' Meeting called, inter alia, for approval of the Financial Statements as at and for the year ended 31 December 2018.



## THE GROUP'S CORPORATE GOVERNANCE

#### **ERG'S VALUES**

Lawfulness, honesty, fairness, equality, confidentiality, equity, integrity, transparency, responsibility and sustainability: the values and principles that guide the Group in its business activities have strengthened over time and are fully expressed in the Code of Ethics.

GOVERNANCE

The members of the governing bodies of the Group's companies, our employees and the people who work together with us are called to comply with the principles set out in the Code of Ethics and – each within their respective roles and responsibilities – with our governance rules.

## THE STRUCTURE OF ERG S.P.A.'S BOARD OF DIRECTORS AND OF ITS BOARD COMMITTEES AS AT 31 DECEMBER 2018

| Office          | Members                   | List<br>(M/m)<br>* | Executive/<br>non-<br>executive | Independent<br>pursuant to<br>Code and<br>Consolidated | % partici-<br>pation<br>** | No. other positions | Date of first appointment | and              | nations<br>Risk<br>nittee | ar<br>Remun      | nations<br>nd<br>eration<br>nittee |
|-----------------|---------------------------|--------------------|---------------------------------|--|----------------------------|---------------------|---------------------------|------------------|---------------------------|------------------|------------------------------------|
|                 |                           |                    |                                 | Finance Act<br>(T.U.F.)                                |                            |                     |                           | ****             |                           | ****             |                                    |
| Chairman        | Edoardo<br>Garrone        | М                  | Executive                       |  | 92%                        | 3                   | 16/10/1997                |                  |                           |                  |                                    |
| Deputy Chairman | Alessandro<br>Garrone     | М                  | Executive                       |  | 83%                        | 1                   | 16/10/1997                |                  |                           |                  |                                    |
| Deputy Chairman | Giovanni<br>Mondini       | М                  | Non-<br>Executive               |  | 100%                       | 1                   | 16/10/1997                |                  |                           |                  |                                    |
| CEO             | Luca<br>Bettonte          | М                  | Executive                       |  | 100%                       | -                   | 15/12/2009                |                  |                           |                  |                                    |
| Officer         | Massimo<br>Belcredi       | М                  | Non-<br>Executive               | Code<br>T.U.F.   | 100%                       | 1                   | 29/04/2003                | Yes              | 100%                      | Yes <sup>1</sup> | 100%                               |
| Director        | Mara Anna<br>Rita Caverni | М                  | Non-<br>Executive               | Code<br>T.U.F.   | 100%                       | 2                   | 24/04/2015                | Yes              | 90%                       | Yes              | 100%                               |
| Director        | Barbara<br>Cominelli      | М                  | Non-<br>Executive               | Code<br>T.U.F.   | 67%                        | -                   | 24/04/2015                | Yes <sup>1</sup> | 100%                      | Yes <sup>2</sup> | 100%                               |
| Director        | Marco<br>Costaguta        | М                  | Non-<br>Executive               |  | 83%                        | 8                   | 20/04/2012                |                  |                           |                  |                                    |
| Director        | P. Francesco<br>Lanzoni   | М                  | Non-<br>Executive               | T.U.F.   | 100%                       | 1                   | 29/04/2003                |                  |                           | Yes              | 100%                               |
| Director        | Silvia<br>Merlo           | М                  | Non-<br>Executive               | Code<br>T.U.F.   | 83%                        | 3                   | 24/04/2015                |                  |                           | Yes              | 100%                               |
| Director        | Elisabetta<br>Oliveri     | М                  | Non-<br>Executive               | Code<br>T.U.F.   | 100%                       | 2                   | 23/04/2018                | Yes <sup>2</sup> | 100%                      |                  |                                    |
| Director        | Mario<br>Paterlini        | m                  | Non-<br>Executive               | Code<br>T.U.F.   | 100%                       | -                   | 23/04/2018                |                  |                           |                  |                                    |

<sup>\*</sup> This column indicates M/m according to whether the member was elected from the majority list (M) or the minority list (m).

<sup>\*\*</sup> This column indicates the participation percentage of Directors at the Board of Directors' and Committee meetings (no. appearances/no. meetings held during period in which the member has held their position).

<sup>\*\*</sup> This column indicates the number of Director or Statutory Auditor positions held by the relative subject in other companies listed on regulated markets, including foreign markets, in financial, banking, insurance companies or companies of significant size, different to those held in ERG Group companies.

<sup>\*\*\*\*</sup> This column indicates a member of the BoD being part of the Committee.

<sup>\*\*\*\*\*</sup> This column indicates the date of the first appointment of the Directors starting from 16 October 1997, the date the company was listed on the stock exchange.

<sup>1</sup> Until 23 April 2018.

Since 23 April 2018.

#### **GOVERNANCE**

Corporate Governance involves a set of rules and activities. The elements comprising and giving rise to corporate governance are the statutory bodies, the board committees and the corporate governance documents that regulate their operation.

Our Corporate Governance is structured according to a traditional model, based on which:

 the Board of Directors, appointed at the Shareholders' Meeting, is responsible for

- determining and achieving the strategic objectives of both the Company and the entire Group:
- the Board of Statutory Auditors, again appointed at the Shareholders' Meeting, has supervisory duties.

The statutory audit is entrusted to Independent Auditors at the Shareholders' Meeting on the basis of a reasoned proposal by the Board of Statutory Auditors.

#### SUSTAINABILITY IN THE BOARD OF DIRECTORS

The Board of Directors and the Board of Statutory Auditors of ERG, following the best practices suggested by the Corporate Governance Code, self-assessed the level of their skills to identify any areas for further study.

Specifically, the questionnaire used by the Directors identified a number of skills already regarded as necessary by the previous Board of Directors:

- knowledge of the energy sector
- audit, compliance, legal and corporate
- sustainability
- strategy
- corporate governance

- finance and accounting
- risk management
- management skills
- international experience
- remuneration policies

and asked each Director to express his/her level of knowledge (on a scale from 1 to 5) on each skill indicated.

The analysis of the results showed the Board of Directors' level of "confidence" on each specific subject. As regards sustainability, it emerged that 17% of Directors regarded themselves as having excellent skills (score 5), 50% good skills (score 4) and 33% sufficient skills (score 3).

The Sustainability Committee includes the Chairman, the Executive Deputy Chairman and the CEO.

Again as regards sustainability, the skills were acquired through entrepreneurial experience, as managers or executive directors (41% of cases), and through professional experience, as consultants or non-executive members of a board or board committees (47% of cases).

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#### THE BOARD OF DIRECTORS

GOVERNANCE

The current Board of Directors is composed of twelve members. It was appointed at the Shareholders' Meeting on 23 April 2018 and will remain in office until the Shareholders' Meeting is called for approval of the Financial Statements as at and for the year ending 31 December 2020.

#### Protection of minorities

A Director was appointed from the minority list submitted by a number of institutional investors, in compliance with the principles of protecting minorities laid down in the Consolidated Finance Act (T.U.F.).

#### Respect for gender balance

33% of Directors in office are the less represented gender. This percentage complies with the gender balance criteria established by current legislative and regulatory provisions, which requires that at least one third of the elected Directors be reserved for the less represented gender. The average age of the members of the Board of Directors is around 56: 2 members (17%) are less than 51 years of age. For further information about the appointment procedure, see the section "Report on Corporate Governance and Ownership" at the www.erg.eu website.

The Board of Directors has set up three internal

#### committees:

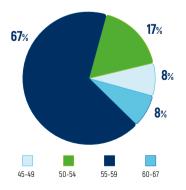
- the Control and Risk Committee, which supports
  the assessments and decisions taken by the
  Board of Directors with regard to the Internal
  Control and Risk Management System, as well
  as those related to approval of the periodical
  financial reports;
- the Nominations and Remuneration Committee, which performs the role and responsibilities provided by the Corporate Governance Code for the Nominations and Remuneration Committee;
- the Strategic Committee, which has consultative and proposal-making functions towards the CEO and the Board of Directors in the definition of strategic business guidelines, portfolio guidelines, strategic finance guidelines and policies, and single extraordinary finance transactions.

#### SIGNIFICANT INVESTMENTS AS AT 31 DECEMBER 2018

| Direct<br>shareholder | % share of<br>ordinary capital<br>and voting capital |
|-----------------------|--|
| San Quirico S.p.A.    | 55.628%  |
| Polcevera S.r.l.      | 6.905%   |
| Other Shareholders    | 36.467%  |
| Treasury shares       | 1.000%   |

- there are no securities conferring special control rights;
- there are no employee stock option plans.

**BOD - BREAKDOWN BY AGE** 



#### **BOD - SENIORITY OF DIRECTORS**



#### CORPORATE BODIES AND BOARD COMMITTEES OF ERG S.P.A.



#### **SHAREHOLDERS**

Approve the Financial Statements, appoint the Board of Directors, the Board of Statutory Auditors. the Independent Auditors and decide on amendments to the Articles of Association and extraordinary transactions such as mergers, demergers and share capital increases.



#### **BOARD OF DIRECTORS**

Approves the periodic financial reports, defines the strategic guidelines, the fundamental aspects of the organisational structure and the corporate governance system, resolves on significant transactions, and assesses the company's performance.

Composed of 12 members, 7 of which are independent\*, held 12 meetings during 2018 which lasted on average approximately 2 hours and 45 minutes.

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#### **BOARD OF STATUTORY AUDITORS**

Monitors compliance with laws and with the Articles of Association, with the principles of sound management, the adequacy of the ICRM System\*\* and the independence of the Independent Auditors.

Composed of a Chairman, 2 Standing Auditors and 3 Alternate Auditors. held 13 meetings during 2018 which lasted on average approximately 3 hours.











#### CONTROL AND RISK COMMITTEE

Supports the Board of Directors in decisions on the approval of periodic financial reports, those related to Group Governance, to the ICRM System\*\*, to the obligations pursuant to Italian Legislative Decree no. 231/01 and to the Finance Area

Composed of a Chairman and 2 members (all non-executive, independent pursuant to the Italian Consolidated Finance Act (T.U.F.) and for the most part independent pursuant to the Corporate Governance Code), held 11 meetings during 2018 which lasted on average approximately 2 hours and 10 minutes.









#### NOMINATIONS AND REMUNERATION **COMMITTEE**

Makes recommendations for the remuneration of Directors with powers or specific duties and for the definition of remuneration policies and Group's management incentive schemes.\*

Composed of a Chairman and 2 members (all non-executive, independent pursuant to the Italian Consolidated Finance Act (T.U.F.) and for the most part independent pursuant to the Corporate Governance Code), held 6 meetings during 2018 which lasted on average approximately 1 hour and 25 minutes.







#### STRATEGIC COMMITTEE

Supports the CEO and the Board of Directors in the definition of strategic business guidelines, portfolio guidelines, and strategic finance guidelines and decision making related to long-term strategic plans, investment budgets of the Group as well as significant capital expenditures.

Consisting of a Chairman and 5 members, held 8 meetings during 2018 which lasted on average approximately 4 hours.





- 5 independent pursuant to Corporate Governance Code and 2 independent pursuant only to T.U.F.
- Internal Control and Risk Management System.
- \*\*\* May issue opinions for the purposes of the procedure for transactions with related parties.

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#### THE BOARD OF STATUTORY AUDITORS

The current Board of Statutory Auditors is composed of three standing auditors and three alternate auditors. It was appointed at the Shareholders' Meeting on 3 May 2016 with a three-year mandate; consequently the mandate conferred upon the Board of Statutory Auditors will expire on the date the Shareholders' Meeting is called to approve the Financial Statements at 31 December 2018.

#### Protection of minorities

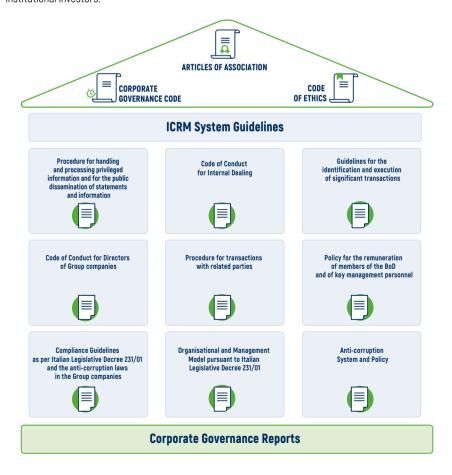
The Chairman of the Board of Statutory Auditors and an alternate auditor were appointed from the minority list submitted by a number of institutional investors.

#### Respect for gender balance

33% of the Standing and Alternate Auditors are the less represented gender.

#### INDEPENDENT AUDITORS

The Independent Auditors were appointed at the Shareholders' Meeting on 23 April 2018, for years 2018 - 2026; consequently the appointment for the statutory audit will expire on the date the Shareholders' Meeting is called for approval of the Financial Statements at 31 December 2026. For further information on the role played by each body, see the "Report on Corporate Governance and Ownership" section on the Group's website www.erg.eu.



#### INTERNAL COMMITTEES

The Group's governance also includes Internal Committees (non-board committees composed

of Group managers) with advisory and proposal functions towards executive Directors.

#### CREDIT COMMITTEE

Has competence, for the entire Group with the exclusion of Joint Ventures, in matters regarding the granting of credit lines, schedule analysis and collection trends, assessment and verification of overdue recovery plans, general assessment of credit performance.

## HUMAN CAPITAL COMMITTEE

Defines and monitors the main Human Capital development programmes and activities, provides support with regard to strategies determining the value of Human Capital, and monitors the effective implementation of the Human Rights Policy, dealing with any non-compliance reports.

#### MANAGEMENT COMMITTEE

Monitors the Group's economic, financial and industrial results, follows the changes in the institutional and regulatory framework, analyses the development opportunities and monitors the relevant projects within the scope of the strategic plan, ensuring that all Organisational Units are aligned to the priorities.



## SUSTAINABILITY COMMITTEE

Defines the Group's directions on sustainability and promotes the implementation of consistent practices concerning corporate social responsibility; approves, monitors and assesses the sustainability-related objectives and the priority action areas relating to CSR; approves the preparation timing and method for the Non-financial statement (NFS) and for CSR initiatives.

#### RISK COMMITTEE

Supports the CEO in defining financial and market risk management strategies and policies, supplies useful input for the authorisation of financial and market risk management operations, the monitoring of the implementation of major operations and the checking of their relative effects.

#### INVESTMENT COMMITTEE

Provides support to the CEO in the evaluation of the Group's investment proposals and expresses its technical and economic-financial opinion in the various phases of the investment approval process.

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## PROCEDURES TO PROTECT MINORITY SHAREHOLDERS

The Group's main procedures for the protection of minority shareholders are summarised below.

#### Code of Conduct for Internal Dealing

The Code aims to ensure transparent financial transactions carried out by Relevant Persons, namely those persons who have significant decision-making powers or considerable knowledge of corporate strategies, given their roles within the Group.

## Guidelines for the identification and execution of significant transactions

The Guidelines set out the criteria to be used to identify the most significant transactions, consisting of quantitative and qualitative criteria and criteria deriving from the specific requirements of the parties involved (related party transactions and intragroup transactions). The document also sets out the behavioural principles that need to be followed to carry out the above-mentioned operations.

## Procedure for handling and processing privileged information and for the public dissemination of statements and information

The procedure for handling and processing privileged information and for public dissemination of statements and information aims at ensuring that all statements and information intended for the market are the outcome of an accretion process that ensures that it is both timely and accurate.

It defines the tasks and responsibilities of the functions involved, identifies the criteria, methods and timing of the various procedural stages, and establishes the appropriate decisionmaking levels for disseminating the statements and information.

## THE INTERNAL CONTROL AND RISK MANAGEMENT SYSTEM

ERG Group's Internal Control and Risk Management System (hereinafter also the "ICRM" System) consists of a set of corporate tools, organisational structures, standards and rules necessary to ensure sound and correct management of the company, in keeping with the goals defined by the Board of Directors. Identifying, measuring, managing and monitoring the main risks, as well as setting up appropriate information flows are the main actions performed by the control function. The ICRM System involves the entire organisational structure of the Group, from the Board of Directors of ERG and of its subsidiaries to all company staff.

The main parties involved and their respective duties are the following:

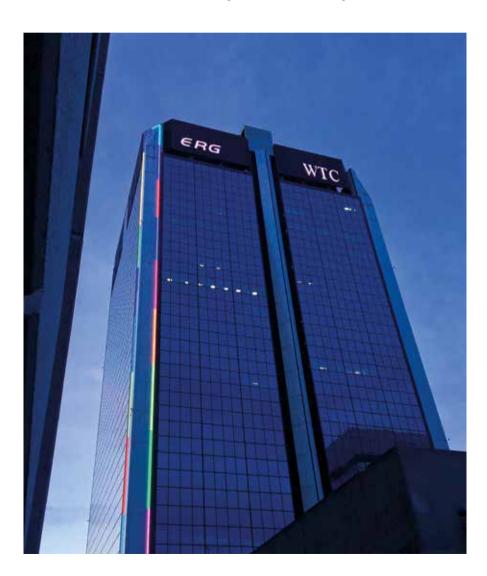
- the Board of Directors, which orients and assesses the adequacy of the Internal Control and Risk Management System;
- the Executive Deputy Chairman, in charge of the Internal Control and Risk Management System, responsible for verifying the correct functionality and the overall adequacy of the ICRM System;
- the Chief Executive Officer, who identifies the main corporate risks;
- the Control and Risk Committee, tasked with supporting, through a preliminary analysis, the assessments and decisions of the Board of Directors pertaining to the ICRM System, as well as those relating to the approval of periodic financial reports;
- the Board of Statutory Auditors, which monitors observance of the law and of the Articles of Association, compliance with the principles of sound administration, and the adequacy of the ICRM System organisational structure (for aspects within its competence);
- the Supervisory Body, which oversees compliance with the Code of Ethics and

verifies the effectiveness and adequacy of the Organisational and Management Model pursuant to Italian Legislative Decree 231/01;

 the Chief Audit Officer, in charge of verifying the viability and suitability of the ICRM System.

Other relevant players with specific duties include Group Management, primarily responsible for internal control and risk management activities, and second-level control functions, including the Manager in charge of financial reporting, the Group Risk Management & Corporate Finance department and the Compliance functions dealing especially with overseeing legal risk and non-compliance.

For further information, see the "Internal Control and Risk Management System Guidelines" and the "Report on Corporate Governance and Ownership" available at www.erg.eu.



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#### INTERNAL AUDIT

As part of the rules and activities pertaining to the Corporate Governance, the Internal Audit department assesses the adequacy of the ICRM System, of which it is an integral part, and specifically:

- ensures objective and independent activities of "assurance" and "consultancy" to Top Management of the Holding and of the Group's Companies to improve the effectiveness and efficiency of the internal control and risk management processes;
- helps the corporate organisation achieve its goals by adopting a professional and systematic approach that is able to generate added value through the assessment and improvement of the internal control, risk management and Corporate Governance processes;
- verifies the operation and suitability of the ICRM System and, in particular, checks that Management has identified the main risks, that the risks were assessed using consistent procedures and that the mitigating actions have

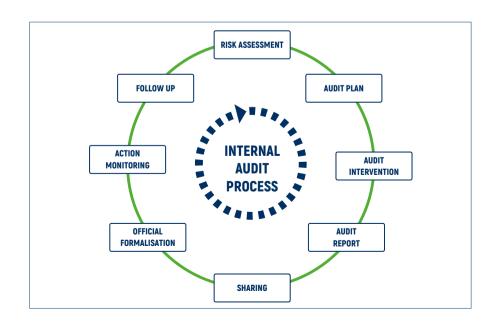
been defined and implemented. Furthermore, it checks that the risks identified have been handled in keeping with the resolutions of the Board of Directors, with external regulations and with the Group's internal rules.

Risk Assessment is the first logical step of the Internal Audit process since it identifies the areas of greater relevance which must be further examined (included in the three-year "rolling" audit plan), consistently with the size of the Internal Audit Division.

The Audit Plan is defined by considering the main results obtained from the Risk Assessment activities.

The three-year "rolling" plan comprises the following methodological phases:

 "Risk Assessment", that is, the definition of a hierarchy of «Risk Based» processes (which may be potentially subject to Auditing) based on the Group's «Risk Catalogue», developed by Group Risk Management & Corporate Finance as



part of the «IRM» (Integrated Risk Management) process. The Risk Assessment process requires:

- acquisition of the most recent version of the Risk Catalogue developed by the Enterprise Risk Management OU (Group Risk Management & Corporate Finance department);
- analysis of the Risk Catalogue's risk sheets and of the correlations with the Group's processes (Process Map);
- definition of the parameters (or weights) for assessing the processes related to the Risk Catalogue risk assessments and preparation of process ranking (prioritisation of risk-based processes):
- definition of processes that may be subject to auditing. Generally, managerial processes related to strategic risks and monitored by the BoD and Top Management are not taken into account, as also activities overseeing specific regulatory events, which cannot be verified using Audit instruments and techniques;
- integration with auditing areas relating to the risk of fraud / non-compliance with the Code of Ethics, not included in the «Risk Catalogue», but part of the Internal Audit mandate;
- modifications and/or supplements resulting from the planning and from the results of the Audits carried out during previous years;
- assessment and possible receipt of any requests and/or suggestions from the Executive Deputy Chairman in charge of the Internal Control and Risk Management System, the Control Bodies and the Group's Top Management;
- submission of the draft Three-year Plan to the Control and Risk Committee and receipt of any observations;
- submission of the final draft Three-year Plan to the Board of Directors for formal approval.

Planning must ensure the following objectives:

- coverage of all business areas on a biennial basis:
- coverage of foreign subsidiaries, envisaging at least one Audit/year;
- performance of one ICT Audit/year;
- verification of corrective actions to be taken, agreed upon with the corporate management of reference and based on the results of the completed Audits;
- "saturation of production capacity" of Internal Audit resources.

To integrate the control activities, maximise their effectiveness and minimise any overlapping, Audit activity planning is coordinated with other control activities, especially with the Compliance audits laid down by Italian Legislative Decree 231/01 and Italian Law 262/05.

Regarding the type of actions taken, the Internal Audit activities are divided as follows:

- Audit: activities designed to analyse a process, understand risks, identify and verify the functioning of the controls. Audits may be carried out in two ways:
  - by company, or single organisational unit, checking the activities and control exercised by management on this unit (general review and organisational audits);
  - by process, cutting horizontally across all the organisational lines affected, even of different companies, and examining both operational and administrative aspects (process audits);
- Monitoring the implementation of the corrective actions implemented by management: these activities are not included in the annual plan, but are carried out continually by Internal Audit during the year;
- Follow-up: activities verifying the actual implementation of the corrective Action Plan. Internal Audit checks the actual implementation

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of the corrective actions by holding meetings with the functions subject to audit and carrying out document checks on the controls implemented following the agreed actions;

 Ad-hoc consulting/actions: in order to support and respond to specific requests from our Management. Internal Audit may provide support and assistance activities; the nature and scope of these activities are defined together with the internal client, depending on staff's expertise and knowledge and on the basis of the function's independence.

Internal Audit also carries out periodic checks on behalf of the Supervisory Bodies of the Group's companies. These checks are aimed at verifying the effectiveness of the Organisation, Management and Control Models pursuant to Italian Legislative Decree 231 adopted by the companies themselves. The detailed operating procedures of the checks are defined together with the Supervisory Body of the Group's companies, also in relation to the Audit Plan activities.

In 2018, Internal Audit completed all the interventions set out in the Audit Plan approved by the Board of Directors in 2017, and carried out the checks in compliance with the Models 231 as provided for in the Plans approved by the Supervisory Bodies of the Group's companies. The eight audits carried out during 2018 (in addition to a special project carried out at management's request) required an average period of 13 weeks each for completion (regarded as the time lapsing between the date of the project start meeting and the date on which the final Report was issued).

Upon completion of the activities, a total of 66 observations were issued which gave rise to 119 corrective action plans shared with the company management of reference, to which further 15 were added following half-yearly 231 monitoring. The average, slightly under 2 action plans per observation, is in line with the department's internal goals. The following table summarises the activities completed in 2018 with indication of any deviations from the Plan.

| TYPE OF INTERVENTION | PLAN APPROVED                        | NUMBER OF INTERVENTIONS               |
|----------------------|--------------------------------------|---------------------------------------|
| INTERNAL AUDIT       | 8 interventions<br>1 special project | 8 interventions<br>2 special projects |
| FOLLOW UP            | 4 quarterly interventions            | 4 quarterly interventions             |
| 231 MONITORING       | 2 half-year cycles                   | 2 half-year cycles                    |

# THE GDPR PROJECT FOR THE PROTECTION OF PRIVACY

In Europe the regulatory framework of Privacy drastically changed in 2018. All Member States were required to adapt to the new Regulation (EU) 2016/679 - GDPR, which entered into force on 25 May 2018. ERG complied with all the requirements of the new legislation, initially using its internal resources and expertise.

We invested in specialised training and a member of our staff was certified as Privacy Manager by the training institution DNV-GL. The contents and relevant final exam of this professionalising programme are recognised for the AICQ SICEV certification process. This internal employee currently deals with all of the Group's Privacy issues.

Compliance by the ERG Group firstly focused on all of the more substantial aspects of the new regulation: those relating to Privacy by Design (internal risk assessment, internal policies, etc.) and to Privacy by Default (data protection by default to meet Regulation requirements and protect data subjects' rights), without neglecting formal aspects such as the updating of both internal and external documentation.

Based on the type of personal data processed and the risks associated with their processing, the need arose to comply with the obligation to train the individuals involved in personal data processing operations (so-called principle of accountability).

Training and focus on specific data processing issues confirm ERG's wish, as data controller, to

build a correct corporate culture on personal data protection.

Internal training is delivered mainly through two modules:

- basic training module, prepared for the entire ERG Group and mainly concerned with general data protection aspects (applicable principles, changes with respect to the Privacy Code pursuant to Italian Legislative Decree 196/2003, roles and responsibilities, sanctions, codes of conduct, violations, data subjects and their rights, consent and consent management, processing register, etc.);
- personalised classroom training module for a limited number of people within the Group who process personal data in a more specific and indepth manner than the recipients of the previous module. This module is above all concerned with aspects relating to definitions, positions (roles and responsibilities), main actions to be carried out and operational implications (information notice, collecting and managing consent, breach management, processing register, management of video surveillance activities, processing of employees' personal data, relations with third-party suppliers, training, management of figures, interaction with the DPO and/or with Control Bodies. etc.).

Both training courses include a final test to assess the work carried out and the level of training achieved.

Lastly, quality assurance is performed by a third party to check and validate ERG's compliance with the requirements of Regulation (EU) - 2016/679 - GDPR

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### **ENTERPRISE RISK MANAGEMENT**

Risk Management activities are of key importance to reach our goals of growth, efficiency and risk mitigation.

Proper and effective risk management strengthens our ability to create value for our shareholders and stakeholders and to ensure long-term business sustainability.

Enterprise Risk Management (ERM) is the Group's structure that supports management in identifying, assessing and monitoring risks, as well as defining the most effective response strategies for their mitigation.

The approach adopted by ERM is inspired by the international framework of reference ERM CoSO (Enterprise Risk Management Committee of Sponsoring Organizations of the Treadway Commission) and is implemented in our Group as an integral part of the Internal Control and Risk Management System.

The process involves integrated risk management between the systems implemented

at company process level based on the specific Risk Evaluation methods and tools adopted by the FRM Model

The main goals of ERM are:

- obtaining an integrated and dynamic view of the main Group corporate risks, which may affect the achievement of the objectives of the Business Plan:
- strengthening the corporate culture at all levels and the awareness that adequate risk assessment and management positively affect the achievement of goals, the creation of value for the company and medium-long term business sustainability.

To this end, the ERM model is developed by means of:

- identifying and assessing the Group's main risks and defining control tools and the necessary strategies to mitigate the risks;
- continuously checking smooth operation and effectiveness of the risk management process, providing to management a clear representation of the "dynamic" evolution of risk mapping.

#### **ERM GOALS REACHED IN 2018**

Risk Assessment activities involved 100% of the Group's companies, both in Italy and abroad, together with all Senior and Middle Management. We identified 46 "main" risks (14 of which TOP) divided into Strategic, Financial, Operating (including HSE and ICT risks) and Compliance risks. We further divided the risks within these categories into "external/internal" and "transformation/permanent". We included the "Rating Downgrade" risk among the top Risks in the Risk Catalogue (in December 2018, Fitch Agency published the rating assigned to ERG S.p.A. with an Investment Grade rating "BBB-" and stable outlook) and we analysed the associated risk profile, assessing its relevant impact.

More specifically, the Enterprise Risk Management methodology includes:

- integration between the ERG model and corporate strategies and, in particular, the "Plan and Budget" process, allowing the alignment between strategic planning and risk assessments;
- creation of synergies with Company departments that carry out specific risk assessment activities

(e.g. HSE, ICT);

- introduction of specific, quantitative and qualitative Key Risk Indicators (KRI) for the structured and dynamic monitoring of risk trends and the development of risks over time;
- a six-monthly reporting activity that provides information about the development of the main risks mapped.

| RISK  | DESCRIPTION  | MANAGEMENT STRATEGY IMPLEMENTED BY THE ERG GROUP   |
|---|--|--|
| 1 - Natural<br>variability<br>of renewable<br>sources | The production volumes are subject to variability due to the natural mutability of renewable sources (water, wind and sun), which may negatively affect the production by renewable energy plants.   | Technological and geographical diversification of renewable energy plants (wind, solar and hydroelectric) and of the geographical location of renewable plants (European scale).  Use of highly accurate forecasting systems to draw up a plan for production and short-term operational activities.  Scheduling of plant downtime according to the periods when renewable sources' contribution is lower.  Use of industrial control systems (SCADA) for continual plant status monitoring, which allow us to take immediate action in the event of accidental failure and to reduce machine shutdown time.                             |
| 2 - Risk of<br>variations in<br>market prices         | Risk caused by the volatility of<br>the market price of commodities<br>(electricity/gas in particular), which<br>may significantly affect the Group's<br>results.  | <ul> <li>Definition of risk exposure limits and their regular monitoring.</li> <li>Escalation process if the approved limits are exceeded.</li> <li>Use of financial instruments to cover the price risk, if this exists.</li> <li>Contractualisation of indexed sales formulas, if possible, to transfer risks to customers.</li> </ul>   |
| 3 - Regulatory<br>modifications                       | Possible regulatory modifications in the Countries where the Group operates and which may negatively affect the achievement of business objectives.  | Regulatory monitoring through institutional relations, association channels, comparison with operators of the sector, specialised press.  Active participation in the consultations to protect the Group's interests.  Sensitivity Analysis to assess the effect of the main regulatory evolutions on the Group's results.  Periodical reporting to Management.  |
| 4 - Downgrade<br>Rating                               | Risk related to possible downgrading by the rating agency which could restrict possible access to the capital market and/ or increase the cost of loans with negative effects on the economic, financial and equity situation of the Group, as well as its reputation.                             | ERG implements a risk mitigation strategy aimed at preventing "crisis" situations (e.g. liquidity; Financial Breach Ratio) and possible credit worthiness downgrading. The strategy has various levels and is designed to achieve:  a balanced financial structure in terms of duration and composition;  continuous monitoring of final and estimated results and of financial balance; investment planning consistent with existing financial covenants and associated risks;  the search for a portfolio of assets that ensures stable cash generation also through the geographical and technological diversification of its plants. |
| 5 - New<br>Investments                                | Possible uncertain events originating from various factors, for example, the scenario (micro/macro-economic, political, regulatory, business) and technical, operational, financial, organisational factors, etc. which may have an impact on the decision of a new investment and/or its success. | Processes for the selection of investments consisting of subsequent project examination and approval activities including, inter alia, internal and external supporting studies, benchmark analysis, legal and regulatory analysis, sustainability models and financial assessment/planning.  Analysis of all risks associated with relevant projects: (i) Potential impact and strategy/actions to contain/eliminate the risk; (ii) Mitigation process verification and monitoring.  Periodic WACC/HR updating, also through benchmarking, to ensure an adequate return with respect to the expected risk profile.                      |

The ERM process is implemented with a Risk-Based approach contributing to the definition of our Business Plan through the identification of specific goals, the analysis of the risk profile associated with them, and the identification of management and monitoring strategies.

At an operational level, Management - through the support of the Enterprise Risk Management Organisational Unit - identifies the risks under its responsibility and provides advice to mitigate the risks of current actions/projects. The results of this process are consolidated through Group risk mapping where priorities are defined in order to support their coordination and integrated management. All risks mapped according to the ERM approach are included in an "ERG Group Risk Catalogue".

| RISK  | DESCRIPTION  | MANAGEMENT STRATEGY IMPLEMENTED BY THE ERG GROUP  |
|---|--|---|
| 6 - Cyber attacks<br>against production<br>industrial systems | Risk related to possible non-<br>compliance with the covenant<br>obligations provided in the<br>corporate funding contracts.   | Security assessment to identify system criticalities and supporting infrastructures.     Definition and implementation of the Security Programme to adapt the processes, systems and infrastructure to best practices.     Development of security awareness plans and training to users.     Use of automatic instruments (e.g. Intrusion Detection Systems) for accident prevention, detection and management purposes.     Cyber Crime insurance coverage.   |
| 7 - Failure to<br>protect the<br>reputational<br>capital      | Internal/external events which may negatively affect the reputation of the ERG Group (amongst the different factors: financial performance, Ethics and Integrity, Social Responsibility, HSE Policies, ICT Security, crisis management, etc.). | <ul> <li>Communication and information activities to maintain a high level of Group reputation by stakeholders, which also envisages social responsibility initiatives and the dissemination of Non-Financial Information.</li> <li>Relationships with all the main stakeholders and media; monitoring of the perception by stakeholders.</li> <li>Communication activity through website/social media.</li> <li>Reputational Crisis Management aimed at promptly managing and limiting the effects of the crisis, in order to protect the Group's reputation.</li> </ul> |
| 8 - Anti-Corruption<br>Compliance                             | Possible involvement of a Group Company and/or one of its directors, representatives or employees in proceedings relating to corruption offences, which may lead to the application of sanctions and to reputational damage.                   | Adoption of a system of behavioural rules (Code of Ethics and Anti-Corruption Policy) valid for the whole Group.     Adoption of an "Integrated Anti-Corruption Model", for all Italian and foreign companies, in line with best practices.     Definition of information flows for Anti-Corruption System monitoring.     Training on anti-corruption topics.     Definition and implementation of Compliance Programmes to check compliance with the Anti-Corruption Policy.  |
| 9 - Industrial<br>risks and HSE                               | Risks due to the malfunctioning of plants, which may cause problems in production processes and/or negatively affect HSE.  | Implementation of a Business Continuity Management process guaranteeing the correct maintenance of production assets, through risk assessment activities and Business Impact Analysis.     Adoption of certified Management Systems (ISO 14001 and OHSAS 18001) and continuous training for all the staff performing activities inside the plants.     Insurance coverage levels for business interruption, property damage and injuries to personnel.  |

As usual, ERG Group's Risk Universe (the standard catalogue of homogeneous risk classes) was updated in the first quarter of 2018, on the basis of an external benchmarking activity and of specialised publications, to include "Emerging Risks".

The tool supports Management:

- during risk assessment (and especially risk identification) since it includes all areas where risks may arise;
- in the consolidation phase, by checking whether some risk areas have not been analysed/ covered and so examine them more in depth, if necessary.

During the most recent update, we particularly integrated the Risk Universe (which currently includes more than 60 risk classes) with some new classes, such as those on compliance with Italian Legislative Decree 254/2016 - "Non-Financial Disclosure" (regarding incomplete/incorrect representation of Non-Financial information in the financial statements with respect to the law, with ensuing sanctions and negative impacts also at reputational level) and those more generally related to sustainability issues.

Following the update of the Risk Universe, we carried out ERM risk assessment activities and the Group's Risk Catalogue was updated. More specifically, two assessment cycles were carried out during 2018, which involved all Group companies in Italy and abroad, for the identification of "TOP Risks" and "Gold Risks".

The "Risk Management Policy" was also reviewed during the fourth quarter of 2018. The document was updated with some new risks identified during the ERM process, specific responsibilities

were reviewed (also following organisational changes), and some response strategies were integrated to make them more effective in the extremely dynamic context in which the ERG Group operates.

The results of the ERM process are periodically reported to:

- Management/CFO/CEO, who assess the appropriateness of the risk profile in relation to the goals set and the actions taken to mitigate the risks:
- the Board Committees, which are tasked with the assessment of the overall effectiveness of the Integrated Risk Management process.

During 2018, we integrated the risk reporting activity with the Group's "ERM Risk Dashboard" which monitors the risk variations of the ERM Risk Catalogue by comparing the results obtained in the current half year with those of the previous half year. Monitoring involves two indicators:

- the risk profile, which is monitored by shifting the residual risk in the likelihood-impact matrix: any change in Likelihood and/or Impact that affects the risk profile makes it possible to measure the trend compared to the previous half year (increase, stable, decrease);
- the Key Risk Indicator: a specific risk indicator that only shows the quantitative changes and the trend of changes compared to the previous half year of the specific indicator monitored.

More specifically, the main risks run by the ERG Group are listed in the "Risk and Uncertainties" chapter of the Report on Operations, to which reference may be made for further details.

For further details on non-financial risks, reference may be made to the detailed charts at page 65-67, 114-120, 138-142, 157-160.

## THE GROUP'S PRINCIPLES

ERG carries out its activities in accordance with the highest national and international standards of Corporate Governance and applying the principles of integrity, impartiality and transparency. These principles are even more important when dealing with the problem of corruption: a global phenomenon that can endanger and damage the integrity of companies.

In order to underline our constant attention to the observance of national and international anti-corruption laws and regulations, alongside the Code of Ethics and the Sustainability Policy, we have decided to adopt an Anti-Corruption Policy, inspired by national and international best practices and applicable to the Group's Italian and foreign companies. This Policy has been translated into English, French and German in order to be understood and implemented by all staff and to be accepted by our partners, in the countries where the Group operates.

Ethics and integrity when managing relations with our stakeholders are the key aspects on which our way of doing business is based.

Maintaining and safeguarding reputation is essential to allow the ERG Group to be appropriately perceived by all of its stakeholders as a reliable and trustworthy counterparty.

Specifically, ERG undertakes to prevent corruption by using a number of rules of conduct, control tools and procedures; they are aimed at checking the way activities are conducted (prior and post completion), in order to prevent and repress any form of unethical conduct or corruption.

To this end, the Group operates in compliance with the laws and regulations of the single countries in which it operates, as well as with international Agreements on the matter, implementing measures to prevent and fight corruption and illegal practices. The following have been specifically adopted:

- by the Companies under Italian law: the Code of Ethics, the Organisational and Management Model pursuant to Italian Legislative Decree No. 231/01 and the Anti-corruption policy;
- by the Companies under foreign law: the Code of Ethics and the Anti-corruption policy. In this respect, ERG:
- does not tolerate any kind of corruption or unethical conduct, considering them to be a risk for a sustainable development economy, for good governance and fair practices;
- is committed to raising awareness and, where necessary, training all people, suppliers and partners
  as well as to developing appropriate procedures, especially with regard to relations with communities,
  Bodies and Institutions, suppliers and customers.

From the ERG Sustainability Policy

# OUR ANTI-CORRUPTION MANAGEMENT METHODS

Following our industrial reconversion process and in consideration of our growing overseas expansion, we decided to further strengthen our prevention system. We adopted, therefore, an Anti-corruption system in line with most advanced national and international standards, and an Anti-corruption policy valid for both Italian and foreign companies, available in English, French and German on the website and referred to in all contractual clauses.

The Policy declares the Group's commitment and establishes guidelines to ensure compliance with Anticorruption system requirements aimed at:

- a) fully rejecting and preventing corruption, according to a "zero tolerance" principle;
- b) ensuring compliance with all Anti-Corruption Laws, with particular reference to those applicable in the countries where the Group operates;
- c) identifying anti-corruption controls and implementing them in internal regulatory instruments (especially in anti-corruption procedures);
- d) identifying training activities on the Policy and on compliance with the Anti-Corruption Laws and their recipients;
- e) guaranteeing the commitment to continually improve the Anti-corruption system. We define further operating goals on an annual basis, in line with the Policy's general goals, which are reflected in the annual Compliance Plan drawn up by the "231 Compliance" Organisational Unit and presented to ERG S.p.A.'s Control and Risk Committee and to subsidiaries' competent corporate bodies.

Specifically, in implementation of the Anti-corruption policy, all ERG Group companies have adopted a specific procedure that subjects to anti-corruption checks any third parties with whom they intend to hold contractual relations. Even this procedure (and all relevant forms) has been translated to ensure it is fully applied in all countries where the ERG Group operates.

The "231 Compliance" Organisational Unit monitors the achievement of the goals and submits periodical reports to ERG S.p.A.'s Control and Risk Committee and to subsidiaries' competent corporate bodies. Specifically, the Policy is the regulatory instrument through which the Group:

- with regard to companies under Italian law, intends to further strengthen the behavioural principles
  and control measures already set forth in the Code of Ethics and Models 231, with specific reference to
  the prevention of active and passive, public and private corruption, even when the companies operate
  directly abroad (e.g. through branches) or through foreign subsidiaries;
- with regard to foreign companies, develops the principles of conduct in relation to combating corruption, already provided for in the Code of Ethics, and indicates the control measures to be observed during activities that may expose the Company to risks of active and passive, public and private corruption.

The "231 Compliance" Organisational Unit was identified as the recipient, both in Italy and abroad, of any reports regarding "risk indicators" (payments or expenses inadequately documented or made in cash,

## NON-FINANCIAL REPORTING PURSUANT TO ITALIAN LEGISLATIVE DECREE 254/2016 - ANTI-CORRUPTION

relations with third parties that declare that they have been involved in previous cases of corruption or in other serious breaches of law regarding them, etc.), as well as any Policy violations which persons inside or outside the Group have come to know about. We have set up a specific email for this purpose [compliance231@erq.eu].

All of the Group's Italian companies have adopted their own Organisational and Management Model pursuant to Italian Legislative Decree No. 231/2001. The Models 231 are composed of a general part, where the organisation and the responsibilities with regard to 231 compliance are described, and a special part, in which – based on a risk assessment – the activities that expose the companies to crimes of corruption (active and passive, public and private), violations of workplace health and safety rules, and environmental crimes are identified and periodically updated.

A Supervisory Body, established pursuant to the decree - which is an independent body with autonomous monitoring and verification powers - supervises the entire system.

A dedicated IT system is used for qualifying and quantifying the risk levels of the sensitive activities identified (likelihood of occurrence and sanctioning impact). The relevant results are used by the Supervisory Bodies to define and plan the 231 verification activities.

The Supervisory Body provides people inside and outside the company who wish to report possible violations of the Model 231 and/or the Code of Ethics, with two separate communication channels: a postal mail address and a dedicated email address. The Supervisory Body evaluates the reports received in an independent, timely, professional and responsible manner and, where necessary, by listening to the author of the report and/or the person responsible for the alleged violation.

The details of the system are described in the following chapters and may be found on the institutional website in the section dedicated to corporate governance (http://www.erg.eu/corporate-governance).



## **ERG GROUP'S ANTI-CORRUPTION SYSTEM**

The fight against corruption has always been a priority for the companies and the people of our Group. For this reason we are constantly committed to improving organisational and regulatory tools that guarantee a control system effective in preventing and fighting corruption.

Specifically, after adopting the Anti-Corruption System and Policy in 2017, which integrate and complete the provisions already laid down in the Code of Ethics and the Organisational and Management Models pursuant to Italian Legislative Decree 231/01, we approved the "Key Third-Party Due Diligence", which identifies the controls to be performed on counterparties considered particularly at risk.

#### KEY THIRD-PARTY DUE DILIGENCE PROCEDURE

The aim of the "Key Third-Party Due Diligence" procedure is to ensure that there is adequate knowledge of the third parties with which our Group holds relations and to manage the risk of corruption in business activities, by mitigating any dangerous situations actually identified and by supporting the decision to establish or otherwise a contractual relationship with a key third party.

In particular, it establishes:

 the principles, rules and responsibilities for performing the activities to identify the third parties to be subject to due diligence (key third parties);



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- the methods for carrying out checks and managing relevant results;
- the procedures for setting up and monitoring relations with key third parties, by specifically checking (also IT checks) suppliers, consultants, intermediaries, partners, job candidates, members of administrative and control bodies, and attorneys who wish to collaborate with one or more Group companies.

The checks concern issues such as, for example, relations with members of the public administration, press news regarding relevant crimes, legal proceedings initiated or completed, and any conflicts of interest leven potential). If circumstances arise suggesting that there could be a potential red flag risk, the risk level is assessed before establishing a possible contractual relationship and appropriate mitigation measures are identified; in most serious cases, these may lead to the contractual relationship not being finalised with the key third party.

The procedure is another important governance and protection tool of our Group. In fact, its purpose is to integrate the controls laid down by the Models 231 and the Anti-Corruption Policy, especially on the risk of corruption (active and passive, public and private) for companies under Italian law and the controls required by the Anti-corruption Policy for foreign companies.

## CODE OF ETHICS AND ORGANISATION AND MANAGEMENT MODELS

The Group's Code of Ethics is one of the pillars of our governance, also with a view to anticorruption.

In order to further strengthen some ethical principles, including the fight against corruption, the respect for human rights and the protection of workers, we updated the Code of Ethics in 2018

and further clarified some rules of conduct and prohibitions.

Furthermore, we strengthened the safeguards for individuals wishing to report conduct contrary to the Code of Ethics, establishing two channels of communication with the control bodies and taking into consideration also anonymous reports, provided they are sufficiently accurate and detailed.

The Anti-Corruption System is in perfect synergy with the Group's Code of Ethics and with the Models 231 adopted by the Italian operating companies. They strengthen the behavioural principles and control measures already envisaged, especially as regards the prevention of active and passive corruption.

As a result of our Group's increasing international dimension, the diffusion of the Code of Ethics is ensured by its translation into English, French and German and by its publication on the website.

Knowledge and acceptance of our ethical principles is ensured by a specific e-learning training module for new hires and classroom training.

We require that third parties (suppliers, partners, etc.) specifically accept the Code of Ethics in order to start business relations with any of the Group's companies.

Specific sanctions are applied in the event of infringements by employees or third parties working with the Group.

We conduct risk assessments periodically to identify the activities that expose the companies to crimes of corruption (active and passive, public and private), crimes resulting from violations of workplace health and safety rules, and environmental crimes. On the basis of these checks, we draw up and update the Models 231, which describe the organisation, responsibilities

and controls implemented to handle the above risks.

In 2018, the Supervisory Bodies were particularly involved in studying and assessing the impact of regulatory changes, especially those on how to handle reporting and protect reporting persons (so-called whistleblowing).

Following the acquisition of a group of 18 companies operating in the photovoltaic sector, we also carried out a risk assessment on the state of compliance with Italian Legislative Decree 231/01 and on the organisational and business characteristics of the companies involved. After the assessment, we drew up the Model 231 for ERG Solar Holding S.r.I. and updated the 231 Models of the remaining 17 companies, which adopted the Code of Ethics and the Anti-corruption Policy. During the year, the Supervisory Bodies of these companies were appointed.

Furthermore, to improve the traceability and objectivity of risk assessments, we implemented an IT system that identifies higher-risk activities, which was used by the Supervisory Bodies to draw up their own audit plans for 2019.

More specifically, the system measures the likelihood of occurrence (frequency of the activity, likelihood that the crime will occur and any previous occurrence, inside and outside the company) and the impact (severity of the sanctions provided for by the Decree against the bodies and potential benefit that may be obtained from commission of the offence) of the offences pursuant to Italian Legislative Decree 231/01, the results of which are weighted on the basis of the importance assigned to single factors and are used to classify the (potential) risk levels of the sensitive activities identified in the Models 231.

With regard to training activities, in 2018 we started a project to redefine the methods and contents of e-learning training for new hires on compliance with Italian Legislative Decree 231/01. Training will be delivered mainly through educational videos and, in addition to a general introduction on the Decree, will include individual parts on medium- and high-risk sensitive activities in relevant companies (e.g. relations with the Public Administration and the Authorities, occupational health and safety management). During these parts, reference will be made to real situations in which offences may occur and how to behave in these circumstances. New hires will be required to fill in intermediate and final questionnaires to check the level of training achieved.

Given the many sensitive activities that will be examined, the project will have a multiannual duration.

#### SUPERVISORY BODY

The Supervisory Body of ERG S.p.A. (SB) consists of 3 members, one of whom is an external member. The Supervisory Body met five times in 2018 to examine amongst other issues the information flows received, the results of the audit activities (also in relation to 231 compliance) and the 231 test activities, as well as the Reports on activities carried out in 2017 and the first half of 2018, the 2019 Plan of activities and budget, and to meet, where necessary, the company persons of reference. The periodical Reports on the Plan of activities were shared with the Control and Risk Committee and with the Board of Directors.

The Supervisory Body provides people inside and outside the Group with two communication channels for reporting any violations of the Model 231 and/or the Code of Ethics: a postal address and an email address.

These channels ensure that the name of the person making the report is kept confidential. The SB evaluates in an independent, professional and responsible manner the reports received, listening, where necessary, to the author of the report and/or the person responsible for the alleged violation and motivating in writing the reason for which it may decide not to proceed. The SB checks and makes sure that whoever makes a report in good faith is not subject to any retaliation, discrimination or penalisation, whether direct or indirect. It also ensures that the identity of this individual is protected, without prejudice to legal obligations and the protection of the Company's rights or those of the persons accused wrongly and/or in bad faith.

The Supervisory Body evaluates in a professional and responsible manner any reports of unlawful conduct relevant for the purposes of the Decree or relating to violations of the Model and/or the Code of Ethics, provided they are detailed and based on accurate and consistent evidence; the Supervisory Body may listen to the author of the report and/or the person responsible for the alleged violation, motivating in writing the reason

for which it may decide not to proceed.

The Supervisory Body also takes into consideration detailed anonymous reports, for further examination, only if containing all objective elements required for the subsequent verification phase.

If the SB verifies the non-existence or obvious groundlessness of the reports, it dismisses them after drafting a specific report.

Any reports that prove to be unfounded, intentionally or with gross negligence, lead to the application of the Sanctioning System envisaged by the Models 231.

No anonymous reports were received in 2018.

In 2018, the Group's Supervisory Body approved a specific procedure to facilitate the circulation of relevant information among the Committees themselves. The procedure envisages that each SB, in fulfilling its supervisory duties, must submit to the other Committees, whenever concerned, the relevant information for the supervision and/or application of the Organisational and Management Model pursuant to Italian Legislative Decree 231/01.

#### **LEGAL DEPARTMENT OF THE YEAR - ENERGY SECTOR**

The ERG corporate & legal affairs team won first prize at the VI edition of the "top legal corporate counsel awards" as "legal department of the year in the "energy" sector.

The awards ceremony - which celebrated excellence among the staff of Italian companies - was held at the Palazzo del Ghiaccio in Milan, and involved around 550 professionals,



representing 130 companies operating in the financial, industrial and services sector. The evaluations were conducted by a technical commission composed of influential legal managers and executives belonging to the entrepreneurial and national finance sectors.

# ECONOMIC RESPONSIBILITY

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The creation of sustainable value added over time is possible thanks to a series of actions aimed at improving our way of doing business, transforming them into a competitive advantage.

Improving processes, technology and business practices for increasingly reliable and high-performance plants.

An eye on technological innovation to prepare our path towards the future.

# 795 EUR million

2,919 MW
TOTAL INSTALLED CAPACITY

7,485 GWh OF ELECTRICITY PRODUCED

89.7%
CAPITAL INVESTED
IN PLANTS FUELLED BY
RENEWABLE SOURCES

# ECONOMIC VALUE GENERATED AND DISTRIBUTED

| (5115 HILL)                                 | 2010  | 2015  | 2010  |
|---|-------|-------|-------|
| Current amounts (EUR million)               | 2018  | 2017  | 2016  |
| Production value                            | 1,050 | 1,065 | 1,041 |
| Economic value distributed                  | (795) | (746) | (748) |
| Production costs                            | [426] | (450) | [463] |
| Remuneration of personnel                   | (80)  | (79)  | (76)  |
| Remuneration of public administration       | (54)  | (51)  | (39)  |
| Remuneration of debt capital <sup>[1]</sup> | (105) | (89)  | (97)  |
| Remuneration of risk capital (2)            | (128) | (75)  | (71)  |
| Remuneration for the community              | [2]   | [2]   | [1]   |
| Economic value withheld by the Group        | 255   | 319   | 293   |
| Amortisation and depreciation               | 275   | 252   | 254   |
| Remuneration of the company                 | (21)  | 67    | 39    |

<sup>(1)</sup> Interest paid and other financial expenses to service debt.

<sup>(2)</sup> Dividends distributed by the Group net of extraordinary disbursements.

| Current amounts (EUR million)                    | 2018  | 2017  | 2016  |
|--|-------|-------|-------|
| Net value added                                  | 1,050 | 1,065 | 1,041 |
| Production costs                                 | [426] | (450) | (463) |
| Remuneration of personnel                        | (80)  | (79)  | (76)  |
| Remuneration of public administration            | (54)  | (51)  | (39)  |
| Remuneration of debt capital                     | (105) | (89)  | (97)  |
| Remuneration for the community                   | (2)   | [2]   | (1)   |
| Amortisation and depreciation                    | (275) | (252) | (254) |
|  |       |       |       |
| Profit before non-controlling interests          | 108   | 142   | 110   |
| Profit attributable to non-controlling interests | -     | -     | [3]   |
| Profit attributable to the parent                | 108   | 142   | 107   |

#### **ERG AND ECONOMIC RESPONSIBILITY**

ERG's growth strategy is strongly oriented towards renewable energy sources, with particular focus on wind and hydroelectric power. Our main goal is the creation of value that is sustainable over time, by growing our profitability and carefully balancing our production portfolio.

# **KEY ECONOMIC INDICATORS**





#### **EBITDA**



#### **INVESTED CAPITAL**

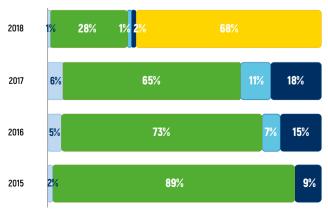




# **THERMOELECTRIC**



#### INVESTMENTS DURING THE YEAR

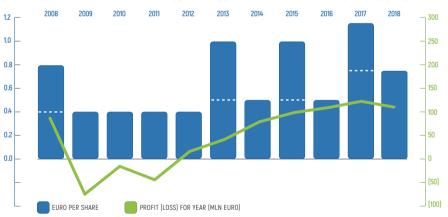


# **ERG'S STOCK MARKET PERFORMANCE**

# ERG VS. EURO STOXX UTILITIES, FTSE ALL SHARE AND FTSE MID CAP CHANGE % FROM 29/12/2017 TO 28/12/2018



#### SHAREHOLDER REMUNERATION IN COMPARISON WITH ANNUAL FINANCIAL RESULTS



#### SHAREHOLDER REMUNERATION

Our Group has always maintained a careful asset management policy in order to guarantee the long-term continuity of the group. An analysis of the financial results over the years and related distributed dividends provides further evidence of the success of this approach.

In recent years, ERG has been able to satisfactorily remunerate the capital invested by its shareholders. In 2018, an ordinary dividend of EUR 0.75 per share was paid out (EUR 0.75 in 2017).

# **ERG GROUP'S PLANTS**

|                              | Installed<br>capacity<br>in MW<br>at end of<br>2018 | Production in GWh |        | Plant availability <sup>(1)</sup> |        | Incentive<br>scheme |        |  |
|------------------------------|---|-------------------|--------|-----------------------------------|--------|---------------------|--------|--|
|                              |   | 2018              | 2017   | 2016                              | 2018   | 2017                | 2016   | -  |
| WIND                         |   |                   |        |                                   |        |                     |        |  |
| Italy                        | 1,093   | 2,012             | 2,117  | 2,220                             | 21%    | 22%                 | 23%    | Feed-in tariff, GRIN<br>(former Green Certificates<br>CO (Certificates of Origin)                                    |
| Germany                      | 216   | 337               | 369    | 240                               | 18%    | 19%                 | 16%    | Feed-in tariff   |
| France                       | 307   | 552               | 491    | 499                               | 23%    | 22%                 | 23%    | Feed-in tariff   |
| Poland                       | 82  | 219               | 248    | 213                               | 31%    | 35%                 | 30%    | Certificates of Origin   |
| Bulgaria                     | 54  | 138               | 157    | 148                               | 29%    | 33%                 | 31%    | Feed-in tariff   |
| Romania                      | 70  | 176               | 201    | 181                               | 29%    | 33%                 | 29%    | Green Certificates   |
| UK                           | -   | 29                | 29     | -                                 |        |                     |        | Green Certificates (ROC)   |
| Total - Wind                 | 1,822   | 3,464             | 3,612  | 3,501                             | 22%    | 23%                 | 23%    |  |
| WATER                        |   |                   |        |                                   |        |                     |        |  |
| ERG Hydro                    | 527   | 1,740             | 1,144  | 1,358                             | 97.87% | 96.63%              | 96.52% | GRIN (Green certificates),<br>RID (dedicated withdrawal),<br>RES (renewable sources),<br>CO (Certificates of Origin) |
| SUN                          |   |                   |        |                                   |        |                     |        |  |
| Italy                        | 90  | 130               | -      | -                                 | 79.10% | -                   | -      | Feed-in Tariff   |
| Total renewable sources      | 2,439   | 5,334             | 4,756  | 4,859                             |        |                     |        |  |
| NATURAL GAS                  |   |                   |        |                                   |        |                     |        |  |
| ERG Power                    | 480   | 2,151             | 2,453  | 2,693                             | 64.8%  | 63.2%               | 62.4%  | TEE (energy efficiency certificates) [2]   |
| Total electricity production |   | 7,485             | 7,209  | 7,552                             |        |                     |        |  |
| Electricity purchases        |   | 6,143             | 4,536  | 4,751                             |        |                     |        |  |
| Total electricity sales      |   | 13,627            | 11,747 | 12,303                            |        |                     |        |  |
| lotal electricity sales      |   | 13,627            | 11,/4/ | 12,303                            |        |                     |        |  |

<sup>1</sup> The value of plant availability is calculated as follows:
- "load factor" for wind farms is the ratio between the actual production values in relation to the theoretical maximum production values [calculated taking into account the actual commissioning of each individual wind farm);

<sup>-</sup> the "1st principle overall performance" index for the thermoelectric plant is calculated in accordance with the procedures laid down by Italian Ministerial Decree 5 September 2011 (CAR).

<sup>2</sup> ERG Power does not have any free  ${\rm CO_2}$  allowances under the EU-ETS regulation.

# **ONE COMPANY**

In 2018, we continued in the implementation of the "ONE Company" project by consolidating the organisational changes and integration of the various areas of the Group already begun at the start of 2017.

The measures of 2017 (redefinition and reorganisation of the strategic, business and support processes - processes of Business Development and procurement through an

increasingly integrated approach with that of Energy Management), were followed by further important organisational changes (starting with establishment of the Engineering Development OU).

The new configuration has made our organisation more flexible and capable of handling the demanding growth challenges envisaged by the Group over the next few years. This evolution is a result of:

#### THREE AWARDS FOR OUR TRANSFORMATION

#### **FORBES GREEN AWARD**

ERG Chairman Edoardo Garrone received the Forbes Green Award, granted by the prestigious economic newspaper "for the capacity of the Genoa-based Group, with a past as leader in the oil industry, to have become one of the leaders in alternative energy".



#### THE 100 ITALIAN EXCELLENCES AWARDED IN MONTECITORIO



On the occasion of the concluding event of the 4th edition of "Premio 100 Eccellenze Italiane" (100 Italian excellences awards), ERG was awarded as an "excellence" in the "Energy" sector, among the 100 Italian leaders, for their precious contribution to the growth of our country. The 100 excellences identified, by category and sector, range from the Armed Forces to medical-scientific research, from

industry to journalism, from sports to entertainment and from music to fashion, passing through the food and wine sector as well.

#### **LUCA BETTONTE: 2018 MAN OF THE YEAR**

In December, the prestigious press service selected ERG's Chief Executive Officer as "2018 Man of the Year", for having guided the company in its transformation from a leading private Italian oil company to a leading independent operator in the production of electricity from renewable sources.



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- redevelopment of the existing operating units, accompanied by a change management process;
- proper organisational sizing through valuedriven optimisation of staff and rationalisation of processes and structures;
- considerable development in the IT (Information Technology) area, particularly in automation, digitisation and modernisation of the technological infrastructures, data quality initiatives, smart working and business intelligence;
- strong motivation generated by an increasingly shared view of the Group's mission, objectives and commitments.

Thanks to these interventions, we succeeded in:

 strengthening and consolidating our foreign presence in wind power;

- further increasing in-house management of Operation & Maintenance activities;
- taking advantage of new opportunities offered by an increasingly competitive and constantly transforming electricity market, with an organisational structure able to "absorb" the new activities without significant impacts, as occurred during the year with the gradual internalisation of management and maintenance of the new "solar" technology.

The current ONE Company organisational structure is the result of ongoing streamlining measures aimed at ensuring a constant dynamic equilibrium, faced with multiple external and internal interferences.

The objective is to place the Group in the best possible condition in order to promptly seize the opportunities offered by the constantly evolving power market.

#### **DEBUT IN GREEN FINANCE**

The year 2018 was a significant one for the Group in terms of financial sustainability: achievement of Fitch's public rating of BBB- ["Investment Grade" category] demonstrates our financial strength and will allow us to diversify our sources of financing, optimise costs and improve financial flexibility. In 2018 as well, we strove to manage liabilities on the medium/long-term debt structure, in order to further improve financing conditions.

Lastly, the positive impact of our activities on the de-carbonisation processes of the economy has enhanced the ERG Group with regard to ESG (Environmental, Social and Governance) issues. This was also a qualifying element for access to the credit market: the underwriting of two ESG loans for EUR 240 million highlights how the financial market has recognised and understood our sustainability choices. The loans will allow the Group to support its substantial investment plan by introducing, among the drivers for approving loans, the bonus mechanism based on the achievement of an objective in terms of  $\mathrm{CO}_2$  avoided, calculated on the basis of production from renewable sources over the period of the Plan.

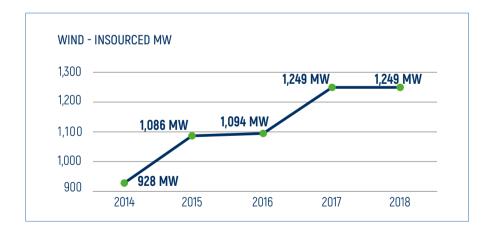
## MANAGEMENT OF WIND FARMS

We have been operating in the wind farm business for over 11 years now and are currently the leading Italian operator, with approximately 1,100 MW of installed capacity, thanks to the important growth path undertaken through organic growth (i.e., green-field projects) as well as through acquisitions. We are also present in another six European countries (France, Germany, Poland, Bulgaria, Romania and the UK).

In-depth knowledge of plants, the capacity to analyse problems in order to identify their causes and define prevention measures, and continuous training of personnel: this industrial approach has always characterised our way of doing business, allowing us to face a market which had until now

been managed solely from a financial point of view. As reported in the past, this has resulted in implementation of the "Level 2 SCADA" project for the creation of a single, centralised, real-time control system for the status of the turbines in various wind farms, thanks to which we are able to remotely harmonise and manage any signals or alarms, regardless of the technology used, resetting them if necessary and restarting them once the problem has been resolved.

The different management approach has resulted in the internationalisation of all Italian plants (and a part of our plants abroad as well) with regard to operation and maintenance.



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The decision to internalise, included as a line of action in the 2015-2018 Strategic Plan, and further developed in the 2018-2022 Business Plan with regard to plants abroad, mainly arises from the awareness that the optimisation of maintenance operations stems not only from the ability to minimise machine downtime, but also to identify significant breakdowns in the plants and develop efficient management of spare parts logistics. The optimal combination of these activities, also in a predictive light, is highly complex and variable and, therefore, has made direct management of the plants by ERG personnel absolutely necessary.

#### WIND TURBINE GENERATOR (WTG) MAINTENANCE

The constant search for improvement in performance is the principle that has driven our evolution of approaches to the maintenance of industrial machines.

The simplest approach is maintenance upon failure, which is the maintenance that is planned and managed exclusively following breakage. This approach is very costly in terms of machine downtime, as all activities must be initiated when the system is off, generating significant production loss.

The natural evolution of this scenario was the introduction of preventive maintenance, based on periodic revisions scheduled regardless of the machinery's operating conditions. While this approach allows us to avoid machine downtime, it has high costs of planned replacement of items presumed to be damaged but which have not yet completed their "useful life".

A truly revolutionary approach to the management of rotating machines is predictive maintenance: in fact, thanks to monitoring of the operating conditions of the wind turbine generator, it is possible to identify the defect in a component directly at the source and allows

decisions on any interventions to be made in advance, ensuring significant improvement in terms of both reliability and safety of the system, as well as better organisation of resources, reduction in maintenance costs and minimisation of production losses.

Thanks to progressive growth in the specific knowledge acquired in the wind power sector and to the willingness to make our systems increasingly efficient, we have developed a "Condition Based Maintenance" approach, based on predictive maintenance.

The first intervention involved the installation of Condition Monitoring Systems (CMS) on most of the multimegawatt fleet (275 turbines, for a total of 565 MW between Italy and France at the end of 2017) to monitor the operating status of the components of the drive train (consisting of rotor bearings, gearbox and generator) most exposed to the risk of breakage and, therefore, with the greatest economic impact.

More specifically, the CMS analyses, through a series of accelerometers, the vibrations produced by the drive train of the turbines, which change based on wear and tear of the components and the relative damage generated. Based on the knowledge acquired and on statistical data, we defined the specific acceptable vibration thresholds (machine in good condition), alerts and alarms for each component and each type of breakage. The data are collected in the field and submitted to the Genoa headquarters, where they are compared with the attention thresholds defined by the system, permitting the rapid identification of turbines that require assessment and estimation of where the damage is located, its stage of progress and the breakage times.

Thanks to the extensive implementation of these tools, our technicians are now able to give priority from the technical standpoint to maintenance of turbines, underground cables and substations (electrical BoP - Balance of Plant) and civil works (civil BoP).

**FCONOMIC** 

In this scenario, timing of the maintenance depends on two variables:

#### 1. Weather conditions

Since maintenance conditions can now be scheduled, they are planned during less windy periods or any time external factors impose limitations on production (e.g., in the case of restrictions on production imposed by the network).

The availability of detailed wind forecasts for each wind farm allows better planning of activities: the production threshold, which is the threshold that allows maintenance to be planned, has been set at 49% and is recalculated each time the weather forecast is undated.

2. The availability of technically competent personnel trained to carry out the planned activity

Thanks to the "Click" system, we can optimise the resource allocation process in maintenance activities, minimising production loss.

This system is based on two main pieces of incoming information:

- · requests for maintenance to be carried out, regarding both turbines as well as the components (ordinary maintenance, planned by CMS-predictive maintenance, on failure, etc.);
- expertise of the maintenance staff, determined by considering the experience gained on the field and the technical training courses completed.

Based on the information received and with

the supervision of the Maintenance Planning department, the system generates a schedule of the resources for the maintenance activities. optimising on:

- · the relevance of maintenance;
- the skills of personnel (those with specific expertise on the activities to be carried out);
- logistics (with consequent optimisation of travel times):
- layout of the trucks (to ensure availability of the instruments needed for the work to be carried out).

#### THE RESULTS OF OUR IOURNEY

The introduction of our remote monitoring and control system for turbines and the implementation of an innovative maintenance process for the sector resulted in greater availability and efficiency of the machines during windier days and, consequently, an increase in production.

We also paid significant attention to the instruments that monitor the performance of our assets, which have improved thanks to the identification of effectiveness indicators for the actions undertaken compared to the objectives set, the most effective of which are:

- load factor: percent use of installed capacity;
- · time availability: the percentage of hours per year in which a plant has been available to produce:
- energy availability: the percentage of energy actually produced compared to the potential production of the farm for the given period scalculated based on the final balance of wind levels).

The trend of said indicators shows how the performance of our wind generators has steadily improved over time.

#### PREDICTIVE MAINTENANCE ON TURBINE TRANSFORMERS

As already described, the CMS system makes it possible to monitor the operating status of the mechanical components of the drive train through accelerometers and interpretation of the vibrational data. The transformer within the nacelle of certain Vestas V80/V90/V100 wind turbines (total of 159 turbines equal to 334 MW) raises the voltage of the output power of the generator from 690V (or 1000V) to 20kV, 21kV or 30kV, a level necessary in order to reach the substation and be fed into the grid. Even today, a true predictive system for transformers is still being studied, namely one that is capable of predicting a possible failure of the component through the analysis of variables (both electrical and environmental, such as temperature of the windings).

We have therefore decided to focus on preventive maintenance, trying to act "in time" on what could be the causes of possible breakage of the transformer.

This entails, in addition to the annual cyclical maintenance activities on the transformers, an in-depth analysis of the visual inspections, particular with regard to the surface condition of the resin and the support feet of each coil.

In fact, over the years we have found that most of the problems were due to deterioration of the surface of the coils, which cracked until causing a short in the windings. These surface areas can be restored through superficial sanding and application of a new layer of resin, which





lengthen the transformer's life. In order to carry out this type of maintenance, we have also envisaged, in collaboration with suppliers, specific training courses for our technicians in order to carry out these repairs in the best possible way.

Deterioration of the lower supports (feet) of the coils, which no longer ensure grounding, is also one of the main causes of malfunction and can only be resolved through replacement. In this case as well, we enrolled our technicians in specific courses organised in collaboration with suppliers, in order to best learn the maintenance methods.



With these measures included in ordinary

maintenance, greater prevention and extension of the useful life of the nacelle's transformers can be quaranteed.

# LENGTHENING LIFE... IS POSSIBLE!

Part of our wind farms, installed at the "dawn of the wind age", have now accumulated more than 15 years of operation and are nearing the end of their theoretical useful life, estimated at about 20 years.

So we asked ourselves whether it were possible to use these wind turbines for a longer period of time, if the actual loads (based on the orographic and climatic conditions of the site) were lower than the planned ones.

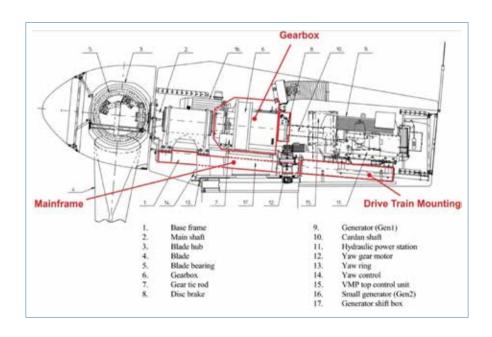
Our analysis focused on a significant fleet of 422 Vestas V47 wind turbines (274 MW) with an average age of 17 years. Starting in 2017, we began working to understand the actual potential for extending the useful life of wind turbines up to 30 years.

The first step in the analysis regarded modelling

of the workloads of the structural apparatus of each machine in relation to the working conditions of each site compared to the planned ones, thereby enabling a calculation of residual life. After this preliminary phase, we evaluated and planned the maintenance strategies to be implemented in order to be able to use a wind turbine for a longer period of time.

The initial studies, conducted on orographically and climatically more difficult sites, have confirmed that, with the appropriate inspection and maintenance strategies on the more critical components (blades, blade bearings and mainframe - i.e. the steel structure that supports the drive train), the useful life of a turbine can actually be brought to 30 years.

The preventive and predictive measures



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undertaken for each component can be summarised as follows:

- blades: we carry out inspection campaigns on the blades via telephoto lens, classify the types of damage detected and perform preventive repair activities on the blade surface. Furthermore, in collaboration with blade manufacturers, we repair any anomalies identified on the connecting element between the blades and the bearing, another component under constant assessment, given the various materials of which it is composed:
- mainframe: this has the structural function of supporting the loads and stress transmitted from the rotor to the tower, without these being propagated onto the components of the drive train, as well as onto the rotor. Through a specific study, we identified 30 points to subject to constant visual control using penetrating liquids. As a result of this operating decision, part of our technicians took courses on methods to perform "Non-destructive technical tests" and earned their certification according to the UNI EN ISO 9712 standard:
- blade bearings: these play a fundamental role in the proper functioning of the wind turbine generator because they guarantee the correct

positioning of the pitch angle of the blade (inclination with respect to the wind) and regulate the electrical and production output of each turbine. The predictive measures undertaken regard replacement of the lubrication grease with a better performing type and suitable for application.

During ordinary maintenance, we collect and analyse grease samples: its chemical/physical/technical status provides us with an understanding of the wear of the bearing. Moreover, thanks to our expertise, we have been able to define thresholds for the presence of "pollutants/residues" (particularly iron and chrome particles that may result from wear of the bearings but, being mixed with the grease that holds them, can also accelerate it), the exceeding of which requires full replacement of the grease and restoration of the correct filling level of the bearing (a similar principle was adopted in the process of monitoring the oil of gear boxes, as reported in the 2017 NFS).

In the future, particular attention will also be paid to revision of the ordinary maintenance checklists, to which we will add controls in order to place even greater focus on the most stressed components.



# **NEW TECHNOLOGIES FOR BETTER WORK**

In-sourcing of activities is a resource for our future, to increasingly better handle our plants and achieve the best profitability.

However, maintenance is an activity that requires significant physical effort and highly diversified knowledge: for this reason, we have developed and are experimenting with a series of technological innovations that allow us to be more efficient and effective, improving the working conditions of our technicians.

A first step was the installation of stair assistants in 131 turbines, in order to enable operators to climb quickly, using less energy and more safely. In fact, many turbines do not have lifts (only available in the most recent models), and reaching the nacelle positioned at around 90 metres from the ground may require around 15/20 minutes of climbing via stairs. This stair assistant makes it possible for the engineer to hook themselves up, via a special harness, to a system equipped with a small motor which, always remaining in traction, decreases operator exertion by up to 80%, cutting the climbing times in half.

Another tool that we are beginning to test are exoskeleton prototypes and, in particular, models to lighten the weight on the back and shoulders. In a few months, we will know if the use of such sophisticated equipment is suitable for our activities, also taking into account the small spaces and the significant safety requirements that we would like to maintain in every work environment.

Lastly, the management of diversified technological systems increasingly widespread throughout the territory (25 substations, 54 farms, 974 turbines, 25 anemometers), requires ever greater and multi-specialised skills on the part of operators working in the field.

It has therefore become necessary to improve

the effectiveness of maintenance operations and resolve unexpected or unknown problems. It is to manage these very problems that the project. which began in 2017 and is still in the testing phase, was created, involving the use of augmented reality glasses (or smartphones) to carry out particular activities with the remote support of other colleagues who are experts in a certain technology. Smart glasses are a highly powerful tool in achieving our objective, also since they allow one to operate in hands-free mode. Having identified the problem, the colleague at the office can suggest how to resolve it, thereby permitting transversal assistance across different regions and through different technologies. With this project, we have set the short and medium-term objectives of:

- reducing non-resolving interventions;
- · carrying out highly effective on-the-job training;
- enhancing expert personnel;
- providing operators with hands-free access and augmented reality;
- creating online guidelines to support training.



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# TRAINING AT THE BASIS OF OUR WORK METHODS

The guidelines of our 2015-2018 Business Plan and 2018-2022 Plan focused on the in-sourcing of Operation & Maintenance activities, in order to shorten the value chain and thereby increase the profitability of our operations.

As all-round pioneers in the wind farms segment, we have done the same in terms of specific training, with a strong focus on developing the skills of our technicians.

- · We focused our actions on two main areas:
- external training in maintenance/operation management, care of third-party entities;
- creation of a learning centre with simulators, for practical exercises.

#### **EXTERNAL TRAINING**

We had set the goal of completing, by 2018, a full training process involving about 90 maintenance personnel of turbines and substations, enabling them to acquire an officially recognised level of professionalism... and we succeeded.

We designed, organised and activated a programme that enabled our technicians to obtain certification according to the UNI EN 15628:2014 European standard "Qualification of maintenance personnel", to render the company's organisational system consistent with the European regulatory framework on the role of specialist.

We completed training cycles during the year and carried out 12 exam sessions for a total of approximately 800 man-hours, with written, oral and practical tests.

The results were extremely positive: 66 of our technicians earned Level 1 Certification -Maintenance Specialist, while 30 technicians with a higher profile earning Level 2 Certification
- Maintenance Supervisor. The licences will be delivered in the first quarter of 2019.

Afurther area of training regarded our technicians in the Production Optimisation unit, who attended the course on the use of penetrating liquids and achieved ISO 9712 certification. Their use will be required in analysing the stability, safety and efficiency of the turbine's supporting structure, also in order to carry out accurate assessments to establish the extent of lengthening the technical life of the plants.

#### THE TECHNICAL TRAINING CENTRE IN CARAFFA

On 24 October 2018, the "Technical Training Centre" in Caraffa di Catanzaro was inaugurated, with the presence of our top management. This project was created with the objective of creating and developing a didactic/operating centre in which to conduct classroom training but above all practical training, involving all personnel operating on the wind and photovoltaic equipment.

In the last two years, in view of the changed maintenance strategy based on the principles of CBM (Condition Based Maintenance), it has become necessary to begin training projects to support the new operating methods (tribology, vibration analysis, boroscopy, etc.).

The Technical Training Centre aims to become a learning centre in which to develop customised training modules and will project the company towards internalised management of specialist skills, enhancing the value of our personnel and allowing technicians to be trained in the use of technologies aligned with the current industrial

revolution, which will profoundly change the way we work.

The first phase regarded identification and realisation of the necessary areas and space for training: we used the buildings of our operating centre in Caraffa, situated in a nearly barycentric position with respect to our plants. The site consists of a classroom and a wing designated for the simulators used for practical training, with real components.

The subsequent phase involved realisation of the simulators, through the creation of equipped workstations for study and experimentation, reproducing real situations and problems typical of wind farms, thereby allowing simulation of the interventions necessary to resolve them.

In the classroom, technical stations were created for the simulated study of subjects such as hydraulics, electromechanics and mechanics, in order to implement training courses, updates and requalification of maintenance personnel.

#### Hydraulics simulator

This training includes the basic notions of

hydraulics and electro-hydraulics, theoretical/ practical exercises and the reproduction of specific turbine systems in the laboratory.

We find hydraulics applications on:

- · the rotor blocking system;
- · the pitch system.

It will be predominantly designated for simulation of the pitch system, simulating the mechanical movement of the piston and regulation of the blade angle.

#### Electro-mechanical simulator

This training covers the basic notions of electrical engineering and electromechanics, with exercises on electrical/asynchronous motors and electrical drives.

We find electro-mechanical applications on:

- · the pitch blade system;
- · the Yaw control system.

It is also possible to simulate functioning of the Yaw control system and the drive of the Yaw motor, both under ordinary operation as well as



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in case of anomalies. In this way, personnel may perform exercises and practice troubleshooting, i.e. the identification and solution of problems.

#### Mechanical simulator

This training includes the basic notions of mechanics and machines, theoretical/practical exercises on gear wheels, gears, different types of couplings, shafts, bearings, clutches and brakes.

We find mechanical applications on:

- gear boxes;
- · the Yaw control system;
- gear drives:
- bearings.

In the broader internal area, we have designed and built simulators, allowing practical exercises to solve the most common problems in conditions corresponding to reality, such as:

- · simulation of blade repairs;
- simulation of gear box/videoscopic inspection;
- simulation of troubleshooting on medium voltage cables (maintenance on failure);

HSE simulator for emergency evacuation training.

#### Blade simulator

The increase in the internal fleet has made it necessary, in terms of inspection and repair, for skills to be disseminated, involving a larger number of technicians.

We therefore designed and built a blade simulator with the aim of creating a theoretical-practical course on the blade inspection method, as well as on the techniques for surface restoration.

#### Gear box videoscopy simulator

The project to create an area dedicated to specialist training in gear box videoscopy arose from the implementation of the CBM (Condition Based Maintenance) strategy within the 0&M (Operation & Maintenance) processes of wind farms.

Training envisages a theory component on the various types of gear boxes and on the interpretation of measurable data, as well as a purely technical component on the use of videoscopy within a specifically set up gear box.



We also created a didactic gear box with visible internal parts that permits analysis and a detailed breakdown of activity with greater clarity and effectiveness.

#### MV underground cable simulator

We designed an MV (Medium Voltage) cable simulator with the aim of creating a theory and practice course to train High/Medium Voltage technicians, specialised in the localisation of faults on underground cables using the mobile laboratory available to technicians.

During recent years, the problem of faults on underground cables, particularly in the older systems, has significantly impacted the availability of plants. This has consequently made the dissemination and development of specific knowledge on use of the fault-seeking machine essential.

To build the simulator, we used a test MV cable coil, extended within the yard of the centre of

operation, with the ends connected to the ground so as to reproduce actual operation.

We made a hole in the cable in order to provide the technicians with practice on identifying faults using the mobile "Centrix" laboratory, simulating the various tests.

#### Emergency evacuation simulator

Lastly, we created a simulator for emergency evacuation training.

One of the main aspects to ensure the safety of operators during maintenance activities is the management of the risk of working at heights, in a very particular environment located at least 50 metres from the ground: the wind turbine.

The simulator gives the technicians more frequent practice in evacuation and safety measures, essential in managing this specific risk. Consequently, each turbine operator is trained in bringing their injured partner to the ground to await assistance.



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# ANALYSIS OF SIGNIFICANT EVENTS DURING THE YEAR

We have always adopted an industrial approach to the management of our activities, based on indepth technical knowledge of the plants.

Through specific training programmes, our engineers and technicians benefit from continuous training, sharing and spreading their knowledge within the company. They are always ready to take advantage of the opportunities offered by technological developments to improve performance of the plants or render their maintenance more sustainable.

To this end, the specialists of our four technologies (wind, solar, hydro and thermal) met for a day of discussion on the most important technical issues that influenced performance of the plants during the year. In particular, they outlined the innovative approaches and practical solutions adopted to prevent or resolve the problems at the basis of unavailability of the individual plants recorded in 2018.

For example, the head of the thermoelectric plant described the solution adopted upon breakage of a major component: rather than waiting several weeks for the spare part, a transitional solution - effective and never tried before - was studied internally and implemented together with the manufacturer, which allowed us to save on many days of downtime and production loss as we waited for the definitive solution.

For the wind energy sector, given the many issues addressed, the need to find maintenance solutions in difficult situations and environments, such as that inside the rotor HUB, at heights and in confined spaces, has emerged once again.

For example, our technicians replaced the blade studs (the bolts that hold the blade to the turbine) thanks to specific application equipment for work at heights, designed in-house, thereby avoiding the disassembly of the blade, which would have required heavy lifting equipment that is extremely expensive in terms of both cost and time. Our engineers have also developed ultrasonic material testing methods that simplify and speed up inspections and, above all, are compatible with the confined environments in which our maintenance technicians operate.

In the solar field, the latest technology acquired by ERG, our experts found themselves facing hydro-geological problems of instability of the soil. Technicians carefully studied the possible solutions, combining the knowledge acquired in the wind field with the requirements of solar technology. The result was the design of a new system for the collection and distribution of rainwater, which will allow us to solve the hydrogeological problem, also giving us the opportunity to improve plant productivity, thanks to relocation of several rows of photovoltaic panels.

Lastly, the head of the hydroelectric plants illustrated the detention process for the Corbara Dam, which made it possible to collect and distribute the overflow of March 2018, in accordance with the management procedures issued by the Civil Protection authorities.

This day of works demonstrated how our people and the specific expertise in the fields in which they operate are our true added value. The solutions that we identified and proposed often improve and make the standard maintenance procedures proposed by the manufacturers more effective. It is these refined skills acquired in the field that have made us a valuable partner for manufacturers, demonstrating the validity of our industrial approach.

# MANAGEMENT OF HYDROELECTRIC PLANTS

The second leading technology in terms of installed capacity for our Group is hydroelectric: a renewable source and among the most widespread since the dawn of the modern age.

The dams and infrastructures of the Hydroelectric Complex of Terni primarily date back to the first half of the 1900s: for this reason, they are perfectly integrated with the surrounding environment, are part of the landscape and indeed constitute the basis for the presence of numerous territorial activities related to tourism.

The plants of the Complex cover a vast area including Umbria, Lazio and the Marche regions, and comprise 19 plants with 40 production groups (of which three mini-plants built in 2017), seven large dams and 155 km of watercourses, tunnels and conduits.

The water sources used for electricity production are the Nera, Velino and Tiber rivers, which together represent a water system that is

well integrated with the territory, enabling the creation of important natural areas, such as:

- · the Oasis of Alviano on the Tiber river;
- the Nera River Park and the Marmore waterfalls.

Thanks to a revamping process of reconstruction and modernisation that began in 2008 and ended in 2013, involving 28 Production Groups over 37, the technical and energy efficiency of our plants was increased, simultaneously raising their environmental and safety standards.

We renovated and improved the automation and remote control systems and implemented online monitoring of the plants. This will enable us to achieve a greater capacity of preventing failures or malfunctions in the hydraulics systems. We have also adopted new technologies which, by exploiting higher pressures, have allowed us to reduce the amount of oil used and to use biodegradable oils and self-lubricating materials instead of traditional greases and oils in hydraulic systems.



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#### PRODUCTION PROCESS

The hydroelectric process is based on the transformation into electricity of the potential energy of a higher mass of water, which is first transformed into kinetic energy by the movement of water, then into mechanical energy by the turbines and lastly into electricity by the alternator situated along the axis of the turbine: in short, the mass of water "falling" from above towards the area below (the hydraulic drop) drives the turbine-alternator units at the foot of said hydraulic drop, generating electricity.

A typical feature of our plants is that they are in succession: therefore, the water coming out of one production plant above is captured and sent to the plant below to be used in a new drop, along with additional water from other rivers belonging to the surrounding river basin. Consequently, the same water is used several times, making the most of its energy content. At the end of the cycle, the water is returned to the river basin, in the same quantity and quality as the water collected, and can flow back into the natural water cycle.

#### MANAGEMENT PROCESS

The plants are managed through two main functions: "Operation" and "Maintenance", with two separate operating units.

#### Operation

The Operation unit predominantly handles 24-hour remote operation of the plants, as well as their control and self-maintenance, to ensure proper functioning of the 40 production groups, and is carried out by personnel within the company.

Since the start/stop of the machines is carried out centrally for all systems, the function checks in particular:

 the status of hydraulic works for intake (water supply) of the plants;

- the correct functioning of equipment and turbines, checking for any anomalies related to vibrations, pressures and temperatures;
- verification, reading and calibration of all equipment and meters of the plants.

The unit is also responsible for two technical management activities in the larger plants for safety purposes:

- decommissioning and safety, for works on electrical, hydraulic or pressurised systems;
- operating manoeuvres, which are very important for the management of overflows upon request by the Territorial Bodies.

Thanks to our hydraulic works and control systems distributed throughout the territory, we are able to manage the effects connected to water scarcity or abundance, such as during overflows, providing a civil protection service for the community, clearly in collaboration with the hydraulic authorities, prefectures, the fire brigade and local authorities.

#### Maintenance

Maintenance activities are planned and managed by our staff but predominantly carried out by outside companies. These are planned activities and intervention on failure, as well as analysis of the causes of failure and inspection activities.

The production of electricity from hydroelectric sources, while using a consolidated technology, is highly complex, since each plant is different from the other in terms of "drop" and "water flow rate", which are intrinsic characteristics of the territory. Therefore, a large part of the maintenance projects requires "customisation". All activities are carried out with considerable attention to the safety of people and of the territory.

# PREDICTIVE MAINTENANCE IN HYDRO

The management of our plants aims to best meet the needs of the market by preserving the integrity of the plants, minimising breakages and optimising maintenance costs.

To achieve these objectives, we have adopted the so-called Condition Based Maintenance (CBM), based on predictive maintenance. This is particularly necessary in order to improve the availability of plants, as already outlined in the wind activities of prior years.

After an initial study phase in 2017, this year we implemented Online Hydro Plant Monitoring (Monitoraggio On Line degli Impianti Hydro - MOnLHy) on the Galleto (326 MW), Baschi (86 MW) and Narni (40 MW) plants.

This monitoring envisages the following phases:



- installation of new systems to monitor vibrations, gases dissolved in transformers, turbine flow rates and other relevant quantities for continuous monitoring;
- logging of the measurements already available on the machines and integration of the new measurements into a centralised database;
- realisation of the IT infrastructure and implementation of all modules and relative algorithms necessary for the diagnostic and performance analysis of machinery, as well as process optimisation.

Significant short/medium-term results are expected from the project, in terms of:

- reduction of maintenance costs through the creation of a "new" CBM approach, consisting of:
  - rapid recognition of potential faults and consequent reduction in damage and costs for accidental events;
  - better planning of maintenance activities, general revision of the groups and inspections on condition;
  - increase in useful life of the machine, identifying and avoiding areas of critical operation.
- increase in plant productivity, with a consequent increase in production revenue, through knowledge of group performance and the relative incremental cost curves, to optimise the production structure in the re-dispatching phase.

Completion of the second phase of implementation is already envisaged in 2019, extended to the plants of Cotilia (48 MW) and Monte Argento (64 MW), providing the benefits of the described approaches to all of the major production plants.

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## MANAGEMENT OF THE THERMOELECTRIC PLANT

The Combined Cycle Gas Turbine (CCGT) is a combined cycle cogeneration power plant fuelled by natural gas, with installed capacity of 480 MW, located in the multi-company site of Priolo-Melilli (SR).

The plant consists of:

- two twin modules, each of which comprises two gas turbines and respective heat recovery steam generators, which fuel a steam turbine;
- auxiliary systems necessary for operation of the plant;
- a GIS substation with two voltage levels (380 kV and 150 kV) that permits connection to the National Transmission Grid and to the Internal Electricity Network of the Multi-Company Site of Priolo.

The gas turbines of the CCGT are fuelled exclusively by methane and their exhaust fumes (still hot) are channelled into heat recovery steam generators. The technology underlying the burners (NOx) permits the achievement of high levels of efficiency and low emissions.

Specifically, the total steam generated by the CCGT is fed into the site's multi-company grid,

while the electricity generated and not used within the site is sold to the National Transmission Grid

#### MAINTENANCE AND EFFICIENCY OF THE CCGT

Improvement of plant efficiency is our constant focus: over the years, with the "continuous improvement" project, which has involved all technical operating personnel, we have given rise to numerous technical projects aimed at improving efficiency levels (project for preheating of methane and of the air entering the turbines), reducing any losses (revision of the steam network) and optimising the distribution systems (efficiency of internal power distribution grid).

In addition, thanks to constant maintenance activities and reduction of the technical minimum of gas turbines, we have improved the flexibility of the system and its reliability.

The results were observed from both a technical as well as economic standpoint: the plant's performance index calculated according to CAR regulations (1st principle overall performance) has shown constant growth over the years.



#### THE CAR RENEWAL PROJECT

ERG Power's Combined Cycle Gas Turbine (CCGT) was the first and largest plant to earn, from Gestore dei Servizi Energetici (GSE), the High Efficiency Cogeneration (Cogenerazione ad Alto Rendimento - CAR) qualification, meaning a plant layout that is able to achieve overall thermodynamic efficiency that is much higher than average (well over 60%). In fact, the plant produces, through combined cycle, electricity and thermal energy (heat useful for other production cycles) by using the same primary energy (methane gas). The configuration of our plant allows us to produce electricity and supply the "steam network" of the entire industrial complex with process steam at different pressure and temperature conditions.

After 10 years of service, during which the plant received the support envisaged by EEC Directive 2004/8/EC, we are proceeding with the application for renewal of the CAR qualification through a project envisaging the renewal of several main components of the CCGT.

In order to identify the necessary investment, define an even more efficient CCGT structure thanks to new technical solutions and new turbines and obtain renewal of the CAR qualification, we have set up a Working Group with the task of developing the project through three stages:

- preliminary assessment of the technologies available on the market to optimise the existing assets, under the plant as well as operating profile;
- definition of an investment proposal by the end of 2019 in order to make modernisation of the plant economically convenient;
- · implementation of the new systems layout by 2020-2021.

In this way we will rejuvenate our plant, making it even more efficient and helping to maintain a modern and competitive generation fleet.



**FCONOMIC** 

Lastly, greater operating continuity has enabled the achievement of excellent economic results, as we were able to best manage the performance trend of energy market prices thanks to the plant's calibration capacity.

#### PRODUCTION PROCESS IN THE ENERGY MARKET

The CCGT power plant is constantly monitored and managed by personnel that, based on technical analyses, estimates the plant availability on a daily basis. Such planning is essential in order to estimate the plant's actual production capacity, based on which the Energy Management Bidding function analyses the supply on the electricity market.

The two functions have a very tight relationship: Bidding participates in the markets based on the plant availability information it receives from Operation, while the latter carries out electricity production plans based on the results of the markets in which Bidding has participated.

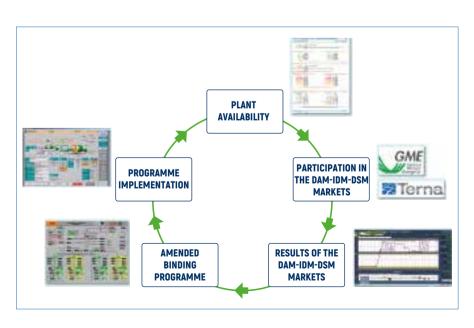
There are five main phases in this process:

· communication of plant availability by 11:00 am of day n-1 (Operation);

- participation in the Day-Ahead Market (DAM) based on the price scenarios and levels of demand and supply (Bidding):
- receipt from Gestore Mercati Energetici (GME) of a binding electricity production plan for the twenty-four hours of the subsequent day, based on the market results:
- any modifications to the Binding Plan due to variations in the dispatching services market (DSM) or in orders sent by Terna or to manage the grid's safety equilibrium;
- · launch of production based on the time profile defined by Bidding.

Lastly, on the day of implementation of the plan. Operation shall communicate the plant availability for the next day, relaunching the information exchange cycle just described.

With a view to increasingly improving the flexibility of the plant and quickly respond to the market and to changes in the site structure, we have invested in cutting-edge control systems that allow us to anticipate plant issues. This



allows us to carry out targeted and concentrated maintenance operations in less profitable periods, allowing us to reach a plant availability of more than 98%.

An important example of this is the "Plant Diagnostics Test" system, a natural extension of the system for monitoring of the key operating parameters of the CCGT plant. Providing support to all Operation and Maintenance personnel, this system activates a second level of analysis by identifying the main internal causes of deviation and the operating and maintenance interventions necessary to bring the deviations back within the optimal limits.

This system is applied to the main equipment of the ERG Power plant and is broken down into the following sub-processes:

- 1. execution of diagnostic tests;
- 2. execution of corrective measures;
- 3. updating of the machine data sheet.

The control process focuses on the analysis of three main types of parameters related to one another:

- key performance parameters: parameters with a direct impact on the machine's efficiency (specific consumption, expected performance, etc.);
- secondary performance parameters: parameters related to the key performance parameters (e.g., compression ratio, temperature, etc.) that occurred during specific tests;
- functional parameters: parameters with a direct impact on the reliability of equipment (temperature, oil, vibrations, etc.).

Any change in each secondary performance parameter and functional parameter is associated to the relative cause, thanks to the experience of 0&M personnel in operating the plant, and the maintenance or corrective measures to be implemented are consequently easy to identify.



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# MANAGEMENT OF ENVIRONMENTAL MARKETS

Energy efficiency, green energy... the new and most relevant themes in the world of energy that also govern a good part of everything that is not the electron market.

In particular, the recognition of electricity produced from renewable sources has been a trend throughout the industry and which by 2017 had certified about 70 million Guarantees of Origin (GO - titles certifying the origin of energy from plants powered by renewable sources) on the Italian territory.

The Guarantee of Origin (GO) is an electronic document that serves to prove to an end customer that a certain amount of energy has been produced from renewable sources, as required by European Directive 2009/28/EC, by a plant to which Gestore dei Servizi Energetici (GSE) has issued the certification as Plant with Guarantee of Origin (Impianto con Garanzia d'Origine, IGO) with regard to energy.

In particular, for each MWh of renewable electricity fed into the grid by plants qualified as IGO, the GSE issues a GO certificate to the producing companies which, in turn, may transfer them to their customers, accessing the organised market and the bilateral platform set up by Gestore dei Mercati Energetici (GME), according to principles of transparency and traceability defined at ministerial level.

Guarantees of Origin are therefore very important not only for the producer but for customers as well: companies that pay attention to the environment and to reducing climate impact as a key part of their strategies can state that their production does not generate indirect emissions (so-called Scope 2 emissions), qualifying their product as even more sustainable.

In this green market, we are among the top producers, with a total GO emission that in 2018



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will be around 1.97 million certificates, thanks to the new qualification of the Basque hydroelectric plants and the wind farms of Bisaccia, Lacedonia and Vicari (+255 thousand GOs equivalent to 255 GWh of green energy).

Conversely, the thermoelectric power plant of Priolo, as a High Efficiency Cogeneration Plant, enjoys the benefits of Energy Efficiency Certificates (TEE), in consideration of the fact that the plant, due to its technical characteristics, is able to obtain simultaneous production of electricity and steam, generating a high yield and significant energy savings.

The plant is therefore able to accrue approximately 100 thousand TEEs for ten years from the start-up year of each module.

Linked to the production in a specific year, the Energy Efficiency Certificates are assigned by the GSE in the subsequent year, when they are available for sale to customers through bilateral negotiation or sold in market sessions organised by GME.

Lastly, in order to guarantee compliance of the ERG Power plant with the European Union's Emissions Trading Directive, which implements worldwide emission reduction targets, we purchase on the market  $\mathrm{CO_2}$  certificates corresponding to the emissions generated by the CCGT plant (as the plant does not have any free  $\mathrm{CO_2}$  allowances). These quantities are certified by an independent third party, as required by the Emission Trading

#### **ERG'S GREEN PLANTS**

regulations.

- 18 wind farms and 30 IGO-qualified photovoltaic plants
- · Over 400 wind turbines with the same number of generators at height
- · 96 technical reports drawn up in order to obtain the qualifications
- · 48 technical sheets with attached photographic report, for a total of approximately 1,400 pages
- · 480 final documents submitted through the dedicated GSE portal to obtain the qualifications

ERG has already qualified its wind farms as IGO for a total of over 440 MW of power and its photovoltaic assets for a total of 89 MW, and it plans to obtain qualification for all the remaining wind farms in Italy (mainly in Southern Italy and the Islands) by 2019.

This will enable us to achieve the impressive figure of over 1,100 MW of installed 60-certified power. This is possible due to the collaboration of ERG's technical turbine personnel, who have carried out a census of the generators at height and collected the photos for the reports necessary to obtain the qualification.



### **ERG AND OPEN INNOVATION**

#### COLLÈGE DES INGÉNIEURS LABS

CDI Labs is an initiative established in 2016 and promoted by the SAFM (Scuola di Alta Formazione al Management) of Turin, with the collaboration of the CDI (Collège Des Ingénieurs), to encourage the encounter between large industrial groups (ERG, Atlantia, CLN and FCA) and innovative technological startups ready for the market, from 10 European countries and from Israel. The project is divided into three annual cycles characterised by the repetition of identification, selection and assessment activities for each year.

In 2018, we sought open innovation initiatives with high potential for application in Group activities, identifying two possible solutions:

- Intellium for the possible experimentation of safety shoes equipped with sensors able to detect and report safety problems involving the personnel wearing them, aimed at improving safety monitoring in the production sites.
- TRC Thermal Recycling Composites for reuse
  of the disposed wind blades. The company is
  a spin-off of the Spanish National Research
  Council, created for the commercial exploitation
  of a patent. This technology allows, through
  a temperature-controlled thermal process,
  removal of the resin from fibreglass or carbon
  composites and the extraction of fibres to
  be reused in new composites. This meets the
  recycling requirements for fibreglass from the
  replaced wind turbine blades as part of repowering/re-blading projects.

We are conducting further in-depth studies and evaluations of the possible launch of field trials for both projects.

#### ERG RE-GENERATION CHALLENGE

The ERG Re-Generation Challenge is a national competition for the best business plans, designed to give students, founders and companies the chance to develop business initiatives in the energy, renewable and circular economy sectors. In 2017, we centralised the initiative entirely in Umbria. Two of the projects rewarded in the first edition (Wisepower - predictive control system on the damage on blades of the wind turbines, and Agesic - safety application on smartphone) were able to test their ideas within ERG's business activities.

In 2018, the ERG Re-Generation Challenge extended the initiative to 8 regions in Central-Southern Italy (Sicily, Sardinia, Calabria, Campania, Puglia, Basilicata, Molise and Umbria). We completed 14 stages of identification and training, during which 120 startup, small business or student projects were presented. At the end of January 2019, at the end of the conclusive event in which 10 finalist startups participated, we assigned three grants designated to develop business activities.

In particular, we awarded:

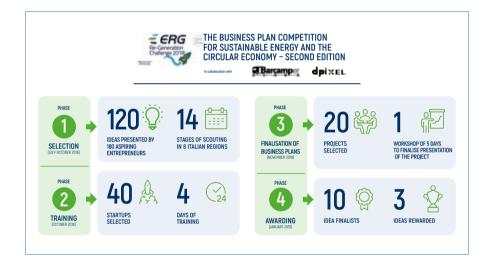
 Preinvel, startup from Grottaglie (TA), which developed an innovative system to reduce micro-dust, a problem that not only causes serious damage to the environment and people,



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but also causes major penalties for companies that fail to contain emissions within the legal limits. In 5 years of research, the team developed a patented technology that uses fluid dynamics to eliminate pollutant micro-dust smaller than 1 micron

- Secure Shelter, startup from Perugia, which developed a system for real-time structural monitoring. The project is the result of research carried out at the University of Perugia
- and allows managers of public and private infrastructures (bridges, buildings, roads) to remotely and continuously monitor in real time, for optimal risk management and optimisation of maintenance activities.
- Nanolead, incubator startup in Palermo, for an innovative electrochemical storage technology based on lead electrodes and nano-structured lead dioxide, able to produce more efficient batteries.



#### ERG RE-GENERATION CHALLENGE WINS THE SMAU GENOA 2018 INNOVATION AWARD

The award ceremony for the ERG challenge for the best business plans dedicated to renewable energy and circular economy took place during the SMAU Live Show, held at Palazzo della Borsa in Genoa, as part of the initiatives of the Ligurian stage of the 2018 roadshow conducted by SMAU.

SMAU is the independent platform through which every year over 50,000 entrepreneurs, managers of companies and public



administrations, meet and discuss innovation, technology, digital and internationalisation.

# **OUR SUPPLIERS**

#### THE GROUP'S SUPPLY CHAIN

Responsible supply chain management and value creation for our business partners are important values for us.

The Group's supplies are mainly of a technical nature and are linked to the development (new construction), improvement and efficiency or maintenance of our plants.

Primary international companies satisfy a significant part of the procurements, such as suppliers of turbines in the construction of new wind farms, or leading industrial groups with regard to maintenance activities. However, our main goal is to limit the condition of "single supplier" or exclusive supplier to the specific cases justified by technical reasons or constraints that can be objectively identified.

We also seek to maximise the use of competitive processes to ensure equal treatment of suppliers. Moreover, we pay attention to local suppliers who, with the same technical and quality requirements, once selected, can give further impetus to the economy within their areas.

For the activities of efficiency and maintenance of

our plants in all technologies (wind, hydroelectric, solar and thermoelectric), we deal with both national and international suppliers, depending on the technical and technological requirements.

In general, we do not purchase raw materials for production, with the exception of the methane gas used to supply the Priolo CCGT power station, which, together with electricity, is the only energy source supplied to the Group. To reduce the environmental impact of our activities, we buy certified electricity from renewable sources where possible, thereby significantly reducing SCOPE 2 emissions.

#### SUPPLIER MANAGEMENT

We seek commitment from suppliers and external collaborators in sharing our corporate values, informing partners of our rules of conduct and asking them to sign the ERG Group's Code of Ethics, the Organisational and Management Model pursuant to Italian Legislative Decree no. 231/01 and the Anti-corruption Policy.

In 2018, we began to evaluate all suppliers, in Italy and abroad, at an ethical and reputation level as well. In this way, we ensure that both companies and their executives maintain, in their dealings

#### **EVOLUTION OF THE SUPPLIER QUALIFICATION SYSTEM**

In 2018, we set up a working group to review the qualification questionnaire, differentiated by product category, and to introduce a new IT tool, ensuring better integration of the information into the company's processes.

In 2019, a "Sustainable Procurement" project will also be launched, thoroughly analysing certain categories of suppliers, creating ratings and sustainability indicators, and identifying criteria and areas of application in their processes (such as, for example, the CAM categories of the Ministry for the Environment).

#### **ERG AND SUPPLIERS**

ERG considers its suppliers a primary source of competitive success; thus, it strives to base its relations with suppliers on the same principles of sustainability, integrity and confidentiality and manage these relations with both current and potential suppliers in accordance with principles of legality, transparency, correctness and loyalty.

ERG also requires that its suppliers, particularly in the performance of their contractual services to the Group, comply with the principles contained in the Code of Ethics, also with regard to relations with any subcontractors.

In line with the aforementioned principles, ERG, in managing its purchasing processes and in the performance of the relative contractual services to the Group, requires Recipients to:

- manage their affairs in a correct and ethical manner. In particular, all actions, transactions, negotiations
  and, in general, conduct in the practice of business, must be based on the utmost fairness, with the
  exclusion of any corruption or favouritism, completeness and transparency of information and legitimacy,
  not only formal, in accordance with the current regulations and internal procedures;
- . [...]
- comply with all regulations specifically relevant at the time, with particular reference to the topic of safety and environmental protection;
- respect the rights of the employed workers, with particular attention to the principles of equal opportunity and application of the remuneration conditions envisaged by the labour agreements;
- · extend controls on the conditions of workers to its own supply chain, to the extent possible;
- adhere to the principles of the Code of Ethics and report to the Supervisory Body on any behaviour that appears to be in conflict with these.
- . [ ]
- not arbitrarily exclude from tenders or, in general, from supply requests any potential suppliers that, taking
  into due consideration their professionalism, efficiency and reliability, possess the relative prerequisites;
- demand observance of the contractual conditions, with particular reference to human rights, health, safety and environmental topics;
- · [...]
- · avoid suppliers with whom they have a family relationship or affinity;
- · [...]
- clearly and transparently show the evaluation criteria adopted and the reasons for the selections made.
   In accordance with the principles described above, ERG periodically audits its own "vendor list" [...]

From the ERG Code of Ethics

with us and within their management, behaviour in line with generally recognised ethical and social principles. In accordance with the provisions of the "Key Third-Party Due Diligence" procedure, we verify the presence of any investigations launched, sentences or orders issued against the supplier or its administrators.

The selection of suppliers is based on an accurate assessment, classification and monitoring process, according to objective criteria with regard to their technical capacity and reliability.

This activity is regulated by a procedure that uses on-line supplier management portals, allowing a complete analysis of the technical, economic-financial, legal and qualitative profile of the potential partner.

In addition to specific requirements relating to the environmental, health and safety aspects indicated in the HSE Group specifications, we request information on the protection of human rights, compliance with the ban on child labour, the obligation of equal treatment and the prohibition of discrimination. This allows us to value companies with specific certifications and recognition, extending the principles of sustainability in which we believe to the supply chain as a whole.

It is also important for us to avoid any situations of dependence of the supplier on our Group: consequently, we monitor to ensure that each supplier does not generate more than 30% of its turnover with ERG.

If this threshold is exceeded, we begin an analysis and evaluation process in order to define the appropriate corrective actions. This also ensures an economic/financial equilibrium for the supplier, avoiding a significant tie to our Group.

# RESPECT OF PAYMENT TIMES AS A COMPETITIVE EDGE IN RELATIONS WITH SUPPLIERS

According to our Code of Ethics, we are called upon to "... manage relations with suppliers based on the principles of legality, transparency, correctness and loyalty. [...] expect respect and ourselves respect the contractual conditions". During a difficult economic period, we believe that guaranteeing our suppliers payment terms consistent with contractual provisions helps them to best manage their business, guaranteeing long-term sustainability. Therefore, we constantly monitor respect of the agreed payment terms and, since 2016, we report on them.

Our analysis has highlighted that approximately 95% of invoices payable calculated in terms of value [91% in 2017] are paid in accordance with the contractual expiry dates\*. We also believe it is important to be real interlocutors for our suppliers: this is why we do not use call centres or third-party services, but rather answer their calls directly, maintaining a collaborative relationship that is fundamental to ensure effectiveness and efficiency of the service.

\*The Group's administrative procedures involve the execution of two "massive" payments per month, generating an average delay of approximately 7 working days.

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We also constantly monitor field activities, through the assessment of objective indicators in the area of environment and safety, ensuring compliance with the rules and procedures. This further element contributes to a more precise evaluation of the partner, not only to identify and correct any critical issues, but also to reward their level of excellence, both in terms of service and, for example, financial solidity.

In the event of findings during the audits, we promptly set up "repair" activities, subsequently proposing, where appropriate, training courses in favour of suppliers and third party workers. The repeated performance of activities outside of the established parameters may lead to penalties for the supplier, termination of the contract and, in more serious cases, removal from the Vendor List.

# THE PROCUREMENT PROCESS: TRANSPARENCY AND EQUAL OPPORTUNITIES FOR SUPPLIERS

In compliance with the rules of fairness and transparency, we aim to encourage competition

between suppliers, maximising the use of tenders in assigning contracts, also through the use of an online portal that tracks all stages of the awarding process.

The process is based on the rules of:

- transparency of procedures and behaviours;
- separation of roles in contractual relations and in negotiations in particular;
- consistency among ethical principles and organisation, through verification of employed personnel;
- equilibrium in relationships, intended as the definition of limits in the orders assigned to each supplier with regard to their overall turnover;
- respect of the agreements signed with suppliers, also in terms of contractual conditions and payment terms.

Awarding is based on the most advantageous offer, taking into account all of the related variables (especially the technical ones) and not only based on the lowest price.

#### **ECO-ERG PROJECT**

Based on a widespread awareness among our employees and in society as a whole, in 2018 we launched a project for the "environmental improvement" of office activities.

We created a working group formed of many company functions (Procurement, Facility Management, Organisation, etc.) with the objective of analysing office processes. After several brainstorming sessions, it was revealed that certain operating procedures, considered optimal, were not adopted uniformly throughout all of our offices. We therefore compiled the best behaviours and in the course of 2019 we will strive to adopt them in a uniform manner, trying to:

- · optimise separate waste collection;
- eliminate plastic where possible (food and coffee distributors, etc.);
- · further improve public drinking water in order to avoid bottles;
- · introduce printers with paper recycling systems.

DATA AND

#### MANAGEMENT OF SUBCONTRACTING

Each supplier is also liable for any authorised subcontractors and undertakes to comply with social and environmental regulations, such as those regarding the protection of health and safety in the workplace or the disposal of waste. Procurement also supervises the subcontracting

process, through the acquisition of information and document control, including regular payment of contributions, respect of the workplace safety regulations, the extent in percentage terms with respect to all works and a guarantee of the maximum discount applied with respect to contract prices.



# ENVIRONMENTAL RESPONSIBILITY

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Over 5.3 TWh of electricity produced from renewable sources that have enabled us to save over 3 million tonnes of  $\mathrm{CO}_2$  in a year, a cogeneration plant with very low emissions, certified management systems, development projects managed with a close eye on the environment.

In this way we contribute to combating climate change and safeguarding biodiversity. 3,029 kt CO<sub>2</sub> AVOIDED BY USING RENEWABLE ENERGY SOURCES

5,334 GWh

OF ELECTRICITY GENERATED
FROM RENEWABLE SOURCES

0.14 kg CO<sub>2</sub>/kWh carbonisation factor electricity production

86%
OF ELECTRICITY USED DERIVING FROM RENEWABLE SOURCES

## THE EUROPEAN AND GLOBAL APPROACH TO CLIMATE CHANGE

The international scientific community is now in agreement that climate change, a genuine threat to the future generations, is largely the result of human activity. According to the international scientific community the correlation between greenhouse gas emissions and global warming is incontrovertible proof of the link between the two phenomena.

On the basis of this evidence, at the end of 2015 the European Union and 195 other countries signed the Paris Agreement during the United Nations COP 21 conference, a milestone in the global effort to combat climate change caused by man.

The Agreement, which came into force in 2016, commits signatories to adopt plans to reduce greenhouse gas emissions in order to keep the Earth's average temperature increase "well below" 2 °C and to take all possible actions to limit this increase to 1.5 °C; the plans adopted must be reviewed every 5 years on the basis of eventual variations from the forecasts.

## THE CLEAN ENERGY PACKAGE FOR ALL EUROPEANS

As far back as October 2014 the leaders of the European Union had set up the "Energy Union", which established three main goals to achieve by 2030:

- a reduction of at least 40% in greenhouse gas emissions (compared to the levels recorded in 1990):
- at least 27% of the EU's final energy consumption deriving from renewable energy;
- an improvement of at least 27% in energy efficiency.

In November 2016 Europe subsequently renewed its commitment to achieving these targets through the adoption of the "Clean Energy Package for all Europeans" (CEP), a series of regulations and directives to make the decarbonisation of energy across the continent a reality.

The CEP consists of eight legislative proposals destined to come into force as of 1 January 2021 including, in particular, the revised renewable energy directive, the Energy Union Governance regulation proposal, the revised internal electricity market directive and a directive regarding common regulations in the internal electricity market.

It took over two years of negotiations between the European Commission, the European Parliament and the European Council to draft the regulations; all of the texts have now been consolidated and a large number of the measures have been officially published.

In terms of ERG's business activities, the most interesting parts of the CEP are:

- the recast Renewable Energy Directive to 2030 (REDII);
- 2. energy union governance regulation;
- market design, i.e. the updating of the Electricity Market Directive and Regulation.

### The European Directive

The current Renewable Energy Directive was recast according to the new time horizon of 2030. The revised version was published in the Official Journal of the European Union in December 2018 and should be transposed into the national legislation of Member States by June 2021.

In terms of content, the new Directive introduces the following elements:

- a binding renewable energy target for the EU of 32% of gross final consumption by 2030, higher than the Commission's initial proposal of 27%;
- confirmation of the possibility of supporting renewable energy generation through competitive and non-discriminatory mechanisms;
- specific provisions designed to guarantee the stability of support schemes, to protect the profitability of plants and to avoid retroactive changes;
- the commitment to developing Corporate Power Purchase Agreements, long-term procurement contracts for energy produced from renewable sources;
- new measures to facilitate and streamline the permitting process with specific focus on the repowering of existing renewable energy plants (maximum duration of the procedure 1 year and 2 years only in exceptional cases);
- a new regulatory framework for Guarantees of Origin by which these are issued and made available to electricity producers.

#### Governance

The Regulation on the Governance of the Energy Union provides practical information on the obligations of Member States with regard to achieving their 2030 renewable energy targets.

This Regulation was also published in the European Union Official Journal in late December and is immediately applicable among Member States, without any need for transposition.

It introduces the obligation for Member States to draft National Energy and Climate Plans which define volumes, timeframes and practical implementations of the individual energy/environmental ambitions of each Member State through to 2030.

The National Energy and Climate Plan proposal

was sent by Member States to the European Commission by the first few days of 2019. According to the timetable, the Commission will provide Member States with feedback by June 2019; the final version of the Plan must then be sent to Brussels, reviewed and corrected, by 31 December 2019.

### Market Design

The updating of the Electricity Market Directive and Regulation constitutes the so-called Market Design.

The main aspects of the measures are:

- the reform of the wholesale electricity market with the aim of promoting the flexibility of the electricity system in order to better support the generation of intermittent renewable electricity;
- the introduction of new emission limits as part
  of the capacity remuneration mechanisms
  (CRM) which drive a reduction in coal-powered
  plants and the elimination of permanent
  incentives for the continued use of obsolete
  technologies;
- new electricity dispatching rules with the aim of prioritising the dispatching of renewable energies and the opening up of network service markets to these energies;
- the creation of the necessary market conditions for the adequate development of electricity storage systems.

## THE ITALIAN NATIONAL ENERGY AND CLIMATE PLAN PROPOSAL (PNEC)

On the basis of the 2017 National Energy Strategy (Strategia Energetica Nazionale, SEN) and the provisions of the aforementioned Governance Regulation, on 8 January 2019 the Ministry for Economic Development, together with the Ministry for the Environment and the Ministry for Transport, presented the integrated Italian National Energy and Climate Plan proposal (Piano

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Nazionale integrato per l'Energia e il Clima, PNEC) to the European Commission (EC).

The PNEC aims to define the national goals, policies and lines of action that Italy intends to put into practice between now and 2030 to contribute to achieving the 2030 climate and energy goals adopted at European level.

The draft undergoes Strategic Environmental Assessment (SEA) and, in parallel, the various parties involved are widely consulted also through a dedicated internet portal.

The PNEC is structured according to the 5 dimensions already identified by the Clean Energy Package and SEN: Decarbonisation, Energy efficiency, Energy security, the Internal energy market, Research, innovation and competitiveness.

It also identifies a number of priority measures common to each of the 5 dimensions:

- the development of electric RES in particular PV and Wind – phase out of coal by 2025;
- the prioritisation of measures designed to limit the consumption of soil, the continuity/ repowering of existing RES farms while protecting the landscape;
- streamlining of the permitting process for investments required for the transition and stability of the regulatory framework;
- electrification of energy demand (transport, civil):
- evolution of the energy system from centralised to distributed with self-consumption and RES;
- R&D focused in particular on the storage of energy from RES;
- energy efficiency also in civil engineering and public administration;
- updating of the public governance of the environment and energy on the basis of the carbon-neutral concept;

 assessment of any additional transition tools (e.g. environment tax).

The PNEC sets goals for 2030 in terms of

- the percentage of final energy consumption deriving from renewable sources:
- · energy efficiency;
- the reduction of greenhouse gas emissions largely in line with those of the SEN: 30% of final gross energy consumption from renewable energy - which translates to 55.4% for the electricity sector thanks mainly to wind and photovoltaic technologies - and a 43% reduction in energy consumption compared with the PRIMES model of 2007.

The growth trend in electric RES proposed by the plan involves a non-linear profile: slower growth until 2025, faster afterwards (as foreseen by the SEN) due to the rallying effect of solar energy, while the growth of wind energy will be quicker from the outset.

Compared with the economic situation under current policies, the PNEC proposes to make investments of around EUR 184 billion, EUR 52 billion of which in the electricity sector.

The planned investments should also create an average of around 115,000 temporary jobs a year in the 2017-2030 period - 18,000 in the electricity sector - as well as around 6,700 permanent jobs in the electricity output sector, net of the departure of fossil fuels and bio energies from the sector.

### **EU-ETS SCHEME: REVIEW OF THE ETS DIRECTIVE**

The EU emissions trading system (EU ETS) was launched in 2005 to promote reductions of greenhouse gas emissions in a cost-effective and economically efficient manner. The system sets a limit on the amount of greenhouse gases that can be emitted by heavy energy-using industries, energy producers and airlines. Emission

ΠΑΤΑ ΑΝΠ

allowances are capped by the EU and businesses can buy or receive individual allowances. The cap is reduced over time so that total emissions gradually fall.

The ETS system is regarded as the European Union's main tool for meeting its greenhouse gas emission reduction targets for 2020 and 2030.

In recent years the economic crisis has contributed to a fall in emissions and a reduced demand for emission allowances. Together with other possible factors, this has led to a fall in coal prices and the accumulation of large numbers of excess allowances in the system with the risk that the EU ETS is not able to provide incentives to reduce emissions in a cost-effective way or to drive low-carbon innovation.

This market situation, together with the need to adapt the system to the 2030 decarbonisation targets, have made the structural review of the system a necessity ahead of the fourth phase of the Emission Trading System between 2021 and 2030.

After over two years of discussions, in March 2018 the Official Journal of the European Union published the new Directive 2018/410 (EU), which amends Directive 2003/87/EC (the ETS Directive). Member States are required to transpose the regulation by 9 October 2019.

To speed up the emission reduction process, as of 2021 the total amount of emission allowances will fall at an annual rate of 2.2% compared with the current rate of 1.74%. The market stability reserve (MSR) - the mechanism introduced by the EU to reduce the surplus of allowances on the carbon market and to improve the resilience of the ETS to

future shocks - will be significantly strengthened. Between 2019 and 2023 the quantity of allowances in the reserve will double to 24% of the allowances in circulation. The regular feeding rate of 12% will be restored as of 2024.

As a long-term measure to improve the functioning of the system and if not otherwise decided during the first review of the market stability reserve in 2021, as of 2023 the number of allowances in the reserve will be limited to the previous year's auction volume. All allowances held in the system above this quantity will no longer be valid.

The amended EU ETS Directive contains predictable, strong and fair regulations to combat the risk of transferring CO, emissions.

The system of free allocation will be prolonged for another decade and has been revised to focus on sectors at the highest risk of relocating their production outside of the EU. These sectors will receive 100% of their allocation for free. For less exposed sectors, free allocation shall be phased out after 2026 from a maximum of 30% to 0 at the end of phase 4 (2030).

A considerable number of free allowances will be set aside for new and growing installations. This number consists of allowances that were not allocated from the total amount available for free allocation by the end of phase 3 (2020) and 200 million allowances from the MSR.

Finally, more flexible rules have been set to better align the level of free allocation with actual production levels. Overall, more than 6 billion allowances are expected to be allocated to industry for free over the period 2021-2030.

## OUR PRINCIPLES THE GROUP CODE OF ETHICS

"ERG believes that the complete compatibility of its activities with [...] the local area, natural resources and the surrounding environment is an essential condition both for the acceptability of its plants and its operational activities, and to achieve its growth objectives.

ERG thus constantly works to ensure that the business operations of all Group companies are carried out with full respect [...] for the environment, intended in the broadest sense, carefully considering these factors as part of the long-term planning process and encouraging the adoption of environmentally-friendly and energy efficient technologies.

As a socially responsible business, which also counts on the active contribution of all Recipients, ERG aims to:

- [...] ensure constant attention and commitment to improving its performance in the environmental field, monitoring and reducing energy use, minimising waste production, complying with the legal limits for atmospheric, water and ground emissions, responsibly and carefully using natural resources and protecting local ecosystems and biodiversity;
- assess environmental and social impacts before undertaking new activities or introducing modifications and innovations to processes and products;
- establish relationships based on dialogue and constructive collaboration, marked by the utmost transparency and trust, with institutions and all stakeholders, with the goal of developing its activities while respecting local communities;
- -maintain high levels [...] of environmental protection by implementing management systems that are
  developed, periodically verified and certified according to internationally recognised standards and
  introducing management and intervention methods and procedures, based on the careful analysis and
  assessment of risks, in order to deal with possible emergencies;
- provide continuous information, awareness-raising activities and training to consolidate the [...] environmental protection principles at all levels of the company.

Finally, as confirmation of the huge importance ERG gives to [...] environmental protection, the evaluation of each employee's individual performance considers whether or not their conduct is in line with company policies, and particularly the above points."

From the ERG Code of Ethics

## OUR MANAGEMENT METHODS IN THE ENVIRONMENTAL AREA

The attention we focus on managing the environmental aspects of our plants goes well beyond simply complying with our legal obligations. We have implemented integrated environmental and safety management systems that comply with the international ISO 14001 (environment) and OHSAS 18001 (safety) standards to guarantee the constant monitoring of processes at our Italian production sites, paying equal attention to the issues of the Environment and Safety and integrating their management. For all our technologies (wind, hydroelectric, solar and thermoelectric) we have developed an integrated management system, structured as follows:

- each Group company has adopted its own HSE policy which draws on the principles in the Group's Code of Ethics and in Sustainability Policy;
- implementation is entrusted to the individual in charge of the company (Managing Director, General Manager, sole director, etc. depending on the circumstances) who guarantees the correct application of the system and is responsible for legislative compliance also as regards third parties;
- a centrally coordinated HSE department provides support for monitoring regulations, supervising activities in the field and verifying the correct implementation of the operating procedures in the environmental sphere:
- the Operating Units that directly manage the plants guarantee the application of the regulations and respect for all other commitments voluntarily undertaken by the Group.

At the beginning of 2017, a Group HSE unit was set up with the aim of guaranteeing the observance of the legislation in force relating to health, safety and environment, by means of the development of an integrated HSE system at Group level and the co-ordination of the HSE Organisational Units dedicated to the different generation technologies. An integration, which in ERG's vision, has the objective of designing and accomplishing a single management system which, maintaining the different technologies of the operating areas, makes it possible to harmonise and simplify all those "transversal" processes relevant for the safety and environmental aspects. A project has also been developed at group level which in the next few years will lead to the environmental and safety certification of the Group's international companies, with priority given to France, Germany and the UK.

The absence of environmental non-compliance penalties received by our companies during the year is indirect proof of the quality of the management systems we have adopted and the effectiveness of our procedures.

In addition, recognising just how significant having a local plant is for the resident population, we believe that communication and information is a priority issue. For this reason, our hydroelectric and thermoelectric plants are registered with EMAS and this, thanks to the Environmental Declaration published each year, makes it possible to report the results of the management of relevant environmental aspects on a continuous basis.

As well as operations management, a structured monitoring system based on the Organisational and Management Model has been implemented for the Italian companies in accordance with Italian Legislative Decree 231/2001.

## IDENTIFIED RISKS AND SPECIFIC MANAGEMENT METHODS

The Group's commitment in this area also takes the form of an analysis of the potential impact of its activities on the various environmental matrices. For the most relevant issues, the specific risks identified and the relative Management Systems adopted in each of the three different technologies are presented below.

## **USE OF ENERGY RESOURCES**

The ERG Group renewable energy plants (wind, solar and hydroelectric) use a fairly small amount of electricity acquired from the grid, enough to guarantee a continuous supply of electricity to the ancillary systems and safety systems.

During regular operations the plants produce enough electricity to satisfy their requirements.

The ERG Power thermoelectric plant uses natural gas as its primary source, producing the energy it requires during operations. Grid electricity is only required to power some services outside the plant and in the event of plant shutdowns.

In order to minimise the environmental impact deriving from the purchase of energy from the national grid, following a decision by the Sustainability Committee the ERG Group has made a pledge to procure certified electricity from renewable sources.

This policy is applicable to all of the Group's plants wherever technically possible.

The quantities and relative indicators are reported on the pages at the end of the document.

### **EMISSIONS OF GREENHOUSE GASES AND POLLUTANTS**

The ERG Group's **renewable energy plants** (wind, solar and hydroelectric) do not generate direct emissions. As regards indirect emissions, please refer to the paragraph "Use of energy resources".

The ERG Power **thermoelectric plant** fuelled by natural gas generates  $\mathrm{CO}_2$  emissions that are disclosed in accordance with the EU-ETS regulation and certified by an external body (it does not enjoy free allocations of  $\mathrm{CO}_2$  allowances). Other emissions ( $\mathrm{NO}_{\mathrm{X}}$  - nitrogen oxides and  $\mathrm{CO}$  - carbon monoxide) are measured thanks to continuous monitoring systems certified according to the UNI 14181 standard.

Some of the high voltage electrical equipment at our plants (switchboards and switches) is insulated using sulphur hexafluoride ( $SF_6$ ). This gas is classified as a greenhouse gas: the plant Operating Units (for all technologies) monitor eventual dispersions and intervene as quickly as possible to eliminate leaks and to restore the correct quantities.

Other greenhouse gases (various forms of F-Gas) are present in the air conditioning systems of our plants. The plant Operating Units (for all technologies) monitor eventual dispersions and intervene as quickly as possible to eliminate leaks and to restore the correct quantities.

The quantitative data relating to the various emissions and relative indicators are reported on the pages at the end of the document

## **USE OF WATER RESOURCES**

Water resources are used differently according to the technology. In any case, none of our plants are located in areas suffering from water shortages.

For the **wind farms** this aspect is "not material" as they do not use water resources in their production processes.

For the **solar installations** this aspect is "not material" as they do not use water resources in their production processes. The water is only used to wash the panels and to maintain the greenery in the relevant areas of the plant.

Neither is this aspect of relevance to the **hydroelectric plants** as the water drawn from rivers and reservoirs is used for the production of electricity and to cool the systems before being returned to its source in the same quantity and quality.

The **thermoelectric plant** mainly uses two sources of water: seawater to cool the plants and untreated water to produce the demineralised water needed to generate steam. Seawater is drawn and returned in the same quantity and quality: the use of this source does not impact on the availability in the environment of resources used for human consumption.

Once demineralised, the untreated water is used to produce the steam required by the plant to replenish the CCGT steam cycle and to supply the site's industrial customers so they can fuel their production processes. The water drawn for the replenishment of the CCGT steam cycle is returned to the environment in the form of steam or condensation and does not impact the availability of water for human consumption. In any case, technological improvements to the plants are consistently identified in order to reduce the consumption of untreated water through the reuse of water deriving from other site plants.

The quantities and relative indicators are reported on the pages at the end of the document.

### OTHER IMPACTS OF ACTIVITIES

Following the materiality analysis in the "environmental protection and biodiversity" sphere, additional details regarded as representative of ERG's business have emerged and are therefore covered in the report:

- · visual and noise impact of the plants;
- · management of biodiversity;
- · effluents and waste:
- · oil spillage in water.

The impact and management of these individual aspects vary according to the technology: below is a summary of these elements and their relative management systems.

### Visual and noise impact

Wind farms: visual and noise impact is assessed as part of the authorisation process by the relevant authorities which includes both an environmental impact assessment (the interaction between the plants and natural matrices such as fauna in general, non-migratory and migratory birds, the ecosystem, flora, water resources etc.) and a social impact assessment (interaction between the plants and local communities in terms of visual and noise impact, accessibility, impact during the construction and management phases etc.). More specifically, all new large Italian plants are subject to an EIA (Environmental Impact Assessment) by the Ministry for the Environment. Similar authorisation processes are in place in all other European nations in accordance with the general regulations of the European Union. As a result, all plants are constructed with respect for applicable laws, making this a non-material aspect during the operation of the plants.

**Solar installations**: visual impact is assessed as part of the authorisation process by the relevant authorities which includes both an environmental impact assessment (the interaction between the plants and natural matrices such as fauna in general, non-migratory and migratory birds, the ecosystem, flora, water resources etc.) and a social impact assessment (interaction between the plants and local communities in terms of visual and noise impact, accessibility, impact during the construction and management phases etc.). Visual impact mitigation actions (planting of trees along the perimeter of the plant) have been implemented where requested during the authorisation process. As a result, all Group plants have been constructed with respect for applicable laws, making this a non-material aspect during the operation of the plants.

**Hydroelectric plants**: the majority of plants and relative hydraulic works are historically part of the landscape; some sites (e.g. the Galleto power plant) are also of particular architectural interest. The visual impact of the plants and sites is not a material aspect.

The new mini-hydro plants positioned to take advantage of releases from dams were built on the basis of the authorisations issued by the relevant authorities which include an environmental impact assessment (the interaction between the plants and natural matrices such as fauna in general, and fish in particular, the river ecosystem, the availability of water resources for social use or to guarantee the survival of plant

and animal life along the banks etc.) and a social impact assessment (interaction between the plants and local communities in terms of visual and noise impact, accessibility, impact during the construction and management phases etc.). As a result, they are developed with respect for applicable laws, making this a non-material aspect during the operation of the plants.

The noise generated outside the plants is only a significant aspect for those located near to homes or residential areas. Noise emission measurement and monitoring campaigns have been carried out in order to check compliance with applicable noise pollution legislation. The measurements taken were compliant with the legislation, making this a non-material aspect during the operation of the plants.

**Thermoelectric plant**: the ERG Power plant occupies around 25 hectares of the approximately 900-hectare multi-company site of Priolo (SR). In terms of both noise and visual impact, the location of the plant at the centre of this site - a major industrial district - means that it does not have any visual impact on the resident community. Periodic measurements, carried out at the edges of the site, demonstrate that the noise emissions comply with the legal limits, making this a non-material aspect during the operation of the plants.

## Management of biodiversity

The impact of new plants on the biodiversity in the areas in which they are located is the subject of assessment and authorisation by the relevant authorities during the permit issuing phase (see above with regard to the protection against visual and noise impact).

The environmental management systems certified in accordance with the ISO 14001 standard involve the constant monitoring of the interactions between the plants and the environmental matrices: in this way the provisions of the authorisations will continue to be observed.

Wind farms: the main form of interaction between the wind farms and biodiversity regards the resident and migratory birds that pass through or nest in the wind farm areas. Preventive analyses prior to the construction phase and subsequent monitoring (where requested) are carried out to make sure that the farms do not interfere with the regular life of the birds. The periodical analyses carried out (detailed in past Sustainability Reports) show that the turbines have become an integral part of the areas in which they are located and are therefore recognised by birds as part of the landscape.

**Solar installations**: the main form of interaction between the solar installations and biodiversity regards soil occupation deriving from the extension of the photovoltaic plants across the territory. Soil occupation means the loss of farmland or the replacement of the previous vegetational state. These aspects are assessed as part of the authorisation process by the relevant authorities and form part of the environmental impact assessment (where necessary). All plants are constructed with respect for applicable laws, making this a non-material aspect.

**Hydroelectric plants**: please refer to the published article which outlines the methods used to manage these aspects.

**Thermoelectric plant**: as mentioned, the ERG Power plant is located on the multi-company site of Priolo Gargallo (SR). There are no interactions between the plant and areas of high biodiversity.

#### Effluents and waste

All plants have an Integrated Management System certified in accordance with the ISO 14001 (environment) and OHSAS 18001 (safety) standards. The hydroelectric and thermoelectric plants are also registered as per the EMAS regulation.

The existence of certified management systems guarantees the constant monitoring of updates to the regulations and that plant operations are carried out according to procedures that respect best practices and the reference regulations.

One of the goals common to all of the ERG Group's Organisational Units is minimising the amount of waste produced and maximising its recovery.

Refer to the published article which outlines the specific activities designed to optimise the management of waste and effluents

## Oil spillage in water

All hydroelectric plants have an Integrated Management System certified in accordance with the ISO 14001 (environment) standard and are registered as per the EMAS regulation. The existence of these systems guarantees the constant monitoring of updates to the regulations and that plant operations are carried out according to procedures that respect best practices and the reference regulations.

The oils used in the hydroelectric plants are designed to feed the lubrication and/or hydraulic circuits that govern the plants. These feature on the list of hazardous substances with a potential risk in the event they leak into the water following the accidental breaking of circuits, for example.

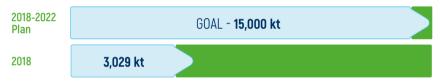
The management of this risk is structured into various levels, including:

- specific 0&M activities with scheduled and periodic checks on plants with the aim of reducing the risk of lubrication and/or hydraulic circuits breaking;
- the presence of systems for the active detection (24-hour monitoring), collection and filtering of process water oil;
- use of biodegradable oils "Best available technology" which decompose on contact with water.



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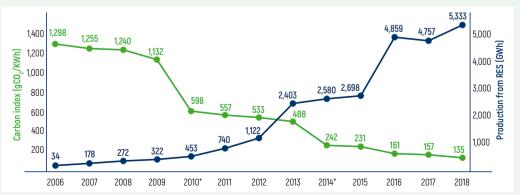




To calculate  $CO_2$  avoided we have used the  $gCO_2/kWh$  conversion factor published by Terna in its annual reports and referred to the thermoelectric power output of each country.

## **DECARBONISING OUR ELECTRICITY OUTPUT**

The transformation of our Group has enabled us to gradually reduce the carbon intensity of our output over the years. In this way, at the end of 2018 we had reduced the carbon intensity of our output by 90% since entering the renewable energies sector. In the last four years we have reduced it by 42%.



\* The two points of discontinuity were caused by the start-up of the ERG Power plant in place of the pre-existing CTE in 2010 and the sale of the ISAB Energy plant in 2014.

## THE REDUCTION OF CO<sub>2</sub> EMISSIONS

We produce electricity from renewable sources, an activity which, by definition, does not generate direct emissions.

Just as we strive to minimise our impact on the natural environment, the reduction of our direct and indirect greenhouse gas (GHG) emissions represents another important commitment for us.

All of our direct emissions ("Scope 1" emissions) derive from the activities of ERG Power's natural gas-fuelled cogeneration thermoelectric plant. Thanks to its configuration, the plant, operational since 2010, guarantees very high yields and minimal emission levels well below the legal limits.

All improvement processes introduced have led to an increase in efficiency and a gradual reduction in emissions per MWh produced.

These emissions are certified according to the EU-ETS regulation.

Other Scope 1 emissions are generated by:

- SF<sub>6</sub> (sulphur hexafluoride) leaks from some high voltage equipment;
- F-gas (fluorinated gases) leaks from air conditioning systems;
- · the use of company vehicles.

The values related to these emissions are not material (below 0.14%).

Meanwhile, our indirect GHG emissions from energy consumption ("Scope 2" emissions) are generated by the purchase of national grid electricity required for the functioning of the plants if they are not operational, and by condominium services for the offices.

In mid-2016 the Sustainability Committee approved a project for the supply of renewable energy for all Group requirements where technically feasible.

We have continued to pursue this commitment over the years with around 86% of our supply requirements met using renewable energy at the end of 2018, with estimated savings of around 10,000 tonnes of CO<sub>2</sub>.



### SUSTAINABLE TRANSPORT

The company has adopted a sustainable transport programme that takes account of the specific distribution of our employees across Italy: around a third of employees are located in Genoa (the headquarters) with the remainder split between the secondary sites (Rome and Terni) and the plants distributed across the country.

This geographical dispersion makes it impossible to develop sustainable transport services in the strictest sense of the term. However, we have nonetheless sought to optimise the logistics of our employees' movements, reducing their environmental impact as far as possible: company cars are made available to staff which they can share for transfers between Group sites (typically Genoa-Terni and Rome-Terni).

We have also adopted the following measures at the Genoa site:

- · vehicle for General Services, usually used in the city, 100% electric;
- inclusion of hybrid vehicles in our "car policy";
- launch of an app for carpooling among employees for both commutes and transfers.

## **GREEN ENERGY FOR OUR ADDITIONAL CONSUMPTION**

In order to minimise the environmental impact deriving from the purchase of energy from the national grid, following a decision by the Sustainability Committee the ERG Group has made a pledge to procure certified electricity from renewable sources. This policy is applicable to all of the Group's plants wherever technically possible.

2018 **86**% | 2017 **84**% | 2016 **51**%

## THE REDUCTION OF SCOPE 2 EMISSIONS

Emissions can also be reduced by using energy more efficiently: the ERG Group has launched a project to replace existing lighting systems with new LED technology systems. The first steps were taken in 2016 in the Genoa offices and at the ERG Power plant, and we continued this process at the ERG Hydro site in Terni in 2017. At this site the energy diagnosis studies have made it possible to improve the efficiency of the heating/air conditioning/sanitary water and lighting systems: the new systems will be installed and commissioned by the end of 2018 and will produce savings of:

- · around 220,000 kWh/year thanks to new boilers for heating the offices (-43% consumption);
- · around 175,000 kWh/year thanks to the new LED lights (-81% consumption).

The balance for the 2016 activities (-400 kWh/year approx.) and 2017 activities will therefore make it possible to reduce consumption by around 800,000 kWh, the equivalent of over 450 t/year of CO<sub>2</sub>.

## **CDP 2018: B RATING FOR ERG**

The Carbon Disclosure Project (CDP) is an initiative that was launched to collect and disseminate both quantitative and qualitative information and data on the strategies that companies adopt to combat climate change.

We registered with the initiative in 2016, being voted "Best Newcomer Italy". In 2017 we were awarded an A-rating while in 2018, following the introduction of a new valuation method, we were given a B rating. This rating is higher than both the Utilities sector average [C] and the average for Europe (B-).

2018 **B** | 2017 **A-** | 2016 **B** 

This result is an important acknowledgement for us, not only because it recognises the transparency of our communications but also because it is the confirmation of our unyielding commitment to adopting strategies that promote a form of sustainable development that combines economic performances with a reduction in CO<sub>2</sub> emissions.

Our business strategy, focused on the production of renewable energy, in line with the indications of COP 21, regards the development of green energy, respect for the environment and transparency towards our stakeholders as key elements in combating climate change.



## **SCOPE 3 EMISSIONS**

Our indirect GHG emissions ("Scope 3" emissions) comprise emissions generated by:

- electricity purchased and resold in Italy to end customers, equal to 3.2 ktCO<sub>2</sub>;
- the wind energy supply chain. The estimated values, calculated using the Life Cycle Assessment (LCA) of some turbine models (over 80% of production and around 85% of machines), come to around 28.5 ktCO<sub>3</sub>;
- transfers of employees, calculated by the travel agency on the basis of a certified methodology. These come to around 0.9 kt of CO, (0.9 kt in 2017).

It is much more difficult to estimate the emissions along the supply chain for the other technologies (hydroelectric and thermoelectric) as the plants are formed of numerous components from different suppliers (unlike wind farms which have a single supplier) and some infrastructure was built at the start of the 1900s. We will offset these emissions thanks to the annulment of CER (Certified Emission Reductions) for hydroelectric projects.

## THANKS TO OUR PRODUCTION WE SAVE PRIMARY ENERGY SOURCES

The ERG Power plant has been awarded Energy Efficiency Certificates (EEC) by Gestore Mercati Energetici (GME) which attest to the primary energy savings made thanks to its configuration as a high-efficiency cogeneration plant. Each year the plant enables savings of over 100,000 TOE (each EEC corresponds to one TOE), equal to around 600 tonnes of CO<sub>2</sub>.

| 2018         | 2017         | 2016         |
|--------------|--------------|--------------|
| ~103,000 TOE | ~105,000 TOE | ~101,000 TOE |

As well as avoiding  $\mathrm{CO}_2$  emissions and having positive effects on the environment, the generation of electricity from renewable sources also benefits the Italian economy as it means the country does not have to purchase primary energy sources for the production of energy.

To adequately quantify this impact, we calculated the Tonnes of Oil Equivalent (TOE) avoided, i.e. the amount of conventional primary sources replaced by renewable energy: over two million TOE in the last three years.

| 2018         | 2017         | 2016         |
|--------------|--------------|--------------|
| ~890,000 TOE | ~810,000 TOE | ~830,000 TOE |



## ATMOSPHERIC EMISSIONS: A SUSTAINABLE AND RELIABLE COMMITMENT

The environmental management systems adopted to stimulate sustainable growth allow us to optimise our production processes, control plans, monitoring systems and continuous improvement goals.

Direct emissions are managed at ERG Power's natural gas-fuelled CCGT plant, built in 2010 and equipped with high yield burners that help reduce  $N\Omega x$ 

The company is constantly committed to monitoring all environmental aspects and in particular conveyed emissions (NOx - nitrogen oxides and CO - carbon monoxide).

These emissions are constantly measured through Monitoring Systems (EMS) which monitor the plant during "normal" and "transition" operating phases and verify compliance with the legal limits. If the instrument is unavailable, they also calculate and validate the missing data.

Operators in the control room are able to accurately verify how much has been emitted

from each emission point and carry out an hourly assessment of both the concentrations and masses emitted.

We guarantee the validity and functionality of the equipment for monitoring and maintaining the performances of the EMS through the application of the UNI EN 14181:2015 standard which establishes their periodic maintenance and calibration by both internal staff and specialised companies, with a final audit by external bodies.

All metrics that are not continuously measured are monitored by a certified external lab via periodic measuring campaigns performed in the ways established by the Integrated Environmental Authorisation.

As the plant is subject to the EU-ETS regulation (without benefitting from the allocation of free allowances), the  $\mathrm{CO}_2$  emissions are certified by a third party and sent to the Ministry for the Environment on an annual basis.



## WATER SAVINGS TO IMPROVE EFFICIENCY

We produce electricity using four different technologies, three of which renewable: wind energy, solar energy and hydroelectric energy, as well as thermoelectric energy powered by natural gas.

None of the three renewable sources consume water: only the hydroelectric plants use it to power the turbines, releasing the same quantity and quality of water as they take back into the atmosphere.

The thermoelectric plant meanwhile uses various sources of water for different functions:

- seawater is used as is to cool the plants and then returned to the natural water cycle in the same quality and quantity, minus the evaporation that takes place during the process;
- untreated fresh water (mix of surface and groundwater), supplied by the site utilities consortium, which after undergoing demineralisation in the SA9 plant is transformed by the thermoelectric power plant into steam which is used to produce electricity, i.e. as a heat vector for site customers. The multi-company site in Priolo Gargallo also uses demineralised water in other technological areas of its plants.

We constantly monitor these processes in order to improve efficiency and reduce consumption: over the years we have recovered fresh water flows in both the electricity production cycle and in other plants at the Priolo site, reusing them to power the demineralisation plant and thus reducing both withdrawals and effluents.

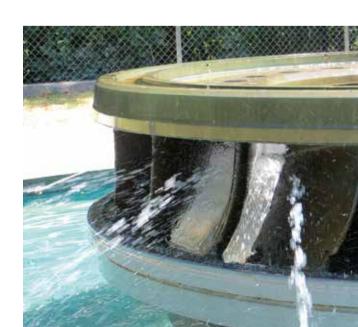
More specifically, the following flows have been recovered:

treated and partially desalinated water from

- the groundwater treatment plant which would otherwise have been discharged into the sea (approx. 1.3 million m³ in 2018);
- backwashing water (for washing the reverse osmosis ultrafiltration system) from the same SA9 plant (approx. 600,000 m<sup>3</sup> in 2018);
- water from the tanks used to collect steam condensation from the thermoelectric power plant boilers (approx. 195 m<sup>3</sup> in 2018).

In 2018 the amount of recovered water came to around 1.9 million m<sup>3</sup> giving the demineralisation plant an efficiency of 58.6% (around 63.8% in 2017 and 64.2% in 2016), calculated as the ratio between demineralised water produced and total incoming water during the process.

The water flow recovery index, calculated as the percentage relationship between recovered water flows and demineralised water produced, was 41.3% in 2018, 32.3% in 2017 and 33.8% in 2016.



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## ENVIRONMENTAL MANAGEMENT OF HYDROELECTRIC PLANTS

From an environmental perspective, hydroelectric power generation does not have any significant impact as the channelled water is returned to the body of water from which it was taken in the same quantity and quality.

The only potential source of pollution for receptors is the water used for cooling the plants, which could be accidentally contaminated.

More specifically, all of the production plants have tanks for the collection of natural plant drainage and water used to cool the machines that separate out oily parts.

Specific tank emptying systems prevent traces of oil from being spilled downstream.

If the automatic systems identify the presence

of oil in the tanks, personnel are trained to take all possible measures to remove the pollutant substance and prevent it from contaminating bodies of water.

For several years ERG Hydro has implemented plant solutions to prevent oil leaks in the environment.

### These include:

- the increased safety of system operating pressures, which has made it possible to reduce the volume of lubricating oil in plants;
- the use of next-generation synthetic biodegradable oils which are able to decompose in water and carbon dioxide without being harmful.



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## WOOD IN CORBARA, FROM WASTE TO RESOURCE

The responsible and sustainable management of a company also involves minimising its environmental impact, with the reduction in the amount of waste produced by the plants.

One particular type of waste is the wood which is transported along the river Tiber, particularly during floods, and accumulates along the banks of Lake Corbara.

Removing these residues from our rivers is useful for the industrial sector but also very important for the environment as it helps keep both water and riverbanks clean, generating hydraulic and hygiene benefits and minimising hydrogeological risk.

We have always sought to ensure the environmentally sustainable management of the woody biomass deposited along the banks of Lake Corbara which the law classifies as waste and which must therefore be managed as such.

However, as this wood has not been treated in any way we believe that rather than simply regarding it as waste we can use it as part of our efforts to safeguard the environment.

In collaboration with the University of Perugia, we carried out an analysis for the "Definition of an integrated system for the management of woody biomass that accumulates at Lake Corbara" with the aim of verifying the technical/legal feasibility of using it for energy recovery in biomass plants, for example, by analysing the chemical and physical characteristics of the material.

Following this study, after a long period of coordination with the Region of Umbria we

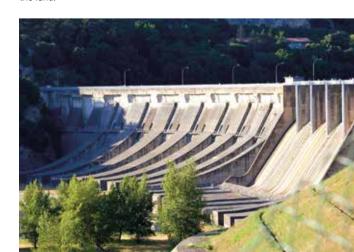
shared the project's feasibility and management methods.

Since the end of 2018 Corbara wood can be managed according to the Decision of the Regional Council concerning the "Guidelines for the management of vegetation residues deriving from the maintenance of green areas and the woody material deposited along the banks of reservoirs and rivers"

Among other things, these establish the possibility of considering the wood that accumulates on the banks of the lake as reusable material and therefore suitable for activities such as energy recovery, the wood industry or the production of soil improvers.

The preliminary collection, gathering, sorting and storage operations must firstly be illustrated to the supervisory bodies in a report that describes the activities and the areas involved in detail.

All of this is designed to support a circular economy that optimises the use of natural resources and minimises the impoverishment of the land.



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## **INCREASING MINIMUM VITAL FLOWS**

Barriers like dams and locks create discontinuities in the river ecosystem which impact on the riverbed downstream. These effects can be mitigated by releasing water downstream of each barrier for the health of the riverbed and irrigation.

In 2006 a specific piece of Italian legislation introduced the concept of the "Minimum Vital Flow", i.e. the flow of water required on a constant basis to sustain freshwater ecosystems and guarantee the balanced use of the water resource. The three regions that host the ERG Hydro plants (Umbria, Lazio and Marche) have recently updated their Water Protection Plans in which the management of water releases is geared towards mitigating the effects of the climate as far as possible given the importance of water accumulations in the ecosystem of the area.

More specifically, for all surface water that did not reach "good" status by 31/12/2015, the update of the Water Protection Plan of the Region of Umbria for 2016-2021 involves the application of the new Ecological Flow (EF), defined by the EU Water Framework Directive as the amount of water required for the aquatic ecosystem to continue to thrive and provide the services we rely upon.

The Ecological Flow (which therefore evaluates both quantitative and qualitative elements) is calculated on the basis of the Minimum Vital Flow and experiments carried out on each body of water or on uniform groups of bodies of water, correlating the values of the environmental indices with the flows.

As such, the Ecological Flow deems that the flow in every section of a natural river must have the qualitative and quantitative characteristics that the river requires to guarantee good ecological characteristics. The District Authority, by order of the Ministry for the Environment, has defined the methodology for determining the value of the EF in the district territory.

Until 2021 the calculation method can be further refined via the "verification and experimentation phase", also to take account of site-specific situations not previously identifiable. Specific experiments will therefore be required for the site-specific assessment of general hydrological conditions and the repercussions on human activities.

We are committed to supporting the Regions and other management bodies - in our areas of expertise - in all necessary activities to achieve the surface water quality goals in the areas in which we operate, making our knowhow and resources available



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## THE OASIS OF ALVIANO

In the eastern part of the Alviano lake, slightly upstream of the dam of the same name, there is an oasis that occupies around 400 of the lake's 900 hectares which hosts many resident bird species and, thanks to its geographical position, has also become a stopping point for migratory birds.

It has all the typical features of humid freshwater areas - marshes, a pond, swamps, a water meadow, one of the largest woods in Central Italy - and is home to a huge number of bird species, such as great white egrets, stilt birds and ospreys, and many different amphibians, such as crested newts and agile frogs.

The mammals that live in the oasis include foxes, boars, badgers, porcupines and hedgehogs.

Thanks to the partnership with ERG and the province of Terni, the WWF takes care of the Oasis of Alviano, opened in 1990, overseeing its maintenance and guaranteeing the best possible home for the various species.

This year's activities were focused on the maintenance of the "flooded prairies" which, following the flood of 2012, were filled with mud, with a significant variation in morphology and the consequent growth of weeds.

With the mud having been removed in past years, activities in 2017 and 2018 concentrated on the cutting of weeds which, reaching up to 4 metres high in some places, prevented many birds from stopping and blocked tourists' view of the species. These measures immediately revitalised the Oasis from both a natural and tourism point of view.

Innumerable species nested in the Oasis in 2018, some new - including rosy starlings and northern bald ibis - and others resident.

For the first time there was also a group of 22 pink flamingos, which passed through at the start of April.

There was also a significant increase in tourism: the redevelopment of the watchtower, the refurbishment of the observatory and the educational workshop, and the creation of a photography hut by the pond, on the water's edge, attracted greater numbers of tourists and photography enthusiasts.

There were plenty of visits from school pupils who were able to study the life of the marsh in a laboratory equipped with microscopes, cameras and screens, observing all the phases of a biology research project "live".

Photography enthusiasts were able to develop their passion at the oasis: thanks to hides perfectly integrated among the wildlife, ideally positioned in relation to the sun and close to the feeders that attract the animals, we are able to offer a suitable environment for those devoted to this hobby.



Kindly lent by the Oasis of Alviano

## ENVIRONMENTALLY-FRIENDLY CONSTRUCTION AND MANAGEMENT

When designing, constructing and managing every new plant we carefully assess environmental, social, archaeological and technical-urban planning aspects. We always seek to identify the solution with the least impact, prioritising cooperation with the local authorities, collaboration with local communities, our expertise and best industry practices.

In 2018 we began building new wind farms in France and Germany, which will help us achieve our business plan and consolidate our standing as the leading producer of wind energy in Europe.

Below is a brief summary of the measures we have taken to minimise environmental impact - visual and social impact in particular - in the various countries.

#### **FRANCE**

## WIND FARM Vallée de l'Aa2

#### Pas-de-Calais. North-East France

Construction April - December 2018.

Environmental impact of the wind farm on the land: to minimise the impact generated by the movement of the soil, the planning of the internal road system and assembly pitches involved the stabilisation of the existing soil using lime, therefore minimising both on site digging and the introduction of new material from external quarries.

Visual impact caused by the building of electrical substations: to minimise the visual impact generated by the installation of the two electrical substations, we applied an external wooden finish that blends in with the surroundings.

Interaction with resident birds: there was a risk that worksite activities would begin during the nesting period of the bird species present on site. So as not to interfere with the natural biological cycle of the local species we counted the number of nests on the ground. An ornithologist confirmed that there were no nests and this enabled us to proceed with stripping the land in the worksite areas having fenced off some zones to prevent the construction activities from interfering in any way with the local birdlife.

Noise impact on the local community: one of the biggest preoccupations of the local communities is the noise emitted by the blades of the turbines, the tips of which rotate at around 300 km/h. To accurately evaluate the noise generated by the new wind farm it was necessary to establish the "ground zero": for this reason, before construction began an analysis of the noise in the area, the socalled background noise, was carried out. In 2019, with the machines already in operation, we will perform another analysis to assess the impact of the machines on the surrounding environment. If necessary, in collaboration with the turbine suppliers we will alter some of the operational parameters of the turbines in order to reduce their acoustic impact.

## WIND FARM Linda

## Saxony-Anhalt, Germany

Construction September 2018 - June 2019.

Preliminary studies on habitat and biodiversity: to minimise the possible interaction between the worksite and sensitive natural areas, we analysed the local biodiversity, marking off areas worthy of conservation with fences and signs.

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Minimising the impact on the soil and subsoil: during the construction phase we assessed the best solutions for reducing this impact through the recovery and reuse of topsoil and the consolidation of the foundation soil, without using concrete posts.

When planning the worksite we noted that the topsoil was fertile and we therefore decided to recover the first 20/40 cm of stripped soil for future use at the site, limiting the amount of material brought in from external quarries. For the same reason, when creating the roads of the farm we used geogrids to reinforce the foundations, again minimising the amount of external material required.

Finally, in the subsoil we strengthened the soil around the turbine foundations using vibrocompacted gravel, minimising the use of nonnatural materials.

### OPERATIONAL MANAGEMENT

Our environmental management best practices are not limited to the construction phase of our plants: we also guarantee that their operation does not interfere with the environment and the local communities.

This means that we continue to monitor some areas already analysed in the permitting phase also during ordinary operations, carrying out additional subsequent monitoring.

One of the most common of these checks assesses whether the turbines interfere with resident and migratory birds.

## Italy

The studies carried out in Italy at our wind farm in Vicari, in central Sicily, are now in their third year and make it possible to catalogue the birds in the area and their behaviour in increasing detail. The analyses have shown that despite their elevation



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from the land, the turbines become a part of the landscape and do not interfere with the flight of the birds.

None of the species identified at the site have abandoned their reference area; on the contrary, the changes in their use of the space (distancing themselves) and flight behaviour (increasing heights) seem to suggest that the birds are able to detect the presence of the blades and avoid them, modifying the direction and height of their flight paths.

Conversely, migration routes are at a higher altitude than the height of the blades.

### Bulgaria

In Bulgaria, in the protected area of Kaliarka, we took part in a project to monitor the interference of the blades on the migration routes of species crossing the Black Sea. A group of ornithologists constantly monitors the area also thanks to the help of radars which record the size and flight direction of flocks: on the basis of their path, the ornithologists can request to block the turbines on the birds' flight paths.

#### **Poland**

The monitoring of resident or migratory birds and bats began when the farm was constructed in 2016. The regular monitoring process involves

## WIND TURBINES: FULLY SUSTAINABLE PLANTS

Almost all of the materials used to construct a wind turbine (tower, nacelle and blades) are recyclable, making it easier to dispose of at the end of its useful life. A study by ANEV, the Italian Wind Energy Association, broke down the various construction elements, hypothesising the following scenario:

| Material         | Origin                              | Scenario      |
|------------------|-------------------------------------|---------------|
| Steel            | Tower and other components          | 90% re-usable |
| Cast iron        | Foundations and other components    | 90% re-usable |
| Copper           | Electrical components               | 95% re-usable |
| Aluminium        | Electrical components and structure | 90% re-usable |
| PVC plastic      | Other components                    | 100% landfill |
| Fibreglass       | Blades and nacelle structure        | 100% landfill |
| Lubricating oils | Turbine's mechanical parts          | 90% re-usable |

Source: ANEV

The same study also analysed the Energy Pay Back Time (EPBT), i.e. the time needed to reach a balance between the energy used during the extraction, production, design, transportation, installation, future dismantling and recycling phases of the facility and the energy it produces when operational.

For a 2 MW wind turbine, the most common type in Italy, the estimated average EPBT is 9 months. After this time, a wind turbine has already produced the amount of energy needed for its entire life cycle: this is another factor that underlines the environmental compatibility of producing electricity from renewable wind power.

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activities in the air and on the ground, the reproduction process and the ground search for birds and bats potentially involved in collisions. The observations made during the year suggested that the farms have very little effect on the activities of the birds.

In 2018 we also continued to monitor the noise generated by our plants thanks to a mobile laboratory which recorded, for each of the various receivers, typically local farms, the amount of noise produced by our plants. The measurements were taken in different locations, both during the day and at night, and showed that the legal limits had not been exceeded at any time.

## Germany

We also monitored the influence of our farms on the life of bat colonies in Germany, taking account of their flight trajectories and feeding areas. The automatic control system, which enters into effect on the basis of specific environmental and climatic variables, monitors the movements of these animals close to the turbines, automatically shutting them down in the event of possible interactions between the machines and the bats.

The blade management systems were also set to regulate another type of interference between the plants and the local community: the flickering effect which occurs when the sun is low in the sky and projects the shadow of the blades across the landscape, creating a continuous alternating light/dark effect on the homes close to the farm. This phenomenon generally occurs for brief periods during the year and for just a few minutes at a time, and is particularly common in Northern Europe where the high latitude and low angle of the sun accentuate the effect.

The implemented management system is automatic: on the basis of certain variables like the angle of the sun, the intensity of the light, the position of the turbine and the position of the sites, it acts independently, stopping the blades in conditions conducive to the flickering effect.



## SOCIAL RESPONSIBILITY

Safety and certified management systems as a key condition for the management of the business and our assets.

Training, the enhancement of talent and inclusion are the principles of our approach to people.

Suitable remuneration for attracting talent and motivating managers.

We support the development and promotion of the local areas in which we operate by providing training activities for youths and incentivising the launch of new businesses.



100%
ISO 14001 AND/OR OHSAS 18001
CERTIFIED ITALIAN COMPANIES
CONSISTENT WITH THEIR ACTIVITIES

20.1% FEMALE EMPLOYMENT

99.7%
EMPLOYEES ON PERMANENT EMPLOYMENT CONTRACTS

5.9 days

OF TRAINING PER EMPLOYEE

## OUR PRINCIPLES THE GROUP CODE OF ETHICS

ERG believes that the complete compatibility of its activities with the health and safety of its workers, the local area, natural resources and the surrounding environment are essential conditions both for the acceptability of its plants and its operational activities, and to achieve its growth objectives.

ERG thus constantly works to ensure that the business operations of all Group companies are carried out with full respect for the health and safety of Group and third-party employees as well as the environment in the broadest sense, carefully considering these factors as part of the long-term planning process and encouraging the adoption of environmentally-friendly and energy efficient technologies. [...]

Finally, as confirmation of the huge importance ERG gives to the values of health, safety and environmental protection, the evaluation of each Group employee's individual performance considers whether or not their conduct is in line with company policies, and particularly the above points. [...]

From the ERG Group's Code of Ethics

## Furthermore

The Group's sustainable approach takes the form of policies aimed at protecting and developing its Human Capital through: [...] the adoption and application of certified processes and procedures, also supported by the adoption of Health and Safety Management Systems certified in accordance with recognised standards, aimed at minimising risks and removing the causes which may jeopardise the health and safety of its personnel and the third parties who operate at the Group's plants and/or offices. [...]

From the ERG Group Sustainability Policy

## Furthermore

In observance of these principles we intend [...] to encourage careful and responsible management within the sphere of safety in the workplace, aimed at the prevention of accidents, injuries and occupational diseases and the protection of the health of the workers, by means of:

- the precautionary assessment of the risks associated with the activities and the processes handled for the purpose of adopting appropriate technical-operational mitigation solutions;
- the verification that, both the design and construction of new plants, and the realisation of changes to processes, equipment, the organisation (structure and/or roles), are supported by an analysis/assessment of the risk:
- the identification and on-going monitoring of the significant dangers of accidents linked to the plants run,
   and adopting suitable prevention measures in line with standards of recognised validity;

- the use of systems and processes aimed at ensuring the intrinsic safety of the activities;
- · the checking and assessment, in terms of safety, of the reliability of the contractors and the suppliers;
- the drawing up of emergency plans aimed at the protection of the population, the environment and those who work in the Facilities, in the event of an operating anomaly and/or a significant accident:
- the registration, analysis and communication of the accidents and near misses, planning and implementing the necessary improvement action.

From the Quality, Environment and Safety policy

# OUR MANAGEMENT METHODS WITH REGARD TO HEALTH AND SAFETY

The ERG Group pays close attention to managing the Health, Safety and Environment aspects of its plants, going well beyond straightforward compliance processes: for this reason, it has adopted Integrated Environment, Health and Safety Management Systems compliant with the ISO 14001 (Environment) and OHSAS 18001 (Health and Safety) standards.

The latter will be replaced in the next few years by certification based on the ISO 45001 standard and extended to the Group's international companies.

In this way we ensure constant supervision of the processes carried out within our production sites via operations which permit the systemic integration between the two areas (Environment and Safety) which are held in equal consideration.

In all our technologies (wind, solar, hydroelectric and thermoelectric power) an integrated HSE management system has been adopted:

- each Group company has its own HSE policy which draws on the principles laid out both in the Group's Code
  of Ethics and in the Sustainability Policy:
- the head of the company (Managing Director, General Manager, Sole Director etc., as applicable) is responsible for its implementation, guaranteeing the correct application of the system, also by third parties, and is also in charge of ensuring regulatory compliance;
- an HSE unit, co-ordinated at central level, which for each technology provides the support for the legislative monitoring, the checking of the on-site activities and supervision of the correct implementation of the operating procedures in the environmental and health and safety sphere;
- the Operating Units which directly manage the plants in accordance with the matters envisaged by the
  integrated management system, ensuring the accurate legislative compliance and the observance of the
  policies of all the other commitments voluntarily undertaken by the Group.

In 2017 a Group HSE unit was set up with the aim of spreading a Culture of Knowledge and Risk Prevention with regard to health, safety and environmental issues and of guaranteeing the observance of the legislation in force by means of the development of an integrated HSE system at Group level and the co-ordination of the HSE Organisational Units dedicated to the different generation technologies. An integration, which in ERG's vision, has the objective of designing and accomplishing a single management system which, maintaining the different technologies of the operating areas, makes it possible to harmonise and simplify all those "transversal" processes relevant for the safety and environmental aspects.

According to the safety procedures in force, employees, third parties and occasional guests are previously informed and trained on what to do, and in particular what procedures to implement, if an emergency occurs at the operating sites. Furthermore, emergency management simulations and evacuation drills are carried out periodically.

The Group actively collaborates with the workers' safety representatives and constantly involves them to analyse the risks linked to health and safety and to organisational changes; it organises systematic meetings in order to discuss and evaluate any improvements that could be made.

## IDENTIFIED RISKS AND SPECIFIC MANAGEMENT METHODS

The Group's commitment in this area also takes the form of the analysis of the possible impacts of its business activities on health and safety.

In general, we can divide the analysis up into three areas:

- · impacts on the health and safety of workers;
- · impacts on the health and safety of third party workers who operate care of our plants;
- impacts on the health and safety of the individuals who live in the vicinity of our plants.

The analysis of the possible impacts of the activities on the health and safety of the workers, both employees and third-party companies who operate care of our plants, is carried out within the sphere of the Management Systems and is based on legislative compliance and on the best sector practices. The adoption of these systems permits the use, for whomever operates in our plants, of uniform procedures and suitable control systems: also thanks to on-site audit activities, we guarantee an ongoing supervision and continual checking of the correct running of the activities.

These controls are joined by the accurate analysis of the causes of any accidents, as well as near misses: in this way we implement a series of preventive actions which, using the "lesson learning" method, can prevent the repetition of accidents or the transformation of near misses into accidents.

Since we believe that the protection of health and safety is a generalised cultural fact and must not be a

"unilateral initiative of the ERG Group", we promote the collaboration and involvement of employees and third parties via dedicated meetings and events which may stimulate active participation in the processes, also by means of the formalisation of indications and suggestions for the improvement of Health and Safety standards: we usually reward active participation also by means of internal competitions.

The Group objectives regarding the safety of employees (included in the Sustainability Commitments) envisage the "absence of accidents caused by safety shortfalls in the plants and in the offices". The reporting is available in the specific section of the document.

Also, the impacts on the health and safety of the individuals who live in the vicinity of the plants are handled with a view to an Integrated Management System and, therefore, are analysed for each technology:

Wind farms: in the design phase, the class of the turbines is selected for the specific site and, therefore, the size is developed so as to operate safely during the entire life cycle of the plant. The wind turbines installed at our wind farms are designed and constructed by leading construction companies according to the pertinent international legislation, so as to ensure the safety and health of the workers when running. These turbines are also compliant with the necessary certification in terms of electricity generation, structural reliability and safety specifications relating to installation and start-up. The maintenance programme implemented by the Company permits the running of the wind farm under safety conditions for the entire life cycle of the site.

Hydroelectric plants: over the last few years, revamping work has been carried out on many electricity generation units with the adoption of latest generation machines and equipment which observe stringent design/installation standards with respect to the safeguarding of the health and safety of the operators and third parties during the running and maintenance activities. Furthermore, the inspection and maintenance programmes ensure the permanence of the expected safety levels. However, the hydraulic works connected to the generators (in particular the dams) represent an element of attention: their structural safety is constantly monitored by the Group units which also collaborate with the Institutions tasked with the periodic checking of their stability.

An additional significant element of these plants in the handling of the safety of the area on which they are located are the so-called overflow "detention activities" which the dams perform thanks to their accumulation capacity. Accordingly, the overflow surges of the rivers due to heavy rainfall are interrupted, the water collected and released in a controlled manner so as to decrease the impact. Obviously, the regulation of the overflows is carried out according to well defined operating protocols agreed with the local Authorities which require the full conciliation of the opening manoeuvres of the mobile parts so as to guarantee the safety of the populations downstream from the dams.

The **thermoelectric plant** is included within the context of the Priolo Gargallo multi-company site, where numerous industrial activities co-exist. The gas turbines installed are latest generation, Low NOx in type and therefore guarantee very contained emissions well under the authorised thresholds. Machines and equipment are compliant with stringent design/installation standards with respect to the safeguarding

## NON-FINANCIAL REPORTING PURSUANT TO ITALIAN LEGISLATIVE DECREE 254/2016 HEALTH AND SAFETY AREA

of the health and safety of the operators and third parties involved in the running and maintenance activities. Furthermore, the inspection and maintenance programmes ensure the permanence of the expected safety levels.

Very stringent safety protocols are applied within the site in consideration of the type of plants present (in particular the presence of a refinery subject to the legislation on RIR - major risk accident plants). The emergency response service in the event of emergency is ensured by the Fire Brigade and A&E/Nursing services present at the site; the co-ordination with the local authorities, in accordance with the matters envisaged by the Multi-company Internal Emergency Plan, guarantees the intervention of outside support so as to contain any emergency situations at the site and safeguard the population which lives in the surrounding areas.



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## **OUR SAFETY SYSTEM**

The careful handling of health and safety in the workplace is one of the consolidated values of our way of doing business. For this reason, as well as being included in the Code of Ethics, it is referred to in the Group's other policy documents, such as the Sustainability Policy and the HSE Policies.

In 2018 we continued the process of reviewing and harmonising the safety procedures of the various technologies, implementing a series of activities to protect the health and safety of workers.

#### **H&S MANAGEMENT SYSTEM**

The first initiatives concerned the reference standards and monitoring processes. In particular, in light of the new ONE Company structure, we launched a process of simplifying and harmonising all certified OHSAS 18001 procedures, consolidated over time in the various Group companies, bringing them into line with the new 2015 standard. By the end of 2020 we will replace the current certification with the new ISO 45001 standard certification.

## SYSTEM FOR CHECKING PERFORMANCES AND AUDITS

Monitoring the key performance indicators (KPI) is crucial for constantly stimulating the organisation towards the realisation of the "zero accident" goal. This is why the system for checking the performances with regard to safety and environment has been combined and aligned for all the Group companies through common definitions, KPI, analysis and reporting methods as well as standard criteria for handling and analysing the accidents.

We have also enhanced the checking activities by means of a Programme of Internal Audits to be implemented, thanks to "transversal" teams, on all the company entities. In this way, we have fostered the exchange of knowledge and interaction between different operating areas and the systematic analysis of the results, thanks to which it is possible to improve the working conditions of our people while protecting our assets.

#### SYSTEMS FOR REPORTING NEAR MISSES

We believe that our staff's awareness and active participation is essential for the implementation of our principles.

With regard to near misses it is very important to promote a safety culture based on prevention because it helps to protect people and the environment.

For this reason, we have decided to incentivise and strengthen the process used by employees and third-party companies who operate at our sites to report near misses: in fact, by closely analysing each report we can trace the causes and assess whether there are similar situations elsewhere in our plants.

Even if our respect and monitoring of operating procedures remains high at all times, in 2018 four Italian employees suffered injuries - all of which during wind farm maintenance activities - due to behavioural issues rather than unsafe equipment or plants.

The Group's HSE units assessed the events and took suitable action to prevent a repeat of the accidents. The analyses not only concerned the specific site of the accident but also all the areas of the plants affected so as to extend the effects of the prevention action as far as possible.

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#### RAISING AWARENESS OF THE CONTRACTORS

GOVERNANCE

We believe that the safety culture must not be cultivated within the Group alone, but must also be spread among external parties that come and work care of our sites.

Accordingly, we have directly involved our contractors in classroom-based awareness raising activities in order to promote the safety culture and share our approach.

We have also reviewed the company documents which regulate dealings with suppliers to

emphasise the technical-documental checks on the requisites of contractors before they start work.

Finally, we have implemented a last-minute risk analysis process which involves - when activities actually get underway and under our coordination - an additional examination of the work areas in order to confirm or adapt the risk assessment performed previously.

This final moment is formalised on-site between our representatives and those of the contracting company.

## SAFETY WALKS AND ON-SITE HSE AUDITS

During the year, our Group's HSE Organisational Units carried out many on-site checks to monitor the compliance of third party companies with Health, Workplace Safety and Environment principles and regulations. In addition, the standards set by the OHSAS system help monitor workplaces and processes. In 2018, 86 controls comprising on-site audits and specific checks were carried out at the ERG Power plant with a very low rate of nonconformities recorded among third party companies (approx. 8% of HSE audits).

At the Hydroelectric Complex 47 on-site HSE audits were carried out on contractors: nonconformities mainly regarding documentation were discovered in 50% of cases. In addition, 40 Safety Walks & Talks were held: discussions on site with suppliers on operating procedures, analysing on-site activities in order to identify "unsafe conditions" and relative improvement actions.

Working together with contractors to manage health and safety aspects is imperative for ERG and an important part of its continuous improvement process, a value to promote not only through the instruments for monitoring the activities of contractors but also through the exemplary conduct of our personnel, awareness-raising and training tools and the active involvement of all workers.

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WIND POWER CHECKS

86
THERMAL POWER CHECKS

33 SOLAR CHECKS

87
HYDRO POWE CHECKS

## INTERNAL HSE PERFORMANCE SEMINAR

Our business encompasses four different technologies (wind energy, solar, hydroelectric and thermoelectric) which adopt a common approach to the health and safety of employees thanks to a central Group HSE department with coordination and guidance functions.

The concept of sharing experiences and practices led us to organise a joint working day involving the managers of the various technologies, the relative HSE reference persons and the top management.

A large amount of the work focused on analysing the 4 accidents that took place in 2018 and the near misses - events that actually occurred but did not cause injuries.

It was established that the main causes of the accidents related to human conduct rather than plant safety deficiencies, a factor that reduced their impact and enabled those involved to return to work without any permanent consequences.

On this basis, in 2019 we will work on the sphere of personal conduct, raising the awareness of workers with training days and tools and methods, also innovative in nature, to create a safety culture that goes beyond the standards established by law.

Another initiative will be the new Safety Competition, through which actions to improve

procedures and operating methods can be suggested with prizes awarded for the best ideas. The supervision of the Group and the sharing of experiences enable us to broach the issue of safety in a consistent and coordinated way: by sharing experiences we can identify the best practices adopted at each plant and disseminate them across the board, at the same time planning training courses. This is how we are able to develop the shared operating methods that will form the basis for the Group's safety approach in the future.



#### **MEASURING ELECTROMAGNETIC FIELDS IN ROMANIA**

In 2018 we launched a campaign to measure the electromagnetic fields in our substations in order to guarantee the safety of workers and identify any possible interference with the surrounding environment. With the support of an external body we monitored electromagnetic values in 20 places at our substation and verified that they were all within the legal limit, meaning that they have no impact on the environment or people.

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### HYDRO PLANT SAFETY PROCEDURES

Our hydroelectric plants are highly structured and widespread across the territory: they are composed of a very high number of water supply and channelling works with flumes, suspended aqueducts, intake structures, drainage structures etc.

We felt it was necessary to carry out a widespread inspection of the condition of these works, an additional project to the ordinary and extraordinary maintenance works that would give us a broad overview of our plants.

The definition of the Operational Safety Processes of the Hydro plants was the main project for 2018 and sought to provide us with:

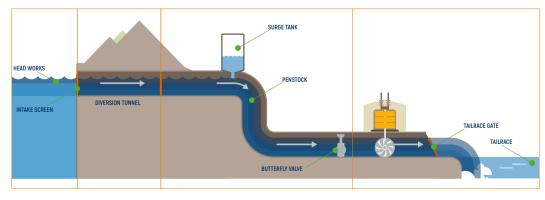
- an up-to-date overview of the condition and functionality of the main components for the safe management of the hydroelectric plants;
- a multi-year improvement plan with relative priorities both in operational/maintenance terms and as regards investments.

The activities regarded all of the Group's hydraulic profiles and the conduits of our main plants:

- · Tiber (Baschi and Alviano plants);
- Nera/Velino (Cotilia, Galleto, Monte Argento, Narni and Nera Montoro plants);
- upper-middle section of Nera River (Preci, Triponzo, Borgo Cerreto and Galleria Medio Nera plants).

A third party produced an inspection report for each plant, highlighting the "condition index" of the sites, the eventual operating risk and any eventual improvement measures.

The inspections and analyses focused mainly on the electromechanical interception and manoeuvre systems, the penstock, the return flow channels (drainage) and the protective equipment, for a total of over 1000 technical elements examined



NODE 1 NODE 2 NODE 3 NODE 4

DATA AND

Performed according to the HAZOP (HAZard and OPerability analysis) method, the analysis examined four types of risk: safety, environmental, economic and reputational.

The results of the analyses were very reassuring: no sites presented critical issues that required

immediate action in order to mitigate risks.

The necessary actions were mainly aimed at maintaining the condition of the plants over the years and/or improving their functionality, and will be implemented throughout the course of the Plan on a yearly basis.



## **ERG HYDRO: THE LARGE DAMS**

ERG Hydro, the company that owns our hydroelectric assets, operates seven "large dams" (Aja, Alviano, Corbara, La Morica, Marmore, Salto and Turano), with a total reservoir volume of approximately 600 million m³ of water.

The structural monitoring of the dams is entrusted to a team of engineers which periodically measures the horizontal and vertical movements of the dam, its rotations, deformations, etc.

All the data originating from the instrumental monitoring system is stored in an "IT database" for subsequent analysis and validation.

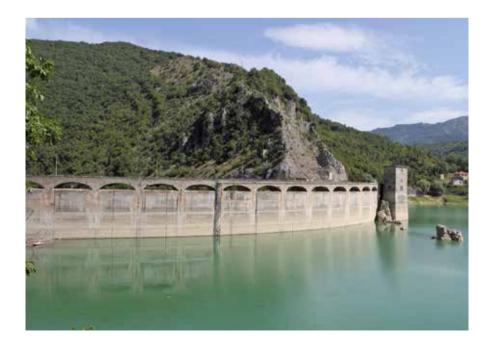
This data makes it possible to analyse a number of key parameters in order to assess the integrity of the structure, such as the "up-stream/downstream" change in direction of the crowning (top part of the dam), as well as under-pressure values and the values of losses or filtrations.

The calculations are based on the straightforward

flowcharting of the data at ten-year intervals (analysis of long-term trends) or on statistical conduct-related models.

Specifically, the latter make it possible to compare the forecast values with the real measurements carried out in the field: in the event of major discrepancies, we perform additional instrumental controls to analyse any anomalies in the structural behaviour of the dam. All data recorded are sent to the Supervisory Authority every month and every six months we prepare a report on the state of the dam containing all the data from the previous five years.

In addition, twice a year the Supervisory Authority carries out a "supervisory visit" during which it verifies the functioning of all the equipment installed at the dam and takes sample measurements of the structural monitoring system of the infrastructure.



## THE TURANO DAM: CONSTRUCTION OF NEW DRAINAGE CURTAIN

We plan the ordinary and extraordinary maintenance of dams and their complementary works (floodgates, guardhouse, control towers, generator rooms) on the basis of instrumental and functional tests.

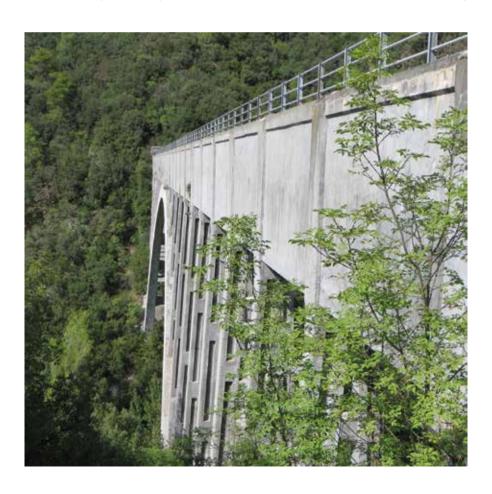
In particular, we have recently built a new drainage curtain for the Turano dam, with a view to minimizing the subpressures along the foundation.

The construction of the new curtain entailed drilling about 2,200 metres of drainage pipes inside the body of the dam and about 800 metres of drainage pipes along the foundation.

At the same time, we installed 10 piezometers for monitoring the subpressures and extracted 100 samples of concrete for the mechanical tests on the material used to build the dam (compressive and tensile strength, specific weight, permeability and ultrasonic pulse velocity).

During the final project authorization phase, the General Manager of the Dams requested the installation of three extensometers at different depths (10, 20 and 30 m) to monitor any movements between the abutments and the impost section of the foundation.

Every two weeks, the extensometers, made up of invar steel bars and a stainless steel measuring



head, will be read using a centesimal digital gauge.

#### THE FLUMES

In 2018, we completed the seismic improvement works on the flume of Scheggino, part of the complex infrastructure for conveying water from the middle section of Nera River to Piediluco Lake (total length of the gallery 42 km).

The seismic improvement works entailed wrapping the horizontal cross beams of the piers and the rectangular section of the piping with synthetic materials made of carbon fibre and epoxy resin. In addition, to limit longitudinal movement, we installed two pairs of "seismic dissipation plates" in the support of the structure of the flume with the lateral abutments

#### THE SALTO AND TURANO VIADUCTS

In 2018, we completed the physicochemical characterisation plan of the reservoir crossing viaducts in Fiumata (Salto dam) and Castel di Tora (Turano dam).

The activities provided a complete overview of the state of the works:

- geometrical survey of the structures, using drones and Laser Scan technology;
- "Ferroscan" surveys for determining the characteristics of the reinforcing bars (position, number, size);
- state of conservation and strength of the concrete and steel (sampling and laboratory tests: over 50 concrete test pieces, five steel bar samples and over 70 indirect yield and fracture tests on the steel):
- geotechnical investigations to characterise the foundation rock from a mechanical point of view (four boreholes down to a depth of 30 metres);
- geophysical investigations to reconstruct a model of the subsoil using MASW (Multi-channel Analysis of Surface Waves) techniques for the seismic characterisation of the two sites;
- investigations into the submerged structures by means of underwater visual inspections of the supporting piers (conducted by scuba divers down to a depth of 12 metres and by ROVs for the structures situated at greater depths).

The materials are currently being characterised and, depending on the outcome, any necessary maintenance operations will be performed.

#### DAM MANAGEMENT IN THE EVENT OF AN EARTHOUAKE

In the event of seismic events with a magnitude of greater than 4 on the Richter scale which involve areas in proximity to dams, it is envisaged that, in accordance with a series of consolidated procedures and protocols defined by the Supervisory Authority, in the hours immediately after an earthquake, the Group's technical and operational departments - coordinated by the Chief Engineer - carry out a careful inspection to ascertain the structural conduct of the dam and of the load-bearing structures of the complementary facilities, as well as functioning tests on the drainage equipment, power supply systems and telephone connections.

The results of these checks are promptly sent to the Supervisory Authority as an "Extraordinary Certification of the condition of the works".

## **DETENTION OF RIVER OVERFLOWS**

Besides the 19 generation plants (including the 3 new plants constructed in 2017 which use the releases of the Minimum Vital Flow), ERG Hydro has 7 large dams and 22 minor barriers, all located along the rivers Velino, Nera, Tiber and their tributaries.

Barriers and water works have the main function of conveying the river water to the power plants. They also have a safety function, making it possible to handle and control natural flowrate changes (overflow events) and mitigating the impacts on the area.

In the event of overflows, the operation of the reservoirs, especially those with a significant capacity, makes it possible to modulate the releases of water downstream from the barriers in quantities which can be received by the water basins, containing the flowrates within the river-beds: it is therefore possible to exploit their accumulation capacity so as to release lower flowrates downstream thus operating a

"detention" of the river overflows.

In 2018, following the overflows in March and April, we launched procedures to monitor and manage incoming water flows, collecting the excess water from lake Turano for around 40 days and from lakes Corbara and Alviano for around 20 days.

Thanks to the rainfall and flowrate detection systems, installed throughout the pertinent area, and the constant contact with the Authorities (Civil Defence Agency, Regional Operations Centres, Prefectures, Municipal Authorities, etc.), during overflow events the Terni control room ensures continual remote control of the plants and the water works, managing river water transits to avoid flooding.

Besides remotely managing the plants and accessory facilities, guards are always present at all the dams, trained and ready to deal with any situation; we have also installed command and control systems to operate drainage equipment.



## OPERATIONAL VIDEO SURVEILLANCE TO PROTECT MAINTENANCE

The goal of Operational Video Surveillance is to improve the safety of operators working at the Hydro plants, particularly during maintenance activities in overflow conditions.

Video controls make it possible to monitor the plants and enable personnel in the remote operation room or at the plant to provide operators carrying out technical work on site with remote assistance.

The operational video surveillance system makes it possible to monitor:

- · locks and discharges;
- · the rotating parts of the plant;
- the assistance provided to personnel working on site during overflow conditions;
- the basin downstream from the locks, in the event of releases.

Controls can take place:

- · from a "local" station at the plant;
- · remotely from the remote operation room;
- · automatically.

Other possibilities offered by the system are perimeter controls, fire protection monitoring also in the absence of personnel, the monitoring of lighting systems and electricity consumption, thereby allowing energy savings.

We therefore implemented an integrated safety system monitoring and management platform (PSIM – Physical Security Information Management) in line with the most advanced technology standards and regulations.

The PSIM can collect data from different devices (video surveillance, sensors, access control, fire detectors, energy saving systems etc.) in order to identify and solve, in a simple and proactive

way, also highly complex situations. Thanks to many custom and virtualised automations, this integration offers numerous organisational advantages including greater control, improved reporting and a drastic reduction in intervention times.

The Centralised System is able to integrate different systems (video surveillance, access control etc.) on the same platform and, at the same time, manage them individually and independently.

If necessary, it can be programmed to exchange data and/or information with the other systems.

The complete installation of the video surveillance and centralised security system in 2018 will gradually be followed by the expansion of other structures, systems, intake and drainage structures in order to cover all of the Group's plants in the space of a few years.



### "MAN DOWN ALARM" APP

To guarantee the increased safety of maintenance workers, ERG Hydro will fit the smartphones of technical staff with a new app with a "man down alarm" function.

This new function will make it possible to take prompt action in the event that people working in potentially risky conditions find themselves in emergency situations, even if they are on their own. In fact, the application makes it possible to identify the position of the person with an accuracy of around 20 metres in optimum conditions.

In the event of illness, accidents or other dangerous situations, the application can activate the alarm in the following ways:

- manually, when the worker deliberately sends the alarm from their phone;
- automatically, when the worker assumes a horizontal position for longer than a preestablished length of time.

The app does not require external devices

because it functions on two levels:

- · app on the worker's phone;
- remote control panel that receives the alarms located in the plant's Remote Operation (RO) room, manned 24/7.

Whether sent manually or automatically, the alarm signal sent via mobile data connection is received:

- by the remote control panel continuously monitored by RO staff;
- by a list of email addresses that for each user includes a group consisting of the Department Manager, the assistant and their closest colleagues.

One significant aspect considered in the development of the application is respect for the privacy of workers: the system will only show their position in the event of an alarm and will not enable the company to check where they are in real time or see their location or movements.

#### FROM IDEA TO IMPLEMENTATION

The idea and design for this App was presented during the ERG-Regeneration challenge 2017 and was one of the three winners of the ERG Award.

The implementation in the field and effectiveness of the system show how the competition attracts high value-added proposals and how the selection process is successful in identifying the best ideas.



## **DEVELOPMENT OF THE COMMUNITY**

Being a part of the community does not just mean constructing our plants: it also means forging a system of relations with the local community that goes beyond the specific rules defined by the regulations for obtaining permits.

Being present means interacting with the community via periodic updating meetings on the advancement of the project, explaining how and why a plant is built in a certain place, what value added it brings and, if possible, also involving the community directly in the project.

The website of Epuron, our development company in France, has a list of the projects undergoing development, the authorisation status of each one, as well as copies of public notices and some project documents.

Each of the projects under development in the UK has a dedicated website in which local communities can find information on the project's development process.

In France we have done even more: the direct engagement of the local population went beyond merely presenting the project and discussing land use planning in public, to involve them directly in the funding of the project being developed.

Through the first (for ERG) participation loans (based on mini-bonds) we have given citizens in the towns close to the site the chance to actively participate in the project by investing a sum of money returned at a very advantageous rate.

For Prospoder wind farm, thanks to the participation of 59 people we raised EUR 50,000



which will be used to install an anemometer and further develop the plans to construct the farm. Funds were also raised for the development of the Saint-Vincent-la-Châtre et Fontivillié wind farm: 76 people participated for a total of EUR 70,000 which will go towards the installation of an anemometer.

On other occasions we have intervened more directly in local works: at the Vallée de l'Aa2 wind farm we contributed to renewing the infrastructure of the "renewable energies house" (a tourist and educational site focused on the theme of renewable energy located in this windy area full of wind farms) and to consolidating the

"Wind Route", a pedestrian path that passes through the wind farms in the area. Thanks to ERG's support a safe playground was developed for children close to the picnic area.

A different approach was taken during the development of two wind farms in the UK with a series of community benefits established together with the local community based on the installed capacity of the wind farm. These funds will form part of a grant that will be managed independently and used to support local initiatives and the development of local enterprise.

As well as these incentive schemes, in some cases the possibility of offering the local community the chance to own one of the turbines at the farm is also being evaluated. This approach – known as

Community Ownership – makes it possible to benefit financially from the local project, making the community feel more engaged in the venture.

Other additional forms of support (such as covering the electricity costs of the communities close to the farm) are identified case by case thanks to our experience in the development of wind farms and the close dialogue and management of relations with the local communities and authorities, always developed with the aim of distributing part of the value added of our plants to the local area.



#### OTHER INITIATIVES FOR COMMUNITIES

During the year we launched other initiatives to foster the development of communities not directly affected by our new business projects:

- around 50 computers no longer required in our offices were used to set up computer rooms at schools
  participating in the "Vai col Vento!" project;
- through the University of Genoa, we supported a study grant for the creation of a training course
  for students at a technical college in Batoufamin (a village in Cameroon) focused on the sizing and
  management of a solar energy plant and the installation of an off-grid photovoltaic system to guarantee
  lighting at a school;
- in Germany, thanks to the purchase of bottles of water for the on-site operators and offices on a Non-Profit Association we subsidise water search and well-drilling projects in Ethiopia.

#### **NEW OFFICES AT THE PRIOLO PLANT**

Modern new offices, efficient from both a functional and energy perspective and with suitable air conditioning systems: this was the goal of the project to redevelop the second floor of the building that until 2010 hosted the control room of the old plants replaced by the current ERG Power combined cycle plant. As well as improving the access ability of the offices, we also created new spaces for staff changing rooms and facilities. All rooms are equipped with a VRF (Variable Refrigerant Flow)



air conditioning system, which guarantees a comfortable microclimate, and an external insulation system associated with the fitting of thermally-cut windows.

The production of hot sanitary water is guaranteed by a solar thermal system which minimises the use of electric boilers also during the winter.

The creation of these offices was strategic as it made it possible to concentrate all of the site personnel in the building, guaranteeing improved synergies, logistically more straightforward relations between colleagues and, finally, a more comfortable working environment.

Today, ERG personnel in the building can enjoy larger spaces, more welcoming and habitable workplaces and greater levels of comfort. All of this translates into the improved wellbeing of the ERG population at the Priolo Gargallo site.

# OUR PRINCIPLES THE GROUP CODE OF ETHICS AND THE SUSTAINABILITY POLICY

People are a key factor in the existence, development and success of any company. ERG therefore pays particular attention to protecting the rights and developing the abilities and skills of all its employees so that they can realise their full potential and professionalism and, as a result, contribute to achieving the Group's objectives in accordance with the commitments to social and environmental responsibility established by the management. ERG guarantees respect for the rights of its workers and offers equal working opportunities to all, on the basis of individual professional profiles and potential performance levels, without any discrimination, disapproving of all harmful behaviour against individuals and pledging to adopt the most suitable supervisory measures to this end. For this reason ERG, in accordance with all laws, regulations and company policies in force, pledges to:

- select, hire, pay, train and assess people according to merit and professional expertise, without any political, trade union, religious, racial, language or sexual discrimination;
- guarantee a work environment in which the dealings between colleagues are characterised by loyalty, correctness, collaboration, reciprocal respect and trust;
- · guarantee the freedom of association of workers and recognise their right to bargain collectively;
- respect contracts and collective labour agreements with particular reference to the regulation on remuneration, working hours, rest periods, weekly rest, mandatory leave and holidays;
- offer suitable working conditions from a health and safety standpoint, as well as respectful of everyone's moral personality, in order to foster interpersonal relationships free of prejudice;
- counter any form of intimidation, hostility, isolation, undue interference, conditioning or harassment, sexual
  or of any other type or kind;
- ensure that, within a framework of reciprocal rights and duties, workers are guaranteed the possibility of expressing their personality and reasonable protection of their sphere of confidentiality in personal and professional dealings;
- · intervene in the event of attitudes not compliant with the principles set out above.

To implement the above, ERG undertakes to make available, via its internal communication channels and the competent organisational units, information on policies for handling the individuals, in accordance with the confidentiality restrictions established by good business management criteria; it also undertakes to develop the professional skills of its employees through training, with growth and development programmes supported by adequate budgets.

Each organisational unit head must involve their co-workers in the unit's working activities and the achievement of the assigned objectives; in turn, the latter must be collaborative and proactive, actively

contributing to carrying out the established activities. There are plenty of opportunities to take part in discussions and decisions geared towards achieving the business objectives, in which the various points of view expressed by co-workers help the unit manager to take final decisions with greater confidence.

From the Code of Ethics ERG

The Group's sustainable approach can also be seen in its policies to protect and develop Human Capital. For this reason ERG requests that all those who collaborate with the Group's companies, whether employees, suppliers, contractors or partners, respect the principles outlined in the "Policy for the protection of Human Rights".

The Group also respects and upholds these principles by:

- monitoring respect for the principles of the Universal Declaration of Human Rights, the declarations of the International Labour Organization and the principles of the UN Global Compact;
- adopting and applying processes and procedures, also supported by the adoption of Safety Management
  Systems certified in accordance with recognised standards, aimed at minimising risks and eliminating the
  causes which may endanger the health and safety of its personnel and the third parties who operate at the
  Group's plants and/or offices;
- complying with all legal obligations regarding the involvement of employees, or their representatives, in business reorganisation processes; guaranteeing the equality of the individuals, meaning the commitment to ensuring equal opportunities without any discrimination based on political opinion, nationality, age, gender, sexual orientation and/or intimate human characteristics;
- recognising the role of the social partners as counterparties in the definition of suitable labour management policies;
- granting the individuals the freedom to join and/or associate themselves with trade unions or workers' organisations;
- · developing activities and policies to improve the work-life balance;
- underlining the key role its people play in achieving the company's goals, using appropriate assessment systems and supporting professional development training initiatives.

Aware that the active contribution of all individuals is essential to achieving the above objectives, ERG develops ongoing targeted information, awareness raising and training activities.

From the ERG Sustainability Policy

In addition, in 2018 the ERG Group adopted its own Human Rights Policy, available at www.erg.eu.

## OUR MANAGEMENT METHODS WITH REGARD TO HUMAN RESOURCES

We attribute great importance to the management of human resources given the fundamental role they play in the development and management of our business.

Our principles are outlined in the Group Code of Ethics, in the Sustainability Policy and in the Human Rights Policy.

HR governance takes place via two committees: the Human Capital Committee and the Supervisory Body established in accordance with Italian Legislative Decree no. 231/2001.

The Human Capital Committee is tasked with:

- defining and monitoring the main human capital development programmes and activities (career/ replacement plans, medium/long-term incentive plans, talent identification and management, retirements etc.);
- providing support to the Executive Deputy Chairman and the Chief Executive Officer in decisions
  relating to the personnel development and the variable remuneration and medium/long-term incentive
  systems, as well as for proposals to be submitted to the Nominations and Remuneration Committee;
- monitoring the implementation of the Human Rights Policy and managing related non-compliance reports.

In its role as Ethics Committee, the Supervisory Body, established in accordance with Italian Legislative Decree no. 231/2001, monitors the correct application of the Code of Ethics with specific regard to the issues of respect for human rights, equal opportunities etc.

It also manages any reports on these issues received via the communication channels made available to all employees and also third parties (dedicated email address and regular postal address).

The management of relations with the social partners is delegated to a specific unit which reports, with regard to strategies and results, to the Chief Human Capital & ICT Officer.

All relations with employees, with the collective representatives of employees and with the social partners are always conducted with respect for the legislation in force in all countries in which we are present, guaranteeing the correct application of the National Collective Labour Agreements of the sector in question.

## IDENTIFIED RISKS AND SPECIFIC MANAGEMENT METHODS

In accordance with its scope, the ERG Group has analysed the issues of gender equality, the implementation of international agreements, dialogue with the social partners and respect for human rights, and the measures adopted to prevent violations and discrimination.

The analysis, performed internally, took account of the countries in which the Group operates, the business sector, the legislation and practices with which we comply, the implementation of policies and Management Models, and the governance structure.

Downstream from the analysis, the spheres - even if important - are not considered to be sources of risk mainly due to the operating practices, which ensure respect for said principles.

Nevertheless, in 2018 the Group adopted a specific Human Rights Policy on these aspects in order to underline and formalise its approach to these issues. The policy was published on the official ERG website. There are also systems and operating procedures that regulate the processes of personnel recruitment and management and guarantee respect for the principles in the Human Rights Policy.



INDICATORS

## PEOPLE ACQUISITION: A THREE-STEP PROCESS

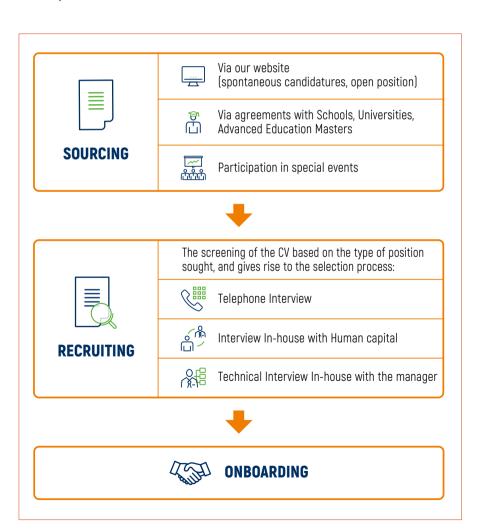
ERG hires high school graduates, recent university graduates, young adults with several years' work experience and senior professionals to strengthen its team and/or introduce new approaches to the company.

In general, the uniformity and outline of the process enable us to respect every individual, irrespective of age, gender, ethnic origin and nationality.

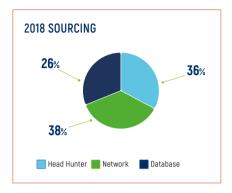
At ERG the acquisition process consists of three stages.

We get into contact with potential candidates via three channels:

- the career site database in the "Work with us" section;
- our network, career days, professionals connected with ERG, professional contacts;
- · head hunters.



In 2018 the three channels produced the following results:



#### **EMPLOYER BRANDING**

We communicate our Corporate Value Proposition mainly via online information and a few sector meetings.

In 2018 we largely dedicated our time to the careers website where, through the words and passion of our Green Energy Makers, we describe how their work helps to create a better and more sustainable world. We also provide visitors to the website with career development tools. Each chapter consists of a short explanatory text with information and tips which can be downloaded in PDF format.





BE READY FOR YOUR INTERVIEW





**HOW TO RESIGN** 





### SOCIAL COMMUNICATIONS FOR EMPLOYER BRANDING

| twitter               | @ergnow     | You can receive information on ERG and the world of renewable energy.  |
|-----------------------|-------------|--|
|                       | @ergcareers | You will discover how we do things at ERG, our values and culture. You will learn about the experiences of the ERG people. You will find out how you can become a #GreenEnERGyMaker and develop your talent. |
| Linked in             | ERG S.p.A.  | You will get updates on the ways of becoming a #GreenEnERGyMaker, and discover our values and culture. You will be informed about developments at ERG and in the world of renewable energy.                  |
| slideshare ERG S.p.A. |             | You will get key overviews of ERG (infographics, presentations).   |
| You Tube ERGnow       |             | You will visit our plants through the videos and learn about our culture and projects from our employees.  |

In addition... follow our hashtags #GreenEnERGymakers #weareERG #ERGPeople #joinERG

#### AWARDS AND RECOGNITION

Potentialpark is a Swedish company specialised in Employer Branding targeted at young talent. Every year it publishes a ranking that assesses corporate online communications, analysing for example the careers sections of websites, online interaction with candidates, ATS (Application Tracking Systems) and Social Media.

The 50 Italian companies included in the rankings were assessed according to 317 criteria.

As regards the individual categories, we came first in the analysis of the "mobile experience", an area of growing importance considering internet connections mainly take place through smartphones and tablets these days, second in

the "career website" category, ninth in "applying on line" and 19th as regards social media.

In the 2018 European rankings, which looked at 134 companies, the "Careers" section of our website www.erg.eu came 8th in this category.

Compared with the 2017 rankings we jumped 12 positions, entering the Top 10 of the best European corporate websites dedicated to recruitment. In the overall standings we ranked 29th (+10 places compared with last year).

The "Careers Website" ranking is established by a jury of young 20-28-year-olds that reward company websites with the most suitable content for attracting and informing potential candidates.







#### **GROWTH OPPORTUNITIES FOR UNIVERSITY STUDENTS**

In 2018 Talent Management, and in particular the Recruiting and Learning areas, made the skills and experience of some of their personnel available to a number of students of the Faculty of Economics, Engineering and Psychology of the University of Genoa for the drafting of their dissertations.

We also took part in "I want to be the manager," a Confindustria, Federmanger and AIDP initiative in which university students shadow a manager in order to get first-hand knowledge of what it means to work for a company. The experience lasts three days and involves meetings with colleagues and external figures, the preparation of presentations and reports and, at the end of the experience, also the possibility of taking part in an orientation interview.

#### **ONBOARDING**

Our final selection only takes place at the end of the Onboarding process.

One of the missions of the HR department is to enable new recruits to understand the context so they can make best use of their skills and fulfil their potential.

The onboarding process involves meetings, readings, experiences, interviews to discover ERG and its values, activities and processes: primarily the technical, economic, organisational and social side of the company. It is also a phase in which new recruits reveal a

bit more about themselves and show what they are about.

Often underplayed by companies, we have decided to place a great deal of emphasis on this highly important and delicate process. We therefore organise individual and collective moments, development and familiarisation sessions to maximise our investments in new employees.

The collective moments organised in 2018 included the Induction Seminar and Surfing ERG, an initiative aimed at the colleagues that joined the Group following the acquisition of Epuron.

#### **SURFING ERG**

The Talent Management & Acquisition department organised a 2-day onboarding event in Genoa for 16

new French colleagues at Epuron, acquired in 2018 by ERG Power Generation.

We chose the title "Surfing ERG" to convey the concept and objectives of the two days of meetings: to give our new French colleagues the opportunity to "ride the ERG wave" by visiting our Genoa offices and meeting 20 colleagues that represent our company. A mix of information, figures, people and new contacts that made it possible to transmit our culture, our values and our projects, immediately establish-



ing strong bonds with our new colleagues so they are effective, productive and integrated as quickly as possible.

#### Goals:

- To get to know the ERG people, to begin transmitting our culture and working method, learning about rules, activities and processes.
- · To become familiar with the company's main projects.
- To relate with people to help them settle in, enabling them to be effective, productive and fulfilled as quickly as possible.

#### **INDUCTION SEMINAR 2017-2018**

Twenty-seven new colleagues from the various ERG offices took part in the 2017-2018 edition of the Induction Seminar, an event that provides a complete overview of our company.

The seminar consists of various meetings in which the company presents itself via the voices, accounts and experiences of its employees. It is an opportunity for colleagues to get to know areas and people that they wouldn't normally come into contact with, providing a comprehensive overview of our company and its values in the process.

During the second itinerant module participants have the chance to visit the ERG plants (hydroelectric, thermoelectric and wind energy) at the production sites of Terni, Priolo and Carlentini. The various topics examined touch on technical, operational, sustainability and business ethics issues: we want to familiarise all of our new hires with the principles ERG adheres to in its business activities.



### PHD EXECUTIVE PROJECT

The PhD Executive is a form of doctorate introduced by the Italian regulatory system that enables company employees to continue working while completing research, graduating after three years with a Doctorate Degree.

The idea is to analyse an innovative subject, interesting from both an academic and business perspective, giving it scientific validation with solid theoretical support. We have identified the Department of Mathematics at the University of Genoa as the ideal hub for the PhD course, also forming an extensive network of academics from other universities.

We have decided to structure the project into three parts:

- evaluation of simulation mathematical models, studying their properties to identify which is the best according to the analysis context;
- study of the evaluation criteria of some physical or financial derivative contracts (e.g. energy sales contracts to end customers) in order to establish their real value;
- 3. analysis of risk indicators to assess the reliability of contracts and monitor their performance.
  This form of collaboration enables us to keep the company's know-how up to date with the latest developments in Energy Risk Management, an area that has undergone constant evolution and change in recent years.

### **HOW DO PEOPLE GROW AT ERG?**

The growth of the people that work with us is fundamental for ensuring the consistency of the Group's results and is also one of the cornerstones of the Human Resources approach of the Management Team and Human Capital. The employability and "sustainable future" of every Group person are goals that ERG aspires to in every career phase and go beyond personal and organisational factors.

We have therefore developed an approach tailored to people and their growth which takes account of experience, expertise, leadership style, personal talent and performances.

This individual approach is supported by a "career system" which guarantees selectivity, sustainability and equality with a pathway consisting of different job titles:

- · specialist;
- · professional;
- · senior professional;
- · manager;
- · senior manager;
- · director.

Essentially every position comprises a range of job titles that people can be given on the basis of their seniority

In 2018 we reviewed the criteria that govern growth paths and their measurability:

- · performances:
- skills:
- leadership style;
- seniority in role;
- · adaptability.

These five factors constitute a person's experience and are essential for both their vertical growth, into roles of greater responsibility, and their horizontal growth, with the broadening of their skills sets.

## THE ROLE OF PEOPLE IN THEIR PERSONAL DEVELOPMENT: SHAPE YOUR FUTURE AND WORKING OPPORTUNITIES

We ask our people to play an active role in their growth paths.

We have provided everyone with the Organisational Manual, which outlines the responsibilities, involvement in processes, activities and skills required in every position within the Group.

It is a guide that enables everyone to work on their employability in the Group and plan growth paths.



Through our talent management portal, the People Portal, everyone has the opportunity and responsibility to indicate their ideal career path for the next three years to the HR team. As well as the roles they would like to cover, employees can also indicate their interest in relocating and the reasons behind these choices.

In addition to this medium-term content, we have also launched a Job Posting system that instantly matches internal opportunities with individual aspirations.

If we believe that there are already profiles within the company that could effectively cover the role following a period of sustainable development, before launching an external search we prefer to publish an announcement on the intranet and propose potential career development opportunities to our colleagues. In 2018 we covered 18 positions thanks to Job

Posting system and received a total of 45 applications.

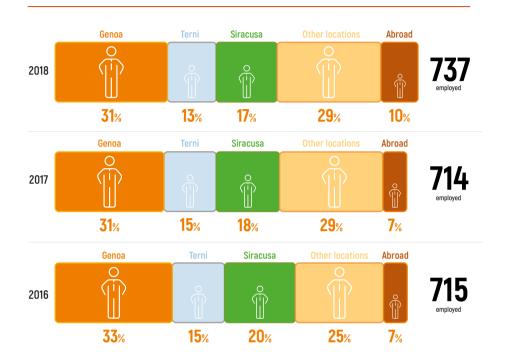
#### **Succession Planning**

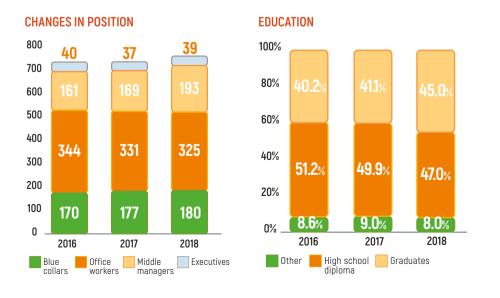
The dynamics of internal careers are guided by the Management Team and Human Capital which each year, with the support of the Key Leaders, map the possible successors for every company role. In this way it is possible to develop replacement plans for the people currently in that position and to guarantee both the sustainability of individual growth and the continuity of results in the event of resignations, rotations or reorganisations.

The 2018 update once again revealed that there are no significant organisational deficiencies in the event of emergencies and that for all positions there are candidates that could be developed within three years, confirmation of our strong position with regard to succession planning and professional growth.

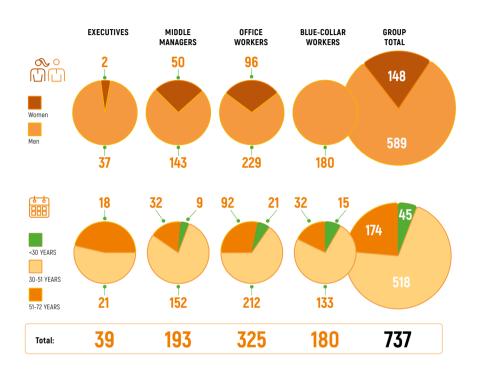


## **ERG GROUP:** PEOPLE AND ORGANISATION

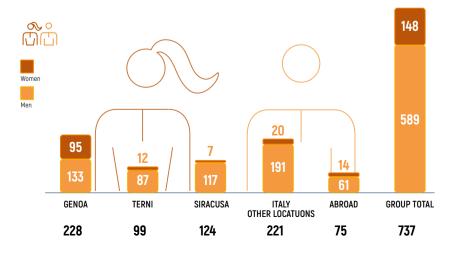




#### **ROLES BY AGE AND GENDER**



#### **GENDER BY SITE**



## HUMAN CAPITAL COVERAGE: WHAT HAPPENED IN 2018?

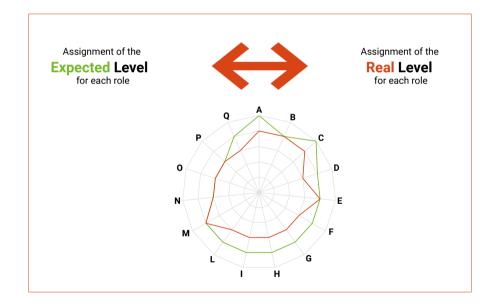
2018 saw the consolidation of the "One Company" model, which has completely changed the internal organisation of the company. It was a year in which we continued to measure the growth of our Human Capital Coverage (HCC) index, a key aspect for the implementation of our business plan.

This year we drew once again a parallel with previous years, taking four assessment cycles into account.



The objective remains that of comparing the level of expertise expected for each role with the real level of expertise verified in the field.

However, the way the tool is used has changed in



order to better study the aspects that emerged from the 2017 assessment.

On the basis of the new initiatives launched in 2018, the Talent Management & Acquisition area used models and information provided by the HCC to formulate its professional growth and training activities where the indexes showed that there were aspects that could be improved. The

HCC also inspired the 2019 programmes of the partners of our Human Resources department (HRBP), which presented important developments in their areas of responsibility to the Chief Human Capital & ICT Officer.

The HCC continues to evolve: compared with 2017 we have further developed the profiling of human capital and travelled down new paths with

the "functional model", confirming the growth that began in 2017 with the reorganisation and covering 90% of the Group in 2018.

With an increase of around 3 percentage points compared to 2017, in 2018 our Human Capital Coverage index operated in a decidedly different context with completely overhauled organisational logics.

The main aspects which brought about this increase are connected with a number of key factors:

- the identification of the organisational areas where measures were needed;
- the development of organisational processes to improve productivity within specific action areas;
- · the streamlining of training based on the

analyses carried out with the HCC.

Competence, expertise, know-how and the ability to learn are fundamental characteristics for individuals but also the resources on which the company's future is built.

For the sustainability of both individuals and the Group, we invest heavily in the growth of people and their employability: to this end, the HCC is a tool that can be used by our employees to adapt to changes in the labour market and continue their professional progress.

Our Business Plans of development aim to achieve a 92% Human Capital Coverage index in 2022, a stimulating goal considering the highly dynamic organisational climate.

| KPIS OF "HCC" PROCESS |                         |                           |                       |                   |  |  |  |
|-----------------------|-------------------------|---------------------------|-----------------------|-------------------|--|--|--|
| 2016                  | 650  EMPLOYEES ASSESSED | 100%  COMPANY  EMPLOYEES¹ | 379 SKILLS IDENTIFIED | 86%  HCC COVERAGE |  |  |  |
| 2017                  | 700  EMPLOYEES ASSESSED | 100%  COMPANY  EMPLOYEES¹ | 385 SKILLS IDENTIFIED | 87% HCC COVERAGE  |  |  |  |
| 2018                  | 725  EMPLOYEES ASSESSED | 100%  COMPANY EMPLOYEES¹  | 400 SKILLS IDENTIFIED | 90%  HCC COVERAGE |  |  |  |

## WHAT TALENT MEANS FOR ERG

At ERG we take a "holistic view" of the individual.

Talent management processes are launched at various times of year and focus closely on performance, expertise, skills, development potential, motivation and... talent.

"Talent" is a keyword for ERG.

At ERG "talent" is not a person with exceptional potential but rather a distinctive quality that enables people to naturally achieve extraordinary results while enjoying what there are doing.

On the basis of this approach, we focus on the personal "resources" that already exist rather than those that are missing. This leads us to take a 360° view of people and, more importantly, enables individuals to enjoy learning more about themselves. Talent is evident immediately and something we express naturally.

But this doesn't mean we always maximise its potential.

IT IS important to recognise which actions help us to harness it and to develop routines and habits to

train it and hone it further.

On the basis of this distinction, at ERG we look for the talent in people rather than talented people.





## **LEARNING: TRAINING AT ERG**

At ERG we regard people as our most important asset.

Their personal and professional growth within the Group and the constant updating of their skills represent an investment for our future. It is their work, their commitment and their knowledge that sets us apart from our competitors and enables us to meet our business goals.

An ongoing process of change involves every company, business and organisation, and training is the best tool for addressing it.

Developing and promoting the talents and the technical and managerial/behavioural skills of our people is one of our competitive levers and the primary goal of our training activities.

Training is personalised on the basis of the goal we want to achieve in that precise moment and adapted to our style. Our training activities therefore reflect our culture, our values and the meaning we give to our work.

We talk about training paths rather than courses because we accompany people on both an individual and Group development process in which we provide them with the tools to put the concepts planned and learned during classroom activities into practice.

Every path concludes with a "change by addition": from this moment on people possess something



they did not have before and choose how to apply it to their work and, often, also to their private lives. The training programme can be found in the YouLearn catalogue which we update every year on the basis of specific company and individual development goals.

Given our growing international dimension, we changed the name of the catalogue this year from the Italian "Fai crescere la Tua Energia" to the English "Enhance Your Energy". The motivation that people must have to grow and enrich both themselves and the entire organisation has remained unchanged.

This year the catalogue is made up of 38 titles organised into seven topics.

- Communicating with Impact knowing the most effective communication rules according to goals and instruments used.
- 2) Understanding complexity managing and understanding the complex systems in which we live: numbers, problematic situations, economic impacts of strategic choices, the market in which we operate.
- 3) Effective collaboration models for the smooth functioning of teams and individuals.
- 4) Aligning your actions with the priorities organisation of work and project management.
- Leading and developing people being People Managers at ERG.
- Recognising and using your talents, motivation, energy.
- 7) Working in other languages to improve language skills through classroom courses, themed seminars, online courses with tutors or self-teaching courses on the platform, concentrating on our languages: English, French, German and Italian.

**FCONOMIC** 

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Everybody, regardless of their role, professional seniority, previous personal experience, business sector and worksite, can choose which training courses they wish to sign up for from the catalogue and create their own individual development plan.

Another additional theme is the "7 Habits" developed by Franklin Covey, available both for Managers and for Highly Effective People, which was proposed for the second year running. We believe these are useful for promoting a culture geared towards both individual and team effectiveness and excellence.

During our training courses people have a chance to meet colleagues with whom they appear to have little in common. However, by examining the same topics and sharing their stories, experiences and professional skills, everyone benefits mutually from this diversity. Our classrooms are deliberately heterogeneous in order to spread a culture that goes beyond geographical borders or roles covered within the Company.

We believe that people responsible for their individual growth are perfectly able to guide it, together with their People Manager, by choosing the training course that best fits their interests. Thanks to this approach we have noticed how people's motivation and commitment to participating in training activities have increased significantly in recent years.

Our educational model consists of four phases - pre-work, classroom, on the job activities and monitoring - consisting of:

- informal learning: stimulus, in-depth studies, analysis, pre-class exercises and shadowing, coaching, implementation of action plans;
- · formal learning: classroom sessions with physical or remote presence, online and mobile learning activities;

 social learning: comparisons, individual and Group tutoring in which to share and make personal experiences available to others.

One activity to help implement the new leadership model was the "Feedback Gym", which involved all those taking part in the managerial feedback process. Based on films of the manageremployee interview, participants were able to practice applying the coaching model to provide effective feedback on producing results.

## PRE-WORK Readings Videos Exercises on-line CLASSROOM Didactics Interaction Exercises ON THE JOB Follow-up Tutorship Survey MONITORING Action plan Shadowing Coaching

The Top Management undergo constant updating and partake in an ongoing external dialogue thanks to the partnership with The European House of Ambrosetti. This group provides analysis and roundtables through around a hundred events a year, structured into tracks (Top Management, Marketing/Sales and Communications, Human Resources and Organisation, Administration, Finance and Control, Integrated Logistics) and integrated with horizontal lines of discussion (economic scenario, business system and leadership).

We also hosted two Ambrosetti events this year, opening our Learning Center to external guests in order to discuss macroeconomics and innovation topics.

As well as training activities on relational and social skills (so-called "soft skills"), there are also

activities so people can develop the necessary technical skills to effectively carry out their role, acquiring and enhancing increasingly up-to-date expertise in each technical area.

The Operating Centre in Caraffa is the place where, as well as the transmission of skills, opportunities are created for the sharing of knowledge and experience acquired in the field, making learning a natural process.

From a methodological perspective, both management and technical training increasingly integrate traditional classroom teaching with forms of individual or group online learning, with support activities like tutoring on specific issues or the guided analysis of systemic matters, as well as shadowing and mentoring activities for practical learning.

| KPIS OF OUR TRAINING |                                   |   |                                  |  |  |  |
|----------------------|-----------------------------------|---|----------------------------------|--|--|--|
| 2016                 | 31,787 HOURS OF TRAINING PROVIDED | 5.6  DAYS OF TRAINING PROVIDED PER PERSON | 96%  PARTICIPANTS IN THE COURSES |  |  |  |
| 2017                 | 37,950 HOURS OF TRAINING PROVIDED | 6.6  DAYS OF TRAINING PROVIDED PER PERSON | 97%  PARTICIPANTS IN THE COURSES |  |  |  |
| 2018                 | 34,356 HOURS OF TRAINING PROVIDED | 5.9  DAYS OF TRAINING PROVIDED PER PERSON | 92%  PARTICIPANTS IN THE COURSES |  |  |  |

## WE ARE ERG: OUR LEADERSHIP MODEL

The leadership model guides the development processes (learning, leadership development, promotion etc.) and is the compass that shapes our conduct, supports our skills and inspires our values.

Which managerial skills, which approach to our work, to the team, to innovation and to results will enable us to achieve the goals we have communicated to the market?

In parallel to the development of the 2018-2022 plan, the Human Capital Committee met to respond to these questions, knowing that the answers would be key to fulfilling the commitments undertaken. The product of individual and working group reflections, of questionnaires and evenings of lively debate, is a model that everyone can identify with and which highlights the necessary Values, Skills and Behaviour of the ERG Group for 2018-2022.

We often use the metaphor of the iceberg to describe how behaviour is an expression of values, motivations and beliefs that are not "visible" but which guide and inspire our actions. Values are the foundation of this model and Skills and Behaviour are its levers of development. Tradition, Sustainability, Passion and Challenge

are our values. These constitute the Group's DNA and generations of people proudly identify with them. They are the glue of our community and underpin our way of thinking, of acting and of doing business.

While our Values are consistent, our Skills and Behaviour vary with the evolution of our Group, our strategy and the historic moment.

The first model was developed in 2006, the second in 2012. In 2017 we carried out a review of the essential skills required and identified how to implement them through the following types of behaviour:

Leading and Inspiring
Result Driven

Forward Thinking

**Talent Enabling** 

Inclusion

Come Together

Leading and inspiring
Making things happen
Envisioning and shaping

the future

Recognising, developing and supporting talent Adopting an empathetic

and engaging style to drive involvement

Building cross-cutting and high-performance

teams



These skills are not just limited to the top management but must be present and developed at all levels of the organisation. Everyone at ERG is a leader and everyone is asked to adopt the behaviour outlined in the model.

## THE FIRST YEAR OF THE LEADERSHIP MODEL

The implementation of the Leadership model consists of five phases.

#### Phase 1: Familiarisation

To launch the new leadership model, as well as training activities and the distribution of traditional information materials, we have published WE ARE ERG. This book gathers together the expectations and experiences of Alessandro Garrone, CEO Luca Bettonte and CHCO Alberto Fusi, with photos and quotes from the Management Team, as well as food for thought and a story for every skill written by the Group's Key Leaders with the help of the Scuola Holden. The book has been translated into English, French and German and distributed to everyone that works for ERG.

The Leadership model was also the theme of the 2018 annual Group Meeting of ERG's Key Leaders.

#### Phase 2: Recognition

In 2018 we launched the new version of the Talent Management portal and gave everyone the opportunity to provide positive feedback to colleagues each time they identified a form of conduct in line with the leadership model. This feedback appears on the profile page of the person that receives it: an acknowledgment

of their virtuous behaviour and a quick way of spreading a good practice.

#### Phase 3: Activation

Having disseminated the model, in October we activated the 2018 cycle of managerial feedback, a process in which Key Leaders are invited to carry out a self-assessment and evaluate their actions by providing examples of their conduct. The People Manager does likewise at the same time and the two stakeholders then get together to compare their reciprocal viewpoints and define a development plan.

For ERG this type of feedback is a highly valuable method of sharing knowledge and points of view that can enable new forms of behaviour. This is why we have invested significant amounts of both time and money on feedback and mutual dialogue and interaction.

#### Phase 4: Train

You Learn and the managerial feedback action plan are the two main catalysts of growth, genuine "gyms" for systematically honing new approaches.

#### Phase 5: Develop new habits

In 2016 we adopted the Franklin Covey model to transform virtuous behaviour into informed habits and above all to develop mental approaches geared towards excellence. For us, developing new habits means consolidating the conduct detailed in the model and making it systematic with the possibility of forming your own personal style.





RECOGNITION

ACTIVATION

TRAIN

DEVELOP NEW HABITS

## PEOPLE AND REMUNERATION: DEVELOPING A SENSE OF BELONGING

The fundamental principle which we pursue is that of guaranteeing equal economic recognition for everyone on the basis of their respective characteristics and professional skills. In this context, we seek to adopt policies and procedures that preventall forms of discriminatory behaviour.

Our Group's remuneration policy is based on the recognition of merit. Merit is the benchmark by which the remuneration systems generate a sense of belonging, motivating and encouraging people to improve, acknowledging and rewarding results, the quality of people's professional contributions and their development potential. Equality, Sustainability and Selectivity are the cornerstones of our remuneration policy.

Equality is guaranteed by the periodic updating of wages in accordance with the reference market and the indications of external stakeholders; Sustainability means the optimal balancing of individual aspirations and the company's financial resources; Selectivity means acknowledgment

of the most deserving people and guaranteeing market conditions for everyone else.

As regards fixed remuneration, thanks to our salary policy we eliminate the average differential between male and female "administrative staff" (45% of the workforce) and limit it to 3% in the "middle managers" category (25% of the workforce).

2018 saw non-Executives covered by the NCLA for the Energy and Oil and Metalworking and Mechanical Engineering sectors converge in the Electricity contract. This convergence made it possible to apply common regulations to all employees, enabling us to apply our remuneration principles more comprehensively.

In 2018 we further consolidated our short-term incentive system for the Group's Directors/Senior Managers and Professionals, selected on the basis of the critical importance of their role.

To be effective the system must protect both

#### WOMAN/MAN REMUNERATIVE DIFFERENTIAL<sup>1</sup>



<sup>1</sup> Percentage ratio between the average fixed remuneration for women for each position they belong to and the average fixed remuneration for men for the same position.

INDICATORS

## DIFFERENCE BETWEEN MINIMUM ERG GROUP ITALY PAY AND APPLICABLE NATIONAL COLLECTIVE LABOUR AGREEMENTS

| Position             | 2018  |      | 2017  |      | Change 2018/2017 |      |
|----------------------|-------|------|-------|------|------------------|------|
|                      | Women | Men  | Women | Men  | Women            | Men  |
| Executives           | 134%  | 110% | 134%  | 110% | 0%               | 0%   |
| Middle managers      | 106%  | 106% | 114%  | 108% | -8%              | -2%  |
| Administrative staff | 110%  | 114% | 100%  | 104% | 10%              | -10% |

## DIFFERENCE BETWEEN AVERAGE ERG GROUP ITALY PAY AND APPLICABLE NATIONAL COLLECTIVE LABOUR AGREEMENTS

| Position             | 2018  |      | 2017  |      | Change 2018/2017 |      |
|----------------------|-------|------|-------|------|------------------|------|
|                      | Women | Men  | Women | Men  | Women            | Men  |
| Executives           | 134%  | 161% | 134%  | 166% | 0%               | -5%  |
| Middle managers      | 132%  | 136% | 138%  | 143% | -6%              | -7%  |
| Administrative staff | 123%  | 125% | 155%  | 159% | -32%             | -34% |

people, with the sustainability clause that sets the company goal for all levels, and the financial and organisational integrity of the company, guaranteed by the assigned objectives and the clawback clause.

The sustainability clause is a gate which, upon the achievement of specific operating goals, permits the pay-out of the company incentive as long as there have been no cases of accidents leading to the death or permanent invalidity of 46% or higher of one of our employees.

The clawback clause involves the possibility of requesting the partial or total return of the

incentive paid out (or the withholding of deferred sums), within three years of its maturity, if it turns out that it was awarded on the basis of incorrect data.

For the incentive to be paid out the system sets four goals: a Group goal measured by the EBT (consolidated earnings before IAS tax at current adjusted values), equal to 30% of the incentive target amount, and three individual targets, equal to 70% of the incentive target amount, connected with the role covered and measured on the basis of specific economic/financial and/or project parameters. For more details on the system see the Remuneration Report.

| Туре                         | Weight        | Definition                 |                               | Level of achievement of performance indicators | Incentive<br>paid |
|------------------------------|---------------|----------------------------|-------------------------------|--|-------------------|
| Corporate                    | 700/          | Consolidated income before |                               | = Threshold Indicator                          | 50% target value  |
| objective                    |               |                            | ≥ Outstanding Indicator       | 150% target value                              |                   |
| Individual objective 70% Div | Ministra a to | Economic                   | < Threshold Indicator         | 80% target value                               |                   |
|                              | 70%           | Divided in:                | Development<br>Organisational | ≥ Outstanding Indicator                        | 120% target value |

In 2018 all Directors and Senior Managers and 45% of company professionals participated in the short-term incentive system. Compared with 2017 there was a 1 percentage point increase in the number of women, who now account for 15% of participants in the system (14% in 2017).

In parallel with the presentation of the 2018-2022 Business Plan, the Shareholders' Meeting approved the new Long-Term Incentive System, valid for the three-year period 2018-2020. The new Long-Term Incentive System (LTI) involves the attribution of a predefined number of ERG S.p.A. shares, free of charge, if a specific predetermined performance target is achieved (performance shares).

The long-term incentive system guarantees the sustainability of the company, encouraging the top management to pursue goals that last for long business cycles, not merely a year.

The shares are assigned at the end of the three-year vesting period if a predetermined Group EBITDA (earnings before interest, tax, depreciation/amortisation and impairment losses) target is met for the 2018-2020 three-year period.

As mentioned, to guarantee the sustainability of the system we have introduced the clawback clause which can be exercised by the Company within three years of the shareholders' approval of the 2020 annual report should it emerge that the data used to verify performances were evidently inaccurate. For more details on the system see the Remuneration Report.

The Plan is reserved for directors with executive roles and a small selection of key leaders in managerial roles whose decisions have a direct impact on the achievement of the 2018–2022 Business Plan targets.

#### WE ARE ERG, ERG IS WITH US: An integrated system for the growth and inclusion of ERG people

Introduced in 2018, our leadership model is based on five values, one of which is sustainability, i.e. the ability to grow while creating a better world for all stakeholders.

People play a central role at ERG and are regarded as one of the company's key stakeholders. We recognise the value of people's commitment and pay close attention to them throughout their "lifetime at ERG" via an integrated Welfare model that has taken shape and evolved over our 80-year history. The company welfare system is tailored to people with the goal of meeting the needs of the various sections of the workforce. The system (illustrated in the following table) looks after employees when they are hired through



the Onboarding process, which enables them to get to know us directly through the accounts of our people, and continues to do so throughout the various stages of their professional and private lives until their natural departure from the working world. All benefits are recognised in equal measure to all Group employees. Some are also recognised to other external collaborators.

#### SUPPLEMENTARY PENSION SCHEMES

| Type of fund     | % participation per<br>category |
|------------------|---------------------------------|
| Previndai        | 97%                             |
| Fopen            | 69%                             |
| Open funds       | 2%                              |
| Weighted average | 74%                             |

#### SUPPLEMENTARY BENEFITS

| Type of fund     | % participation per category |
|------------------|------------------------------|
| FASI             | 100%                         |
| FISDE            | 99%                          |
| Weighted average | 74%                          |

#### **80 YEARS OF ERG, 80 ACTIONS**

To mark the 80th anniversary of ERG and in recognition of the contribution our people have made to the transformation of the Group, the Garrone and Mondini families rewarded all employees of the ERG Group's Italian companies with 80 shares. Employees of the foreign branches received a bonus of the same value as the shares given to employees of the Italian sites.

With the same intention the Board of Directors of ERG S.p.A. decided to reward all Group employees, both in Italy and abroad, with a bonus of EUR 1,500, paid out during the 80th anniversary celebrations. This bonus involved 664 employees and 53,120 shares in the ERG S.p.A. portfolio.

#### MENS SANA IN CORPORE SANO: ERG FIT LIFE

A new gym full of equipment with machines for all kinds of exercises divided into three areas - cardio, floor exercises, equipment - as well as instructors for the courses and personal trainers to follow all those that work out.

The perfect place to improve the work-private life balance while staying in shape, relieving daily stress and ensuring you are more reactive and productive in the rest of your free time.

On this basis we opened the gym for all Group employees at the Genoa site: a brand new industrial-style 400 m2 space with the best equipment and the latest cutting-edge inventions to guarantee users a healthy and comfortable environment.



|   | <br>ტტტ | Onboarding                                       | A process for getting to know ERG, the tools available and the main<br>stakeholders, in order to welcome people as warmly as possible and<br>enable them to settle in quickly.  |  |  |  |  |
|---|---------|--|---|--|--|--|--|
| Training -                                      |         | You Learn  | Training course designed to increase the individual value of people.  |  |  |  |  |
|   |         | Health<br>benefits                               | Health insurance which guarantees the reimbursement of a percentage of the healthcare costs borne in public and private institutions.   |  |  |  |  |
| Health Prevention programme and nursing offices |         |  | Diversified prevention protocols according to the types of risl associated with the workplace (head offices, production sites). Voluntary tumour prevention programmes. Flu vaccination campaign. Additional leave for medical check-ups. |  |  |  |  |
|   |         | Additional accident insurance and life assurance | Additional and improved insurance coverage compared with legal and contractual obligations.   |  |  |  |  |
| Social security                                 | S       | Supplementary pension schemes                    | Supplementary pension funds also financed by company contributions.   |  |  |  |  |
| Security  | P       | Tax<br>advice                                    | Agreements with CAAF (Authorised Tax Assistance Centre).  |  |  |  |  |
|   |         | Marriage<br>leave                                | Flexible marriage leave compared with national legislation.   |  |  |  |  |
|   |         | Parental leave and compulsory leave of absence   | Employees maintain their corporate benefits<br>during maternity leave and during the period of compulsory maternity<br>leave allowances are paid in full.   |  |  |  |  |
| Work-life                                       | (24h)   | Facilitation                                     | Flexible working hours to facilitate the return from maternity leave.   |  |  |  |  |
| balance   |         | Crèche & nursery<br>school                       | Agreements or refunds for employees that use these services.  |  |  |  |  |
|   |         | "Ferie Solidali"                                 | Transfer of holidays to "needy" colleagues with participation of ERG.   |  |  |  |  |
|   |         | Transport  | Contribution at sites not sufficiently served by a public transport system.   |  |  |  |  |
| Wellness and                                    |         | ERG 4 Sport sports centres                       | ERG Fit Life: company gym in Genoa.<br>Partnerships with sports centres at other sites.<br>Direct participation in national and international sports events.  |  |  |  |  |
| free time                                       |         | Free time  | Recreational centres.<br>Corporate volunteering projects.   |  |  |  |  |
| Community                                       | · CHS   | Events   | Family Day.<br>Christmas gift and Christmas Party.<br>30 years together.  |  |  |  |  |

ΠΑΤΑ ΑΝΠ

### ERG INVESTS IN INDUSTRIAL RELATIONS: 2018, A YEAR OF INNOVATION AND ENGAGEMENT

Our 2018 began in the new contractual framework of the National Collective Labour Agreement for the Electricity sector. This agreement came into force on 1 January 2018 and applied to all of the Group's people in Italy, as established at the end of 2017 following a shared and constructive trade union dialogue. This operation not only represented an evolution of the regulations, it was also an important step in the creation of a business culture in keeping with our sector.

Nevertheless, the change of NCLA was not an end but rather the starting point of an innovation and engagement process that in the last 12 months has radically altered the company's industrial relations.

In this sense, 2018 was a year in which the Group chose to invest in industrial relations via new methods and tools.

#### INDUSTRIAL RELATIONS PROTOCOL

On 15 June 2018 we adopted an Industrial Relations Protocol for the first time.

This large, structured document, signed by ERG and the national Trade Unions, defines the principles and methods for developing dialogue between the Company and the various levels of union representation.

More specifically, the Protocol defines:

- the principles and guidelines of the new model of industrial relations;
- the areas of competence and "perimeters" of the various territorial levels:
- specific moments of "cooling down and conciliation" in the event of disputes between the parties;
- the creation of mixed bilateral committees (company/ union).



This regulatory instrument was immediately useful in channelling the new union dynamics of the Electricity sector and enhancing moments of dialogue and engagement. Engagement, in particular, is one of the cornerstones of the industrial relations tradition of the ERG Group which - over its 80-year history - has always sought to involve all of its stakeholders.

#### ADVANCED TRADE UNION TRAINING PROGRAMME

The participatory approach to industrial relations reached a new high with the Advanced Trade Union Training Programme for members of the Internal Trade Union.

Taking the recent Patto della Fabbrica ("Factory Pact") - signed by Confindustria and national trade unions on 8 March 2018 - as our starting point we designed and implemented an Advanced Training Programme that encouraged participants to



reflect on the new business processes that characterise the new ERG Electric, on the levers of value creation and on the role that industrial relations can play in the new ERG.

We then designed three training modules, each of which featuring moments of dialogue and interaction with the outside world, to underline the participatory nature of the training investment. As well as company managers, the teachings were also carried out by experts and researchers in industrial relations and labour law, Confindustria and the aforementioned national trade unions.

#### **WORK-PRIVATE LIFE BALANCE:**

#### FERIE SOLIDALI AND NEW FORMS OF FLEXIBILITY

We live and operate in a working context that is constantly and deeply transforming. On one hand we are witnessing the creation of new forms of work, on the other reconciling our working lives with our private lives is becoming increasingly important.

With this in mind, in 2018 we introduced new tools designed to impact positively on the organisational wellbeing of our people. 2018 new measures included greater flexibility in the use of parental leave and the time bank, also for those that work part time.

Furthermore, 2018 was also the year in which the "ferie solidali" system ("solidarity vacation system") was introduced in full.

The results and level of participation in the project were quite notable. Our people donated almost 200 days of vacation, which were supplemented by a contribution from the company. The total was then made available to all colleagues with specific personal or family issues. In 2018 this solidarity-based tool was used on five occasions to help colleagues undergoing moments of personal difficulty.

#### **COMMUNICATION WITHIN ERG**

We regard both internal and external communication activities as essential for correctly and comprehensively conveying our way of doing business.

Our aim is to construct trusting long-term relationships with our stakeholders, to maintain an ongoing dialogue that encourages debate, and to protect and grow our reputation capital.

It is with these goals that over the years we have focused on the development of a digital communication system through which we are able to reach our reference stakeholders, in a comprehensive and immediate manner, with direct, targeted content. Transparency, quality and promptness are the mainstays of our communication.

As regards the digital world we communicate through:

- · corporate website www.erg.eu;
- social media: Twitter with the @ERGnow and @ERGcareers accounts, LinkedIn with the company page and YouTube with the ERGnow channel:
- intranet site ERGate, which updates ERG People on the latest Group news, on events, internal

initiatives and the collaboration and knowledge sharing tools available. Since 2017, the website has also been available in English so as to further communication and interaction with the colleagues of the foreign branches.

We also recount the ERG universe through debates, the participation of our top management in industry events, conferences and lectures at leading universities.

#### THE CORPORATE WEBSITE

We describe who we are and what we do via our corporate website www.erg.eu, beginning with our people, the GreenEnERGy Makers. In fact, thanks to their contribution and involvement we have managed to improve the content of our site over the year. The "traditional" and specific areas of a listed company (Investor Relations, Corporate Governance etc.) are constantly updated and enriched, in line with international best practices in the area of digital communications.

In 2018 we once again achieved excellent results in the main analyses relating to the quality of online communications.



#### 2018 Webranking

In November the Corriere della Sera's weekly L'Economia magazine published the results of Webranking Italy 2018, Europe's most important study into the quality of corporate communications which seeks to promote the transparency and comprehensiveness of online information.

The 17th Italian study, performed by Lundquist in collaboration with Comprend, examined 111 listed

companies which were given a score of between 0 and 100; the average score given to Italian companies was 47.2.

Our website gained two additional points compared with 2017 for an overall score of 76.8, placing it eleventh in the rankings (7th in 2017). Our online communications were particularly appreciated for the way we communicate the identity and values of the company in the context of employer branding.

#### ERG INSTITUTIONAL WEBSITE - WEBRANKING TREND 2005 - 2018



#### SOCIAL MEDIA

We have been active on Twitter, LinkedIn and YouTube since 2015. As well as being based on mainstays like promptness and dynamism, our communication strategy also aims to illustrate aspects of company life at ERG with the goal of consolidating our reputation as a leading green energy producer and strengthening our relations with our stakeholders.

#### **Twitter**

@ERGnow is our corporate Twitter account: it is used, both in Italian and English, to communicate news and information on the business, on the performance of the stock and on Corporate Social Responsibility activities, as well as the most important events sponsored by ERG. At the end of 2018 @ERGnow had 7,700 followers and

had tweeted almost 700 times. In September 2017 we created the @ERGcareers account entirely dedicated to recruitment in Italy and abroad.

On @ERGcareers, in an integrated manner with the ERG LinkedIn profile and corporate website www.erg.eu, it is possible to find information on current vacancies but also information on our development and talent management policies, to use as a guide when evaluating one's applications.

#### Linkedin

Business transactions, financial results, interviews with the management and CSR activities and projects are the main contents of our LinkedIn profile. Current vacancies are

also published in parallel with the @ERGcareers account. At the end of 2018 the account had 19,660 followers (13,777 in 2017) and had published 238 posts with around 6,900 views on average.

#### YouTube

On this channel we have published all videos

mainly concerned with institutional events and the stories of ERG People, who describe their experiences and their view on the significance of working for a green company. In 2018, 22 videos were published on YouTube, for a total of 8,202 view minutes and 6,443 total views by unique users.

#### **OUR NEW LOGO**

After almost 20 years we have decided to adopt a new logo that visually represents our new green positioning but also our evolving path in the energy sector. A logo that visually communicates the Group's capacity to evolve and move with the times without losing sight of its most distinctive qualities.

The light blue, green and dark blue of the new logo recall the colours of Nature. The stylised E, known as "blade", seems to have been modelled by the natural elements from which ERG creates its energy.

The payoff, Evolving Energies, expressly seeks to underline and celebrate this distinctive characteristic of our Group, which has always been synonymous with energy. Energy in evolution.



#### **ERG FINALIST AT THE "OSCAR DI BILANCIO 2018" AWARDS**

The "Oscar di Bilancio" awards, which since 1954 have been given to the most virtuous companies in the areas of reporting and cultivating stakeholder relations, were presented on Wednesday 28 November. Held in the Aula Magna of Bocconi University, the event promoted by FERPI, the Italian Public Relations Federation, together with Borsa Italiana and Bocconi University awarded prizes in 7 categories.



ERG - already winner of an Oscar di Bilancio in 2016 - was a finalist in the "Medium-size businesses listed in the FTSE MIB and FTSE ITALIA MID CAP segments" together with Piaggio and Hera, which won first prize.

#### INTERNAL COMMUNICATIONS

During a period of great change, which sees the company at the end of a transformation process from oil operator to leading "green energy" player, internal communications become a fundamental activity for informing and involving all the employees.

Specifically, a targeted measurement of the information needs of the company employees is an indispensable base for being able to plan action likewise targeted to satisfy them. Accordingly, the degree of appreciation for the company's online internal communication instruments - the "ERGate" intranet portal and the "TeamERG" house

organ - was once again monitored in 2018.

Thanks to the statistical analyses on the web pages visited, we were able to collect important data not only on the "level of interest" in the various sections/articles but also on the most suitable methods for making these communication tools more effective and functional for the users' benefit. Furthermore, in relation to the process of consolidating ERG as a player in the "green economy", during the year internal initiatives were organised aimed at informing, involving and stimulating ERG personnel with regard to their "green responsibility" and environmental sustainability principles.

#### **ON-LINE COMMUNICATION TOOLS**



Intranet portal (ERGate)

ERG people can find all the information they need on "company life" on the intranet. This tool is designed to promote the spreading and sharing of information, documents, images, projects, etc.



House Organ (TeamERG) TeamERG is the digital and interactive company magazine which contains stories, projects and the most important events of the Group. It is available online on a quarterly basis.

#### **GROUP MEETING**



"Leading the Future" 22-23 March 2018 The annual meeting between the top management and ERG's key leaders took place in the Learning Center at the Genoa site. Organised following the presentation of the Plan, the meeting was an opportunity to assess the current state of play and the challenges of the new plan, and to present the ERG Leadership Model.

The importance of skills was also the theme of the account provided by speaker Chiara Montanari, civil engineer and the first Italian woman to lead an expedition to Antarctica. All of the speeches made at the Group Meeting were published in full on the Intranet portal and made available to the entire company workforce.

#### **CORPORATE EVENTS**

GOVERNANCE



#### 80 years of ERG

2018 marked ERG's 80<sup>th</sup> anniversary. Lots of initiatives were organised to celebrate this important milestone with the ERG People playing a central role.



#### Family Day

The annual event for the children (between 3 and 12 years of age) and families of employees involved around 120 participants at the Genoa, Terni and Syracuse sites. Once again it was organised in collaboration with Legambiente, which helped plan the event and the workshops on green energy. To mark ERG's 80th anniversary a theatre company acted out a wonderful fairytale to tell the children the story of the company where their parents work.



#### Corporate volunteering

In collaboration with Legambiente, on Saturday 29 September 2018 we organised our second Corporate Volunteering Day at Piediluco Lake in Terni, one of the biggest natural lakes in Umbria. The initiative emulated the success of the first day organised in Genoa (Villa Croce) the previous November and forms part of "Puliamo il Mondo", the Italian version of Clean Up the World, for the tidying and cleaning of urban centres. Together with the volunteers of Legambiente we dedicated the morning to cleaning and tending to the park next to the lake.



#### Christmas Event

To celebrate Christmas this year we decided to depart from the traditional festive events and "synchronise" the toasts at our Genoa, Rome, Syracuse, Terni, Paris and Hamburg sites and in our operation centres of Ploaghe in Sardinia and Vallata in Campania.

And so, at 12 p.m. on Tuesday 18 December, we all gathered in our respective sites to raise a glass at the same time.

#### COMPETITION



Quanto sei un #greenEnergyMaker? During the summer we launched the photograph competition "Quanto sei un #greenEnergyMaker?" (How much of a #greenEnergyMaker are you?) to show how green we are in our daily lives.



80 energia da raccontare The "80enERGiadaraccontare" competition talks about ERG's 80 years in the business, giving a voice to its people who provide an account of their lives in the company through a video selfie.

#### **SPORT**



ERG for fit gym

"You can have results or excuses, not both" is the motto of the ERG company gym opened at the end of October at the Genoa site and open to all employees. The gym comprises 31 next-generation machines and a team of personal trainers to help people while they work out.



New York Marathon To celebrate ERG's 80th anniversary, this year the company chose the New York Marathon, held on Sunday 4 November, as the perfect occasion for its traditional sporting event. Regarded as the premiere marathon in the world, it has more runners than any other, this year numbering almost 60,000. Running has been a traditional activity at ERG for many years now, underlining the great importance that the company attributes to team spirit and the values of sport.



Terni Marathon For the third year in a row we supported the Valentine's Day Marathon, held on Sunday 18 February in Terni. It proved to be a real festival of sport and energy at which the #greenenERGymakers" turned out in force.



**BikERGs** 

In its third year, the "BikERGs" Motorcycle Rally saw our bikers ride through the hills of Langhe and Roero, along roads and across landscapes well known to all keen bikers. The ERG people, from various parts of Italy (Genoa, Rome, Terni), met up on a Saturday morning in Genoa and headed for the town of Bra, synonymous with the Slow Food movement and home of Piedmont Baroque, passing the hills of Liguria, Parco del Faiallo, Sassello and Monte Beigua on their way.

#### SUMMER CAMP AT PIEDILUCO LAKE

ERG organised the first Summer Camp for school-age children of employees at the Terni Hydroelectric Complex, an opportunity for children and teenagers to meet and socialise during the school holidays while providing concrete support to their families.

The Summer Camp is a project that forms part of the activities to support the Piediluco Rowing Club and was a chance for the kids to enjoy a highly enriching and transformative four-week experience in direct contact with nature, learning about the environment. The concepts they learned will form their behaviour, promoting a real change in their attitude to their surroundings.

In the spaces made available by the Club participants were entertained by a staff of expert educators and instructors who organised daily activities in the water and in the natural



environment of the lake, introducing the children to canoeing and kayaking, sailing, tennis and swimming.

Using a varied, interesting and motivational methodology the kids made friends and enjoyed moments of great happiness and personal growth that encouraged socialisation even among the youngest children through collaborative games, physical activity, excursions in the open air and activities tailored to the ages and aptitudes of the youngsters.



#### THE MAIN COMMUNITY INITIATIVES

#### **ENVIRONMENT, HEALTH AND SOCIAL DEVELOPMENT**



#### ERG Re-Generation Challenge

The second edition of the ERG Re-Generation Challenge, the business plan competition created to provide students, start-uppers and companies with the opportunity to develop business initiatives, began in June 2018. In the scouting phase, the first edition of the ERG Re-Generation Challenge involved Umbria, Lazio and Marche with a total of 66 projects presented.

The three winners continued their entrepreneurial development process by forming contacts and agreements with major companies in the energy sector.

The second edition was national in scope, focusing particularly on the regions of South and Central Italy. The three best ideas were awarded a sum of money to help develop their projects.



#### Vai col Ventol

Now in its fifth year, environmental education project "Vai col Vento!" (Go with the wind!) is dedicated to third-year middle school pupils in the municipalities that host our wind farms. The project has been sponsored by the Ministry of the Environment since its launch and - as of 2016 - also by the Carabinieri. It involves around 1,600 students a year from Sicily, Calabria, Basilicata, Campania, Molise, Puglia and Sardinia. The initiative aims to the awareness of students and teachers as to the active role the younger generations can play in safeguarding the environment and developing the culture of sustainability, involving classroom lessons focused on renewable energy sources, and wind in particular, on environmental topics, climate change and energy efficiency. The lessons are complemented by guided visits to the wind farms during which our expert technicians illustrate the various phases of developing, managing and running a wind farm right through to the production of electricity.



#### A tutta Acqua!

Dedicated to secondary school students in Umbria, Lazio and Marche where we are present with our hydroelectric plants, the second edition of environmental education project "A tutta Acqua!", developed in follow-up to "Vai col Vento!" and adopting the same format, was held in the spring of 2018. As well as the training sessions and guided tour of the Galleto plant, the children also have the chance to visit the protected area of the Marmore Falls.



#### Progetto Scuola

In 2010 we launched "Progetto Scuola" ("School Project") to support activities in schools of all levels and types in the province of Syracuse. In 2018 we once again supported the Legality Project organised by the provincial headquarters of the Carabinieri of Syracuse through the launch of the competition entitled "Un casco vale una vita" ("Helmets save Lives") dedicated to third-year middle school pupils. We also supported the "lcaro 2018" road safety education project organised by Syracuse's provincial Traffic Police division, which involves approximately 2,000 secondary school students.

#### **ENVIRONMENT, HEALTH AND SOCIAL DEVELOPMENT**



#### **Electricity Day**

This event is dedicated to final-year students of technical schools in the areas where our plants are located, and organised as part of "Progetto Scuola". Held various times in the province of Syracuse, in 2018 the initiative was also held for the third consecutive year in the cities of Terni, Perugia, Rieti and Viterbo: in November over 250 youngsters from four technical schools visited the hydroelectric plant in Galleto. In Sicily students from Augusta, Palazzolo and Carlentini (all in the province of Syracuse) were able to visit the combined-cycle power plant in Melilli and the control centre of the wind farms in Carlentini. Our managers and engineers explained the technical characteristics of the two plants to the students, highlighting the importance for ERG of energy efficiency and sustainable production.



#### Cilla Liguria Onlus

In 2018 ERG supported the Cilla Liguria Non-Profit Association in the construction of an Accommodation Centre in the Convent of the Capuchin Sisters of Quarto dei Mille for families with children hospitalised at the Istituto Gaslini of Genoa. The Centre will be made available to relatives of children from other towns being treated at the Genoa hospital free of charge.



#### Mus-e Onlus Foundation

We support the Mus-E ONLUS Foundation (non-profit organisation), which promotes projects for primary schools where there is a significant presence of immigrant children or children from difficult social and family backgrounds in order to create new generations that are able to live in harmony irrespective of culture, origin, disabilities and all other differences



#### Puliamo il mondo

In collaboration with Legambiente, on Saturday 29 September 2018 we organised our second Corporate Volunteering Day at Piediluco Lake in Terni, one of the biggest natural lakes in Umbria. The initiative emulated the success of the first day organised in Genoa (Villa Croce) the previous November and forms part of "Puliamo il Mondo", the Italian version of Clean Up the World, for the tidying and cleaning of urban centres. Together with the volunteers of Legambiente we dedicated the morning to cleaning and tending to the park next to the lake.



#### The Oasis of Alviano

Opened in 1990, the Oasis of Alviano is cared for by the WWF which guarantees the conservation of the environment and the best possible home for the various species. There is a large Environmental Education Centre in the park together with seven bird-watching hides equipped with notice boards and explanatory panels to help visitors recognise the various species. A tower was also built so visitors can watch the birds.

#### **CULTURE AND KNOWLEDGE**



#### Umbria Jazz Foundation

GOVERNANCE

We support the Umbria Jazz Foundation which organises the "Umbria Jazz" Festival in July in Perugia: during the musical festival the main square in the town was renamed "ERG Square". We also contributed to the organisation of Umbria Jazz Spring, held in Terni.



#### **INDA** Foundation

We support the Istituto Nazionale del Dramma Antico (INDA, National Institute of Ancient Drama) Foundation which since 1914 has been organising and staging festivals of classical works at the Greek Theatre of Syracuse and promoting the classical culture in Italy and throughout the world.



#### Science Festival

In November ERG took part in the 2018 edition of the Science Festival, which was held in Genoa between 25 October and 5 November. As part of the many activities and workshops at the Festival, ERG presented "The Power of Change", a virtual experience for children of all ages during which they are taken on a journey to discover our wind farms, solar installations and hydroelectric plants.



#### Communications Festival

ERG was sponsor of the fifth Camogli Communications Festival (6-9 September 2018). This year's theme - "Visions" - celebrated the ability to envisage new ideas, to look beyond the tangible and to imagine potential and realistic solutions. It was the underlying topic of conferences, forums, round tables, interviews, workshops and shows that looked at social, economic, political, financial and scientific aspects.



#### CSR IS -Sustainability and Social Innovation Expo

Spreading the culture of Sustainability is very important to us: this is why we support the "CSR IS – Sustainability and Social Innovation Expo", whose key words for the 2017 edition were "Change, cohesion, competitiveness". We attended the stage held in Genoa and the final nation-wide event at the Università Bocconi in Milan. An important initiative not only for showcasing our best practices for Corporate Social Responsibility but also for stimulating networking among some of the most important CSR players.



We supported the seventh edition of the "Boot Camp", a training event for members of the Young Entrepreneurs Group of Confindustria Genoa. A mix of theory and practice to develop useful skills for tackling the difficult context that Italian companies currently operate in.



#### CIVITA

We are members of CIVITA, an association that promotes and manages Italy's cultural heritage and protects, promotes and increases the accessibility of its artistic heritage also by organising exhibitions, movie screenings and European projects.

#### YOUNG PEOPLE AND SPORT



Torneo Ravano

In 2018 we were once again the main sponsors of the "34th Torneo Ravano – 25th Coppa Mantovani", the biggest school sports tournament in Europe.

Held at Fiera di Genova, over 6,000 primary school children (3rd, 4th and 5th classes) participated in the event with 691 teams in 12 different sports (boys' and girls' football, rugby, volleyball, basketball, cycling, fencing, athletics, sailing, rowing, water polo and for the first time also tennis), all of which played strictly in teams.

#### Trofeo Archimede ed Elettra

The "Trofeo Archimede ed Elettra" ("Archimede ed Elettra Trophy"), the traditional school sports competition in the Province of Syracuse, was held for the 27th time in 2018. Held at the "Riccardo Garrone" ERG Sports Centre in Syracuse, the event involved over 1,000 students from schools in Syracuse and its province.



**NPC Cares** 

In 2016, we became partners of "NPC Rieti Pallacanestro" to support the "NPC Cares" project: this initiative was created by the Rieti-based sports team to support the healthy mental and physical development of young people through sports and the success stories of well-known champions. In 2018 ERG contributed to redesigning the historic basketball court in the Regina Pacis district of Rieti.



Stelle nello Sport

In our role as Gold Sponsor, we took part in the 19th edition of "Stelle nello Sport" (Sports Stars), a project designed to promote the values of sports among an increasingly large sector of the population in Liguria, focusing particularly on young people and schools and with an emphasis on lower-profile sports, support for Paralympic sports and fundraising for the Gigi Ghirotti Association of Genoa and the Fondazione Areo non-profit organisation.



ERG Sports Centre Syracuse The "Riccardo Garrone" ERG Sports Centre in Syracuse was subject to a series of renovation works beginning in 2007. It is now an important sports centre that supports the community and the region, with a strong emphasis on young people

#### THE EDOARDO GARRONE FOUNDATION

Making the next generations protagonists of the social, economic and cultural development of the territory, providing them with skills and tools to take action and make informed and original plans: this is the mission of the Edoardo Garrone Foundation which once again launched and supported training courses capable of creating sustainable value in 2018.

#### RESTARTALP® IDEAS THAT MOVE MOUNTAINS

ReStartAlp®, a temporary incubator of business ideas in the Alpine area, is a strategic continuation of the work carried out since 2014 with the ReStartApp® campuses, fostering the creation and development of start-ups whose purpose is the development, promotion, protection and sustainable exploitation of the Alpine region. Developed in collaboration with Fondazione Cariplo, the campus was held for the third time in 2018.

The consolidated formula of the project, aimed at aspiring entrepreneurs in the mountain region, consists of a 10-week residential campus. The programme, led by professors, experts and professionals, involves teaching activities, business creation and development workshops, case studies and success stories as well as visits to Alpine businesses and destinations that have established themselves both in Italy and internationally thanks to projects to relaunch the area from an economic, environmental and social perspective.

The 2018 edition of the campus involved 14 young adults of between 24 and 35 years of age from all over Italy.



#### RESTARTAPP® FOR CENTRAL ITALY

The Edoardo Garrone Foundation, ReStartApp®, Legambiente and "La Rinascita ha il cuore giovane" have come together to help stabilise and relaunch the businesses affected by the earthquake that struck Central Italy – Lazio, Marche and Umbria – in 2016, bringing this region traditionally devoted to farming, livestock crafts and tourism to its knees. Since then many businesses have had to suspend their activities, but others are now getting back on their feet.

This is the context of the ReStartApp® project for Central Italy, a programme involving 31 companies structured into two sections: the first dedicated to individual businesses, the second, more broad-reaching, geared to the development of networking projects and aimed at trialling new forms of collaboration in order to consolidate the local production and distribution system.

#### FUNDRAISING COACHING PLUS

The first edition of the Fundraising Coaching Plus project, launched in 2018 by the Edoardo Garrone Foundation in collaboration with Centro Studi Philanthropy, supported two Non-Profit Associations from Genoa, ABEO Liguria ONLUS and Teatro Necessario ONLUS, in the organisation of a personalised fundraising plan. Given the positive results achieved, the Foundation chose to extend its period of consultancy to the two organisations for six more months than originally planned so they could become completely independent in the planning and realisation of future activities.



ΠΑΤΑ ΑΝΠ

Continuing to pursue the goal of offering the third sector tools and skills for a change that will generate value in time, in late 2018 the Foundation launched the second edition of the project introducing a number of new features. In fact, the Edoardo Garrone Foundation opened up the project to all Non-Profit Associations in Liguria and pledged to finance the participation of two candidates - one per association selected - on the Università di Bologna Fundraising Master's course. It will also support the activities of those that raise funds in the two chosen organisations by contributing half the wages of an annual internship.

The associations selected for the 2019 edition of Fundraising Coaching Plus are Istituto David Chiossone ONLUS per ciechi e ipovedenti and Comunità Società Cooperativa ONLUS.

#### **APPENNINOLAB**

AppenninoLab was held for the fourth time and between 16 and 21 July 2018 helped around 30 upper secondary school students discover the environmental, economic, social and cultural resources of the Apennines. In the evocative setting of the Parco delle Capanne di Marcarolo (Alessandria), the pupils were able to learn about the local territory and help enhance it with lessons and on-site experiences, also taking part



in various sporting activities.

Sport and culture remain the cornerstones of this project. Group activities, orienteering in the woods, excursions, kayaking, team building activities, mountain bike rides and internal competitions were just some of the activities that the students could take part in.

They were guided by two high-profile personalities in Luca Mercalli - a famous climatologist - and Mirko Celestino - coach of the Italian Mountain Bike Team.

New for this year was a project dedicated to planning a "Giornata dell'Appennino" ("Apennine Day") to organise in the nearby municipalities of Campo Ligure, Tagliolo, Gavi and Voltaggio, on which the students worked very hard.

The aim is to develop managerial skills that the youngsters can subsequently take advantage of in their future careers. To this end, AppenninoLab made it possible to acquire an extra 12 hours of work experience in addition to the 200 hours required of high school students and the 400 hours required of pupils at technical schools.

#### TRAINING

#### Sustainable growth:

#### seminars with Luca Mercalli

"Sfide ambientali per il vostro futuro" ("Environmental challenges for your future"): In 2018 the Garrone Foundation decided to repeat the training meetings with Luca Mercalli. The seminars were aimed at lower and upper secondary school students and focused on the theme of climate change. Over 800 youngsters attended the meetings in the 2017/2018 academic year.

The objective of the initiative is to offer the younger members of society an authoritative and qualified standpoint on the subjects of environmental emergency and sustainable

development, at the same time providing food for thought and rehashing so the work can carry on in the classroom with the teachers.

In order to enable in-depth analysis during the traditional lessons, the Edoardo Garrone Foundation organised a meeting between Luca Mercalli and the teaching staff of Ligurian schools of all types and levels so the teachers could share approaches and materials from the classroom work.

#### Genova Scoprendo

Genova Scoprendo (Discovering Genoa) consolidated its model based on the themes of sustainability and active and responsible citizenship, which continue to be highly

appreciated by both teachers and students.

For the 2017/2018 edition the "KEEP CLEAN" event was introduced which saw students clean the town parks of Nervi, carefully sorting rubbish into the various categories of separated waste. The initiative was carried out in collaboration with Amiu and the Municipality of Genoa and involved the participation of Roberto Cavallo, a well-known "waste expert" who framed the activities with data on the interaction between the environment and the various types of waste.

The event was replicated in the 2018/2019 academic year: in October 2018 over 200 lower secondary school pupils cleared all rubbish from Parco dell'Acquasola in the heart of Genoa.



# 5 DATA AND INDICATORS

#### **DATA AND INDICATORS**

#### **ECONOMIC AND FINANCIAL RESULTS**

|  |                            | 2018       | 2017<br>restated | 2016       |
|--|----------------------------|------------|------------------|------------|
| Revenues from ordinary operations                        | million EUR                | 1,027      | 1,048            | 1,025      |
| EBITDA at replacement cost                               | million EUR                | 491        | 472              | 455        |
| EBIT at replacement cost                                 | million EUR                | 216        | 220              | 202        |
| Net Profit<br>of which Group Net Profit                  | million EUR<br>million EUR | 133<br>133 | 108<br>108       | 125<br>122 |
| Group net profit (loss) at adjusted replacement cost (1) | million EUR                | 107        | 117              | 107        |
| Total net financial indebtedness                         | million EUR                | 1,343      | 1,233            | 1,557      |
| Net invested capital                                     | million EUR                | 3,172      | 3,110            | 3,286      |
| Investments (2)  | million EUR                | 510        | 94               | 60         |
| Financial leverage                                       |                            | 42%        | 40%              | 47%        |

<sup>[1]</sup> Does not include inventory gains (losses) of TotalErg, non-recurring items and related applicable theoretical taxes.

Total revenues in 2017 include 100 thousand EUR in grants from Public Administration or the European Community for employee training. ERG Group does not donate to political parties.

#### **ERG SHARES**

|                          |             | 2018    | 2017    | 2016    |
|--------------------------|-------------|---------|---------|---------|
| Market capitalization    | million EUR | 2,480   | 2,315   | 1,535   |
| Year-end reference price | EUR         | 16.50   | 15.40   | 10.20   |
| Maximum price            | EUR         | 20.34   | 16.50   | 12.45   |
| Minimum price            | EUR         | 15.08   | 9.96    | 8.88    |
| Average price            | EUR         | 17.78   | 12.62   | 10.61   |
| Average volume           | no.         | 304,159 | 249,533 | 244,424 |

(1) Maximum price recorded on 14/05/2018, lowest price recorded on 02/01/2018.

#### **CUSTOMERS**

|                        |    | 2018 | 2017 | 2016 |
|------------------------|----|------|------|------|
| Intercompany customers | n. | 22   | 21   | 20   |
| Industrial customers   | n. | 8    | 9    | 3    |
| Site customers         | n. | 15   | 11   | 11   |

<sup>[2]</sup> In investments in tangible and intangible fixed assets. Not including M&A investments for 39.5 million EUR in 2017 for the acquisition of the companies of the DIF Group in Germany and the M&A investments for 306 million EUR made in 2016.

#### PERSONNEL, ORGANISATION OF WORK AND INDUSTRIAL RELATIONS

|  |       | 2018           | 2017           | 2016           |
|--|-------|----------------|----------------|----------------|
| Employees at 31/12   | no.   | 737            | 714            | 715            |
| Executives at Genoa site   | no.   | 39<br>61%      | 37<br>59%      | 40<br>70%      |
| Middle managers  | no.   | 193            | 169            | 161            |
| Administrative staff   | no.   | 325            | 331            | 344            |
| Workers  | no.   | 180            | 177            | 170            |
| Other external collaborators (1)                                   | n.    | 19             | 32             | 35             |
| Female employment [%] of wich: female employment at Genoa site (%) |       | 20.1%<br>42.0% | 20.9%<br>42.5% | 21.0%<br>41.6% |
| Average time at the company (years)                                |       | 9.8            | 9.8            | 8.9            |
| Average employee age (years)                                       |       | 43.8           | 43.6           | 43.8           |
| Part time employees (Italy)  | %     | 5.0%           | 4.1%           | 3.8%           |
| Part time employees (abroad)                                       | %     | 1.3%           | n.d.           | n.d.           |
| Percentage of overtime (Italy)                                     | %     | 5.4%           | 4.8%           | 4.9%           |
| Percentage of overtime (abroad)                                    | %     | 2.6%           | n.d.           | n.d.           |
| Unionisation rate  | %     | 31.7%          | 31.0%          | 26.9%          |
| Ongoing labour disputes  | no.   | 3              | 2              | (1) 4          |
| Strike [2]   | hours | 0              | 0              | 272            |
| Turnover (3) (inbound staff + outbound staff)/headcount at 31/12   | %     | 13.4%          | 10.2%          | 6.8%           |
| Inbound turnover   | %     | 8.3%           | 5.0%           | 9.9%           |
| Outbound turnover  | %     | 5.1%           | 5.2%           | 3.2%           |
|  |       |                |                |                |

 <sup>[1]</sup> The 2018 figure includes 13 men and 6 women, the 2017 figure includes 22 men and 10 women, the 2016 figure includes 24 men and 11 women.
 [2] Hours of Italy-wide strikes
 [3] The indicator does not count the staff that have joined/left the Group as a result of acquisitions/disposals of companies, so as to show the real change in staff during the year.

#### **TRAINING**

|   |          | 2018   | 2017   | 2016   |
|---|----------|--------|--------|--------|
| Total training                                    | hours    | 34.356 | 37.950 | 31.787 |
| of wich required by law                           | %        | 17%    | n.d.   | n.d.   |
| of wich for technical and soft skills improvement | %        | 83%    | n.d.   | n.d.   |
| Average training per employee                     | days/emp | 5.9    | 6.6    | 5.6    |

| TRAINING BY PROFESSIONAL         |              | 2018           |        | 2017         |                | 2016   |              |                |        |
|----------------------------------|--------------|----------------|--------|--------------|----------------|--------|--------------|----------------|--------|
| CATEGORY AND GENDER<br>GRI 404-1 | Men<br>hours | Women<br>hours | Total  | Men<br>hours | Women<br>hours | Total  | Men<br>hours | Women<br>hours |        |
| Executives                       | 1,044        | 113            | 1,157  | 2,003        | 171            | 2,174  | 1,092        | 164            | 1,256  |
| Middle managers                  | 6,927        | 1,876          | 8,803  | 7,533        | 2,578          | 10,111 | 6,166        | 1,557          | 7,723  |
| Administrative staff             | 12,002       | 3,579          | 15,581 | 14,600       | 4,455          | 19,055 | 11,438       | 4,310          | 15,748 |
| Workers                          | 8,814        | -              | 8,814  | 6,348        | 262            | 6,610  | 7,023        | 37             | 7,060  |
| Total                            | 28,788       | 5,568          | 34,356 | 30,484       | 7,466          | 37,950 | 25,719       | 6,068          | 31,787 |

| AVERAGE TRAINING BY PROFESSIONAL<br>CATEGORY AND GENDER <sup>(I)</sup><br>GRI 404-1 | 2018         | 2018           |              | 17             | 2016         |                |
|---|--------------|----------------|--------------|----------------|--------------|----------------|
|   | Men<br>h/emp | Women<br>h/emp | Men<br>h/emp | Women<br>h/emp | Men<br>h/emp | Women<br>h/emp |
| Executives  | 28.2         | 56.5           | 57.2         | 85.5           | 29.5         | 54.6           |
| Middle managers   | 48.4         | 37.5           | 60.8         | 57.3           | 52.2         | 36.2           |
| Administrative staff  | 52.4         | 37.3           | 62.9         | 45.0           | 47.5         | 41.8           |
| Workers   | 49.0         | -              | 36.5         | 87.3           | 41.6         | 37.0           |

<sup>(1)</sup> average training by professional category and gender

#### **DETAILED ANALYSIS OF PERSONNEL** (NO. OF EMPLOYEES)

| TYPE OF CONTRACT                |     | 2018  |       |     | 2017  |       |  |  |
|---------------------------------|-----|-------|-------|-----|-------|-------|--|--|
| GRI 102-8                       | Men | Women | Total | Men | Women | Total |  |  |
| Permanent contract - Full time  | 588 | 113   | 701   | 564 | 118   | 682   |  |  |
| Permanent contract - Part-time  | -   | 34    | 34    | -   | 29    | 29    |  |  |
| Fixed-term contract - Full time | 1   | 1     | 2     | 1   | 2     | 3     |  |  |
| Group Total                     | 589 | 148   | 737   | 565 | 149   | 714   |  |  |

| TYPE OF CONTRACT                |     | 2018  |       |     | 2017  |       |  |
|---------------------------------|-----|-------|-------|-----|-------|-------|--|
| GRI 102-8                       | Men | Women | Total | Men | Women | Total |  |
| Permanent contract - Full time  | 628 | 73    | 701   | 635 | 47    | 682   |  |
| Permanent contract - Part-time  | 33  | 1     | 34    | 29  | -     | 29    |  |
| Fixed-term contract - Full time | 1   | 1     | 2     | 2   | 1     | 3     |  |
| Group Total                     | 662 | 75    | 737   | 666 | 48    | 714   |  |

| TYPE OF CONTRACT                        | 20    | 2018 |       | 2017 |  |
|---|-------|------|-------|------|--|
| GRI 102-41                              | Total | %    | Total | %    |  |
| Electric                                | 630   | 86%  | 112   | 16%  |  |
| Industrial executives                   | 39    | 5%   | 37    | 5%   |  |
| French contract                         | 37    | 5%   | n.d.  | n.d. |  |
| Foreign contracts                       | 31    | 4%   | 42    | 6%   |  |
| Energy and Oil                          | -     | -    | 372   | 52%  |  |
| Metalworking and Mechanical Engineering | -     | _    | 151   | 21%  |  |
| Group Total                             | 737   |      | 714   |      |  |

| DV COUNTDY AND CENDED | 2018 |       |       | 2017 |       |       |
|-----------------------|------|-------|-------|------|-------|-------|
| BY COUNTRY AND GENDER | Men  | Women | Total | Men  | Women | Total |
| Italy                 | 528  | 134   | 662   | 531  | 135   | 666   |
| France                | 33   | 8     | 41    | 14   | 7     | 21    |
| Germany               | 22   | 3     | 25    | 17   | 4     | 21    |
| UK                    | 3    | -     | 3     | -    | -     | -     |
| Bulgaria              | 1    | -     | 1     | 1    | -     | 1     |
| Poland                | -    | 1     | 1     | -    | 1     | 1     |
| Romania               | 2    | 2     | 4     | 2    | 2     | 4     |
| Group Total           | 589  | 148   | 737   | 565  | 149   | 714   |

#### DETAILED ANALYSIS OF TURNOVER - ITALY - GRI 401-1 (NO. OF EMPLOYEES)

| PERSONNEL EMPLOYED BY AGE AND GENDER - 2018 | Men  | Women | Total | Turnover rate |
|---|------|-------|-------|---------------|
| <30 years                                   | 9    | 3     | 12    | 44.4%         |
| between 30 and 50 years                     | 13   | 2     | 15    | 3.2%          |
| >50 years                                   | -    | 1     | 1     | 0.6%          |
| Total                                       | 22   | 6     | 28    | 4.2%          |
| Inbound turnover rate                       | 4.2% | 4.5%  | 4.2%  |               |

| PERSONNEL EMPLOYED BY AGE AND GENDER - 2017 | Men  | Women | Total | Turnover rate |
|---|------|-------|-------|---------------|
| <30 years                                   | 9    | 1     | 10    | 35.7%         |
| between 30 and 50 years                     | 14   | 1     | 15    | 8.0%          |
| >50 years                                   | 1    | -     | 1     | 0.2%          |
| Total                                       | 24   | 2     | 26    | 3.9%          |
| Inbound turnover rate                       | 4.5% | 1.5%  | 3.9%  |               |

| PERSONNEL EMPLOYED BY AGE AND GENDER - 2016 | Men  | Women | Total | Turnover rate |
|---|------|-------|-------|---------------|
| <30 years                                   | 10   | 1     | 11    | 31.4%         |
| between 30 and 50 years                     | 8    | 6     | 14    | 3.1%          |
| >50 years                                   | 7    | 3     | 10    | 5.5%          |
| Total                                       | 25   | 10    | 35    | 5.2%          |
| Inbound turnover rate                       | 4.7% | 7.2%  | 5.2%  |               |

| OUTBOUND EMPLOYEES BY AGE AND GENDER - 2018 | Men  | Women | Total | Turnover rate |
|---|------|-------|-------|---------------|
| <30 years                                   | 2    | 2     | 4     | 14.8%         |
| between 30 and 50 years                     | 7    | 2     | 9     | 1.9%          |
| >50 years                                   | 17   | 2     | 19    | 11.2%         |
| Total                                       | 26   | 6     | 32    | 4.8%          |
| Outbound turnover rate                      | 4.9% | 4.5%  | 4.8%  |               |

| OUTBOUND EMPLOYEES BY AGE AND GENDER - 2017 | Men  | Women | Total | Turnover rate |
|---|------|-------|-------|---------------|
| <30 years                                   | 1    | 1     | 2     | 7.1%          |
| between 30 and 50 years                     | 8    | 3     | 11    | 5.9%          |
| >50 years                                   | 10   | 2     | 12    | 2.7%          |
| Total                                       | 19   | 6     | 25    | 3.8%          |
| Outbound turnover rate                      | 3.6% | 4.4%  | 3.8%  |               |

| OUTBOUND EMPLOYEES BY AGE AND GENDER- 2016 | Men  | Women | Total | Turnover rate |
|--|------|-------|-------|---------------|
| <30 years                                  | 1    | -     | 1     | 2.9%          |
| between 30 and 50 years                    | 9    | 4     | 13    | 2.9%          |
| >50 years                                  | 9    | -     | 9     | 5.0%          |
| Total                                      | 19   | 4     | 23    | 3.4%          |
| Outbound turnover rate                     | 3.6% | 2.9%  | 3.4%  |               |

#### DETAILED ANALYSIS OF TURNOVER - ABROAD - GRI 401-1 (NO. OF EMPLOYEES)

| PERSONNEL EMPLOYED BY AGE AND GENDER - 2018 | Men   | Women | Total | Turnover rate |
|---|-------|-------|-------|---------------|
| < 30 years                                  | 10    | 4     | 14    | 77.8%         |
| between 30 and 50 years                     | 16    | 3     | 19    | 35.8%         |
| > 50 years                                  | -     | -     | -     | -             |
| Total                                       | 26    | 7     | 33    | 44%           |
| Inbound turnover rate                       | 42.6% | 50.0% | 44.0% |               |

| PERSONNEL EMPLOYED BY AGE AND GENDER - 2017 | Men   | Women | Total | Turnover rate |
|---|-------|-------|-------|---------------|
| < 30 years                                  | 5     | -     | 5     | 62.5%         |
| between 30 and 50 years                     | 5     | -     | 5     | 125.0%        |
| > 50 years                                  | -     | -     | -     | 0.0%          |
| Total                                       | 10    | _     | 10    | 20.8%         |
| Inbound turnover rate                       | 29.4% | _     | 20.8% |               |

| PERSONNEL EMPLOYED BY AGE AND GENDER - 2016 | Men  | Women | Total | Turnover rate |
|---|------|-------|-------|---------------|
| < 30 years                                  | 6    | 2     | 8     | 35.7%         |
| between 30 and 50 years                     | 18   | 5     | 23    | 8.0%          |
| > 50 years                                  | 5    | -     | 5     | 0.2%          |
| Total                                       | 29   | 7     | 36    | 3.9%          |
| Inbound turnover rate                       | 4.5% | 1.5%  | 3.9%  |               |

| OUTBOUND EMPLOYEES BY AGE AND GENDER - 2018 | Men  | Women | Total | Turnover rate |
|---|------|-------|-------|---------------|
| < 30 years                                  | 1    | 1     | 2     | 11.1%         |
| between 30 and 50 years                     | 2    | 2     | 4     | 7.5%          |
| >50 years                                   | -    | -     | -     | -             |
| Total                                       | 3    | 3     | 6     | 8.0%          |
| Outbound turnover rate                      | 4.9% | 21.4% | 8.0%  |               |

| OUTBOUND EMPLOYEES BY AGE AND GENDER - 2017 | Men   | Women | Total | Turnover rate |
|---|-------|-------|-------|---------------|
| < 30 years                                  | 1     | -     | 1     | 12.5%         |
| between 30 and 50 years                     | 7     | 2     | 9     | 225.0%        |
| >50 years                                   | 2     | -     | 2     | 5.6%          |
| Total                                       | 10    | 2     | 12    | 25.0%         |
| Outbound turnover rate                      | 29.4% | 14.3% | 25.0% |               |

| OUTBOUND EMPLOYEES BY AGE AND GENDER - 2016 | Men | Women | Total | Turnover rate |
|---|-----|-------|-------|---------------|
| < 30 years                                  | -   | -     | -     | -             |
| between 30 and 50 years                     | -   | -     | -     | -             |
| >50 years                                   | -   | -     | -     | -             |
| Total                                       | -   | -     | _     | -             |
| Outbound turnover rate                      | -   | -     | -     |               |

#### DETAILED ANALYSIS OF PERSONNEL (NO. OF EMPLOYEES)

| % PROFESSIONAL CATEGORY AND GENDER | 2018 |       |       | 2017 |       |       |  |
|------------------------------------|------|-------|-------|------|-------|-------|--|
| GRI 405-1                          | Men  | Women | Total | Men  | Women | Total |  |
| Executives                         | 95%  | 5%    | 39    | 94%  | 6%    | 37    |  |
| Middle managers                    | 74%  | 26%   | 193   | 73%  | 27%   | 169   |  |
| Administrative staff               | 70%  | 30%   | 325   | 70%  | 30%   | 331   |  |
| Workers                            | 100% | -     | 180   | 98%  | 2%    | 177   |  |
| Total                              |      |       | 737   |      |       | 714   |  |

| % PROFESSIONAL CATEGORY AND AGE |            | 2018        |            |       | 2017       |             |            |       |
|---------------------------------|------------|-------------|------------|-------|------------|-------------|------------|-------|
| GRI 405-1                       | < 30 years | 30-50 years | > 50 years | Total | < 30 years | 30-50 years | > 50 years | Total |
| Executives                      | -          | 54%         | 46%        | 39    | -          | 59%         | 41%        | 37    |
| Middle managers                 | 5%         | 79%         | 17%        | 193   | 1%         | 80%         | 18%        | 169   |
| Administrative staff            | 6%         | 65%         | 28%        | 325   | 5%         | 66%         | 29%        | 331   |
| Workers                         | 8%         | 74%         | 18%        | 180   | 11%        | 73%         | 16%        | 177   |
| Total                           | 45         | 518         | 174        | 737   | 36         | 506         | 172        | 714   |

| ACE DDAOKET AND CENDED  |     | 2018  |       |     | 2017  |       |  |  |
|-------------------------|-----|-------|-------|-----|-------|-------|--|--|
| AGE BRACKET AND GENDER  | Men | Women | Total | Men | Women | Total |  |  |
| <30 years               | 39  | 6     | 45    | 32  | 4     | 36    |  |  |
| between 30 and 50 years | 405 | 113   | 518   | 388 | 118   | 506   |  |  |
| >50 years               | 145 | 29    | 174   | 145 | 27    | 172   |  |  |
| Total                   | 589 | 148   | 737   | 565 | 149   | 714   |  |  |

| PERSONNEL EMPLOYED   |       | 2018   |       |       | 2017   |       |  |
|----------------------|-------|--------|-------|-------|--------|-------|--|
| BY ORIGIN AND REGION | Italy | Abroad | Total | Italy | Abroad | Total |  |
| Company acquisitions | -     | 12     | 12    | -     | -      | -     |  |
| Permanent contract   | 25    | 21     | 46    | 24    | 10     | 34    |  |
| Temporary contract   | 3     | -      | 3     | 1     | -      | 1     |  |
| Training             | -     | _      | _     | 1     | -      | 1     |  |
| Total                | 28    | 33     | 61    | 26    | 10     | 36    |  |

| OUTBOUND EMPLOYEES        | 2018 |       |       | 2017 |       |       |  |
|---------------------------|------|-------|-------|------|-------|-------|--|
| BY REASON AND REGION      | Man  | Women | Total | Man  | Women | Total |  |
| Resigation                | 11   | 3     | 14    | 14   | 5     | 19    |  |
| End of temporary contract | -    | 3     | 3     | 2    | 1     | 3     |  |
| Agreed resolution         | 18   | 3     | 21    | 12   | 3     | 15    |  |
| Total                     | 29   | 9     | 38    | 28   | 9     | 37    |  |

#### SAFETY\*

| INJURIES IN THE WORKPLACE (NO.) | Men | Women | Total 2018 | Total 2017 | Total 2016 |
|---------------------------------|-----|-------|------------|------------|------------|
| Italy                           | 4   | -     | 4          | 4          | 2          |
| Abroad                          | -   | -     | -          | 2          | _          |
| Total                           | 4   | _     | 4          | 6          | 2          |

| FREQUENCY INDEX | Men  | Women | Total 2018 | Total 2017 | Total 2016 |
|-----------------|------|-------|------------|------------|------------|
| Italy           | 4.43 | -     | 3.61       | 3.53       | n.d.       |
| Abroad          | -    | _     | _          | 20.03      | n.d.       |
| Total           |      | _     | 3.25       | 4.87       | 1.74       |

Frequency index calculated as (no. of injuries x 1,000,000)/no. hours worked

| SEVERITY INDEX | Men | Women | Total 2018 | Total 2017 | Total 2016 |
|----------------|-----|-------|------------|------------|------------|
| Italy          | 0.2 | -     | 0.16       | 0.24       | n.d.       |
| Abroad         | -   | -     | -          | 0.24       | n.d.       |
| Total          |     | -     | 0.15       | 0.24       | 0.03       |

Severity index calculated as (no. of days lost x 1.000)/no. hours worked

| OTHER SAFETY INDICATORS                                  | Men  | Women | Total 2018 | Total 2017 | Total 2016 |
|--|------|-------|------------|------------|------------|
| Sick leave rate [%]                                      | 2.1% | 2.7%  | 2.2%       | (1)1.6%    | 1.9%       |
| Working days lost due to injuries in the workplace (no.) | 182  | -     | 182        | 300        | 40         |
| Cases of occupational disease (no.)                      | -    | -     | -          | -          | -          |
| Rate of occupational disease [%]                         | -    | -     | -          | -          | -          |
| Work-related deaths (no.)                                | -    | -     | -          | -          | -          |

#### **AUDIT HSE AND SAFETY WALKS**

|       |     | 2018 | 2017 | 2016 |
|-------|-----|------|------|------|
| Wind  | no. | 237  | 554  | 342  |
| Solar | no. | 33   | n.a. | n.a. |
| Hydro | no. | 87   | 51   | 28   |
| Power | no. | 86   | 53   | 125  |

<sup>\*</sup> The safety indicators do not count the "other external collaborators".
[1] sick leave rate refer just to the italian employees [no. of days absence /day workable].

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#### **SAFETY**

| THIRD-PARTY COMPANY INJURIES   |     | 2018         | 2017                  | 2016                 |
|--|-----|--------------|-----------------------|----------------------|
| Third-party company injuries   | no. | 2            | 4                     | 1                    |
| Frequency index – third party companies – Total Frequency index – third party companies – Italy Frequency index – third party companies – Abroad |     | 4.26<br>5.19 | 7.28<br>2.47<br>20.67 | 2.14<br>n.d.<br>n.d. |
| Severity index – third party companies - Total Severity index – third party companies - Italy Severity index – third party companies - Abroad    |     | 0.16<br>0.19 | 0.05<br>0.06<br>0.03  | 0.06<br>n.d.<br>n.d. |

METHOD FOR ESTIMATING HOURS WORKED - THIRD PARTY COMPANIES

The hours worked by the employees of third party companies have been estimated differently according to the technology involved.

Hydro plants, Power, Wind Italy and Office: manual recording of the hours worked.

Wind Farms abroad: the estimate of the hours worked, given the technical impossibility of recording the presence of the O&M contractors with global service agreements, is based on a hypothesis that one FTE can service 15 MW, moltiplied by workable days (260) and by 8 hours.

METHOD FOR CALCULATING DAYS LOST DUE TO INJURIES - THIRD PARTY COMPANIES

Report sent by the company of the injured worker..

#### **SUPPLIERS**

|  |      | 2018  | 2017  | 2016  |
|--|------|-------|-------|-------|
| Active suppliers (transactions with at least one order)                                  | no.  | 1.772 | 1.564 | 1.553 |
| with registered offices or a billing address in Italy                                    | %    | 65%   | 71%   | 86%   |
| with registered offices or a billing address in the regions where our plants are located | %    | 34%   | 35%   | 33%   |
| % expenditure local suppliers (Italy/total)  |      | 77%   | 74%   | 59%   |
| Qualified suppliers on Vendor List   | no.  | 990   | 920   | 1.147 |
| of which: qualified based on HSE parameters  | no.  | 223   | 226   | 313   |
| Newly qualified suppliers in the year  | no.  | 67    | 61    | 51    |
| of which: newly qualified based on HSE parameters in 2018                                | no.  | 36    | 31    | 28    |
| Average qualification time   | days | 59    | 103   | 110   |
| $\%$ of tenders (of total value of purchases) $^{\![1]}$                                 | %    | 53%   | 41%   | -     |
| % of tenders (of total value of purchases)   | %    | -     | -     | 52%   |
| % of tenders (of total number of purchases) $\!^{\text{(1)}}$                            | %    | 29%   | 31%   | -     |
| % of tenders (of total number of purchases)  | %    | -     | -     | 29%   |

<sup>1)</sup> The 2017 indicators have been calculated following a different method with respect to the previous years of reporting, or rather respectively considering the tender value/total value of orders issued and the number of tenders/total orders issued which does not permit a comparison with the figures for the previous years. Accordingly, the indicators are represented separately.

#### WIND - ENVIRONMENT AND COMMUNITY

|         | 2018   | 2017   | 2016  |
|---------|--|--|---|
| GWh     | 3,464  | 3,613  | 3,501   |
|         | 22%  | 23%  | 23%   |
| kt      | 2,050  | 2,270  | 2,217   |
| GWh     | 11.47  | <sup>(4)</sup> 11.43   | <sup>(4)</sup> 11.36  |
|         | 98.6%  | 82.3%  | 26.2%   |
| kt      | 0.09   | 1.4  | 5.5   |
| MWh/MW  | 6.07   | 6.12   | 6.60  |
| kg      | 3,230  | 924  | 896   |
| kg      | 1,424  | 1,333  | n.d.  |
| kg<br>t | 0,5<br>12                                    | 3,2<br>76  | n.d.<br>n.d.  |
| kg      | 88   | 80   | 90  |
| kg<br>t | 12<br>19                                     | -<br>-   | -   |
| t       | 185<br>53.3%                                 | 56<br>60.9%  | 50<br>n.d.  |
| t       | 102  | 35   | 21  |
| t       | 45<br>44.0%<br>49<br>47.7%                   | 16<br>45.7%<br>19<br>54.3%   | n.d.<br>n.d.<br>n.d.<br>n.d.  |
| t       | 83   | 21   | 29  |
| t       | 54<br>65.3%<br>23<br>28.1%                   | 18<br>85.7%<br>3<br>14.3%  | n.d.<br>n.d.<br>n.d.<br>n.d.  |
|         | kt GWh  kt MWh/MW  kg kg kg t  kg t  t  t  t | GWh 3,464  22%  kt 2,050  GWh 11.47  98.6%  kt 0.09  MWh/MW 6.07  kg 3,230  kg 1,424  kg 0,5  t 12  kg 88  kg 12  t 19  t 185  53.3%  t 102  t 45  44.0%  t 49  47.7%  t 83  t 54  65.3%  t 23 | GWh 3,464 3,613 22% 23% kt 2,050 2,270 GWh 11.47 (4)11.43 98.6% 82.3% kt 0.09 1.4 MWh/MW 6.07 6.12  kg 3,230 924 kg 1,424 1,333 kg 0,5 3,2 t 12 76 kg 88 80 kg 12 - t 19 -  t 185 56 53.3% 60.9% t 102 35 t 45 16 44.0% 45.7% t 49 19 47.7% 54.3%  t 83 21 t 54 18 65.3% 85.7% t 23 3 |

<sup>(1)</sup> The increase in consumption is caused by the increase in the plants running.

<sup>[2]</sup> Value take into consideration the supplies of electricity from renewable production which does not generate emissions; the indirect emissions are calculated on the basis of the conversion factors relating to the gross thermoelectric production of each country published by Terna on its website (Source: Terna, 2015 international comparisons) according to a Location Based approach.

<sup>(3)</sup> Data as at end 2018 accounts quantities into the wind turbines (1.870kg) and into plants abroad (436 kg) not accounted in the previous years.

(4) Value recalculated with respect to that indicated into the Non Financial Reporting 2017 due to improved reporting methodology.

#### **SOLAR - ENVIRONMENT AND COMMUNITY**

|  |         | 2018        | 2017                         | 2016                         |
|--|---------|-------------|------------------------------|------------------------------|
| Production   | GWh     | 130         | n.a.                         | n.a.                         |
| Technical availability plants  |         | 79.10%      | n.a.                         | n.a.                         |
| CO <sub>2</sub> avoided  | kt      | 67.99       | n.a.                         | n.a.                         |
| Indirect energy consumption  | GWh     | 1.16        | n.a.                         | n.a.                         |
| Indirect green energy consumption %  |         | 3.1%        | -                            | -                            |
| Indirect CO <sub>2</sub> emissions   | kt      | 0.6         | n.a.                         | n.a.                         |
| SF <sub>6</sub> present in the electrical equipment  | kg      | 9.80        | n.a.                         | n.a.                         |
| ${\rm SF_6}$ top ups equivalent to tons of ${\rm CO_2}$  | kg<br>t | -           | n.a.<br>n.a.                 | n.a.<br>n.a.                 |
| Area covered by photovoltaic plants  | m²      | 630,291     | n.a.                         | n.a.                         |
| Water used for panel cleaning  | m³      | 494         | n.a.                         | n.a.                         |
| Waste produced (1) of which sent to recycling  | t       | -           | n.a.<br>n.a.                 | n.a.<br>n.a.                 |
| Waste hazardous produced   | t       | -           | n.a.                         | n.a.                         |
| of which sent to recycling<br>of which sent to recycling<br>of which sent to disposal<br>of which sent to disposal | t       | -<br>-<br>- | n.a.<br>n.a.<br>n.a.<br>n.a. | n.a.<br>n.a.<br>n.a.<br>n.a. |
| Waste non-hazardous produced   | t       | _           | n.a.                         | n.a.                         |
| of which sent to recycling of which sent to recycling  | t       | -           | n.a.<br>n.a.<br>n.a.         | n.a.<br>n.a.<br>n.a.         |
| of which sent to disposal of which sent to disposal  |         | -           | n.a.                         | n.a.                         |

(1) In 2018 the Operation & Maintenance activities have been performed by third parties.

#### **OFFICES IN ITALY**

|  |     | 2018  | 2017  | 2016  |
|--|-----|-------|-------|-------|
| Indirect energy consumption            | MWh | 1,333 | 1,154 | 1,280 |
| Indirect CO <sub>2</sub> emissions (1) | t   | 371   | 363   | 607   |

<sup>[1]</sup> Value take into consideration the supplies of electricity from renewable production which does not generate emissions; the indirect emissions are calculated on the basis of the conversion factors relating to the gross thermoelectric production of each country published by Terna on its website (Source: Terna, 2015 international comparisons) according to a Location Based approach.

Wastes: wastes produced in offices are disposed of as municipal waste and therefore quantities are not accounted for.
Water consumptions: the consumptions of water in the offices refers exclusively to uses for sanitary purposes and are part of the condominium services, therefore are not accounted. They are non-material with respect to the business.

#### HYDROELECTRIC POWER - ENVIRONMENT AND COMMUNITY

|  |                        | 2018                | 2017                | 2016                |
|--|------------------------|---------------------|---------------------|---------------------|
| Production   | GWh                    | 1,740               | 1,144               | 1,358               |
| Technical availability plants  |                        | 97.87%              | 96.63%              | 96.52%              |
| CO <sub>2</sub> avoided  | kt                     | 910                 | 631                 | 775                 |
| Energy consumption from primary sources - Diesel fuel <sup>(1)</sup>                       | litres                 | 32,717              | 17,000              | 28,700              |
| Indirect energy consumption  | GWh                    | 5.46                | <sup>(5)</sup> 7.35 | 7.66                |
| % indirect green energy consumption  |                        | 100%                | 100%                | 100%                |
| Indirect ${\rm CO_2}$ emissions $^{\rm [2]}$   | kt                     | -                   | -                   | -                   |
| ${\sf SF}_{\scriptscriptstyle 6}$ present in the electrical equipment                      | kg                     | 820                 | 894                 | 894                 |
| SF <sub>6</sub> in stock   | kg                     | 321                 | 323                 | 326                 |
| ${\rm SF_6}$ top ups equivalent to tons of ${\rm CO_2}$                                    | kg<br>t                | 2.0<br>47           | 2.9<br>68           | n.d.<br>n.d.        |
| F-GAS present in air conditioning systems  | kg                     | 189                 | 179                 | 174                 |
| F-GAS top ups  | kg                     | -                   | -                   | -                   |
| equivalent to tons of CO <sub>2</sub>  | t                      | -                   | -                   | _                   |
| Total releases from concession (MVF)   | million m <sup>3</sup> | 957                 | 1,057               | 970                 |
| Waste produced of which sent to recycling  | t                      | 2,861<br>99.4%      | 2,866<br>99.0%      | 2,747<br>74.0%      |
| Waste hazardous produced of which sent to recycling  | t<br>t                 | 13<br>9             | 12<br>11            | 3<br>2              |
| of which sent to recycling<br>of which sent to disposal<br>of which sent to disposal       | t                      | 72.1%<br>4<br>27.9% | 91.7%<br>1<br>8.3%  | 80.0%<br>1<br>20.0% |
| Waste non-hazardous produced   | t                      | 2,848               | 2,854               | 2,744               |
| of which sent to recycling of which sent to recycling                                      | t                      | 2,835<br>99.5%      | 2,827<br>99.1%      | 2,036<br>74.2%      |
| of which sent to disposal of which sent to disposal  | t                      | 13<br>0.5%          | 27<br>0.9%          | 708<br>25.8%        |
| of which waste removed from rivers and water basins (wood and grate cleaning residues) [8] | t                      | 2,685               | 2,525               | 2,610               |
| of which sent for recycling  |                        | 100%                | 100%                | (4)77%              |

<sup>[1]</sup> The diesel fuel is used to fuel power supply continuity systems and for office heating; emissions are not calculated for this consumption, as the figure represents the purchases and not the consumption, furthermore no final balance is drawn up.

<sup>[2]</sup> Indirect emissions are calculated on the basis of the conversion factors relating to the thermoelectric production of each country published by Terna on its website (Terna, international comparisons) according to the Location Based approach

international comparisons)according to the Location Based approach.

[3] Wood and grate cleaning residues removed from the rivers represent a portion of the total waste produced. They are reported separately to point out the contribution given by the activities for the territory and the hydro-geological safety of river-beds.

<sup>(4)</sup> Transfer activities to the recycling facility started in May 2016.

<sup>[5]</sup> Data updated from 2017 reporting (13.9GWh) due to subsequent checks on plant's consumption. Update made in order to show the correct trend over the years.

#### THERMOELECTRIC POWER - ENVIRONMENT AND COMMUNITY

|   |                                    | 2018         | 2017         | 2016         |
|---|------------------------------------|--------------|--------------|--------------|
| Production  | GWh                                | 2,151        | 2,453        | 2,693        |
| ERG Power performance index <sup>[1]</sup>            |                                    | 64.8%        | 63.2%        | 62.4%        |
| Energy consumption (primary sources)                  | TEP                                | 422,212      | 472,468      | 507,738      |
| Energy consumption (primary sources)                  | thousand m <sup>3</sup>            | 493,556      | 550,876      | 592,765      |
| Indirect energy consumption (2)                       | GWh                                | -            | 1,63         | 1,58         |
| Indirect energy consumption (2) (4)                   | GWh                                | 0.89         | 0.79         | 0.75         |
| % Indirect green energy consumption                   |                                    | 14.3%        | 15.3%        | 5.8%         |
| Direct CO <sub>2</sub> emissions <sup>(3)</sup>       | kt                                 | 1,008        | 1,130        | 1,216        |
| Indirect CO <sub>2</sub> emissions <sup>(2)</sup>     | kt                                 | -            | 0.8          | 0.8          |
| Indirect CO <sub>2</sub> emissions (2) (4)            | t                                  | 0,4          | 0.4          | 0.4          |
| $NO_{\chi}$ emissions $^{(3)}$                        | t                                  | 340          | 364          | 394          |
| CO emissions  | t                                  | 42           | 44           | 46           |
| SF <sub>6</sub> present in the electrical equipment   | kg                                 | 13,077       | 13,061       | 13,061       |
| SF <sub>B</sub> in stock                              | kg                                 | 332          | 370          | n.d.         |
| SF <sub>6</sub> top ups                               | kg                                 | 11           | 16           | 5            |
| equivalent to tons of CO <sub>2</sub>                 | t                                  | 266          | 376          | 117          |
| F-GAS present in air conditioning systems             | kg                                 | 944          | 823          | 10           |
| F-GAS top ups   | kg                                 | 3            | 132          | n.d.         |
| equivalent to tons of CO <sub>2</sub>                 | t                                  | 4            | 220          | n.d.         |
| Thermoelectric CO <sub>2</sub> index                  | kt/GWheq                           | 0.399        | 0.408        | 0.404        |
| Thermoelectric NO <sub>x</sub> index                  | t/GWheq                            | 0.13         | 0.13         | 0.13         |
| Thermoelectric CO index                               | t/GWheq                            | 0.017        | 0.016        | 0.015        |
| Seawater withdrawals for plant cooling systems        | million m <sup>3</sup>             | 197          | 200          | 217          |
| Well water withdrawals                                | million m <sup>3</sup>             | 6            | 5            | 6            |
| Water returned to the natural cycle                   | % of withdrawals                   | 96.8%        | 97.1%        | 97.1%        |
| Cooling water returned to the natural cycle           | million m <sup>3</sup>             | 197          | 200          | 217          |
| Water resource use index demineralised water plant    | % water produced/<br>inbound water | 58.6%        | 63.8%        | 64.2%        |
| Waste produced  | t                                  | 1,546        | 2,079        | 3,715        |
| of which sent to recycling                            |                                    | 54.6%        | 65.3%        | n.d.         |
| Waste hazardous produced                              | t                                  | 174          | 291          | 351          |
| of which sent to recycling of which sent to recycling | t                                  | 74<br>42.7%  | 110<br>37.8% | n.d.<br>n.d. |
| of which sent to disposal                             | t                                  | 42.7%<br>99  | 181          | n.d.         |
| of which sent to disposal                             |                                    | 57.3%        | 62.2%        | n.d.         |
| Waste non-hazardous produced                          | t                                  | 1,373        | 1,788        | 3,364        |
| of which sent to recycling                            | t                                  | 770<br>56.1% | 1,247        | n.d.<br>n.d. |
| of which sent to recycling of which sent to disposal  | t                                  | 603          | 69.7%<br>541 | n.d.<br>n.d. |
| of which sent to disposal                             |                                    | 43.9%        | 30.3%        | n.d.         |

<sup>[1]</sup> Index of "P" principle overall performance" calculated in accordance with the procedures laid down by Ministerial Decree of 5 September 2011 [CAR].
[2] Indirect emissions are calculated on the basis of the conversion factors relating to the thermoelectric production of each country published by Terna on its website (Terna, international comparisons) according to the Location Based approach.

<sup>(3)</sup> The figures relating to the atmospheric emissions are consistent with the annual data reported for the purposes of the E-PRTR Register and with the EU-ETS declarations.

<sup>[4]</sup> la variazione è determinata dalla modifica dell'assetto di impianto che permette una più precisa contabilizzazione dei consumi. La rettifica viene esposta per consentire una corretta visione dei trend dei consumi.

#### **OPERATING DATA AND ENVIRONMENTAL INDICATORS - GROUP**

|  |                 | 2018            | 2017          | 2016          |
|--|-----------------|-----------------|---------------|---------------|
| Total electricity production   | GWh             | 7,485           | 7,209         | 7,552         |
| of which from renewable energy sources                                   | GWh             | 5,334           | 4,756         | 4,859         |
| Sales of electricity   | GWh             | 13,627          | 11,747        | 12,303        |
| Market share of power generation in Italy                                |                 | 2.15%           | 2.00%         | 2.28%         |
| Market share of power sales in Italy                                     |                 | 3.78%           | 3.20%         | 3.55%         |
| Direct energy consumption (methane)                                      | TEP             | 422,212         | 472,468       | 507,738       |
| Direct energy consumption (methane)                                      | $\mathrm{Nm}^3$ | 493,556         | 550,876       | 592,765       |
| CO <sub>2</sub> avoided  | kt              | 3,029           | 2,901         | 2,993         |
| Scope 1 emission originated by energy production                         | kt              | 1,008           | 1,130         | 1,216         |
| Other Scope 1 emissions [2]  | kt              | 1.4             | 1.0           | 0.2           |
| Total indirect energy consuptions  | GWh             | -               | 27,7          | 21,5          |
| Total indirect energy consuptions  | GWh             | 20.3            | 20.9          | 21.2          |
| % Indirect green energy consumption                                      |                 | 86%             | 84%           | 51%           |
| Scope 2 emissions (1)  | kt              | 1.5             | 2.2           | 6.6           |
| Scope 3 emission   | kt              | 31,726          | 2,504         | 2,713         |
| of wich generated by traded energy<br>of wich generated by capital goods | kt<br>kt        | 3,213<br>28,513 | 2,504<br>n.d. | 2,713<br>n.d. |
| Waste produced   | t               | 4,591           | 5,001         | 6,512         |
| of which sent to recycling   | t               | 3,786           | 4,230         | 3,901         |
| of which sent to recycling<br>of which non-hazardous                     |                 | 82%             | 85%           | 60%           |
| of which non-hazardous<br>of which non-hazardous                         | t               | 4,304<br>94%    | 4,663<br>93%  | 6,137<br>94%  |

The indirect emissions are calculated on the basis of the conversion factors relating to the gross thermoelectric production of each country published by Terna on its website (Source: Terna, international comparisons) and according to the Location Based and Market based approach.
 The variation is determined by the inclusion of the company technical fleet not previously accounted for. The emissions generated by vehicles allocated for mixed use were counted at 50%.

## AUDIT REPORT



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(Translation from the Italian original which remains the definitive version)

Independent auditors' report on the consolidated nonfinancial statement pursuant to article 3.10 of Legislative decree no. 254 of 30 December 2016 and article 5 of the Consob Regulation adopted with Resolution no. 20267 of 18 January 2018

To the board of directors of ERG S.p.A.

Pursuant to article 3.10 of Legislative decree no. 254 of 30 December 2016 (the "decree") and article 5 of the Consob (the Italian Commission for listed companies and the stock exchange) Regulation adopted with Resolution no. 20267 of 18 January 2018, we have been engaged to perform a limited assurance engagement on the 2018 consolidated non-financial statement of the ERG Group (the "Group") prepared in accordance with article 4 of the decree and approved by the board of directors on 6 March 2019 (the "NFS").

#### Responsibilities of the directors and board of statutory auditors ("Collegio Sindacale") of ERG S.p.A. (the "parent") for the NFS

The directors are responsible for the preparation of a NFS in accordance with articles 3 and 4 of the decree and the "Global Reporting Initiative Sustainability Reporting Standards" issued in 2016 by GRI - Global Reporting Initiative (GRI Standards).

The directors are also responsible, within the terms established by the Italian law, for such internal control as they determine is necessary to enable the preparation of a NFS that is free from material misstatement, whether due to fraud or error.

Moreover, the directors are responsible for the identification of the content of the NFS, considering the aspects indicated in article 3.1 of the decree and the Group's business and characteristics, to the extent necessary to enable an understanding of the Group's business, performance, results and the impacts it generates.

The directors' responsibility also includes the design of an internal model for the management and organisation of the Group's activities, as well as, with reference to the aspects identified and disclosed in the NFS, the Group's policies and the identification and management of the risks generated or borne.

The Collegio Sindacale is responsible for overseeing, within the terms established by the Italian law, compliance with the decree's provisions.

Ancona Aosta Bari Bergamo Bologna Bolzano Brescia Catania Como Firenze Genova Lecce Milano Napoli Novara Padova Palermo Parma Perugia Pescara Roma Torino Treviso Trieste Varese Verona

Società per azioni Capitale sociale Euro 10.345.200,00 i.v. Registro Imprese Milano e Codice Fiscale N. 00709900159 R.E.A. Milano N. 512887 Partita IVA 00709600159 VAT number 100709600159 Sede legale: Via Vittor Pisani, 25



#### Auditors' independence and quality control

We are independent in compliance with the independence and all other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. Our company applies International Standard on Quality Control 1 (ISQC Italia 1) and, accordingly, maintains a system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

#### Auditors' responsibility

Our responsibility is to express a conclusion, based on the procedures performed, about the compliance of the NFS with the requirements of the decree and the "Global Reporting Initiative Sustainability Reporting Standards" issued in 2016 by GRI - Global Reporting Initiative (GRI Standards). We carried out our work in accordance with the criteria established by "International Standard on Assurance Engagements ISAE 3000 (Revised) - Assurance Engagements Other than Audits or Reviews of Historical Financial Information" ("ISAE 3000 Revised"), issued by the International Auditing and Assurance Standards Board applicable to limited assurance engagements. This standard requires that we plan and perform the engagement to obtain limited assurance about whether the NFS is free from material misstatement. A limited assurance engagement is less in scope than a reasonable assurance engagement carried out in accordance with ISAE 3000 Revised, and consequently does not enable us to obtain assurance that we would become aware of all significant matters and events that might be identified in a reasonable assurance engagement.

The procedures we performed on the NFS are based on our professional judgement and include inquiries, primarily of the parent's personnel responsible for the preparation of the information presented in the NFS, documental analyses, recalculations and other evidence gathering procedures, as appropriate.

Specifically, we carried out the following procedures:

- Analysing the material aspects based on the Group's business and characteristics disclosed in the NFS, in order to assess the reasonableness of the identification process adopted on the basis of the provisions of article 3 of the decree and taking into account the reporting standards applied.
- Analysing and assessing the identification criteria for the reporting scope, in order to check their compliance with the decree.
- Comparing the financial disclosures presented in the NFS with those included in the Group's consolidated financial statements.



- 4. Gaining an understanding of the following:
  - the Group's business management and organisational model, with reference to the management of the aspects set out in article 3 of the decree;
  - the entity's policies in connection with the aspects set out in article 3 of the decree, the achieved results and the related key performance indicators;
  - the main risks generated or borne in connection with the aspects set out in article 3 of the decree.

Moreover, we checked the above against the disclosures presented in the NFS and carried out the procedures described in point 5.a).

 Understanding the processes underlying the generation, recording and management of the significant qualitative and quantitative information disclosed in the NES

Specifically, we held interviews and discussions with the parent's management personnel and personnel of ERG Power Generation S.p.A.. We also performed selected procedures on documentation to gather information on the processes and procedures used to gather, combine, process and transmit non-financial data and information to the office that prepares the NFS.

Furthermore, with respect to significant information, considering the Group's business and characteristics:

- at parent and subsidiaries level,
  - a) we held interviews and obtained supporting documentation to check the qualitative information presented in the NFS and, specifically, the business model, the policies applied and main risks for consistency with available evidence.
  - we carried out analytical and limited procedures to check, on a sample basis, the correct aggregation of data in the quantitative information;
- we visited ERG S.p.A. and ERG Power S.r.I.'s Priolo Gargallo production site, which we have selected on the basis of their business, contribution to the key performance indicators at consolidated level and location, to meet their management and obtain documentary evidence supporting the correct application of the procedures and methods used to calculate the indicators.

#### Conclusion

Based on the procedures performed, nothing has come to our attention that causes us to believe that the 2018 consolidated non-financial statement of the ERG Group has not been prepared, in all material respects, in accordance with the requirements of articles 3 and 4 of the decree and the "Global Reporting Initiative Sustainability Reporting Standards" issued in 2016 by GRI - Global Reporting Initiative (GRI Standards).



#### Other matters

The NFS presents the corresponding figures included in the 2017 consolidated nonfinancial statement for comparative purposes, which was reviewed by other auditors, who expressed an unqualified conclusion thereon on 27 March 2018.

The Group prepared a 2016 sustainability report and has presented the data included therein for comparative purposes in its NFS. That sustainability report was reviewed by other auditors in compliance with ISAE 3000 Revised, not pursuant to any legal requirements, who expressed an unqualified conclusion thereon on 12 April 2017.

Genoa, 25 March 2019

KPMG S.p.A.

(signed on the original)

Luisa Polignano Director of Audit

## CORRELATION BETWEEN ERG MATERIAL ASPECTS AND GRI STANDARDS

| ERG Group<br>material aspects                                | Correlation<br>with GRI Standards               | Scope of material aspects | Type<br>of impact   |
|--|---|---------------------------|---------------------|
|  | GRI 205: Anticorruption (2016)                  | Group                     | Direct              |
| Ethics and integrity   | GRI 405: Diversity and equal opportunity (2016) | Group                     | Direct              |
|  | GRI 419: Socioeconomic compliance (2016)        | Group                     | Direct and Indirect |
| Relations with stakeholders                                  | N/A   | Group                     | Direct              |
| Risk management  | N/A   | Group                     | Direct              |
|  | GRI 302: Energy (2016)                          | Group                     | Direct              |
| Environmental<br>management                                  | GRI 303: Water (2016)                           | Group                     | Direct              |
| systems  | GRI 307: Environmental Compliance (2016)        | Group                     | Direct              |
| Climate change approach                                      | mate change approach GRI 305: Emission (2016)   |                           | Direct and Indirect |
| Safeguarding the environment                                 | GRI 304: Biodiversity (2016)                    | Group                     | Direct              |
| environment<br>and biodiversity                              | GRI 306: Effluent and waste (2016)              | Group                     | Direct              |
| Safety management systems                                    | GRI 403: Occupational Health and safety (2016)  | Group                     | Direct              |
| Safety of infrastructure,<br>plants and local<br>communities | GRI 413: Local communities (2016)               | Group                     | Direct and Indirect |
| Training and development                                     | GRI 401: Employment (2016)                      | Group                     | Direct              |
| of employees   | GRI 404: Training and education (2016)          | Group                     | Direct              |
| Development of the local community                           | GRI 203: Indirect economic impact (2016)        | Group                     | Direct and Indirect |

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# TABLE OF CONCORDANCE WITH ITALIAN LEG. DECREE 254/2016

| Areas<br>of Leg. Decree<br>254/2016              | Requirements<br>of Leg. Decree 254/2016   | Reference<br>documents 2018  |  |
|--|---|--|--|
| Company<br>management<br>model                   | Art. 3.1, paragraph a) Description of the company model for the management and organisation of its business activities, including any models adopted pursuant to Leg. Decree 231/2001   | DNF pag. 10-16   |  |
|  | Policies Art. 3.1, paragraph b) Description of company policies, including due diligence policies   | DNF pag. 114-116<br>Sustainability Policy  |  |
| Environment                                      | Risk management model Art. 3.1, paragraph c] Description of the main risks, including the ways of managing these risks, generated or suffered, and which derive from the company's activities   | DNF pag. 116-120   |  |
|  | Art. 3.2, paragraph a, b, c) Use of energy resources, distinguishing between those produced by renewable and non-renewable sources, the use of water resources; greenhouse gas emissions and emissions of pollutants in the atmosphere; environmental impact  | DNF pag. 121-135   |  |
|  | Policies Art. 3.1, paragraph b) Description of company policies, including due diligence policies   | DNF pag. 157-160, Human Resources section<br>DNF pag 138-140, Health and Saftey section<br>Sustainability Policy |  |
| People   | Risk management model Art. 3.1, paragraph c) Description of the main risks, including the ways of managing these risks, generated or suffered, and which derive from the company's activities   | DNF pag 140-142, Health and Saftey section<br>DNF pag 157-160, Human Resources section                           |  |
|  | Art. 3.2, paragraph c) Information on the impact on health and safety   | DNF pag 143-147  |  |
|  | Art. 3.2, paragraph d) Information on HR management, including gender equality, the implementation of international conventions and dialogue with social stakeholders   | DNF pag 161-181  |  |
|  | Policies Art. 3.1, paragraph b) Description of company policies, including due diligence policies   | DNF pag. 157-160, Human Resources section<br>Sustainability Policy   |  |
| Social   | Risk management model Art. 3.1, paragraph c] Description of the main risks, including the ways of managing these risks, generated or suffered, and which derive from the company's activities   | DNF pag 157-160, Human Resources section   |  |
|  | Art. 3.2, paragraph d) Information on social aspects  | DNF pag. 183-198   |  |
|  | Policies Art. 3.1, paragraph b) Description of company policies, including due diligence policies   | DNF pag. 157-160, Human Resources section<br>Human Rights Policy   |  |
| Human rights                                     | Risk management model Art. 3.1, paragraph c) Description of the main risks, including the ways of managing these risks, generated or suffered, and which derive from the company's activities   | DNF pag 157-160, Human Resources section   |  |
|  | Art. 3.2, paragraph e) Respect for human rights, measures adopted to prevent violations, as well as actions taken to prevent discriminatory behaviour and actions   | DNF pag 104 -105   |  |
|  | Policies Art. 3.1, paragraph b) Description of company policies, including due diligence policies   | DNF pag. 65-67<br>Anticorrption Policy   |  |
| Combating<br>active and<br>passive<br>corruption | Risk management model Art. 3.1, paragraph c) Description of the main risks, including the ways of managing these risks, generated or suffered, and which derive from the company's activities   | DNF pag. 62-63   |  |
|  | Art. 3.2, paragraph f) Information on combating active and passive corruption   | DNF pag. 68-71   |  |
| Diversity of<br>governance<br>bodies             | Policies Art. 10.1 paragraph a) Description of diversity policies applied in relation to the composition of administrative, management and control bodies with regard to aspects such as age, gender composition, training and professional background, as well as a description of the goals, implementation methods and results of these policies | DNF pag. 46-48   |  |

### **GRI CONTENT INDEX**

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| GRI Standard    | Required for CORE   | Page / Link  | Notes/Information/Omissions  |
|-----------------|---|--------------|--|
| GRI 102: GENE   | ERAL DISCLOSURES (2016)   |              |  |
| ORGANIZATIONAI  |   |              |  |
| 102-1           | Name of the organization  | 38           |  |
| 102-2           | Activities, brands, products, and services                                | 10-12        | _  |
| 102-3           | Location of headquarters  | 6            | -  |
| 102-4           | Location of operations  | 13           |  |
| 102-5           | Ownership and legal form  | 50-52        | For further details relating to the ownership structures and the legal form, see the matters indicated in the Report on Corporate Governance and Ownership Structure   |
| 102-6           | Markets served  | 13, 201      |  |
| 102-7           | Scale of the organization   | 200, 11-12   |  |
| 102-8           | Information on employees and other workers                                | 201, 203     |  |
| 102-9           | Supply chain  | 103-107; 208 |  |
| 102-10          | Significant changes to the organization and its supply chain              | 10-11        | No significant changes are indicated relating to the scope and the ownership structures during the reporting period. In any event, for further details with reference to these two aspects, see the matters indicated in the Consolidated Financi. Statements of the ERG Group at 31 December 2014 and in the Report on Corporate Governance and Ownership Structures. |
| 102-11          | Precautionary Principle or approach                                       | 61-64        |  |
| 102-12          | External initiatives  | 192-198      |  |
| 102-13          | Membership of associations  | 30-31        |  |
| G4 - EU1        | Installed capacity  | 13, 77       |  |
| G4 - EU2        | Net energy produced   | 77; 209-213  |  |
| G4 - EU3        | Number of residential, industrial, institutional and commercial customers | 200          |  |
| G4 - EU5        | Allocation regime for CO <sub>2</sub> emission quotas                     | 77           |  |
| STRATEGY        |   |              |  |
| 102-14          | Statement from senior decision-maker                                      | 4-5          |  |
| 102-15          | Key impacts, risks, and opportunities                                     | 55-64        |  |
| ETHICS AND INTE | GRITY   |              |  |
| 102-16          | Values, principles, standards, and norms of behavior                      | 46-48; 66-70 |  |

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| GRI Standard  | Required for CORE   | Page / Link        | Notes/Information/Omissions  |
|---------------|---|--------------------|--|
| GOVERNANCE    |   |                    |  |
| 102-18        | Governance structure  | 49-54              |  |
| 102-22        | Composition of the highest governance body and its committees | 50-51              |  |
| 102-24        | Nominating and selecting the highest governance body          | 51                 | For further details relating to the appointment and selection process for the highest governance bodies and the respective committees, see the matters indicated in the Report on Corporate Governance and Ownership Structures. |
| 102-25        | Conflicts of interest   | 55                 |  |
| 102-30        | Effectiveness of risk management processes                    | 20-22; 63-64       |  |
| 102-32        | Highest governance body's role in sustainability reporting    | 22                 |  |
| 102-35        | Remuneration policies   | 178-180            | For further details relating to the remuneration policies, see the matters indicated in the Report on Corporate Governance and Ownership Structures.   |
| STAKEHOLDER E | NGAGEMENT   |                    |  |
| 102-40        | List of stakeholder groups                                    | 26                 |  |
| 102-41        | Collective bargaining agreements                              | 201                |  |
| 102-42        | Identifying and selecting stakeholders                        | 26-27; 31          |  |
| 102-43        | Approach to stakeholder engagement                            | 26-37              |  |
| 102-44        | Key topics and concerns raised                                | 38-41              |  |
| REPORTING PRA | CTICES  |                    |  |
| 102-45        | Entities included in the consolidated financial statements    | 40                 |  |
| 102-46        | Defining report content and topic Boundaries                  | 38-40              |  |
| 102-47        | List of material topics                                       | 39, 218            |  |
| 102-48        | Restatements of information                                   | 209, 211, 212, 213 |  |
| 102-49        | Changes in reporting  | 209, 211, 212, 213 |  |
| 102-50        | Reporting period  | 38                 |  |
| 102-51        | Date of most recent report                                    | 38-41              |  |
| 102-52        | Reporting cycle   | 41                 |  |
| 102-53        | Contact point for questions regarding the report              | 41                 | For any information relating to this document, see the "Contacts" section of the corporate website www.erg.eu.   |
| 102-54        | Claims of reporting in accordance with the GRI Standards      | 220-225            |  |
| 102-55        | GRI content index   | 220-225            |  |
| 102-56        | External assurance  | 215-217            |  |

GOVERNANCE

ECONOMIC RESPONSIBILITY

| GRI Standard     | Required for CORE  | Page / Link      | Notes/Information/Omissions                  |
|------------------|--|------------------|--|
| TOPIC-SPECIF     | FIC STANDARDS  |                  |  |
| GRI 200: ECOI    | NOMIC SERIES (2016)  |                  |  |
| GRI-201: ECONOM  | IIC PERFORMANCE (2016)   |                  |  |
| 201-1            | Direct economic value generated and distributed                              | 74               |  |
| GRI-202: MARKET  | PRESENCE (2016)  |                  |  |
| 202-1            | Ratios of standard entry level wage by gender compared to local minimum wage | 178-179          |  |
| GRI-203: INDIREC | T ECONOMIC IMPACT (2016)   |                  |  |
| 103-1            | Explanation of the material topic and its Boundary                           | 218-219          |  |
| 103-2            | The management approach and its components                                   | 131-135          |  |
| 103-3            | Evaluation of the management approach  | 131-135          |  |
| 203-1            | Infrastructure investments and services supported                            | 131-135          |  |
| GRI-204: PROCUF  | REMENT PRACTICES (2016)  |                  |  |
| 204-1            | Proportion of spending on local suppliers                                    | 208              |  |
| GRI-205: ANTICO  | RRUPTION (2016)  | ·                |  |
| 103-1            | Explanation of the material topic and its Boundary                           | 218-219          |  |
| 103-2            | The management approach and its components                                   | 66-71            |  |
| 103-3            | Evaluation of the management approach  | 66-71            |  |
| 205-1            | Operations assessed for risks related to corruption                          | 65-71            |  |
| 205-3            | Confirmed incidents of corruption and actions taken                          |                  | No cases of corruption were recorded in 2018 |
| GRI-G4 SECTOR D  | <br>Disclosures - Electric Utilities eu (2013): Disponibilit                 | TY AND AVAILABIL | ITY  |
| G4 - EU10        | Planned capacity   | 77               |  |
| GRI-G4 SECTOR D  | DISCLOSURES - ELECTRIC UTILITIES EU (2013): SYSTEM EFFI                      | CIENCY           |  |
| G4 - EU11        | Average generation efficiency of thermal plants                              | 212              |  |
| GRI 300: ENVI    | RONMENTAL SERIES (2016)  |                  |  |
| GRI-302: ENERGY  |  |                  |  |
| 103-1            | Explanation of the material topic and its Boundary                           | 218-219          |  |
| 103-2            | The management approach and its components                                   | 116              |  |
| 103-3            | Evaluation of the management approach  | 116              |  |
| 302-1            | Energy consumption within the organization                                   | 209-213          |  |
| 302-4            | Reduction of energy consumption  | 125, 213         |  |

| GRI Standard     | Required for CORE   | Page / Link  | Notes/Information/Omissions  |
|------------------|---|--------------|--|
| GRI-303: WATER   | (2016)  |              |  |
| 103-1            | Explanation of the material topic and its Boundary                              | 218-219      |  |
| 103-2            | The management approach and its components                                      | 117          |  |
| 103-3            | Evaluation of the management approach   | 117          |  |
| 303-1            | Water withdrawal by source  | 212          |  |
| GRI-304: BIODIVE | ERSITY (2016)   |              |  |
| 103-1            | Explanation of the material topic and its Boundary                              | 218-219      |  |
| 103-2            | The management approach and its components                                      | 119, 131     | -  |
| 103-3            | Evaluation of the management approach   | 119, 131     | ·  |
| 304-2            | Significant impacts of activities, products, and services on biodiversity       | 119, 131     |  |
| GRI-305: EMISSIO | ON (2016)   |              |  |
| 103-1            | Explanation of the material topic and its Boundary                              | 218-219      |  |
| 103-2            | The management approach and its components                                      | 116, 123     |  |
| 103-3            | Evaluation of the management approach   | 116, 123     |  |
| 305-1            | Direct (Scope 1) GHG emissions  | 212-213      |  |
| 305-2            | Energy indirect (Scope 2) GHG emissions   | 123, 209-213 |  |
| 305-4            | GHG emissions intensity   | 212          |  |
| 305-5            | Reduction of GHG emissions  | 124, 209-213 |  |
| 305-7            | Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions | 212          |  |
| GRI-306: EFFLUE  | NT AND WASTE (2016)   |              |  |
| 103-1            | Explanation of the material topic and its Boundary                              | 218-219      |  |
| 103-2            | The management approach and its components                                      | 120          |  |
| 103-3            | Evaluation of the management approach   | 120          |  |
| 306-1            | Water discharge by quality and destination                                      | 212          |  |
| 306-2            | Waste by type and disposal method   | 209-213      |  |
| GRI-307: ENVIRO  | NMENTAL COMPLIANCE (2016)   |              |  |
| 103-1            | Explanation of the material topic and its Boundary                              | 218-219      |  |
| 103-2            | The management approach and its components                                      | 115          |  |
| 103-3            | Evaluation of the management approach   | 115          |  |
| 307-1            | Non-compliance with environmental laws and regulations                          |              | No significant monetary sanctions or non<br>monetary sanctions due to failure to observe<br>environmental laws and regulations were<br>recorded in 2018. |

| GRI Standard     | Required for CORE   | Page / Link | Notes/Information/Omissions  |
|------------------|---|-------------|--|
| GRI-308: SUPPLII | ER ENVIRONMENTAL ASSESSMENT (2016)  |             |  |
| 308-1            | New suppliers that were screened using environmental criteria   | 208         |  |
| GRI 400: SOCI    | AL SERIES (2016)  |             |  |
| GRI-401: EMPLOY  | MENT (2016)   |             |  |
| 103-1            | Explanation of the material topic and its Boundary  | 218-219     |  |
| 103-2            | The management approach and its components  | 159         |  |
| 103-3            | Evaluation of the management approach   | 159         |  |
| 401-1            | New employee hires and employee turnover  | 204-205     |  |
| 401-2            | Benefits provided to full-time employees that are not provided to temporary or part-time employees                            | 178-181     |  |
| GRI-402: Labor/N | Management Relations (2016)   |             |  |
| 402-1            | Minimum notice periods regarding operational changes  |             | The minimum notice period for the operational changes adopted by ERG is compliant with the legislative provisions envisaged by national labour agreement for workers in Italy. |
| GRI-403: OCCUPA  | ATIONAL HEALTH AND SAFETY (2016)  |             |  |
| 103-1            | Explanation of the material topic and its Boundary  | 218-219     |  |
| 103-2            | The management approach and its components  | 139-140     |  |
| 103-3            | Evaluation of the management approach   | 139-140     |  |
| 403-2            | Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities | 207-208     |  |
| 403-4            | Health and safety topics covered in formal agreements with trade unions   | 143         |  |
| GRI-404: TRAININ | IG AND EDUCATION (2016)   |             |  |
| 103-1            | Explanation of the material topic and its Boundary  | 218-219     |  |
| 103-2            | The management approach and its components  | 173-175     |  |
| 103-3            | Evaluation of the management approach   | 173-175     |  |
| 404-1            | Average hours of training per year per employee   | 202         |  |
| 404-3            | Percentage of employees receiving regular performance and career development reviews  | 171         |  |
| GRI-405: DIVERSI | TY AND EQUAL OPPORTUNITY (2016)   |             |  |
| 103-1            | Explanation of the material topic and its Boundary  | 218-219     | _  |
| 103-2            | The management approach and its components  | 157-159     |  |
| 103-3            | Evaluation of the management approach   | 157-159     | _  |
| 405-1            | Diversity of governance bodies and employees  |             | For further details relating to the composition of the governance bodies, see the matters indicate in the Report on Corporate Governance and Ownership Structures.             |

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| GRI Standard     | Required for CORE  | Page / Link      | Notes/Information/Omissions   |
|------------------|--|------------------|---|
| GRI-406: NON DIS | SCRIMINATION (2016)  |                  |   |
| 406-1            | Incidents of discrimination and corrective actions taken   |                  | No episodes of discrimination were recorded in 2018.  |
| GRI-407: FREEDO  | M OF ASSOCIATION AND COLLECTIVE BARGAINING (2016)  |                  |   |
| 407-1            | Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk | 104-105          |   |
| GRI-413: LOCAL C | OMMUNITIES (2016)  |                  |   |
| 103-1            | Explanation of the material topic and its Boundary   | 218-219          |   |
| 103-2            | The management approach and its components   | 192-198          |   |
| 103-3            | Evaluation of the management approach  | 192-198          |   |
| 413-2            | Operations with significant actual and potential negative impacts on local communities                         | 132-135, 192-198 |   |
| GRI-419: SOCIOE  | CONOMIC COMPLIANCE (2016)  |                  |   |
| 103-1            | Explanation of the material topic and its Boundary   | 218-219          |   |
| 103-2            | The management approach and its components   | 55-56            |   |
| 103-3            | Evaluation of the management approach  | 55-56            |   |
| 419-1            | Non-compliance with laws and regulations in the social and economic area                                       |                  | No significant monetary sanctions or non monetary sanctions due to failure to observe laws and regulations were recorded in 2018. |
|                  |  |                  |   |
| Material topi    | c not related to a GRI Standard topic specific   |                  |   |
| MATERIAL TOPIC   | : RISK MANAGEMENT  |                  |   |
| 103-1            | Explanation of the material topic and its Boundary   | 218-219          |   |
| 103-2            | The management approach and its components   | 61-64            |   |
| 103-3            | Evaluation of the management approach  | 61-64            |   |
| MATERIAL TOPIC   | : STAKEHOLDER RELATIONS  |                  |   |
| 103-1            | Explanation of the material topic and its Boundary   | 218-219          |   |
| 103-2            | The management approach and its components   | 26-38            |   |
| 103-3            | Evaluation of the management approach  | 26-38            |   |
|                  |  |                  |   |

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