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ERG S.p.a.

Italy | Commodities | Energy production

BUY

Price: €26.02 (9th February 2021)
Target Price: €33.27
Upside: +27.9%
Dividend Yield: 2.8%

Primary exchange: Borsa di Milano
Tickers: ERG
ISIN: IT0001157020

Market data:

Main shareholders:

San Quirico S.p.A.	55.6%
Polcevera S.r.l	6.9%
Treasury shares	0.9%
Other shareholders	36.5%

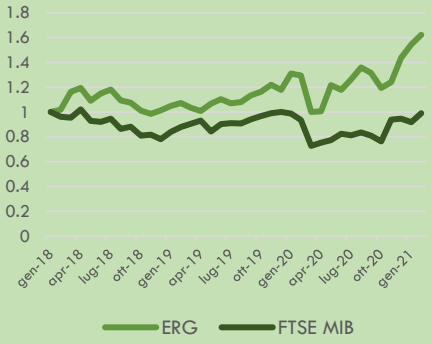
Key financials:

	2020	2021E	2022E
EPS[€/share]	0.58	0.63	0.80
DPS [€/share]	0.75	0.75	0.75
Price to Book	2.31x	2.41x	2.50x
ROE [%]	4.99	5.62	7.44
NFP/EBITDA	2.69x	2.86x	2.94x

Stock data:

52 w H/L: €13.17-27.54
Avg. daily volume (3 Mo): 249,806.6
Float: 36.5%
52 w Beta: 0.71

3Y price performance:



CFA Institute Research Challenge
Initiation of coverage 10th February 2020

ERG, an Italian interpretation of "green"

We initiate our coverage on ERG SpA (ERG) with a BUY recommendation and a year-end target price of €33.27, which offers a 27.9% upside from its closing price on the 9th February 2021. ERG is a middle-cap Italian renewable energy company and ranks among the top ten wind power operators in Europe, with a substantially increasing presence also in the hydroelectric and solar PV sectors. Looming uncertainties feature the renewable energy sector and, more in general, the world's economic and financial scenario and among them the (i) **Covid-19's disruptive impact on financial markets**, (ii) the **Italian and European's switch from incentives to auctions** and (iii) the **last year's sharp decrease in energy prices** due to low inflation are not to be forgotten. Nevertheless, despite such unclear future we believe that the company has great potential that has not been noticed by the market, yet.

"We sold the old ERG and bought a brand-new one"

"Edoardo Raffinerie Garrone" was the name of the company funded in Genoa just after the end of the First World War, named after his owner. The company operated in the refinery sector for 70 years until 2006, when a crucial change of course utterly rivolutionised its soul: from 2006 on, the entity's refinery operations have been sold and the capital employed in oil activities has shrunk, all of which in favour of the adoption of a brand-new green strategy aiming at sustainability and CO2 reduction. ERG's top management likes to see this strategy's clean-cut as a disposal of the old company followed by the acquisition of a new, better, environmental-friendly one. The renewables' energy industry is skyrocketing and ERG, early and outstanding example of such sector alignment, plans onto exploiting such blossoming with i) a solid and diversified portfolio, both by sector and by geographical area, thanks to which the company is able to maintain a strong and growing performance, ii) a winning mix of technologies and businesses that create long-term synergies, iii) economies of scale that leverage on low maintenance costs and iv) a conservative financial policy supported by a substantial amount of liquidity.

Renewables are skyrocketing. Will ERG manage to keep up and take off?

Our price objective of €33.27 provides an upside of 27.9% from the 9th February 2021, and reflect our beliefs that ERG will demonstrate resilience in this current and future challenging commodity environment facing the risks arising from incentives policies and prices volatility through a solid and diversified growing strategy that leverages on a conservative financial policy.

	2018	2019	2020	2021E	2022E	2023E	2024E
Unit price [€/MWh]	131.13	127.22	129.52	134.35	130.19	127.84	127.46
Baseload price per unit [%]	*53.6%*	*48.1%*	*37.7%*	*39.3%*	*41.9%*	*43.3%*	*44.7%*
Incentives per unit [%]	*46.4%*	*51.9%*	*66.1%*	*60.7%*	*58.1%*	*56.7%*	*55.3%*
Production [GWh]	7,506	7,982	7,695	8,055	8,706	10,055	11,357
Revenues [€mn]	1045.6	1044.4	1017.6	1104.9	1157.2	1312.4	1478
EBITDA [€mn]	479.58	495.9	515.37	561.25	582.71	669.41	768.03
EBITDA margin [%]	*45.9%*	*47.5%*	*50.6%*	*50.8%*	*50.4%*	*51.0%*	*52.0%*
EBIT [€mn]	205.51	189.95	195.03	210.8	259.69	366.81	479.87
EBIT margin [%]	*19.7%*	*18.2%*	*19.2%*	*19.1%*	*22.4%*	*27.9%*	*32.5%*
Tax rate [%]	27.6%	37.3%	20.0%	31.5%	31.2%	30.5%	30.2%
Net profit [€mn]	132.63	31.555	87.445	94.633	120.51	190.79	264.65
Net profit margin [%]	*12.7%*	*3.0%*	*8.6%*	*8.6%*	*10.4%*	*14.5%*	*17.9%*
Earnings per share	0.88	0.21	0.58	0.63	0.80	1.27	1.76
Dividends per share	1.15	0.75	0.75	0.75	0.75	0.75	0.75
Price to earnings	30.01	126.14	45.52	42.06	33.03	20.86	15.04
Price to book	2.18	2.23	2.31	2.42	2.50	2.49	2.37
Net financial position over EBITDA	2.28	2.78	2.69	2.86	2.94	2.74	2.51

Source: QUALENERGIA.it

We issue a BUY recommendation on ERG, with a target price of €33.27, which offers a 27.9% upside from its closing price on the 9th February 2021. Our price objective is computed by projecting the Discounted Free Cash Flow to the Firm over the next 10 years, with terminal value estimated using the historical EV/EBITDA levels. Our assessment is based on the belief that ERG relies on a sustainable growth strategy based on *i)* a solid and diversified portfolio, both by sector and by geographical area, thanks to which the company is able to maintain a strong and growing performance, *ii)* a winning mix of technologies and businesses that create long-term synergies, *iii)* an economies of scale that leverages on low maintenance costs, *iv)* a conservative financial policy supported by a substantial amount of liquidity. Together with all these certainties, however, there are also possible risks, which see the Italian and European political scenario pouring out their indecisions on the industry, which already has do deal with volatility of the commodity market.

From grey to green activities

With its entry into the renewable energy sector in 2006, ERG begins to mark its path toward a green future, definitely consolidated with the total sale of the ISAB refinery in 2013, the year in which ERG ranks as the leading wind energy operator and positioned itself in the top ten in Europe, and with the exit from Oil wit sale of TotalErg in 2018. From that moment on, the company further expands its green portfolio, entering the hydroelectric (2015) and solar (2018) sectors. This transition is also marked by the change in the composition of the capital employed, the 48% employed in oil activities in 2008 was completely absorbed in 2014 (only 6% remains) by the capital employed in green activities, and of the EBITDA, which sees the oil contribution drop dramatically from 65% in 2008 to 0% in 2014. This framework had a significant impact on CO2 emissions, growing by approximately 25x in the period 2008-2020, in line with European decarbonisation goals, allowing ERG to obtain important incentives, a source of revenues.

Source: enersolare.net

ESG winds to propel ERG into the future

Global shift towards a sustainable economy, regulatory pressure and increasing activism in environmental, social and governance spheres are all set to benefit the company in the future. On the 23rd of December 2020, ERG placed its third green bond, for an aggregate nominal amount of €100mn at an issue price corresponding to 101.102% and a fixed interest rate of 0.5% (+77.5bp vs Mid Swaps), 7 years maturity and rated BBB- by Fitch, reaching a total outstanding notional amount of corporate bonds of €1.1bn. The company thus continues its mission of a sustainable business strategy, a path recognized by Vigeo Eiris, and supported by other providers of ESG ratings that have all acknowledged the strength of the sustainability vein running through the core of a company.

Source: FiscoOggi.it

Growth through diversification

ERG writes its growth path through a strategy with a double diversification, geographical and seasonal, as a guideline, which allows the company to make the most of the differences in the location and intensity of the various energy resources, managing to obtain a balanced production throughout the whole year. This strategic vision of ERG's growth is the basis of our assessment of future performance, which sees the company go through several stages of development characterized by specific combinations of business, technologies and territories. By 2022 ERG will complete the projects currently underway, reaching an estimated capacity of 3,430MW (+10%), 67% of which deriving from wind farms in Italy and abroad, consolidating once again its presence in the UK. The two-year period 2023-2025 will be marked by strong expansion, with the commissioning of the medium and early-stage projects undertaken in the previous years, which will be translated into a 60% increase in production. In the five years after, ERG will experience a more contained growth, but will benefit from the different natures of the projects that leverage on long-term synergies and low maintenance costs.

Source: QUALENERGIA.it

Brexit, incentives framework and commodity volatility: how much uncertainty is the industry facing?

Changing European environmental policies, Brexit and the pandemic make for an unstable economic environment, and the most frequently cited word remains uncertainty. Lockdowns impact energy demand and commodity volatility. Brexit forces ERG to slow down on UK expansion plan. Projects and existing energy plants are highly illiquid. The review of incentives on renewables, which will take place at the end of the year, both at European and state level could further change the expected scenario. Key factors for the company remain the improvement of wind plants in southern Italy and the resolution of the stalemate caused by Brexit. The company adopts effective and comprehensive risk control policies that allow it to maintain a good solidity and protect itself from the main risks, but the high uncertainty linked to the above mentioned facts could cause substantial losses in the short-medium term

Exhibit 1: Asset portfolio by sector (2019)

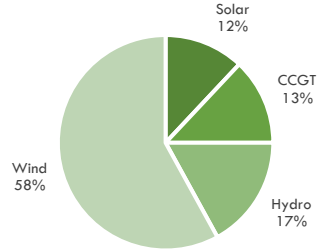


Exhibit 2: Asset portfolio by geography (2019)

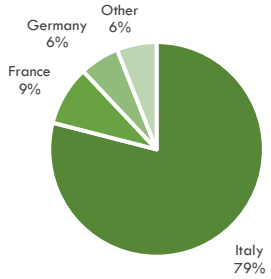
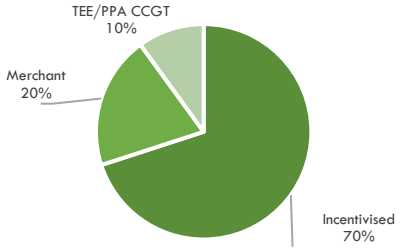
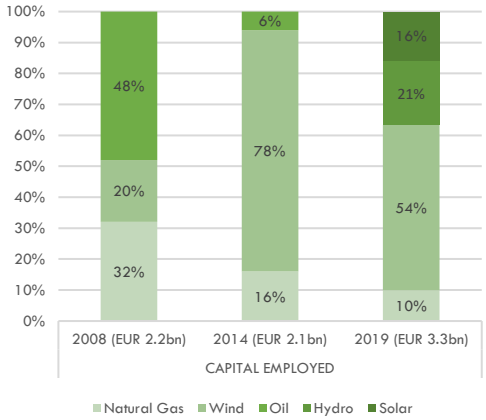


Exhibit 3: Asset portfolio by incentive



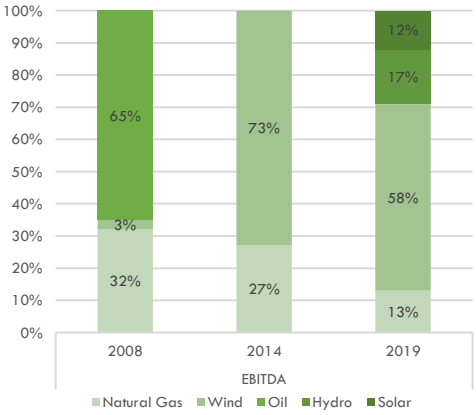
Source: company data

Exhibit 4: Change in the capital employed structure (2008-19)



Source: company data

Exhibit 5: EBITDA breakdown over the years



Source: company data

BUSINESS DESCRIPTION

Company presentation

ERG's history dates back to 1938 when it was founded as a little refinery near Genoa, sector in which it operated for 70 years before moving to the renewable energies sector. As time went by the company grew at sustained pace as an oil operator (in 1975 the Sicilian refinery has been opened and still is nowadays one of the Mediterranean's biggest refineries) and in 2006, following the entrance of the new generations in the family company, ERG looks beyond its core business for new growth opportunities. This research resulted in an epochal change: ERG took over EnerTAD, an independent company active in the renewables energy sector and owner of a 77MW wind power plant, with the initial aim of diversifying its assets' portfolio. 2008 is another crucial year for ERG as it manages to sell 49% of its ISAB refinery to LUKOIL with an attached put option agreement providing for the sale of the remaining 51%: this proved to be a crucial move for the company and its investors as it enabled the former to carry out the sale at an armoured overprice, allowing for protection against re-pricing agreements just before the financial and oil sectors' meltdowns. This move proved all analysts wrong and enabled the company to invest the EUR 3 billion sale proceeds from 2008 to 2013 in the renewable energies' sector. ERG in the meantime left the so called "gray activity" and officially joined the green sector in 2012, when management declared that "we have sold ERG and bought back a brand-new ERG"; one of the first moves outlined in the new business plan has been the acquisition of a company for wind farm O&M activities and the beginning of wind power plants' repowering activities: dismantling existing shovels and rebuilding brand-new wind parks through the usage of greater technological advantage translated into higher and more efficient production, which enabled ERG to become the first wind operator in Italy and among the top 10 in Europe. At the same time the company joined the Italian hydroelectric sector with 7 dams and 3 basins with programmable core to program production. Last but not least has been the entrance in the solar energy sector, which took place in 2018-2019.

The numbers in the transition from the "old" to the "new" ERG

As can be seen from the *exhibit 1*, ERG's transformation has been remarkable also considering the capital employed: in 2008, 50% of such capital was invested in oil activities and only 20% was actually invested in renewable activities; at the end of 2019 oil and ERG ceased being a going concern, with 65% of the company's activities being characterised by electric energy production (of which 54% linked to wind power, 16% to solar power, 21% to hydroelectric power and 10% to natural gas). ERG's EBITDA value still resembles 2008's levels but the composition is entirely different, and with the undertaken transformation the avoided CO2 has been increased by 25 times, consistent with Europe's decarbonisation goals.

Current asset portfolio

ERG mainly carries out (*i*) Centralised Energy Management activities for all the generation technologies in which the Group operates, and (*ii*) Operation and Maintenance activities of its Italian windfarms and solar plants and part of the plants in France and Germany, as well as the Priolo CCGT plant, the Terni Hydroelectric Complex and the Priolo CCGT plant. *Exhibit 2* depicts the company's actual portfolio which is still heavily biased towards Italy: EBITDA ranging from 70 to 75% still incentivised in Italy from expiring incentives and from auction tariffs, set in place to securitise future cash flows by fixing the unit revenue. Despite this, future growth plans encompass both eastern and western Europe. The company operates in the following electric energy power sectors [*exhibit 1*]:

1. Wind. ERG is present in the wind power energy sector, with a total amount of 1,967 MW of current installed capacity. This is the company's historically most important energy renewable energy sector, it is indeed the first operator in Italy and ranks in the Europe's top ten wind power producers. The wind farms are mainly concentrated in Italy (1,093 MW), but with a significant and growing presence abroad (874 MW operational), mainly in France (397 MW), Germany (272 MW), Poland (82 MW), Romania (70 MW) and Bulgaria (54 MW).

2. Solar. PV energy is another important renewable energy field for ERG, in which the company can count on an installed capacity of 141 MW, with two photovoltaic plants in Lazio (51.4 MW) and 31 photovoltaic plants located in 8 regions in the North and the South of Italy.

3. Hydroelectric & Thermoelectric. Hydroelectric and Thermoelectric energy sources complete ERG's asset portfolio: hydroelectric energy is produced thanks to an integrated portfolio of assets consisting of 19 plants, 7 dams, 3 reservoirs and one pumping station, located in the Umbria, Marche and Lazio regions, linked by a network of rivers and canals of over 150 km with a capacity of 527 MW. Thermoelectric energy, on the other hand, is produced by ERG through the CCGT "Centrale Nord" plant (480 MW) at the industrial site in Priolo Gargallo, Syracuse, Sicily. The company considers this power plant as being highly-efficiency, with low environmental impact able to use a combined cycle technology fuelled with natural gas, producing also steam and other utilities [*Appendix 1*].

Business strategy

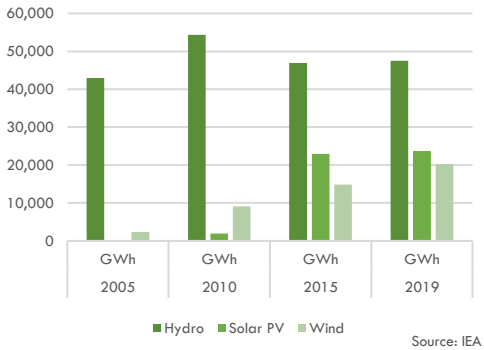
ERG has been adopting a strategy focused on sustainable development and decarbonisation targets [*Appendix 1*]. Such approach has also been driven by Europe's need to steer towards renewable energy sources when dealing with the industry of electricity generation: Governments have been increasingly pushing towards decarbonisation in favour of renewable sources and there has been a radical change in the competitive scenario through the progressive introduction of competitive auctions for the award of new renewable capacity and the consequent abandonment of incentivising systems. Renewables can then be regarded as being a sector with proper industrial characteristics which will gain ever increasing importance in the coming years. Within this changed competitive environment, ERG's strategy is to continue to grow in renewable energies by boosting and fully exploiting its industrial know-how, its territorial presence, the quality of its assets and its operating efficiency. The goal in the 2018-2022 time interval has been and will be to increase installed capacity by 850MW through three channels:

Exhibit 6: Auctions

STRENGHTS	WEAKNESSES
Flexibility Real price discovery Greater certainty regarding prices Greater certainty regarding quantities Transparency	Relatively high transaction costs Risk of underbuilding and delays

Source: IRENA

Exhibit 7: Renewables' energy production in Italy by industry



Source: IEA

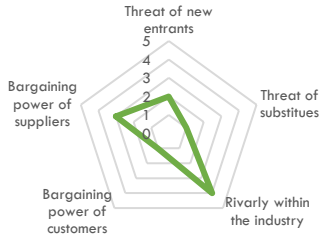
Exhibit 8: Production increase in Italy by sector (cumulative)

Source: IEA

Exhibit 9: Drivers and challenges for Germany and France

	Drivers	Challenges
FRANCE	Ambitious targets supported by auctions, with a clear schedule for solar PV and onshore wind until 2019; technology-specific working groups established to accelerate deployment.	Uncertainty over auction design for self-consumption tenders; long development lead times for onshore and offshore wind.
GERMANY	Targets combined with support schemes, and predictability from a clear timeline of fixed-volume auctions.	Grid constraints; ageing onshore wind fleet; onshore wind permitting slow-down; self- consumption surcharge for commercial PV.

Exhibit 10: Renewables' 5 forces analysis



Source: team estimates

(i) Greenfield and co-Development. ERG intends to continue with its growth strategy through the organic development of its own pipeline of projects or agreements for co-development in France, Germany and the United Kingdom; it plans to grow as a wind power operator through the usage of this channel except for Italy, in which it is already present as first operator [*Exhibit 2*].

(ii) Repowering and Reblading in Italy. Wind farms characterised by obsolete technology will be boosted and made much more efficient thanks to the carrying out of repowering and reblading activities; such old wind farms feature turbines of less than 1 MW, with incentives already expired or expiring, but are at the same time located in the windiest sites, therefore with very high expected profitability even in the absence of incentives; the company is planning to expand in the wind power sector in Italy according to this strategy: taking a park, halving the number of wind towers and boosting production by 4 times (as new wind towers feature 3 to 4MW each) and at the same time keeping the same land area occupied. With respect to the reblabing channel, on the other hand, it has already been exploited by ERG by maintaining the same wind towers and changing the final parts with more aerodynamic wind turbines, capable of incrementing production by 20%.

(iii) M&A. ERG has used mergers and acquisitions for exploiting growth opportunities in countries of interest, with the primary aim of generating new synergies through portfolio consolidation. The M&As channel is considered by ERG as being a reasonably flexible instrument which has already been properly used by the company in the very first part of the current industrial plan: it has been used for some picking activities in France and Germany within the wind power and solar energy sectors. As of the current date, M&A activity can be considered completed.

INDUSTRY OVERVIEW

The renewables' energy industry

Covid-19 impact. The industry has been negatively affected by the world pandemic and, as a result of it, both installations and production have suffered a substantial decrease in the first half of 2020. Nevertheless, the industry proved flexible and readily rebounded after the strongest limitations have been suspended. Even though some uncertainty is still looming especially in Europe where new lockdowns have been introduced, the aggregate impact of the pandemic on renewables in both the medium and long term is expected to be minimal [see *Appendix 2.1* for more details].

From incentives to auctions

Renewables are growing at an incredible pace and the farewell to traditional energy is getting closer and closer. Experience in policy design has been developed during the years but needs now to be adjusted in order to address (i) the rapid decline in the costs of renewable technology, (ii) the approaching grid parity and (iii) the growing share of variable renewable energy. For all these reasons, auctions have started becoming popular and preferred to incentives for energy deployment. The strengths and weaknesses are given in the *exhibit 6* which shows that auctions mainly call for transparency and certainty, raising the need for companies to become more efficient and competitive. An usual auction is characterised by the (i) auction demand, which provides for the auctioned volume and how it is shared between technologies and project sizes; (ii) the qualification requirement, which shades light on the minimum requirements potential auctioneers need to abide to in order to be eligible, (iii) the winner selection process which sets all the criteria for selecting the winner and, to conclude, (iv) the sellers' liabilities, which aims at ensuring high implementation rates of the awarded projects efficiently. A decent level of competition has to be achieved during auctions, which is dependent on the technologies that can compete, the auctioned volume and the number of bidders in the auction: if such level-playing-field of competition is not achieved, potential collusive behaviours may negatively affect auctions' cost-efficiency.

Italy

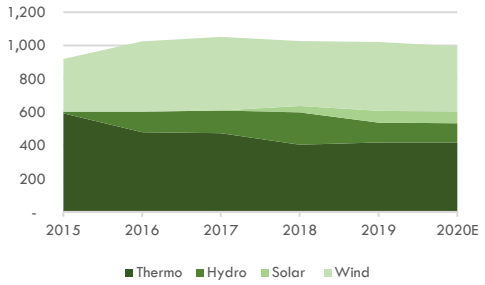
ERG's revenues stem mainly from Italy (79%), France (9%) and Germany (6%) and expects to expand mainly in these latter two countries. A careful evaluation of the renewable energy sector in each of these countries is therefore required. Over the selected years, hydroelectric energy production is constant over time [*exhibit 7*], whereas an impressive increase in both solar and wind energy production can be appreciated from [*exhibit 8*], signalling the country's constantly increasing interest and tendency to rely on renewable energies.

Auctions and PPAs: higher deployment, lower acceleration: Wind power in Italy has grown in 2020 but at a slower pace compared to 2019 (55% lower), scoring a value of 0.2GW as a result of the pandemic. The lack of a proper support scheme in the country has led to a slowdown in the industry's market activity; as a result of it, auctions have been introduced (such introduction has interested many European countries) and are expected to change this trend. 1GW has been auctioned last year and 90% of it has been won by wind developers at prices ranging around EUR 57/MWh in the first round and EUR 64.9/MWh in the second. The National Energy and Climate Plans aims at achieving 9GW of additional wind capacity by 2030, with 5GW expected to be auctioned by the government by 2021. As a result of it, annual additions are expected to range around 1GW starting from 2023 until 2025, also thanks to the further introduction of corporate PPAs; such increase may also be even more significant if permitting processes were facilitated. To conclude, repowering potential has also to be considered for all the 5.8GW-capacity wind turbines which have been operating since 2010.

PV growth among slowdowns, government ambitious targets and "green" recovery policies: Similarly to 2019, Italy has added roughly 0.8GW of PV capacity in 2020 and in the first half of 2020 increased even more compared to the same period of last year's. PV applications are expected to grow even more than wind power energy in the next two years thanks to tax incentives, the "Scambio sul posto" self-consumption scheme and a new 110% tax rebate for residential PV systems (one of the measures aiming at fostering expenditure linked to the Covid-19 pandemic). Italy's PV additions are expected to increase even more beyond 2022: its National Energy and Climate Plan provides for a target equal to 52GW of PV capacity by 2030 which is much higher compared to the 20.9GW installed by 2019. The auction scheme introduced in 2019 is relevant also for the solar PV industry and is expected to lead growth towards the 2030's target. Just like for the wind power

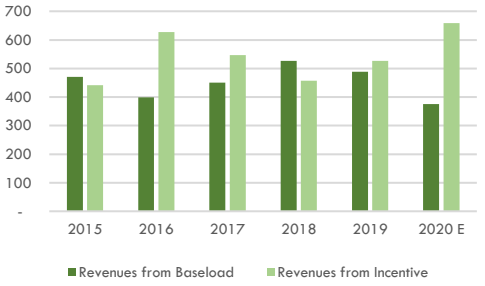
STRENGHTS
1. In-house O&M boosts efficiency and competitiveness during auctions
2. Renewables are the best substitute for traditional energy
3. ERG can count on diversified energy sources for levelling energy production
OPPORTUNITIES
1. The industry is growing at an incredible pace
2. Sustainability is becoming crucial for today's companies
WEAKNESSES
1. ERG faces competition from huge conglomerates
2. Revenues heavily tilted towards Italy
3. Most parks are in South Italy with high mob presence
4. Low presence and brand recognition in other European countries
THREATS
1. EU's decarbonisation target by 2030
2. Long term impact of the switch from incentives to auctions
3. Climate change

Exhibit 11: Revenues growth by sector [€mn]



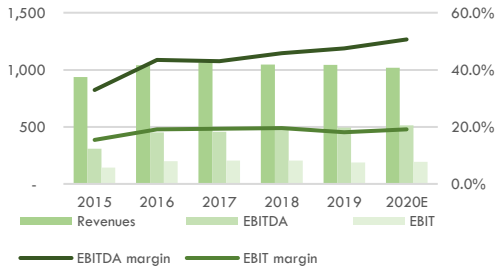
Source: company data, team estimates

Exhibit 12: Revenues by price [€mn]



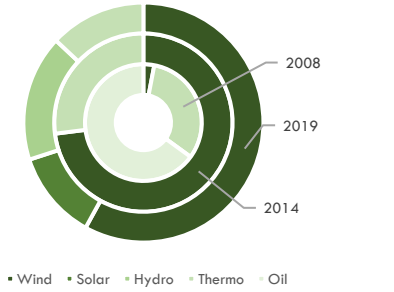
Source: company data, team estimates

Exhibit 13: EBITDA and EBIT margins [€mn]



Source: company data, team estimates

Exhibit 14: EBITDA by energy source



Source: company data, team estimates

energy sector, the government's challenges regard the easing of permitting processes and additional policies implementation for stimulating deployment.

Abroad

The other main two countries in which ERG is present and plans on expanding into are France and Germany, which feature government policies and renewables' growth very similar to the Italian case: wind power and solar PV additions are increasing really fast, consistent with EU's green and decarbonisation targets by 2030. Just like Italy, deployment is likely to be very volatile as a consequence of the governments' decision to switch from set tariffs to competitive auctions in both countries; despite this, Germany's Investment Acceleration Act and, more generally, eased permitting processes are expected further foster renewable energies' growth in the medium term [see *Appendix 2.2* for more details].

Competitive advantages

1. The **threat of new entrants** in the renewable energies' industry [see *Appendix 2.3* and *Exhibit 10*] is not significant as economies of scale are difficult to achieve leaving room for a reasonable degree of cost advantage to consolidated players; further, strict licenses and requirements are set in place by governments which are added to large expenditures required upfront.
2. **Rivalry within the industry** is affected by the fact that renewables are getting ever-increasing importance, thus pushing traditional conglomerate energy producers joining the industry, with high investment capabilities; exit barriers are high due to the large investments required in the industry and governments' regulations and restrictions; these two strong points are slightly offset by the fact that the industry is growing at an incredible pace in Europe meaning that competitors are less prone to engage in competitive actions as there is no need to "steal" market share. ERG here should take advantage of this fact and expand as much as possible towards the European's 2030 decarbonisation target.
3. The **threat of substitutes** is non-existent as renewables themselves are the ultimate substitute for traditional energy, and ERG is an early and outstanding example of such industry alignment.
4. The **bargaining power of customers** is deemed to be low, too, as energy is a commodity needed by everyone, and this negatively affects the bargaining power of the market actors who purchase it, being them commercial businesses or governments; further, buyers are willing to pay overprices for clean energy with respect to traditional one as its usage is considered a powerful marketing tool.
5. **Suppliers and their bargaining power** are difficult to spot as ERG is at the top of the supply chain: here governments may be considered to be a kind of supplier as they provide for the price-rule energy companies have to abide to. The regulatory change from incentives to auctions is expected to have a large impact on energy companies' profits and this and translates into high power in the hands of governments. For more details about competitors and their financials see appendix 2.4.

FINANCIAL HISTORICAL ANALYSIS

Introduction

ERG consolidates its presence in the renewables, installing +664MW in the period 2015-2020 (+523MW in the wind power and +51MW in the photovoltaic), thus confirming its leading position among wind operators in Italy and among the top ten in Europe achieved in 2013. In fact, ERG boasts a diversification strategy on two fronts: that of energy resources and that of geography (+517MW abroad in the period 2015-2020), thus managing to maintain a stable and strong performance despite the adversity caused by the uncertainty of weather conditions and the volatility of prices and incentives.

Analysis

Revenues: a stable trend driven by energy sales (€1,018mn in 2020, +1.7% CAGR 2015-2020) [***Exhibit 11***].

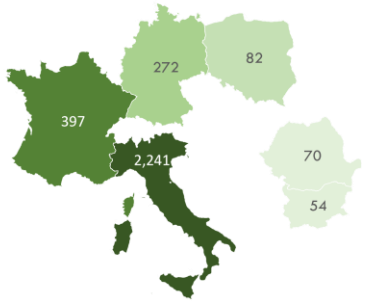
Revenues from sales. Are the main sources of revenues, the 97.9% of them in 2020 (98.2% on average in the period 2015-2020), but down by 2.4% from 2019 (from €1,022mn in 2019 to €997mn, *team estimates*), a reduction mainly due to: *i)* a decrease of 4.8% in revenues from the wind sector, as a result of a lower output generation (-3%) and a reduction in the average annual energy unit price *(team estimates)*; *ii)* a decrease of 9.9% in the hydroelectric energy production, partly offset by higher prices, with an effective -3.8% revenues reduction *(team estimates)*. The overall increase in capacity (+664.4MW) and the related increase in production (+2,365GWh, *team estimates*) are not totally reflected in revenues trend (+1.6% CAGR 2015-2020), which are strongly dependent on volatile energy prices, composed by the baseload price and an incentive part, having different impact on revenues each year [*Exhibit 12*].

1. Wind. It represents an average of 39% of total revenues from 2015 to 2020 (+4.5% CAGR), with an estimated value of €394mn in 2020 *(team estimates)*, down by 4.8% compared to the €414mn in 2019, due to a decrease in energy selling prices (from 104.76€/MWh to 101.55€/MWh on average in Italy and abroad, *team estimates*) and a 3% reduction in the output (from 4,000GWh to 3,878GWh, *team estimates*). The constant increase in revenues is the effect of an always increasing installed capacity (+523MW of which 517MW abroad), which offsets the negative price scenario the sector is expiring, mainly due to uncertain incentives framework.

2. Solar. Entered in ERG portfolio in 2018 representing on average the 6% of revenues, it sees a constant increase toward 2020 (+35.9% CAGR), thanks to the new installed capacity (+51.4MW) and increasing selling prices (from 314€/MWh to 325.51€/MWh, *(team estimates)*. The sector generates €70mn in 2020 (*team estimates*), -1.2% from 2019 (€71mn), a decrease mainly driven by bad weather conditions specially in the fourth quarter.

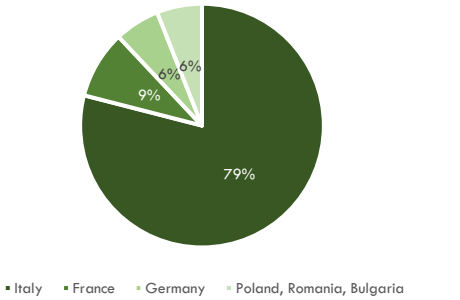
3. Hydro. Entered in ERG portfolio in 2015 and became fully operational in 2016, this sector represents now an estimated 11% of revenues, with an almost stable performance in the period 2016-2020 (-1.3% CAGR). The estimated value for 2020 is €114mn *(team estimates)*, down by 3.8% compared to the €119 in 2019, due to a decrease in the production stemming from the lower availability of water resources.

Exhibit 15: Installed capacity in MW 2020



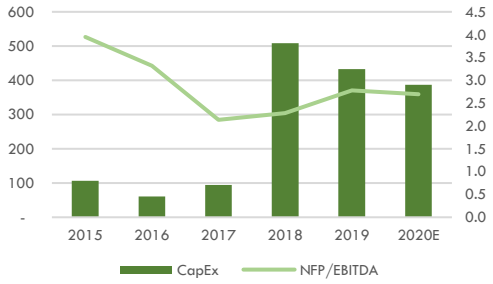
Source: company data, team estimates

Exhibit 16: EBITDA by region 2019



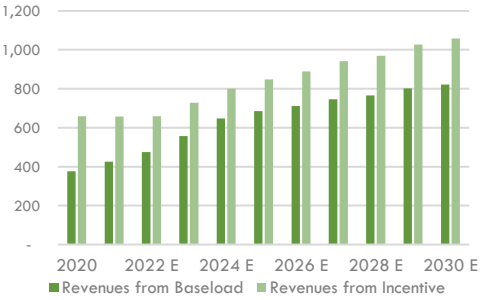
Source: company data, team estimates

Exhibit 17: Net financial position and CapEx [€mn]



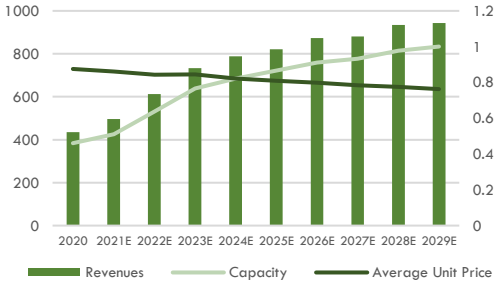
Source: company data, team estimates

Exhibit 18: Revenues from baseload electricity prices and from Incentives (2020-30) [€mn]



Source: company data, team estimates

Exhibit 19: Influence of capacity, average unit price, and load factor on wind revenues [€mn]



Source: company data, team estimates

4. Thermo. As the hoof of ERG, it represents the 46% of revenues from sales, with a slight tendency to decline toward 2020 (-1.1% CAGR 2015-2020), reflecting the entry of new sources and their continuous growth in the energy portfolio. The estimated value for 2020 amount to €418mn *(team estimates)*, almost stable from 2019. Revenues from the sector include also the ones related to the supply of steam to captive customers of the Priolo Gargallo petrochemical site, which represent an average of 15% in the period 2016-2020, amounting for €60mn in 2020 *(team estimates)*.

EBITDA and EBIT: strong operating margins (50.6% and 19.4% respectively in 2020).

ERG experienced an increasing trend both in the EBITDA margin, which grew from 32.9% in 2015 to 50.6% in 2020 (+10.8 CAGR, *team estimates*) and in the EBIT margin, from 15.5% in 2015 to 19.4% in 2020 (+6.4% CAGR, *team estimates*) [*Exhibit 13*]. The main driver of this trend is the wind sector, which represent approximately the 60% of the total EBITDA in the period 2016-2020, as a result of the growing expansion both in Italy and abroad (mainly France and Germany). Its share grew from a 3% in 2008 to a 73% in 2014, totally incorporating the 63% of EBITDA contribution by the oil sector, and then decreased to 58%, a result given by the entry of the solar and the hydroelectric sector in the ERG portfolio, which gradually earn more share ending up to approximately 12% and 17% respectively in 2019, reflecting the balance among the different energy sources. These changes in the portfolio also impacted the thermoelectric EBITDA contribution, decreasing from the 32% in 2008 to the 13% in 2019 [*Exhibit 14*]. The increasing trend of the EBITDA and the EBIT is also supported by the geographical portfolio diversification [*Exhibit 15*], which allows ERG to improve the complementarity of energy resources, spreading the wind power capacity across Italy, France, Germany, Poland, Romania and Bulgaria, with the respective 50%, 23%, 12%, 6%, 5% and 4% share of the 2020 total production *(team estimates)*. The biggest EBITDA contribution is given by Italy (79% in 2019), in which all the sectors are operative [*Exhibit 16*].

CapEx: investing in green energy through a strong debt position.

As ERG is amplifying its portfolio toward new energy sources and markets, it needs a strong cash position to support this growth: CapEx raised from approximately the 11% of revenues in 2015 to the 38% in 2020 *(team estimates)*, with an average of €258mn in the period. The sectors that required the majority of investments was the wind power, with a total expenditure of €549mn in the period 2015-2019 and contributing on average the 60% of the total CapEx, and the more expansive photovoltaic, with €566mn in investments in only two years (2018-2019), an average of 59%. Once again we see how ERG has and is expanding its green energy portfolio, a trend necessary to consolidate its presence in this two non-programmable resources sectors, which is reflected in the gradual increase in the installed capacity. This expansion is supported by strong debt structure through project finance, corporate loans and green bonds, allowing ERG to maintain a consolidated NFP/EBITDA below the 3x (an existing restrictive covenant), with an average of 2.9x in the period 2015-2020 *(team estimates)* [*Exhibit 17*]. To strengthen this conservative financial policy ERG maintains a solid liquidity profile, with an average of €743mn in the cash account from 2015 to 2020 *(team estimates)*.

FINANCIAL FUTURE ANALYSIS

Introduction

In the short-term (2021-2022), we estimate ERG to see its revenues grow at a 6.6% CAGR mainly affected by (i) a return of ANEPs to a pre-pandemic level [Annex 3.3], (ii) a stable regulatory environments for the emission of incentives, and (iii) a steady but lower capacity growth compared to previous years. In the medium term (2023-2025), we foresee a 4.4% CAGR due to (i) a slightly growing ANEP powered by a strengthened inflation rate (Annex Prices), (ii) a negative influence of national policy in regards to green energy incentives [Exhibit 18], (iii) an acceleration in the capacity expansion in the wind and solar sectors (+1,613MW), and (iv) a improved efficiency, quantified with greater load factors, because of technological advances and equipment renovation. The long-term period (2025-2030), with an estimated +2.9% CAGR, is again negatively affected by the incentives framework, and by a more contained growth in the installed capacity (+1,175MW). The effect of economy of scale coming from the dilution of fixed costs on an increased production level, will outperform the negative influence of decreasing unit prices benefiting ERG's EBITDA margins (+190bps from 2020 to 2030 with an average of 51.8%).

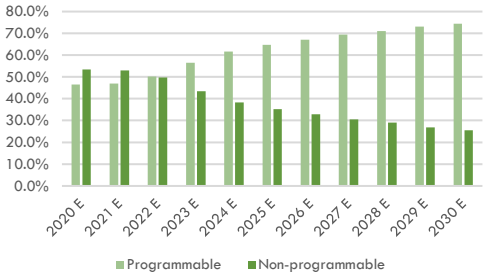
Main assumptions

Revenues: different sources for the production of the same product

ERG produces energy from four different sources: wind, solar, hydro, and thermo. Each of them have its peculiar characteristics: such as different incentive schemes, efficiency levels, CapEx growth, etc. Thus, we started our estimated considering the revenues coming from each sources of production separately :

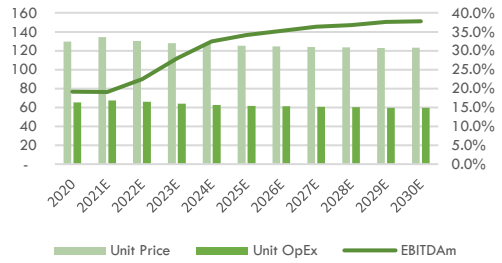
1. Wind: this sector is the main driver for ERG's production growth. It will receive the majority of ERG's future CapEx. In accordance to the firm's business plan (valid until 2022) and team estimates, the wind capacity will expand at a 9.5% CAGR (2021-2030) through greenfield, park-repowering, and, after 2022, M&A in Italy and other European countries, where ERG has already established itself *(Annex Capacity)*. Altogether with the growth of the average load factor (from 22% to 26%), a measurement of production efficiency, which results from (*i*) a general technological advance of new wind-mills and (*ii*) the improvement of already installed facilities with practices such as repowering and reblading, the positive impact on revenues will outperform negative factors. The main negative impact is due to lower incentives level. The situation varies from country to country: for instance, in Italy many incentives plan are coming to an end, in the UK there are no incentive at all and the system bases on auctions. Overall, according to team estimates, the revenues related to the wind sector will increase at a 10.2% CAGR (*exhibit 19* shows the relations between wind revenues and the factors that influence them).

Exhibit 20: Revenues from programmable and non-programmable sources in relative terms



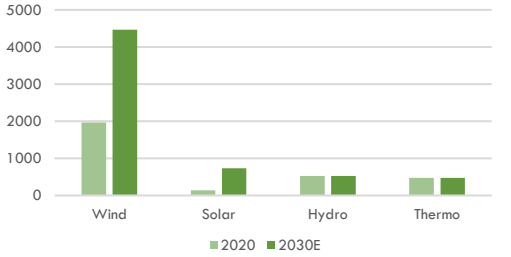
Source: company data, team estimates

Exhibit 21: Unit prices and OpEx influences on EBITDAm



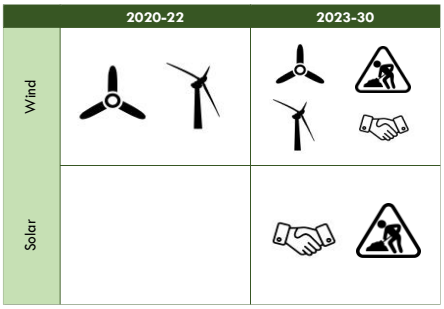
Source: company data, team estimates

Exhibit 22: Comparison of capacity by sector (2020-30) [MW]



Source: company data, team estimates

Exhibit 23: Types of CapEx for the wind and solar sectors for the 2020-22 and 2023-30



2. Solar: this sector is the second pillar for ERG's production expansion. It shares similar characteristics with the wind sector: we expect the capacity of the solar production to grow at a 20.2% CAGR (2021-2030), the load factor to increase form a 18% to a 21% in a ten years period due to technological advances in solar panels, and slightly worsening incentive scheme in the countries where ERG has or will have established its solar plants: Italy and Germany. Thankfully to a higher CapEx growth relative to installed capacity and a negative but better regulatory environment, the solar sector is the first driver of ERG' revenues expansion with a 23.1% CAGR.

3. Hydro: the wind and solar sectors are where ERG looks for its growth and where it puts its efforts and resources. However, being these sectors strictly dependent to exogeneous variables (weather conditions, climate change, etc), ERG must hedge these itself with a solid base of programmable sources of production: the hydro and thermo sectors (*exhibit 20*). According to the information provided by the company, we estimate a null growth for the hydro, which, weakening incentive environment, will result in a stable revenues output over the considered period (CAGR of -0.4%).

4. Thermo: this sector with a great strategic importance on ERG's production management will have the worst impact on the company revenues. The thermo-related revenues refer to the sales of the electricity produces from the CCGT plant and steam. Considering that the value of steam sold will almost be constant since it is regulated by industrial agreements with companies of the Priolo-Gallo industrial site, the main effect on revenues is given by an average lower incentive per unit and a constant production capacity of the CCGT plant. Indeed, the revenues for the thermo decrease with a -1.4% CAGR from 2021 to 2030. In exhibit X, it is shown the impact of each sector revenues on ERG's total earnings.

Operating costs: greater production for economies of scale

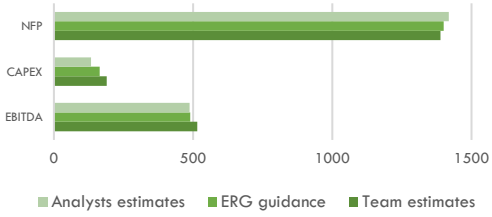
We assumed to be fundamental in our analysis to split generation of revenues between different sources because of their peculiar nature, this is not the case for the operating costs incurred by ERG. By their nature, these expenses are linked to all the business operation conducted by the company, we think that a divisional split would be misleading and irrelevant. The purchases item constitutes 51.2% of operating costs in 2020 (*team estimates*): it mainly refers to the acquisition of electricity and gas to sustain the ordinary industrial process. Because of its variable nature lined to the production level, the relative percentage of purchases to other OpEx, modelled using our inflation estimates (*Annex Price* for more details), will increase up to a 58.9% in 2030. Finally, according to the company's statement we forecast a constant level in the period affected by the pandemic, followed by hiring and increased expense in the post-pandemic expansion phase. According to our estimates, the resulting EBITDA will increase at 6.7% CAGR which is higher compared to the 5.7% of total revenues. Thus, the EBITDA margin shows a +190 bps improvement in 2030 relative to 2020 mainly attributable to economies of scale effects and increased production efficiency, which offset the negative impact of decreasing unit prices (*exhibit 21* shows this comparing the trends of the main elements which directly impact ERG's EBITDAm).

Capital expenditure: strong growth in the non-programmable sources of production

We assume completely different scenarios for the programmable and non-programmable sources of energy. As displayed in *exhibit 22*, the capacity for the hydro and thermo will remain constant. In this regard, we do not consider the rumours on a possible sale of the CCGT plant by ERG, being consistent with the information provided by the company in investors meetings and other instances. On the other hand, ERG has been repeatedly reported the intention to expand the wind and solar production capacity. To estimate future CapEx levels, we consider two different periods based on the current business plan which expires in 2022. Up to that date, the expansion path goes through greenfield, reblading, repowering in the wind sector, and it remains constant in all the other sectors (from 3,116 MW installed in 2020 to 3,430 in 2022). The situation drastically changes in the following period where the wind sector sees an expansion through all type of investments (repowering and reblading of old parks in Italy, greenfield investments and M&A abroad) and ERG improves its presence in the solar sector in Italy and Germany through greenfield investments and M&A. In exhibit 23 the ways ERG intends to expand the non-programmable sources of production are shown: for instance, in the period 2020-22, the wind sector will benefit from reblading and repowering, instead, in the 2023-30 period, the solar sector will grow through M&A and greenfield investments.

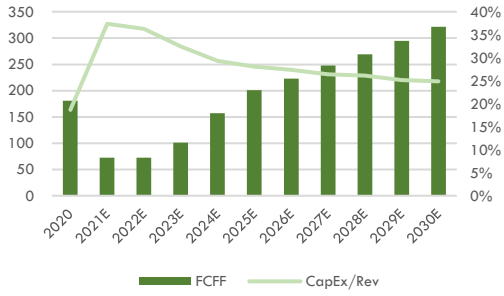
Millions of €	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Revenues	1,064	1,046	1,044	1,018	1,105	1,157	1,312	1,478	1,566	1,634	1,723	1,770	1,867	1,918
Wind	*431*	*376*	*420*	*394*	*435*	*497*	*612*	*733*	*788*	*821*	*872*	*881*	*935*	*942*
Solar	*-*	*37*	*70*	*70*	*73*	*73*	*115*	*160*	*205*	*252*	*301*	*351*	*403*	*456*
Hydro	*123*	*174*	*115*	*114*	*139*	*135*	*133*	*132*	*128*	*124*	*120*	*117*	*113*	*110*
Thermo	*444*	*398*	*411*	*418*	*436*	*429*	*425*	*422*	*412*	*403*	*394*	*386*	*378*	*370*
Other	*66*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Revenues growth	*2.1%*	*-1.7%*	*-0.1%*	*-2.6%*	*8.6%*	*4.7%*	*13.4%*	*12.6%*	*6.0%*	*4.3%*	*5.4%*	*2.8%*	*5.4%*	*2.8%*
EBITDA	458	480	496	515	561	583	669	768	813	849	899	925	981	1,010
EBITDA margin	*43.0%*	*45.9%*	*47.5%*	*50.6%*	*50.8%*	*50.4%*	*51.0%*	*52.0%*	*51.9%*	*52.0%*	*52.2%*	*52.2%*	*52.5%*	*52.7%*
Purchases	*33.4%*	*33.4%*	*31.3%*	*27.8%*	*26.5%*	*25.6%*	*26.4%*	*26.9%*	*27.0%*	*27.4%*	*27.5%*	*27.7%*	*27.8%*	*27.9%*
Personnel expenses	*6.5%*	*6.5%*	*6.4%*	*6.4%*	*6.3%*	*6.1%*	*5.8%*	*5.2%*	*4.8%*	*4.6%*	*4.5%*	*4.3%*	*4.3%*	*4.2%*
Other operating expenses	*17.1%*	*17.1%*	*16.5%*	*18.2%*	*16.5%*	*17.5%*	*17.4%*	*16.9%*	*16.3%*	*16.1%*	*16.0%*	*15.7%*	*15.7%*	*15.4%*
EBIT	207	206	190	195	211	260	367	480	535	576	627	651	702	725
EBIT margin	*19.4%*	*19.7%*	*18.2%*	*19.2%*	*19.1%*	*22.4%*	*27.9%*	*32.5%*	*34.1%*	*35.2%*	*36.4%*	*36.8%*	*37.6%*	*37.8%*
Profit before taxes	140	144	52	136	134	182	290	403	457	498	550	573	625	648
Tax rate	*23.5%*	*27.6%*	*37.3%*	*20.0%*	*31.9%*	*31.1%*	*30.3%*	*30.0%*	*29.8%*	*29.8%*	*29.7%*	*29.7%*	*29.6%*	*29.6%*
Net profit margin	207	133	33	89	91	126	202	282	321	350	386	403	440	456
Production	7,207	7,506	7,982	7,695	8,055	8,706	10,055	11,357	12,232	12,837	13,628	14,022	14,857	15,255
Unit Price	139	131	127	130	134	130	128	127	125	125	124	124	123	123
FCF	411	233	337	259	367	360	379	425	464	485	506	527	550	578
CapEx	94	509	433	387	393	400	407	414	421	428	435	443	450	458
CapEx/Revenues	*8.8%*	*48.7%*	*41.5%*	*38.0%*	*35.6%*	*34.6%*	*31.0%*	*28.0%*	*26.9%*	*26.2%*	*25.3%*	*25.0%*	*24.1%*	*23.9%*
NFP/EBITDA	2.13	2.28	2.78	2.69	2.86	2.94	2.74	2.51	2.44	2.43	2.36	2.34	2.23	2.17

Exhibit 24: Comparison of our estimates for 2020 data with ERG guidance and analysts estimates



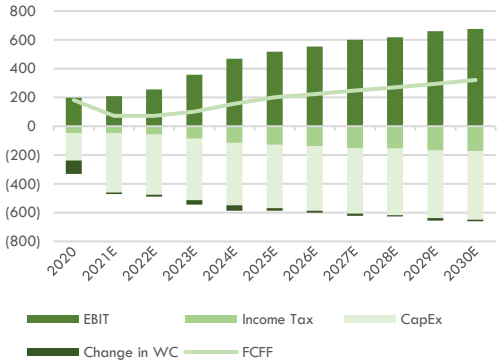
Source: team estimates, company data, FACTSET

Exhibit 25: FCFF and CapEx/Revenues forecast [€mn]



Source: team estimates

Exhibit 26: Free Cash Flow growth [€mn]



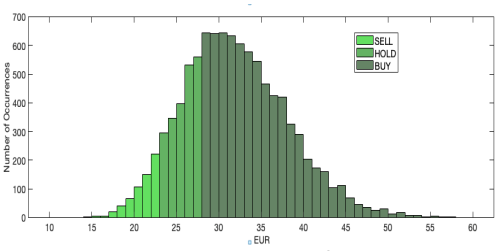
Source: team estimates

Exhibit 27. Sensitivity analysis

WACC \ EXIT MULTIPLE	5.5	6.5	7.5	**8.5**	9.5	10.5	11.5
1.41%	27.37	33.12	38.87	44.62	50.37	56.12	61.87
1.91%	25.63	31.13	36.63	42.13	47.63	53.13	58.63
2.41%	23.96	29.23	34.49	39.76	45.02	50.28	55.55
2.91%	22.38	27.42	32.45	37.49	42.53	47.57	52.61
3.41%	20.86	25.69	30.51	35.33	40.16	44.98	49.80
3.91%	19.42	24.04	28.65	33.27	37.89	42.51	47.13
4.41%	18.04	22.46	26.88	31.31	35.73	40.15	44.58
4.91%	16.72	20.96	25.19	29.43	33.67	37.90	42.14
5.41%	15.46	19.52	23.58	27.64	31.70	35.76	39.82
5.91%	14.26	18.15	22.04	25.93	29.82	33.71	37.6
6.41%	13.11	16.84	20.57	24.29	28.02	31.75	35.48

Source: team estimates

Exhibit 28. Monte Carlo simulation



Source: team estimates

Although the great expansion needs also a great capital expenditure, we assume that ERG will sustain this position splitting the cash outflows more or less equally among the 2021-2030 period, thanks to the strong financing policy which is based on a differentiated debt structure: green bonds, project financing and corporate loans. In fact, we expect that the NFP/EBITDA ratio will continue to remain below the 3x, decreasing towards 2030. Moreover, we estimate that the financial position will be further supported by a solid liquidity profile, with an expected average of €922mn in the period.

Dividend Policy: consistent value for shareholders

ERG has always maintained a stable dividend policy (€0.5 DPS in the period 2015-2017 and €0.75 from 2018 to 2020), evidencing that dividends are not affected by the company's performance. We have therefore foreseen that the company will persist with this policy, continuing to distribute €0.75 per share until 2026, the year in which we expect a dividend increase of €0.25 per share, basing our assumption on the general trend of historical data and on the expected future growth.

VALUATION

Introduction

We estimate a year-end target price of €33.27, up 27.9% from the closing price on 9th February 2021, and a BUY recommendation for the ERG.MI stock. We adopted the Discounted Cash Flow valuation model, rather than the Dividend Discount Model, as dividends payments are not linked to the performance and hence to the intrinsic value of the firm. Moreover we have chosen to discount the Free Cash Flow to the Firm, instead of the Free Cash Flow to the Equity, as it is better suited to ERG's financial structure and allows for changing leverage.

Discounted Cash Flow Model

The DCF relies on our forecast assumptions on the future analysis that are mainly driven by the expansion of the wind and solar sectors and therefore see ERG going through different growth stages, partly affected by the changing prices, which depends on inflation and oil price estimates, and the uncertainty of incentives framework.

Short-term period (2021-2022). Revenues growth consolidation (+6.6% CAGR, average EBITDA margin 50.6%) with the completion of the projects foreseen by the 2018-2022 business plan and the return of ANEPs to a pre-pandemic level.

Medium-term period (2023-2025). Strong expansion with the installation of new capacity (+1,613MW) thanks to the completion of greenfield projects and pipelines that are now in the medium- and short-stage, together with a decreasing trend in incentives, have an overall effect of slowing growth of revenues (+4.4% CAGR, average EBITDA margin 51.6%)

Long-term period (2025-2030). Revenues CAGR +2.9 (average EBITDA margin 52.3%) due to a slower growing capacity (+1,175MW), mainly driven by the completion of some pipelines and by repowering and reblading projects, and a continuous negative impact of incentives.

The **Free Cash Flow to the Firm** grows with a constant path (+18% CAGR 2021-2030), as we have assumed that ERG splits the capital expenditures to sustain the expansion more or less equally among the forecasted years [*Exhibit 25 and 26*].

We use a value of 3.91% for the **Weighted Average Cost of Capital** that has been derived using the following assumptions:

Beta	0.75	Estimated regressing ERG returns against the FTSE MIB index (3 years).
Risk-free rate	0.34%	Calculated computing the weighted average of the 10-year Government bonds of ERG present and future key markets (Italy, Germany, France and UK).
Market risk premium	7.86%	Calculated computing the weighted average of ERG present and future key markets market premia.
Cost of equity	6.21%	Computed with the Capital Asset Pricing Model.
Cost of debt	0.33%	Based on the yield of the recently listed bond in December 2020 (ISIN: XS2274549034) with a 7 years maturity.
Tax rate	30%	Computed as the 24% of the EBIT and the 5% of the EBITDA (30% on average over the forecasted 10 years).
Debt ratio	0.38	Current market value of debt in February 2021.
Equity ratio	0.61	Current market value of equity in February 2021.

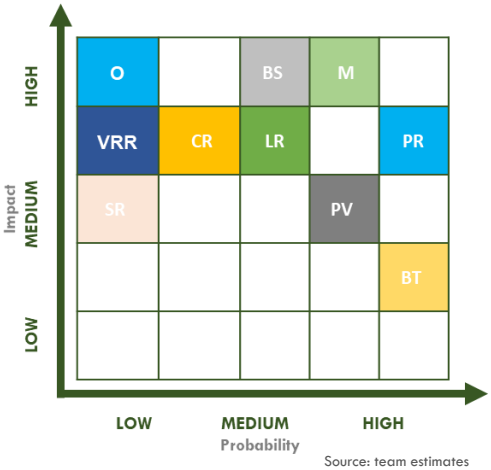
The **terminal value** was calculated with the exit multiple method, which we believe is more suitable for the industry of which ERG is a part, since, given that a large part of ERG's revenues comes from incentives, the unpredictability of the policy regarding green incentives do not make constant future growth certain. The method relies on the 8.5x historical average (5 years) of the EV/EBITDA multiple.

Sensitivity analysis and Monte Carlo simulation

The sensitivity analysis on the target price shows that, changing WACC and Exit Multiple values, the BUY scenario is the most frequent one [*Exhibit 27*].

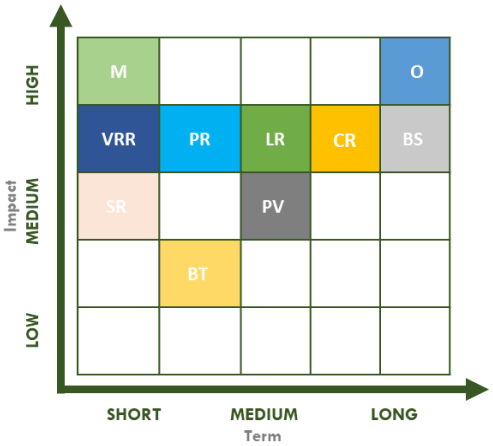
In order to check the robustness of the DCF calculation, we performed a Monte Carlo simulation, modelling revenues growth, EBITDA margin, cost of capital and EV/EBITDA multiple according to the identified investment risks that could have an impact on them [Annex Monte Carlo simulation]. The simulation confirmed our assumptions, resulting in a right-skewed distribution, with a mean fair price of €31.95, almost in line with our valuation [*Exhibit 28*].

Exhibit 29: Impact-Probability risk matrix



Source: team estimates

Exhibit 30: Impact-Time horizon risk matrix



Source: team estimates

Exhibit 31: Risks mitigation levels

Risk type	Consideration level	Mitigation level
Financial risks		
Market risk (M)	HIGH	N/A
Credit risk (CR)	HIGH	HIGH
Liquidity risk (LR)	MEDIUM	MEDIUM/LOW
Solvency risk (SR)	HIGH	HIGH
Business & strategic risk (BS)	HIGH	MEDIUM/LOW
Non-financial risks		
Operational risk (O)	HIGH	MEDIUM
Production variability (PV)	HIGH	MEDIUM
Vandalism & reputational risk (VRR)	MEDIUM	MEDIUM
Political/regulatory risk	HIGH	HIGH
Building & testing risk	HIGH	MEDIUM

Source: team estimates

Exhibit 32: Power Installed-Concentration risk

Source: team estimates

Introduction

The end of incentives for older wind farms will reduce the stability of revenues and make it impossible to make accurate forecasts in the medium to long term. The sector is characterized by a high level of uncertainty due to the transition phase, which will mainly affect the start-up of new plants (green field activity) or the acquisition of new plants (M&A activity), it will be more difficult to "plan" and/or "evaluate" new investment in the absence of valuable forecasts. Added to this are the health crisis, supply shocks and changing consumers behavior. A further element is Brexit that has forced the company to slow down expansion in the UK market and plan to adopt PPAs in place of more flexible mechanisms such as auctions (which in France and Germany remain key drivers of the company's growth). ERG purchased a total of two projects in the UK between 2018 and 2020 for a total amount of 104 MW. Brexit certainly constitutes a risk on the profitability of these farms and therefore a potential economic loss in the medium term.

Financial risks

Market risks (M)

Resumption of restrictive measures causes slow down and the pandemic does not seem to be stopping in Europe. A deteriorated macroeconomic climate and uncertainty may influence new investments. ERG Group is also mainly exposed to the following risks: oscillation of Electricity & Gas prices, foreign exchange risk, production variability and interest rate risk.

Credit risk (CR)

The company maintains good relations with its buyers. Contracts involving public administrations could results unreliable due to changing in terms or delaying payments. Interest rates will remain low in the short to medium term due to EU expansive policies.

Liquidity Risk (LR)

The company holds assets of a special nature that are difficult to transfer. the company may be forced to lower the price to sell its assets below market value Incurring large losses.

Business & strategic risks (BS)

Brexit, lack of certainty on the end of the pandemic and lack of clarity on the new long-term national policies, leads to changes in business plan preventing the achievement of the objectives and causing slowdowns.

Solvency risk (SR)

Despite the difficulties caused by uncertainty, the company shows it has sufficient capital and financial stability to secure its obligations to investors and lenders, and is therefore able to meet its obligations.

Financial risks

Operational risks (O)

Some of the wind farms owned by ERG in Italy are obsolete and constitute a critical factor in operational risks and competitivity. The concentration of key assets in medium-high seismic and hydrogeological risks areas leads to a negative assessment of the geographical diversification of the plants [*Exhibit 32*].

Production variability (PV)

Technological limitations make it impossible to do without fossil fuel and/or hydroelectric plants. ERG declares that it does not intend to increase the share of energy produced by gas-fired CCGT plants (13% / EBITDA) and hydroelectric plants (17% / EBITDA). This strategy will lead in the future to an increase in the risk associated with production variability.

Vandalism & Reputational Risks (VRR)

The wind farms in southern Italy are vital resources for the company. There are several studies that show a connection between the presence of mafia-type "OCs" (Criminal Organizations) and the presence of wind farms in southern Italy. ERG is therefore strongly exposed to both reputational and "vandalism/intimidation" risks due to this evidence.

Political/Regulatory risks (PR)

The European Union has set a target of achieving a 40% share of renewable energy by 2030. This target will require a strengthening of the CEP (Clean Energy Package) policies, which will have to be adapted to other objectives such as the innovation of existing technologies and the deployment of renewables in underperforming areas. These objectives will also require a strong intervention at the national level through the NECP (National Energy and Climate Plan), which will be the real tool to achieve the EU objectives. The implementation of these two interventions has started in 2020 (we talk about a transition phase). The EU will therefore be able to assess and review the NECPs in the period 2020-2021, but for now there is still a great deal of regulatory uncertainty. Another issue concerns the goal of a single European energy market. The health crisis and the necessary closures combined with extraordinary economic measures risk fragmenting the market, increasing inflation on production costs and distorting normal competition mechanisms. On the UK side, uncertainties remain high. The UK is in a state of turmoil with the exit from the Europe and a pandemic that will not stop soon. However, it appears to be a short to medium term crisis that will not change the UK's intentions to remain one of the world's leading renewable energy country.

Building and testing risks (BT)

The time taken to obtain permits has lengthened considerably since the start of the health crisis, leading to further delays and losses. Moreover, the construction and testing of plants in densely populated areas risks leading to legal disputes which may cause significant reputational or economic losses.

Exhibit 33: ESG framework

Leader	E	S	G
Strong	Climate	Wealth	Purpose
Good	Waste	Equality	Quality
Lagging	Water	Safety	Risk
Weak	Land	Community	Reporting

Source: Fitch Ratings, World Economic Forum

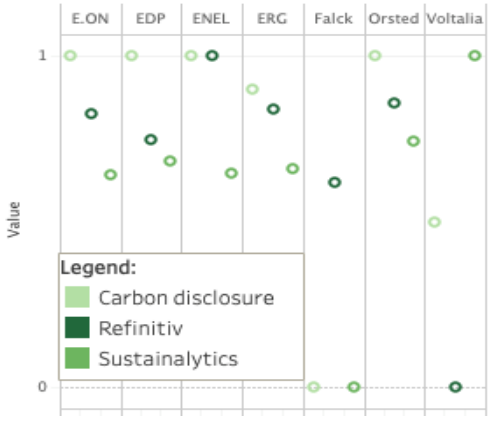
Exhibit 34: Board of directors

		T	E	I	M	R	N	O
Chairman	E.Garrone	23	X					3
Deputy Chairman	A.Garrone	23	X					1
Deputy Chairman	G.Mondini	23						1
CEO	L.Bettonte	11	X					-
Director	M.Belcredi	17		X		X		1
Director	M. A. R.Caverni	5		X		X		2
Director	B.Cominelli	5		X			X	1
Director	M.Costaguata	8						5
Director	P. F. Lanzoni	17		X			X	2
Director	S. Merlo	5					X	4
Director	E. Olivieri	2						3
Director	M.Paterlini	2			X			1

T – Tenure, E – Exectutive, I – Independent, M - minority elected, R - Control and risk committee. N -Nominations and Renumeration Committee, O – number of other positions held

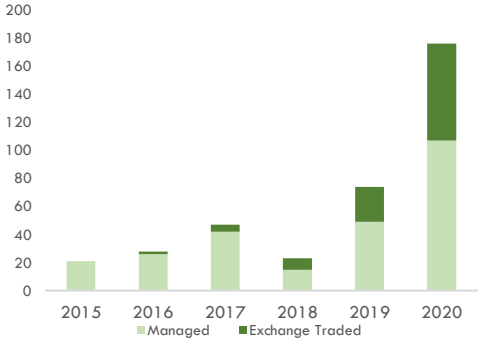
Source: Company data

Exhibit 35: ESG selected peer scores (normalized)



Source: Refinitiv, Sustainalystics, Carbon Disclosure Project

Exhibit 36: Global ESG flows



Source: Morningstar, SPDR Research Americas

ENVIRONMENTAL, SOCIAL AND GOVERNANCE

Framework

This section provides an explicit assessment of how well the company is positioned to respond to the global ESG trends. Evaluation is performed by analysing company's position in 12 key ESG areas [*Exhibit 33*]. The materiality factor is then added to each area, obtaining a combined score for each category [*Appendix 7.1*] . Additionally, recent trends in ESG metrics are considered to obtain an outlook rating The analysis framework is inspired by Fitch Ratings and World Economic Forum publications .

Environmental 30/35

The successful transition away from the fossil fuel industry has placed ERG in the heart of the renewable energy sector in the EU, which stands to benefit from tailwinds of sustainable energy transition. Regulatory pressure and targets for the renewable energy (27% percent by 2030) production will lead to a higher demand. Funds shift to more environmentally friendly enterprises will continue to lower the cost of capital, both equity (expected inflows from sustainability minded investors) and debt (green bonds). Lower risk of stranded assets and less public scrutiny over environmental issues are further advantages when compared with non-renewable peers. ERG has made strong commitments to other environmental causes including waste management and water security, solidifying a sustainability leader status. Although climate change is identified as a significant risk, this risk is ubiquitous across the investment universe and is expected to have below average impact on ERG.

Leader (Neutral)
Strong
Good
Lagging
Weak

Social 20/35

Management has made significant investments in order to create value for society beyond shareholders, participating in corporate events (8) and initiating community building projects (>30). The increased training of employees (7.8 days per employee), safety leadership and linkage of executive pay to accidents will reap benefits in the future through operational excellence. Gender equality is being extensively disclosed and addressed by the management, with gender gap being less then 2% for employees excluding executives (only fixed pay disclosed). The less positive statistics are number of female executives (5%) with no executive female directors on the board of directors, as well as high turnover rate (13.6%), particularly among employees under the age of 30 (40%). The success of recently implemented programs aimed at tackling these outstanding social issues will play an important role in consolidating ERG's position as the social leader, which will in turn provide a positive material impact on the company.

Leader (Neutral)
Strong
Good
Lagging
Weak

Governance 25/35

The company is majority owned by the founding family which exhorts a significant amount of control over the operations and governance. The board consists of 12 directors (6 independent), of which only one was appointed by the minority shareholders [*Exhibit 34*]. Effective governance is ensured through enterprise risk management system, internal auditing and CEO support committees including risk, sustainability, and remuneration committees. The management appointed has a strong record and qualifications [*Appendix 7.2*] necessary to successful expansion in the renewables sector. The renumeration policies of the board include both fixed and incentivized plans, however the renumerations are not tied to sustainability targets (expected in future). There is no corporate governance committee, and the roles of CEO and Chairman are not separated. Overall, the governance of the company is strong, however it has not kept up with the best practice standards, resulting in underperformance in this category relative to its peers.

Leader
Strong (Negative)
Good
Lagging
Weak

Summary and peer analysis 80/100

ERG has placed Environmental, Social and Governance factors at the core of the corporate strategy and achieved strong results across the board, thus our analysis suggests that company is likely to benefit from the increased attention of investors to the ESG performance.

While renewable energy industry is well positioned to benefit from a global super trend of sustainable finance, the relative position of ERG in the sector is equally important. ERG enjoys strong, although not leading position in the ESG aspect among it's peers [*Exhibit 35*]. ERG is on par with most of it's peers in the ESG risk category from Sustainalytics, outperformed by Orsted and Voltalia. Refinitiv places ERG in the 4th position among it's peers, valuation that is significantly dragged down by poor governance pillar valuation. Carbon disclosure project assigned a very strong at A-, having improved from B in previous years. Overall, ERG is rated strongly by most providers, however it is outperformed by Orsted and ENEL, which may be a decisive factor for some investors.

As the value of strong ESG credentials became more appreciated by the markets, ESG linked investment has attracted an increasingly large share of the global investments pool, particularly through the exchange traded funds [*Exhibit 36*]. This trend is projected to continue and ERG is likely to capture some of the increased interest, which can provide a significant upside to the share price.

1. BUSINESS DESCRIPTION

Repowering and project portfolio in Italy

No. Of Projects	MW AS IS	MW post Repowering	Grid Connection	Advanced of Authorisation	Expected COD
3	92	218	Secured	Obtained VIA Decree	2022 - Beginning 2023
2	69	146	Secured	Positive opinion Commissione VIA, waiting for F.A.M. opinion	2022 - Beginning 2023
2	21	42	Secured	Waiting for Commissione VIA opinion	2022 - Beginning 2023
7	**182**	**407**	**Secured**	**Projects well advanced with expected COD by 2022 - beginning 2023**	
1	43	113	Secured	Positive opinion Commissione VIA, F.A.M. negative opinion under recourse	2023+
2	37	67	Applied	Positive opinion Commissione VIA, waiting for F.A.M. opinion	2023+
4	92	195	Secured	Applied for Authorisation to Commissione VIA	2023+
1	18	40	Applied	Engeneering for Authorisation	2023+
8	**190**	**415**	**Projects with expected COD 2023+**		
15	**372**	**822**	**TOTAL**		

Repowering and project portfolio in Italy

No. Of Projects	MW	Notes	In operation as of	Expected COD
1	13	Avignano 1	2Q 2019	
1	2	Greci 2	2Q 2020	
1	20	Obtained VIA Decree		3Q 2021
1	40	Applied authorisation to Commissione VIA		4Q 2021
4	**75**	**TOTAL**		

Total installed capacity at current date

	Wind	Hydro	Solar	CCGT
	(tot 1968 MW)	(tot 527 MW)	(tot 141 MW)	(tot 480 MW)
Italy	56%	100%	100%	100%%
France	20%			
Germany	14%			
Poland, Romania and Bulgaria	10%			

Wind power pipeline at current date

	France	United Kingdom	Germany	Italy	Poland
	(tot 443MW)	(tot 357MW)	(tot 244MW)	(tot 822MW)	(tot 60,5MW)
Pipeline	90%	29%	100%	50%	
Secured	10%	22%			
Under Construction		49%			100%
RPW with COO by end 2022				50%	

Installed capacity in 2017 by strategy (2774MW)

M&A		Greenfield & CoDev	
Solar:	**141MW**	**Wind:**	**77MW**
ForVei	90MW	Vent D'Est	16MW
Andromeda	51MW	Vaa2	13MW
Wind:	124MW	Le Melier (EPURON)	8MW
Polaris	52MW	Torfou (EPURON)	18MW
Barkow	34MW	Linda	22MW
Trinity	38MW		
In Construction/RTB		**Repowering at most advanced stage**	
New Projects:	79.5MW	Incremental capacity for RPW	225MW
Sandy Knowe (added)	42MW	7 projects for RPW	
Creag Riabhach (added)	13MW	Capacity from 182MW to 407MW	
Piotrkov (Poland)	24.5MW		
In Construction/RTB:	279MW		
EXPECTED INSTALLED CAPACITY IN 2022: 3600MW with a NET INCREASE OF 850MW			

2. INDUSTRY OVERVIEW

2.1 Covid-19 impact on the renewables energy industry

The world and Europe after strict lockdowns

The renewable energy industry has been without surprise affected by the Covid-19 pandemic, and its growth had to adapt after governments' movement restrictions were lifted. Though the pandemic seems now manageable, a reasonable amount of uncertainty is still looming. Full lockdown has been indeed implemented in about 100 countries from February to May 2020, with partial lockdowns were present in the remaining world economies. These containment measures have eventually proved effective leading to a decrease in new infections in the following months, giving governments some spare time for managing the following waves taking place from October 2020 on.

The impact on renewables

All such safety regulations and restrictions weighted heavily on companies' supply chains and led to significant delays in the renewable energy industry, mainly affecting its key markets' new onshore wind and solar PV installations. Nevertheless, following the first lockdown, the industry returned in many countries to its quasi-normal pace with respect to construction projects, regulatory implementations (e.g. licensing and auctions) and financing, thanks to the substantial adaptation to the new ongoing rules. At the current date and despite significant quarantine rules applied to workers in the industry, it can be argued that implications for the renewable energy industry are expected to be minimal, both for equipment manufacturing and construction activities. The only area on which light still has to be shed relates to the newly introduced lockdowns in the European continent, which cast new uncertainty over the expansion of renewable energies in 2021.

January to June renewable electricity capacity additions (EX.A1)

As expected, the pace of onshore wind and solar PV additions suffered a sensible decrease of 11% in the first months of 2020 compared to the same period of 2019. Aggregated markets' estimations mark a value of solar PV production growth equal to 40 GW, scoring a disappointing 17% decrease compared to 2019; similarly, the wind power sector growth decreased by nearly 8%. Hydroelectric energy, on the other hand, benefitted from new large-scale projects mainly in China and scored an increase in the first months of 2020 compared to year before. To sum-up, lockdowns' impacts and restrictions differ a lot on a country-by-country basis and compared with 2019, first quarter (Q1) capacity additions in 2020 were lower for all technologies except hydro, with solar PV and wind each contracting 25% (EX1).

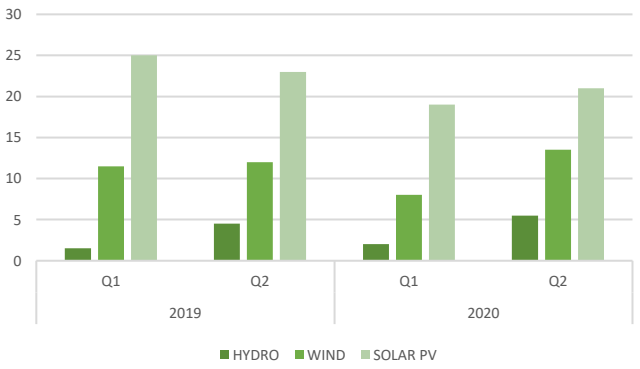
Europe (EX.A2)

In Europe renewable energy capacity additions have suffered a decrease in the first half of 2020 compared to the same period of the year before; nevertheless, installation and construction pace sensibly increased in the second half of the year, partially offsetting the initial negative trend thanks to loosened social-distancing rules and restrictions. More precisely, Germany strongly recovered in May and June after many slowdowns in the previous months (especially concerning ground-mounted PV): as a result of it, installations compared to the same 2019's period have increased. Such rebounds took place also in Italy where pre-pandemic levels have been reached after a sharp 90% decline in the first quarter of 2020.

Pre-crisis policies will have at least as much impact as Covid-19 on the future of renewable technologies

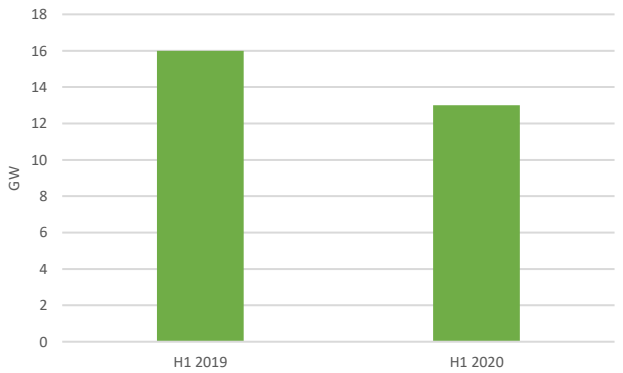
The renewable industry auction-based business model broke records despite the global pandemic: Italy, Germany, France and Portugal carried out and completed auctions pertaining to the wind and solar PV sector in the first half of 2020 while at the same time scoring a lower awarded capacity compared to the year before (EX3).

Renewable electricity capacity addition (global) [GW]



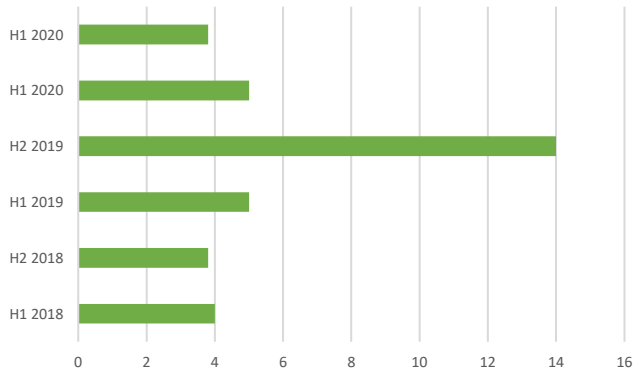
Source: IEA

Renewable electricity capacity addition (Europe) [GW]



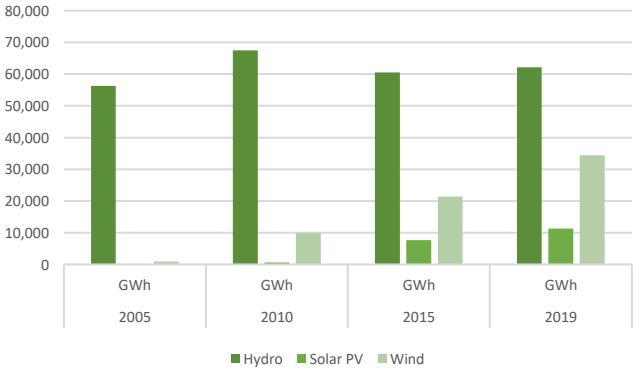
Source: IEA

Renewable electricity auctions results (2018-20, Europe) [GW]



Source: IEA

Renewable energy production in France by industry



Source: IEA

2.2 Green energy industry in France and Germany

France

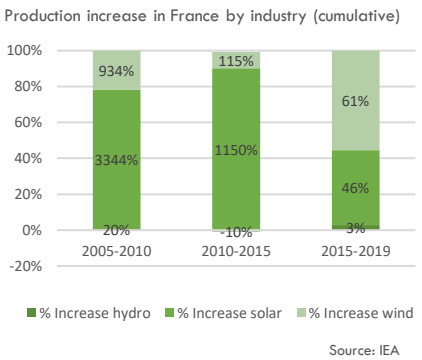
Renewable energy production by source in France is shown in EX.A4. Just like Italy, the hydroelectric energy production is constant over time, whereas an impressive increase in both solar and wind energy production can be appreciated from EX.A5, signalling the country's constantly increasing interest and tendency to rely on renewable energies. The renewable energy industry is expected to grow even more in the next years (about by 19GW), thanks to large investments on both solar PV and wind power sectors. Additions are expected to increase in the medium term thanks to the introduction of competitive auctions, which is a newly introduced system also in Italy and in Germany. Despite the Covid-19 pandemic, France is expected to add 1GW of onshore wind capacity this year, one-third lower compared to last year's result.

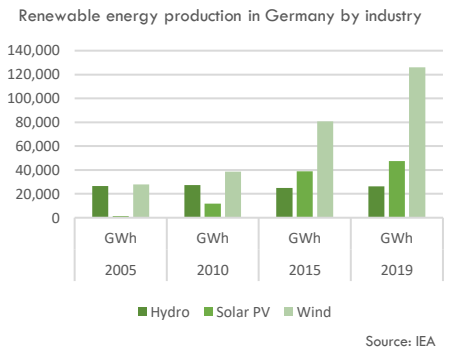
Solar PV will be affected by the government's multiannual energy plan (PPE), which both gives room for the country's commitment to reach the 20GW target in PV capacity by 2023 and provides for annual auctions until 2024. This plan will also boost wind power additions thanks to auctions and yearly-scheduled tenders (1.9GW) until 2024.

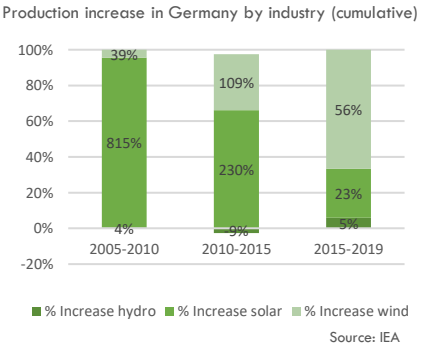
Germany

Renewable energy production by source in Germany is shown in EX.A6. Just like Italy and France, the hydroelectric energy production is constant over time, whereas an impressive increase in both solar and wind energy production can be appreciated. The country's capacity of renewable energy is expected to increase by 33GW in the period spanning from 2018 and 2023 thanks by the large increase in the wind and solar PV installations. As can be seen from EX.A6, such increase in energy production is driven mostly by wind power energy (17GW growth); just like Italy, deployment is likely to be very volatile as a consequence of the government's decision to switch from set tariffs to competitive auctions. Such increase in additional capacity can also be explained by the commissioning of unsubsidised projects such as PPAs. The energy average price from auctions is expected to be ranging from EUR 47/MWh to EUR 57/MWh.

EEG 2021: the Renewable Energy Act is a proposed reform which is expected to lead to a contraction in expected PV distribution, as provides for a 200-400mw cap per year in competitive auctions for rooftop systems providing for a power higher than 500kW, from 2021 on. EEG 2021 will also provide for financial incentives for local communities in order to make projects' acceptance more desirable and to limit restrictions on new installations, and at the same time create a "quota" for new installations in southern Germany. To conclude, a new Investment Acceleration Act has been proposed which aims at continuing construction during litigations.







2.3 Porter's 5 forces

Threat of new entrants	Economies of scale	They are quite difficult to achieve, therefore cost advantages for consolidated players are significant and, as a result of it, new entrants would face high production costs.	WEAK
	Capital Requirements	Capital requirements are high in the industry, thus making the setting up of business hard for potential new entrants because large expenditures need to be faced first. Research and Development costs are significant as well, especially when dealing with new reblading and repowering technologies for improving plants' efficiency.	WEAK
	Access to distribution channels	The access to distribution channels does not provide for particular issues in order to make new entrants enter the market.	STRONG
		Governments' policies provide for the fulfilment of strict licenses and requirements before a company can start operating.	WEAK
	How can ERG tackle the threat of new entrants? ERG can take full advantage of its economies of scale gained throughout the years thanks to its cost advantage, which derives from the efficiency and knowledge of its power plants given by the in-house O&M leading to competitive advantage during auctions. ERG may boost its recently introduced green-brand image by spending on marketing in order to build strong brand recognition.		
Rivalry within the industry	Number of competitors	Renewables are gaining ever-increasing importance thus pushing big electricity companies joining the green industry. Consequently, the company faces competition both from international conglomerates expanding on renewables and from smaller companies already specialised in the sector (i.e. similar to ERG).	STRONG
	Growth prospects	The renewable energy industry is growing very fast in Europe and is expected to keep its pace (and also increase it) for the next years until reaching the EU's decarbonisation target in 2030. This means that competitors are less prone to engage in competitive actions as there is no need to "steal" market share from others.	WEAK
	Fixed costs	Fixed costs are high, companies are therefore prone to exploit their plants' full capacities.	STRONG
	Exit barriers	Exit barriers are predictably high due (i) to the large investments which are required in the industry and (ii) to governments' regulations and restrictions. Firms operating in the industry are therefore reluctant to leave the business.	STRONG
	How can ERG tackle the rivalry among existing firms? Given that the industry is growing so fast in Europe, ERG should expand as much as possible through its main expansion channels.		
Threat of substitutes	Substitues	Renewable resources come in the form of solar PV, hydro and wind power. These are the very best substitutes to traditional energy and an ever-increasing number of companies are trying to change their business model in order to produce clean energy. As a consequence of it, renewables may be regarded as being the most important threat to traditional energy producers and ERG is an early and outstanding example of such industry alignment. Renewables may now be considered a substitute, but as time goes on they will certainly become the crucial milestone for the earth's future.	WEAK

Bargaining power of customers	Energy is a commodity	The buyers of the energy produced by ERG are mainly commercial entities and governments-owned electricity corporations. Buyers of utilities suffer a disadvantage here as energy is a commodity and everyone is in need of it.	WEAK
	Renewables' desireability	Buyers are encouraged and willing to pay overprices with respect to traditional energy as green energy usage is considered a powerful marketing tool.	WEAK
	How can ERG tackle the bargaining power of buyers? The bargaining power of buyers is weak, therefore ERG may build a larger customer base through marketing efforts in order to build and strong brand image. An example of such an effort might be leveraging the experience gained in renewables thanks to the early transition with respect to other competitors.		
Bargaining power of suppliers	Governments	ERG is an energy supplier, therefore it is quite difficult to spot who could be one of it potentials suppliers. From a certain point of view the government might be regarded as being an important ERG's supplier, given that it substantially sets the rule for the price ERG receives from the sale of its own energy: the Italian government was used to granting large subsidies to energy companies thus increasing their revenues, whereas in the last years it introduced the auction-based scheme which calls for entities' efficiency boosting as the price is no more guaranteed: the more the company is efficient, the higher it can bid.	STRONG
	How can ERG tackle the bargaining power of suppliers? ERG may analyse the governments' policies of the countries in which it plans to expand, in order to see whether there can be some advantages in expanding into one country with respect to another one. European countries, though, seem to be following a common pattern (i.e. auctions) regarding energy pricing policies. The energy industry is a crucial piece of business for governments; therefore, close relationships may be developed in order to make both of them better off.		

2.4 Competitive analysis

ERG is considered a "sui generis" company as it is present in the renewable energy industry and at the same time produces energy from conventional sources (e.g. gas), for this reason the company cannot be directly compared to any listed peer. Despite this, ERG measures up at a reasonable extent in Italy with Enel and Falck Renewables and in Europe with Orsted, Voltalia, Neoen and EDPR; all of them are part of the renewables' industry even though the sources used differ from company to company. As it can be seen from EX.8 and from what has been previously said in this section, the renewables' industry is growing at an incredibly high pace and the companies 3 years' energy growth witnesses this: all selected competitors' revenues have been growing fast for the past 3 years and are expected to keep growing given the ever-increasing interest and necessity for renewables' usage. Enel is a traditional energy operator but is investing substantially in the green industry through its subsidiary "Enel Green Power" and, as a result of it, presents a 3 years revenues growth value above 300%, witnessing the fact that cash-rich big energy giants are transitioning towards renewables with huge investments fully exploiting the industry's expansion. Smaller companies already specialised in the industry need to take care of this signal and make use of their longer presence in the sector through their competitive advantages, which for what ERG is concerned means exploiting its efficiency derived from the in-house carrying out of O&Ms activities. Concerning the EBITDA Margin, companies feature an average value of 50% meaning that core costs do not impact too much on revenues, leaving room for further investment and expansion, which is what is actually happening. ERG now has three main challenges: (i) prove its efficiency and competitiveness during auctions, (ii) be ready to face strong competition from former traditional energy producers' giants and (iii) be prepared to conclude its transition towards renewables according to the EU's 2030 decarbonisation target, which translates into abandoning its traditional energy production channels.

Competitive financial analysis

			ITALY		EUROPE			
COMPANY NAME		**ERG SpA**	**Falck Renewables**	**Enel**	**Orsted**	**EDP Renovaveis**	**Voltalia**	**Neoen**
PRICE	EUR	26,48	6,45	8,50	147,65	22,95	26,00	58,60
SHARES OUTSTNDING	mil	150,3	291,4	10.166,7	420,4	872,3	95,3	85,6
MARKET CAP	EUR mil	3.942,1	1.863,9	86.395,0	62.068,4	20.019,5	2.477,8	5.063,2
GEOGRAPHY		EU	EU - NA - AS	Global	EU - NA - AS	EU - NA - SA	EU - SA - AF	EU - NA - SA - OC
REVENUES(1) from renewables	EUR mil	1.022,00	374,00	7.733,00	9.116,68	1.824,00	175,00	253,20
REVENUES DIVIDED AMONG **WIND**	EUR mil	414,00	123,00		2.151,5		78,75	111,00
SOLAR	EUR mil	71,00	29,00	N/A	0,1	N/A	92,75	119,10
HYDRO	EUR mil	119,00	0,00		0		3,50	0,00
Total EBITDA from renewables	EUR mil	504,0	204,0	4.604,0	2.353,0	1.648,0	65,0	216,1
EBITDA MARGIN		49%	55%	60%	26%	90%	37%	85%
Installed capacity (MW) **WIND**	MW	1900,00	922,70	10327,00	11403,00	11078,00	3510,00	875
SOLAR	MW	141,00	128,60	3094,00	10,00	284,00	4134,00	1980
HYDRO	MW	527,00	0,00	27830,00	0,00	0,00	156,00	0
EARNINGS GROWTH from renewables **3Y**		46,70%	50,00%	340,63%	10,85%	25,50%	37,80%	153,00%
Net Debt	EUR mil	1.555,2	697,61	N/A*	11954,00	3106,18	380,79	1691,5
Net Debt / EBITDA		309%	342%	N/A*	508%	188%	586%	783%

(1) ERG: value comprises also thermoelectric energy; ENEL: value comprises also geothermal energy; Falck: value comprises also WtE and Biomass energy; Voltalia: value comprises also storage business; Orsted: value comprises also biomass, bioplant and storage business.
* Net debt does not relate to Enel Green Power but to ENEL SpA instead, therefore it is not comparable and for this reason it has not been added to the table.

Source: company data, team estimates

3. FUTURE ANALYSIS

3.1 Study on capacity

Capacity installed divided by source of production in the 2015-30 period [MW]

	2015	2016	2017	2018	2019	2020	2021 E	2022 E	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Total Capacity	**2451.5**	**2727.5**	**2821.9**	**2933.5**	**3077.9**	**3115.9**	**3122.9**	**3430.1**	**4074.1**	**4723.1**	**5043.1**	**5318.1**	**5593.1**	**5868.1**	**6143.1**	**6318.1**
% change		11.26%	3.46%	3.95%	4.92%	1.23%	0.22%	9.84%	18.77%	15.93%	6.78%	5.45%	5.17%	4.92%	4.69%	2.85%
Wind																
Italy	1087.0	1095.0	1093.0	1093.0	1093.0	1093.0	1093.0	1093.0	1317.0	1542.0	1542.0	1542.0	1542.0	1542.0	1542.0	1542.0
Germany	86.0	168.0	216.0	216.0	272.0	272.0	272.0	272.0	342.0	496.0	546.0	596.0	646.0	696.0	746.0	796.0
France	128.0	252.0	252.0	307.0	359.0	397.0	404.0	530.7	673.7	773.7	873.7	973.7	1073.7	1173.7	1273.7	1273.7
Poland	82.0	82.0	82.0	82.0	82.0	82.0	82.0	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5	142.5
Bulgaria	27.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
Romania	35.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
UK	0.0	0.0	48.0	15.0	0.0	0.0	0.0	120.0	252.0	347.0	442.0	492.0	542.0	592.0	642.0	692.0
Capacity	1445.0	1721.0	1815.0	1837.0	1930.0	1968.0	1975.0	2282.2	2851.2	3425.2	3670.2	3870.2	4070.2	4270.2	4470.2	4570.2
% of total	59%	63%	64%	63%	63%	63%	63%	67%	70%	73%	73%	73%	73%	73%	73%	72%
Solar																
Capacity				89.6	141.0	141.0	141.0	141.0	216.0	291.0	366.0	441.0	516.0	591.0	666.0	741.0
% of total				3%	5%	5%	5%	4%	5%	6%	7%	8%	9%	10%	11%	12%
Hydro																
Capacity	526.5	526.5	526.9	526.9	526.9	526.9	526.9	526.9	526.9	526.9	526.9	526.9	526.9	526.9	526.9	526.9
% of total	21%	19%	19%	18%	17%	17%	17%	15%	13%	11%	10%	10%	9%	9%	9%	8%
Thermo																
Capacity	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0	480.0
% of total	20%	18%	17%	16%	16%	15%	15%	14%	12%	10%	10%	9%	9%	8%	8%	8%

Source: company data, team estimates

3.2 Study on load factor

Load factor divided by source of production in the 2015-30 period [%]

	2015	2016	2017	2018	2019	2020	2021 E	2022 E	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Wind																
Italy	20.8	23.3	22.4	21.5	22.9	22.2	22.2	22.3	22.4	23.2	23.4	23.7	24.0	24.2	24.5	24.8
Germany	21.0	16.0	19.0	18.0	20.0	18.8	18.8	18.8	19.3	19.8	20.3	20.8	21.3	21.8	22.3	22.8
France	24.0	23.0	22.0	23.0	25.0	23.4	23.7	24.0	24.3	24.6	24.9	25.2	25.5	25.8	26.1	26.4
Poland	37.0	30.0	35.0	31.0	36.0	33.8	33.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8
Bulgaria	31.0	31.0	33.0	29.0	29.0	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6
Romania	30.0	29.0	33.0	29.0	31.0	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4
UK			7.0	7.0				33.0	35.0	33.0	35.0	33.0	35.0	33.0	35.0	33.0
Solar																
Load Factor				16.0	18.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
Hydro																
Load Factor	21.0	29.0	25.0	38.0	27.0	34.3	21.7	34.3	21.7	34.3	21.7	34.3	21.7	34.3	21.7	34.3
Thermo																
Load Factor	62.6	64.1	58.3	51.2	59.6	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1

Source: company data, team estimates

3.3 Study on prices

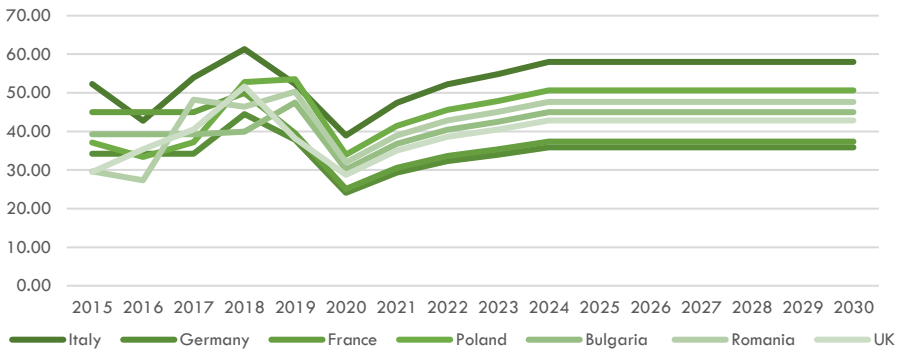
In order to estimate future ANEPs, we take into consideration both the trend of historical prices and the estimates of experts regarding the overall commodities market and inflation rate. Considering that for the last 10 years, the price of Crude Oil and the ANEP are almost perfectly correlated (from 0.69 for France to 0.95 for Germany), we use the estimates for crude Oil prices 2021-2024, inflation rates, and currencies exchange rates, to predict the ANEP in the 2021-2024 period.

We use the obtained figures to construct a time series from 2010 to 2024, on which we fitted a stochastic process. The best fit varies according to the country, however the random walk is the most frequently observed. Thus, we assumed the last observed price (2024) as the best guess for the following periods.

Correlation between crude oil and ANEP (2010-20)

	Corr
Italy	0.94
Germany	0.95
France	0.69
Poland	0.90
Bulgaria	0.71
Romania	0.74
UK	0.84

ANEPs for the 2015-30 period



Source: GME, team estimates

ANEP (average national electricity prices) in the 2015-30 period [€/MW]

	2015	2016	2017	2018	2019	2020	2021 E	2022 E	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Italy	52.30	42.80	54.00	61.30	52.30	38.92	47.42	52.22	54.89	58.03	58.03	58.03	58.03	58.03	58.03	58.03
Germany	34.20	34.20	34.20	44.50	37.90	34.76	29.32	32.29	33.94	35.88	35.88	35.88	35.88	35.88	35.88	35.88
France	45.00	45.00	45.00	50.00	39.50	36.23	30.56	33.66	35.38	37.40	37.40	37.40	37.40	37.40	37.40	37.40
Poland	37.10	33.40	37.20	52.80	53.50	49.06	41.39	45.58	47.92	50.65	50.65	50.65	50.65	50.65	50.65	50.65
Bulgaria	39.30	39.30	39.30	39.90	47.50	43.56	36.75	40.47	42.54	44.97	44.97	44.97	44.97	44.97	44.97	44.97
Romania	29.70	27.30	48.20	46.40	50.30	46.13	38.92	42.86	45.05	47.62	47.62	47.62	47.62	47.62	47.62	47.62
UK	-	-	44.70	61.00	-	36.04	35.02	38.57	40.54	42.86	42.86	42.86	42.86	42.86	42.86	42.86

Source: GME, team estimates

National incentives per sector received by ERG in the 2015-30 period [€/MW]

	2015	2016	2017	2018	2019	2020	2021 E	2022 E	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Wind																
Italy	82.00	95.60	91.91	63.28	64.90	61.94	59.12	56.44	53.87	51.43	49.10	46.88	44.76	42.73	40.80	38.96
Germany	62.00	58.40	62.20	50.00	58.00	57.23	56.47	55.72	54.99	54.26	53.54	52.83	52.13	51.44	50.76	50.09
France	45.40	43.70	43.40	37.40	49.80	49.80	49.80	49.80	49.80	49.80	49.80	49.80	49.80	49.80	49.80	49.80
Poland	26.00	10.80	7.90	10.70	19.80	18.75	17.76	16.81	15.92	15.08	14.28	13.52	12.80	12.13	11.48	10.87
Bulgaria	41.00	44.70	24.70	34.90	31.20	29.54	27.97	26.48	25.08	23.74	22.48	21.28	20.15	19.08	18.07	17.11
Romania	29.50	29.50	9.90	11.80	16.70	14.90	13.30	11.87	10.59	9.45	8.44	7.53	6.72	6.00	5.35	4.78
UK	0.00	0.00	55.70	39.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar																
Incentive				232.70	261.70	261.70	261.70	261.70	261.70	261.70	261.70	261.70	261.70	261.70	261.70	261.70
Hydro																
Incentive	58.70	57.20	53.00	37.70	39.70	36.71	33.95	31.40	29.03	26.85	24.83	22.96	21.23	19.64	18.16	16.79
Thermo																
Incentive	95.98	106.28	93.08	84.38	77.38	74.12	70.80	67.64	64.62	61.73	58.97	56.34	53.82	51.41	49.12	46.92

Source: company data, team estimates

National prices per sector received by ERG in the 2015-30 period [€/MW]

	2015	2016	2017	2018	2019	2020	2021 E	2022 E	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Wind																
Italy	135.00	139.00	144.50	124.90	118.10	110.73	106.54	108.66	108.76	109.46	107.12	104.90	102.78	100.76	98.83	96.99
Germany	96.20	92.60	96.40	94.50	95.90	91.99	85.80	88.02	88.93	90.14	89.42	88.71	88.01	87.32	86.64	85.97
France	90.40	88.70	88.40	87.40	89.30	86.03	80.36	83.46	85.18	87.20	87.20	87.20	87.20	87.20	87.20	87.20
Poland	63.10	44.20	45.10	63.50	73.30	67.81	59.15	62.40	63.84	65.73	64.93	64.18	63.46	62.78	62.14	61.53
Bulgaria	80.30	84.00	64.00	74.80	78.70	73.10	64.72	66.96	67.62	68.72	67.45	66.26	65.13	64.06	63.04	62.08
Romania	59.20	56.80	58.10	58.20	67.00	61.03	52.22	54.73	55.64	57.08	56.06	55.15	54.34	53.62	52.98	52.40
UK	0.00	0.00	100.40	100.40	0.00	36.04	35.02	38.57	40.54	42.86	42.86	42.86	42.86	42.86	42.86	42.86
Solar																
Price	0.00	0.00	0.00	294.00	314.00	300.62	309.12	313.92	316.59	319.73	319.73	319.73	319.73	319.73	319.73	319.73
Hydro																
Price	111.00	100.00	107.00	99.00	92.00	75.63	81.37	83.62	83.92	84.88	82.86	80.99	79.26	77.66	76.19	74.82
Thermo																
Price	153.88	153.88	153.88	153.88	140.18	113.04	118.22	119.86	119.51	119.76	117.00	114.36	111.84	109.44	107.14	104.95

Source: company data, team estimates

3.4 Income statement

	2017	2018	2019	2020	2021 E	2022 E	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Revenues from sales and services	**1,053,552**	**1,023,736**	**1,021,594**	**996,657**	**1,082,211**	**1,133,419**	**1,285,437**	**1,447,586**	**1,533,989**	**1,600,539**	**1,687,407**	**1,733,864**	**1,828,353**	**1,878,955**
Growth	*2.7%*	*-2.8%*	*-0.2%*	*-2.4%*	*8.6%*	*4.7%*	*13.4%*	*12.6%*	*6.0%*	*4.3%*	*5.4%*	*2.8%*	*5.4%*	*2.8%*
Other Income	10,581	21,903	22,795	20,930	22,726	23,802	26,994	30,399	32,214	33,611	35,436	36,411	38,395	39,458
Total Revenues	**1,064,133**	**1,045,639**	**1,044,389**	**1,017,587**	**1,104,938**	**1,157,221**	**1,312,431**	**1,477,985**	**1,566,203**	**1,634,150**	**1,722,843**	**1,770,275**	**1,866,748**	**1,918,413**
Growth	*2.1%*	*-1.7%*	*-0.1%*	*-2.6%*	*8.6%*	*4.7%*	*13.4%*	*12.6%*	*6.0%*	*4.3%*	*5.4%*	*2.8%*	*5.4%*	*2.8%*
Purchases and change in inventories	355,820	327,239	290,824	269,570	282,517	305,322	352,660	398,321	429,002	450,200	477,955	491,777	521,076	535,028
% of Tot. Revenues	*33.4%*	*31.3%*	*27.8%*	*26.5%*	*25.6%*	*26.4%*	*26.9%*	*27.0%*	*27.4%*	*27.5%*	*27.7%*	*27.8%*	*27.9%*	*27.9%*
Services and other operating costs	182,020	172,025	190,528	168,065	193,624	201,643	221,462	241,358	252,234	261,555	271,213	277,710	287,495	294,053
% of Tot. Revenues	*17.1%*	*16.5%*	*18.2%*	*16.5%*	*17.5%*	*17.4%*	*16.9%*	*16.3%*	*16.1%*	*16.0%*	*15.7%*	*15.7%*	*15.4%*	*15.3%*
Personnel expense	68,698	66,800	67,137	64,586	67,545	67,545	68,896	70,274	71,679	73,113	74,575	76,067	77,588	79,140
% of Tot. Revenues	*6.5%*	*6.4%*	*6.4%*	*6.3%*	*6.1%*	*5.8%*	*5.2%*	*4.8%*	*4.6%*	*4.5%*	*4.3%*	*4.3%*	*4.2%*	*4.1%*
EBITDA	**457,595**	**479,575**	**495,900**	**515,366**	**561,252**	**582,711**	**669,414**	**768,033**	**813,287**	**849,283**	**899,100**	**924,722**	**980,590**	**1,010,192**
Growth	*1%*	*5%*	*3%*	*4%*	*9%*	*4%*	*15%*	*15%*	*6%*	*4%*	*6%*	*3%*	*6%*	*3%*
EBITDA margin	*43.0%*	*45.9%*	*47.5%*	*50.6%*	*50.8%*	*50.4%*	*51.0%*	*52.0%*	*51.9%*	*52.0%*	*52.2%*	*52.2%*	*52.5%*	*52.7%*
Amortization, depreciation and impairment of non-current assets	250,935	274,068	305,953	317,873	353,075	327,962	310,556	299,822	294,882	294,996	299,536	307,972	319,855	334,811
% of Tot. Revenues	*23.6%*	*26.2%*	*29.3%*	*31.2%*	*32.0%*	*28.3%*	*23.7%*	*20.3%*	*18.8%*	*18.1%*	*17.4%*	*17.4%*	*17.1%*	*17.5%*
EBIT	**206,660**	**205,507**	**189,947**	**197,493**	**208,177**	**254,748**	**358,857**	**468,211**	**518,405**	**554,286**	**599,564**	**616,750**	**660,735**	**675,381**
Growth	*3.5%*	*-0.6%*	*-7.6%*	*4.0%*	*5.4%*	*22.4%*	*40.9%*	*30.5%*	*10.7%*	*6.9%*	*8.2%*	*2.9%*	*7.1%*	*2.2%*
EBIT margin	*19.4%*	*19.7%*	*18.2%*	*19.4%*	*18.8%*	*22.0%*	*27.3%*	*31.7%*	*33.1%*	*33.9%*	*34.8%*	*34.8%*	*35.4%*	*35.2%*
Net financial income (expense)	65,298	61,416	137,097	58,103	59,613	70,494	75,929	82,058	86,753	89,443	93,019	95,675	97,513	98,217
% of EBIT	*31.6%*	*29.9%*	*72.2%*	*29.4%*	*28.6%*	*27.7%*	*21.2%*	*17.5%*	*16.7%*	*16.1%*	*15.5%*	*15.5%*	*14.8%*	*14.5%*
EBT	**140,190**	**144,013**	**52,304**	**139,390**	**148,564**	**184,254**	**282,929**	**386,154**	**431,652**	**464,843**	**506,545**	**521,075**	**563,222**	**577,164**
Growth	*9.5%*	*2.7%*	*-63.7%*	*166.5%*	*6.6%*	*24.0%*	*53.6%*	*36.5%*	*11.8%*	*7.7%*	*9.0%*	*2.9%*	*8.1%*	*2.5%*
EBT margin	*13.2%*	*13.8%*	*5.0%*	*13.7%*	*13.4%*	*15.9%*	*21.6%*	*26.1%*	*27.6%*	*28.4%*	*29.4%*	*29.4%*	*30.2%*	*30.1%*
Income taxes	32,958	39,683	19,531	47,878	46,064	56,958	85,846	116,087	129,517	139,277	151,549	155,895	168,210	172,288
Tax rate	23.5%	27.6%	37.3%	20.0%	31.0%	30.9%	30.3%	30.1%	30.0%	30.0%	29.9%	29.9%	29.9%	29.9%
Profit (loss) from continuing operations	**107,232**	**104,330**	**32,773**	**91,512**	**102,500**	**127,296**	**197,083**	**270,066**	**302,135**	**325,566**	**354,996**	**365,179**	**395,012**	**404,875**
Net profit (loss)	**206,815**	**132,762**	**32,773**	**91,512**	**102,500**	**127,296**	**197,083**	**270,066**	**302,135**	**325,566**	**354,996**	**365,179**	**395,012**	**404,875**
Growth	*65.7%*	*-35.8%*	*-75.3%*	*179.2%*	*12.0%*	*24.2%*	*54.8%*	*37.0%*	*11.9%*	*7.8%*	*9.0%*	*2.9%*	*8.2%*	*2.5%*

Source: company data, team estimates

Source: company data, team estimates

3.5 Balance sheet

	2017	2018	2019	2020	2021 E	2022 E	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Goodwill	125,932	148,269	220,940	235,526	251,074	267,649	285,319	304,154	324,234	345,638	368,456	392,780	418,710	446,352
PP&E and intangibles	2,816,429	3,070,827	3,147,656	2,961,364	3,021,303	3,113,040	3,228,984	3,362,578	3,508,146	3,660,752	3,816,094	3,970,398	4,120,343	4,262,985
Other non-current assets	241,711	261,522	219,067	228,329	225,080	221,831	218,582	215,333	212,084	208,835	205,586	202,337	199,088	195,839
Non-current assets	**3,184,072**	**3,480,618**	**3,587,663**	**3,425,219**	**3,497,457**	**3,602,520**	**3,732,885**	**3,882,066**	**4,044,463**	**4,215,225**	**4,390,136**	**4,565,515**	**4,738,141**	**4,905,176**
Trade receivables	255,534	251,001	193,466	281,627	298,052	315,271	360,086	408,199	432,991	451,700	476,180	489,252	515,795	529,910
Inventories	20,597	21,623	22,273	23,100	21,701	23,054	25,837	28,785	29,921	30,513	31,563	31,557	32,700	32,703
Other current assets	126,980	170,475	145,880	182,300	191,415	200,986	211,035	221,587	232,666	244,299	256,514	269,340	282,807	296,947
Cash and cash equivalents	812,992	774,193	653,528	1,219,821	1,130,052	1,022,040	932,838	888,852	880,704	852,696	843,632	851,227	881,409	936,811
Current assets	**1,216,103**	**1,217,292**	**1,015,147**	**1,706,848**	**1,641,220**	**1,561,350**	**1,529,796**	**1,547,423**	**1,576,283**	**1,579,208**	**1,607,888**	**1,641,376**	**1,712,711**	**1,796,372**
Assets held for sale	261,069													
Total assets	**4,661,244**	**4,697,910**	**4,602,810**	**5,132,067**	**5,138,677**	**5,163,871**	**5,262,681**	**5,429,489**	**5,620,746**	**5,794,433**	**5,998,024**	**6,206,892**	**6,450,853**	**6,701,548**
Shareholders equity	1,877,466	1,828,832	1,774,606	1,718,887	1,661,965	1,620,277	1,644,349	1,736,776	1,858,177	1,964,807	2,099,108	2,242,873	2,416,698	2,601,880
Non-controlling interest			11,530	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400
Total shareholders equity	**1,877,466**	**1,828,832**	**1,786,136**	**1,730,287**	**1,673,365**	**1,631,677**	**1,655,749**	**1,748,176**	**1,869,577**	**1,976,207**	**2,110,508**	**2,254,273**	**2,428,098**	**2,613,280**
Financial liabilities	1,788,714	1,868,211	2,032,624	2,412,082	2,539,941	2,540,611	2,573,990	2,623,903	2,669,563	2,713,075	2,757,139	2,801,482	2,845,754	2,889,989
Other non-current liabilities	440,411	472,768	458,435	446,300	453,887	461,603	469,450	477,431	485,547	493,802	502,196	510,734	519,416	528,246
Non-current liabilities	**2,229,125**	**2,340,979**	**2,491,059**	**2,858,382**	**2,993,828**	**3,002,215**	**3,043,440**	**3,101,334**	**3,155,111**	**3,206,876**	**3,259,335**	**3,312,216**	**3,365,170**	**3,418,236**
Trade payables	126,796	92,294	87,830	84,598	88,559	95,707	110,546	124,859	134,477	141,121	149,822	154,154	163,338	167,712
Current financial liabilities	287,651	334,726	121,558	342,100	264,241	313,571	330,192	330,279	334,619	341,107	347,043	352,700	358,428	364,193
Other current liabilities	138,050	101,080	116,228	116,700	118,684	120,702	122,753	124,840	126,963	129,121	131,316	133,548	135,819	138,128
Current liabilities	**552,497**	**528,100**	**325,616**	**543,398**	**471,484**	**529,980**	**563,492**	**579,979**	**596,058**	**611,350**	**628,181**	**640,402**	**657,585**	**670,032**
Liabilities held for sale	2,156													
Total liabilities	**2,783,778**	**2,869,079**	**2,816,675**	**3,401,780**	**3,465,312**	**3,532,194**	**3,606,932**	**3,681,312**	**3,751,169**	**3,818,226**	**3,887,516**	**3,952,618**	**4,022,755**	**4,088,268**
Total equity and liabilities	**4,661,244**	**4,697,911**	**4,602,811**	**5,132,067**	**5,138,677**	**5,163,871**	**5,262,681**	**5,429,489**	**5,620,746**	**5,794,433**	**5,998,024**	**6,206,892**	**6,450,853**	**6,701,548**

Source: company data, team estimates

3.6 Cash flows statement

	2017	2018	2019	2020	2021 E	2022 E	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Net income	206,815	132,761	32,771	89,412	102,500	127,296	197,083	270,066	302,135	325,566	354,996	365,179	395,012	404,875
Depreciation and amortization	250,935	274,069	305,294	317,873	353,075	327,962	310,556	299,822	294,882	294,996	299,536	307,972	319,855	334,811
Changes in working capital	21,191	- 72,516	53,616	- 93,934	- 11,065	- 11,423	- 32,759	- 36,748	- 16,311	- 12,655	- 16,829	- 8,734	- 18,503	- 9,744
Cash flow from operating activities	**471,375**	**296,791**	**405,077**	**324,758**	**444,509**	**443,835**	**474,880**	**533,140**	**580,707**	**607,908**	**637,703**	**664,417**	**696,365**	**729,942**
Capex	- 60,450	- 63,841	- 68,508	- 66,047	- 69,140	- 74,721	- 86,245	- 97,316	- 104,679	- 109,593	- 116,241	- 119,351	- 126,207	- 129,265
Investments	- 3,337	103,444	- 92,697	- 123,953	- 343,873	- 344,979	- 340,255	- 336,100	- 335,771	- 338,009	- 338,637	- 342,925	- 343,594	- 348,188
Cash flow from investing activities	**- 63,787**	**39,603**	**- 161,205**	**- 190,000**	**- 413,013**	**- 419,700**	**- 426,500**	**- 433,416**	**- 440,450**	**- 447,603**	**- 454,878**	**- 462,276**	**- 469,800**	**- 477,452**
Cash dividends paid	- 74,408	- 171,139	- 112,362	- 111,653	- 111,653	- 111,653	- 111,653	- 111,653	- 111,653	- 148,870	- 148,870	- 148,870	- 148,870	- 148,870
Change in financial debt	- 48,328	- 152,135	- 256,636	541,898	- 9,613	- 20,494	- 25,929	- 32,058	- 36,753	- 39,443	- 43,019	- 45,675	- 47,513	- 48,217
Cash flow from financing activities	**- 8,567**	**- 375,193**	**- 364,537**	**430,245**	**- 121,266**	**- 132,147**	**- 137,581**	**- 143,710**	**- 148,405**	**- 188,313**	**- 191,889**	**- 194,545**	**- 196,383**	**- 197,087**
Net cash flow	**387,091**	**- 38,799**	**- 120,665**	**565,003**	**- 89,769**	**- 108,012**	**- 89,201**	**- 43,986**	**- 8,148**	**- 28,008**	**- 9,064**	**7,595**	**30,182**	**55,402**
Cash and cash equivalent	**814,282**	**775,483**	**654,818**	**1,219,821**	**1,130,052**	**1,022,040**	**932,838**	**888,852**	**880,704**	**852,696**	**843,632**	**851,227**	**881,409**	**936,811**

Source: company data, team estimates

3.7 Ratio analysis

	2015	2016	2017	2018	2019	2020 E	2021 E	2022 E	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Financial health																
LT Debt/E	1.22	1.12	0.95	1.02	1.15	1.40	1.53	1.57	1.57	1.51	1.44	1.38	1.31	1.25	1.18	1.11
Current Ratio	2.19	2.25	2.20	2.31	3.12	3.14	3.48	2.95	2.71	2.67	2.64	2.58	2.56	2.56	2.60	2.68
Cash Ratio	1.26	1.01	1.47	1.47	2.01	2.24	2.40	1.93	1.66	1.53	1.48	1.39	1.34	1.33	1.34	1.40
Net Debt/EBIDTA	5.00	3.68	2.76	2.98	3.03	2.98	2.98	3.14	2.94	2.69	2.61	2.59	2.51	2.49	2.37	2.29
Profitability																
Gross Margin	32.92%	43.51%	43.00%	45.86%	47.48%	50.65%	50.79%	50.35%	51.01%	51.96%	51.93%	51.97%	52.19%	52.24%	52.53%	52.66%
Operating Margin	15.50%	19.16%	19.42%	19.65%	18.19%	19.41%	18.84%	22.01%	27.34%	31.68%	33.10%	33.92%	34.80%	34.84%	35.39%	35.21%
Net Margin	2.53%	11.98%	19.44%	12.70%	3.14%	8.99%	9.28%	11.00%	15.02%	18.27%	19.29%	19.92%	20.61%	20.63%	21.16%	21.10%
Efficiency																
ROA	0.51%	2.19%	2.30%	2.22%	0.71%	1.78%	1.99%	2.47%	3.74%	4.97%	5.38%	5.62%	5.92%	5.88%	6.12%	6.04%
ROE	1.44%	5.74%	5.71%	5.70%	1.83%	5.29%	6.13%	7.80%	11.90%	15.45%	16.16%	16.47%	16.82%	16.20%	16.27%	15.49%
ROIC	0.78%	2.42%	2.79%	2.66%	0.83%	2.34%	2.56%	3.07%	4.55%	5.95%	6.37%	6.59%	6.89%	6.82%	7.09%	7.02%
Asset Turnover	0.20	0.23	0.23	0.22	0.23	0.20	0.22	0.22	0.25	0.27	0.28	0.28	0.29	0.29	0.29	0.29

4. VALUATION

Free cash flows [€mn]

	2020	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2020-2030E CAGR
Revenues	1,018	1,105	1,157	1,312	1,478	1,566	1,634	1,723	1,770	1,867	1,918	6.5%
% change	*-2.6%*	*8.6%*	*4.7%*	*13.4%*	*12.6%*	*6.0%*	*4.3%*	*5.4%*	*2.8%*	*5.4%*	*2.8%*	
EBIT	197	208	255	359	468	518	554	600	617	661	675	13.1%
% margin	*19.4%*	*18.8%*	*22.0%*	*27.3%*	*31.7%*	*33.1%*	*33.9%*	*34.8%*	*34.8%*	*35.4%*	*35.2%*	
Tax Rate (%)	20.0%	31.0%	30.9%	30.3%	30.1%	30.0%	30.0%	29.9%	29.9%	29.9%	29.9%	
Depreciation and Amortization	318	353	328	311	300	295	295	300	308	320	335	
as % of Revenues	*31.2%*	*32.0%*	*28.3%*	*23.7%*	*20.3%*	*18.8%*	*18.1%*	*17.4%*	*17.4%*	*17.1%*	*17.5%*	
CAPEX	-190	-413	-420	-427	-433	-440	-448	-455	-462	-470	-477	
as % of Revenues	*18.7%*	*-37.4%*	*-36.3%*	*-32.5%*	*-29.3%*	*-28.1%*	*-27.4%*	*-26.4%*	*-26.1%*	*-25.2%*	*-24.9%*	
Changes in Working Capital	-94	-11	-11	-33	-37	-16	-13	-17	-9	-19	-10	
Free Cash Flows	**192**	**73**	**73**	**101**	**157**	**201**	**223**	**248**	**269**	**295**	**321**	*5.3%*

Source: company data, team estimates

Present value of free cash flows [€mn]

	2020	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	Terminal value	
Free Cash Flows	192	73	73	101	157	201	223	248	269	295	321	8.5	Exit EV/EBITDA
% change		*-62.2%*	*0.3%*	*39.0%*	*55.1%*	*27.9%*	*10.9%*	*11.2%*	*8.5%*	*9.6%*	*9.0%*	1,010	2030E EBITDA
WACC		3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	8,587	Terminal value
Present Value Factor		0.96	0.93	0.89	0.86	0.83	0.79	0.76	0.74	0.71	0.68	0.68	
Present Value of FCF		**70**	**67**	**90**	**135**	**166**	**177**	**190**	**198**	**209**	**219**	**5,849**	

Source: team estimates

WACC

WACC	**3.91%**
Target Debt/Equity	0.62
Average Tax Rate	30%
Cost of Debt	0.33%
Risk Free Rate	0.34%
Beta	0.75
Market Risk Premium	7.86%
Cost of Equity	6.21%
Exit Multiple	**8.5**

Source: team estimates

Sensitivity analysis

WACC \ EXIT MULTIPLE	5.5	6.5	7.5	**8.5**	9.5	10.5	11.5
1.41%	27.37	33.12	38.87	44.62	50.37	56.12	61.87
1.91%	25.63	31.13	36.63	42.13	47.63	53.13	58.63
2.41%	23.96	29.23	34.49	39.76	45.02	50.28	55.55
2.91%	22.38	27.42	32.45	37.49	42.53	47.57	52.61
3.41%	20.86	25.69	30.51	35.33	40.16	44.98	49.80
3.91%	19.42	24.04	28.65	33.27	37.89	42.51	47.13
4.41%	18.04	22.46	26.88	31.31	35.73	40.15	44.58
4.91%	16.72	20.96	25.19	29.43	33.67	37.90	42.14
5.41%	15.46	19.52	23.58	27.64	31.70	35.76	39.82
5.91%	14.26	18.15	22.04	25.93	29.82	33.71	37.6
6.41%	13.11	16.84	20.57	24.29	28.02	31.75	35.48

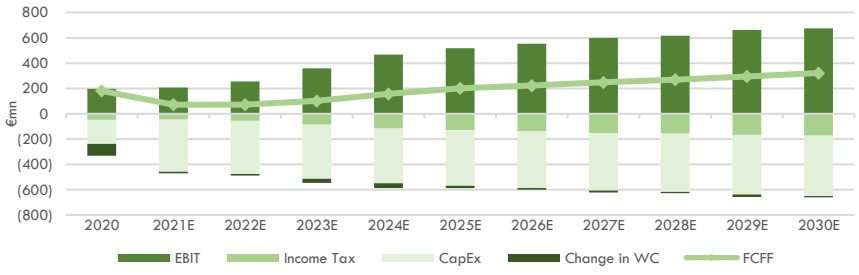
Source: team estimates

ERG's fair value

Enterprise Value (€mn)	7,370
Net Debt (€mn)	2,412
Equity Value (€mn)	4,958
Outstanding shares(mn)	149
Fair Value	**33.27**
Current Share Price (2/9/2021)	26.02
Upside/Downside (%)	**27.9%**

Source: team estimates

Free cash flow growth



Source: company data, team estimates

Trailing and target multiples at our price objective

	2020	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
P/E(x)	55.44x	49.50x	39.86x	25.74x	18.79x	16.79x	15.58x	14.29x	13.90x	12.84x	12.53x
P/FCF(x)	27.35x	68.26x	68.06x	48.95x	31.55x	24.67x	22.23x	19.99x	18.42x	16.81x	15.42x
EV/Sales(x)	5.65x	5.21x	4.97x	4.38x	3.89x	3.67x	3.52x	3.34x	3.25x	3.08x	3.00x
EV/EBIT(x)	28.52x	27.06x	22.11x	15.70x	12.03x	10.87x	10.16x	9.40x	9.13x	8.53x	8.34x
EV/EBIDTA(x)	10.93x	10.04x	9.67x	8.41x	7.33x	6.93x	6.63x	6.27x	6.09x	5.74x	5.58x

Source: team estimates

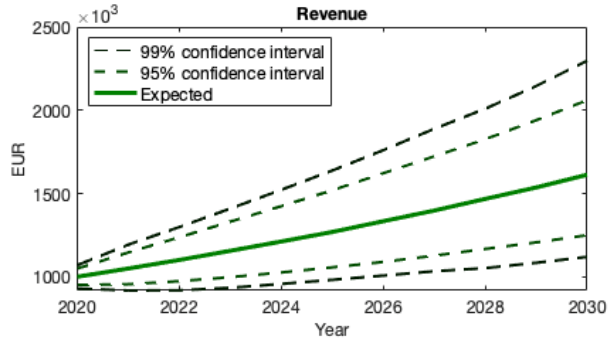
4. VALUATION

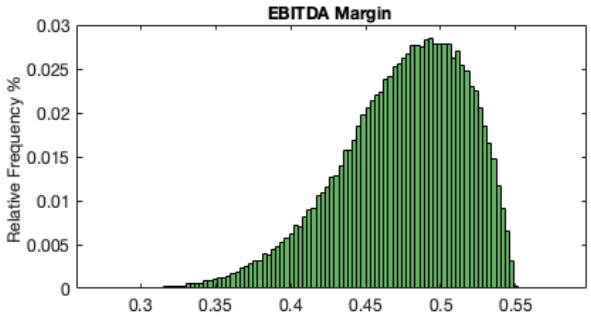
4.1 Framework

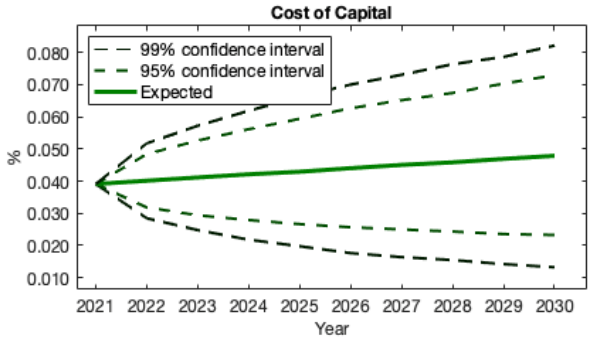
In order to check the robustness of the DCF calculation, the share price was simulated using Monte Carlo method with simplified assumptions The key modelling parameters and results are presented below. The fair share price was found to be 31.95, approximately in line with other valuation methods.

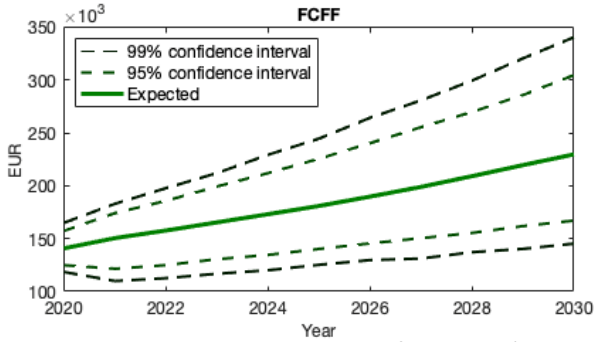
Item	Distribution	Notes
Revenue Growth	Normal: mean 5%, standard deviation 10%	Average year-on-year revenue growth over the next 10 years was projected to be 5%, with significant volatility of 10% assumed to allow for potential upsides and downsides both from cost and production sides.
EBITDA Margin	Beta (3,5) : mean 0.475, standard deviation 0.043, max 0.55, min 0.25	Left skewed distribution was assumed to reflect a higher probability of a decrease in the margin.
Cost of Capital	Random walk: drift 0.1%, volatility 0.3%	Sensitivity to the change in financing cost was modelled by allowing the costs to follow random walk. A slight upward drift term was added to reflect higher probability of an increase from currently historically low levels of capital costs in future.
EV/EBIDTA multiple	Normal: mean 8.5, standard deviation 2.5	Exit multiple was taken as 5-year average, with high volatility assumed due to inherent uncertainty of forecasting the value in 10 years
Target Price 31.95	Mean 31.95 , s.d 6.17, skewness 0.4354, excess kurtosis = 0.384 min 13.80, max 60.79,	The price computed was slightly lower than the DCF calculations. Distribution exhibits excess kurtosis and skewness, reflecting higher than normal risk and higher upside potential. High range of values is explained by long forecast horizon.

4.2 Forecasted values



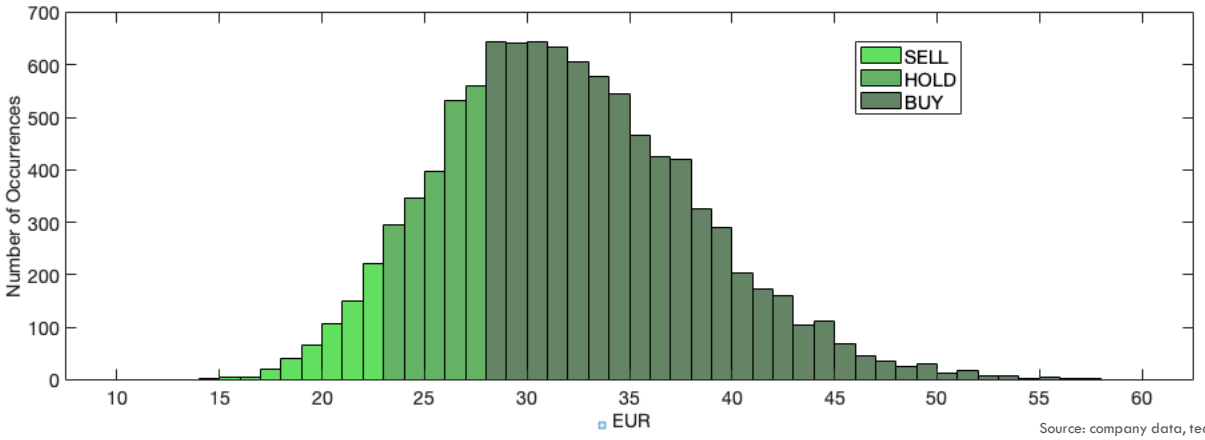






Source: company data, team estimates

4.3 Forecasted values



Source: company data, team estimates

5. INVESTMENT RISKS

5.1 Introduction

The end of incentives for older wind farms will reduce the stability of revenues and make it impossible to make accurate forecasts in the medium to long term. The sector is characterized by a high level of uncertainty due to the transition phase, which will mainly affect the start-up of new plants (green field activity) or the acquisition of new plants (M&A activity), it will be more difficult to "plan" and/or "evaluate" new investment in the absence of valuable forecasts. Added to this are the health crisis, supply shocks and changing consumer behaviour. A further element is Brexit that has forced the company to slow down expansion in the UK market and plan to adopt PPAs in place of more flexible mechanisms such as auctions (which in France and Germany remain key drivers of the company's growth). ERG purchased a total of two projects in the UK between 2018 and 2020 for a total amount of 104 MW. Brexit certainly constitutes a risk on the profitability of these farms and therefore a potential economic loss in the medium term.

5.2 Financial risks

Market risks (M)

Electricity demand was significantly impacted by the health crisis due to a reduction in services and industrial activities only partially offset by an increase in residential consumption. Demand recovered in Europe (e.g. France and Germany) following the ending of lockdown measures but remained below 2019 levels (10% in June and 5% in July 2020). The continued resumption of restrictive measures causes further slow downs and the pandemic does not seem to be stopping in Europe. A deteriorated macroeconomic climate and uncertainty over national and European policies are factors that cause doubts on the availability of financing for renewable energies project. Renewable energy projects require large amounts of capital and a certain ability to forecast future revenues. There are evidences to suggest that the renewables sector is experiencing a crisis in this regard. In the performance of its activities, the ERG Group is mainly exposed to the following Price risks: oscillation of Electricity prices for all generating plants whose electricity is sold on the Market; oscillation of the prices of Gas, CO2 and EEC associated with the production of the natural gas-fuelled cogeneration plant (CCGT) of ERG Power. While lower electricity prices carry a risk, lower gas prices carry an advantage. ERG will have to be able to balance these two factors in the coming years. ERG is also exposed to foreign exchange risk, production variability and interest rate risk. As far as interest rates is concerned, these are low and will remain so for a long time to come thanks to the financial policies implemented to combat the economic slowdown. Therefore, they do not represent a risk in the short to medium term.

Credit risk (CR)

Despite the uncertainty associated with expansion in the UK and the other factors outlined in the analysis, the company maintains good relations with its buyers. The risk of a credit loss is reduced by the use of long-term contracts such as PPAs and established mechanisms such as auctions. However, many contracts involve the public administration (especially the Italian one), which has sometimes proved unreliable by changing the terms of existing PPAs (as happened in France in the past) or delaying payments.

Liquidity Risk (LR)

The company holds assets of a special nature that are difficult to transfer. The financial size of the assets does not allow for a quick disposal. The projects acquired are large and the high development risks, combined with the period of uncertainty, Brexit and the deteriorating economic environment cause concerns about liquidity. In order to be able to liquidate the UK projects or assets held, the company may be forced to lower the price below market value Incurring large losses.

Business & strategic risks (BS)

The greatest risk is linked to the impossibility of implementing the business plan. In particular, the Brexit, the lack of certainty on the end of the pandemic and the lack of clarity on the new long-term national policies (especially Italian and British) lead to the need to change the business plan quickly and continuously, preventing the achievement of the objectives and causing slowdowns. Another fundamental factor is the constant technological development and the risk of obsolescence of plants. The emergence of new technologies (e.g. floating offshore wind turbines) could lead to a loss of competitiveness in the medium long-term.

5.3 Non-financial risks

Operational risks (O)

Some of the wind farms owned by ERG in Italy are obsolete and constitute a critical factor in operational risks. However, these are specific cases for which an intervention is envisaged in the actual business plan (Repowering and Reblading activity). 79% of revenues are generated on the Italian market (Fig. 2) and 58% come from wind power (Fig. 3). It is indisputable that ERG's Italian wind farms are a key resource for the company. 100% of ERG's Italian wind farms are located in southern Italy and on the islands (Fig. 4). Analyzing the risk maps drawn up by "ISPRA" (Istituto Superiore per la Protezione e la Ricerca Ambientale) and "Protezione Civile", we can observe a correlation between the sites of ERG's wind farms and natural phenomena with a catastrophic nature such as seismic risk and hydrogeological risk (Fig. 5). The concentration of key assets in medium-high risk areas leads to a negative assessment of the geographical diversification of the plants, which is present but not sufficient.

Vandalism & Reputational Risks (VRR)

The wind farms in southern Italy are vital resources for the company. There are several studies that show a connection between the presence of mafia-type "OCs" (Criminal Organizations) and the presence of wind farms in southern Italy. ERG is therefore strongly exposed to both reputational and "vandalism/intimidation" risks due to this evidence.

Political/Regulatory risks (PR)

The European Union has set a target of achieving a 40% share of renewable energy by 2030. This target will require a strengthening of the CEP (clean energy package) policies, which will have to be adapted to other objectives such as the innovation of existing technologies and the deployment of renewables in underperforming areas. These objectives will also require a strong intervention at the national level through the NECP (national energy and climate plan), which will be the real tool to achieve the EU objectives. The implementation of these two interventions has started in 2020 (we talk about a transition phase). The EU will therefore be able to assess and review the NECPs in the period 2020-2021, but for now there is still a great deal of regulatory uncertainty. Another issue concerns the goal of a single European energy market. The health crisis and the necessary closures combined with extraordinary economic measures risk fragmenting the market, increasing inflation on production costs and distorting normal competition mechanisms. On the UK side, uncertainties remain high. The UK is in a state of turmoil with the exit from the Europe and a pandemic that will not stop soon. However, it appears to be a short to medium term crisis that will not change the UK's intentions to remain one of the world's leading renewable energy country.

Building and testing risks (BT)

The construction of plants for production of renewable energy has a considerable impact from a territorial point of view. The so-called environmental impact is a point of discussion and is assessed according to the interests of the community and is therefore subject to "political-administrative" approval, which adds a further obstacle in territories rich in landscape/naturalistic constraints (such as Italy). The need to obtain these permits (not only for the construction but also for the modification of the plants, considerably slows down the start of the operation activity. The time taken to obtain permits has lengthened considerably since the start of the health crisis, leading to further delays and losses. Moreover, the construction and testing of plants in densely populated areas risks leading to legal disputes which may cause significant reputational or economic losses.

Source: company data, team estimates

5. INVESTMENT RISKS

5.1 Introduction

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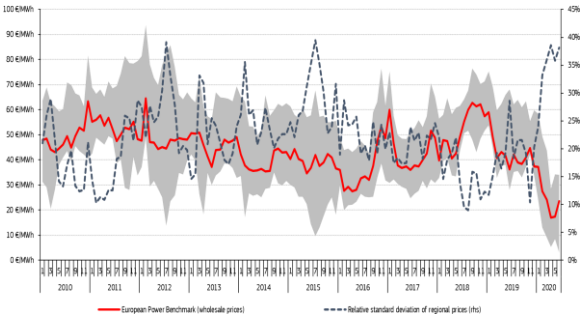
Risk mitigation level

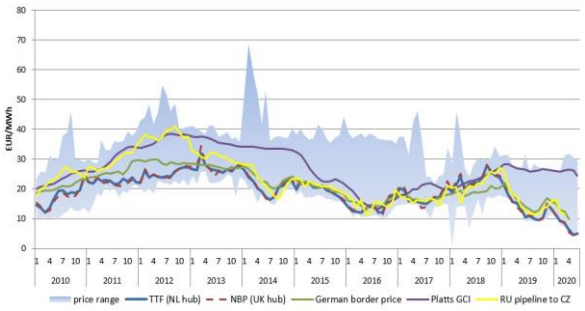
Risk Type	Consideration level	Mitigation level
Financial Risks		
Market (M)	HIGH	N/A
Credit risk (CR)	HIGH	HIGH
Liquidity risk (LR)	MEDIUM	MEDIUM/LOW
Business & strategic risks (BS)	HIGH	MEDIUM
Non-Financial risks		
Operational risks (O)	HIGH	MEDIUM
Production variability (PV)	HIGH	MEDIUM
Vandalism & Reputational Risks (VRR)	MEDIUM	MEDIUM
Political/Regulatory risks (PR)	HIGH	HIGH
Building and testing risks (BT)	HIGH	MEDIUM
Solvency risk (SR)	HIGH	HIGH

Electricity prices 2010-20



Source: Eurostat

Gas prices 2010-20



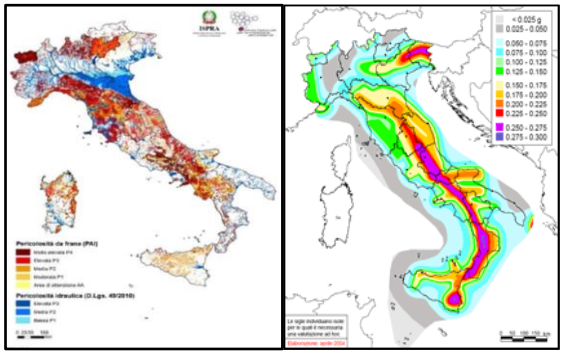
Source: Eurostat

Phases for the construction of a wind park and the possible mafia interactions

Phases	Crimes
Preparation: • Identification of the site • Contact with owner of site (if not already owned). (Options: Purchase of the site / Rent of the site / Government land grant)	• Extortion (through intimidations) • Fraud
Authorization: • Contact with public administration Autorizzazione Unica • Approval of environmental agencies • Building permit	• Abuse of office (public official) • Breach of confidentiality (public official) • Corruption (of public officials) • Forgery (of administrative docs) • Fraud • Issuing and use of forged invoices
Raising funds: • Financing (e.g. bank loans, private equity, etc) • Identification of authorized bank • Proof of availability of land and financial viability	• Corruption (of bankers) • Accounting manipulation • Forgery of financial documents • Fraud (of EU funds)
Execution: • Identification of contractor and construction company • Identification of sub-contractors	• Extortion racket • Money laundering • Violation of building codes • Violation of environmental codes
Activation: • Hiring staff • Turbines Activation • Connection to the grid • Production of electricity	• Extortion racket

Source:V. Checchi, M. Polo Università Bocconi, 2019

Seismic, landslide and flood risks



Source: ISPRAR and Protezione Civile Italiana

Risk Classifications	Risks	Mitigation Factors
	Regulatory Risks	
	➢ EU target revision ➢ Worsening of restrictive conditions ➢ Increased bureaucracy costs ➢ Unclear laws ➢ Slowdown in administrative activities ➢ Uncertain relations with UK	✓ Continuous dialogue with institutions ✓ Dialogue with other Operators in the sector ✓ Commissioning of studies and expert interventions ✓ Continuous information from official sources ✓ Participation in interest groups and committees ✓ Maintaining good relations with local authorities and stakeholders ✓ Analysis of possible scenarios and assessment of the impact on the group through simulations ✓ Preparation of contingency plans and medium to long-term planning ✓ Maintaining and implementing organizational flexibility
	Market Risks	
	➢ Economic slowdown ➢ Commodity price volatility ➢ Reduced access to credit ➢ Rating downgrade ➢ Increased cost of funding ➢ Exchange rate risk ➢ Decreased incentives	✓ Maintaining a balanced financial structure ✓ Monitoring results and measuring performance ✓ Risk-adjusted investment plans ✓ Stabilization of revenues through hedging and diversification policies ✓ Clear and structured capital expenditure processes ✓ Correct market risk allocation ✓ Constant review of WACC and risk-return ratio of projects ✓ Increased productivity and lower costs ✓ Market diversification ✓ Hedging on commodity prices
	Legal Risks	
	➢ Legal disputes during construction and testing of plants ➢ Risk of Vandalism and Intimidation ➢ Risk of changes to PPA conditions ➢ Risk of scandals due to OC involvement in O&M, Construction and Approval phases of projects.	✓ Transparency ✓ Internal and external communication activities ✓ Corporate social responsibility & Monitoring stakeholder opinion ✓ Adoption of codes of ethics and conduct ✓ Continuous staff training ✓ Compliance programmes ✓ Constant adaptation to anti-corruption policies ✓ Cooperation with the authorities
	Operational Risks	
	➢ Obsolescence of technologies employed ➢ Increase in O&M costs ➢ Impossibility of O&M due to Covid-19 restrictions ➢ Work accidents ➢ Plant downtime ➢ Problems with the national electricity grid and distribution	✓ Technological improvement of plants ✓ HSE audit & monitoring of plants ✓ Adoption of certified management systems (ISO, OHSAS) ✓ Staff training ✓ Plants insurance coverage

6. ENVIRONMENT, SOCIAL AND GOVERNANCE

6.1 Evaluation

Environmental pillar core - 30/35 (85.7); Social Pillar Score - 25/30 (83.3), Governance Pillar Score =-25/35 (71.4) Combined Score = 80/100

Criteria and Key Performance Indicators	Company Policies and Basis for Rating	Rating	Weight
E1 : Climate Change • Greenhouse gas emissions Scope 1 and Scope 2 • Paris aligned targets • TFCD implementation • Carbon accounting methodology	• Scope 1 – 1155 kt of CO_2 released (Best available technology used) • Scope 2 – 89% from renewable sources (51% in 2016) • 5.4 TW/h of renewable energy produced • 145g CO_2/kWh – largely constant since 2016 • Carbon Disclosure rating A-, (previously held B and A-)	4	15%
E2: Waste & Pollution • Proportion of waste recycled • Air pollution (NOx, SOx) • Resource circularity	• Life extension analysis program aiming at reducing solid waste • Reblading and Repowering (20 turbines replaced, approx. +20% eff) • NOx emitted at CCGT plant (Best Available Technology used) • Part of plastic free project	5	5%
E3: Water Security • Proportion of water recycled or reused • Water consumption in stressed areas • Nutrients released	• Wind and solar production do not have a strong impact • Hydro – potential for contamination in plant, mitigated through Next-gen synthetic biodegradable oils • Thermo plant - water flow recovery index 41% (33.8% in 2016)	5	5%
E4: Land Use & Ecological Sensitivity • Direct and indirect operations in sensitive areas for plant and animal life. • Greenfield development activity	• Significant land use for the insallations • Lower impact of Repowering and Reblading with respect to greenfield • Habitat conservation projects such as Oasis of Alviano • Negative impact of greenfield is mitigated through environmental studies	4	10%
S1: Employment & Wealth Generation • Absolute number and rate of employment • Economic contribution • Tax paid • Total R&D	• 744 EUR million economic value distributed, of which 81 to personal, 57 to public administration • 91.8% capital invested in plants fueled by renewable sources • Workforce increased from 737 to 754 • Focus on operational efficiency	4	5%
S2: Dignity & Equality • Trends in diversity and inclusion • Pay Equality, wage level • Labour standards, pay, benefits, and rewards; • Talent acquisition retention, and turnover;	• 20.8% female employment; Low ratio of female executives (5%) • Wage equality for office workers and middle managers • Most Attractive Employee award in 2019 • High youth turnover (40% for <30) • Human capital coverage of 92%	3	5%
S3: Safety Management & Training • Occupational health and safety for all employees • Trends in workplace accidents and fatalities • Engagement in safety management	• Sustainability Clause included in executive renumeration • 4 injuries in workplace (3 abroad) • Leadership in safety project, including 3d party • ISO 45001 standard accreditation in process • 7.8 days of training per employee, increasing over time	5	10%
S4: Communities & Customer Engagement • Engagement with the local communities of direct operations and of suppliers; • Exposure to war, other conflicts, and terrorism	• 2 million EUR distributed to community • Board engaged significantly in community projects and charities • Increased following online • Over 30 community commitments and initiatives	5	5%
G1: Governing Purpose • Comprehensiveness of the policy framework; • Public statements about ethics and values • Training and compliance framework	• Values are clearly outlined, and ethics code established • Corporate Governance Code adhered to • ESG central aspect of governance • Anti-corruption classroom training (89 people x 18 hours)	4	5%
G2: Governing Body Quality • Composition, skills, tenure, diversity • Independence of board • Incentives set by the board • Succession planning and unexpected changes	• Compliant with Gender balance (33%) • Executive renumeration not linked to ESG metrics • Executive termination payments present • CEO on board of directors • 11 directors installed by majority owner	3	15%
G3: Risk & Opportunity oversight • Committee structures and their membership • The level of preventive and remedial actions • Responsibility of the board for cybersecurity • Risk Oversight including Cyber	• 8 internal committees supporting system, risk specialists • 3 external committees • Comprehensive ERM system • Privacy Management system • No corporate governance committee	4	10%
G4: Transparency & Reporting • Level of disclosure of ESG indicators • Quality of an annual sustainability report • Level of disclosure on taxation issues	• Strong disclosure across the board, increasing over time • Majority key indicators as identified in WEF reported • Detailed sustainability report is available • Tax disclosed (27% rate)	4	5%

Framework adopted from S&P and WEF, scores are based on current level and trend ; Level: 5 = Outstanding (rare) 4 = Strong, 3 = Good, 2 = Lagging, 1 = Weak

6.2 Key management

Name	Role	Key Affiliations and Experiences
Edoardo Garrone	Chairman of the Board (2004 –	• Degree in Political Science (Alfieri Institute), further education in in USA, UK and France • ERG since 1988, deputy chairman (1990-2003), other managerial positions • Chairman of San Quirco (ERG holding company), Il Sole 24 Ore • Member of Fondazione Gerolamo Gaslini, Assonime (Association of Italian Listed Companies), Civita Association, Magna Carta Foundation • Member and Chair of various charitable institutions
Alessandro Garrone	Executive Vice-President (2007 -	• Degree in Economics (U Bergamo) • ERG and subsidiaries since 1988, key roles include CEO of ERG (2002-2012), Chairman of ERG Renew (2012-2016), Restructuring roles (1997-98) • Director at Banca Passarore & C. SpA , Vice chair of AIDAF (Family businesses association) • Previous director positions at i-Faber (2004-13), MutuiOnline Group (2006-17)
Giovanni Mondini	Vice President (2002-	• High School Diploma • ERG since 1992, various positions particularly in Shipping and Refinary subsidiaries • Chairman of San Quirico S.p.A and Confindustria Genova • Director at AVM Energia S.p.A (2010-15), various positions at Tankersud(1988-90)
Luca Bettonte	CEO (2009-	• Degree in Economics and Business (U Bologna) • ERG since 2007, positions include CFO (2007-09), General Corporate and Director (2009-13), director of TotalERG (2012-18), GM and CEO of ERG Renew (2009-12) • Deputy Chairman of Elettricità Futura • Charterered Account and Auditor, 8 years at PwC (UK,IT) • Professor of Economics and Commerce at U Bologna and U Sacro Cuore (2004-10) • Finance controller and CFO at Atlantia (2003-07) ; Indesit (1998-2003)
Angelo Leonelli	Chief Regulatory & Public Affairs officer (2016-	• Electrical Engineering (Milan Politechnico) and Master of Business Management and Strategy (Sole 24 Ore) Previously head of Regulatory, Market Analysis & Performance Control for ERG Power • E.ON group : positions including CEO of E.ON Italia Power & Fuel, Director of Asset Optimisation and Regulatory Affairs (2008-2015) • Endesa :Energy Management Department, Head of Front and Middle Office (2002-08) • ENEL: Director of Asset Optimisation, Production division (1993-2001)
Andrea Navarra	Corporate & Legal affairs (2014-	• Law Degree (La Sapienza), Admitted to the Rome Bar Association. • Head of Legal & Corporate Affairs and Ethics Officer at Engie International Power/GDF Suez Group (currently Engie) (2008-13) • Chiomenti Studio Legale - Senior Associate – M&A, Energy & Project Finance. (2004-08) • Clifford Chance LLP (Rome/London) - M&A, Energy & Project Finance department. (2000-04)
Corrado Bosio	Chief Business Development and M&A Officer (2006-	• Degree in Economics and Business Studies (U Genoa) • 7 years Edison S.p.A - M&A Director, Executive Assistant to the Chief Executive Officer • Project Development and Project Finance department at Ansaldo Energia (1995-2000)
Costantino Deperu	Chief Engineering Development Officer (2008-	• Graudated Engineering (U Genoa), Masters in Project Management • Previously : Head of Engineering of Renew and Power divisions , Country Manager UK • Licensed Engineer, Internal Auditor, Health and Safety Coordinator • International project manager and site manager positions in Spain, France
Renato Sturani	Generation & Market COO (2020-	• 25 Years of experience in international electricity sector, large part of it in operations. • Head of renewables & efficiency and head of business unit hydrauclic power generation at BKW (CZ) • Head of power generation Region West (ITA & FR) and then Renewables (5 EU countries)
Paolo Merli	Corporate General Manager & CFO (2006-	• Electrical Engineering (U Pavia) and MBA in Finance (Eni "Scuola Superiore Enrico Mattei") • 7 years as a financial analyst covering the European Energy at Intermonte • 2 years at Snam S.p.A (currently part of Eni Group)

Sources: company data