



# European Power and Utilities report

KPMG Global Energy Institute

—

Q1 2019



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# Price and margins overview

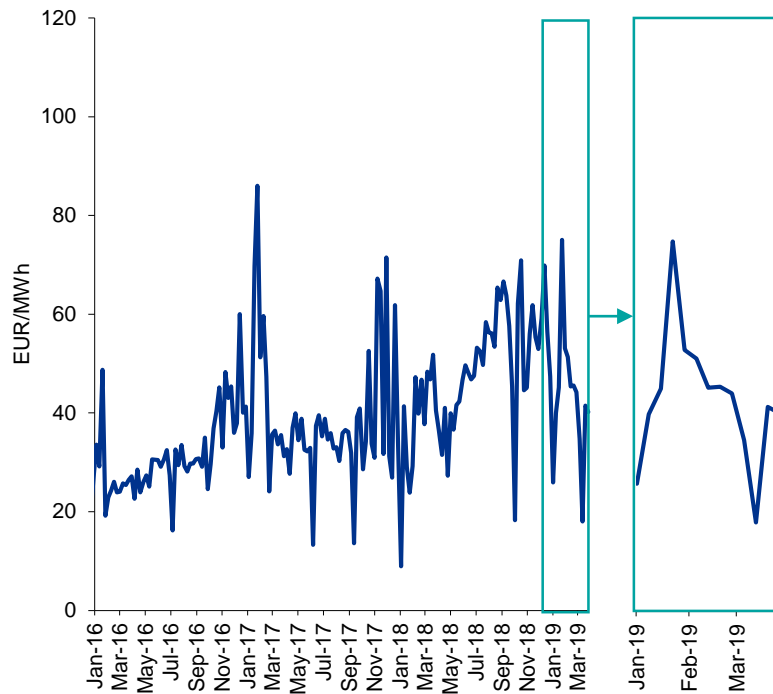
<b>Electricity prices</b>	Peak and base load prices in France, Germany, Spain and the UK continued to decline after the seasonal peaks observed in the fourth week of January up to mid March. The decline was mostly due to weak demand as a result of mild weather conditions and also due to higher renewable generation owing to abundant wind generation during the quarter
<b>Oil prices</b>	Brent and WTI crude prices increased by 13 percent and 12 percent, respectively, during the quarter (January to March 2019), reaching US\$67.58/barrel and US\$60.14/barrel at the end of Q1 2019. The oil prices rose due to production decline from Venezuela and Iran, accompanied by optimism surrounding the negotiations between China and the US. However, prices were negatively impacted by rise of US oil stocks during the quarter
<b>Gas prices</b>	Average prices of Henry Hub, EU border and NBP declined by nearly 25 percent q-o-q. The prices were impacted by forecasts of mild weather and high levels of European gas storage, along with the decline of spot contracts and bearish movement of coal and carbon prices. The prices were supported by a rise in oil and CO <sub>2</sub> prices during the quarter
<b>Coal prices</b>	Coal prices rose in the beginning of January, influenced by the prospects of cold weather and signs of rising demand, but later continued to decline till the end of the quarter. Average Australian coal prices declined by 7.6 percent q-o-q and African coal prices declined by 11.5 percent q-o-q. The fall was due to low demand, high level of renewable generation in Germany, weakness of the Asian market and high inventory level at import terminals across Europe
<b>Carbon prices</b>	Carbon prices increased initially in January to EUR25.0/T, as the market sentiment recovered following the 'Brexit vote' due to rise in energy prices amid expectations of the cold wave hitting EU. The prices continued to decline till the end of February, triggered by the apprehensions of a 'no-deal Brexit' and the absence of compliance buyers. Prices increased in the first week of March, due to renewed compliance and speculative buying, but were negatively impacted by decline in coal and gas prices, accompanied by strong market supply
<b>Dark/spark spreads</b>	During the quarter, clean spark spreads were more attractive than clean dark spreads in many parts of Europe including France, Germany, Spain and the UK. Since the end of January, gas-fired power has become considerably more profitable than coal, resulting in switching of power plants from coal to gas

# Electricity price evolution

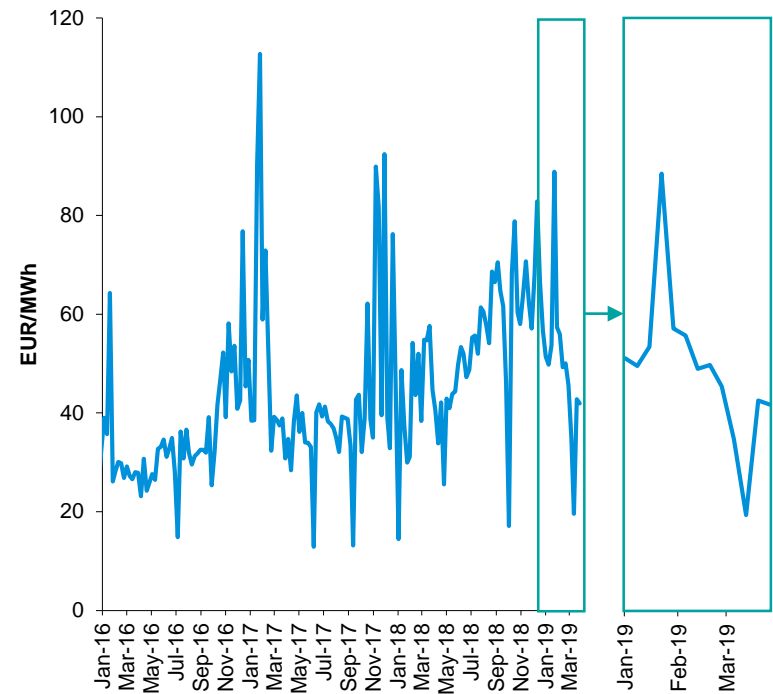


Germany

## Base load



## Peak load



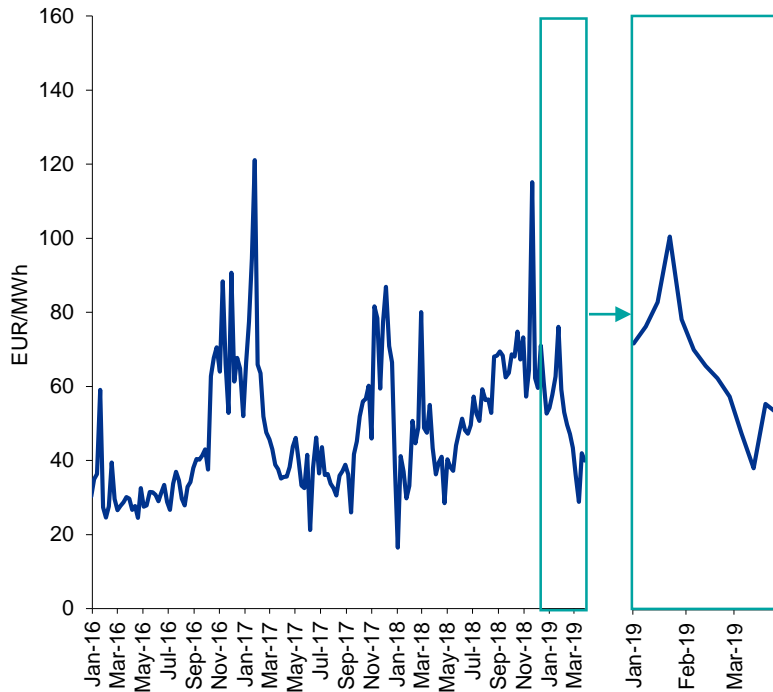
Source: Reuters, 2019.

# Electricity price evolution (cont.)

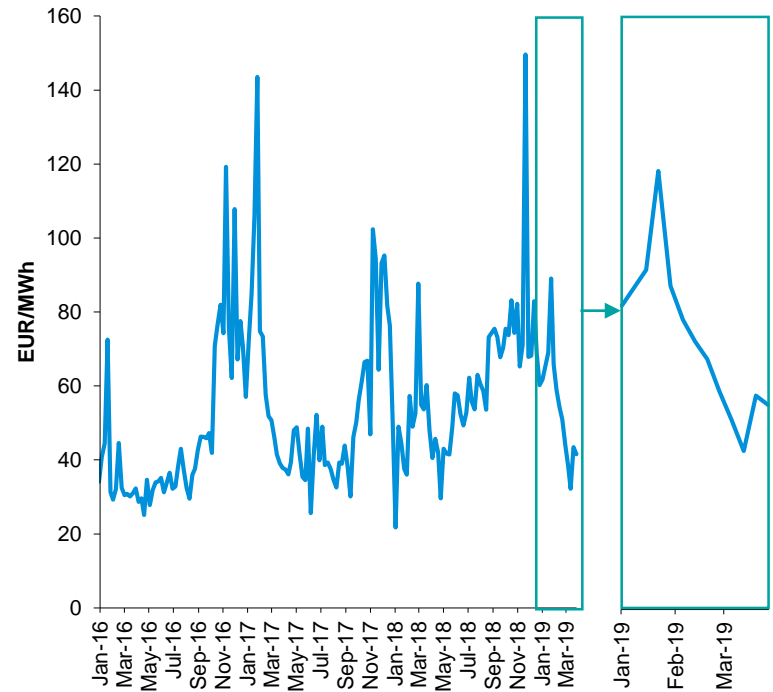


France

## Base load



## Peak load



Source: Reuters, 2019.

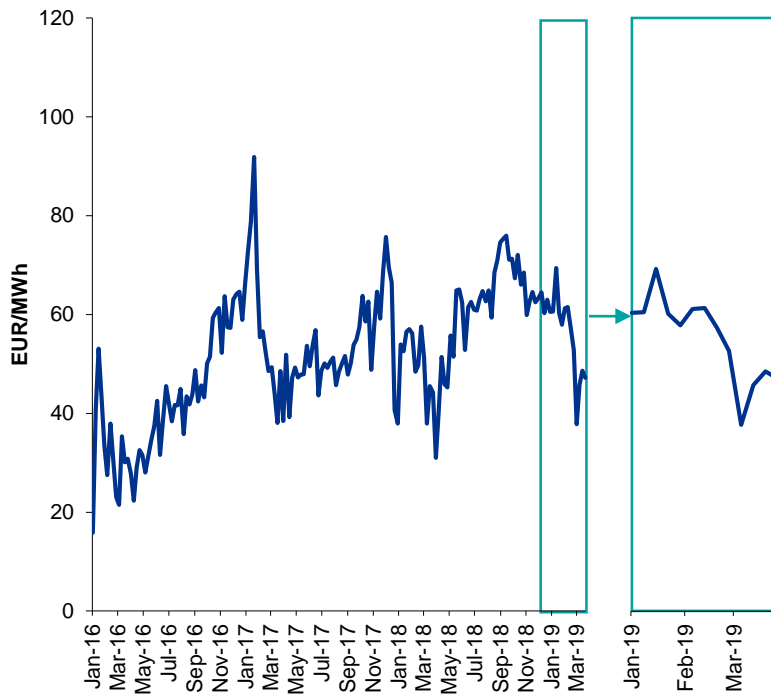
## Price and margins

# Electricity price evolution (cont.)

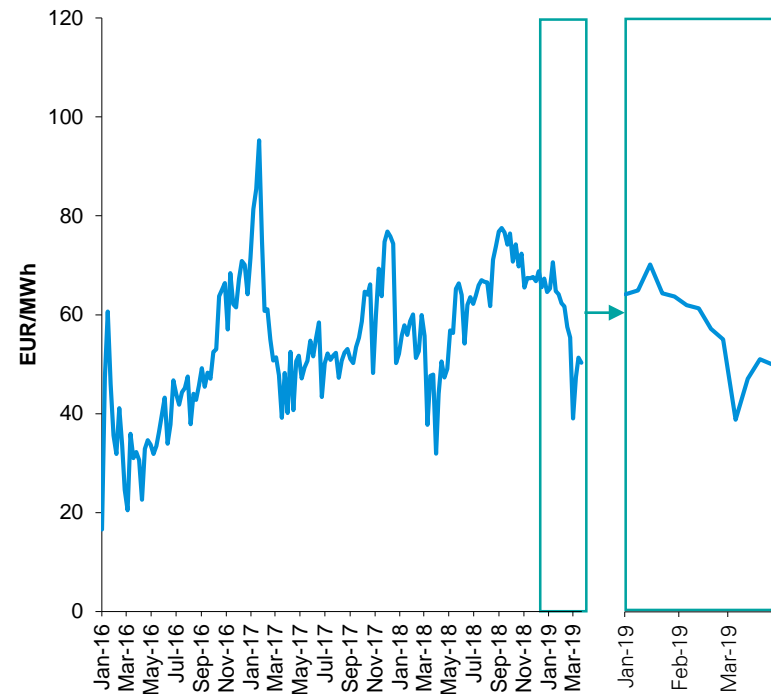


Spain

### Base load



### Peak load



Source: Reuters, 2019.



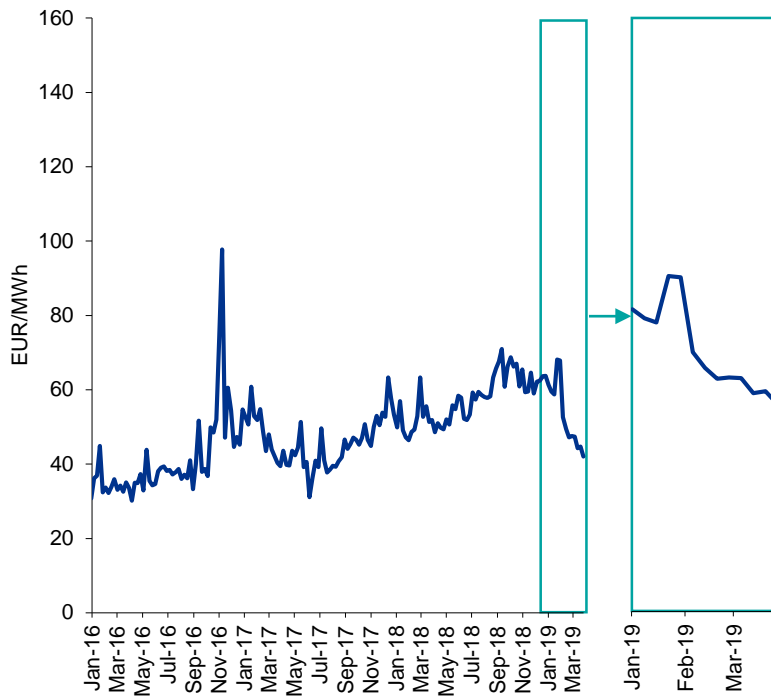
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# Electricity price evolution (cont.)

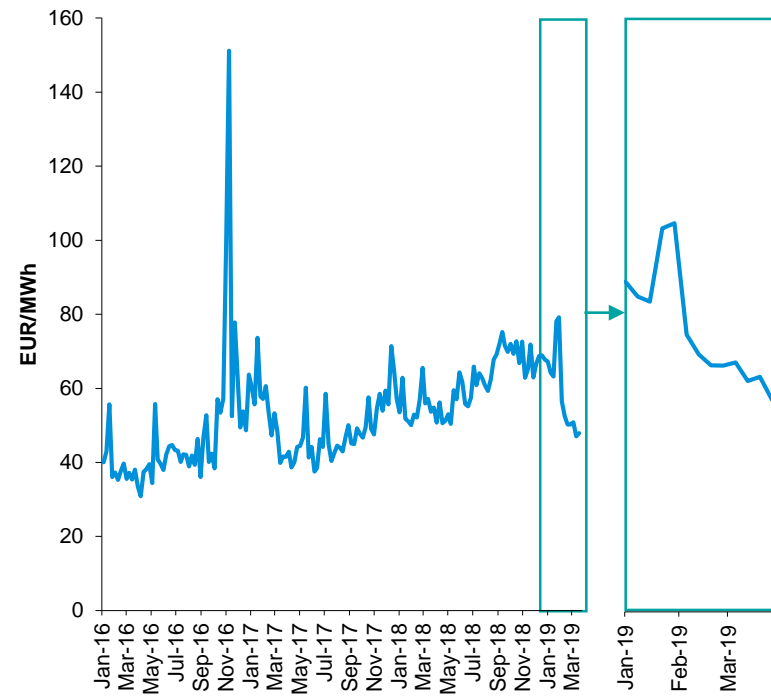


United Kingdom

## Base load



## Peak load

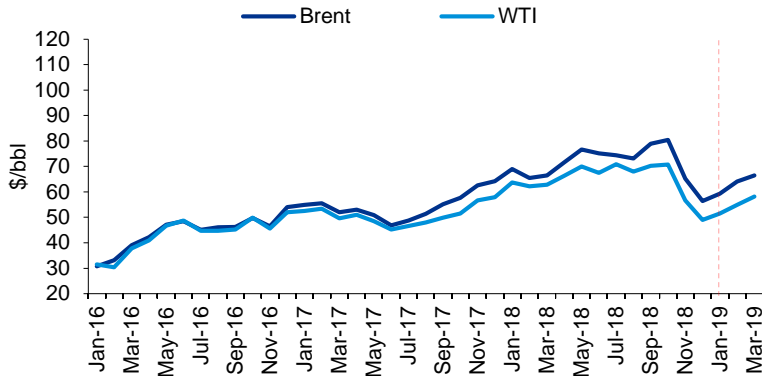


Source: Reuters, 2019.

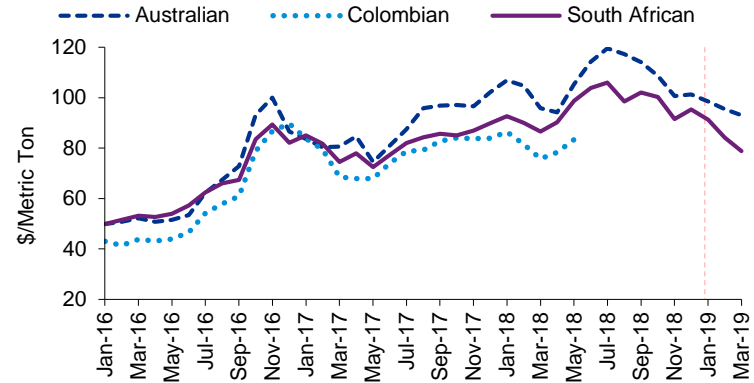
## Price and margins

# Fuel and Carbon price evolution

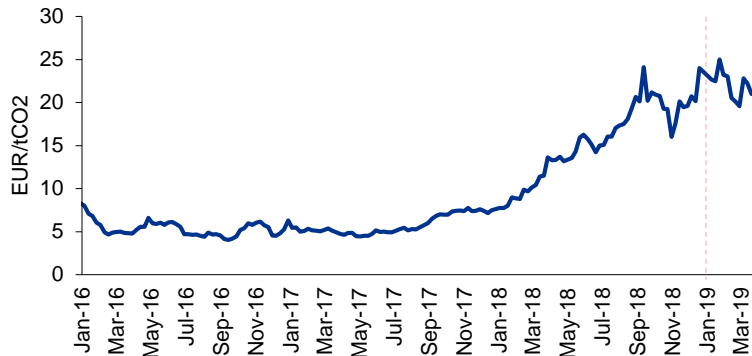
### Crude oil



### Coal<sup>(a)</sup>

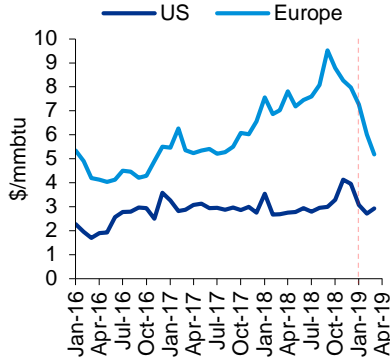


### Carbon price — EU ETS

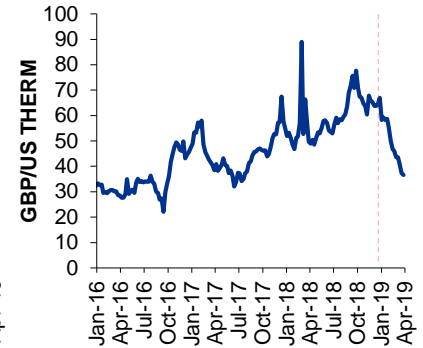


### Gas prices

#### US (H.Hub) and EU (border)



#### NBP



Note: (a) The World Bank has not published the Colombian coal prices since Q3 2018 – therefore the prices are not available for the period July 2018 to March 2019.

Source: World Bank commodities price data (The Pink Sheet), 1 July 2019; Reuters, 2019.

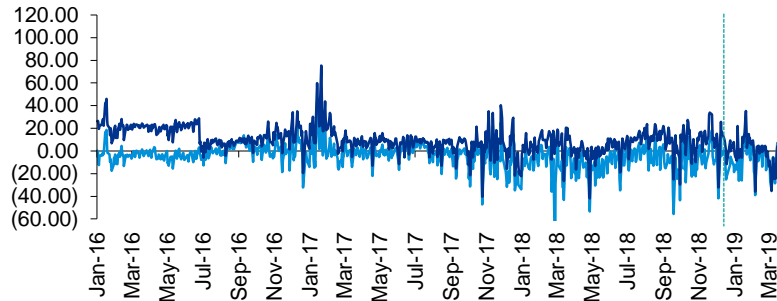


## Price and margins

# Clean dark and spark spreads

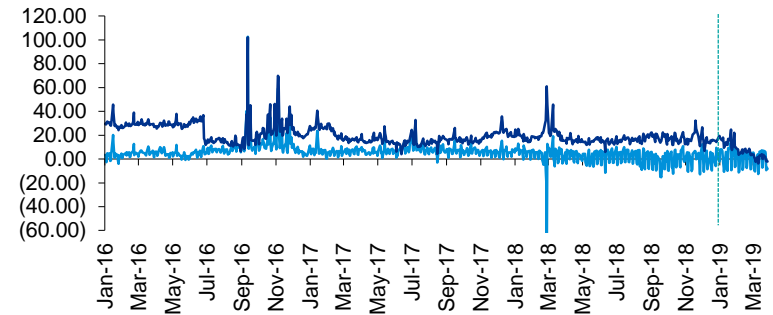
### Germany

EUR/MWh



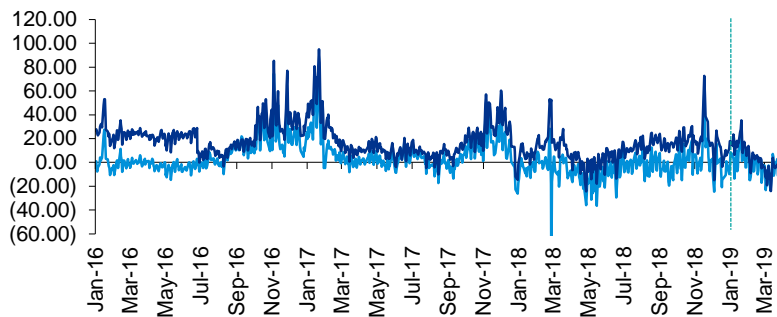
### The UK

GBP/MWh



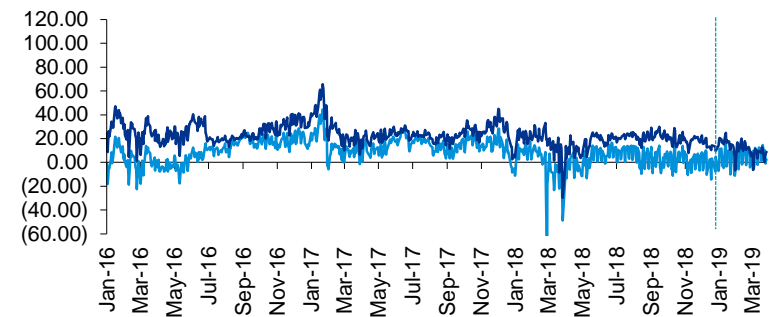
### France

EUR/MWh



### Spain

EUR/MWh



— Clean dark spread

— Clean spark spread

Source: Reuters, 2019.

# Regulatory and economics news overview

## European Union

### Natural Gas

Liquefied Natural Gas (LNG) imports in the European Union (EU) posted a strong increase of 126 percent in Q1 2019 compared with Q1 2018

### Electricity

Falling gas spot prices led to the intensive coal-to-gas switch across the EU power market in Q1 2019, as coal was disadvantaged by relatively high carbon prices. Uncertainty surrounding the Brexit issue was the main factor influencing CO2 prices, which fell 14.3 percent during the quarter. Despite this, the prices were still twice as high as in March 2018. Wholesale electricity prices fell across the EU markets, due to mild weather conditions in February and March, accompanied by lower energy commodity prices and good renewable output. The Renewables sector continued to increase its share in the power mix and reached 31 percent, mainly due to strong wind generation

## UK

### Confirmation of sector deal in offshore wind

On 7 March 2019, the UK government published its Offshore Wind Sector Deal — Sector Deal between the government and the Offshore Wind industry. The UK aims to achieve 30GW of offshore wind generation by 2030, up from 8GW in Q1 2019, thus covering one-third of Britain's electricity demand from offshore wind. By 2030, the government stated that, by 2030, it aims to create 20,000 new skilled jobs in the sector and raise the number of women entering the industry by twofold. This Deal will mean there will be more electricity from renewables than fossil fuels, with 70 percent of British electricity predicted to be from low carbon sources by 2030

# Regulatory and economics news overview (cont.)

### Germany

#### The entry in the coal exit

The Commission on Growth, Employment and Structural Change has decided to exit from coal, latest by 2038. On 31 January 2019, the commission presented the final report to the Federal Chancellery. The Commission has agreed on EUR40 billion support for the federal states, which are expected to be affected by the coal exit

The Federal government passed a regulation for the development of LNG (Liquefied Natural Gas) infrastructure on 27 March 2019

### France

#### The project 'Climate Energy' passed as a law by the House of Representatives

The 2019 law reinforces the objectives already in place in the 2015 Energy Transition law, which is the founding regulation for energy and climate. Following are its main objectives to achieve carbon neutrality by 2050:

- Reducing the share of fossil fuels: The new target is 40 percent reduction in fossil fuel use by 2030, compared with the former 30 percent target.
- Eliminating the 'thermal colanders' (buildings with poor energy performance) with a three-phase approach:
  - Developing existing subsidies
  - Introducing compulsory improvements by building owners and tenants
  - Implementing binding mechanisms
- The reduction of nuclear power share in power production, down to 50 percent by 2035 instead of earlier target of 2025
- Better monitoring of energy prices

# Regulatory overview

<b>Spain</b>	<p>In January 2019, the Royal Decree Law 18/2019 was approved, which clarifies issues about the request, allocation and trade of free greenhouse gas emission rights for the 2021–30 period</p> <p>In February 2019, the Spanish Ministry of Ecological Transition (MITECO) submitted a draft of the NECP (National Energy and Climate Plan) for the 2021–30 period to the European Commission. The NECP sets ambitious targets, aiming for fast energy system transition</p> <p>In March 2019, the government announced that it will restore tax on the production of electricity, 7 percent tax on electricity production, effective from the second quarter of 2019</p>
<b>Portugal</b>	<p>The Regulatory Entity for Energy Services (ERSE) approved the directive that defines the reference price methodology of the tariff for the use of natural gas transmission network, the discount to be applied at entry and exit points of storage facilities and the discount to be applied to normalized interruptible capacity products</p>
<b>Italy</b>	<p>The ARERA (Italian Regulatory Authority for Electricity Gas and Water) announced an update to the guaranteed minimum prices for the electricity produced from renewables for 2019. These prices were raised by 1.1 percent, following the rise of the consumer price index by the same percentage</p>
<b>The Netherlands</b>	<p>The Dutch government will close one of its five coal-fired power plants next year, four years earlier than planned, to reach its climate goals. The decision follows a 2018 court order instructing the government to ensure greenhouse gas emissions are reduced from the 1990 levels by at least 25 percent by the end of 2020</p> <p>The Dutch government announced a carbon tax for companies. Proposals to fight climate change put forward in recent months will cost the Netherlands about EUR 5.2 billion (US\$6 billion) over the next decade, but will fall short of achieving a 49 percent CO2 emission reduction goal by 2030, the CPB advisory body said</p>

# Links to new key regulation



News

**Higher wholesale costs raise default and pre-payment price caps from April**

On 7 February 2019, Ofgem announced that the retail energy price cap, which was introduced on 1 January 2019, would be increased from 1 April 2019. The price cap was raised by GBP117 to GBP1,254 per year, April onward. Ofgem uses a methodology to adjust the level of the price cap twice every year, reflecting its estimates for the costs to supply power and gas to customers over the next six-month period. Analysis conducted by Ofgem suggests that default tariff customers would pay an average GBP75–100 more per year on their energy bills if the price cap had not been put in place

[Link I](#)

UK




**Confirmation of sector deal in offshore wind**

On 7 March, the UK government published its long awaited Offshore Wind Sector Deal. The deal reaffirms the UK’s aim to achieve 30GW of offshore wind by 2030, up from 8GW in 2019. This would mean about one-third of Britain’s electricity would come from offshore wind by 2030. This increase in deployment will be delivered through further auction rounds for ‘Contracts for Difference’ (CfDs), which have helped deliver dramatic reductions in the cost of offshore wind over the past five years. By 2030, the government aims to create 20,000 new skilled jobs in the sector and raise the number of women entering the industry by twofold by 2030. This deal will mean there will be more electricity from renewables than fossil fuels, with 70 percent of electricity in Britain predicted to come from low carbon sources by 2030



[Link II](#)



# Links to new key regulation (cont.)

    	<p><b>News</b></p>
	<p><b>Final notices for CfD Round 3 published</b></p> <p>On 1 May 2019, BEIS issued final statutory notices regarding its third round of Contracts for Difference (CfD) auctions. The overall budget for the round is GBP65 million, for upto 6GW of capacity from technologies including offshore wind, tidal and wave, among others. The auction will commence on 29 May 2019, with applications closing on 18 June 2019. The announcement for auction winners is expected in Q3 2019</p>
	<p style="text-align: right;"><a href="#">Link III</a></p>
	<p><b>Climate Change Committee's recommendations on the UK moving to 'Net Zero' carbon economy by 2050</b></p> <p>On 2 May 2019, the UK's Climate Change Committee published a report recommending the UK to move to a 'Net Zero' carbon economy by 2050. If the government accepts this recommendation, it will involve huge changes across the economy, including power, heat, transport, industry and agriculture; as well as all aspects of society, in terms of what we eat, how we travel and live. The main recommendation is that the UK should set and vigorously pursue an ambitious target to reduce greenhouse gas emissions to 'net-zero' by 2050, ending the UK's contribution to global warming within 30 years. In order to be on track to meet these targets, the UK should legislate them as soon as possible</p>
	<p style="text-align: right;"><a href="#">Link IV</a></p>
<p><b>Labour's plans to renationalize energy networks</b></p> <p>On 15 May 2019, the UK Labour Party published details of its plans to renationalize the energy networks. Under Labour's plan, companies that control the UK's GBP62 billion energy infrastructure, including all electricity and gas transmission and distribution, would be taken back into state control soon after a Labour election win. Nationalization of the energy networks forms a central part of Labour's plans to address climate change, with the party arguing that the profits generated from the infrastructure should be invested in the green economy rather than given to shareholders in the form of dividends. Labour also argues that it would deliver better value to the public</p>	
<p style="text-align: right;"><a href="#">Link V</a></p>	

# Links to new key regulation (cont.)

 <b>Germany</b> 	<b>News</b>
	<p><b>The entry in the coal exit</b></p> <p>The commission on 'Growth, Employment and Structural Change' has decided to exit from coal, latest by 2038. On 31 January 2019, the commission presented the final report to the Federal Chancellery. The commission has agreed on EUR40 billion support for the federal states, which are expected to be affected by the coal exit. The respective federal states will get EUR1.3 billion over 20 years as per the commission's report. The coal exit is one of the most demanding transformation processes of the past decades</p> <p style="text-align: right;"><a href="#">Link I</a></p>
	<p><b>Altmaier: LNG infrastructure for more security of supply and competition</b></p> <p>The Federal government passed a regulation for the development of LNG (Liquefied Natural Gas) infrastructure on 27 March 2019. Thus, the regulatory conditions for LNG will improve in the future, leading to elimination of investment constraints. According to Federal Minister, Altmaier, the use of different supply routes and sources in Germany is crucial for the secure supply of gas</p> <p style="text-align: right;"><a href="#">Link II</a></p>

# Links to new key regulation (cont.)



## News

### The project 'Climate Energy' was passed as law on 27 June 2019 by the House of Representatives

This 2019 law reinforces the objectives already in place in the 2015 Energy Transition law, which is the funding regulation for energy and climate. Its main objective is to achieve carbon neutrality by 2050

1. Reducing dependence on fossil fuels: The new target is reducing the consumption of fossil fuels to 40 percent by 2030, compared with the previous target of 30 percent
2. Eliminating the 'thermal colanders' (buildings with poor energy performance) with a gradual three-phase approach:
  - Developing the existing subsidies
  - Introducing compulsory improvements by building owners and tenants
  - Implementing binding mechanisms
3. The reduction of nuclear power share in power production, down to 50 percent by 2035 instead of earlier target of 2025, as initially ruled by the previous regulation
4. Better monitoring of energy prices

The opening of the electricity market for individuals in July 2007 constrained the growth of EDF's (Électricité de France) competing suppliers, due to the quasi-monopoly of EDF in the French electricity production, attributed to its nuclear power plant. The 'ARENH' (Regulated Access to the historical nuclear electricity) became effective in 2010, compelling EDF to sell a share of its nuclear electricity at regulated prices. Therefore, since 2010, the alternative suppliers are receiving benefits owing to the ARENH — 100 terawatt-hours (TWh) per year of electricity, delivered under cost conditions equivalent to those of EDF

This 'Climate Energy' law redefines the level of nuclear electricity that EDF can deliver at a regulated cost to other suppliers (100–150 TWh per year) 2020 onward

[Link I](#)

FRANCE





# Links to new key regulation (cont.)



**News**

France



**Change in regulated tariffs for sale of Electricity**

The regulated electricity sales tariffs (TRVEs) are proposed by the historical providers (EDF and other 162 local distribution companies — ELD) and implemented by decree of the ministers in charge of the Economy and Energy, after the approval of the Energy Regulatory Commission (CRE)

Since June 1, 2019, the regulated electricity sales tariffs went up by 5.9 percent. After this growth, regulated electricity tariffs are expected to rise further. The Commission for Energy Regulatory (CRE) has proposed an average increase of 1.23 percent from 1 August 2019

[Link II](#)

[Link III](#)

**Change in regulated tariffs for sale of Natural gas**



The regulated natural gas sales tariffs are proposed by the historical providers (ENGIE and 22 local distribution companies — ELD) and fixed by the government, after approval of the Energy Regulatory Commission (CRE)

The regulated natural gas sales tariffs have declined by 6.8 percent since 1 July 2019




[Link IV](#)

[Link V](#)

# Links to new key regulation (cont.)

 <span style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 2em; font-weight: bold;">Spain</span> 	<p><b>News</b></p>
	<p>On 25 January 2019, the Royal Decree Law 18/2019 was approved, which clarifies issues on request, allocation and trade of free greenhouse gas emission rights for the 2021–30 period</p>
	<p><a href="#">Link I</a></p>
	<p>In February 2019, the Spanish Ministry of Ecological Transition (MITECO) submitted a draft of the NECP (National Energy and Climate Plan) for the 2021–30 period to the European Commission. The NECP sets ambitious targets aiming for fast energy system transition: 42 percent RES in final energy, 39.6 percent improvement in energy efficiency and 74 percent RES in power generation. This entails the installation of 57GW in new RES by 2030. Moreover, the NECP estimates the need of EUR42 billion of total investments in grid infrastructure, EUR102 billion for RES and EUR86 billion for energy efficiency</p>
	<p><a href="#">Link II</a></p>
<p>On 13 March 2019, the CNMC (National Commission of Markets and Competition), approved the Circular 1/2019, which regulates the mechanism to promote the use of biofuels and other renewable fuels in transport. It expands the certification framework for liquid biofuels to include gaseous biofuels (such as biomethane)</p>	
<p><a href="#">Link III</a></p>	
<p>In March 2019, the government announced that it will restore tax on the production of electricity 7 percent tax on electricity production, effective from the second quarter of 2019</p>	
<p><a href="#">Link IV</a></p>	

# Links to new key regulation (cont.)

		<p><b>News</b></p>
	<p>The Regulatory Entity for Energy Services (ERSE) approved the directive that defines the reference price methodology of the tariff for the use of natural gas transmission network, the discount to be applied at entry and exit points of storage facilities and also to be applied on normalized interruptible capacity products</p>	<p><a href="#">Link I</a></p>
	<p>New ordinance referring to the tariff for installation of over-equipment, states that the consultation charges of ERSE are waived off if the over-equipped electro producer explicitly chooses to apply for a tariff of EUR45/MWh (not accounted from inflation), for a single period of 15 years</p>	<p><a href="#">Link II</a></p>
	<p>Following the CELE (Comércio Europeu de Licenças de Emissão) Directive, the Portuguese government established that 60 percent revenues generated from emission allowance auctions should be allocated to the National Electrical System, to deduct the system's overall usage tariff</p>	<p><a href="#">Link III</a></p>
	<p>In order to ensure the balance of competition and reduce impact of distortions due to events external to market, the office of the Secretary of State for Energy updated the parameter that adjusts the impact of extra market measures and events registered in the framework of the European Union, affecting the average prices of electricity in the wholesale market in Portugal</p>	<p><a href="#">Link IV</a></p>
	<p>ERSE (Energy Services Regulatory Authority) approved the consumption, production and self-consumption profiles to be applicable in 2019, and also determined the adoption of the consumption profile in Medium Voltage (MV) and Special Low Voltage (SLV) installations not included in the telemetry system</p>	<p><a href="#">Link V</a></p>

# Links to new key regulation (cont.)



**News**

Italy



**Framework for implementation of a platform for exchange of balancing energy from a replacement reserve**

With the Resolution 8/2019/R/eel, the ARERA (Italian Regulatory Authority for Electricity Gas and Water) approved the proposal of all TSO performing the reserve replacement process for the implementation of a framework for exchange of balancing energy from a replacement reserves. The implementation process has been entrusted to Terna (Italian TSO)

[Link I](#)

**Determination of value of electricity sales price to formulate incentives to replace the green certificates**

The ARERA, with the resolution 16/2019/R/efr, has determined the average cession price of electricity in 2018, for the purpose of quantification of the cession value, for the year 2019. This provision determines, for the purpose of quantifying the value of incentives replacing the 'ex certificati verdi' (green certificates) for the year 2019. This value is set to EUR61.91/MWh (increase of 17 percent compared with the previous value)

[Link II](#)

**Update of minimum guaranteed prices for the year 2019**

The ARERA updated the guaranteed minimum prices for electricity produced from renewables for 2019. These prices were raised by 1.1 percent, following the rise of the Consumer Price Index by the same percentage. The list per source is in the following link



[Link III](#)

**Tariff regulation criteria for the transport and measurement of natural gas for the regulatory period (2020–23)**

With the resolution 114/2019/R/gas, the ARERA adopted new parameters for the regulation of LNG transportation and measurement, effective within the 2020–23 period. The Italian Authority, with this resolution, implements the Commission Regulation (EU) 2017/460 with regard to the establishment of a network code on harmonized transmission tariff structures for gas

[Link IV](#)

# Links to new key regulation (cont.)

    <b>Netherlands</b>	<p><b>News</b></p>
	<p>The Dutch government announced plans to direct funds toward the development of geothermal heating projects in the Netherlands, through government-owned Energie Beheer Nederland B.V., a natural gas exploration, production, transportation and sales company</p>
	<p><a href="#">Link I</a></p>
	<p>The Dutch government has selected Vattenfall AB as the winning bidder in the country’s first zero-subsidy offshore wind tender for sites I and II of the Hollandse Kust Zuid zone. The Swedish state-owned utility announced on Monday that it has secured a permit for a wind power complex of having capacity of 700–750MW in the Dutch territory of the North Sea</p>
	<p><a href="#">Link II</a></p>
<p>The Dutch government will close one of the five coal-fired power plants in the Netherlands next year, four years ahead of the original plan, to achieve its climate goals, Dutch broadcaster RTL reported. The decision follows a 2018 court order instructing the government to ensure greenhouse gas emissions are reduced from the 1990 levels by at least 25 percent by the end of 2020</p>	
<p><a href="#">Link III</a></p>	
<p>The Dutch government announced a carbon tax for companies after a top advisory body said that the current plans to cut emissions will fall short of targets. Proposals to fight climate change put forward in recent months will cost the Netherlands about EUR5.2 billion (US\$6 billion) over the next decade, but will fall short of achieving a 49 percent CO2 emission reduction goal by 2030, the CPB advisory body stated</p>	
<p><a href="#">Link IV</a></p>	

# Capital markets overview

<b>Eurostoxx Utilities</b>	The Eurostoxx Utilities index increased by an average of 8.9 percent q-o-q. The index cumulated 10.2 percent gains in the last 12 months
<b>Best performance</b>	RWE AG, Enel SpA, Snam SpA, Endesa SA, Iberdrola SA and ENGIE SA registered the best performance in Q1 2019, in terms of share price behavior. During this period, 15 of the top 18 European players experienced positive price evolution
<b>Valuation levels</b>	Valuation levels in the sector averaged at 8.5 EV/EBITDA in Q1 2019, 10.4 percent above the previous quarter. Wide differences persist in EBITDA multiples, with RWE Aktiengesellschaft, Fortum Oyj, Naturgy Energy Group, S.A., SSE plc, Energias de Portugal S.A., Snam S.p.A. and National Grid plc receiving the highest valuations, trading at 11x EV/EBITDA and above
<b>Net debt ratios</b>	Net debt ratios averaged at 3.2x EBITDA, 6.7 percent above the figure registered in Q4 2018 (3x EBITDA)
<b>Credit ratings</b>	In March 2019, Enagás, S.A. and Centrica Plc observed a downgrade in its S&P's rating to 'BBB+' and 'BBB,' respectively. Red Eléctrica Corporación also observed a downgrade in its Fitch's rating to 'A-'. In February 2019, Enel SpA and Endesa, S.A. observed an upgrade in their Fitch's rating to 'A-'

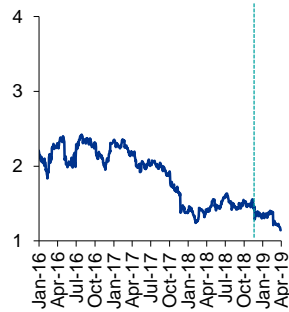
# Share price evolution: Overview

Company	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Last quarter	Last year
	2017	2017	2017	2017	2018	2018	2018	2018	2019	Q1 2019/ Q4 2018	Q1 2019/ Q1 2018
RWE AG	13.28	17.01	19.26	19.98	17.44	20.00	21.55	18.61	21.56	15.89%	23.61%
Enel SpA	4.10	4.62	5.00	5.29	4.96	4.96	4.59	4.61	5.31	15.26%	6.96%
Snam SpA	3.81	4.11	4.03	4.23	3.81	3.72	3.67	3.79	4.24	11.88%	11.28%
Endesa SA	20.04	21.85	20.17	18.92	17.69	19.13	19.44	19.48	21.76	11.73%	22.98%
Iberdrola SA	6.17	6.89	6.81	6.62	6.25	6.39	6.53	6.55	7.31	11.53%	16.96%
ENGIE SA (GDF Suez S.A.)	11.88	13.48	13.93	14.53	13.52	13.95	13.06	12.24	13.58	10.95%	0.45%
E.ON SE	7.14	7.74	9.01	9.79	8.67	9.13	9.35	8.78	9.52	8.45%	9.86%
Naturgy Energy Group, S.A	18.32	21.17	20.00	18.63	19.17	21.14	23.31	22.53	23.86	5.88%	24.48%
Enagás SA	23.43	25.37	24.14	24.19	22.05	23.80	23.99	23.91	25.28	5.73%	14.65%
SSE Plc (*GBP)	15.19	14.71	14.27	13.54	12.55	13.56	12.64	11.17	11.74	5.07%	(6.45%)
EDP	2.84	3.13	3.12	2.97	2.87	3.28	3.39	3.09	3.21	3.98%	11.88%
EDP Renováveis	6.13	6.98	6.92	6.92	7.19	8.14	8.74	7.89	8.15	3.27%	13.32%
REE	17.21	19.17	18.47	18.39	16.84	17.13	18.10	18.95	19.46	2.69%	15.60%
National Grid plc (*GBP)	9.63	10.74	9.52	8.98	7.89	8.37	8.16	8.19	8.37	2.24%	6.13%
Fortum Oyj	14.59	13.84	14.88	17.57	17.72	19.44	21.59	19.33	19.56	1.22%	10.37%
CEZ as (*CZK)	435.62	437.61	413.66	477.50	510.22	549.44	566.89	549.60	548.46	(0.21%)	7.50%
Centrica plc (*GBP)	2.26	2.04	1.98	1.59	1.37	1.48	1.50	1.43	1.30	(9.58%)	(5.27%)
EDF	8.85	8.86	9.25	10.93	10.79	11.65	13.49	16.59	13.47	(18.79%)	24.90%
Eurostoxx Utilities	244.04	273.03	282.12	291.95	272.82	283.24	282.83	276.10	300.77	8.94%	10.25%

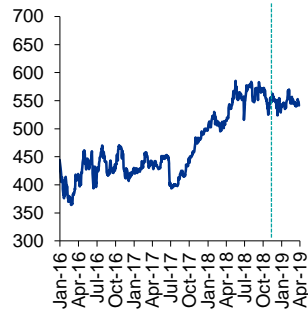
Source: S&P Capital IQ, 2019

# Share price evolution: Individual stocks

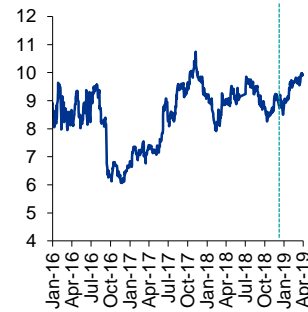
Centrica PLC (\*GBP)



CEZ a.s (\*CZK)



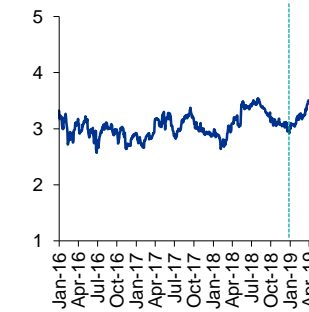
E.ON



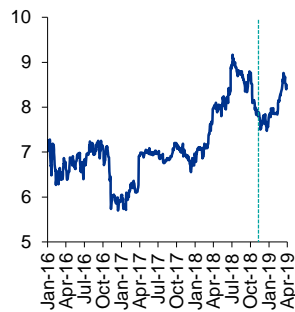
EDF



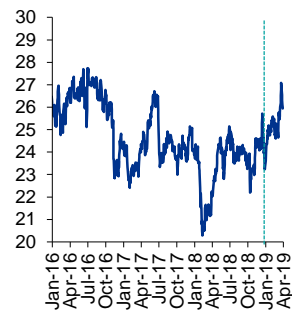
EDP



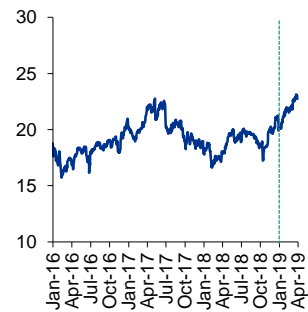
EDP Renováveis



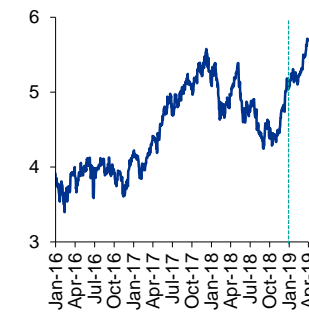
Enagás S.A.



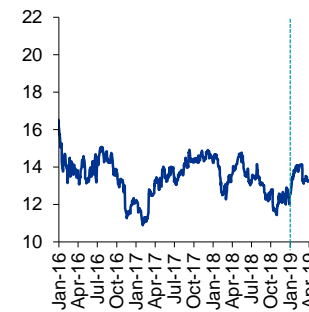
Endesa S.A.



Enel SpA



Engie S.A.

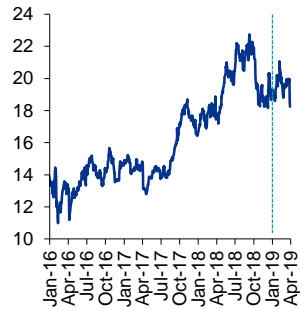


Source: S&P Capital IQ, 2019

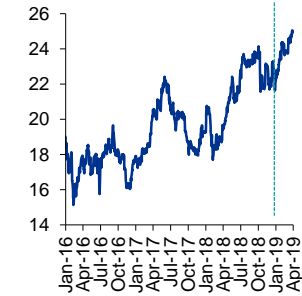


# Share price evolution: Individual stocks (cont.)

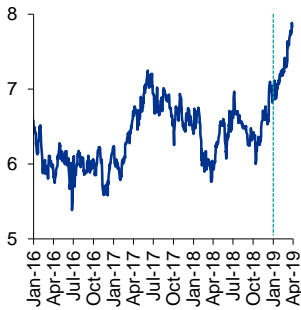
**Fortum Oyj**



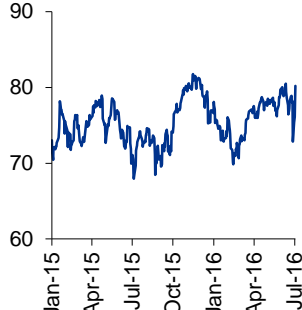
**Naturgy Energy Group, S.A**



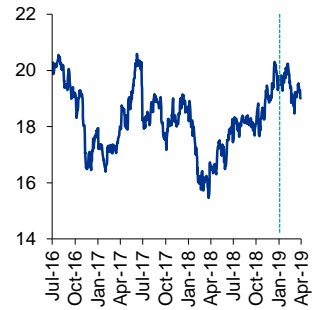
**Iberdrola S.A.**



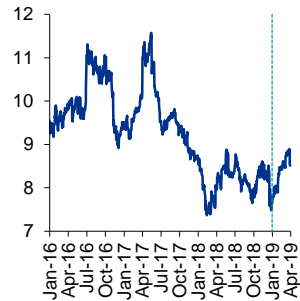
**REE (before the split)**



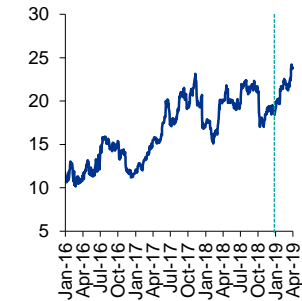
**REE (after the split)**



**National Grid Plc**



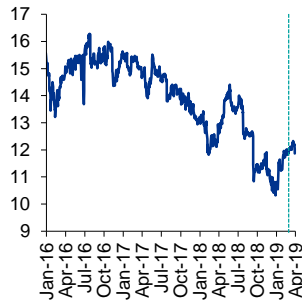
**RWE AG**



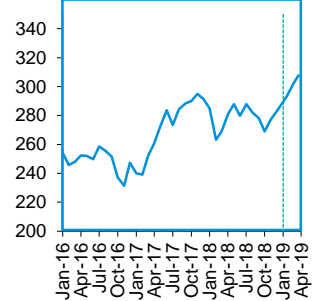
**Snam SpA**



**SSE Plc (\*GBP)**



**Eurostoxx Utilities**



Source: S&P Capital IQ, 2019

# Relative valuation per company

	TEV/EBITDA (LTM) (as of 31 March) ▼	<sup>(a)</sup> TEV (EUR million) (as of 31 March)	Market Capitalization (EUR million) (as of 31 March)
RWE Aktiengesellschaft (DB:RWE)	16.6x	14,842.0	14,629.0
Fortum Oyj (HLSE:FORTUM)	14.3x	21,910.6	16,193.6
Naturgy Energy Group, S.A. (BME:NTGY)	14.0x	43,507.3	24,845.3
SSE plc (LSE:SSE)	13.5x	24,567.4	13,916.1
EDP – Energias de Portugal, S.A. (ENXTLS:EDP)	12.9x	31,625.3	12,739.9
Snam S.p.A. (BIT:SRG)	12.8x	26,694.6	15,114.6
National Grid plc (LSE:NG.)	11.8x	63,282.4	32,839.5
Enagás, S.A. (BME:ENG)	10.7x	10,936.5	6,184.8
EDP Renováveis, S.A. (ENXTLS:EDPR)	10.4x	12,689.9	7,414.6
Iberdrola, S.A. (BME:IBE)	10.0x	89,363.1	49,744.3
Red Eléctrica Corporación, S.A. (BME:REE)	9.8x	15,032.7	10,257.8
Endesa, S.A. (BME:ELE)	8.8x	29,946.0	24,076.0
CEZ, a. s. (SEP:CEZ)	8.5x	17,240.5	11,186.4
Enel SpA (BIT:ENEL)	7.9x	123,229.7	57,990.7
E.ON SE (DB:EOAN)	6.5x	29,474.3	21,526.3
ENGIE SA (ENXTPA:ENGI)	5.6x	50,160.3	32,023.3
Electricité de France S.A. (ENXTPA:EDF)	5.2x	73,480.6	36,649.6
Centrica plc (LSE:CNA)	4.1x	12,134.8	7,357.1
	<b>Weighted average: 8.5</b>	<b>690,118.00</b>	<b>394,688.90</b>

Note: (a) Total Enterprise Value as of 31 March 2019, TEV = market capitalization + interest-bearing debt + preferred stock – excess cash

Source: S&P Capital IQ, 2019

# Leverage and credit ratings

	LTM Net Debt/EBITDA ▼	S&P Rating	Date <sup>(a)</sup>	Moody's Rating	Date <sup>(a)</sup>	Fitch Rating	Date <sup>(a)</sup>
Energias de Portugal, S.A. (ENXTLS:EDP)	6.1	BBB-	15-Apr-19	Baa3	1-Apr-19	BBB-	12-Feb-19
National Grid plc (LSE:NG.)	5.6	BBB+		Baa1		BBB+	
SSE plc (LSE:SSE)	5.5	BBB+	20-Dec-18	Baa1	20-Dec-18	BBB+	6-Mar-19
Snam S.p.A. (BIT:SRG)	5.4	BBB+	31-Dec-18	Baa2	31-Dec-18	BBB+	31-Dec-18
Naturgy Energy Group, S.A. (BME:NTGY)	4.8	NA		Baa2	29-Mar-19	NA	
Enagás, S.A. (BME:ENG)	4.1	BBB+	13-Mar-19	Baa1	2-Apr-19	A-	12-Mar-19
Iberdrola, S.A. (BME:IBE)	3.9	BBB+	30-Apr-19	Baa1	5-Feb-19	BBB+	31-Dec-18
Red Eléctrica Corporación, S.A. (BME:REE)	3.3	A-		Baa1	2-Apr-19	A-	8-Apr-19
Fortum Oyj (HLSE:FORTUM)	3.3	BBB	23-Apr-19	Baa2	2-Apr-19	BBB	31-Dec-18
EDP Renováveis, S.A. (ENXTLS:EDPR)	3.0						
Enel SpA (BIT:ENEL)	2.8	BBB+		Baa2		A-	11-Feb-19
Electricité de France S.A. (ENXTPA:EDF)	2.0	A-	26-Feb-19	A3	29-Mar-19	A-	31-Dec-18
Endesa, S.A. (BME:ELE)	1.7	BBB+	6-Dec-17	Baa2	29-Mar-19	A-	11-Feb-19
E.ON SE (DB:EOAN)	1.7	BBB	31-Dec-18	Baa2	2-Apr-19	NA	
CEZ, a. s. (SEP:CEZ)	1.6	A-	23-Nov-18	Baa1	2-Apr-19	A-	27-Feb-19
ENGIE SA (ENXTPA:ENGI)	1.4	A-	27-Jul-18	A2	17-Jan-19	A	17-Aug-18
Centrica plc (LSE:CNA)	1.3	BBB	2-Apr-19	Baa1	2-Apr-19	NA	
RWE Aktiengesellschaft (DB:RWE)	(0.7)	NA		Baa3	2-Apr-19	BBB	31-Dec-18
<b>Average:</b>	<b>3.2</b>	<b>Mode: BBB</b>		<b>Baa1</b>		<b>A-</b>	

Quarterly rating variation: Upgrade Unchanged Downgrade

Note: (a) The date of publication of latest report (company release, market/industry/peer report) from which the rating has been sourced.

Source: S&P Capital IQ/Moody's/Fitch, 2019

# Global M&A overview

<b>Main trends</b>	<p>The biggest deals during Q1 2019, comprised companies mostly from the US and China. Total value of the top 15 deals amounted to EUR20.74 billion. Most of the deals involved companies having operations in Renewables and New Energies like wind, solar and hydro power plants</p> <p>Top deals constituted mostly power generation and distribution companies with the objective of improving business operations through expansion, portfolio diversification, capacity enhancement, R&amp;D and cost control. Some deals focused on strategies to achieve the climate protection targets through energy transition toward renewables, while simultaneously generating steady cash flow</p>
<b>Main transactions</b>	<p>Hanergy Mobile Energy Holding Group, the Chinese thin film solar products manufacturer, has agreed to privatize Hanergy Thin Film Power Group, using share replacement instead of cash scheme. The HKEX listed affiliate is engaged in thin film solar products</p> <p>China Power International Holding, operating through its subsidiary, China Power International Development Limited, has agreed to privatize, China Power Clean Energy Development Co Ltd, its 28.07 percent owned listed affiliate engaged in development, construction and operating of clean energy power plants</p> <p>A consortium of Commerz Real AG, wpd invest GmbH, KGAL GmbH &amp; Co. KG and Ingka Holding B.V., has acquired approximately 80 percent stake in Veja Mate Offshore Project GmbH, a Germany-based 402 MW offshore wind farm located in the North Sea. The acquisition will support Commerz Real to achieve the 2020 target of — renewable energy production exceeding the energy consumption</p> <p>ENMAX Corporation, a Canada-based company engaged in the provision of electricity, natural gas and telecommunications services, has signed a definitive agreement to acquire Emera Maine from Emera Inc., a US-based company that provides electric delivery services. The acquisition is part of ENMAX's strategy to grow through the expansion of its regulated utility business in North America</p> <p>Total Eren, a France-based company engaged in developing and operating wind, solar and hydro power plants and a subsidiary of Total S.A., has agreed to acquire NovEnergia II, a Luxembourg-based renewable energy assets operator, for an estimated consideration of EUR600 million. The transaction will enable Total Eren to strengthen its presence in Europe</p>

# Top 15 M&A operations in Q1 2019, by deal value

Date	Target company	Target description	Target country	Bidder company	Bidder country	Seller company	Deal value EUR (m)
26 February 2019	Hanergy Thin Film Power Group Limited (32.49% Stake)	Hong Kong-based HKEx-listed company engaged in manufacturing of equipment and turnkey production lines for manufacturing of silicon-based thin film solar photovoltaic modules	China	Hanergy Mobile Energy Holding Group Limited	China	NA	6000.0
03 March 2019	China Power Clean Energy Development Co. Limited (73.58% Stake)	Hong Kong-based HKEx-listed company that develops, constructs, owns, operates, and manages clean energy power plants	China	China Power International Holding Limited	Hong Kong	NA	2547.0
13 February 2019	Veja Mate Offshore Project GmbH (80.00% Stake)	Germany-based 402 MW offshore wind farm located in the North Sea	Germany	KGAL GmbH & Co. KG; Ingka Holding B.V.; Commerz Real AG; wpd invest GmbH	Germany; Netherlands Germany Germany	A.P. Moller – Maersk A/S (Shareholders)	2300.0
25 March 2019	Emera Maine	US-based company that provides electric delivery services to residential and business clients	USA	ENMAX Corporation	Canada	Emera Inc.	1151.0
26 February 2019	NovEnergia II	Luxembourg-based renewable energy assets operator, operation includes wind farms, photovoltaic plants and small hydropower plants	Spain, Luxembourg, Portugal	Total Eren SA	France	NA	1000.0
21 January 2019	JA Solar Holdings Co., Ltd.	China-based company engaged in manufacturing of high-performance photovoltaic (PV) products, with business including wafers, cells, modules and PV power stations	China	Qinhuangdao Tianye Tolian Heavy Industry Co., Ltd.	China	An investor group led by Baofang Jin (Private investor)	971.0

# Top 15 M&A operations in Q1 2019, by deal value (cont.)

Date	Target company	Target description	Target country	Bidder company	Bidder country	Seller company	Deal value EUR (m)
04 March 2019	Silver State South Solar Energy Center (49.99% Stake); Marshall Solar Energy Center (49.99% Stake); Roswell Solar Energy Center (49.99% Stake); Story County II Wind Energy Center; White Oak Wind Energy Center; Ashtabula II Wind Energy Center	US-based 120-MW wind generation plant in Griggs and Steele counties, North Dakota; US-based 150-MW wind generation plant in Hardin, Iowa; US-based 150-MW wind generation plant in McLean County, Illinois; US-based 250-MW solar generation plant in Clark County, Nevada; US-based 62.25-MW solar generation plant in Lyon County, Minnesota; US-based 70-MW solar generation plant in New Mexico	USA	NextEra Energy Partners, LP	USA	NextEra Energy Resources, LLC	899.0
28 January 2019	Waneta Expansion Hydroelectric Project (51.00% Stake)	Canada-based hydroelectric project	Canada	Columbia Basin Trust; Columbia Power Corporation	Canada	Fortis Inc.	876.0
12 February 2019	Sempra Renewables, LLC	US-based producer renewable energy	USA	American Electric Power Company Inc.	USA	Sempra Energy	791.0
16 January 2019	Enel S.p.A. (Nova Olinda (292 MW) solar plant); Enel S.p.A. (Lapa (158 MW) solar plant); Enel S.p.A. (Cristalândia (90 MW) wind farm)	Brazil-based 158 MW solar power plant based in Lapa; Brazil-based 292 MW solar power plant based in Nova Olinda; Brazil-based 90 MW wind farm based in Cristalândia	Brazil	CGN Energy International Holdings Co. Limited	China	Enel S.p.A.	686.0

# Top 15 M&A operations in Q1 2019, by deal value (cont.)

Date	Target company	Target description	Target country	Bidder company	Bidder country	Seller company	Deal value EUR (m)
06 January 2019	Cogeneracion de Energia Limpia de Cosoleacaque, S.A.; Cogeneracion de Altamira, S.A. de C.V	Mexico-based power plant located in Cosoleacaque with a capacity of 104MW; Mexico-based power plant with an expected capacity of 414 MW	Mexico	Contour Global Plc	United Kingdom	Alpek S.A.B. de C.V.	636.0
14 March 2019	EGPNA Renewable Energy Partners, LLC (50.00% Stake)	US-based seven fully operational renewable plants, totalling 650 MW of Enel Green Power North America Renewable Energy Partners, LLC	USA	Enel Green Power North America, Inc.	USA	GE Energy Financial Services Inc.	569.0
1 February 2019	SSE Plc (Dunmaglass wind farm) (35.50% Stake); SSE Plc (Stronelairg wind farm) (35.50% Stake)	UK-based wind farm project: Stronelairg wind farm, near Fort Augustus, Scotland, having installed capacity of 228MW UK-based wind farm: Dunmaglass, located 15 miles south of Inverness, having an installed generating capacity of 94MW.	United Kingdom;	Greencoat UK Wind Plc	United Kingdom	SSE Plc	516.0
8 March 2019	Enertolima SAESP (distribution assets and the electricity commercialization business in Tolima)	Columbia- based distribution assets and the electricity commercialization business owned and operated by Enertolima SAESP	Colombia	Empresa de Energia del Pacifico S.A. E.S.P.	El Salvador	Enertolima SAESP	484.0
28 January 2019	En+ Group plc (10.55% Stake)	Russia-based vertically integrated aluminium and hydro power producer	Russia	Glencore Plc	Switzerland		442.0

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