



European Power & Utilities Report

KPMG Global Energy Institute Europe, Middle East & Africa

—

Q1 2017



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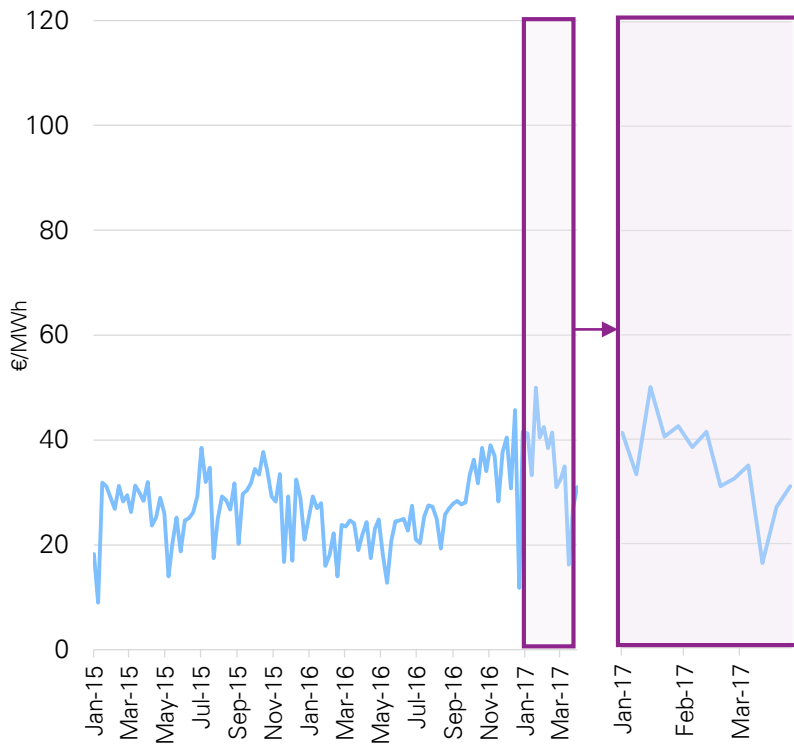
Price and Margins Overview

Electricity Prices	Baseload prices have changed their trend in the last quarter and have started to fall across Europe, following lower gas and coal prices and weak demand-supply balances. Largest declines have been registered in Spain and France after the January price peaks.
Oil Prices	Oil prices remained stable slightly below 55\$ per barrel during the quarter and fell to around \$50 at the end of March.
Gas Prices	Main gas indexes began the quarter with moderate increases, peaked in February, and then fell to end the period at values below December 2016 (2.28 and 5.36 USD/MMBTU for Henry Hub (HH) and EU border prices respectively, 48.85 GBP/MWh for NBP).
Coal Prices	Coal prices decreased significantly in Q1 2017. Colombian Coal led this trend and fell from 83.80 USD/mt in January to 68.50 USD/mt in March 2017.
Carbon Prices	Carbon prices declined during the quarter, reaching a price of 5.10 €/T down from 5.60 €/T in the previous quarter.
Spark Spreads	Gas-fired margins (spark spreads) decreased across Europe during the period. In the case of Germany and France, they have returned to negative levels after 6 months of positive values.
Dark Spreads	Coal-fired margins (dark spreads) experienced a similar evolution to spark spreads, decreasing across main markets in Europe and returning to low or negative values.

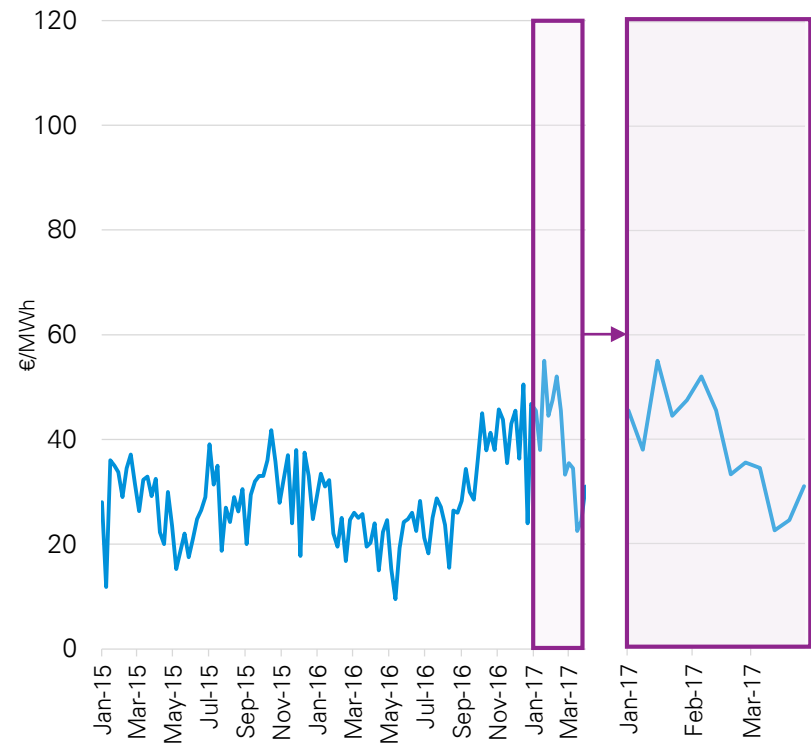
Electricity Price Evolution



Base Load



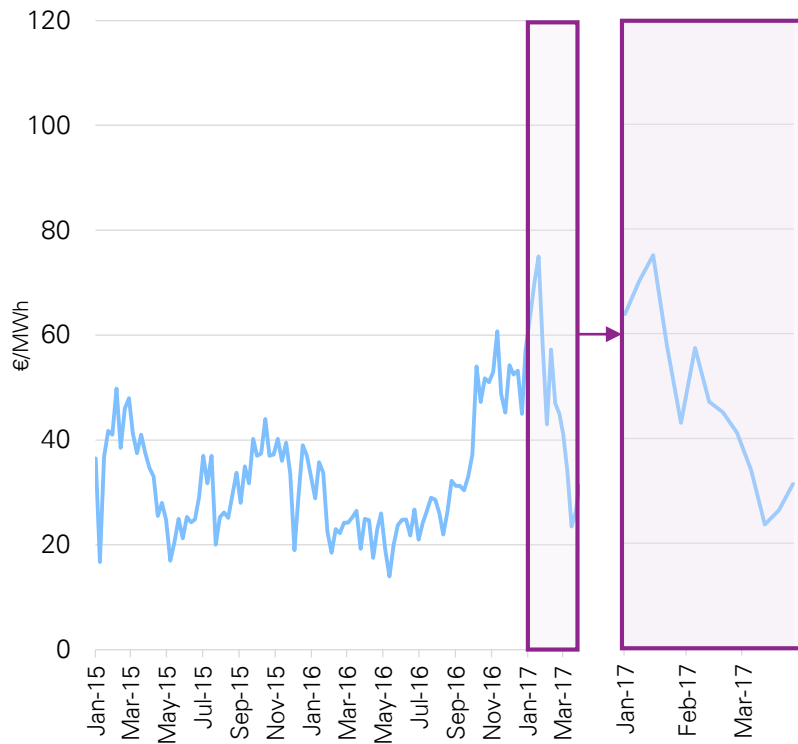
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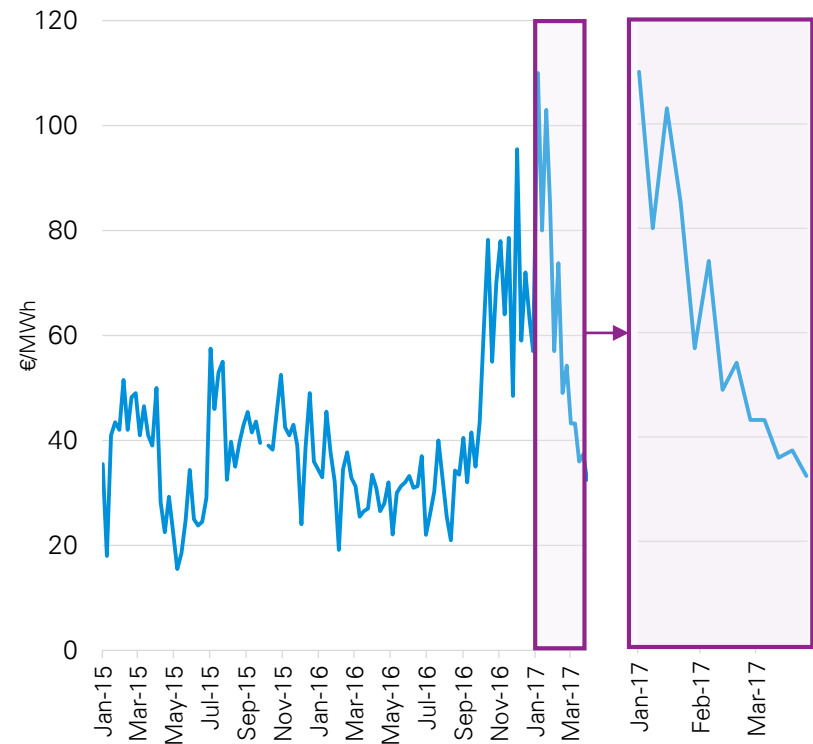
Electricity Price Evolution



Base Load



Peak Load



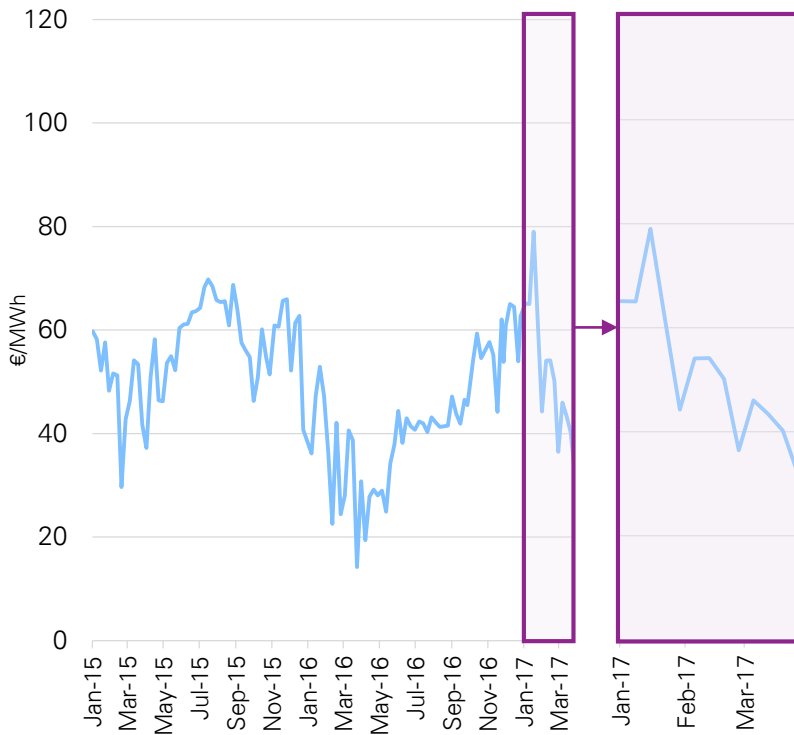
Source: Bloomberg; 2017.

Electricity Price Evolution

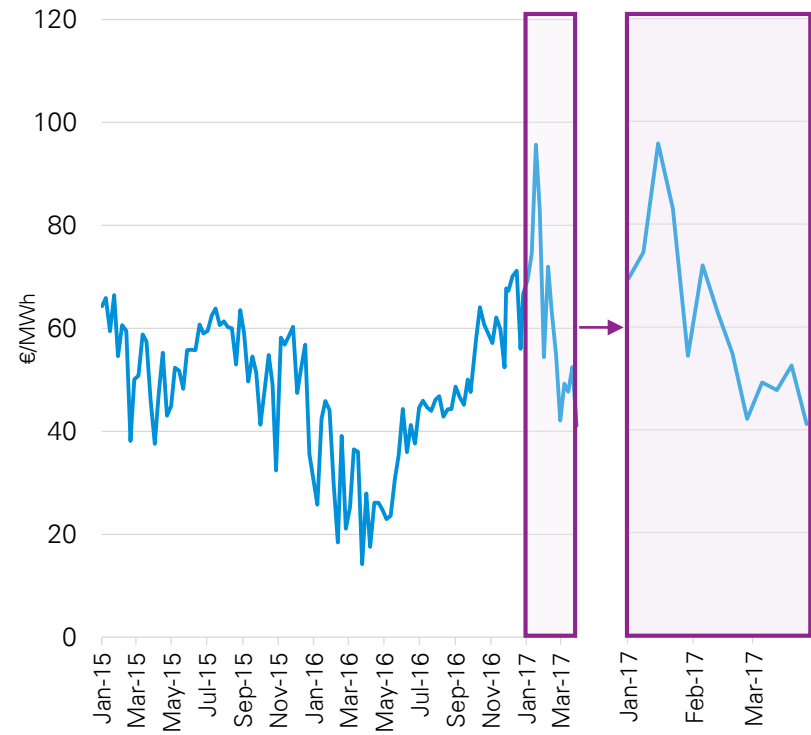
Spain



Base Load



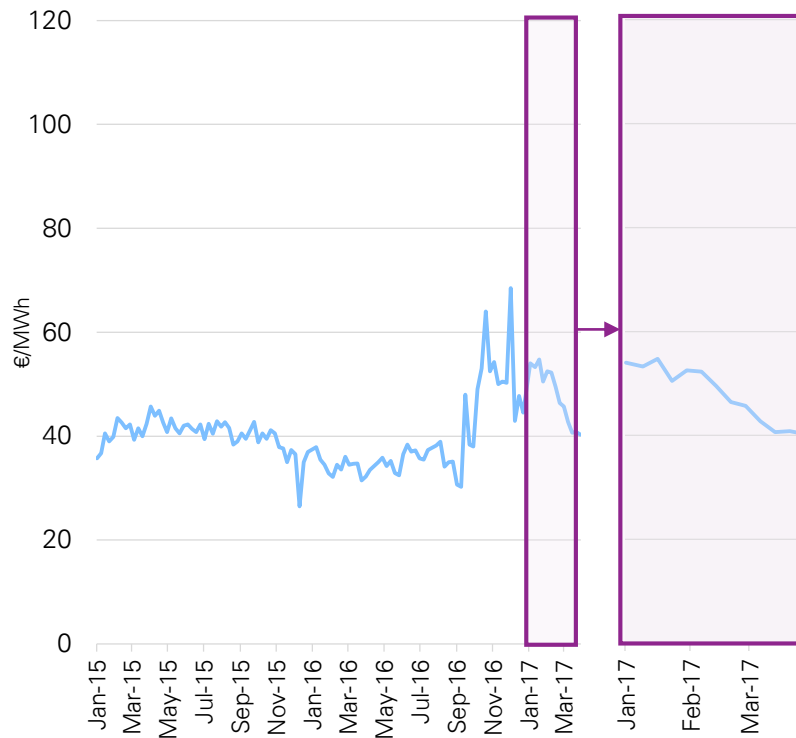
Peak Load



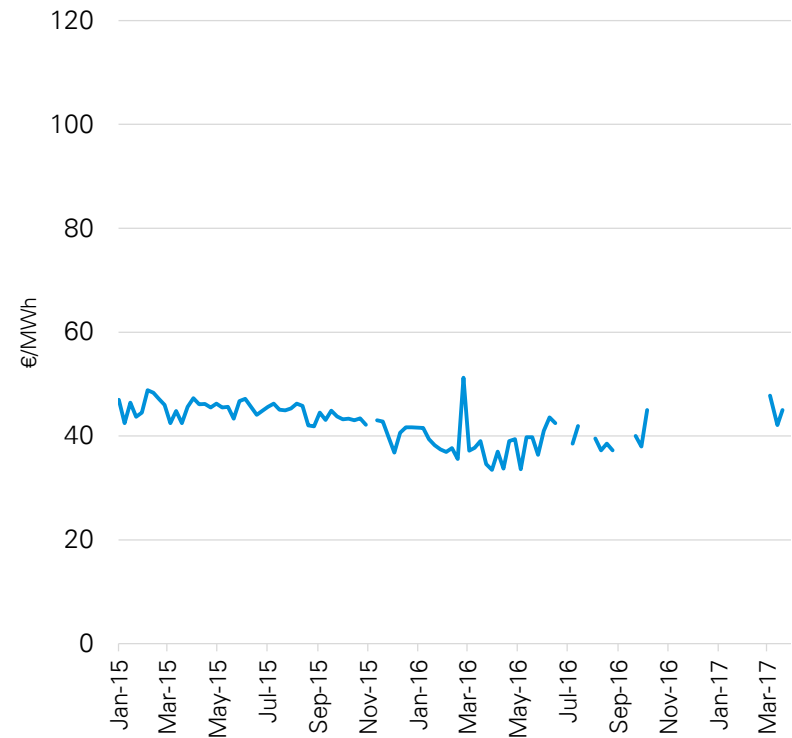
Electricity Price Evolution



Base Load



Peak Load



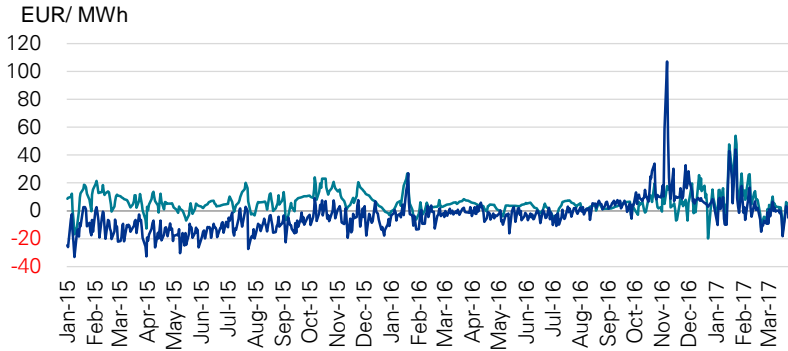
¹ Due to lack of information, the line reflecting peak load prices in 2016 and 2017 is incomplete.

Source: Bloomberg; 2017.

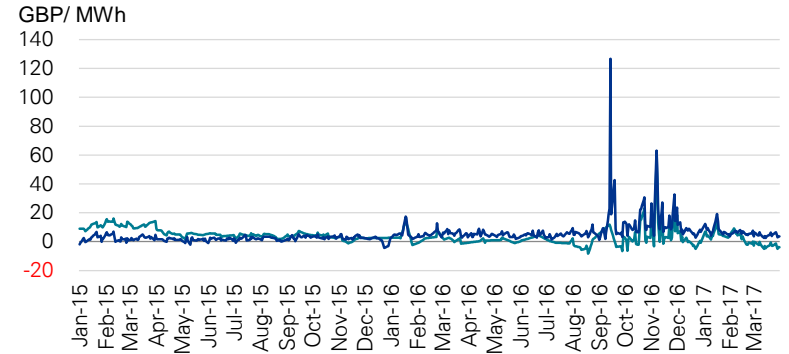
Clean Dark and Spark Spreads



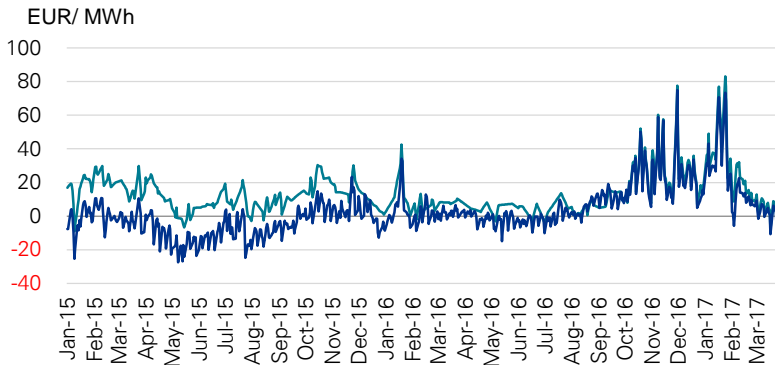
Germany



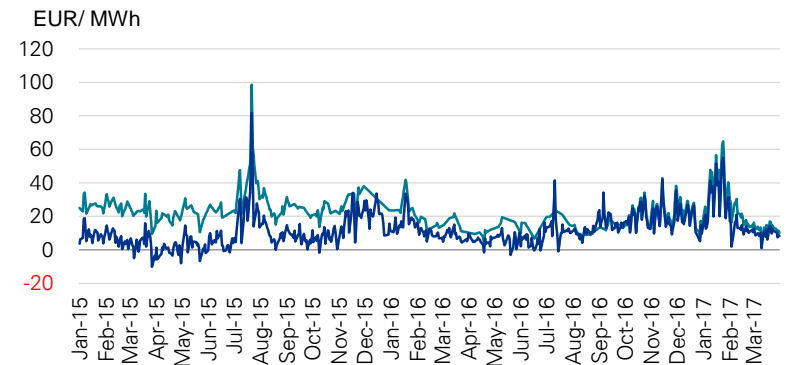
United Kingdom



France



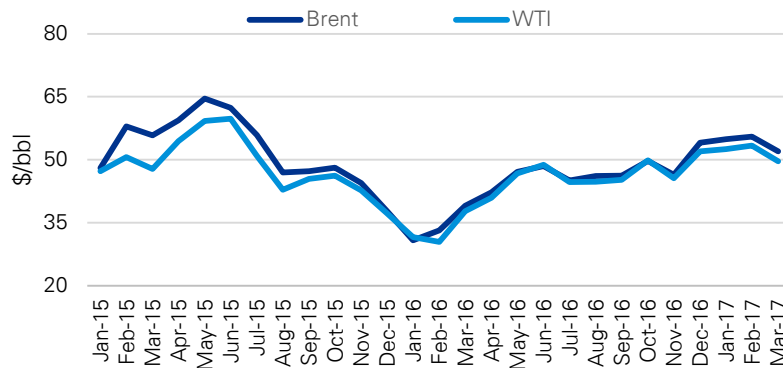
Italy



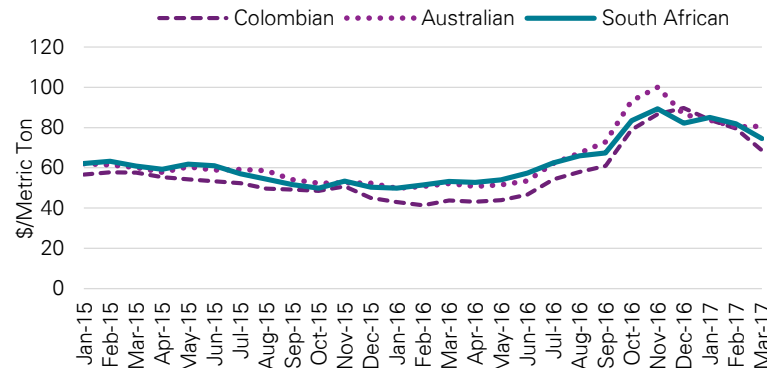
Source: Bloomberg; 2017.

Fuel Price Evolution

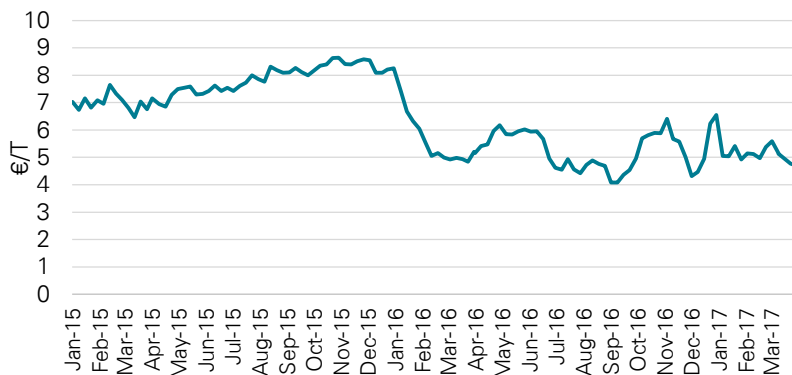
Crude oil



Coal

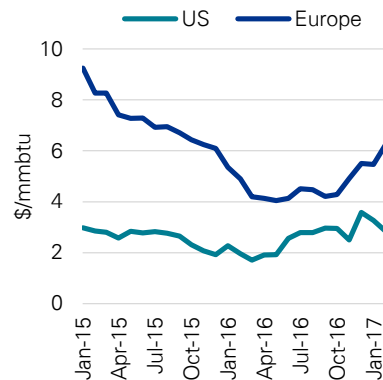


Carbon price – EU ETS

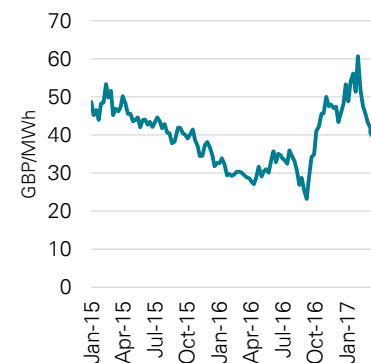


Gas prices

US (H.Hub) and EU (border)



NBP



Regulatory Overview

European Union	The European Commission published a good practices guidance to support the implementation of the Energy Efficiency Directive (cost-effective introduction of individual metering and billing in buildings).
France	The CRE has approved on December 6, 2016 the formula for the power capacity auction in 2017.
Germany	The renewable energies act (EEG) and the wind energy at sea act have come into force and effect both bills have implemented tariff auctions as an instrument for the financial support of renewable energies.
Italy	Energy regulator published the guidelines for the transition period to regulate power imbalances to the organic regime solution, enabling a first state of compliance to the future European electricity regulation
Netherlands	Starting in 2018, the energy market will provide a new option to consumers in the form of the choice of different energy suppliers at one location.
Portugal	The Energy Services Regulatory Authority approved in January the electricity regulated tariffs and prices for 2017, in accordance with the Tariff Regulation for the electricity sector.
Spain	Update of remuneration parameters for existing renewable and cogeneration plants, to be applied during the regulatory semiperiod starting on January 1st 2017.
Turkey	Ministry of Economy issued an anti-dumping measure against China-based PV manufacturers.
United Kingdom	The year-ahead auction to ensure available capacity throughout winter 2017/18 resulted in 54.4GW of capacity securing contracts at £6.95/kW/year.
United States of America	The Federal Energy Regulatory Commission has published a Notice of Proposed Rulemaking to uplift cost allocation and transparency in markets operated by regional transmission organizations and independent system operators.

Links to New Key Regulation



News

A Proposal for a decision of the European Parliament and of the Council on establishing an information exchange mechanism with regard to intergovernmental agreements and non-binding instruments between Member States and third countries in the field of energy was approved and its rules adopted.

[Link I](#)



Approval by the European Nuclear Safety Regulators Group (ENSREG) of the reference documents necessary to launch the topical peer review of the 'Ageing management of nuclear power plants'. This is the first in a series of peer reviews into nuclear safety in Europe that will take place every six years, in accordance with the EU's revised Nuclear Safety Directive

[Link II](#)

The European Commission has published a good practices guidance to help implement the EU's Energy Efficiency Directive, aimed at the cost-effective introduction of individual metering and billing in buildings with multiple residents.

[Link III](#)



Roundtable meeting on cyber security in energy takes place in Rome and results in a Report with recommendations for the European Commission on a European Strategic Framework and potential future Legislative Acts for the energy sector

[Link IV](#)

Links to New Key Regulation



News

France



LNG: New regulated tariffs called « ATTM5 » for the use of the 3 regulated LNG terminal in France: Montoir-de-Bretagne, Fos Tonkin and Fos Cavaou. The new tariffs applies for the period 2017-2021 and reflect a decrease compared to the former tariff of around 6.50% for Montoir, 18.20% for Fos Tonkin & 18.60% for Fos Cavaou. These new tariffs introduce a possibility to book optional capacities in addition to the base offer in order to address the need for flexibility of the users.

[Link I](#)

Gas: As at March 31st, 2017, the average regulated tariff of gas in France has increased by 4.30% compared to December 31, 2016. This increase reflects higher prices on the wholesales spot market in Netherlands and the north of France (PEG Nord) which represents 77.60% of the price formula for the regulated tariff. This increase is mainly linked to a higher consumption of gas during the months of January and February due to the drop in temperatures in continental Europe.

[Link II](#)

Power Capacity mechanism: The CRE has approved on December 6, 2016 the formula for the power capacity auction in 2017. The price formula for the year of Delivery (Y) is set as the average spot price on the market between 01/01Y-4 and 31/12/Y-1. For 2017 the price was set at 10€/kW

[Link III](#)

Power transport: On January 19, 2017 the CRE confirmed its decision to maintain its ruling of November 16, 2016 regarding TURPE 5 (regulated transport and distribution tariff for electricity) despite the injunction sent by the French Minister of environment. The TURPE 5 will replace TURPE 4 regulation by August 1st, 2017 and lead to an increase of 2.71% compared to TURPE 4 tariff.

[Link IV](#)

[Link V](#)

Links to New Key Regulation



News

Germany



On January 1st, 2017 the renewable energies act (EEG) and the wind energy at sea act have come into force and effect. Both bills have implemented tariff auctions as an instrument for the financial support of renewable energies. Although being passed by the parliament in July 2016 both bills have already undergone a first amendment with effect as of December 27th, 2016. The Amendment in particular modifies the rules on self supply with electricity which is partly a wholly relieved from the EEG-Surcharge.

[Link I](#)

On February 3rd, 2017 the rules on usage of public roads for energy grids have been amended, bringing more clarity regarding the rules of procurement. In case the DSO will be replaced following procurement the new DSO must now pay the capitalized earnings value for the transfer of the grid. The existing DSO must get access to comprehensive information and procedural breaches must be notified within fixed.

[Link II](#)

Only the one year following the latest revision of the law on combined power and heat (KWKG) the law has been largely modified as of now CPH-Plants with an installed capacity between 1 and 50 megawatts have to apply for public subsidies by way of auctions. The rules for relief from CPH-Surcharge in favor of businesses with high-electricity costs will be adapted to the scheme as implemented under the EEG.

[Link III](#)

Links to New Key Regulation



News

Germany



The rules on grid charges are going to be modified by the Grid Charge Modification Act. The draft of the federal government was subject to public consultation in the parliament on March 23rd, 2017. It is envisaged to successively abolish the so called remuneration for avoided grid charges which is paid to the decentralized power plants such as CPH-Plants. The costs for these charges have summed up to approx. 700 Million Euro per year.

[Link IV](#)

As a consequence of the roll out of smart metering implemented by the law on metering point operation, the federal grid agency had to revise the procedural rule on the working level (change of supplier, transfer of metering responsibility, transfer of contract etc.). These rules have been determined on December 20th, 2016 and will be complemented by mandatory standard contracts in the course of this year. The law on metering point operation also introduced the new energy market role of the metering point operator with further impacts on the unbundling rules.

[Link V](#)

The first offshore wind auction in the transition phase for existing projects has taken place and brought amazing results. The agency selected four projects with a combined capacity of 1.490MW, including EnBW's 900MW He Dreiht, and DONG's Borkum Riffgrund II West, Gode Wind 3, and OWP West offshore wind farm. The average award price was 0.44 Euro cents per kWh, and the highest price accepted was 6.00 Euro cents per kWh. All four projects are in the North Sea.

[Link VI](#)

Links to New Key Regulation



News

Italy



Italian Energy regulator (AEEGSI) published the guidelines for the transition period to regulate power imbalances to the organic regime solution (based on nodal prices), enabling a first state of compliance to the future European electricity regulation

[Link I](#)

AEEGSI has published a consultation document (230/2017/R/gas) to describe the guidelines to manage and send to the Integrated Information System all measures of counters. It provides:

- Centralizing of measurement data
- Aggregation of all measures useful for settlement

[Link II](#)

A new act of AEEGSI initiates a process for regulating the technical quality of the water service, identifying a system of functional indicators to measure the infrastructural and operational criticalities of the system

[Link III](#)

Definition of the economic conditions applied in the "SIMILAR PROTECTION" market (new reform about market mechanisms for price protection for customers of electricity, similar to free market system)

[Link IV \(a\)](#)

[Link IV \(b\)](#)

Links to New Key Regulation



Netherlands



News

On March 15th, 2017 the Dutch Parliamentary Elections were held. The results include a clear win for Mark Rutte and his People's Party (VVD). Following first coalition discussions, a stable government with the People's Party Christian Democrats, D66 liberals and left wing green party Groenlinks could form a coalition. An alternative coalition would consist of Christian party Christenunie instead of Groenlinks. It is the expectation that in both possible coalitions the existing roadmap (the 'Energieakkoord') will continue to be rolled out, among others with a focus on increasing renewable capacity in the coming years. A prominent point of dispute would then be the closing of the existing coal fired power plants, which is enforced by Groenlinks and D66 and which is rejected by VVD and CDA.

The debate on coal fired power plants is a continuation of the existing discussions on this topic. On the one hand the current Secretary of State Sharon Dijksma aims to close the last five coal fired power plants in order to reduce the emission of CO₂, whereas Minister of Economic Affairs Henk Kamp disagrees because the climate targets of 2020 can be met without closure.

Coalition is expected to be formed in Q2/Q3 2017

[Link I](#)

Starting in 2018, the energy market will provide a new option to consumers in the form of the choice of different energy suppliers at one location (e.g, one for electricity/gas use and one for supplying energy generated by solar panels). The decision to introduce this was made by the ACM, the Dutch consumer & market authority, in response to the demand for this from the sector. The ACM guides the process and acts as a regulator to promote sustainable competition and to help grid operators break even on their investment.

[Link II](#)

Links to New Key Regulation



News

Netherlands



On December 12th, 2016 the Dutch Minister of Economic Affairs announced that Blauwwind II, a consortium of Eneco, Diamond Generation Europe, Shell and Van Oord is the winner of the tender and subsidy and permits for Borssele Wind Farm Sites III & IV (in total 680 MW). The winning bid is 5.45 euro cents per kilowatt-hour. For this tender a subsidy of just 0.3 billion euros is expected instead of the expected 5 billion euros. In the coming three years another 2.1 GW of offshore capacity is being tendered by the Dutch government.

[Link III](#)

Links to New Key Regulation



News

Portugal



In January, the Energy Services Regulatory Authority, approved the electricity regulated tariffs and prices for the year 2017, in accordance with the Tariff Regulation for the electricity sector.

[Link I](#)

During the first quarter, the Portuguese Government, issued the Ordinance 11/2017 of January 9th, which approved the list of buildings for the evaluation of Real State Tax (define the list of urban buildings to which it applies the "cost method plus the land value", which includes power generation plants, dams, electricity transformation facilities and gas production, storage and transport facilities)

[Link II](#)

The Environmental Fund's strategic guidelines, as well as the definition of the annual plan for the allocation of grants and use of revenues, were determined in an Order issued by the Ministry of the Environment. This Order may be revised during 2017 if the budget execution has significant deviations compared to expected revenues.

[Link III](#)

In January, the Portuguese Government, issued the Ordinance 20/2017 that establishes the tariff applicable to the electricity produced by small renewables generation units, sold to the grid.

[Link IV](#)

Links to New Key Regulation



News

Portugal



In January, the Energy Services Regulatory Authority issued the Directive 2/2017, that establishes the energy distribution loss' profiles, consumption profiles, production profiles and self-consumption profiles applicable in 2017.

[Link V](#)

During the first quarter, the deadline for the extinction of regulated tariffs for final customers of electricity, was extended from December 31st, 2017 to December 31st, 2020.

[Link VI](#)

Ordinance 69/2017 of February 17th, approved the duty of deduction by the Last Resort Supplier of the National Electric System, of the electricity produced in the special regime that benefits guaranteed compensation, of the amounts received by power generation centers that cumulatively benefited from support for the promotion and development of renewable energy through other public support.

[Link VII](#)

During the last month, the Portuguese Government approved the Decree-Law 25/2017, that establishes the execution rules for 2017 State Budget. These rules relate to the management of the State treasury, the provision of information by the different sub-sectors and budget consolidation.

[Link VIII](#)

Links to New Key Regulation



News

Portugal



In the first quarter, a set of legislation was issued focused on the establishment of the compensation, rules and auction of the Security Reserve for the year 2017, provided to the National Electric System through availability services provided by electric power producers and other market agents.

[Link IX](#)
[Link X](#)
[Link XI](#)
[Link XII](#)
[Link XIII](#)

During the first quarter, the Government approved the legal regime applicable the Logistics Operator activity applicable to the activity of electricity and gas, was approved by the Government.

[Link XIV](#)

Links to New Key Regulation



News

Spain



Order ETU/78/2017, published by the Ministry of Energy, Tourism and Digital Agenda (MINETAD), that regulates certain aspects relative to the Extraction Value Tax for Gas. Fuel and Condensates and to the perimeters of reference for the determination of payments to suprajacent land owners to concessions for the exploitation of hydrocarbon deposits.

[Link I](#)

Order ETU/130/2017 by the Ministry of Energy, Tourism and Digital Agenda (MINETAD) updates the remuneration parameters for existing electricity production plants based on renewable energy sources, cogeneration and residues, for their application during the regulatory semiperiod starting on January 1st, 2017.

[Link II](#)

Order ETU/258/2017, published by the MINETAD, that establishes the obligatory contributions to the National Fund for the Energy Efficiency for the calendar year 2017.

[Link III](#)

The natural gas regulated tariff for 2017 has been published by the Directorate General for Energy Policy and Mines. It results in an average increase of 1.8% with respect to the previous quarter of 2017.

[Link IV](#)

The CNMC has published a Notice regulating the procedures for constituting, managing, and distributing the compensatory payment fund of the biofuels and other renewable fuels use incentive mechanism for transportation.

[Link IV](#)

Links to New Key Regulation



News

Spain

Another Notice by the CNMC regulates the application for information, the procedure for liquidation, billing and payment of the retributive regime specific to electricity production plants from renewable energy sources, cogeneration, and residues.

[Link VI](#)

Sanction by the CNMC to EDP Energía S.A.U. for penalizing clients for switching to another energy provider, This is considered a serious infringement of the Law of the Electricity Sector, in its measures for the protection of consumers.

[Link VII](#)

Links to New Key Regulation



News

Turkey



The first utility-scale, renewable energy resource areas (RERA) tender took place on March 20th, 2017 for 1,000MW capacity and the consortium of South Korean Hanwha Q Cells and Turkish Kalyon Energy offered the winning bid of **69.9 USD/MWh**. This feed-in-tariff will be applicable for 15 years.

RERA regulation was announced in order to incentivize utility scale solar and wind projects with local manufacturing. For solar, a PV module production facility, with a capacity of 500 MWp per year, and an R&D center will have to be built.

[Link I](#)

Ministry of Economy issued an anti-dumping measure against China-based PV manufacturers. Most of the leading manufacturers are subject to an anti-dumping fee of 20 USD/m², while others are subject to 25 USD/m². The imposed anti-dumping fee will increase the PV module's cost by ~30%.

[Link II](#)

General Electric, Borusan EnBW Energy, Fina Energy and Özgül Energy signed an MoU to collaborate in the installation, operation and financing for utility-scale wind RERA projects.

[Link III](#)

Links to New Key Regulation



News

General Election called for June 8th, 2017

- Theresa May announced on April 18th that a snap general election would take place on June 8th, 2017, rather than in 2020 as initially scheduled.
- The Conservatives currently maintain a significant lead in opinion polls, and are expected to win a larger outright majority than currently exists – no major changes to UK energy and climate change policy are expected if they win.

[Link I](#)

Brexit and the impact on the energy market: Article 50 has now been triggered – March 29th, 2017

- Article 50 was triggered on March 29th, 2017.
- The Prime Minister has confirmed the Britain will no longer be a part of the Single Market, which is likely to result in an exit from the Internal Energy Market.
- The UK Government's position is that it will now need to negotiate a new Free Trade Agreement (FTA) to ensure that harmonised tariff-free trading of gas and electricity can continue.
- Government acknowledges that it may not be possible for the UK to retain full membership and voting rights of the various organisations that set the rules for how these trades occur, for bodies which include ACER (the organisation that brings together energy regulators from across the EU), ENTSO(E) and ENTSO(G), which govern the EU network codes for electricity and gas respectively.
- Any new FTA is very likely to take more than 2 years to negotiate, given the timescales of completing FTAs between the EU and other nations. Moreover, no serious negotiations are likely to start until the end of this calendar year, once the outcome of the French and German elections are known, so some transitional arrangements may be needed.

[Link II](#)

Carbon tax pricing delayed in Spring Budget

- The carbon tax, which was originally due to keep rising until 2030, has been frozen at 2015-16 levels until 2020-21 but the price after 2020-21 remains unclear.
- The Government said that it will target a 'total carbon price' in 2021-22 considering the EU Emissions Trading Scheme and the UK's Carbon Price Floor. Further details on expected carbon price trajectories for the 2020s are to be set out in the 2017 Autumn Budget.

[Link III](#)



Links to New Key Regulation



News

UK Government's Department for Business, Energy and Industrial Strategy (BEIS) published a Green Paper highlighting ten pillars they see as important in driving forward industry for the country's economy – January 23rd, 2017

- Key themes included the need to focus on STEM (Science, Technology, Engineering and Mathematics) skills, business innovation, trade in the post-Brexit economy, improved infrastructure, ultimately leading to growth in the UK economy.
- "Delivering affordable energy and clean growth" was specifically highlighted as one of the 10 pillars that the department would use as a framework when developing policy.
- KPMG responded to the Green Paper, in support of the broad concept of focussing on horizontal industrial 'enablers' (such as skills or infrastructure), while emphasising the need to underpin this strategy with effective tax and regulatory frameworks.

[Link IV](#)

The second allocation round promoting investment into renewable technologies (Contract for Differences) is underway – March 13th, 2017

- The Budget Notice setting out the details for renewable energy subsidy auction was released in March 2017; eligible projects can compete for the previously announced budget of £290m, for each of the delivery years 2021/22 and 2022/23.
- The Application Window is now open for bidders, with sealed bids due in Q2.

[Link V](#)

The year-ahead auction to ensure available capacity throughout winter 2017/18 resulted in 54.4GW of capacity securing contracts at £6.95/kW/year. much lower then the results for the 4-year-ahead auction for delivery starting in 2020/21 – February 3rd, 2017

The low clearing price was driven by the following factors:

- 4GW of existing Interconnector capacity was able to participate;
- 4GW of large scale conventional generation that was previously expected to close (i.e. was unable to secure CM agreements for 2014, 2015 and 2016 auctions – such as Eggborough, Corby, Peterborough, Brigg etc.) instead remain operational and secured agreements;
- 1GW of small sized flexible capacity has delivered on their agreements earlier than required under their 4-year-ahead capacity market contracts.

The security of supply outlook is now heavily dependent on old coal plants and interconnectors delivering capacity to the GB market at times of system stress.

[Link VI](#)



Links to New Key Regulation



News

Transitional Capacity Market Auction 2017 – March 22nd, 2017

- Provisional contracts of over 312MW of demand side response (DSR) capacity were awarded contracts at a clearing price of £45/kw per year, much higher than that expected by some auction participants.
- A total of 32 contracts were awarded to 10 bidders, with DSR specialist EnerNOC UK winning 100MW of DSR contracts, de-rated to 87MW.

[Link VII](#)

Targeted Charging Review (TCR) consultation published to consider potential reforms to how generators are charged – March 13th, 2017

- Ofgem has published a TCR consultation focusing on (i) residual charges; (ii) smaller embedded generation benefits; and (iii) charging arrangements for storage. Ofgem currently believe the current charging methodology is not cost reflective and is creating a number of market distortions. Ofgem is proposing to change:
 - Transmission Network Use of System (TNUoS) and Distribution Use of System (DUoS) residual charges;
 - Embedded benefits for smaller embedded generation; and
 - Transmission and distribution residual charges and Balancing Services Use of System (BSUoS) charges for storage.

Responses to the TCR consultation are due on May 5th, 2017.

Diesel generators in particular are facing significant uncertainty due to a number of government consultations:

1. Air Quality Consultation – all generators, from January 1st, 2019, could be required to meet the new pollution MCPD (Medium Combustion Plant Directive) standards, and will need a permit to operate, with the overarching objective being to tackle “air pollution” and “protect air quality” – diesel plants will not meet the stringent requirements.
2. Embedded Benefits review – the Government has issued a minded-to decision, proposing to significantly reduce the payments that embedded generators currently receive. Responses to the minded-to decision are due on the April 18th, 2017.

[Link VIII](#)

Links to New Key Regulation



News

U.S.A.



The Federal Energy Regulatory Commission has published a Notice of Proposed Rulemaking to uplift cost allocation and transparency in markets operated by regional transmission organizations and independent system operators

[Link I](#)

FERC staff published a Notice to convene a technical conference to discuss opportunities for increasing real-time and day-ahead market efficiency through improved software starting June 26th, 2017

[Link II](#)

FERC staff issues new guidance manual for environmental report preparation

[Link III \(a\)](#)

[Link III \(b\)](#)

FERC convenes workshop on effectiveness of two-year hydro pilot process

[Link IV](#)

FERC issues Policy Statement on cost recovery by electric storage resources

[Link VI](#)

FERC proposes reforms to uplift cost allocation and transparency

[Link VII](#)

Capital Markets Overview

Eurostoxx Utilities	Eurostoxx Utilities index increased an average of 2.28% QoQ. The Index cumulates losses (-2.10%) in the last 12 months.
Best Performance	E.ON SE and Gas Natural registered the best performance in Q1 2017 in terms of share price, in a quarter where 10 out of the 19 European players have experienced a negative QoQ price evolution.
Valuation Levels	Valuation levels in the sector averaged at 7.5 EV/EBITDA in Q1 2017, up from x6.6 in the previous quarter.
EBITDA Multiples	Wide differences persist in EBITDA multiples, with Snam S.p.A., National Grid and Enagas reaching highest values, trading above x12 EV/EBITDA.
Net Debt Levels	Net debt levels remained stable at 3.16 x EBITDA in Q1 2017, very close to the figure registered in Q4 2016 (3.05 x EBITDA).
Credit Ratings	The only change in credit ratings in the European sector during the Quarter was the downgrade of E.ON SE by S&P and Moody's to BBB and (P)Baa2 respectively.

Share Price Evolution: Overview

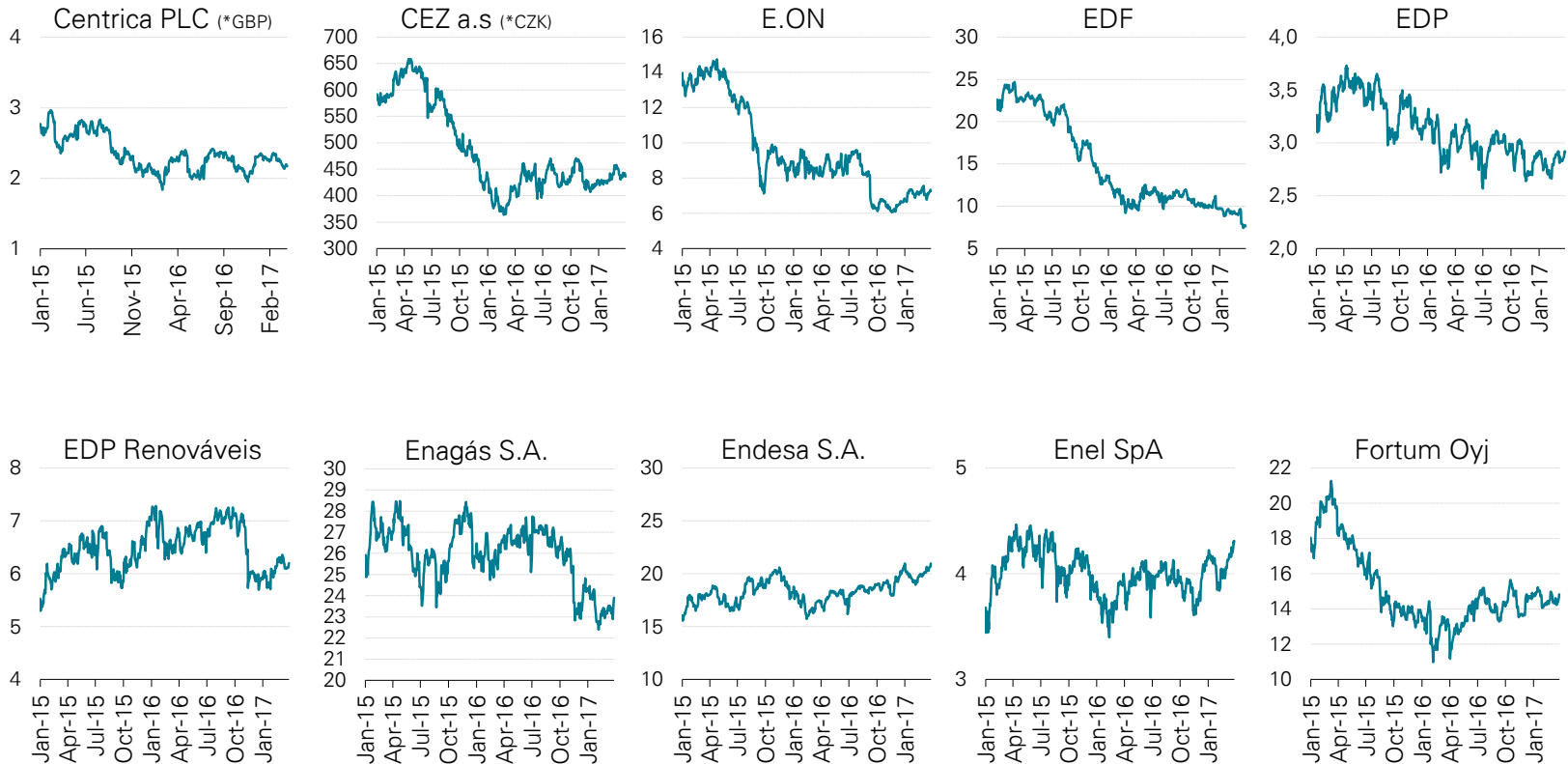
Company	Q3 2014	Q4 2014	Q1 2015	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Last Quarter Q1 2017/ Q4 2016 ▼	Last Year Q1 2017/ Q1 2016 ▼
Centrica plc (*GBP)	3.15	2.9	2.65	2.69	2.54	2.21	2.11	2.16	2.33	2.15	2.26	5.15%	7.14%
CEZ as (*CZK)	607.16	606.78	600.33	624.53	557.01	467.82	391.38	428.52	436.75	435.84	435.62	-0.05%	11.30%
E.ON SE	14.25	13.77	13.61	13.58	10.6	9	8.62	8.65	8.33	6.45	7.14	10.64%	-17.22%
EDF	24.23	22.06	23.12	22.11	19.52	15.19	10.94	11.29	11.22	10.12	8.85	-12.53%	-19.09%
EDP	3.46	3.29	3.39	3.54	3.3	3.27	3.01	2.97	2.97	2.84	2.84	-0.11%	-5.75%
EDP Renováveis	5.35	5.26	5.95	6.48	6.3	6.46	6.72	6.72	7.04	6.31	6.13	-2.87%	-8.80%
Enagás SA	24.7	25.94	26.78	26.66	25.16	27.1	25.88	26.7	26.82	24.61	23.43	-4.79%	-9.46%
Endesa SA	28.51	19.76	17.29	17.56	18.57	19.45	17.05	17.76	18.54	19.24	20.04	4.13%	17.51%
Enel SpA	4.12	3.8	3.96	4.28	4.12	4.06	3.72	3.93	3.99	3.88	4.10	5.79%	10.34%
ENGIE SA (GDF Suez S.A.)	19.37	18.95	18.9	18.25	16.36	15.85	14.19	13.79	14.41	12.4	11.88	-4.22%	-16.30%
Fortum Oyj	19.27	18.57	19.4	17.61	15.24	13.79	12.88	13.14	14.26	14.48	14.59	0.77%	13.29%
Gas Natural SDG SA	22.92	22.06	20.7	21.84	19.11	19.46	17	17.49	18.31	17.19	18.32	6.59%	7.78%
Iberdrola SA	5.51	5.59	5.91	6.14	6.13	6.43	6.13	5.99	5.98	5.93	6.17	3.97%	0.58%
National Grid plc (*GBP)	8.75	9.09	8.99	8.84	8.54	9.23	9.58	9.9	10.82	9.83	9.63	-2.06%	0.50%
REE¹	63.83	69.69	74.06	75.75	72.12	78.82	73.94	77.88	19.811	17.82	17.21	-3.44%	-6.91%²
RWE AG	30.53	27.62	23.97	22.1	15.78	11.81	11.28	12.21	15.06	12.7	13.28	4.56%	17.72%
Snam SpA	4.38	4.12	4.32	4.56	4.45	4.71	5.02	5.21	5.06	4.09	3.81	-6.86%	-24.12%
SSE Plc (*GBP)	15.06	15.79	15.5	16	15.08	14.98	14.26	15.1	15.5	15.23	15.19	-0.27%	6.51%
Eurostoxx Utilities	288.6	280.3	292.9	291.9	269.1	264	249.28	251.42	255.19	238.6	244.04	2.28%	-2.10%

¹ On July 11 REE executed a 4-to-1 stock split. Values in Q3 2016 reflect that split.

Source: Bloomberg; 2017.

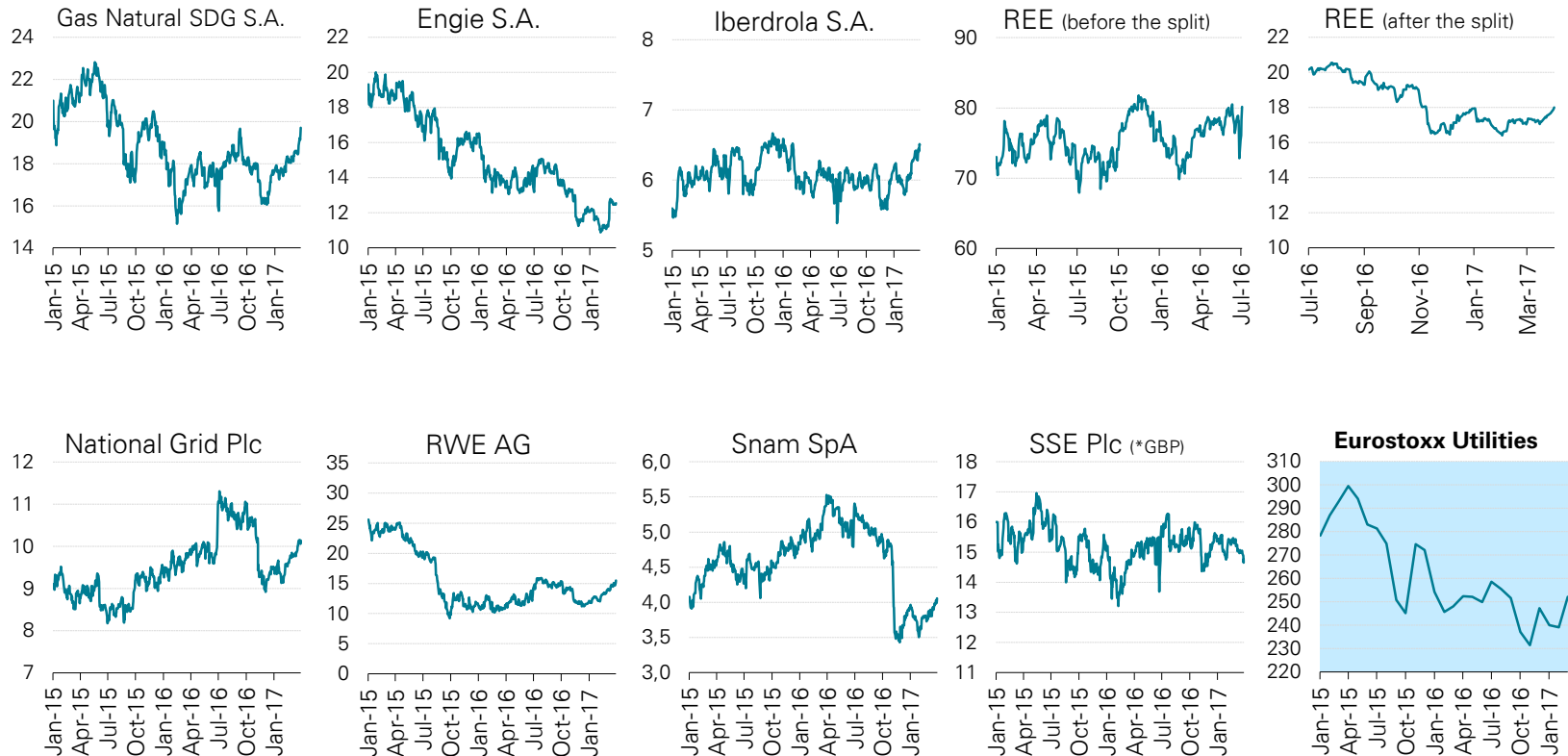
² Percentages are calculated assuming a Q1 2017 average stock value of 68.83. Otherwise due to the 4-to-1 stock split the percentage would not reflect the real evolution of the value.

Share Price Evolution: Individual Stocks (1)



Source: Bloomberg; 2017.

Share Price Evolution: Individual Stocks (2)



Source: Bloomberg; 2017.

Relative Valuation per Company

	TEV (as of Mar 31) / EBITDA (LTM) ▼	TEV (EUR mill.) (as of Mar 31)	Market Capitalization (EUR mill.) (as of Mar 31)
Snam S.p.A.	12.9	25,124.2	14,070.2
National Grid plc	12.3	81,244.3	44,526.3
Enagás. S.A.	12.2	10,831.2	5,813.2
Fortum Oyj	11.7	13,449.5	13,174.5
Iberdrola. S.A.	10.2	74,962.7	42,300.3
EDP - Energias de Portugal. S.A.	10	33,082.5	11,539.5
Red Eléctrica Corporación. S.A.	10	14,843.3	9,704.0
EDP Renováveis. S.A.	9.6	10,907.0	6,046.0
Gas Natural SDG. S.A.	9.1	40,920.7	20,538.7
Endesa. S.A.	8.2	28,350.3	23,324.3
SSE plc	7.9	25,841.0	17,445.9
Centrica plc	7.6	19,391.1	13,934.4
RWE Aktiengesellschaft	7.4	17,641.4	9,380.4
Enel SpA	7	105,580.7	44,875.7
CEZ. a. s.	6.4	14,108.6	8,757.4
ENGIE SA	6.2	64,338.3	31,842.3
Electricite de France SA	4.1	64,631.6	21,620.6
E.ON SE	3.9	25,077.3	15,954.3
	Weighted average: 7.5	670,325.70	354.848

Source: S&P Capital IQ; 2017

Leverage and Credit Ratings

	LTM Net Debt/ EBITDA ▼	Rating S&P	S&P Financial Update	Rating Moody's	Date	Rating Fitch	Date
Enagás. S.A.	5.92	A-	Feb 24-17	Baa2	Dec 20-16	A-	Oct 26-16
Snam S.p.A.	5.67	BBB	Abr 08-17	Baa1	Dec 12-16	BBB+	Oct 26-16
National Grid plc	5.61	A-	Nov 12-16	Baa1	Dec 13-13	BBB	Mar 06-17
EDP - Energias de Portugal. S.A.	5.17	BB+	Mar 17-17	Baa3	Apr 03-17	BBB-	Mar 22-17
Iberdrola. S.A.	4.02	BBB+	Feb 28-17	Baa1	Apr 25-16	BBB+	Oct 26-16
EDP Renováveis. S.A.	3.62	-	Mar 02-17	-	-	-	-
Gas Natural SDG. S.A.	3.62	BBB	Feb 19-17	Baa2	Feb 13-16	BBB+	Mar 22-17
Red Eléctrica Corporación. S.A.	3.45	A-	Mar 02-17	-	-	A	Oct 26-16
Enel SpA	2.81	BBB	Mar 22-17	Baa2	Dec 12-16	BBB+	Oct 26-16
SSE plc	2.78	A-	Nov 11-16	A3	Oct 03-16	BBB+	Mar 22-17
ENGIE SA	2.76	A-	Mar 05-17	A2	Apr 27-16	-	-
Electricité de France S.A.	2.37	A-	Feb 16-17	A3	Sep 28-16	A-	Oct 26-16
CEZ. a. s.	2.26	A-	Mar 23-17	Baa1	Apr 06-16	A-	Mar 22-17
Centrica plc	2.17	BBB+	Mar 24-17	Baa1	May 13-16	A-	Mar 22-17
RWE Aktiengesellschaft	1.98	BBB-	Mar 25-17	Baa3	Nov 03-16	BBB	Apr 06-17
Endesa. S.A.	1.39	BBB	Mar 04-17	-	-	BBB+	Oct 26-16
E.ON SE	1.10	BBB	Mar 16-17	(P)Baa2	Mar 15-17	BBB+	Sep 21-16
Fortum Oyj	0.19	BBB+	Feb 19-17	Baa1	Feb 13-16	BBB+	Mar 22-17
Average:	3.16	Mode: A-		Baa1		BBB+	

Quarterly rating variation: Upgrade Unchanged Downgrade

Source: S&P Capital IQ / Moody's / Fitch; 2017.

Global M&A Overview

Main Trends	<p>The largest deals during Q1 2017 targeted mostly US companies (5 companies in the top 10). The total value of these deals amounted to 2,665 million €.</p>
Main Transactions	<p>Acquisition of SM Energy, a US-based operated assets producing around 27,000 barrels of oil equivalent per day by Venado Oil&Gas, LLC, (€766m)</p>
	<p>Sale of Cricket Valley Energy Center, LLC, a US-based operator of a natural gas-fired thermal power generation project to several buyers including the Development Bank of Japan Inc, and Blackrock Financial Management Inc, (€660m)</p>
	<p>Purchase of M5 Midstream, LLC, a US-based company focusing on the Development of midstream infrastructure by Trilantic Capital Partners, LLP and an Undisclosed bidder, (€554m)</p>
	<p>Acquisition of Stone Energy Corporation, a US-based natural gas field of Stone Energy Corporation by EQT Corporation, (€494m)</p>
	<p>Purchase of Varmevarden AB, a Sweden-based energy company engaged in production and distribution of heat by J.P. Morgan Asset Management, (€454m)</p>

Top-10 M&A Operations in Q1 2017 by Deal Value ⁽¹⁾

Announced Date	Target Company	Target Description	Target Country	Bidder Company	Bidder Country	Seller Company	Deal Value EUR(m)
03/01/2017	SM Energy (non-operated Eagle Ford Assets)	US-Based operated assets producing around 27,000 barrels of oil equivalent per day	USA	Venado Oil & Gas. LLC	USA	SM Energy	766
24/01/2017	Cricket Valley Energy Center, LLC	US-Based operator of a natural gas-fired thermal power generation project	USA	Development Bank of Japan Inc.; Teachers Insurance and Annuity Association of America; Blackrock Financial Management Inc.; Advanced Power AG; and others.	Switzerland; USA; Japan; South Korea		660
23/02/2017	M5 Midstream LLC	US-Based midstream Company focuses on the Development of midstream infrastructure	USA	Undisclosed bidder; Trilantic Capital Partners. LLP.	USA; Afghanistan; Angola; Albania; Algeria; Andorra; Antigua; Aruba. and others.		554
08/02/2017	Stone Energy Corporation (Appalachian assets)	US-Based natural gas field of Stone Energy Corporation	USA	EQT Corporation	USA		494
21/02/2017	Varmevar den AB	Sweden-Based energy company engaged in production and distribution of heat	Sweden	J.P. Morgan Asset Management	USA	Capstone Infrastructure Corp.; Macquarie European Infrastructure Fund	454

Source: Mergermarket; 2017.

Top-10 M&A Operations in Q1 2017 by Deal Value (2)

Announced Date	Target Company	Target Description	Target Country	Bidder Company	Bidder Country	Seller Company	Deal Value EUR(m)
04/01/2017	Geracao Paranapanema S.A. (33,33% Stake)	Brazil-Based company engaged in operating 10 hydroelectric facilities along the Paranapanema River and the Sapicaí-Mirim River	Brazil	Sino-Latin American Production Capacity Cooperation Investment Fund Co. Ltd.	China	China Three Gorges Corporation	383
17/01/2017	Seaway Heavy Lifting (50% Stake)	Netherlands-Based offshore contractor and operator of two world-class heavy lift vessels	Netherlands	Subsea 7 Inc.	Uk; Norway	K&C Baltic Offshore Limited	262
17/03/2017	Empresa Distribuidora de Energía Atlántica S.A.; Empresa Distribuidora La Plata S.A.	Argentina-Based company engaged in marketing and distribution of electricity; Argentina-Based company engaged in the distribution and sale of electricity	Argentina. Italy; Argentina	Desarrolladora Energética S.A.	Argentina	Disvol S.A.	242
28/03/2017	Crescent Companies. LLC	US-Based provider of oilfield services	USA	Rockwater Energy Solutions Inc.	USA	White Deer Energy LLC; Ken Davidson (Private Investor)	191
01/02/2017	SSM 1 Solar ULC; SSM 2 Solar ULC; SSM 4 Solar ULC	Canada-based holding company that operates a solar power plant in Sault Ste. Marie. Ontario	Canada	Fengate Capital Management Ltd.	Canada	Canadian Solar Inc.	183

Source: Mergermarket; 2017.

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