European Power&Utilities Report

KPMG Global Energy Institute
Europe, Middle East & Africa
—
Q1 2016

Overview last quarter evolution in EUR P&U sector

1 Prices and margins

- Baseload power prices in the UK and Spain have shown a downward trend, ending the quarter at 32 €/MWh and 14 €/MWh, respectively. In Germany and France have progressively recovered and ended the period at 30 €/MWh levels.
- Baseload / peakload differentials have widened in France and the UK, whereas in Germany and Spain differentials have narrowed.
- Brent prices reached minimum levels (30 USD/bbl) in January 2016 and have since rebounded, returning to 40 USD/bbl.
- Gas prices continued declining, with levels below 5 USD/MMBTU in Europe.
- Coal prices have slightly increased during Q1 2016.
- Carbon prices seem to stabilize at around 5 €/T.
- Gas margins (spark spreads) have returned to positive values both in Germany and France. Spreads in Italy peaked at 30 €/MWh in mid January but have then significantly decreased. In the UK margins have increased.
- Coal-fired margins (dark spreads) ended the quarter at 6 €/MWh in Germany, -1 €/MWh in the UK, 10€/MWh in Italy and 7 €/MWh in France.

2 Regulatory news

- The EC presented a new Energy Security Package including new rules on gas and a heating and cooling strategy
- EU countries agreed on a Commission proposal to invest €217 million in key trans-European energy infrastructure projects.
- Spain approved Royal Decree 56/2016 relating to energy efficiency and resolved the auction for new biomass and wind plants.
- France ruled the end of regulated gas and electricity tariffs for industry and decided to fix unilaterally a floor price for CO_2 equal to 30€/t.
- Italy approved the new procedures of gas storage capacity auctions, the reference tariffs for the distribution and metering of gas, a new regulation of the switching procedures and defined new specifications for smart meters
- In Germany, an aid for the support of renewable electricity was declared partially incompatible with the internal market. Germany approved new regulation for grid-based energy supply and incentive regulation for grids.
- The UK released Budget 2016 with several noteworthy announcements for P&U and responded to the first and released a second consultation of reforms to the capacity market. The Competition and Markets Authority reported back on its investigation into competition in the UK power sector.
- February 2016 witnessed the first US export of LNG in history

3 Capital markets

- Eurostoxx Utilities index declined 5,91% QoQ.
- Snam SpA, EDP Renováveis and National Grid plc have registered the best evolution on Q1 2016.
- Worst performers in the quarter included EDF and CEZ a.s.
- Valuation levels remain at 7,9 EV/EBITDA in Q1 2016.
- Net debt levels remained stable at 3,05 x EBITDA in Q1 2016.
- The only credit rating change in the quarter was a downgrade for RWE AG by Fitch

4 M&A

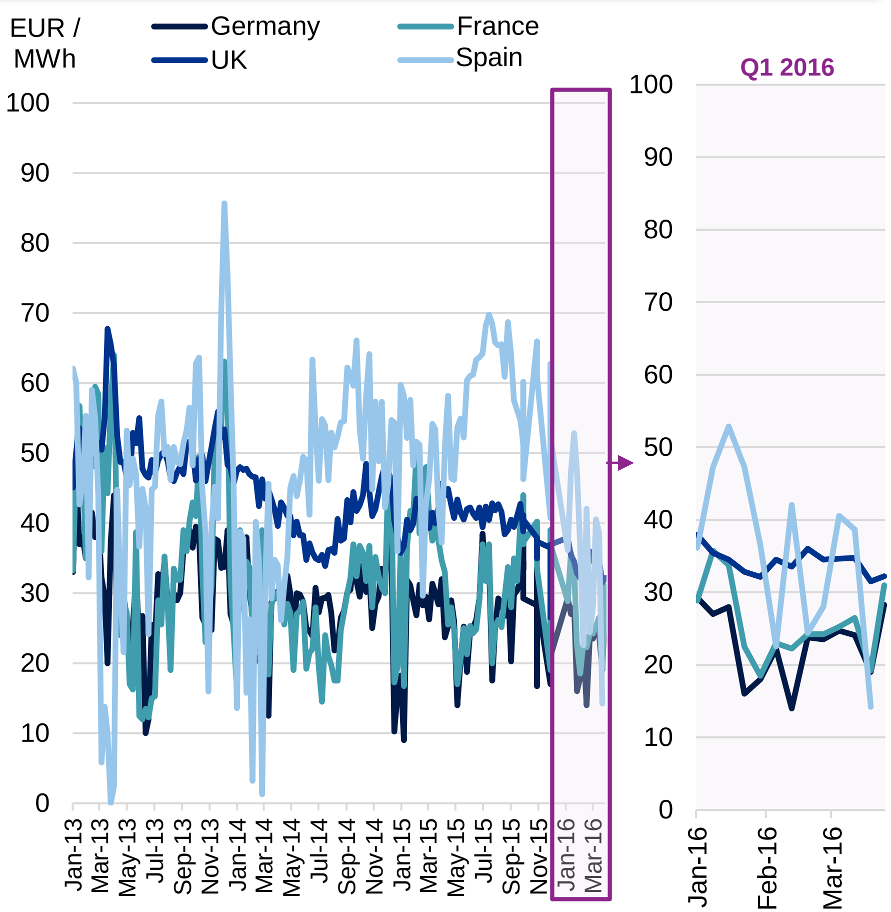
- Renewables (especially wind) and Oil&Gas concentrated most of the M&A activity during Q1 2016, with a quite broad geographical distribution ranging from the US, Canada and China to Spain, the Nordics and Eastern Europe.
- Largest deals have included:
  - The acquisition of Bora Wind Energy Management in Spain by Corporacion Masaveu, Korys and Exus Management Partners (€500m).
  - The purchase of a 11.93% stake of Lundin Petroleum AB by Norwegian Statoil ASA (€496m).
  - The acquisition of Rimrock Midstream, LLC by Warburg Pincus LLC (€454m).

Prices and Margins: Overview

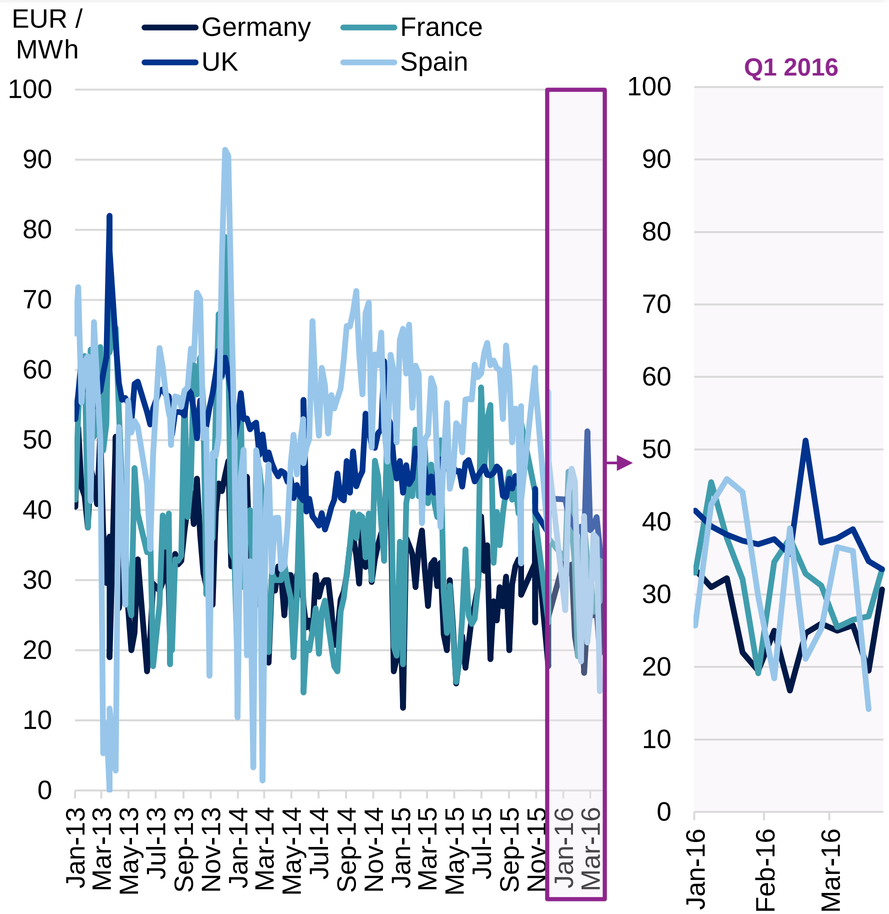
- Starting the quarter at 37 €/MWh, baseload power prices in the UK and Spain have shown a downward trend, ending the quarter at 32 €/MWh and 14 €/MWh, respectively.
- After an initial decrease in the first half of the quarter, prices in Germany and France have progressively recovered, ending the period at 30 €/MWh levels.
- Baseload / peakload differentials have widened in France and the UK during Q1 2016, whereas they have narrowed in Germany and Spain.
- Brent prices reached minimum levels (30 USD/bbl) in January 2016 and have since rebounded, returning to 40 USD/bbl and the end of March.
- Gas prices continued declining, with levels below 5 USD/MMBTU in Europe, 2 USD/MMBTU in the US and 30 GBP/MWh at NBP.
- After several months declining, coal prices have slightly increased during Q1 2016.
- Carbon prices seem to have stabilized at around 5 €/T.
- Gas margins (spark spreads) have returned to positive values both in Germany and France for the first time after more than one year. In the UK gas margins have also increased, exceeding 5 €/MWh. Spreads in Italy peaked at 30 €/MWh in mid January but have significantly decreased since then.
- Coal-fired margins (dark spreads) remained relatively stable in Germany, Italy and France, ending the quarter at 6 €/MWh, 10€/MWh and 7 €/MWh respectively. In the UK they decreased to slightly negative levels by the end of March.

Electricity price evolution

Base load



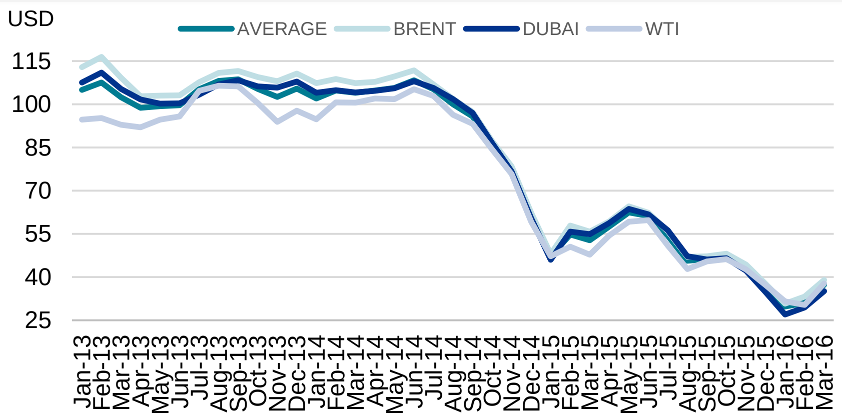
Peak load



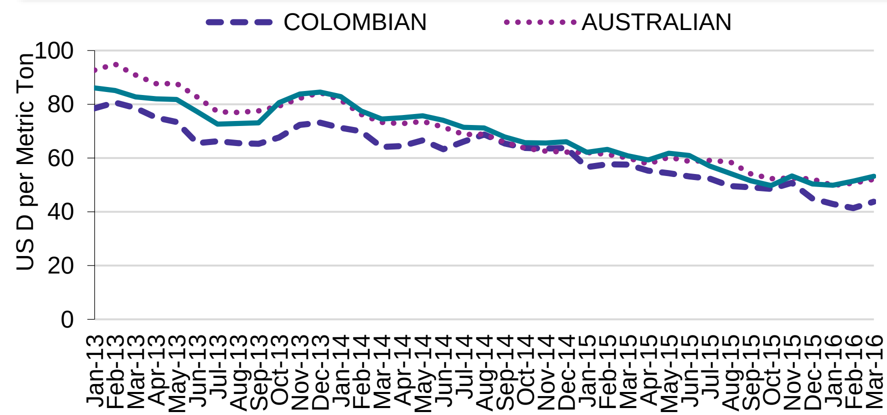
Source: Bloomberg; 2016.

Fuel price evolution

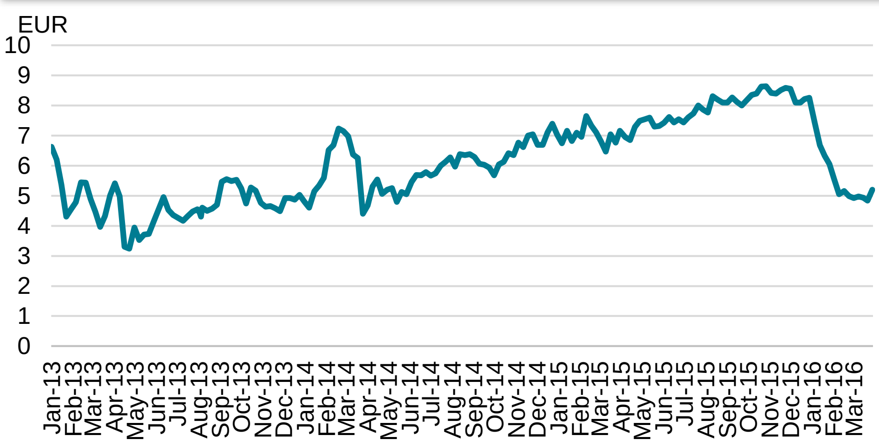
Crude oil



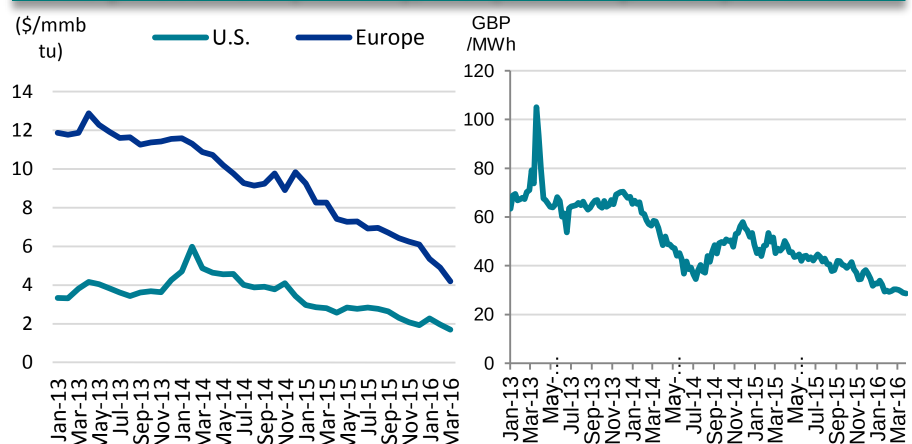
Coal



Carbon price – EU ETS



Gas prices: US (H.Hub), EU (border prices) and NBP

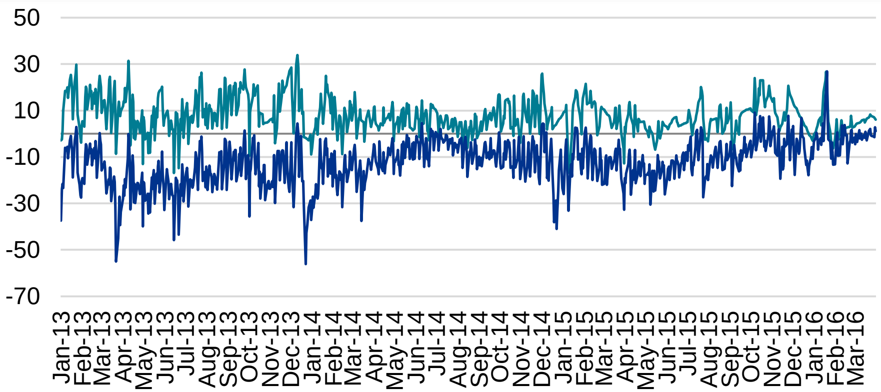


Source: World Bank / Bloomberg; 2016.

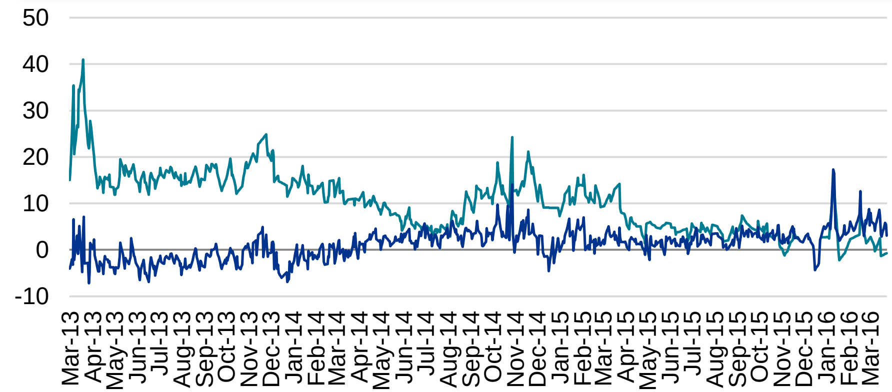
Clean dark and spark spreads

Clean dark spread — Clean spark spread

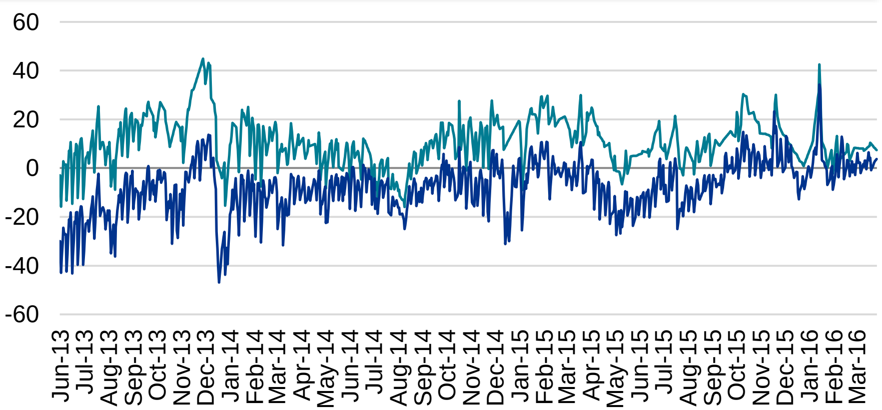
Germany



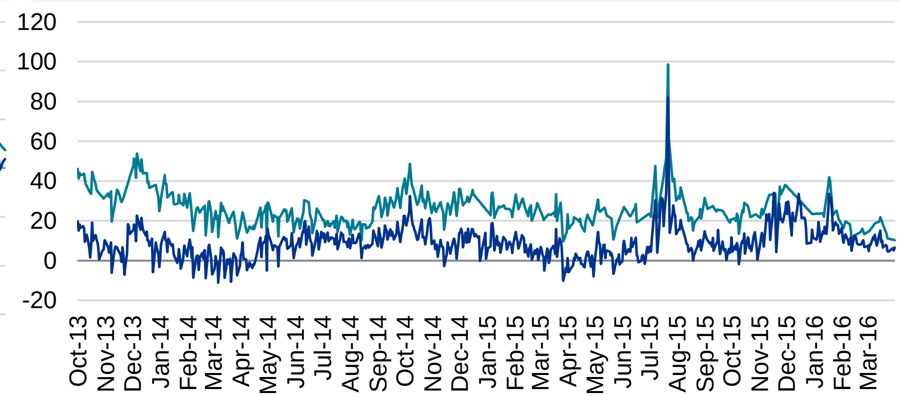
United Kingdom



France



Italy



Source: Bloomberg; 2016.

Regulatory News Overview

- The EC presented a new Energy Security Package including new rules on gas and a heating and cooling strategy
- EU countries agreed on a Commission proposal to invest €217 million in key trans-European energy infrastructure projects.
- Spain approved Royal Decree 56/2016 relating to energy efficiency and resolved the auction for the assignment of the specific remuneration regime for new biomass and wind plants in Spain.
- France ruled the end of regulated gas and electricity tariffs for industry and decided to fix unilaterally a floor price for CO_2 equal to 30€/t. The multi-year energy programme simplified law was also published
- Italy approved the new procedures of gas storage capacity auctions, the reference tariffs for the distribution and metering of gas, a new regulation of the switching procedures in gas and electricity and defined new specifications for smart meters
- In Germany, an aid implemented by the Government for the support of renewable electricity was declared partially incompatible with the internal market by the European Court of Justice. Germany approved during this quarter a new law amending the rules for the award of easement rights for grid-based energy supply and the compromise on the incentive regulation for grids.
- The UK Government released Budget 2016 with several noteworthy announcements for P&U and responded to the first and released a second consultation of reforms to the capacity market. Meanwhile the Competition and Markets Authority reported back on its 18 month + investigation into competition in the UK power sector.
- February 2016 witnessed the first US export of LNG in history from Sabine Pass terminal

Regulatory news per region

EU

- The EC presented a new Energy Security Package including new rules on gas and a heating and cooling strategy for preventing gas crisis and ensuring a good coordination and support between EU countries in case of supply disruption. It sets out an strategy for energy security through access to gas and LNG storages and address improvements on energy efficiency and RES penetration as a way of moving towards a smart, efficient and sustainable heating and cooling system.
- EU countries have agreed on a Commission proposal to invest €217 million in key trans-European energy infrastructure projects. The 15 projects selected, mainly from Central and South Eastern Europe, are aiming at increasing energy security and interconnection networks among MS.
- ACER has published its opinion on ENTSO-E's Winter Outlook Report 2015/16 and Summer Review 2015. The Agency highlights the need of improving assessments of the impact of RES penetration on the stability of the system and from further developments of the probabilistic assessment of system adequacy.

Spain

- Approval of Royal Decree 56/2016, transposing Directive 2012/27/UE, relating to energy efficiency with regard to energy audits, certification of service providers and energy auditors and promotion of energy efficiency in the energy supply.
- Resolution of 18th January 2016, resolving the auction for the assignment of the specific remuneration regime for new mainland electricity generation from biomass and wind plants.
- Approval of Order IET/359/2016, of 17th March, which sets the obligations of energy suppliers to contribute to the National Energy Efficiency Fund for 2016.
- Contribution of €1.5 million from the Spanish Ministry of Economy to the EBRD Sustainable Energy Initiative.
- Resolution approving the procedure of authorization and cancellation of users with a balance portfolio within the virtual balance point (PVB) as well as the framework contract.

Regulatory news per region

France

- End of regulated gas and electricity tariffs for French industry by 1 January 2016.
- France will fix unilaterally a floor price for CO2 equal to 30€/t in the coming French Finance law
- The multi-year energy programme (programmation pluriannuelle de l'énergie – PPE) simplified law has been published
- Decree n°2016-23, dated 18 January 2016, provides further details concerning the calculation of installed capacity of electricity production facilities using renewable energy.
- Decree n°2016-9, dated 8 January 2016, provides the legal framework for the appeals filed against various decisions regarding offshore energy production and transportation facilities from renewables.
- Extension of the operating lifetime of nuclear power plants from 40 to 50 years. Existing doubts on its compatibility with national target of decreasing share of nuclear from 75% to 50%.
- CRE approves the implementation of an pooling service for intra-monthly in regulated LNG terminals.
- CRE approves the evolution of the capacity calculation method at the borders of the Central Western Europe region for the intraday timeframe submitted by RTE.
- New tariffs for the use of gas transmission networks of GRTgaz and TIGF and for the use of regulated LNG terminals.
- Approval of the rules on Programming, Balancing Mechanism and the responsible parties for balancing.
- Decision on pricing of additional services performed exclusively by electricity distribution network operators.
- Approval of allocation rules for the intraday exchange in the France-Belgium interconnection.
- CRE's decision changing the rules for the valuation of load shedding on energy markets.
- Retroactive change on the trading rules of transmission capacity for the link North-South of GRTgaz, at the interface between GRTgaz and TIGF, and with interconnections with Spain.

Italy

- New provision that regulates the procedures of gas storage capacity auctions, while reviewing gas payments, capacity allocation and management of related services.
- Determination of the definitive reference tariffs for the distribution and metering of gas from 2015, and redetermination of those of 2009-2014.
- New regulation of the switching procedure in the gas sector and new definition of 'switching' for the electricity sector.
- Definition of specifications for smart meters in LV and performance of 2G smart metering in the electricity sector, in accordance with Decree 4 July 2014, n. 102.
- Approval of the Three-year program for the transparency and the integrity for 2015-2017.
- Set of the annual average electricity selling price, for 2015, at 51.69 €/MWh for the quantification of the allocation price of green certificates on the market and the value of the incentives to substitute them.
- Modification of the TISSPC, regulation relative to simple production and consumption systems.

Regulatory news per region

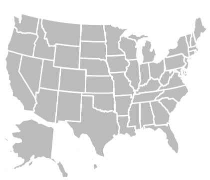
Germany

- The European Court of Justice declared an aid implemented by the German Government for the support of renewable electricity partially incompatible with the internal market.
- New Law amending the rules for the award of easement rights for grid-based energy supply.
- The Federal Ministry for Economic Affairs and Energy has published the compromise on the incentive regulation for grids.
- Publication of the results of the 3rd Tender of subsidies for PV power Plants. 204 MW awarded with a subsidy of 8 cent/kWh.
- BNetzA initiates a consultation on the electricity network development plan for 2030. The TSOs consider for the first time the impact of e-mobility, heat pumps and storage units.
- The Ministry published a proposition of new tender model for offshore wind aiming at ensuring the continuity of its expansion.
- The Ministry issued a paper opening tenders of renewable subsidies to other EU member states from 2017.

UK

- The Government released Budget 2016. with several noteworthy announcements for P&U.
- The government responded to the first and released a second consultation of reforms to the capacity market to encourage capacity provision.
- The Competition and Markets Authority reported back on its 18 month + investigation into competition in the UK power sector.
- Government released a consultation on reforms to the renewable heat incentive.
- Government responded to its consultation on the reform of the Small Scale Feed in Tariff

US



- FERC proposed to revise the 1,000 €/MWh Offer Caps in Regional Wholesale Electric Markets to ensure that price setting in the competitive wholesale electricity markets results in fair and reasonable rates.
- The Supreme Court issued its decision in favor of demand response by supporting FERC Order 745 of 2011, which stipulated the compensation to demand response providers for reducing load at the same rate as generation.
- On February 18, 2016 U.S lower 48 exported oversea LNG for the first time in history. The shipment from Sabine Pass terminal reflects a milestone of the decade of natural gas production growth in U.S.

Links to new key regulation

Spain	News	Link
	On 12th February, was published Royal Decree 56/2016 (a), which transposes the Directive 2012/27/UE (b), relative to energy efficiency. The aim of this regulation is to achieve a 20% reduction of primary energy consumption target for 2020. For this purpose, this RD fosters and promotes a set of actions to apply in energy consuming processes aiming at reducing the primary energy consumption and energy efficiency, as well as optimizing energy demand from installations, equipment or consuming systems. It also sets the disposition of competent and reliable professionals for assuring the proper and effective application of the Directive.	Link I (a) Link I (b)
	The Spanish Power Sector Debt at the end of 2015 was of €25,056 million. This means a reduction of 1,890 millions (7% decrease) compared to 2014. After 14 consecutive years of deficit generation, the sector's debt has taken a negative trend since 2014. In this respect, the estimated annuity for 2016 is of €2,871 million, 0,5% less than in 2015.	Link II
	Resolution of 18th January 2016, resolves the auction for the assignment of the specific remuneration for new mainland electricity generation from biomass and wind plants. In the auction, held the 14th January 2016, 200 MW of biomass (5 plants) and 500 MW of wind capacity (8 plants) were allocated for an offered price of 0 €/MW.	Link III

Links to new key regulation

Spain	News	Link
	Order IET/359/2016, of 17th march, sets the obligations to contribute to the National Energy Efficiency Fund for 2016. From the total amount approved, four companies (namely Repsol, Endesa, Cepsa Comercial Petróleo and BP) account for nearly 50%.	Link IV
	Within the cooperation agreement between the Ministry of Economy and the European Bank for Reconstruction and Development (EBRD), dated as of 19th and 26th of October 2007, the Ministry of Economy will make a contribution of 1.5 million euros to support the EBRD Sustainable Energy Initiative (SEI). The fund is aimed at developing energy efficiency projects.	Link V
	Resolution of the CNMC, as of 9th March 2016, approving the procedure of authorization and cancellation of users with a balance portfolio within the virtual balance point (PVB) as well as the framework contract. The Resolution has been approved following the Proposal of the Spanish TSO.	Link VI

Links to new key regulation

France	News	Link
	**End of regulated gas and electricity tariffs for French industry by 1 January 2016** <u>Gas</u>: The market initiated a major change in 2014 with the end of the regulated gas tariffs for some business consumers, set to come into effect in June 2014 and which will continue until 1 January 2016. The date on which the regulated tariffs for electricity for businesses will also expire. Individualconsumers, professionals whose annual consumption is less than 30 MWhand condominiums whose consumption is less than 150 MWhper yearare not affected by this change <u>Electricity:</u> The suppression of the tariffs was decided as part of a new energy law adopted in 2011. It concerns two sets of regulated tariffs offered by EDF, known as the green and yellow tariffs. The green tariff applies to customers with power needs above 240kVA while the yellow tariff applies to power needs between 36-240kVA, which primarily relates to small and medium-sized businesses Both sets of tariffs are set by ministerial decree on the basis of recommendations from the French energy regulator CRE. The blue category for power needs below 36kVA will still be available to households after 1 January 2016 <u>Expected advantages:</u> The elimination of tariffs could potentially bring new players on to the wholesale market as alternative suppliers capture a new customer base and large industrials determine whether to go directly to market to meet their energy needs However,the end of regulatedelectricity tariffsis expected to havea limited impact because large consortium of 27 large electro-intensive industrials have already signed the Exeltiumagreement with EDF, which was renegotiated in July 2014	Link I Link II

Links to new key regulation

France	News	Link

CO2 price floor announced following the adoption of the French energy transition law

Mrs. Royal has announced on Tuesday 17 May 2016 in front of other EU ambassadors that France will fix unilaterally a floor price for CO2 equal to 30€/t in the coming French Finance law.

This decision follows the approval of the bill for an Energy Transition for Green Growth after more than a year of national consultations, on Wednesday 22 July 2015.

The energy transition bill, known as the Royal bill, which contains 66 articles, aims to cut France's greenhouse gas emissions by 40% between 1990 and 2030 and divide them by four by 2050, to halve the country's energy usage by 2050, to reduce the share of fossil fuels in energy production, to cap the total output from nuclear power at 63.2 gigawatts and bring the share of renewables up to 32% of the energy mix

The adopted bill contains several last minute additions, including a Senate amendment to increase the carbon tax on fossil fuel use to €56 per ton in 2020, and €100 in 2030

Link III
Link IV
Link V

French energy transition law monitoring tools

French energy transition law relies on a national strategic framework composed of :

- The National low-carbon strategy (Stratégie nationale bas carbone – SNBC) which defines the broad, outlines of the overarching and sectoral policies that will allow for the achievement of the targets to reduce greenhouse gas emission in the medium and long term
- The multi-year energy programme (programmation pluriannuelle de l'énergie – PPE), which sets out the conditions under which the main energy objectives of the Energy Transition will be achieved

Links to new key regulation

France	News	Link

The multi-year energy programme (programmation pluriannuelle de l’énergie – PPE) simplified law

After many delays from the initial deadline set at 31 December 2015, the French ministry of Energy has published a simplified version of the PPE on 15 April 2016, revised on 24 April 2016

While it was supposed to tackle the whole French energy mix situation, the simplified version of the PPE is focused only on renewable energies. The nuclear issue is, for example, shyly avoided, same as the issue of energy demand management. Mrs. Royal has explained that the nuclear issue will be dealt with independently later on, in order not to condition the development of renewables by the decisions taken regarding the share of nuclear in the energy mix

According to the simplified version of PPE, onshore wind objectives over 2018-2023 are expected to increase from 9,3 GW in 2014, to 15 GW in 2018 and 22 GW (low scenario) or 26 GW (high scenario) in 2023. Solar PV objectives will also rise from 5,4 GW in 2014 to 10.2 GW in 2018 and 18.2 GW (low scenario) or 20.2 GW (high scenario) in 2023

French renewable energy union (Syndicat des énergies renouvelables, SER) has expressed its satisfaction toward onshore wind and solar PV objectives. Nevertheless, it was disappointed about marine energy, offshore wind and biogas cogeneration low objectives. In addition, many NGO have protested following the release of the simplified version of the PPE stating that it was mainly focused on the investment side rather than the whole energy policy

Link VI
Link VII

Links to new key regulation

Germany

News	Link
Renewable energy: Aid granted by certain provisions of the amended German law concerning renewable energy sources (EEG 2012). Aid supporting renewable electricity and reduced EEG surcharge for energy-intensive users. Decision declaring the aid partially incompatible with the internal market.	Link I
Grid operators: Cabinet approves the Law amending the rules for the award of easement rights for grid-based energy supply in accordance with § 46 of the German Energy Act (EnWG)	Link II
Incentive regulation for grids: The Federal Ministry for Economic Affairs and Energy has published the compromise on the incentive regulation for grids. In the future, the instrument of the capital cost adjustment to ensure that the operators of electricity and gas distribution networks have no more problems with the delay.	Link III

Links to new key regulation

UK	News	Link
	In March, the Conservative Government released Budget 2016. Within this, there were several noteworthy announcements for P&U: ▪ Government committed £290m for a 'pot 2' (less established technology) CfD allocation round in 2016 and £730m over the Parliamentary period supporting up to 4GW of offshore wind. It also set out the target cost reduction trajectory for offshore wind, with a cap at £105/MWh in 2021/22 reducing to £85/MWh by 2025/26; ▪ An 80% increase in interconnector capacity ambition, supporting at least another 9GW of interconnection; ▪ Retained the Carbon Price Support mechanism for the time being, and even increasing the 2020/21 CPS rate to £18/tCO2 + RPI. However, Government noted that they will set out the long term direction for CPS in the Autumn Statement later in 206; ▪ Commitment to invest at least £50m for innovation in energy storage, demand side response and other smart technologies over the next 5 years; and ▪ Launched the first stage of a competition to identify a small modular nuclear reactor which could be build in the UK, committed to delivering an SMR delivery roadmap later this year and allocated at least £30m for R&D in advanced nuclear manufacturing.	Link I
	The Government responded to the first, and released a second consultation on reforms to the capacity market to encourage new capacity provision, specifically CCGT. The main changes under consideration are:	Link II

Links to new key regulation

UK	News	Link
	(cont'd.): ▪ Buying more total capacity, including the possibility of procuring for extreme weather events – Government expect to increase the total capacity to procure by at least 3GW; and ▪ Holding a one-year ahead auction this coming winter for delivery in winter 2017/18.	Link II
	The Competition and Markets Authority reported back on its 18 month + investigation into competition in the UK power sector. The CMA identified 33 remedies for aiding competition in the market from having Ofgem maintain a database of "sticky" customers for other suppliers to contact; introducing locational pricing into transmission loss allocation and better defining the responsibilities of the delivery bodies of Government's energy policy, including strengthening Ofgem's independence. The final remedies will be published by the CMA at the end of June.	Link III
	Government released a consultation on reforms to the renewable heat incentive, the principal incentive for the delivery of renewable heat in the UK. RHI reforms under consultation are split into two delivery phases and include: ▪ Introduction of budget caps and deployment linked tariff degression; ▪ The total exclusion of solar thermal from the scheme; ▪ Movement to a single biomass boiler tariff; and ▪ Extending the terms of pre-accreditation.	Link IV

Links to new key regulation

UK	News	Link
	Government responded to its consultation on the reform of the Small Scale Feed in Tariff. Final amendments included: ▪ Introduction of a total budget cap of £75-100m per year supported by quarterly deployment caps and underpinned by default and contingent deployment linked tariff degression; and ▪ Large reductions in tariffs, but not by as much as some of the original consultation tariff reductions.	Link V

Capital Markets Overview

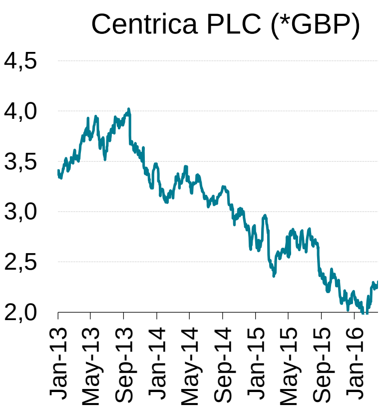
- The Eurostoxx Utilities index average plunged -5,91% QoQ in Q1 2016, bringing the cumulated losses in the last 12 months to -17,50% .
- Snam SpA, EDP Renováveis and National Grid plc registered the best performance in Q1 2016 in terms of share price. In fact all other players in Europe experienced a negative shared price evolution in the quarter. Worst performers included EDF and CEZ.
- Valuation levels in the sector remained stable at x7,9 EV/EBITDA in Q1 2016, almost same value as in the previous quarter.
- Wide differences persist in EBITDA multiples, with highest values among pure grid and renewables players, which all trade above x10,0 EV/EBITDA
- Net debt levels remained stable at 3,05 x EBITDA in Q1 2016, very close to the figure registered in Q4 2015.
- The only credit rating change in the quarter was a downgrade for RWE AG by Fitch

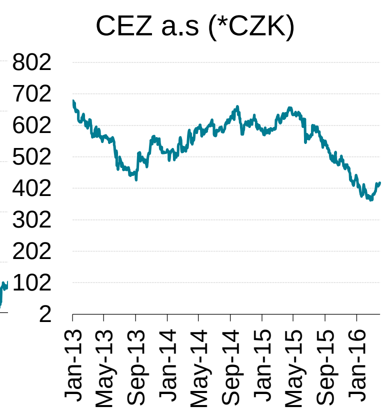
Share price evolution: overview

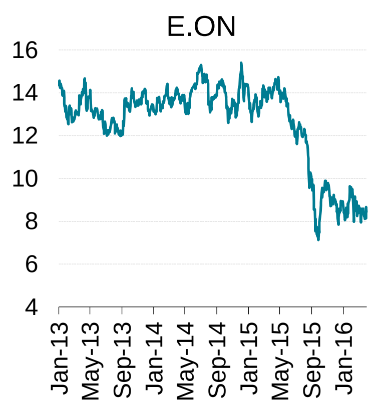
Company	Q1 2013	Q2 2013	Q3 2013	Q4 2013	Q1 2014	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Last Quarter Q1 2016/ Q4 2015	Last Year Q1 2016/ Q1 2015
Snam SpA	3,61	3,65	3,57	3,82	4,09	4,32	4,38	4,12	4,32	4,56	4,45	4,71	5,02	**6,18%**	**13,94%**
EDP Renováveis	4,04	3,89	3,85	3,93	4,47	5,02	5,35	5,26	5,95	6,48	6,3	6,46	6,72	**3,87%**	**11,46%**
National Grid plc (*GBP)	7,12	7,89	7,53	7,68	8,08	8,45	8,75	9,09	8,99	8,84	8,54	9,23	9,58	**3,65%**	**6,16%**
E.ON SE	13,36	13,3	12,57	13,6	13,62	14	14,25	13,77	13,61	13,58	10,6	9	8,62	**-4,41%**	**-57,89%**
Enel Green Power SpA	1,47	1,6	1,64	1,75	1,96	2,07	2,05	1,85	1,78	1,76	1,76	1,88	1,8	**-4,44%**	**1,11%**
RWE AG	28,76	27,21	22,7	26,91	27,87	28,8	30,53	27,62	23,97	22,1	15,78	11,81	11,28	**-4,70%**	**-112,50%**
Enagás SA	17,86	19,3	18,1	19,06	20,77	22,05	24,7	25,94	26,78	26,66	25,16	27,1	25,88	**-4,71%**	**-3,48%**
Centrica plc (*GBP)	3,48	3,75	3,85	3,49	3,23	3,29	3,15	2,9	2,65	2,69	2,54	2,21	2,11	**-4,74%**	**-25,59%**
Iberdrola SA	3,92	4,07	4,12	4,56	4,72	5,2	5,51	5,59	5,91	6,14	6,13	6,43	6,13	**-4,89%**	**3,59%**
SSE Plc (*GBP)	14,4	15,46	15,7	13,91	13,88	15,34	15,06	15,79	15,5	16	15,08	14,98	14,26	**-5,05%**	**-8,70%**
REE	41,14	40,35	41,31	45,78	54,66	61,55	63,83	69,69	74,06	75,75	72,12	78,82	73,94	**-6,60%**	**-0,16%**
Fortum Oyj	14,59	14,67	15,27	16,57	16,68	17,46	19,27	18,57	19,4	17,61	15,24	13,79	12,88	**-7,07%**	**-50,62%**
EDP	2,36	2,5	2,62	2,67	2,99	3,48	3,46	3,29	3,39	3,54	3,3	3,27	3,01	**-8,64%**	**-12,62%**
Enel SpA	2,94	2,77	2,59	3,18	3,62	4,15	4,12	3,8	3,96	4,28	4,12	4,06	3,72	**-9,14%**	**-6,45%**
ENGIE SA (GDF SUEZ S.A.)	15	15,86	16,69	17,85	17,8	19,93	19,37	18,95	18,9	18,25	16,36	15,85	14,19	**-11,70%**	**-33,19%**
Endesa SA	17,41	17,03	17,75	21,17	23,29	27,61	28,51	19,76	17,29	17,56	18,57	19,45	17,05	**-14,08%**	**-1,41%**
Gas Natural SDG SA	14,72	15,61	15,07	17,58	18,87	21,18	22,92	22,06	20,7	21,84	19,11	19,46	17	**-14,47%**	**-21,76%**
CEZ as* (*CZK)	618,45	549,76	469,76	526,93	528,02	585,88	607,16	606,78	600,33	624,53	557,01	467,82	391,38	**-19,53%**	**-53,39%**
EDF	14,51	17,19	21,08	25,7	26,96	27,28	24,23	22,06	23,12	22,11	19,52	15,19	10,94	**-38,85%**	**-111,33%**
Eurostoxx Utilities	222,87	226,15	224,04	249,48	262,29	284,87	288,6	280,3	292,9	291,9	269,1	264	249,28	**-5,91%**	**-17,50%**

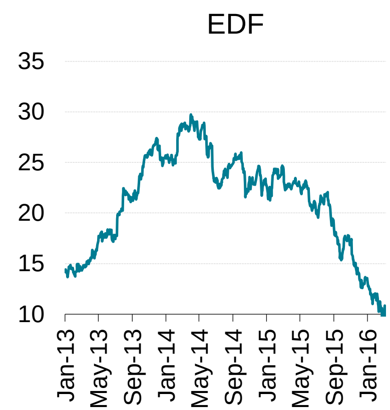
Source: Bloomberg; 2016.

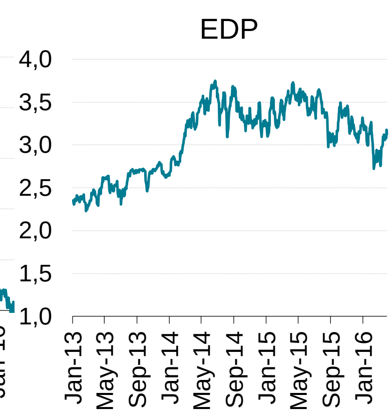
Share price evolution: individual stocks (1)

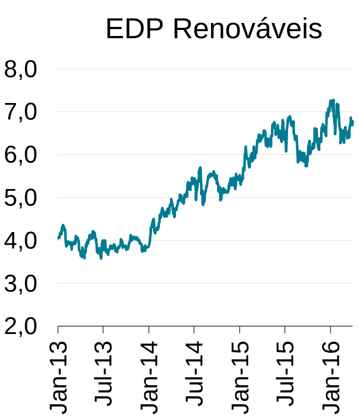


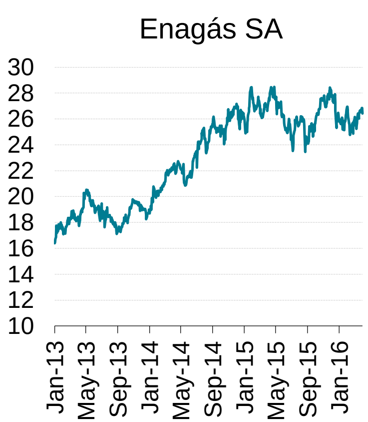


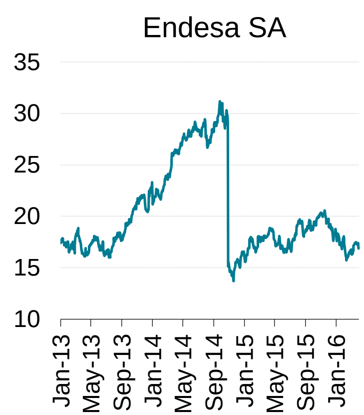


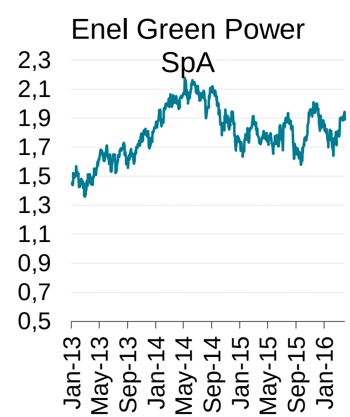


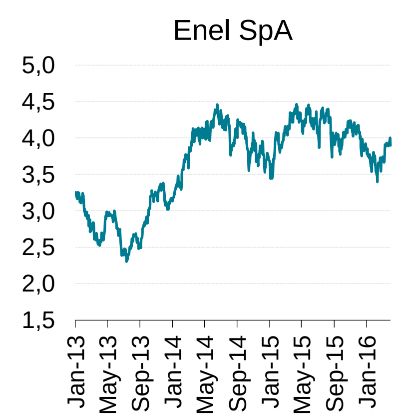






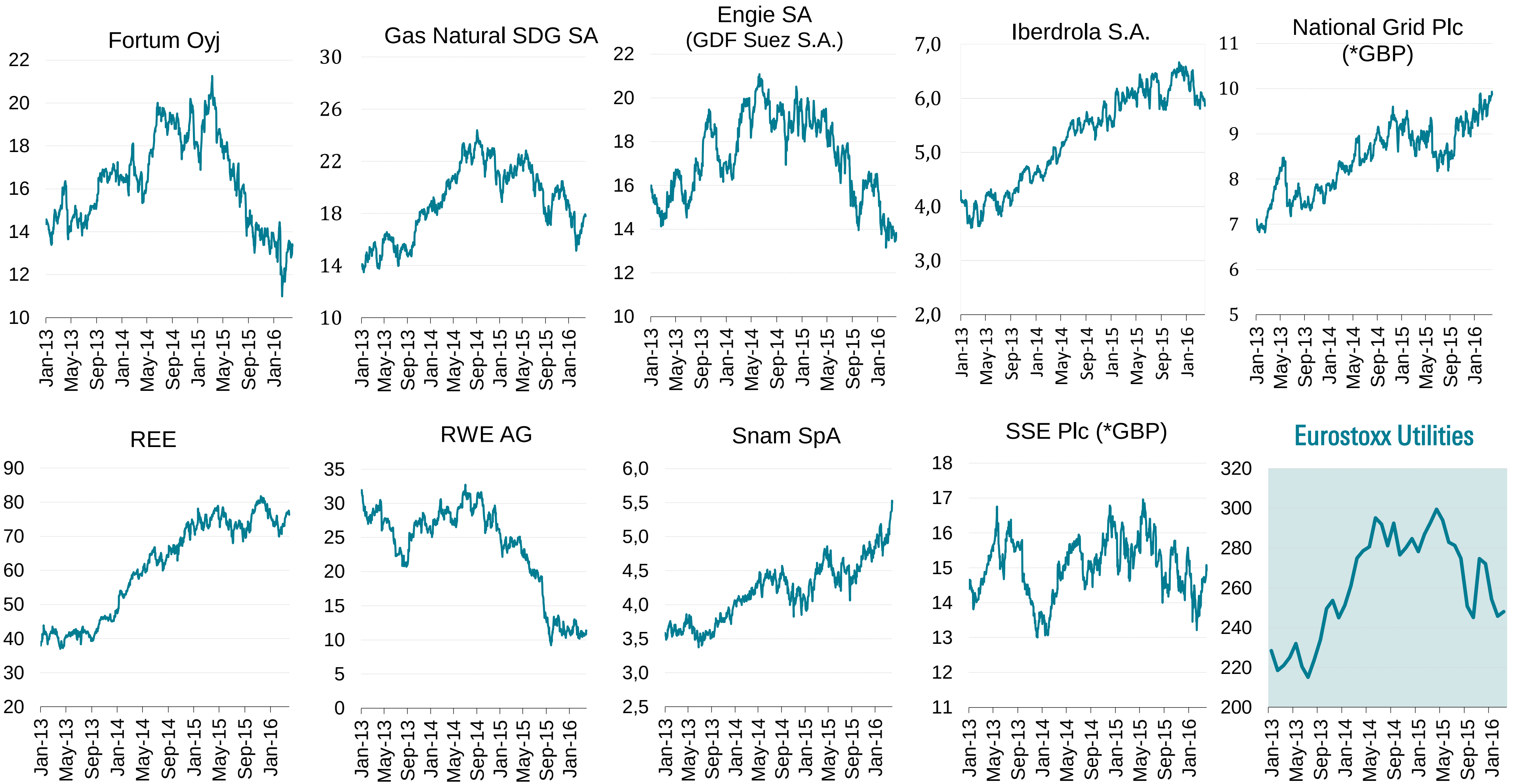






Source: Bloomberg; 2016.

Share price evolution: individual stocks (2)



Source: Bloomberg; 2016

Relative valuation per company

	TEV (as of March 31) **/ EBITDA** (LTM)	**TEV (EUR mill.)** (as of March 31)	**Market Capitalization (EUR mill.)** (as of March 31)
Enagás, S.A.	11,7	10.668	6.306
EDP Renováveis	10,0	10.709	5.853
National Grid plc	11,5	80.122	46.941
Snam S.p.A.	11,8	33.045	19.265
EDP-Energias de Portugal, S.A.	10,8	33.158	11.363
Enel Green Power S.p.A.	10,8	18.176	9.450
Red Eléctrica Corporación S A.	10,6	15.389	10.288
Iberdrola, S.A.	9,6	67.894	36.854
SSE plc	8,8	25.287	18.954
Gas Natural SDG SA	7,8	38.436	17.782
Endesa SA	6,9	22.159	17.861
ENGIE SA (GDF SUEZ S.A.)	6,2	67.905	32.680
Centrica plc	7,4	21.957	14.642
Fortum Oyj	8,3	9.700	11.824
Enel SpA	6,1	93.780	36.654
CEZ, a.s.	5,5	13.328	8.290
Electricite de France SA	3,9	61.062	18.917
RWE AG	3,8	18.438	6.890
E.ON SE	4,1	30.040	16.482
	Weighted average: 7,9	**671.253**	**347.296**

Source: Capital IQ; 2016.

Leverage and credit ratings

	LTM Net Debt/ EBITDA	Rating S&P	S&P Financial Update	Rating Moody's	Date	Rating Fitch	Date
EDP-Energias de Portugal, S.A.	5,93	BB+	Mar 16-16	Baa3	Feb 13-16	BBB-	Mar 07-16
Snam S.p.A.*	4,87	BBB	Oct 30-15	Baa1	Feb 18-14	BBB+	Mar 07-16
Enagás, S.A.	4,95	A-	Feb 18-16	Baa2	Feb 28-14	A-	Dec 23-15
EDP Renováveis S.A.	4,56	-	Aug 02-15	-	-	-	-
National Grid plc.	4,82	A-	Nov 11-15	Baa1	Dec 13-14	BBB	Mar 07-16
Enel Green Power S.p.A.	4,46	-	Nov 15-15	A3	Oct 06-11	-	-
Iberdrola, S.A.	3,98	BBB	Mar 02-16	Baa1	Apr 08-15	BBB+	Mar 07-16
Red Eléctrica Corporación S A.	3,49	A-	Mar 08-16	-	-	A-	Mar 07-16
Gas Natural SDG SA	3,36	BBB	Feb 12-16	Baa2	Feb 13-16	BBB+	Aug 07-15
ENGIE SA (GDF SUEZ S.A.)	2,82	A	Feb 29-16	A1	Feb 13-16	-	-
SSE plc.	2,37	A-	Nov 12-15	A3	Feb 13-16	BBB+	Mar 07-16
Electricite de France SA	2,39	A+	Feb 16-16	A1	Feb 13-16	A	Sep 21-15
Enel SpA	2,45	BBB	Nov 26-15	Baa2	Feb 13-16	BBB+	Mar 07-16
Centrica plc.	2,59	BBB+	Mar 17-16	Baa1	Feb 13-16	A-	Dec 16-15
RWE AG	2,06	BBB	Mar 10-16	Baa2	Feb 13-16	BBB	Mar 22-16
CEZ, a.s.	1,95	A-	Mar 17-16	A3	Jun 23-15	A-	Mar 07-16
Endesa SA	1,33	BBB	Mar 02-16	Baa2	Oct 14-14	BBB+	Mar 07-16
E.ON SE	1,54	BBB+	Mar 10-16	(P) Baa1	Feb 13-16	BBB+	Sep 02-15
Fortum Oyj	-1,90	BBB+	Mar 02-16	Baa1	Feb 13-16	BBB+	Nov 17-15
Average:	**3,05**	Mode: BBB		Baa1		BBB+	

Quarterly rating variation: Upgrade Unchanged Downgrade

Source: Capital IQ / S&P / Moody's / Fitch; 2016.

M&A Overview

- Renewables (especially wind) and Oil&Gas concentrated most of the M&A activity during Q1 2016, with a quite broad geographical distribution ranging from the US, Canada and China to Spain, the Nordics and Eastern Europe.
- Largest deals have included:
  - The acquisition of Bora Wind Energy Management in Spain by Corporacion Masaveu, Korys and Exus Management Partners to Bridgepoint (€500m).
  - The purchase of a 11.93% stake of Lundin Petroleum AB by Norwegian Statoil ASA (€496m).
  - The acquisition of Rimrock Midstream, LLC by Warburg Pincus LLC (€454m).
  - The purchase of a 40% stake of Fosen Vind AS by Nordic Wind Power DA (€440m).
  - The acquisition of Sunnova Energy Corp by Energy Capital Partners, LLC (€266m).

Top-10 M&A operations in Q1 2016 by deal value (1)

Announced Date	Target Company	Target Description	Target Country	Bidder Company	Bidder Country	Seller Company	Deal Value EUR(m)
02/09/2016	Bora Wind Energy Management, S.L	Spain based wind farms	Spain	Corporacion Masaveu S.A.; Korys; Exus Management Partners SL	Spain;Spain; Belgium	Bridgepoint Advisers Limited	500
01/14/2016	Lundin Petroleum AB (11.93% Stake)	Sweden-based oil and gas exploration and production company	Sweden	Statoil ASA	Norway		496
02/24/2016	Rimrock Midstream, LLC	US-based company that acquires, develops and operates a portfolio of midstream energy infrastructure assets	USA	Warburg Pincus LLC	USA		454
02/22/2016	Fosen Vind AS (40% Stake)	Norway-based wind power project	Norway	Nordic Wind Power DA	Switzerland	Agder Energi AS; TronderEnergi AS; Nord-Trondelag Elektrisitetsverk AS	440
03/21/2016	Sunnova Energy Corp.	US-based solar power company focused on leasing systems to residential customers	USA	Energy Capital Partners, LLC	USA		266

Source: Mergermarket; 2016.

Top-10 M&A operations in Q1 2016 by deal value (2)

Announced Date	Target Company	Target Description	Target Country	Bidder Company	Bidder Country	Seller Company	Deal Value EUR(m)
01/20/2016	Huaxing Electric Power Co Ltd (36.88% Stake)	China-based company engaged in electricity energy project investment, electricity technology development and consulting	China	Wintime Energy Co Ltd	China	State Development & Investment Corporation	224
01/05/2016	Thunder Spirit Wind	US-based 107.5-megawatt wind generation project located in near Hettinger, North Dakota	USA	Montana-Dakota Utilities Co.	USA	ALLETE Clean Energy, Inc.	202
02/02/2016	Deep Basin Assets (Simonette and Kaybob region)	Canada-based oil and natural gas properties located in the Greater Simonette and Kaybob areas of Alberta region	Canada	Tourmaline Oil Corp.	Canada		121
01/28/2016	JSC Latvijas Gaze (28.97% Stake)	Latvia-based company engaged in transmission, distribution, storage, and supply of natural gas	Latvia	Marguerite Fund	Luxembourg	Uniper AG	114
01/08/2016	Grupa DUON S.A.	Poland-based supplier of natural network gas and LNG	Poland	Fortum Oyj AB	Finland	Capital Partners S.A.; AKJ Investment TFI S.A.	111

Source: Mergermarket; 2016.

KPMG

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