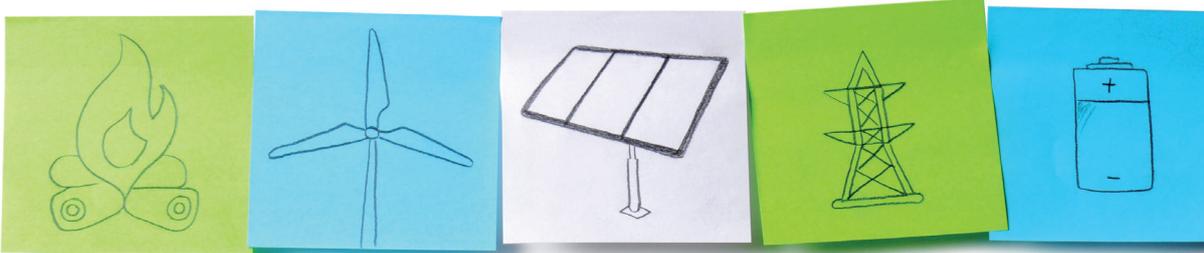


Newsletter

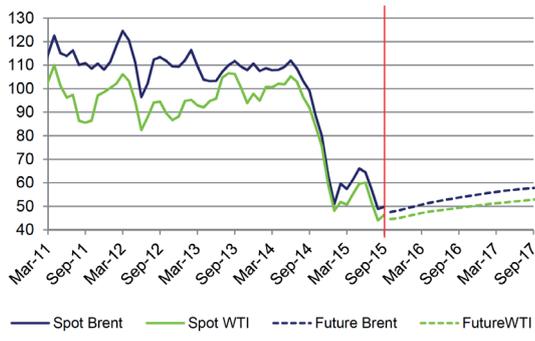
Power & Utilities in Europe



Commodities



Crude Oil (\$/bbl)



Source Capital IQ

Geopolitical turmoil in the Middle East, or the prospect of a stronger demand, have failed to boost the oil prices so far. But the market remains in contango.

Oil prices have hit a six-year low at around 44 US\$/bbl for the WTI and 48 US\$/bbl for the Brent in August (against 96 US\$/bbl and 103 US\$/bbl respectively a year ago) in a context of over-supply as well as a dwindling demand in China. Prices have been volatile in September with the Brent-WTI spread contracting to around 3 US\$/bbl.

Global supply reached 96.3 mb/d at the end of 2Q15 against 93 mb/d a year before, an increase of more than 3 mb/d thereby generating an excess supply over demand around 2.5 mb/d.

Global demand stood at 93.7 mb/d at the end of 2Q15 versus 91.9 mb/d a year ago, an almost 2 mb/d increase in a context of falling prices. Most surprisingly, global oil demand growth is expected to climb to a five-year high of 95.5 mb/d during 4Q15 versus 93.9 mb/d during 4Q14, or an increase of 1.6 mb/d in 2015 which is accounted for by lower oil prices and a strengthening macroeconomic backdrop. The anticipated demand level for 4Q16 is at 96.8 mb/d or another 1.3 mb/d increase which the forward prices hardly seem to reflect today.

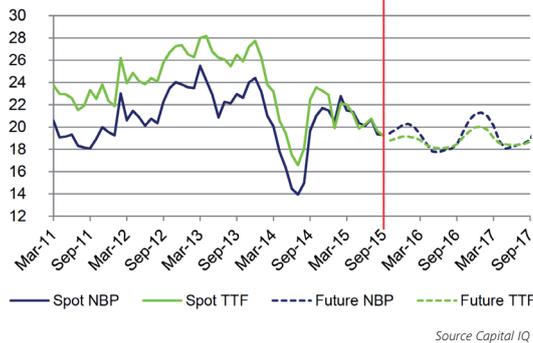
Non-OPEC supply is anticipated to show the biggest decline in more than two decades (around 0.5 mb/d) over 2015-2016. After a drop of 1 mb/d, US oil production (in particular US light tight oil, the driver of US growth) is forecast to shrink by another 0.4 mb/d as a result of the oil price decline according to the IEA.

OPEC crude supply stands at 31.57 mb/d at the end of 2Q15 or 1.2 mb/d higher than a year ago. The 'call' on OPEC is due to climb to an average 31.3 mb/d in 2016, up 1.6 mb/d year-on-year to make up for a lower non-OPEC supply in a context of low prices.

OECD oil inventories hit another record at the end of 2Q15 to 2 923 mb or an increase of 18 mb.



Gas (€/MWh)



As a result of a more integrated and fluid market, intra-EU spreads – whether intra-EU geographic spreads or summer-winter time spreads - have almost disappeared. The EU-Asia gas spread today is no longer sufficient to support re-export.

At the end of 3Q15 gas prices on both TTF and NBP have eroded to a record 4-year low at 19.2 €/MWh from 19.47 €/MWh and 22.45 €/MWh respectively.

This situation is accounted for by a **well-supplied market with a rather low activity**:

- Tensions between Russia and the Ukraine have eased significantly with the extension of the Russian-Ukrainian agreement on gas supply and transit to the EU;
- **Gas demand remains low**;
- The fall in oil price reduces the EU-Asian spread and therefore reduces the attractiveness of EU LNG re-exports to Asia;
- Intra-EU gas trade has remained very low over the past months, including net imports from the Netherlands or French exports to Spain. LNG sendout has failed to rise, with Qatari deliveries not increasing.

Another consequence is in TTF-NBP spreads at their lowest since January 2015.

The summer-winter spread has also come to a record low as a result of falling oil prices (the falling oil price has reduced the time spread and the forward gas price is low compared to the prompt) which hardly pays for the storage costs.

Most surprisingly, storage capacities are already 75% full, with comfortable volumes for the winter already in most Western European markets. In addition, market operators continue to inject at a significant rate (injection rate up 24% year-on-year in August in France) whilst the market economics do not favour storage injection.



Coal (\$/metric ton)



As is the case for oil and gas, coal markets show significant excess liquidity and post record low prices.

CIF ARA coal prices continued to slip over 3Q15 against a backdrop of abundant oversupply and high ARA stocks which were not to be absorbed during the quiet summer period.

As is the case for oil and gas, coal markets show significant excess liquidity and post record low prices. However factors supporting a coal price increase include:

- a potential strike at Colombia's second-largest producer Drummond (the main coal import source of the EU)
- the recent rise in Capesize dry bulk freight rates from Richards Bay to Rotterdam, which could add another \$2.45/mt to the delivered coal price to Europe
- and the fact that US cargoes have not been sold in Europe since the beginning of the year

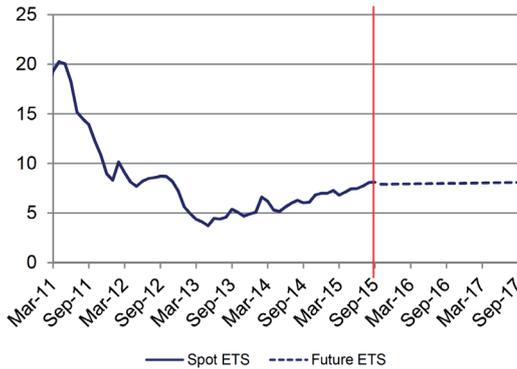
However, **the prospect of coal price rebounding seems very unlikely as the currency of major producing countries have fallen severely.** As a consequence, production costs have gone down under the pressure of lower currencies in key exporting countries like Colombia and Russia. FOB Prices in US\$ are being pulled down by the weak Indian Rupee and the South African rand currently weak against major currencies. Faced with reduced demand for their commodity exports, local currencies are adjusting lower to balance the countries budgets.

The CIF ARA price for thermal coal delivered into Northern Europe is expected to stagnate or slip further in 2016, while the seaborne market won't likely tighten until later this decade, according to a recent coal market forecast released by J.P. Morgan.

The situation of the EU coal market seems hard to believe in a context where Germany's coal-fired power plants contribute more than 50% to the nation's electricity demand in the first half of this year as output from natural gas-fired power plants and wind turbines dropped.



Carbon CO² (€/ton)



Source Capital IQ

Slight price increase reflects a more positive sentiment from market operators in the wake of regulatory evolutions.

EUA prices edged higher over 3Q15 to the 8 €/t level.

The slight price increase reflects a more positive sentiment from market operators in the wake of three fresh regulatory evolutions:

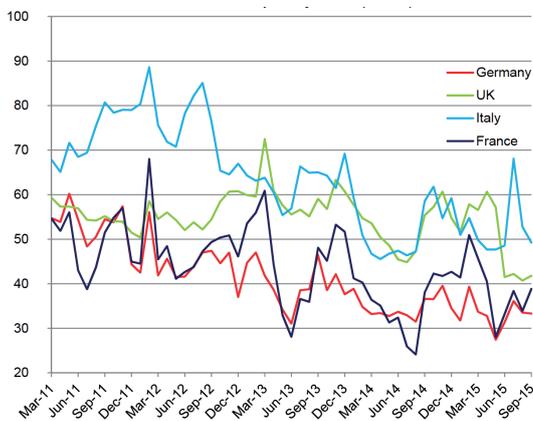
- The final stage of the negotiations leading up to the Market Stability Reserve (MSR) which is due to take place in 2018 (instead of 2021 originally) and is expected to start absorbing the excess liquidity on the ETS market as of early 2019.
- The legislative proposal issued by the European Commission aimed at revising the EU ETS Directive post-2020, translating into legislation the October 2014 Council Conclusions which include the target of reducing the ETS and non-ETS sector emissions by 43% and 30% by 2030 compared to 2005, respectively; and a cap on maximum annual emissions to decrease by 2.2% from 2021 onwards, instead of 1.74% previously.
- The German review of its carbon market which puts an obligation on lignite-fired power plants operators either to shut down their plant or to buy a higher amount of EUA quotas.

Carbon credit prices were further propped up by a modestly higher activity on the German electricity market. But the German government decision, in July, to close 2.4 GW of coal-fired power plants led to a drop of the EUA price level.

Furthermore, market data suggest that the transaction volumes have gone down during the summer.



Electricity Baseload Spot Day Ahead (€/MWh)



Source Capital IQ

Altogether, the electricity demand across the EU remains sluggish but a more effective CWE market has given a strong boost to liquidity.

The heat wave across Europe early July pushed prices up to a 3-year record high level for summer prices, in particular in Italy as temperatures have been 2° C above normal on average and electricity demand peaked at 56.8 GW.

Like during the previous quarter, the electricity demand has been low during 3Q15. However, as was noticed by most electricity market observers and regulators, the liquidity on the European electricity hubs has increased markedly over the quarter, around 6% on average and up to 60% compared to the previous year. Cross-border trade also increased significantly by 60% over the off-peak periods and 40% during peak times, compared to last year at the same period. This is the clear outcome of the introduction of the flow-based market coupling mechanism across the EPEX area, which allows electricity to flow from one EU country to another based on demand rather than reserved interconnection capacity.

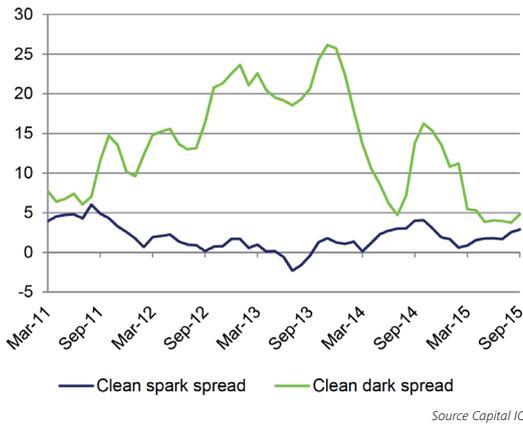
German power prices, around 33 €/MWh up from below 30 €/MWh during the summer, finished the September month at their lowest level since September 2003, in a context of falling coal prices.

French day-ahead prices edged higher on the back of falling wind output as well as amid lower nuclear availability.

Also across the border, Electrabel's Belgian 1-GW Tihange-1 nuclear reactor was ramped back up after maintenance with a bearish influence on French prices.



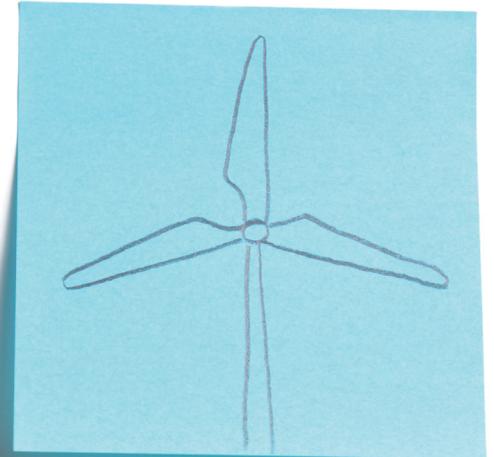
UK clean dark and spark spreads (£/MWh)



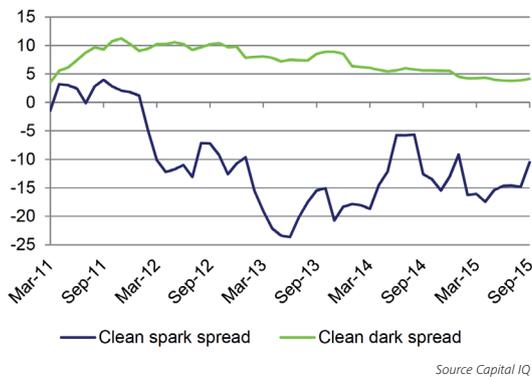
The UK Clean Dark Spread increased marginally depressed by the UK Carbon Price Support mechanism.

The UK Clean Dark Spread increased only marginally over the quarter as depressed by the UK Carbon Price Support mechanism at £18.08/mt equivalent to a carbon price in excess of 25 €/t, or a 23 €/MWh extra penalty for a coal-fired power station in the UK. The UK Carbon Price Support is due to rise to £30/t by 2020 in 2009 prices.

The UK Clean Spark Spread has gone up only modestly with lower gas prices (and a low oil price forward curve) but with lower electricity prices as well.



German clean dark and spark spreads (€/MWh)



Altogether, market signals do not seem to have responded yet to the latest policy measures aimed at penalising coal.

The German Clean Dark Spread remained flat or increased only fractionally. The falling German power price was expected to squeeze coal-fired profit margins, but the clean dark spread benefited from sharply lower fuel costs, including lower coal prices as a result of the producing countries' currencies being weak against the euro or the US dollar.

The German Clean Spark Spread reduced its losses compared to the September months over the previous years (- 10 €/MWh versus - 12.5 €/MWh in 2014 or - 15 €/MWh in 2013). Despite a lower gas price and lower oil price curve, the pressure on gas-fired power plant profitability does not seem ready to ease anytime soon. The Futures curves for most continental Clean Spark Spreads are falling for the month-ahead, quarter-ahead and year-ahead through 2016. This takes place in a context where the German Government has announced closure of another 2.4 GW of coal capacities.

The theoretical CO2 «switch» price was calculated to 39.8 €/tCO2 in the German spot power market and 39.6 €/tCO2 in the British spot power market.

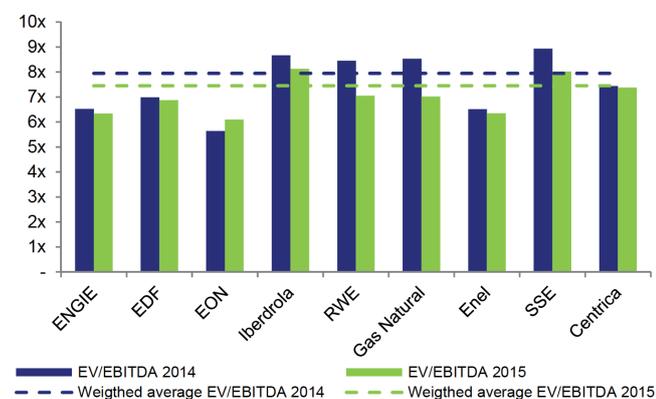
Altogether, market signals do not seem to have responded yet to the latest policy measures aimed at penalising coal.

Spotlight on Power and Utilities market

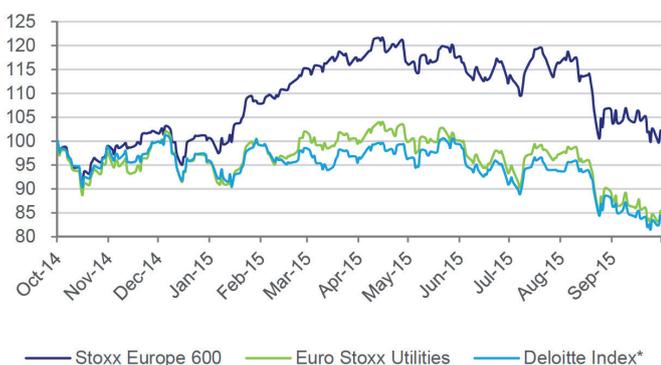
Capital market overview

	Deloitte Index ⁽¹⁾	Engie	EDF	EON	Iberdrola	RWE	Gas Natural	Enel	SSE	Centrica
Market cap. ratios										
Currency		EUR	EUR	EUR	EUR	EUR	EUR	EUR	GBP	GBP
Market cap. (Sept. 30, 2015)		35 870	31 665	15 845	36 901	6 758	17 768	37 030	14 583	11 602
3m stock price performance	-9%	-14%	-21%	-36%	-2%	-48%	-12%	-4%	-3%	-13%
YoY stock price performance	-16%	-27%	-39%	-46%	5%	-67%	-25%	-4%	-2%	-25%
Market multiples										
EV/EBITDA 2014	8,2x	6,5x	7,0x	5,6x	8,7x	8,5x	8,5x	6,5x	8,9x	7,4x
EV/EBITDA 2015	7,7x	6,3x	6,9x	6,1x	8,1x	7,1x	7,0x	6,3x	8,0x	7,4x
P/E 2014	10,3x	14,7x	8,6x	n.m.	15,7x	3,7x	12,2x	n.m.	21,9x	n.m.
P/E 2015	12,2x	12,4x	8,0x	9,7x	15,3x	6,1x	11,9x	12,2x	12,4x	13,0x
Price/book value 2014	1,5x	0,7x	0,9x	0,6x	1,0x	0,6x	1,2x	1,1x	2,4x	3,7x
Profitability ratios										
ROE forward 12m	13%	6%	11%	7%	7%	11%	11%	10%	19%	33%
ROCE forward 12m	8%	5%	6%	8%	5%	11%	7%	9%	12%	13%
EBITDA margin 2014	19%	15%	23%	7%	23%	11%	18%	20%	7%	9%
EBITDA margin 2015	20%	16%	23%	7%	23%	13%	20%	20%	8%	9%
EBIT margin 2014	12%	9%	12%	4%	14%	6%	12%	13%	5%	5%
EBIT margin 2015	12%	9%	12%	4%	13%	8%	12%	12%	6%	5%

⁽¹⁾: Deloitte Index is composed of Engie, EDF, EON, Iberdrola, RWE, Gas Natural, Enel, SSE and Centrica
n.m.: not meaningful



Source Capital IQ



Source Capital IQ

⁽¹⁾: Deloitte Index is composed of Engie, EDF, EON, Iberdrola, RWE, Gas Natural, Enel, SSE and Centrica

Key messages from brokers and analysts

Morgan Stanley – September 21, 2015

“Price outlook – no relief.”

HSBC – August 10, 2015

“China: Massive influence on commodity prices particularly coal, which sets German power prices.”

HSBC – July 28, 2015

“Oversupplied UK power market towards 2020’s call into question the need for Hinkley C nuclear reactor, in our view.”

UBS – August 18, 2015

“Utilities returns/earnings depressed by acquisitions and poor capex discipline.”

Morgan Stanley – September 15, 2015

“German Nuclear Provisions: More noise, more risk, but a long process ahead.”

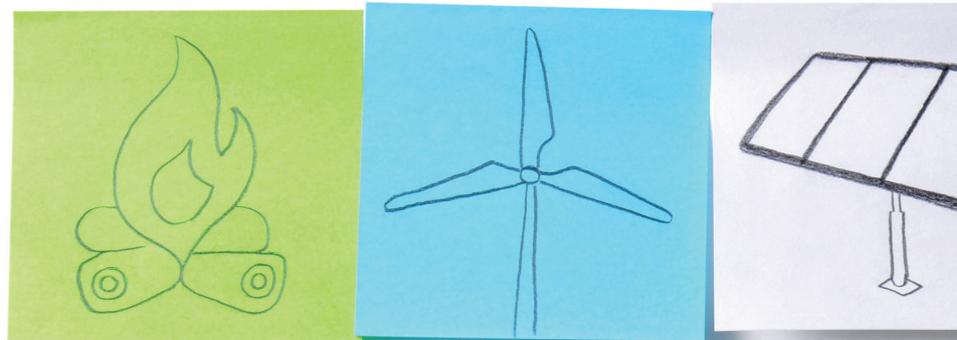
M&A Trends

Transactions involving Power & Utilities companies

- **China General Nuclear Power Corporation and China National Nuclear Corporation** intend to acquire up to **30% stake in Hinkley Point C nuclear project situated in the UK from EDF**. The total installed capacity of the project is estimated to be 3,200 MW with two 1,600 MW each. (GlobalData - October 7, 2015)
- The Italian antitrust regulator has given the go-ahead for the **acquisition by ERG Power Generation**, the leading wind energy operator in Italy, **from E.ON for €950m** of the 527 MW **Terni hydroelectric power facility** made of 16 hydropower plants. The amount of the transaction remain undisclosed. (Reuters - October 6, 2015)
- **Nordex**, a German wind turbine manufacturer, **acquired Acciona Windpower**, a subsidiary of Acciona Group, for **€785m** to form a major player in the wind industry. Nordex has a strong market position in Europe, while Acciona Windpower is well-positioned in the Americas and emerging markets. (Reuters - October 5, 2015)
- **Dong Energy**, the Danish integrated energy company, **intends to issue its shares in an IPO** within 18 months. Following the IPO, the Danish government plans to hold a controlling shareholding in the company. The current value could be **worth as much as €9.4bn**. (SeeNews – September 21, 2015)
- **DONG Energy acquired rights on the Hornsea Project from Smart Wind**, a joint venture of Mainstream Renewable Power and Siemens. The transaction may be worth **€550-750m**. The Hornsea represents a potential of 4 GW offshore wind capacity in the UK and an investment of up to £12bn. (The Herald – August 22, 2015).
- **EDF** has agreed to **acquire** a minimum of 51% and a maximum 75% **stake in Areva NP**, the reactor and service business of Areva SA. Areva SA should retain a maximum 25% stake. The entire **Areva NP's value is estimated at €2.7bn**. (GlobalData – July 31, 2015)
- **SSE PLC announced acquisition from Total E&P** of a **20% interest in four gas fields in new Shetland** gas plant known as Greater Laggan Area. Value of the transaction comprise consideration of **£565m** for assets plus £350m in forecasted investments. (Reuters – July 29, 2015)

Transaction involving equity funds

- **Iberwind**, the Portuguese wind firm with a 684 MW fleet **will be acquired for €288m** by Cheung Kong Infrastructure Holdings and Power Assets Holdings, two subsidiaries of **Hong Kong billionaire Li Ka-Shing**. (GlobalData - October 8, 2015)
- **Kuwait Investment Authority (KIA) acquired 25% of Global Power Generation from Gas Natural through a USD550m** capital increase. Global Power Generation has power plants in Mexico, Costa Rica, Puerto Rico, Dominican Republic, Panama, Kenya and projects under development in Australia (See News - October 6, 2015)
- **DONG Energy sells 50% interest in the German 330 MW Gode Wind 1 project for €780m to Global Infrastructure Partners**, a private equity infrastructure investment fund. As part of the transaction, GIP will issue a 10-year project bond to a group of German insurance firms. (GlobalData - September 11, 2015)
- **Duet Group**, a UK based alternative asset management firm has entered into scheme to **fully acquire Energy Developments Ltd**, an Australian-based provider of low greenhouse gas emission energy, **for \$1,400m**. (MarketLine – July 24, 2015)
- **KKR acquired** from Gestamp Renewables a **80% stake in Gestamp Solar**, a Spanish PV developer, **for around \$1.0bn**. Gestamp Solar is currently operating in 300 MW but aims to have around 2.5 GW of installed capacity by 2020. (GlobalData – July 22, 2015)



European Power and Utilities companies wrap-up

Despite a **positive effect of weather** conditions HY15 **performances continue to be pledged** with **low prices** on wholesale electricity market due to both **pressure on commodities prices** and a broader **slowdown in the European economy**.

German utilities having nuclear generation are facing significant **regulatory threats related to (i) the nuclear funding obligations** that would be required in the coming law and (ii) implementation **measures to deliver carbon savings** and reform the power market.

E.ON announced in September that it expects to record **impairment charges close to €10bn**. **E.ON points out** the impact on profitability of **persistently low wholesale prices for electricity** as well as the **insufficient policy and regulatory environment**.

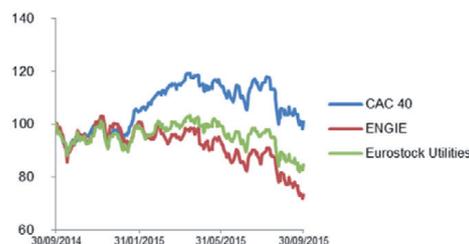
Transformation and reorganisation of Utilities to address current market structural changes are still on the spotlight with namely **continuing deleveraging strategy** (Enel, Engie, E.ON, and Centrica).

Outlook confirmed for all Utilities 2015.

While **E.ON confirmed its outlook** the **net income should be substantially negative** because of the expected **impairment charge**.



Share
Price Perf.
Sep 2014
Sep 2015



Key
Reported
Financials

In billion of €	H1 2015	H1 2014	Var.
Sales	38.4	36.1	6%
EBITDA	9.1	8.8	3%
Operating Income	4.5	5.1	-12%
Recurring net income Gr	2.9	2.5	16%
Net Income Gr Share	2.5	2.5	0%
Operating CF	6.1	6.2	-2%
Net Capex	-6.4	-5.6	14%
Net debt	-37.5	-34.2*	10%

* as of Dec. 31, 2014

In billion of €	H1 2015	H1 2014	Var.
Sales	38.5	39.3	-2%
EBITDA	6.1	6.4	-5%
Operating Income	3.4	3.9	-13%
Recurring net income Gr	1.8	2.0	-10%
Net Income Gr Share	1.1	2.5	-56%
Operating CF	6.4	6.1	5%
Net Capex	-2.7	-2.5	8%
Net debt	-26.8	-27.5*	-3%

* as of Dec. 31, 2014

H1 2015
Highlights

- **Ebitda amounted to €9.1bn, +3.6% vs H1 2014**, due to good operational performance in an unfavourable market context.
- **Highest nuclear output** recorded in H1 since 2011.
- EDF also announced a **strategic review of assets out of France** regarding (i) **fossil-fired plants** and (ii) **activities related to fossil-fired generation and supply not directly linked to its core business**.
- EDF signed a **MoU with Areva to contemplate the acquisition of a majority stake (at least 51%) in Areva NP**, the reactor and service business of Areva SA.
- **EU sentence on State Aid**: EDF has been sentenced to **reimburse €0.9bn** to the French State for State aid not compatible with EU legislation.

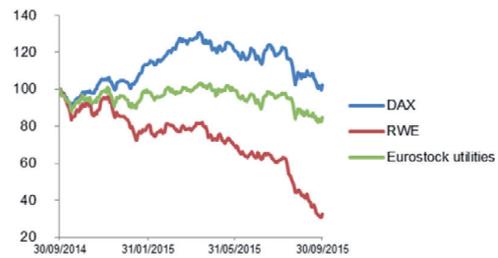
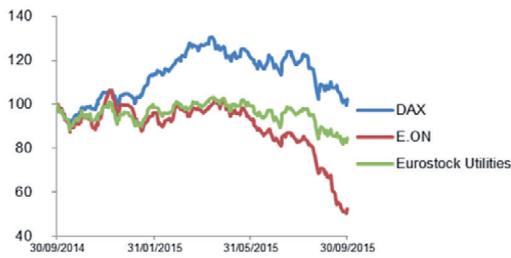
FY 2015
Outlook

- 2015 and 2015-2018 vision confirmed.
- Agreement with Areva: binding offer submitted by EDF during Q4 2015.

- **Ebitda reached €6.1bn, -4.8% vs H1 2014**, due to the drop in commodity prices, the contraction in LNG activities and the unavailability of Doel 3 and Tihange 2 nuclear plants and Doel 1 being offline.
- **Improved operational cash generation vs H1 2014.**
- **Further implementation of development strategy**:
 - 1.5 GW in H1 mainly renewables and gas-fired ;
 - Further developments in gas infrastructures ;
 - Significant step towards solar development with Solairedirect acquisition.
- **Agreement has been reached with Belgian government on Doel 1&2 extension and nuclear contribution.**

- 2015 outlook confirmed with stronger performance expected in H2 2015.

Share Price Perf. Sep 2014 Sep 2015



Key Reported Financials

In billion of €	H1 2015	H1 2014	Var.
Sales	57.3	54.8	5%
EBITDA	4.3	4.9	-12%
Operating Income	2.6	3.2	-19%
Recurring net income Gr	1.2	1.5	-20%
Net Income Gr Share	1.1	0.8	38%
Operating CF	4.2	5.5	-24%
Net Capex	-1.6	-1.7	-6%
Net debt	-29.3	-33.4*	-12%

* as of Dec. 31, 2014

In billion of €	H1 2015	H1 2014	Var.
Sales	25.1	25.1	-
EBITDA	3.2	3.4	-6%
Operating Income	2.0	2.3	-13%
Recurring net income Gr	0.5	0.7	-29%
Net Income Gr Share	1.7	1.0	+70%
Operating CF	0.7	2.0	-65%
Net Capex	-1.2	-1.5	-20%
Net debt	-25.6	-31.0*	-17%

* as of Dec. 31, 2014

H1 2015 Highlights

- Ebitda amounted to €4.3bn, -13% vs H1 2014, reflecting lower achieved prices in power and oil and the weak ruble as well as disposal effects.
- German Government confirms in its new energy law that nuclear operators be backed financially by their parent companies until reactor closure, dismantling, nuclear waste disposal and end storage have taken place. Anticipating that the law will be passed, E.ON has now decided to retain its German nuclear business (plus back-end risks) rather than spinning it off through Uniper, that would impact E.ON ability to sharply cut-off cost and net debt.
- E.ON expects to record impairment charges in the higher single-digit billion euro range in Q3 meaning close to €10bn. E.ON explain this decision as the result of updated assumptions regarding persistently low wholesale prices for electricity and other commodities as well as the insufficient policy and regulatory environment and its impact on profitability.
- E.ON continues to build a strong track record in its offshore wind project roll out:
 - 500MW coming online in H2, 400MW planned for 2018 and FID to be made on a further 385MW ;
 - The new large conventional plants (1.9GW) coming online in H2 will become a key part of Uniper.

- Ebitda reached €3.2bn, -7% vs H1 2014, due to the continued erosion of margins in conventional electricity generation and the unexpected operational and technical problems at RWE npower.
- RWE replaces cancelled €1,750 million hybrid bond with new hybrid capital.
- Large offshore wind farms Nordsee Ost (295MW capacity) and Gwynt y Môr (576MW capacity) inaugurated.
- More clarity on political environment in Germany and the UK:
 - Renouncement of the climate levy for power plants tabled by the German government -> positive effect ;
 - UK competition authority, after investigation, does not see impediments to competition in wholesale electricity or gas markets -> positive effect ;
 - UK government abolishes advantages for green energy producers in connection with the climate protection levy -> adverse effect.

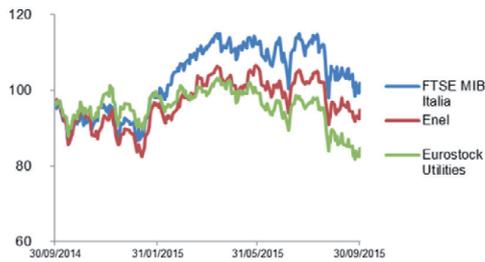
FY 2015 Outlook

After impairment announcement E.ON reaffirms its outlook for full-year 2015 (EBITDA of between EUR7.0 and EUR7.6 billion and recurring net income of between EUR1.4 and EUR1.8 billion). Due to impairment charge E.ON net income should be substantially negative.

- 2015 outlook confirmed.



Share
Price Perf.
Sep 2014
Sep 2015



Key
Reported
Financials

In billion of €	H1 2015	H1 2014	Var.
Sales	37.6	36.1	4%
EBITDA	8.0	7.9	1%
Operating Income	5.1	5.0	2%
Recurring net income Gr	na	na	
Net Income Gr Share	1.8	1.7	6%
Operating CF	3.0	1.8	67%
Net Capex	-2.8	-2.5	12%
Net debt	-39.9	-37.4*	7%

* as of Dec. 31, 2014

In billion of €**	H1 2015	H1 2014	Var.
Sales	21.6	22.0	-2%
EBITDA	2.0	2.1	-4%
Operating Income	1.9	1.4	32%
Recurring net income Gr	0.9	0.7	15%
Net Income Gr Share	1.5	0.7	97%
Operating CF	1.9	1.5	27%
Net Capex	-0.5	-0.6	-6%
Net debt	-6.9	-7.3*	-6%

* as of Dec. 31, 2014

**assuming a fixed exchange rate of 1.40 into euros

H1 2015
Highlights

- Ebitda amounted to €8.0bn, +4% vs H1 2014, principally attributable to a rise in sales of fuels, gas and green certificates.
- Regarding the Latam reorganization (acquisition of 60.6% stake on Enersis in late 2014), the final structure outlined by the board of directors is compliant with Chilean authority requirements: split into two listed company with **Enersis Chile** (power generation and distribution in Chile) and **Enersis Americas** (activities in Colombia, Brazil, Peru and Argentina).
- Enel confirmed that the sale of Slovenské Elektrarne (Slovakia) will follow a dual step:
 - Sale of the first stake expected in Q4 2015;
 - Full disposal by 2018/2019.

- Operating profit reached €1.9bn, +36% vs H1 2014, due to the increase of customer demand (colder weather) and lower environmental supply obligation costs.
- Centrica will reduce and limit scale in E&P and generation, lowering its capital intensity:
 - Capex to these areas will fall by about £1.5bn over the next five year ;
 - Transition to a smaller E&P business focused on the north Sea and East Irish Sea ;
 - Exit wind JVs to release capital.
- British Gas announced in July a second gas price reduction in 2015 with an additional cut of 5%.

FY 2015
Outlook

2015 and 2015-2019 strategic plan confirmed.

- 2015 outlook confirmed.



Share Price Perf. Sep 2014 Sep 2015



Key Reported Financials

In billion of €	H1 2015	H1 2014	Var.
Sales	16.1	15.2	6%
EBITDA	3.8	3.6	6%
Operating Income	2.2	2.2	-
Recurring net income Gr	1.3	1.2	8%
Net Income Gr Share	1.5	1.4	7%
Operating CF	3.0	2.8	7%
Net Capex	-1.3	-1.2	8%
Net debt	-26.2	-25.3*	4%

* as of Dec. 31, 2014

In billion of €	H1 2015	H1 2014	Var.
Sales	13.7	12.1	13%
EBITDA	2.7	2.4	13%
Operating Income	1.6	1.8	-11%
Recurring net income Gr	na	na	
Net Income Gr Share	0.7	0.9	-22%
Operating CF	1.6	1.4	14%
Net Capex	-0.7	-0.7	0%
Net debt	-16.7	-16.9*	-1%

* as of Dec. 31, 2014

H1 2015 Highlights

- Ebitda amounted to €3.8bn, +6% vs H1 2014, thanks to the improvement of the Networks and Renewables businesses partially offset by the drop in the Generation and Supply Business.
- The process of securing the necessary permits for the integration of UIL Holdings with Iberdrola USA continues: expectation to close the deal before the end of 2015.
- More clarity on political environment in the UK: CMA investigation preliminary findings do not imply significant changes to current model

- Ebitda reached €2.7bn, +10% vs H1 2014, mainly due to the contribution of the Chilean energy company (€295m EBITDA in H1 2015) which is fully integrated since 30th November 2014
- Gas Natural México placed two bonds for a total of MXN 2.8bn (~ €151m) on the Mexican Stock Exchange.
- On June 2015, Gas Natural Fenosa reached an agreement to acquire 100% of renewable energy company Gecalsa (10 wind farms and one photovoltaic plant with total capacity of 237.5 MW), for an enterprise value of €260m.

FY 2015 Outlook

2015 outlook confirmed.

The integration between UIL Holdings and Iberdrola USA is envisaged for completion in the last quarter of 2015. The deal is pending various approvals from different regulatory bodies.

2015 outlook confirmed.

The CGE acquisition accelerated attainment of the objectives set out in the 2013-2015 strategic plan.

New strategic plan to be released in late 2015.

Talking points

1 - An electricity market for Germany's energy transition, July 2015: a new Energy-Only Market design, with Capacity Reserve rather than Capacity Market

The introduction of an **Energy-Only Market to be supported by a capacity reserve as opposed to a capacity market is at the heart of the White Paper of the German Government** proposal which outlined the energy market of the future.

The White Paper is the result of a broad-based, transparent discussion involving all stakeholders and initiated by the Federal Ministry with the publication of a Green Paper in October 2014.

The German White Paper aims **at defining an electricity market design which will be able to guarantee a secure and low-cost electricity supply** with due respect to market-driven principles, when a large share of the power is generated from renewable energy sources.

Two concepts are examined:

- a further developed electricity market (referred to as **"Electricity Market 2.0"**), or
- an **electricity market complemented by an additional market which exclusively remunerates the electricity capacity** ("Market + Capacity Market").

One of the main conclusions of the German White Paper is to discard the Market + Capacity Market option on the grounds that a capacity market:

- constitutes a **substantial intervention in the competitive electricity market** and therefore a market distortion;
- entails potentially **high cost risks**;
- **keeps in operation a fleet of old technologies** which are potentially unnecessary and uncompetitive;
- hampers – or crowds out – investment into new energy supply systems; and fundamentally
- remunerates all capacity, and not just the capacity that is required in real time.

The other major conclusion of the **German White Paper is the German Government's preference for a reinforced Energy-Only Market, referred to as Electricity Market 2.0**, backed by a reserve capacity as opposed to a capacity market mechanism.

The concept of the **Electricity Market 2.0** relies on the following:

- An Energy-Only market **will strengthen the existing market mechanisms** so that the electricity market is able to refinance the necessary capacities endogenously and ensure security of supply.
- The Energy-Only market is to **be based on a single** (Germany-wide) **price zone** (EPEX Spot),

as opposed to several price zones which make the market less transparent, reduce liquidity and introduce different grid fees and different levels of EEG (the price component to finance renewable energy sources).

- Energy-Only Markets are considered to **be the most appropriate market instruments to deliver reliable investment signals**
- Energy-Only Markets **deliver the same level of security of supply** as energy traders are committed to deliver the power or are penalised if they do not.
- Grid investment will be extended to support single price zone
- The only separate market (outside of the Energy-Only Market) will be the Balancing Market.

The Electricity market 2.0 is cheaper than capacity payments according to the White Paper: the current overcapacity on the European market (assessed at 60 GW today, against a total installed capacity of 960 GW in the EU today), together with increased cross-border trade, have resulted in lower and less frequent peak prices already. As a result, electricity prices have gone down markedly. However peak prices still remain above the investment signal for a number of hours during the year, and therefore constitutes investment signals.

The White Paper expects that peak prices and futures together with a reformed ETS system – including a minimum EUA price of 15-20€/t as requested by some market participants - **will give investors the adequate confidence** to develop new capacities in a future market design. The Electricity market 2.0 is also compatible with long-term contracts which will continue to offer ways to remunerate dispatchable capacity if and when needed.

The Electricity market 2.0 is complemented by an additional security component by way of a capacity reserve, which is to be controlled and operated by TSOs in the same way as a grid reserve rather than a market mechanism that could impair the electricity market price. The capacity reserve could be made up of conventional plants as well as storage facilities like pump storage and batteries to contribute to balancing generation and consumption. The cost of the capacity reserve would be passed into the grid transportation fee. The question under this scheme will be whether TSOs in Germany will book long term capacities or buy capacity obligations, or will have to acquire the generation assets.

The German White Paper aims at defining an electricity market design which will be able to guarantee a secure and low-cost electricity supply with due respect to market-driven principles.

The major conclusion of the German White Paper is the German Government's preference for a reinforced Energy-Only Market, referred to as Electricity Market 2.0, backed by a reserve capacity as opposed to a capacity market mechanism.

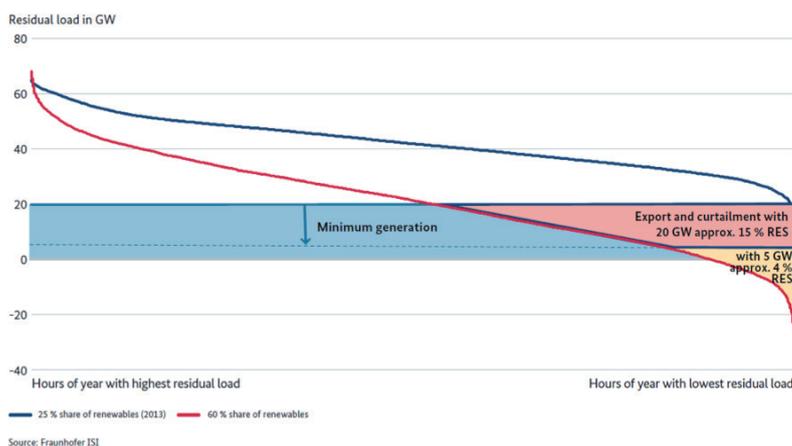
The merit of the Electricity Market 2.0 is that renewable energy sources sell their output to the market and are constantly integrated into the power supply system. The electricity mix comprises a mix of renewable and flexible conventional plants based on bioenergy which can adapt to fluctuation in consumer load and intermittency of renewables, and which will progressively replace the conventional centralised fleet.

With the anticipated increase in renewable capacities, German electricity market participants expect that the residual load – i.e. the demand which needs to be covered by the rest of the power plant fleet after deducting generation from wind and solar power – will decrease. As a consequence, the number of hours when flexible conventional capacities need to be dispatched at a higher marginal cost will decrease, and so will the price of power for consumers.

As shown in the graph below, in a situation with 25% RES share, the residual load varies from 60+ GW down to around 20 GW over a typical year, whilst the same residual load drops to minus 25 GW with a 60% renewable electricity share. In the German electricity market design, there are quite a number

of hours when the RES plants are the marginal producers - therefore the electricity price setters - at a zero marginal cost. During these hours, the German government insists on the merit for flexible, energy-intensive users to make the most of a power supply at an almost zero-cost. Alternatively, excess power will either be exported or feed a number of storage facilities, as is already the case when excess renewable power is used to heat up swimming pools or recharge electric car batteries.

Figure 12: Effects of minimum generation with an increasing share of renewable energy



2 – Grid-exodus highly unlikely on three main limitations

(*) EIA DOE NREL Database, Open EI, UBS

The electricity market design is moving gradually from a centralised to a decentralised system where power is produced locally by renewable-based electric generation facilities or by the consumers themselves with their roof-top PV installations. As a consequence, the need for a number of consumers to stay connected to the High-Voltage grid of the TSOs, or even sometimes the Mid- to Low-Voltage grid of the DSOs has been questioned. **What is at stake is the economic arbitrage between the cost of a connection to the TSO's infrastructure and the cost of energy independence at (almost) all times for a typical household.** A number of recent studies (*) have assessed that, although a mass-exodus from the distribution grid was neither likely nor even possible, an exit from the DSOs grid for a number of consumers was however feasible depending on certain technical and regulatory conditions.

What would be the minimum requirement for a household to be able to exit the distribution grid?

According to the calculations below, a typical house with a 65 sqm roof-surface could host a 2-5kW solar PV park and meet 42% of the household's electricity needs in the summer in California, about 50% in Italy and 54% in Spain. If the same was also equipped with a 5kWh battery, then such percentage would rise to 63% in California, 87% in

Italy and around 93% in Spain. Although California is the most favourable place in terms of irradiation, a significantly higher daily average consumption of electricity per household (twice the level of Italy's or Spain's) makes it difficult for Californian households to become self-sufficient.

In the winter however, self-sufficiency based on simple roof-top PV would not exceed 27% in Italy or Spain and 30% in California. Combining roof-top PV panels with lithium-ion batteries would still meet 53% of the household's winter electricity needs in California and up to almost 70 % in Spain, but no more than 25% in Germany for instance.

Based on the above figures, it could seem highly likely that solar PV will allow a vast number of residential consumers to get off the grid and desert their old utility at the same time.

All economic and market analyses however come to the conclusion that a grid-exodus is going to be a very difficult and potentially highly costly exercise, if not technically impossible in reality.

The first difficulty is technical. Li-ion batteries were originally created for portable electronics, not to store excess power over long period of time, never mind from summer to winter. Similar to what happens to a smartphone, the batteries runs low within a very few days.

All economic and market analyses come to the conclusion that a grid-exodus is going to be a very difficult and potentially highly costly exercise, if not technically impossible in reality.

The main obstacle will lie in the fact that, in order for households to meet their power needs in the winter, they will have to oversize their PV parks and storage systems up to their maximum electricity requirement in the winter. This will imply that they will have a structural excess-output during the rest of the year, in the summer in particular, which will require them to stay connected to the grid in order to export the excess power they produce. With a typical 5kW PV park, an Italian family will be 30 to 60% self-sufficient in the winter but will produce up to 1.7 times its daily needs in the summer, with a large mismatch between hours of production and hours of consumption as PV produces during daytime when most residential customers are at work.

Based on various investment assumptions (**), the studies come to the conclusion that the necessary exercise of oversizing the PV capacity and the batteries in order to be able to get off the grid in 2015 would result in a significant extra cost over the typical annual electricity bill paid by a household connected to the grid. This amount – not a saving but the extra cost of exiting the grid in fact – would be around 1600 € even for a Spanish household

3 - Nuclear investments in the EU

Under the New Policies Scenario of the IEA 2014, the share of nuclear in the global electricity generation mix under the same scenario of the IEA remains stable at 11% over the outlook period. However, nuclear is second-fastest developing fuel for power generation behind the renewables and it increases by some 90% in absolute terms from now until 2040.

Although most of nuclear expansions take place in Asia, the contribution of the nuclear industry to the EU energy mix looks uncertain in the future. A nuclear capacity of 18 GW is to be shut down over the 2012-2040 period and the share of nuclear in the power generation capacity goes down from 13% to 9% under the New Policies Scenario of the IEA. But nuclear is set to remain the second largest contributor to the electricity production in the EU with a 21% share in 2040 (albeit down from 28% in 2014), just behind gas at 24%. It looks like nuclear is to be used at full-load everywhere it is not phased out.

A recent study from the Eurelectric association notes that a number of new regulations in the EU have introduced penalties which may result in safe, operational and competitive reactors to close ahead of normal economic lifetime. These specific nuclear regulations include

(i) an additional tax on thermal (to include nuclear) electricity in Sweden (1437 €/MW/month, around 22.5 m€/year for a typical 1300 MW plant),

in areas with good irradiation, around 2000 € for an Italian family and up to 3500 € annually for a residential consumer in Germany. US studies suggest that a consumer in California would also face an extra cost around 2800 US\$ per year.

The studies suggest that, by 2025, it will still make little economic sense for a household to have rooftop solar panels and batteries to become energy independent. The extra annual cost is expected to be still around 1000 € in Spain and 1700 € in Germany.

The above studies convey another message: **contrary to largely-spread perception, solar is not expected to be a residential phenomenon. Most incremental solar capacities in the US and Europe are either "utility-scale" (ground-mounted) or "utility-like" (developed by or for industrial customers). Solar will be primarily large-scale and it may be at the heart of new business model of utility companies.**

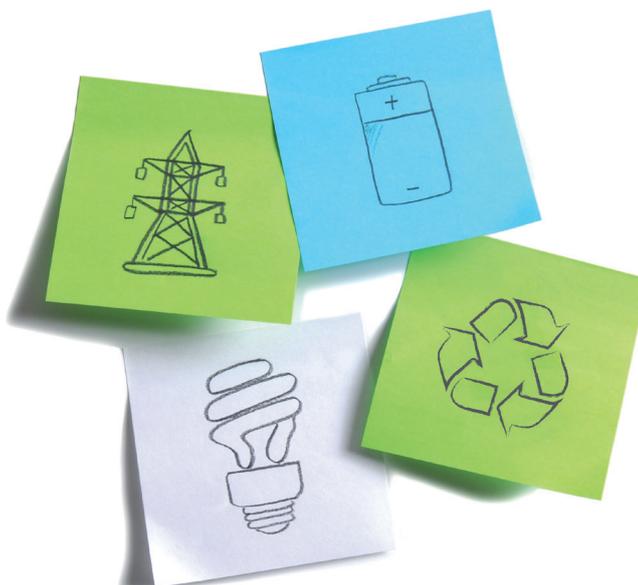
(**) A typical household equipment including PV, plus battery plus back-up generator is assumed to amount to 40 000 € in Spain, and 75 000 € in Germany (UBS study).

- (ii) the 2010 German nuclear tax (about 16 €/MWh),
- (iii) the "nuclear contribution" in Belgium (about 15 €/MWh) since 2008
- (iv) the 2013 nuclear taxes in Spain (10 €/MWh, in addition to the 6.9 €/MWh decommissioning levy).

The study further notes that in a market environment where the wholesale electricity price is set by the short term marginal cost of the marginal supplier, currently around 33 €/MWh in Germany, this additional tax burden contributes to squeezing a number of nuclear plants out of the market.

Solar will be primarily large-scale and it may be at the heart of new business model of utility companies.

Nuclear is set to remain the second largest contributor to the electricity production in the EU with a 21% share in 2040.



This relatively new tax package on nuclear stands in sharp contrast to the early assessment of the EU electricity investments which will be needed to comply with the 2050 roadmap. In the *Energy Economic Developments - Investment perspectives in electricity markets – July 2015*, the European Commission estimates that the development of the 2050 roadmap will require a yearly investment in new power generation capacities around 50 € bn from now up to 2030, and that a new nuclear capacity between 80 and 180 GW will be needed by 2050. The EC further assumes that this new nuclear capacity will post a Levelized Cost of Electricity in the range of 70 to 110 €/MWh.

Investing in capital-intensive, low carbon projects – of which nuclear – with a view to competing on highly volatile wholesale power markets driven by short term marginal costs requires taking a long term view on stable policies, regulations and market arrangements. **The Eurelectric study stresses the fact that the latest nuclear taxation policies in a few EU member will not be supportive of new investments in the fresh capacities required by the 2050 Roadmap.**

In view of the current EU energy transition, some key benefits of the nuclear electricity have to be highlighted, in addition to being a zero-carbon, low marginal cost, long term baseload electricity generation:

- (i) Nuclear is by far the largest contributor to low-carbon electricity generation in the EU, with 53%.
- (ii) Nuclear is criticized for its lack of flexibility. However, although the baseload operating mode is by far the optimum, the **“load-gradient”** (or the ability of a nuclear plant to ramp up to meet unforeseen demand is close to 60 MW/minute whilst TSOs in extreme circumstances normally do not need more than 20 MW/minute.
- (iii) The Nuclear Safety Directive as amended 2014 improves nuclear security and makes nuclear safety regulators independent

- (iv) Nuclear is a very significant job contributor to the EU with 400,000 to 500,000 people working in the nuclear industry, directly and indirectly, in the EU today.

Rather than another new tax system, **the Eurelectric study proposes to let the nuclear industry compete on a level playing field and suggests the following nuclear framework** to be established:

1. EU wide assessment of the existing nuclear plants (given the average age of nuclear power plants in Europe is around 30 years) and decision regarding operation, new-build and decommissioning.
2. EU assessment at the EU level regarding the role of nuclear power, alongside other power generation technologies within the energy mix,
3. Nuclear-specific tax burdens that distort the economics of long-term operation of nuclear facilities and distort the wholesale electricity market should be avoided.
4. National regulators to develop harmonisation and standardisation regarding nuclear operations and components.
5. Improvement of nuclear safety and security in Europe to be not only through national efforts but also at the European level.
6. Effective cooperation between nuclear safety regulators;
7. Post-Fukushima safety upgrades should be implemented for existing reactors in a timely manner with the EU established stress test process.
8. Ensure independence of national safety regulators with adequate competencies and resources ;
9. EU coordination of R&D efforts in nuclear power generation and in waste management.
10. Research in innovative nuclear technologies to be supported at the EU level.

The European power sector is undergoing radical change. Renewable energy sources (RES), distributed generation and demand response are playing an increasing role in the power system. In the meantime, reduced demand due to the economic crisis, coupled with a rapid increase in variable RES with low variable cost, and a drop in the wholesale electricity prices, has seriously affected the business case for power generation, whether new or existing. In this new energy system, decentralised and centralised large-scale systems will depend on each other.

However today a clear EU regulatory package regarding nuclear waste management and storage, with acceptable technical solutions and permitted repositories, is still lacking.

The study stresses the fact that the latest nuclear taxation policies in a few EU member will not be supportive of new investments in the fresh capacities required by the 2050 Roadmap.

Today a clear EU regulatory package regarding nuclear waste management is still lacking.



4 – Renewables Support Mechanisms: what are they? How do they work?

RES are gradually moving to grid parity level as their technologies are becoming more mature. Under the economic theory, RES electricity, including solar and wind, could compete on the wholesale electricity market without any form of government support or subsidy as their marginal cost of generation is well below the short-term marginal cost of conventional power, at an almost zero cost. However, **the Levelised Costs Of renewable Electricity (LCOE) shows that RES sources will need financial support for quite a few years still.**

In fact, the financial mechanism which supports RES development significantly determines the extent to which (i) subsidised RES distort the electricity markets and (ii) introduce an imbalance in the generation adequacy (capacity supply & demand balance).

Depending on the level of market risk they face and the potential market distortion they may create, RES plants fall in the following categories:

1. Merchant plants:

RES plants are fully integrated to the electricity market. They compete with other sources of generation. They are responsible for selling their output on the market and balancing their generation. They face full volume, price and operation risks. They do not receive subsidies. They have to satisfy themselves with the benefit of the carbon price, if available. This is the case in Chile and some Latin American countries.

2. Subsidised-MW with full market integration:

RES plants are fully integrated to the electricity market. They compete with other sources of generation. They are responsible for selling their output on the market and balancing their generation. They face full volume, price and operation risks. However, they receive, from a government entity or otherwise, a subsidy per MW per year based on standard capital costs. This is the case in Spain today, but also in Finland and the Baltics.

3. Subsidised-MWh with limited market integration:

RES plants are fully integrated to the electricity market. They compete with other sources of generation. They are responsible for selling their output on the market and balancing their generation. However they receive a subsidy based on their production, on a per-MWh basis. The support could be either a **Feed-In Premium (FIP)**, i.e. a premium over the market price which is determined at contract signing (ex-ante), like in Spain. Or, they enter into a **Contract for Difference (UK, Germany)** where the premium varies according to market prices and is equal to the difference between a Strike Price and a Reference Price which is linked to market prices. Alternatively, RES reduce their market price exposure by receiving **Green Certificates** on top of the market price (Italy). The premium is equal to the price of the Green Certificate which is a traded financial security and whose value varies according to the Green Certificate market.

4. Subsidised-MWh without market integration:

RES are not integrated in the electricity market and have no market risk. They are not in the merit order and are not responsible for balancing, as TSOs or DSOs offtake their output. RES receive subsidies based on production on a per-MWh basis. This subsidy is referred to as a **Feed-In Tariff (FIT)**, as is the case in France.

Under FIT or FIP mechanisms, RES generators are relatively immune to market price mechanisms.

They further benefit from dispatch priority over other sources of electricity. Therefore their exposure to volume risks is also limited. FIT or FIP mechanisms have attracted criticism for generating negative prices on the wholesale market and high prices for end-consumers. In some countries, significant FIT- or FIP-related liabilities have not been passed yet to the final users' bills.

The table below summarises the various risks and benefits of the different RES support schemes:

	Feed-in Tariff	Feed-In Premium	Contract for Difference	Green Certificate	Investment subsidy
Support Scheme	Guaranteed price based on output	Guaranteed premium over market price, based on output. Defined at contract signature	Market-based premium equal to the difference between Strike Price and Reference Price, based on output	Market-based premium (Green certificate market price) over market price, based on output.	Capital Subsidy per MW of capacity at investment stage
Market integration	RES plant does not sell output	RES plant sells output on the market	RES plant sells output on the market	RES plant sells output on the market	Merchant plant. RES sells output on the market
Balancing responsibility	RES does not have balancing responsibility	RES plant is balancing responsible	RES plant is balancing responsible	RES plant is balancing responsible	RES plant is balancing responsible
Price risk	No	Yes	Yes	Yes	Yes
Volume risk	Yes	Yes	Yes	Yes	Yes
Priority dispatch	Yes	Yes	Yes	Yes	No
New capacity based on adequacy requirements	No. Administrative authorisation is delivered to Projects	Authorisation or tender for new capacities based on supply & demand	Authorisation or tender for new capacities based on supply & demand	Green Certificate market	Authorisation or tender for new capacities based on supply & demand
Typical market	France	Germany, Spain, Italy	UK, Germany	Italy, Belgium	Chile, Latin America

The Levelised Costs Of renewable Electricity (LCOE) shows that RES sources will need financial support for quite a few years still.

Under FIT or FIP mechanisms, RES generators are relatively immune to market price mechanisms.

Policy and Regulation Radar

This section summarizes the key changes respectively in the EU or in the country regulation that may significantly affect the power and utilities companies.

What is changing in the EU regulation?

Energy Union strategy: Commission's Energy Summer Package

Key features	Insights
<p>On 15th July the EC presented a set of proposals named “Summer Package” following the strategy to complete the European Energy Union adopted by the European Commission (EC) on February 2015. This paper focuses on the target to reduce greenhouse gas emissions by at least 40% domestically by 2030. The other targets namely on Energy efficiency and internal energy market are not addressed in the EC document.</p> <p>The package presents proposals to deliver a new deal for energy consumers, to launch a redesign of the European electricity market, to update energy efficiency labelling and to revise the EU Emissions Trading System.</p> <p>This package is an important step towards implementing the Energy Union strategy giving prominence to the energy efficiency and with the consumers at the heart of the market.</p> <p>In order to complete this package the EC, the European External Action Service and EU Member States published an EU Energy Diplomacy Action Plan that will help to meet the external objectives of the Energy Union strategy. This Plan is focused on diversifying energy sources, suppliers and routes to the EU through strengthened energy cooperation and exploring the potential of LNG.</p>	<p>New deal for energy consumers. The target is to empower consumers to act as buyers and sellers – with innovative companies offering new services, price comparison and facilitate switching suppliers, but also to leverage their bargaining power through collective schemes and freely generate and consume their own energy.</p> <p>New energy market design. The target is to improve the flexibility of electricity market and to keep the electricity grid stable by:</p> <ul style="list-style-type: none">• Offering consumers the possibility to adjust their consumption to real time prices;• Ensuring that markets provide the right signals for investments• Building missing electricity infrastructure and making better use of existing infrastructure;• Ensuring flexible trading: for efficient integration of renewables, traders need to be able to trade electricity as close to real time• Eliminating regulated prices and inefficient support to give the right signal to investors. Renewable energy producers need to be able to compete on an equal footing with conventional energy producers.• Introducing a more coordinated approach to renewable energy support schemes across Member States. <p>New proposals for energy labelling. The EC has proposed to return to the original A to G energy label scale, simpler and well understood by consumers. This will help consumers to save energy and money.</p> <p>Revision of the EU Emissions Trading System (EU ETS). This is the first legislative step towards implementing the EU's commitment to reducing GHG emissions by at least 40% domestically by 2030.</p> <p>The quantity of allowances will decline by 2.2% every year starting from 2021. The allocation of free allowances will be focused on the sectors at highest risk of relocating their production outside the EU. Further, the EC proposes that revenues from the emission trading are used by Member States to finance actions to help third countries adapting to the impacts of climate change.</p>
	Next steps
	<p>The proposals have been submitted to the European Parliament and to the Council. They will discuss them and together will reach an agreement.</p> <p>Following the public consultation on electricity market design, the Commission will prepare legislative proposals in the second half of 2016.</p>

[Link: Transforming Europe's energy system - Commission's energy summer package](#)

New Integrated Strategic Energy Technology (SET) Plan

Key features	Insights
<p>Following the strategy adopted by the European Commission (EC) on February 2015 to complete the European Energy Union, on 15th September the EC adopted the new Integrated Strategic Energy Technology (SET) Plan.</p> <p>The upgraded SET Plan proposes ten focused research and innovation actions. These actions will contribute to achieve the research and innovation objectives of the Energy Union.</p> <p>The Plan aims to accelerate the development of low-carbon technologies. It seeks to improve new technologies and bring down costs by coordinating research and helping to finance projects. The research should be based on cooperation amongst EU countries, companies, research institutions, and the EU itself.</p>	<p>In particular, the SET Plan:</p> <ul style="list-style-type: none">• Identifies 10 actions for research and innovation based on:<ul style="list-style-type: none">- become the global leader in renewable energy;- facilitate consumer participation and progress to a smart energy system;- develop energy efficient systems;- diversify options for sustainable transport;- step up research and innovation activities on the application of carbon capture storage and use;- increase safety in the use of nuclear energy.• Addresses for these actions the whole innovation chain, from basic research to market uptake, both in terms of financing as well as regulatory framework.• Proposes to measure progress via overall Key Performance Indicators (KPI's).
	<p>Next steps</p> <p>For each of the ten priority actions the Commission should define with the Member States: the level of ambition and priorities, the modalities for the implementation and the timing for achieving results.</p>

[Link: Towards an Integrated Strategic Energy Technology \(SET\) Plan](#)

EU agreed a common position before the UN Climate Change Conference in Paris

Key features	Insights
<p>On 18 September the Council of Environment Ministers adopted the EU position for the 21st session of the Conference of the Parties (COP 21) to the United Nations Framework Convention on Climate Change (UNFCCC).</p> <p>The EU position is to keep the goal of limiting global warming below two degrees Celsius.</p>	<p>The emissions need to peak by 2020 at the latest, to be reduced by at least 50% by 2050 (compared to 1990) and to be near zero below by 2100. Targets are to be updated every five years, to take into account the latest scientific developments.</p> <p>All Member States should submit new or updated emission reduction commitments every five years (not below their previous proposals). A new system is needed in order to monitor governments' performance in delivering their commitments.</p> <p>Climate change adaptation strategies will form an important part of the agreement as well as climate finance. The role of non-state actors, such as business, cities and organisations in the process is underlined.</p>
	<p>Next steps</p> <p>EU would defend its position during the 21st session of the Conference of the Parties (COP 21) to the United Nations Framework Convention on Climate Change (UNFCCC) and at the 11th session of the Meeting of the Parties to the Kyoto Protocol (CMP 11), which will take place in Paris between 30 November and 11 December 2015.</p>

[Link: EU Position](#)

Draft law sets limits for certain NOX, SO2 and PM for medium-sized combustion plants

Key features	Insights
<p>On 7 October the European Parliament plenary approved the report of Andrzej Grzyb (EPP, PL) on draft Directive on limits for emissions of certain pollutants from medium-sized combustion plants. Emissions of air pollutants from medium-sized combustion plants have so far not been regulated at EU level. The Directive forms part of a wider framework of action in the field of air quality in the EU, as set out in the EU Thematic Strategy on Air Pollution.</p>	<p>The legislative report coordinated by Member of the European Parliament, Andrzej Grzyb (EPP, PL), supports the limits for the existing plants, with thermal output above 5MW, for the maximum emission values for sulphur dioxide (SO2), nitrogen oxides (NOx) and PMs as proposed by the European Commission to enter into force from 2025.</p> <p>The smallest plants, with a thermal output between 1 and 5 MW would have to comply from 2030 onwards.</p> <p>The new plants would have to comply with the new laws within three years. Medium combustion plants relate to those with a thermal input rated between 1 and 50 MW (estimated 143.000 plants within the EU used for electricity generation, domestic or residential heating and cooling and for industrial uses).</p>
Next steps	
<p>The draft law informally approved with Council needs to be formally approved by the Council of Ministers of Environment, before entering into law.</p>	

[Link: Draft directive](#)

Key consultations from EU

What is discussed?	Insights	Link
“Consultation on the review of the Intergovernmental Agreements Decision”	IEU seeks to consult stakeholders' assessment of the IGA Decision and to identify what could be improved in the mechanism it establishes in order to increase transparency of such agreements and compatibility with EU energy security provisions. Closing date: October 22 nd .	Link to the consultation
“Consultation on the list of proposed Projects of Common Interest – Additional projects in oil, gas and electricity”	EU seeks to consult stakeholders' views on the need for a gas, electricity or oil project from an EU energy policy perspective bringing together security of supply, market integration, competition and sustainability. Closing date: October 22 nd	Link to the consultation
“Consultation on a new Energy Market Design”	EU seeks to consult stakeholder's views on the issues that may need to be addressed in such a redesign of the European electricity market. These issues include: (i) improvements to market functioning and investment signals; (ii) market integration of renewables; (iii) linking retail and wholesale markets (iv); reinforcing regional coordination of policy making, between system operators and of infrastructure investments; (v) the governance of the internal electricity market; and, (vi) an European dimension to security of supply. Closing date: October 8 th .	Link to the consultation
“Consultation on risk preparedness in the area of security of electricity supply”	The public consultation on a new energy market design raises some questions related to security of electricity supply. This questionnaire complements the foregoing consultation, by looking in particular at the role of national authorities in preventing and managing risks related to the security of electricity supply, and at how to improve their cooperation in a cross-border context. Closing date: October 8 th .	Link to the consultation
“Consultation on the Evaluation of the Energy Performance of Buildings Directive”	EU seeks to consult stakeholders on the review of the Energy Performance of Buildings Directive and evaluate whether the directive has met its aims. The consultation will also explore issues in relation to the Smart Finance for Smart Buildings initiative and the links of the directive with other energy policy areas. The public consultation launches the review into the directive, which is due by the end of 2016 as required under Article 19 of the directive. Closing date: October 31 st	Link to the consultation

France			
Topic	Key features	Insights	Next Steps
Release of the law on Energy Transition Link	<ul style="list-style-type: none"> The law on Energy Transition has been definitely released on August 18, 2015 setting ambitious long term targets: <ul style="list-style-type: none"> - Reduce greenhouse gas emissions by 40% between 1990 and 2030, and by 75% between 1990 and 2050; - Reduce final energy consumption by 50% between 2012 and 2050 with an intermediate target of 20% in 2030; - Reduce final fossil fuels energy consumption by 30% between 2012 and 2030; - Bring share of renewable energies up to 23% of final energy consumption by 2020 and to 32% by 2030; - Bring share of renewable up to 40% of electricity generation by 2030; - Bring share of nuclear down to 50% of electricity generation by 2025. These targets are accompanied with specific measures: <ul style="list-style-type: none"> - Accelerate the energy savings related renovation of buildings (44% of final energy consumption) with an objective of 500,000 renovations per year. - Accelerate the development of clean transport (electricity should represent 10% of transportation fuels by 2020 and 15% by 2030) - Facilitate the development of renewable energies through modernization of the hydroelectric system, simplification of administrative process and robust financial support - Tackle waste and promote the circular economy. 	<ul style="list-style-type: none"> The law introduces a 63.2 GW cap for nuclear capacities, which represents the current capacity. It means that any new capacity (Flamanville EPR) should trigger a decommissioning (Fessenheim) The objective to cap nuclear electricity production to 50% of the mix by 2025 means to replace approx. 135 TWh of nuclear production in ten years by renewable energy. This is a questionable target which points out that the key issue is the demand side management and energy efficiency. In this respect smart-metering systems for electricity (Linky) and gas (Gaspar) should be a key driver in energy savings on buildings. The law creates a regulatory framework for the continued operations of nuclear facilities that are over 40 years old and reappraises the supervision of facilities shutdowns with a preference for dismantling facilities as soon as possible after their shutdown. The overall target of 32% of renewable energies by 2030 would be translated in a multi-year energy programming law that should set the respective share of each generation source. The path for the law carbon strategy for 2030 would be defined through short/medium term strategy covering three periods: 2015-2018, 2019-2023 and 2024-2028. A carbon roadmap would be allocated to each period with specific measures and targets for 6 key sectors (building, transport, industry, energy, agriculture and wastes). Specific funds for the development of renewable energy are available namely for heat production. New funding or loans are expected especially from BPI which investments in renewables should double between now and 2017 rising to €800m The Energy Transition law objectives are very ambitious but the government does not give indication how to fulfill it at an affordable cost. 	<p>The carbon budget for 2015-2018, 2019-2023 and 2024-2028 should be released by the government in autumn 2015.</p>

Germany			
Topic	Key features	Insights	Next Steps
German "White paper". An electricity market for German's energy transition	<ul style="list-style-type: none"> In the White Paper, the Ministry clearly advocates a further development of the electricity market to become an electricity market 2.0, and argues against the introduction of a capacity market. In the electricity market 2.0, the necessary capacities can be remunerated via existing market mechanisms. The White Paper contains the principles for 20 measures implementing the electricity market 2.0, such as: <ul style="list-style-type: none"> - Guaranteeing free price formation: the principle of free pricing in electricity trading is to be anchored in the Energy Industry Act. Prices send important information to the market players. They are the only way to show how scarce electricity is at any time. - Monitoring security of supply: an ongoing monitoring process will use the latest methods to see whether the supply actually is secure. - Introducing a capacity reserve: this will safeguard the electricity supply against unforeseeable events. - Developing the balancing capacity markets further: in order to keep the system stable at all times and to offset erroneous forecasts, the transmission system operators use balancing capacity. More providers are now to receive access to the balancing capacity markets. This increases competition on these markets and thus reduces costs. 	<ul style="list-style-type: none"> The German Ministry for Economic Affairs and Energy will develop the electricity market into an "electricity market 2.0" so that it is equipped to meet the challenges of the future. In the White Paper, various measures are outlined which will transform the electricity market 2.0 into reality. For more information on the white paper see: http://www.bmwi.de/EN/Service/publications,did=721538.html 	The White Paper will be followed by the enactment of legislation. The bill for the Electricity Market Act is due to be approved by cabinet in October. The relevant legislative process is to be completed in spring 2016.
Draft law: "Digitalization of the Energy Transition"	<ul style="list-style-type: none"> The law regulates the rollout of intelligent metering systems for electricity by setting a legally binding timeframe for the federal rollout. The DSO only remains the responsible metering operator if he also acts as a Smart-Meter-Gateway-Administrator (SMGWA). The SMGWA is a new role, responsible for the installation, operation, configuration, administration and maintenance as well as the monitoring and controlling of data and power flows including the encrypted readout of measured data, its storage and its forwarding to authorized actors. In this way, the metrology section gets liberalized. 	<ul style="list-style-type: none"> As a result of the liberalization of the metrology and the standardization of security and connection guidelines opportunities for companies as IT-companies, existing measuring operators and metering system producers arise. Furthermore, the new role "SMGW Administrator" opens up potential. 	Estimated rollout-start is the January 2017. The existing metering operators have time until 31st December to evaluate if they want to put their metering section out on tender or whether they want to remain in charge for it.
Security Guidelines of the BSI for the Smart Meter Gateway Administration	<ul style="list-style-type: none"> The regulation extends the existing guidelines for SMGW with a focus on the newly introduced SMGW Administration (see Draft law: Digitalization of the Energy Transition). It defines its use cases and their value in terms of availability, integrity, confidentiality and authenticity, including a list of potential threats and consequent essential precautions. It also increases the security standards regarding the digitalization of the intelligent metering systems. 	<ul style="list-style-type: none"> In order to guarantee the interoperability of the different components within the intelligent metering system, the security guidelines set a standard for the upcoming setup of the Smart Meter Gateway Administration. The implementation of the required information security management system and the full encryption of the user data will increase the confidence in the Digitalization of the Energy Transition. 	No specific next steps planned. Guidelines will be updated according to technical requirements.

United Kingdom			
Topic	Key features	Insights	Next Steps
Competition and Markets Authority (CMA) energy market investigation	<ul style="list-style-type: none"> The CMA is conducting a competition investigation into the GB energy market, which will now run until June 2016. The latest development was a 6 month extension to the deadline for the investigation that was previously due to conclude in December 2015. The investigation is now in its second phase with provisional findings and responses to these published in July 2015. These findings build on the Updated Issues Statement published in February 2015. The extension to the timetable is to allow the CMA sufficient time to consider the many detailed responses received to provisional findings. 	<ul style="list-style-type: none"> The provisional findings from the CMA suggest that the wholesale market is competitive, with no suggestion of negative consequences from vertical integration. Other conclusions were less favourable to suppliers, including: <ul style="list-style-type: none"> - Domestic retail customers have been overcharged by up to £1.2bn per year. Significant changes are thus required, with consumer switching a key factor; - There has been significant overpayment as a result of DECC's allocation of contracts to renewable generation on a non-competitive basis. The report further provides a number of proposed remedies to these concerns. Companies would benefit from understanding the provisional findings and the proposed remedies put forward by the CMA, and the remaining process and timeline of the competition investigation in order to assess the impact of potential outcomes on their future business plans. 	The CMA is expected to publish a provisional decision on remedies in January 2016. The final report is expected in April 2016.
Hinkley Point Nuclear UK Guarantee	<ul style="list-style-type: none"> In September 2015 the UK government announced that it would guarantee £2bn worth of debt for the construction of the new nuclear power station deployment at Hinkley Point. This announcement was made by the Chancellor of the Exchequer whilst on a visit to China and emphasised the involvement in the project of China General Nuclear Corporation and China National Nuclear Corporation. 	<ul style="list-style-type: none"> This marks positive progress in the long delayed Hinkley Point C progress. However, the final investment decision for the project has not been made yet and as such this announcement is conditional on the project going ahead. If the project does go ahead it will be in line to receive guarantees on up to a total of £17bn of debt. 	Chinese involvement could be announced in late October but there is no official timetable for the final investment decision.
Reductions to small scale renewables feed in tariff support.	<ul style="list-style-type: none"> In July 2015, the UK government proposed that support for small-scale renewables through the Feed-in-Tariff (FIT) scheme be reduced by up to 87% for small-scale solar projects. This, it is claimed, will help reduce household energy bills, whilst allowing for continued investment in a sector that has seen costs come down in recent years. 	<ul style="list-style-type: none"> These changes, should they go ahead, will significantly impact the financeability of small-scale generation, such as rooftop solar, AD and small-scale wind. The UK government's continued push to reduce subsidies is likely to continue to weigh on investor uncertainty in the low carbon sector. 	Consultation on changes to the FIT scheme will close in October and the outcomes are expected to be implemented by early 2016.
Power line removal	<ul style="list-style-type: none"> National Grid has announced that it will be taking forward projects in Areas of Natural Beauty and National Parks in Dorset, the New Forest, the Peak District and Snowdonia for a total cost of £500m to reduce the visual impact of overhead power lines. The work is expected to be completed in 2021. If all four projects are completed this would replace 17km of power lines. 	<ul style="list-style-type: none"> The overhead lines are likely to be replaced with new underground cables. These plans are in line with an emerging trend to underground cables, where possible, for visual and safety reasons. This has largely been limited due to significant cost differentials over the use of overhead lines. This will have an impact on bills, with the work being funded through levies on bills. 	National Grid will undertake detailed feasibility work including environmental and archaeological studies over the next 12 months.
Shale gas planning process	<ul style="list-style-type: none"> Under new planning guidance issued in August 2015, local councils will be required to meet the deadline of 16 weeks to approve or reject fracking applications in the UK. This follows extended delays to the planning process in Centrica's bid to frack eight wells in Lancashire. These applications were rejected by the local council in June, almost one year after the initial application. Through this 'fast-track' process, the government hopes to limit such delays in the planning process. 	<ul style="list-style-type: none"> Changes to the planning process will not only reduce the time taken for such fracking applications to be processed, but are also aimed at reducing uncertainty to investors and local communities. The planning process will still rely strongly on the input of local communities, but will reduce the administrative burden that has caused delays in the past. 	Local councils have the deadline of 16 weeks to approve or reject fracking applications

Spain			
Topic	Key features	Insights	Next Steps
Electricity production from renewable sources, cogeneration and waste	<ul style="list-style-type: none"> As a reminder, a new remuneration system for renewable generation facilities is now in force based on fixed costs (investment, fixed operation and maintenance) and variables costs (fuel, variable operation and maintenance) - ref. Newsletter of June 2014. The methodology for updating the remuneration to the operation for facilities whose operating costs depend on the price of fuel has now been approved. 	<ul style="list-style-type: none"> This methodology is based on the evolution of fuel prices. For facilities that use natural gas, it is also considered the variation of tolls for access to the gas network. The remuneration to the operation for the first semester of 2015 corresponds with the values passed for 2014. The remuneration for the second semester of 2015 resulting from the application of this methodology passed has been determined and approved now. 	The remuneration to the operation will be updated and approved every semester.
Transmission and Distribution activities	<p>Last year, a new regulatory framework on transmission and distribution activities (ref. Newsletter of March 2014) was set up in Spain. Now, this framework has been completed with :</p> <ul style="list-style-type: none"> An additional request of audited information for transmission and distribution companies. Public consultations about some legislative projects: <ul style="list-style-type: none"> Draft Ministerial Orders about the approval of reference unit values that will be used for the calculation of the remuneration. Draft Royal Decree about the approval of modifications to the methodology of calculation for the remuneration. 	<ul style="list-style-type: none"> Additional information requested: <ul style="list-style-type: none"> Distribution companies: information about electricity demand, new expected demands in the next five years, inventory of assets with their technical characteristics, economic information about the operating costs (Regulatory Information of Costs), accounting information about assets, etc. System operator and transmission company: facilities connected to the distribution network, inventory of assets, economic information about costs and revenues allocation, projects in progress and projects planned for next years, availability of the assets, etc. Main modifications proposed for the remuneration of transmission companies: <ul style="list-style-type: none"> The investments made in interconnections facilities will not be considered to calculate the maximum limit of investments. The objective is to increase the interconnection facilities. Reduction of the time to obtain the administrative authorization for new facilities. Main modifications proposed for the remuneration of distribution companies: <ul style="list-style-type: none"> Before, the investment plans for little distribution companies were multiannual. The modifications include that this investment plans must be annual in order to be adapted to demand needs. 	<p>The remunerations will be calculated based on the information submitted by the companies.</p> <p>The 1st regulatory period will start after the approval of the draft ministerial orders with reference unit values defined.</p>

Italy			
Topic	Key features	Insights	Next Steps
New Criteria Regulation	<ul style="list-style-type: none"> The New Criteria Regulation updates the conditions regarding criteria of tenders and evaluation of offers for granting the natural gas distribution service. The New Criteria Regulation: <ul style="list-style-type: none"> - Introduces procedures to overcome any paralysis of the ATEM (Optimal Territorial Areas) activity and to facilitate the performance of requested activities for the preparation of the tender. - Amends the methods for calculating the reimbursement value to the outgoing operator in the event of anticipated termination of the concessions prior than the original term. - Introduces the possibility for the local granting authority, to not acquire the ownership of the gas networks but to opt for the transfer of ownership of the networks. 	<ul style="list-style-type: none"> The New Criteria Regulation completes the regulatory framework of the gas distribution tenders with the last acts of the Italian Authority for Electricity and Gas (AEEG) defining the value of the VIR (Industrial Remaining Value) and RAB (Regulatory Asset Base), i.e. the value of the gas distribution assets. 	<p>A new extension of the deadline for the gas tenders is still awaited. The extension should be at least equal to two months more for the first 2 groups of ATEM.</p>
Energy performance of buildings	<p>The three ministerial decrees passed last June intend to remedy the infringement procedure on the energy performance of buildings in progress:</p> <ul style="list-style-type: none"> The first decree defines new methods for calculating the energy performance and minimum efficiency requirements for new buildings and for those undergoing renovation The second decree adapts the schemes of technical report of the project to the new regulatory framework, depending on the different types of works. The third decree updates the guidelines for the certification of the energy performance of buildings (APE) 	<ul style="list-style-type: none"> The new model of the APE, along with the national database of energy certificates, will offer the citizens, administrations and operators more information on the efficiency of the buildings and plants, allowing an easier comparison of the energy quality of different real estate units and orienting the market towards buildings with better energy quality. 	<p>The provisions of the decree will come into force on October 1st, 2015.</p>
GSE suspends the effectiveness of the DTR	<ul style="list-style-type: none"> The GSE, authority in charge of fostering renewables energy in Italy, communicated the suspension of the effectiveness of the Technical Reference Document (hereinafter "DTR") that contains "Rules for maintaining the incentives pursuant to the Feed-in Schemes" for photovoltaic plants as published on May 1st, 2015. The DTR set out the rules to guarantee the good management and the efficient use of the incentivized photovoltaic power plants, in compliance with the existing legal framework. The DTR specified the rules for the operators in order to maintain their right to benefit from the feed-in tariffs in case of modifications to the photovoltaic plants, among which e.g.: moving of the plant, modification of the plant's connection point, replacement of the plant's components, reduction and increase of the power capacity of the plant, change in the ownership of the site where the plant is located, change in the ownership of the plant. 	<ul style="list-style-type: none"> The suspension is due to the reason that such aspects could be soon regulated by the new ministerial decree on renewable energy resources different from photovoltaic ("FER Decree"). Waiting for the FER Decree, therefore, the operators shall act pursuant to the provisions provided by the relevant decrees on the feed-in tariffs (i.e. the Feed-in Schemes) and their implementation provisions, with reference to the modifications of the incentivized plants and the consequent informative duties. 	<p>FER Decree is still awaited.</p>

Snapshot on surveys and publications

Deloitte

Energy storage: Tracking the technologies that will transform the power sector – August 2015

The world's population is expected to grow by two billion people by 2050 and global energy demand is expected to roughly double during the same period. However, the penetration of renewable technologies has been hampered by their costs - which are improving - and their intermittency and variability, which reduces availability and induces grid instability.

[Link to the survey](#)

Mexico's Utility Reform: Power & Utilities – August 2015

With adoption of secondary energy reform legislation, the Mexican government offers a clearer picture of how it will implement electricity reforms. The reforms create a path to electricity market competition, generating opportunities for investors who understand the challenges that come with them. While key frameworks exist, significant uncertainty as to the timing and details of the market transition exists.

[Link to the survey](#)

2015 Energy Compliance Survey – June 2015

Fifty one companies participated in this year's survey, including major oil companies, integrated utility companies, independent power producers, and independent system operators. This report highlights our key findings and has been grouped into four categories that are generally of the most interest within the energy industry so you can focus on the regulatory areas that matter most for your business.

[Link to the survey](#)

Agencies or research institutes

International Energy Agency

Technology Roadmap: Hydrogen and Fuel Cells - 2015

This study makes clear that hydrogen holds promise for some of the key challenges facing emissions reduction in sectors such as transport, industry and buildings, as well as the electricity system. The report details the steps governments, industry and researchers need to take to foster and track deployment of hydrogen technology, if it is to be a significant energy carrier by 2050.

[Link to the survey](#)

European Commission

The role of gas storage in internal market and in ensuring security of supply – August 2015

Depending on the design and characteristics, gas storage increases the sources of supply in times of high demand (e.g. due to seasonal variation) and contributes to the functioning of the gas market by providing short term flexibility. The study provides an in-depth analysis targeting the potential of gas storage for supporting the security of gas supplies.

[Link to the survey](#)

Towards an Integrated Strategic Energy Technology (SET) Plan: Accelerating the European Energy System Transformation – September 2015

The Energy Union strategy adopted by the European Commission is built on the ambition to achieve in a cost-effective way a fundamental transformation of Europe's energy system. This will be achieved by moving to smarter, more flexible, more decentralized, more integrated, more sustainable, secure and competitive ways of delivering energy to consumers.

[Link to the survey](#)

Launching the public consultation process on a new energy market design – July 2015

The aim of this consultative Communication is to give the opportunity to all stakeholders to provide feedback on the vision presented and the identified steps required to deliver that vision. It will be complemented by more detailed and comprehensive questions regarding certain aspects, notably regarding security of electricity supply.

[Link to the survey](#)

The new deal for energy consumers – July 2015

While the past decade has transformed the energy sector in Europe, retail energy markets have not kept up. Obstacles to consumers fully benefitting from the ongoing energy transition, meaningfully controlling their consumption, and lowering their bills include: lack of appropriate information on costs, increasing proportion of network charges, insufficient competition, unequal access to information and high entry barriers.

[Link to the survey](#)

Energy poverty and vulnerable consumers in the energy sector across the EU: analysis of policies and measures – May 2015

Energy poverty, often defined as a situation where individuals or households are not able to adequately heat or provide other required energy services in their homes at affordable cost, is a problem across many Member States. Our review highlights the quite distinctive ways in which Member States have both recognized and chosen to address the issues of vulnerable consumers and energy poverty.

[Link to the survey](#)

Eurelectric

Nuclear Power Plants - Tackling the Investment Dilemma – September 2015

Nuclear energy contributes to the three major energy policy objectives of the European Union: security of supply, decarbonisation of the electricity sector and competitive power prices in Europe. Nevertheless, the sector faces a number of challenges. One of these is to improve the economic operation of existing nuclear power plants. Another challenge is to enable new market-based investment.

[Link to the survey](#)

Triggering energy efficiency investments – September 2015

This study focuses on energy efficiency investments, which remain lower than expected, often due to noneconomic Barriers. It mentions that there is a clear need to revise the way in which investments in energy efficiency are being promoted through financing. The EU can play a vital role in sharing lessons learned and information on existing & innovative financing tools as well as standardizing processes.

[Link to the survey](#)

The Benefits of Electrification - Electricity's contribution to sustainable energy use – September 2015

Decarbonising electricity generation will make a major contribution to help Europe meet its climate change targets. Electricity is on track to becoming a carbon neutral energy carrier and, if used more widely, will open the door for many more positive changes, spill-overs in sectors which currently have no prospect of becoming fully sustainable.

[Link to the survey](#)

Oxford institute for Energy

The Political and Commercial Dynamics of Russia's Gas Export Strategy – September 2015

Gas exports have historically provided economic and political strength for Russia and a source of significant revenues for its gas company, Gazprom. However, lower commodity prices, the imposition of sanctions on Russia in light of the Ukraine crisis, lower gas demand in Europe, the EU's desire to diversify away from Russian gas and increasing competition from new global LNG supply are presenting multiple challenges.

[Link to the survey](#)

The cost of price de-linkages between European gas hubs – September 2015

The growth of trading activity on Europe's gas hubs and access to anonymized OTC price data provides the OIES Gas Programme with the opportunity to analyze and draw conclusions on issues of direct relevance to policy makers and market participants. With 2014 data available, the objective of this paper is primarily to explore the extent to which conclusions reached in the Author's previous papers have changed.

[Link to the survey](#)

Achieving a cost-competitive offshore wind power industry: What is the most effective policy framework? - August 2015

The promise of carbon-free, utility-scale power generation from offshore wind farms is encouraging a number of governments to implement policy support frameworks and national targets for offshore wind power generation. However, the high capital requirements for the deployment of offshore wind have proven that it is an expensive approach to meeting national renewable energy and carbon reduction targets, relative to other power generation sources.

[Link to the survey](#)

The Scissors Effect: How structural trends and government intervention are damaging major European electricity companies and affecting consumers – August 2015

The major electricity companies (the 'majors') in Europe have not recovered from a significant decline in their combined market value that began in early 2008. If the causes are structural, as argued here, these companies may be unable or unwilling to finance the investments required to meet the EU policy goals of energy security, environmental sustainability, and acceptable costs.

[Link to the survey](#)

Gas-to-power market and investment incentive for enhancing generation capacity: an analysis of Ghana's electricity sector – August 2015

The results of our analysis show that utilization of gas reserves in Ghana's gas-to-power market is an economically superior strategy compared to an export-oriented utilization scheme. The lack of an effective regulatory framework for investment, skill shortages, and an inefficient electricity pricing structure continue to be the main constraining factors.

[Link to the survey](#)

The Role of Gas in UK Energy Policy – July 2015

UK energy policy has often mystified outsiders. Politicians and policy makers talk grandly of solving the energy “trilemma” of affordability, environmental sustainability and security of supply. Many energy experts seem ensnared in endless debates regarding the minutiae of the electricity supply sector whilst in the real world coal displaces gas in power generation, prices rise and gas and electricity supplies.

[Link to the survey](#)

The Impact of Lower Gas and Oil Prices on Global Gas and LNG Markets – July 2015

The paper explores the major uncertainties in the global gas system connected by flexible LNG to 2030. The lack of clarity on Russia’s future preferred commercial behavior however, adds a level of complexity most market participants would prefer to ignore. Gazprom is occupied on many fronts in both political and commercial spheres.

[Link to the survey](#)

The Outlook for Azerbaijani Gas Supplies to Europe: Challenges and Perspectives – June 2015

The modest prospects for domestic gas demand growth and Azerbaijan’s geographic location require that any future gas field development decision will also require a degree of certainty on export infrastructure capacity to the primary target markets of Turkey and South and South East Europe. These issues are covered in detail.

[Link to the survey](#)

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