

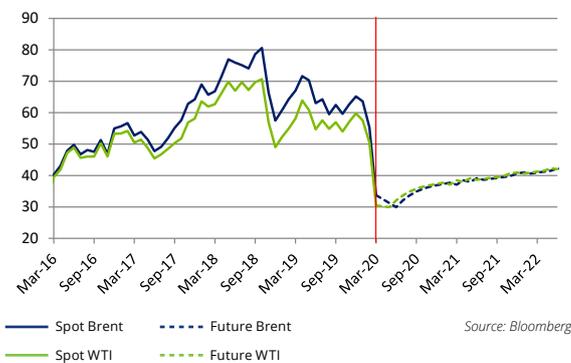


Newsletter Power & Utilities in Europe

Commodities



Crude oil (\$/bbl)



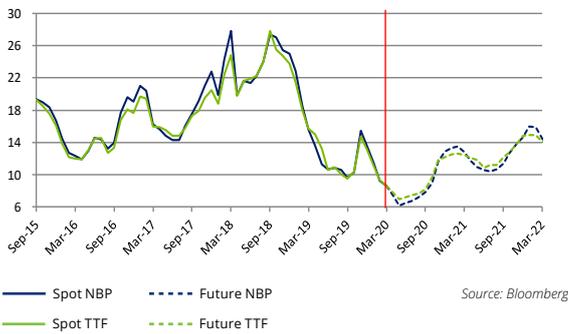
Having recovered in Q4 2019 to reach the highest levels observed since Q2 2019, both Brent and WTI oil prices fell dramatically by around 47 percent across Q1 2020 in response to both demand and supply side shocks, reaching US\$33.73/bbl and US\$30.46/bbl respectively on average by the end of March 2020. Oil prices fell so significantly in February that analysts reported a temporary 'contango' market, where purchasing oil for storage was briefly more profitable than sale.

The first quarter of 2020 was overshadowed by unprecedented demand-side collapse that impacted all fuel commodities. The novel coronavirus outbreak, henceforth COVID-19, originated in Wuhan, China and culminated in mass worldwide lockdown of over 25% of the global population, which applied increasing downward pressure on prices as global demand for oil and other fuels contracted strongly in both consumer and industrial markets from the end of January onwards. By February, the IEA published estimates that global oil demand was set to fall to the lowest level since the great recession, with reduced demand expectations and applied further downward pressure on price. Indeed, by March investor disillusionment in oil markets led to a large increase in speculative investment in the commodity, further marginalising the otherwise healthy fundamentals observed before the COVID-19 outbreak.

These movements were compounded by escalation of geopolitical supply-side uncertainty across the quarter. In early January, Iran's Revolutionary Guard commander, Qassem Soleimani, was killed by a missile strike in Baghdad, leading to strong contractionary supply-side sentiment from crude investors that applied upward pressure on price. Confidence surrounding prompt US de-escalation of political tensions following the attack and the relatively high oil price observed in the market following the strong recovery in Q4 2019, confounded these pressures. Supply-side sentiment was also rendered volatile across the quarter by tensions between members of the Opec+ oil alliance. A reported disagreement over expected production cuts following the spread of COVID-19 led to Russian defection from the alliance, and a price war was triggered resulting in expectations of oversupply coupled with strong price cuts.



Gas (€/MWh)



Source: Bloomberg

Another commodity market impacted by the COVID-19 pandemic, the UK's NBP gas benchmark and the Dutch TTF equivalent each fell by over 30% to €8.64/mWh and €6.83/mWh on average by the end of the first quarter of 2020 - the lowest levels observed in their respective time series. Emerging from a mild winter applied downward pressure on price as seasonal household demand contracted month-on-month, whilst oversupply of natural gas continued, although the global economic lockdown initialised following the COVID-19 outbreak stymied gas delivery.

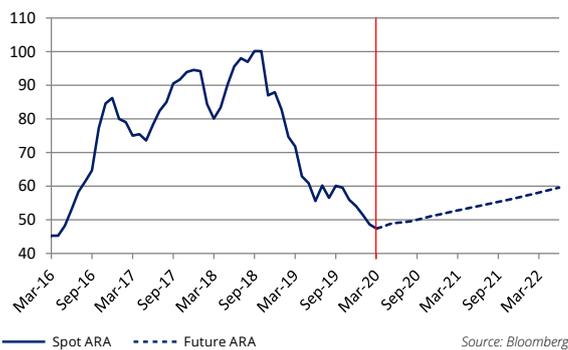
As was the case with oil, global quarantine increasingly hindered demand for gas across the quarter, applying strong downward pressure on price. The positive influences of trade war de-escalation between the US and China characterising a strong international demand for gas at the start of the quarter were quickly eliminated as the pandemic spread, with projections of global gas demand falling in line with industry shutdown and news that gas exporters increasingly were unable to establish contracts with importing counterparties.

On the supply-side, additional influences interacted with the large downward demand-side pressures on price. A deal announced between Russia and Ukraine extending gas supplies through existing central European pipelines led to an increase in supply expectations in early January 2020, which put downward pressure on gas prices. Furthermore, Gazprom announced plans to continue the controversial Nord Stream 2 pipeline without help of foreign countries, which maintained ongoing uncertainty in modes of European gas supply, but contributed to an overall expansionary supply sentiment.

Inter-continental pressures confounded this effect somewhat, as persistently low prices led to a projected fall in US natural gas production for the first time since 2016. As the COVID-19 crisis developed in February, Chinese state-tied LNG importers began to announce plans to freeze contracts – predominantly for seaborne gas imports – as domestic demand became increasingly suppressed. These reduced supply expectations contributed some mitigating influence on downward price trends.



Coal (\$/metric ton)



Source: Bloomberg

In accordance with the EU's focus on renewable energy and reducing coal fired power generation to reduce carbon emissions, ARA prices continued their decline in the first quarter of 2020, falling 12% to settle at \$47.40 per metric tonne on average by the end of March. The observed downward price movements of the index likely under-represent coal fundamentals; it is likely that a seasonal surge in demand is priced into these movements, with coal producers burning stock in preparation for a longer term shift away from coal supply.

The COVID-19 pandemic overshadowed the nuanced dynamics of coal's demand-side, with industrial demand for the fuel slashed following global lockdown. This demand fallout is the predominant driver of the downward price trend observed. Some possibly positive demand influence may have been priced into this trend, as burning of European coal stockpiles may be considered a viable substitution for gas in short-term power generation under circumstances of contract cancellation or freezing.

Supply of coal, which is being phased out gradually from EU economies, continued its downward trajectory in January following Germany's announcement that it will substitute from coal power completely by 2038 in a €40bn package. Coal's decline was further accentuated in February following news that Peabody Energy, the world's largest private coal producer, suspended dividend payments following 2019's warm winter leading to gas prices undercutting those of coal, and had a large-scale merger with Arch Coal blocked by US antitrust regulators. Finally, London's Anglo Pacific group formally announced its divestment from coal towards more green commodities. These supply-side pressures likely mitigated the demand-side decline of coal, leading to the shallow curve observed across the quarter.



Carbon (€/ton)



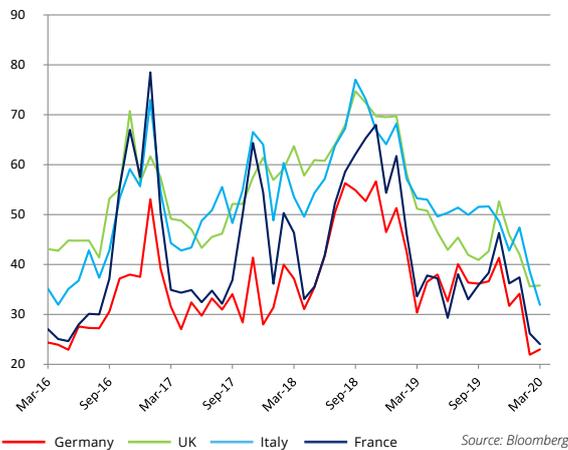
Carbon prices sharply contracted in the first quarter in line with global demand fallout triggered by COVID-19, falling by approximately 19% on average from December 2019 to March 2020 to €19.83 per metric tonne. Analysts note that this may mark the end of a speculative buying phase following the introduction Market Stability Reserve (MSR) mechanism which sought to reduce oversupply of carbon credits in the EU market.

By the end of Q4 2019, demand sentiment was moderately bullish driven by strong fundamentals, with demand for credits by emitting producers initially expected to continue into 2020. However, COVID-19 superseded these sentiments, with enforced suppression of economic activity leading to heavily reduced demand for all fuels, and hence for traded carbon allowances.

The supply-side volatility driven by uncertainty surrounding the UK’s exit from the European Union is likely to still persist beneath the demand-side drivers that dominated commodity markets across the quarter, though these influences currently appear negligible given the long-term uncertainty of economic growth. Furthermore, some degree of certainty as to the UK’s withdrawal from the EU ETS carbon scheme can be considered, given Government’s Department of Business, Energy and Industrial Strategy’s previous commitment to continue engaging in an ETS carbon scheme equivalent following an exit from the EU, coupled by the majority government’s commitment to secure this exit. It would be interesting to monitor developments on the oncoming review of MSR, in the next quarter (Q2 2020), in terms of the levels of withdraw rates as an impact of COVID 19.



Baseload Spot Day Ahead (€/MWh)



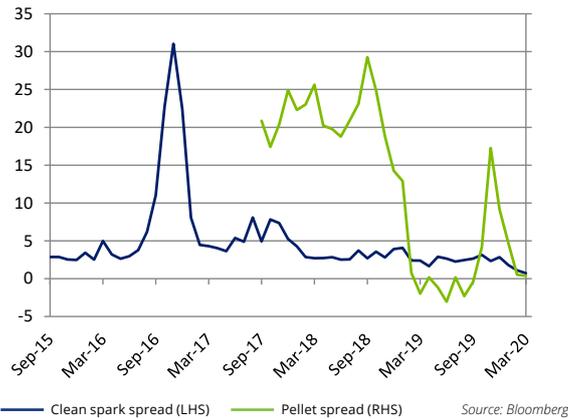
Baseload electricity prices fell by at least 20% on average in the first quarter of 2020 for all four of the countries under consideration in this sample, though UK and German prices rose somewhat between February and March, in line with underlying fuel price contractions observed across many commodities triggered by COVID-19.

On the demand-side, a warmer-than-expected winter continued to reduce heating requirements for many households, though this downward pressure on price became less pronounced across the quarter as spring approached. Furthermore, baseload electricity prices are downwardly influenced by falling carbon prices, incentivising supply. Industrial demand for baseload electricity was also strongly impacted across Europe due widespread stoppages of commercial and industrial activity enforced following the COVID-19 outbreak from March onwards.

Meanwhile, on the supply side renewables continued to fluctuate in their contribution to aggregate energy composition, as storage technology remains small-scale and localised. In particular, wind power generation varied week-on-week, with surges reported frequently in Germany and France. Supply-side disruption from the COVID-19 outbreak was not observed beyond uncertainty regarding the fulfilment of fuel contracts, though planned strikes reduced power generation by 6% of capacity in January.



UK pellet & spark spreads (€/MWh)

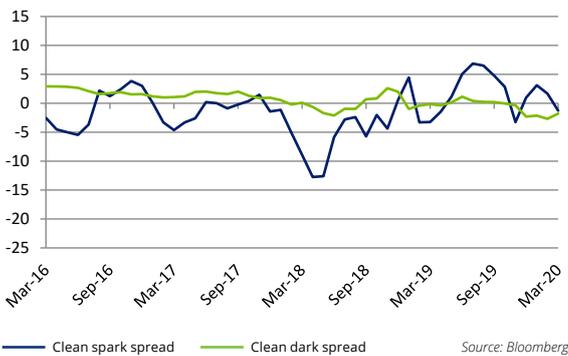


Clean spark spreads, capturing the price surplus or deficit generated by burning a natural gas for energy after accounting for carbon credit tariffs, continued to remain positive in the first quarter, though fell further towards zero as falling gas prices continued to suppress profitability. This coincided with cheaper traded carbon prices, which mitigated the overall impact on spread.

As introduced in last quarter's newsletter, we continue to analyse pellet spreads, which capture the profitability of energy generated by burning commoditised biomass pellets. Note that this spread is here defined as the difference between the baseload price and the price of pellets, plus any level of support that biomass plants receive from Renewable Obligation Certificates or existing Contract-for-Difference. Pellet spreads fell from the level seen by December 2019, arriving at £0.72/MWh on average by the end of March. Pellet spreads have now fallen in line with UK clean spark spreads, despite lower baseload prices respective to prices of biomass, with the majority of this influence driven by COVID-19-related demand contraction.



German clean dark & spark spreads (€/MWh)



Falls in both coal and gas prices across the first quarter, alongside a mitigated carbon price response due to Market Stability Reserve mechanism dynamics and falling baseload prices, led to clean spark spreads – those yielded from burning natural gas for electricity generation – becoming negative on average for the first time since November 2019. Accordingly, dark spreads – those yielded from burning coal – continued to be negative, though rose by €0.73/MWh across the first quarter of 2020. Both sets of spreads have now converged, indicating that the carbon intensity of coal may not be fully offset by current carbon prices despite the decline in both commodities' prices. Furthermore, the German spark spread is lower than that of the UK due to Germany's relatively stronger exposure to continental European influences including the spread of the COVID-19 pandemic within the EU.

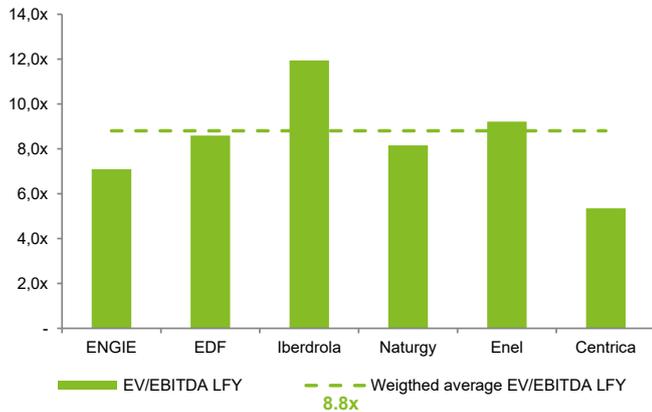


Spotlight on Power and Utilities market

Capital market overview

	Deloitte Index ⁽¹⁾	Enel	Iberdrola	ENGIE	EDF	EON	Naturgy	RWE	Centrica
Market cap. ratios									
Currency		EUR	EUR	EUR	EUR	EUR	EUR	EUR	GBP
Market Cap (Mars 20) ⁽⁴⁾		64 335	59 437	27 988	27 310	24 103	16 530	15 169	2 861
3m stock price performance	-13%	-12%	-2%	-36%	-28%	-3%	-29%	-12%	-58%
YoY stock price performance	0%	12%	16%	-29%	-42%	-5%	-36%	0%	-66%
Market multiples									
EV/EBITDA 2019	9.2x	9.2x	11.9x	7.1x	8.6x	n/m ⁽³⁾	8.2x	n/m ⁽³⁾	5.4x
EV/EBITDA 2020					n/m ⁽²⁾				
P/E 2019	13.8x	14.1x	17.4x	28.4x	5.3x	n/m ⁽³⁾	11.8x	n/m ⁽³⁾	n/m
P/E 2020					n/m ⁽²⁾				
Price/book value 2019	1.4x	2.1x	1.6x	0.8x	0.6x	n/m ⁽³⁾	1.6x	n/m ⁽³⁾	2.4x
Profitability ratios									
ROE forward 12m					n/m ⁽²⁾				
ROCE forward 12m					n/m ⁽²⁾				
EBITDA margin 2019	19%	21%	26%	16%	21%	n/m ⁽³⁾	19%	n/m ⁽³⁾	7%
EBITDA margin 2020					n/m ⁽²⁾				
EBIT margin 2019	12%	14%	16%	8%	9%	n/m ⁽³⁾	13%	n/m ⁽³⁾	1%
EBIT margin 2020					n/m ⁽²⁾				

- (1) Deloitte Index is composed of Engie, EDF, EON, Iberdrola, RWE, Gas Natural, Enel, SSE and Centrica
- (2) Covid-19 impacts make guidance and multiples on 2020 not meaningful
- (3) Due to the large asset swap between E.ON and RWE, financials and multiples are irrelevant
- (4) One-month average weighted by volume



Source: Capital IQ



Source: Capital IQ

Key messages from brokers and analysts

"With economies going into lockdown and GDP growth estimates for 2020 being revised down sharply, fuel commodities and power prices are plunging. But some are faster than others, with coal significantly outperforming gas. We see the middle of the coal-to-gas fuel switch range at €10/t [...]. However generator are well hedged for 2020 (75%-100%), so their earnings might be more resilient that the market currently assumes." (*Société Générale – March 23, 2020*)

"Power demand is falling across Europe by 7-18% following the introduction of restrictive measures aimed at limiting the Covid-19 outbreak." (*Credit Suisse – March 26, 2020*)

"Fossil fuel power generation is set to decline in Europe with capacity closures and new capacity auctions in Renewables to cope with the 2030 targets. We estimate Renewable to move to 53% of total volumes by 2030." (*Morgan Stanley – January 24, 2020*)

"Carbon market: we see prices skewed to the upside and support from the EU." (*Morgan Stanley – January 20, 2020*)

M&A Trends

Transactions involving power and utilities companies

Galp Energia SGPS SA, a Portuguese energy firm, acquired solar photovoltaic projects with a total capacity of **2.9 GW** in Spain, from the **Spanish ACS group**, for **€2.2bn**. (Financial Deals Tracker – February 4, 2020)

Siemens AG has agreed to acquire a 8.1% stake in Spanish wind turbines manufacture, **Siemens Gamesa Renewable Energy SA** from **Iberdrola SA** for **€1.1bn**. (Reuters News – February 5, 2020)

Repsol, a Spanish energy company, has acquired Delta 2 wind power project in Spain, total installed capacity of **805MW**, from **Forestalia**, a Spanish renewable energy company for around **€900m**. (Financial Deals Tracker – March 3, 2020)

Savon Voima, a Finnish provider of electricity trading and hydropower generation services, has acquired district heating business in Joensuu from **Fortum**, a Finnish energy company for **€530m**. (Financial Deals Tracker – January 14, 2020)

Scottish and Southern Energy (SSE) has completed the sale of its retail unit for **£500m** to the UK's electricity supplier **OVO Energy**. (Awareness Times – January 16, 2020)

Snam, an Italian Energy Infrastructure Company, has acquired a 49% stake of the **OLT regasification terminal** from **Iren Mercato SpA**, an Italian supplier of electricity and gas, for around **€332m**. (ENP Newswire – February 27, 2020)

Encavis, a German renewable energy company, has acquired eight wind power projects in Denmark from **Energi Danmark Group**, an energy trading group for **\$120.25m**. (Financial Deals Tracker – December 17, 2019)

EDF has acquired the British electric car charging firm **Pod Point** for more than **£100m**. (The Telegraph Online – February 13, 2020)

Transactions involving equity funds

Iberdrola agreed to acquire remaining 30% stake in the **496 MW Saint-Brieuc offshore wind power project** in France from **UK'S Renewable Energy Systems** and French's **Caisse des Depots et Consignations**. The total cost of the project is expected to be **€2.4bn**. (Financial Deals Tracker – March 12, 2020)

F2i, an Italian infrastructure fund, has acquired **Renovalia Energy Group**, a Spanish renewables developer from the American **Cerberus Capital Management LP** for approximately **€700m**. (SNL Energy M&A Review – January 1, 2020)

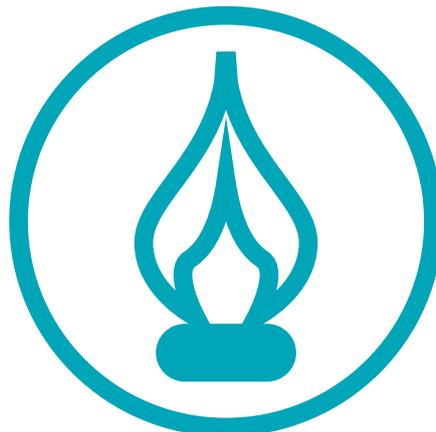
Equinor, a Norwegian energy company, has **sold 25 percent of its stake in the Arkona offshore wind farm** in the German Baltic Sea to private equity funds for **around €500m**. (Financial Deals Tracker – October 5, 2019)

Mubadala, an investment company, **sold stake in Medgaz Algerian pipeline (34.05%) to Naturgy for €445m**. (Reuters – October 15, 2019)

Diamond Transmission Partner, consortium specialized in infrastructures **acquired new offshore electricity transmission link in the UK** from Race Bank Wind Farm Limited, a UK constructor and operator of offshore wind farms, **for £472.5m**. (Financial Deal Tracker – October 12, 2019)

Banque des Territoires, created in 2018 by the **French Caisse des dépôts et Consignation**, has agreed to acquire 50% of wind and solar energy assets in France valued at **€300m (100%)** from **Total Quadran**. (Financial Deals Tracker – January 20, 2020)

Bruc Iberia Energy Partners, an investment fund specialized in the renewable energy infrastructure sector and composed by **Green Investment Group, OP Trust** and **Juan Béjar** has acquired projects for **300MW** photovoltaic to the Spanish **Forestalia** for approximately **€260m**. (CE NoticiasFinancieras – January 15, 2020)



European Power and Utilities companies wrap-up

Utilities companies achieved good performances in 2019 thanks to better energy prices and the return online of capacity market in the UK. Moreover, E.ON and RWE obtained a final green light on their assets swap.

In this context, all major European Power Utilities achieve their guidance for FY19.

However, Covid-19 disease jeopardizes this positive picture and Utilities companies should face now turbulence zone:

- Strongly adverse commodities prices conditions;
- Drop in power prices on wholesale markets;
- Expected increase in working capital due to governmental measures to postpone energy bill and mitigate Covid-19 impact;
- Interruption of maintenance and capex operations on plant, in the context of the “stay home policy”.

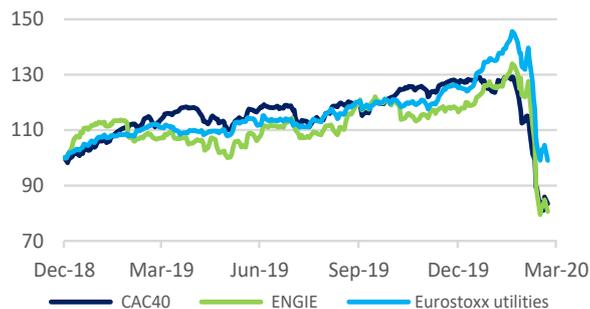
In this adverse context, liquidity is key and most of Utilities are confident to be resilient in term of cash but self-help is requested.

Some Power & Utilities companies as EDF, Engie and Centrica already withdraw their 2020 guidance and announced plans to scale back activity in response to Covid-19 impact with (i) significant cost reductions notably with pay freeze and no bonuses payment policy, (ii) stop or delay of non-critical capital expenditure projects and (iii) cancellation of dividend payment.





Share Price Perf. 2018 - 2019



Key Reported Financials

In billion of €	2019	2018 *	Var.	In billion of €	2019	2018 *	Var.
Sales	71.3	68.5	+4%	Sales	60.1	57.0	+5%
EBITDA	16.7	14.9	+12%	EBITDA	10.4	9.7	+7%
Impairment	-0.4	-0.3	+33%	Impairment	-1.8	-1.8	+0%
Operating Income	6.8	5.5	+24%	Operating Income	5.7	5.2	+10%
Recurring net income Gr	3.9	2.5	+56%	Recurring net income Gr	2.7	2.5	+8%
Net Income Gr Share	5.2	1.2	n.m	Net Income Gr Share	1.0	1.0	+0%
Operating CF	4.2	3.0	+40%	Operating CF	7.6	7.7	-1%
Net Capex	-13.9	-13.9	+0%	Net Capex	-10.0	-7.6	+32%
Net debt	-41.1	-33.4	+23%	Net debt	-25.9	-23.3	+11%

*Figures NOT restated for IFRS16 and restated due to the impact of presenting Edison's E&P operations as discontinued operations

* Figures restated for IFRS16

2019 Highlights

- 2019 guidance achieved
- Revenues increased by 4% to €71bn and increased by 3.5% on an organic basis mainly thanks to:
 - Positive energy price increase due to positive market price movements totalling (i) +€2,2bn in France with a +7.7% rise in regulated sales tariffs on 1 June 2019, and (ii) +€0.5bn in the UK with increased capacity revenue after return of capacity market;
 - Partly offset by the decrease in generation, mainly of (i) French nuclear power (-13.7TWh) and hydropower (-5.8TWh after pumping), and (ii) UK nuclear output (-8.1TWh)
- EBITDA of €16.7bn, +12% vs 2018 (+8.4% organic):
 - Driven by (i) Better price conditions in France and the UK and (ii) a strong performance from EDF Renewables (+33.5% of EBITDA organic growth).
 - Partly offset by (i) a decline in nuclear generation in France (-13.7TWh) and (ii) poor hydropower conditions in France (-5.8 TWh).
- Net income multiplied by 4.4 to €5.2bn thanks to (i) a strong operating performance and (ii) a huge increase of the financial result (+€4.5bn) explained by a positive change in fair value of the portfolio of dedicated assets (€3.5bn), in addition to the good performance of the equity and bond markets in 2019.
- Signing of a binding agreement to sell Edison's E&P activity for an amount up to c. US \$1bn.
- Exercise of put option on participation in CENG.
- Hinkley Point C costs at completion revised to £21.5 - 22.5bn.
- Flamanville 3 costs at completion revised to €12.4bn with fuel loading expected at end-2022.
- Fessenheim: agreement that French State will compensate EDF for the early closure of the plant
- Rise of EMTN notes for €1.25bn (30 years) and \$2.0bn (50 years) and €0.5bn hybrid notes.
- 2019 net rec. income Group share guidance achieved
- Revenues amounted to €60.1bn, +5% vs 2018 and +4% on an organic basis, due to:
 - (i) Supply revenues in North America, France and Europe, (ii) growth in Client Solutions driven by a favorable market context for industrial clients in Europe, (iii) favorable market conditions for Global Energy Management (GEM) activities, and (iv) strong momentum in Latin America
 - Partly offset by lower revenues from (i) Supply activities in the UK and Australia and (ii) from Thermal activities in Europe.
- EBITDA reached €10.4bn, +7% vs 2018 and + 8% on an organic basis, mostly driven by (i) the current operating income growth and (ii) its new strategic plan Lean 2021 which exceeded the 2019 targets.
- Net recurring income Group share relating to continued operations amounted to €2.7bn, compared to €2.5bn in 2018 due to:
 - The continued improvement in the current operating income
 - Partly offset by (i) higher taxes, mainly due to the 2018 positive effect from the recognition of deferred tax assets and (ii) slightly higher recurring financial costs, reflecting the modification in the business mix.
- Triannual review of Belgian nuclear provisions by the CNP Provisions to increase provision by €2.1 bn
- Acquisition of Renvico with onshore wind installed capacity of 329 MW
- Inauguration of the 262.5 MW Ras Ghareb wind park, Egypt's first private and largest wind farm.
- Closure of three coal units in Chile and in Peru
- Issues a triple tranche senior bond for a total amount of 2.5 bn EUR
- Acquisition of a 30-year greenfield concession project for a 1,800 km electric power transmission line in northern Brazil.

FY 2020 Outlook

Withdrawn of the 2020 guidance

Withdrawn of the 2020 guidance



Share Price Perf. 2018 - 2019



Key Reported Financials

In billion of €	2019	2018 *	Var.
Sales	41.5	30.1	+38%
EBITDA	5.6	4.8	+17%
Impairment	-0.3	-0.1	n.m
Operating Income	3.2	3.0	+7%
Recurring net income Gr	1.5	1.5	+0%
Net Income Gr Share	1.6	3.2	-50%
Operating CF	4.4	4.1	+7%
Net Capex	-5.5	-3.5	+57%
Net debt	-39.4	-16.6	+137%

* Figures NOT restated for IFRS16 impacts

In billion of €	2019	2018 *	Var.
Sales	13.1	13.4**	-2%
EBITDA	2.5	1.5	+67%
Impairment	-2.0	0.0	n.m
Operating Income	1.3	0.6	+117%
Recurring net income Gr	1.2	0.6	+100%
Net Income Gr Share	8.5	0.3	n.m
Operating CF	-1.0	4.6	n.m
Net Capex	-9.8	-1.3	n.m
Net debt	-9.1	-4.4	+107%

* Figures NOT restated for IFRS16 impacts

** Figure adjusted mainly due to changes in the recognition of revenues from derivative transactions

2019 Highlights

- 2019 adjusted guidance achieved
- Sales amounted to €41.5bn, +38% vs 2018, primarily attributable to the acquisition of the innogy Group in September 2019 and the adjustment's effects connected with the application of IFRS Interpretations Committee.
- Operating income increased by 7% to €3.2bn:
 - Primarily due to innogy's contribution (€0.4bn) for the first time. The earnings of the innogy segment are principally attributable to German network business.
 - Partially offset by the absence of Renewables business transferred to RWE.
- The net income totalled €1.6bn, -50% vs 2018 due to:
 - Non-operating impact of -€0.7bn from derivative financial instruments in 2019 (prior year: +€0.6bn) due to hedging.
 - A decrease in financials results
 - Higher restructuring expenses consisted primarily of expenditures in conjunction with the planned acquisition of Innogy in 2019.
- Increase of the net debt of €22.8bn to €39.4bn:
 - Primarily due to (i) the initial consolidation of innogy operations, (ii) the initial application of IFRS 16 and (iii) an increase in pension provisions due to significantly lower actuarial interest rates;
 - Partially counteracted by the deconsolidation of reclassified operations at Renewables and PreussenElektra.
- New €3.5bn syndicated credit facility with a term of five years and two options to extend the maturity by one year each.
- Issue of bonds €1.5bn in October 2019, for €2.25bn in January 2020 and €0.75bn in March 2020.

- 2019 guidance achieved
- Sales decreased by 2% to €13.1bn vs 2018, primarily due to:
 - A 25% decline in gas revenue. Since 1 July 2019 gas sales by RWE Supply & Trading in the Czech Republic have been recognised as pure trading transactions and are therefore no longer considered in revenue.
 - Decrease in wholesale volume.
 - Partly offset by higher prices for electricity on the wholesale market realised by RWE Supply&Trading
- EBITDA amounted to €2.5bn, +67% vs 2018, largely driven by (i) the exceptional success in the trading business, (ii) the reinstatement of the British capacity market and (iii) the acquisition of E.ON's renewable energy business.
- Net income amounted to €8.5bn, +€8.2bn vs 2018, greatly affected by the positive one-off effect due to asset swap with E.ON. A €8.3bn book gain on the deconsolidation of innogy's grid and retail business and the stake in IGH came to bear in particular.
- Net CAPEX increased to €9.8bn, +€8.5bn vs 2018, primarily due to
 - Asset swap with E.ON with CAPEX on financial assets amounted to €7.7bn (2018: €0.2bn)
 - Construction of British offshore wind farm Triton Knoll and the Australian solar farm Limondale.
- Operating cash flow negatively impacted by a deterioration in net working capital.
- Significant increase of net debt mainly due to (i) negative operating cash flow, (ii) the asset swap with E.ON (+€3bn) and (iii) adoption of IFRS 16 (+€0.4bn).

• Following European Commission's clearance of the takeover of innogy today, E.ON finalized integration of Innogy with (i) transfer to E.ON of the 76.8% in innogy held by RWE has now been transferred to E.ON, (ii) transferred of E.ON renewables business to RWE, and (iii) approval by E.ON General Meeting of the squeeze-out condition of the minority shareholders of innogy (€42.82 in cash per innogy share).

FY 2020 Outlook

For 2020, targets issued in March 2020 are:

- EBITDA: €7.1 - €7.3bn
- Adjusted EBIT: €3.9 - €4.1bn
- Adjusted net income: €1.7 - €1.9bn

For 2020, RWE targets issued in March 2020 are:

- Adjusted EBITDA: €2.7 - €3bn
- Adjusted EBIT: €1.2 - €1.5bn
- Adjusted net income: €0.8 - €1.2bn



Share Price Perf. 2018 - 2019



Key Reported Financials

In billion of €	2019	2018 *	Var.
Sales	80.3	75.6	+6%
EBITDA	17.7	16.4	+8%
Impairment	-2,9	-0.1	n.m
Operating Income	6.9	9.9	-30%
Recurring net income Gr	4.8	4.1	+17%
Net Income Gr Share	2.2	4.8	-54%
Operating CF	11.6	11.1	+5%
Net Capex**	-9.9	-8.2	+21%
Net debt	-45.2	-41.1	+10%

* Figures NOT restated for IFRS16 impacts
 ** The figure for 2019 does not include €4m regarding units classified as "held for sale" (€378m at December 31st, 2018).

In billion of €	2019	2018 *	Var.
Sales**	26.8	27.4	-2%
EBITDA	2.1	2.4	-13%
Impairment	-0.9	0.1	n.m
Operating Income	0.9	1.4	-36%
Recurring net income Gr	0.4	0.7	-43%
Net Income Gr Share	-1.0	0.2	n.m
Operating CF	1.3	1.9	-32%
Net Capex	-0.8	-0.9	-11%
Net debt	-3.2	-2.7	19%

* Figures NOT restated for IFRS16 impacts
 ** Figures restated of energy derivative contracts and re-presented prior period accordingly

2019 Highlights

- 2019 guidance achieved
- Sales amounted to €80.3bn, +6% vs 2018, mainly attributable to (i) Infrastructure and Networks operations, in particular in Latin America, as well as (ii) to Thermal Generation and Trading in Italy, reflecting an increase in trading activities and the effects connected with the application of recent IFRIC interpretations.
- EBITDA increased to €17.7bn, +8% vs 2018 due to: (i) the performance of Infrastructure and Networks operations in Latin America, which benefited from the performance of Enel Distribuição São Paulo the resolution of previous regulatory issues in Argentina, and (ii) the growth in Thermal Generation and Trading operations in Spain and Brazil.
- Operating income amounted to €6.9bn, -30% vs 2018. The improvement in EBITDA was more than offset by the increase in depreciation, amortization and impairment losses, which include the impairment recognized in 2019 on a number of coal-fired plants in Italy, Spain, Chile and Russia, which totaled €4bn.
- Group net income amounted to €2.2bn, -54% vs 2018, essentially due to impairment on coal-fired plants.
- Net debt increased to €45.2bn, +10% compared to 2018:
 - Principally attributable to (i) the increase of capital expenditure for the period, (ii) adverse exchange rate developments and (iii) initial application of IFRS 16.
- Issue of Notes: \$1.5bn in "sustainable" bonds (Sept. 2019) and €2.5bn Multi-tranche bonds (Oct. 2019).
- Completion of the capital increase of its Chilean subsidiary Enel Américas S.A. ("Enel Américas") for a total of \$3bn.
- Partial demerger of Enel Green Power (EGP) to assign to Enel of the entire share capital of Enel Green Power North America and Enel Green Power Development North America, currently held by EGP
- Start the 450 MW High Lonesome wind farm in Texas, the largest operational wind project in the Group's renewable portfolio

- 2019 guidance achieved
- Revenue is down by 2% at £26.8bn, mainly due to (i) the impact of lower wholesale commodity prices and warmer weather on gas optimisation revenue in North America, (ii) the reduced oil and gas production and nuclear power generation volumes, and (iii) lower achieved gas prices.
- Operating income amounted to £0.9bn, -36% vs 2018, mainly driven by:
 - The drop in Centrica Consumer Business (-£0.2bn) largely related to the implementation of the UK residential energy supply tariff price cap.
 - The decrease in Upstream Business operating profit (-£0.4bn) largely due to (i) lower output, (ii) reduced achieved gas sales prices and (iii) lower volumes from the Rough field.
 - Partly offset by increase in Centrica Business (+£0.1bn) with (i) significant improvement in power retail margins in North America and (ii) good trading and optimisation performance in Europe.
- Groupe net income amounted to -£1bn in 2019 compared to +£183m in 2018, due to:
 - Impairments of E&P and Nuclear assets due to the reduction in commodity price forecasts and restructuring costs linked to the Group's cost efficiency programme
 - Loss from certain re-measurements, largely reflecting the mark-to-market impact of falling gas prices on energy procured to meet the future needs of our customers.
- Operating cash flow is down by £0.6bn (-32%) to £1.3bn, reflecting impacts of (i) UK default tariff cap, (ii) low wholesale gas prices and (iii) nuclear outages.
- Commissioning of first private Liquefied Natural Gas (LNG) import terminal in Brazil with CELSE
- Agreement to sell the 382 MW King's Lynn CCGT for £105 m

FY 2020 Outlook

- For 2020, Enel targets issued in March 2020 are:
 - Ordinary EBITDA approx. €18.6bn
 - Net ordinary income approx. €5.4bn
 - Minimum dividend at €0.35 per share

Withdrawn of the 2020 guidance



Share Price Perf. 2018 - 2019



Key Reported Financials

In billion of €	2019	2018 *	Var.
Sales	36.4	35.1	+4%
EBITDA	10.1	9.3	+9%
Impairment	-	-	n.m
Operating Income	5.9	5.4	+9%
Recurring net income Gr	n.c	n.c	-
Net Income Gr Share	3.4	3.0	+13%
Operating CF	8.1	7.3	+11%
Net Capex	-7.2	-5.3	+36%
Net debt	-37.8	-34.1	+11%

* Figures NOT restated for IFRS16 impacts

In billion of €	2019	2018	Var.
Sales	23.0	24.3	-5%
EBITDA	4.6	4.0	+15%
Impairment	-	-4.3	n.m
Operating Income	2.9	-2.2	n.m
Recurring net income Gr	1.4	1.2	+17%
Net Income Gr Share	1.4	-2.8	n.m
Operating CF	3.5	2.9	+21%
Net Capex	-1.6	-2.3	-30%
Net debt	-15.3	-15.3*	+0%

* IFRS16 adjusted

2019 Highlights

- 2019 Guidance Achieved
- Sales amounted to €36.4bn, +4% vs 2018, mainly due to (i) huge increase of sales (+11%) on Networks due to favorable regulatory frameworks and demand in Brazil and (ii) higher production in Mexico and Spain.
- EBITDA amounted to €10.1bn, an increase of 9% vs 2018:
 - Mainly driven by (i) the tariff improvements in Brazil alongside the efficiencies achieved and the increase in demand, (ii) the increase in offshore wind production thanks to Wiking's contribution, (iii) a greater installed capacity in all countries, and (iv) strong performance of Generation and Supply in Spain and Mexico.
 - Partly offset by (i) a lower hydroelectric production and (ii) less demand and lower margins due to the imposition of the cap on certain electricity and gas tariffs in UK.
- Net income up 13% to €3.4bn, mainly thanks to the growth in EBITDA however slightly offser by higher net financial expenses due to a greater average debt and exchange rate hedges.
- Net investment in the period increased by 36% to €7.2bn with 85% focused on Networks and Renewables.
- Net financial debt increased by 11% to €37.8bn, primarily because of (i) the application of IFRS 16 and (ii) the major investments drive by the Company.
- Sale of stake (8.07%) in Siemens Gamesa to Siemens for €1.1bn.
- Completion of the sale of a minority stake (40%) in East Anglia One offshore wind farm project, for £1.63bn to the Australian Macquarie group.

- 2019 Guidance Achieved
- Group revenue decreased by 5% to €23.0bn:
 - Mainly due to (i) lower energy prices and (ii) volumes sold in the liberalized businesses
 - Partly offset by the growth in the infrastructure activity.
- EBITDA amounted to €4.6bn, +15% vs 2018 due to (i) a positive performance in the infrastructure businesses, (ii) the new commercial strategy in supply activity and (iii) efficiency gains.
- Net income amounted to €1.4bn, +€4.2bn vs 2018, due primarily to non-recurrent impacts of the asset impairment (-€4.9bn) in 2018 following the approval of the new Strategic Plan 2018-2022.
- Net Capex amounted to €1.6bn mainly reflecting ongoing investments in renewable projects as well as investments in remunerated networks.
- Net debt amounted to €15.3bn, stable vs 2018:
 - Mainly due to the increased focus on cash flow generation of the company
 - Partly offset by (i) the substantial investments for growth in energy transition assets and (ii) its shareholder remuneration commitments.
- Naturgy completed the sale of its Moldovan subsidiaries for an equity valuation of €141m and of Transemel with an enterprise value of €182m.
- Agreement to acquire a 34% stake in Medgaz pipeline for €445m.
- EMTN Bond issue of €750 million (0.75% - 10 years)

FY 2020 Outlook

- For 2020, Iberdrola targets 2020 net profit will exceed that of 2019

Naturgy announced in June 2018 its 2018-2022 "Strategic Plan". Targets for 2022 are:

- EBITDA approx. €5.0bn
- Net income approx. €1.8bn
- Net Debt approx. €16.4bn

Impact of COVID-19 Outbreak on Electricity Demand

A special viewpoint article by John Dimitropoulos and Yuanjing Li, Deloitte UK

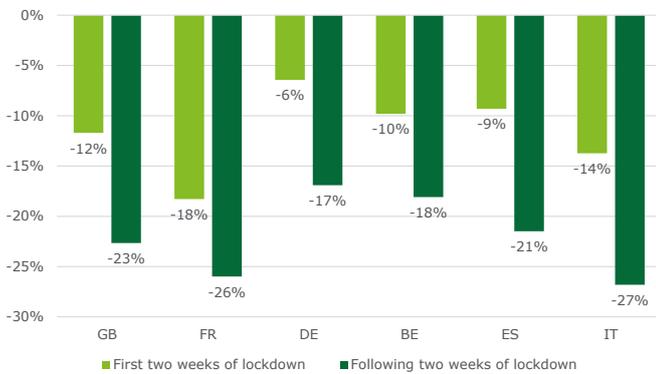
Introduction

The outbreak of COVID-19 across Europe, and subsequent halt of economic activity, has had a profound impact on most key industries, as the majority of businesses had to shut down and people confined to their homes. In this piece, we are examining the immediate impacts of the outbreak on electricity demand in some of the worst hit European countries (France, Italy, Spain, UK, Germany, Belgium) showcasing the UK example. We offer analysis of the observed changes and comment on expected impacts on market participants and the Power & Utilities sector across Europe.

Impact on Electricity Demand across European Countries

Electricity demand in most of Europe's larger economies has plunged due to slowdown of Europe's economy. The first two weeks following the lockdowns saw a reduction in electricity demand between 6-17% in major European markets, but with lockdowns in place longer, electricity demand stabilised at level between 17-27% lower than the level before (see Figure 1).

Figure 1: Electricity Demand Reductions in several European countries after 2 and 4 weeks of COVID-19 lockdown



Note: The lockdown dates are 23/03/2020 in the UK (GB), 17/03/2020 in France (FR), 22/03/2020 in Germany (DE), 18/03/2020 in Belgium (BE), 15/03/2020 in Spain (ES), and 09/03/2020 in Italy (IT).

Source: ENTSO-E. Deloitte Analysis.

Electricity demand was down 20-27% in hard-hit countries in terms of COVID-19 related casualties, such as the Italy, Spain, France and the UK, following a considerable decline in economic activity. Compared with other countries, Belgium has a relatively small, less electricity intensive economy. Therefore its electricity demand decline was less pronounced. Among the major economies, the lockdown impact on electricity demand in Germany was the smallest – a reduction of 17%. According to independent sources, this fact can be explained by a high industrial share of electricity demand in Germany, including an important share from chemicals/medical supplies industry, which is central to efforts to contain COVID-19 virus. As an indicator, industrial electricity use accounts for 45% of total demand in Germany compared to 29% in France, where the share of electricity demand from the service sector is more important.

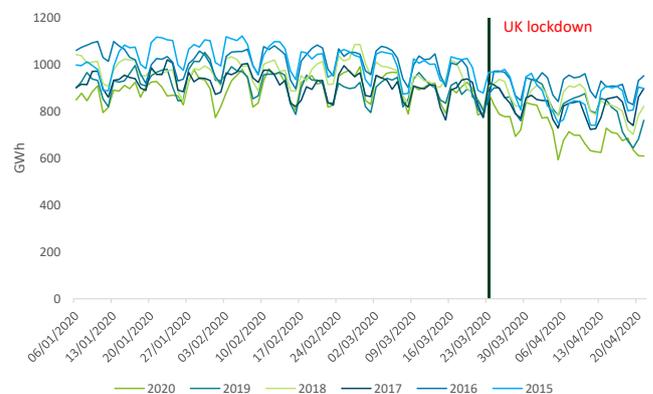
System Impacts: Deep Dive in UK

The UK government placed a lockdown measure to protect the country from a wider spread of COVID-19 virus on Monday 23 March 2020. Since then, the lockdown has resulted in a significant decline in electricity demand and a deviation from the “normal” weekly electricity consumption pattern.

As most businesses are closed and people are ordered not to leave home, electricity demand in Britain has dropped significantly. The immediate impact of the lockdown during the first week was a decrease of electricity demand by 10%. The impact over the following weeks was even larger.

Electricity demand has a weekly seasonality, meaning that demand is higher during the week and lower over the weekend. Compared with the demand curves in previous years, the weekly demand curve in 2020 shows a clear weekly cycle similar to that of previous years until the lockdown came into place. Since the lockdown however, the weekly demand curve was flattened with less difference between weekdays and weekends. Without the lockdown, electricity demand would have increased after Monday 23 March 2020, but it remained at a similar level as the previous weekend.

Figure 2: Daily Electricity Consumption in UK



Note: The series depict daily total demand in GWh. To compare weekly profiles of electricity demand, weekdays and weekends are aligned among different years. X-axis dates only show 2020 between 06/01/2020-21/04/2020. The corresponding periods in previous years are 07/01/2019-23/04/2019, 08/01/2018-24/04/2018, 09/01/2017-25/04/2017, and 11/01/2016-26/04/2016. ENTSO-E uses demand definition as sum of power generated by plants on both TSO/DSO networks, from which net exchange balance and power absorbed by energy storage resources is deducted.

Source: ENTSO-E. Deloitte Analysis.

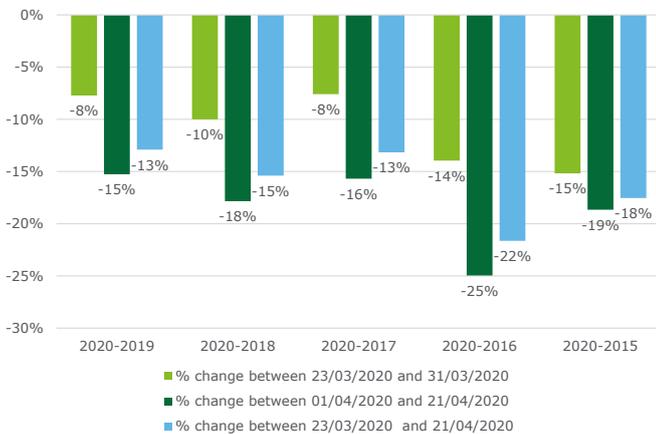
It should be borne in mind that ideally weather factors such as temperature (and solar irradiance) should be taken into account when isolating the net impact of the lockdown measure due to COVID-19 on electricity demand. For instance, due to a relatively mild winter, the year 2020 appears to be a low-demand year

compared with previous years as the 2020 demand curve lies below those of previous years over the first quarter. However, it is clear that the 2020 demand curve still remained within the historical demand range until the lockdown came into place and it fell out of the range afterwards.

Another factor which also should be considered is the occurrence of public holidays, namely the impact of the four-day Easter weekend on electricity demand weekly pattern. For instance, the Easter weekend occurred between 9 and 13 April 2020, resulting in a slump in electricity demand between these days. A sharp decrease in electricity demand over the Easter weekend between 19 and 22 April 2019 was also observed.

Although temperature and public holiday factors need to be considered, the UK lockdown has clearly led to a decrease in electricity demand and a flattened weekly electricity consumption pattern.

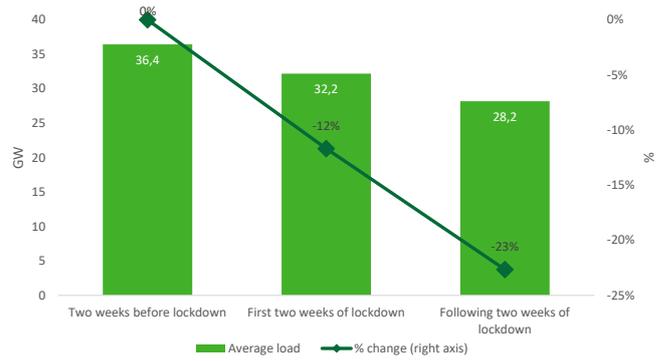
Figure 3: UK percentage change in average load against previous years (not weatherised)



Source: ENTSO-E. Deloitte Analysis.

The lockdown announced by the UK government led to a 13-22% drop in electricity demand between 23/03/2020 – 21-04/2020, compared with average demand load in previous years. During the first days of lockdown, the impact was smaller – an 8-15% decrease between 23/03/2020 – 31/03/2020, as businesses were closing gradually and people were adapting to the lockdown. Once the measure was established, the reduction in electricity demand reached 15-25% in April compared with the same periods in previous years (see Figure 3).

Figure 4: UK Average Load Before and During Lockdown



Note: The figure shows average load in GW accounting for all hours. Two weeks before lockdown are between 09/03/2020 – 22/03/2020. The first two weeks of lockdown are between 23/03/2020-05/04/2020. The following two weeks of lockdown are between 06/04/2020-19/04/2020.

Source: ENTSO-E. Deloitte Analysis.

According to data from the European Network of Transmission System Operators for Electricity (ENTSO-E), the GB average load went down from 36.4 GW to 32.2 GW during the first two weeks of lockdown, and then further to 28.2 GW during the following two weeks of lockdown, representing a 12% and 23% decrease compared with the level before (see Figure 4).

The overall decrease was mostly driven by a drop in industrial and commercial electricity consumption, counting for 45% of UK demand, as offices and factories remain closed. With the UK moving to an extension of lockdown, the impact on electricity consumption is set to continue.

Meanwhile, residential demand experienced a slight increase as households spend more time at home and the lockdown has changed individual consumption behaviours. Some utility companies indicated that residential electricity weekend use remained mostly the same while the overall residential demand saw a 2-6% rise between Monday and Friday ¹.

Profile Shape Changes

The COVID-19 lockdown measure has changed the shape of daily demand profile in Britain.

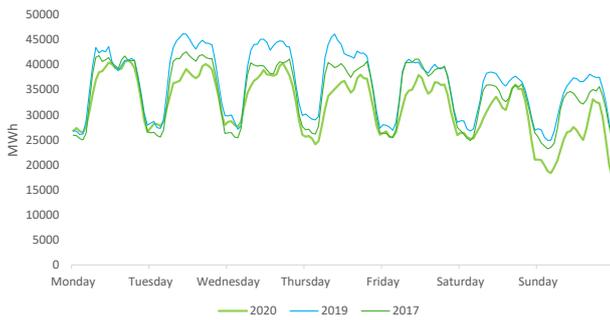
As shown in Figure 5, electricity consumption typically peaks in the morning between 7 – 10 am and in the evening between 6 – 9 pm, but the daily profile following the lockdown has revealed some changes in individual consumption behaviours and habits. On the one hand, the morning peak has been largely suppressed as businesses remain closed and people no longer need to prepare to go to work, resulting in a smooth morning consumption pattern.

On the other hand, electricity use surged in the midday period following an increase in residential use as people prepare lunch and take midday breaks. Some utility companies reported up to a 20-30% increase of electricity use in the midday hours.

Moving forwards, it is likely that this shift in electricity demand profile will remain at least for the period of the lockdown. Beyond the lockdown period, it will depend on the measures that remain in place to slow the pandemic in the future, and the gradual lifting of restrictions

¹See for example <https://www.bbc.co.uk/news/technology-52331534>

Figure 5: UK Hourly Load



Note: The figure shows hourly load in GW. The corresponding weeks are between 30/03/2020 – 05/04/2020, 01/04/2019 – 07/04/2019, and 03/04/2017 – 09/04/2017. Easter weekends did not occur over these periods.

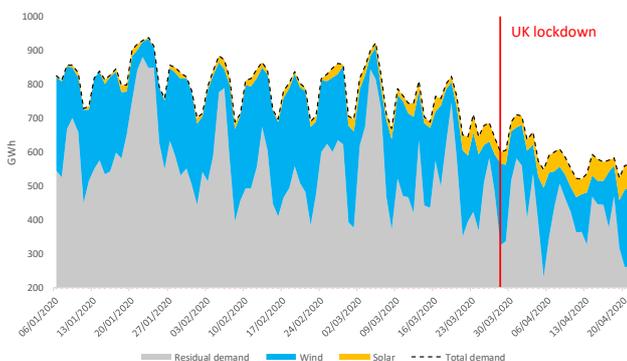
Source: ENTSO-E. Deloitte Analysis.

Residual Demand

The outbreak of COVID-19 and subsequent lockdown has put downward pressure on residual demand in the GB wholesale electricity market (similarly to other markets). Residual demand or load is an indicator showing how much capacity is left for conventional power plants to operate. Intermittent renewable energy sources (RES), such as wind and solar, generate electricity at zero marginal costs and their generation does not follow the demand load curve. They are therefore often characterised as “must-run” generation. A higher “must-run” generation and a lower residual demand means larger downward pressure on wholesale electricity price, especially as conventional power plants need to shut down.

Since the UK lockdown following the outbreak of COVID-19, daily residual demand has fell to a new low level (see Figure 6) given a) a significantly lower total demand and b) a higher renewable generation, especially a surge in solar generation due to sunny weather in March and April. Combined with decreasing gas and carbon price, the UK electricity day-ahead price has fell by more than 40% between 23 March and 21 April 2020 compared with the day-ahead price over the same period in 2019.

Figure 6: UK Daily Residual Demand

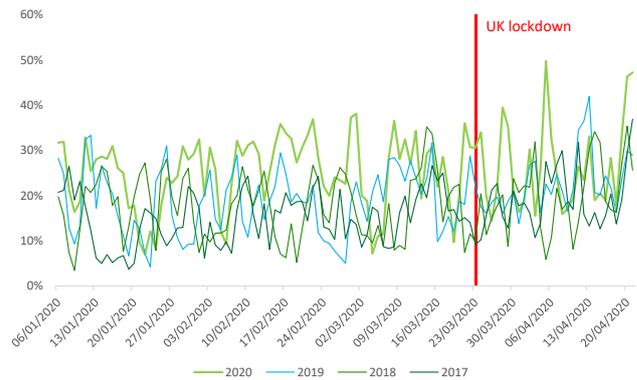


Note: The figure shows daily total demand/generation in GWh. Residual demand is defined as total demand minus wind generation and minus solar generation.

Source: ENTSO-E. Deloitte Analysis.

New intermittent renewable capacity hit record high in 2018 and 2019 in the UK, taking up to 75% new electricity generation capacity that came online. As wind and solar capacity increases every year, the share of renewable generation in the system mix rises significantly between 2017 – 2020. The first quarter of 2020 saw several days with renewable generation meeting more than 30% of total demand (higher if we include biomass). The fall of total demand and rise of solar generation due to sunny weather after the introduction of lockdown has created more pronounced peaks of renewable generation shares, reaching about 50% of total demand for some days (see Figure 7).

Figure 7: UK Daily Intermittent renewable generation share of serving total demand



Source: ENTSO-E. Deloitte Analysis.

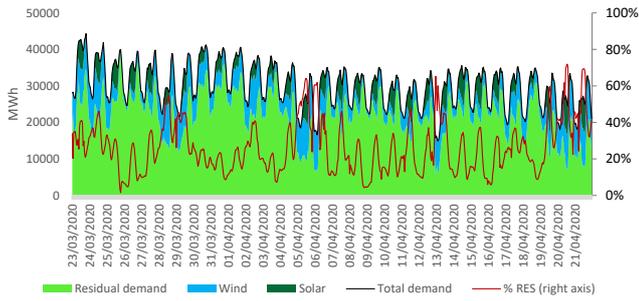
The impact of intermittent renewable generation on residual demand is more pronounced when looking at hourly profile (see Figure 8). As solar generation surged, residual demand was squeezed during day time. Over the Easter weekend and between 19 – 21 April, renewable generation took up about 70% of total demand for certain hours and left only about 30% of total demand for conventional generators in the GB day-ahead market. We note that the corresponding shares of RES generation would be even higher if we took into account generation from biomass.

The effect of low demand with particularly good weather has contributed into making a new record, marking the 28th of April as the longest period in the UK (over 18 days) without burning coal².

² <https://www.nationalgrideso.com/news/great-britains-new-record-longest-period-coal-free-electricity-generation>

https://www.linkedin.com/posts/deloitte-uk_power-activity-6673976535151734784-E-NX

Figure 8: UK Hourly residual demand profile and intermittent RES share of total demand



Note: The figure shows hourly demand and generation in MWh. Coordinated Universal Time (UTC) is used. Source: ENTSO-E. Deloitte Analysis.

What does this all mean? Impact on utilities

The dramatic reduction in demand, with coincidental good weather, has meant that System Operators have had to put substantial efforts to make sure that there is sufficient inertia on the system, especially in countries such as Spain, Germany, Italy and UK where there is a significant amount of RES capacity. In more extreme case, higher RES curtailment may be needed.

Because of the residual demand effect, the majority of the impact of lower demand has been concentrated on conventional thermal generators (mostly gas firing CCGTs) as they have to operate less hours (and at lower prices). We note also that the change is daily profile shapes means that coincidental demand matches with profile for RES, thereby reducing revenues from peaker plants and increasing overall RES shares. As May and early June mark usually the beginning of planned outage periods for nuclear plants, if low demand remains, then thermal plant would have to be called in to fill the gap.

We note also that because of the change in profile shapes, many utilities would have to significantly alter their hedging positions, as previous contracted quantities would be very diverse from market outturns. For those market players with a more merchant approach, the risk profile of the current unpredictable situation can be very damaging.

For suppliers, the impact of COVID-19 on economic activity employment and eventually consumers’ pockets would mean an increasing level for non-payments and bad debts, with the potential to disrupt significantly cashflows. Even though current market provisions safeguard consumers from utilities going bust, a widespread effect may have more severe consequences for consumer bills. In addition, suppliers with focus more on the Industrial and Commercial sectors, may feel the impact stronger as large consumers would reduce their demand or even eliminate it entirely (if they go bust and cease operations).

For infrastructure investment, another observation is for companies that have large exposure to extremely capital intensive projects (such as EDF), the culmination of the above factors, along with unavoidable delays to construction schedules due to the outbreak, may mean significantly and rapidly deteriorating balance sheets. Even though we do not expect a significant shift in energy and climate policy agendas across Europe, in the short-term several smaller scale renewable energy projects may be delayed due to restrictions, whereas financing conditions may have to change. Even though the impact of COVID-19 on the global economy is expected to be hard, investments in energy networks and green infrastructure are considered a “safe haven” for investors (as was proved in the 2008 financial crisis) so we expect the utilities industry to be resilient in the long term.

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?

CEER publishes its 2020 Work Programme

Key features	Insights
<p>On January 8, 2020, the Council of European Energy Regulators (CEER) has published its Work Programme for 2020.</p> <p>The Programme follows CEER's 3D Strategy (2019-2021), whose core elements are Digitalisation in the consumer interest, decarbonisation at least cost and dynamic regulation.</p>	<p>The 2020 Work Programme comprises of 22 public work items, which consists of 6 activities (workshops, conferences) and 16 deliverables (reports). In 2020, most of these work items are related to dynamic regulation to enable the digitalization of the energy system in the consumer interest.</p> <p>The priorities for 2020 are, among others, the following:</p> <ul style="list-style-type: none">• Consumers in an increasingly digital world and retail markets: CEER will concentrate on consumer protection and empowerment, developing well-functioning and competitive retail markets. In this sense, CEER will focus on innovative business models looking at examples of aggregation, peer-to-peer trading and other innovative business models emerging in the energy sector and beyond.• New legislative/policy developments: CEER will respond to new regulatory developments such as future new legislative package on gas markets and decarbonization, including regulatory aspects relating to the future role of low-carbon gases and sector coupling, as well as aspects of the European Green Deal that touch on energy regulation.• The role of Distribution System Operators: CEER will build its analysis of aspects of the regulatory framework for DSOs relating to data management and smart metering. Additionally, CEER will continue its work on cybersecurity, flexibility, electricity distribution tariffs and stranded assets.• Gas and electricity market developments: CEER will consider how energy markets might be affected by new communication technologies and the resulting effect on energy trading at wholesale and end user levels. CEER will also explore areas where gas and electricity converge and will explore whether more effective sector coupling between electricity and gas could be achieved through greater alignment of regulation.

Next steps

The Work Programme for 2020 incorporates a set of public work items that are scheduled during the entire year 2020 and, in some cases, the works extend until 2021.

Link: [CEER publishes its 2020 Work Programme](#)

EU Cohesion Policy invests over €1.4 billion in green projects in 7 Member States

Key features	Insights
<p>On March 17, 2020, the European Commission approved an investment package worth more than €1.4 billion of EU funds in 14 large infrastructure projects in 7 Member States (Croatia, Czechia, Hungary, Poland, Portugal, Romania and Spain).</p> <p>The projects cover several areas such as environment, health, transport and energy. Additionally, these projects will contribute to the European Commission's efforts related to climate and energy and will also accelerate the economy's decarbonization process.</p> <p>According to the European Commission press release, these projects represent a "massive investment to boost the economy, protect the environment and improve citizens' quality of life and social well-being".</p>	<p>The investment will provide funding for several projects in 7 Member States. The most significant projects are the following:</p> <ul style="list-style-type: none">• Improving Croatia's rail network by financing the purchase of 21 new electric trains to boost service quality, reduce delays and encourage more people to use a sustainable transport type. The funds amount to €119 million from the Cohesion Fund.• Increasing energy supply reliability and efficiency in Czechia through an investment of almost €37 million from the European Regional Development Fund that will allow to develop a new efficient and reliable double-circuit power line. This project also intends to increase energy security and renewable energy generation by reducing regional blackouts and grid failure.• Clean energy and better transport services in Poland will be boosted through the development of a power transmission line and power substations in Northern and North-Western Poland thanks to an investment of over €54 million from the Cohesion Fund. Additionally, there are other investments, such as, for example, almost €85 million from the European Regional Development Fund will improve public transport in Olsztyn (including an intelligent transportation system), reducing congestion and increasing positive urban environmental consequences.• Improving rail connection in the Atlantic corridor thanks to an investment of €265 million from the European Regional Development fund, which will improve over 178km of the rail connection in the 715km Madrid-Lisbon high-speed line, and specially in the Extremadura area. This action intends to have both positive and environmental benefits.
	<p>Next steps</p> <p>Once approved the funding, these projects will be developed in the following years and will help to achieve the EU objectives in terms of sustainability and decarbonization.</p>

Link: [EU Cohesion Policy invests over €1.4 billion in green projects in 7 Member States](#)

Ten EU countries calls on European Commission to pursue 'green' coronavirus recovery

Key features	Insights
<p>Austria, Denmark, Finland, Italy, Latvia, Luxembourg, the Netherlands, Portugal, Spain and Sweden has called on the European Commission to use the European Green Deal as major lever for the economic recovery of Europe after the crisis caused by COVID-19. In this sense, the environment and climate ministers of these countries have prepared a letter in which encourage the European Commission to present the 2030 Climate Target Plan as soon as possible.</p>	<p>In the letter, the 10 countries ask the European Commission to examine which elements of the Green Deal can be brought forward to accelerate a green recovery and fair transition. The countries believe that the European Green Deal offers solutions for responding to the economic crisis caused by the COVID-19 virus and for transforming Europe into a sustainable and climate-neutral economy.</p> <p>According to the letter, "we need to increase investment, especially in the fields of sustainable mobility, renewable energies, building redevelopment, research and innovation, the recovery of biodiversity and the circular economy".</p> <p>The letter also states that raising the emissions reduction target for 2030, strengthening the European regulatory framework on the fight against climate change and enhancing environmental standards will position European countries at the forefront of new low-carbon economic development.</p> <p>The letter concludes that the protection and preservation of biodiversity should be a fundamental part of the response to the global and environmental crisis since they are vital to guaranteeing the well-being and survival of our societies.</p>
	<h3 data-bbox="571 833 1508 878">Next steps</h3> <p>The ministers call on a quick response to the crisis. During the following months is expected the European Commission shall develop several measures to deal with the economic crisis caused by COVID-19 pandemic.</p>

Link: [Ten EU countries calls on European Commission to pursue 'green' coronavirus recovery](#)

What is changing in the country regulation ?

United Kingdom			
Topic	Key features	Insights	Next Steps
Contracts for Difference (CfD): proposed amendments to the scheme 2020	<ul style="list-style-type: none"> The UK Government is consulting on proposed changes to the Contracts for Difference (CfD) scheme to ensure it continues to support low carbon electricity generation at the lowest possible cost to consumers. The key changes being proposed include: <ol style="list-style-type: none"> the reintegration of a number of technologies (including onshore wind and solar PV in the “established” technology pot; the option for setting-up a separate pot for offshore wind technology, recognising its role in supporting the UK meet its net zero by 2050 target; halting payments during any period of negative reference prices (this currently only applies if there are six consecutive periods of negative prices); and a series of measures that seek to simplify auction allocation and contractual milestones, as well as including some flexibility in the way capacity constraints are applied. 	<ul style="list-style-type: none"> The proposed changes will be welcomed by a range of renewable energy developers to participate in the CfD auction (in particular onshore wind and Solar PV) and providing support and some protection against volatile electricity wholesale prices. This will also provide greater level of competition between different renewable technologies with the aim of providing value for money for customers. The proposal to not pay out where reference prices are negative is seen as a way of also reducing the cost for consumers, in particular as greater penetration of renewable technology leads to more periods of zero or negative prices. 	<ul style="list-style-type: none"> The consultation will run until 22 May 2020 and the Government aims to introduce changes to the CfD scheme for the next allocation round planned for 2021.
Capacity Market Consultation on Future Improvements	<ul style="list-style-type: none"> On the 3 February 2020, the BEIS published a consultation on proposed future changes to the Capacity Market following the European Commission’s decision on State aid for the scheme, which included a commitment by the UK Government to make certain improvements. The consultation seeks views from interested stakeholders on proposals to implement five of the six commitments referenced in the decision including: <ol style="list-style-type: none"> Allow all types of capacities (except interconnectors) to apply to prequalify to bid for all the agreement lengths available in the CM (up to fifteen years) if they can demonstrate they meet the relevant capital expenditure (CAPEX) thresholds Reduce the minimum capacity threshold to participate in the CM from 2MW to 1MW Enshrine in legislation our commitment to procuring at least 50% of the capacity set-aside for the T-1 auction Ensure the incorporation into the CM of any new capacity type which can effectively contribute to addressing the generation adequacy problem Establish a reporting and verification mechanism for the carbon emission limits to be applied to the CM Remove the exclusion of plants with Long-term (LT) STOR contracts from the CM 	<ul style="list-style-type: none"> In most cases, the proposals have been included in response to feedback received from participants in the Capacity Market and result from the commitments made by the UK Government as part of the European Commission’s State Aid approval for the GB Capacity Market The key change on proposals for direct participation of foreign capacity in the GB Capacity market has not been included in this consultation and is likely to be of greater interest to companies with generation assets located outside Great Britain. 	<ul style="list-style-type: none"> The consultation is currently closed and the Government is considering the responses received. The plan is to implement these changes before the prequalification window opens later in 2020. A separate call for evidence will be published in due course on the proposals to implement the sixth State aid commitment on enabling the direct participation of foreign capacity.

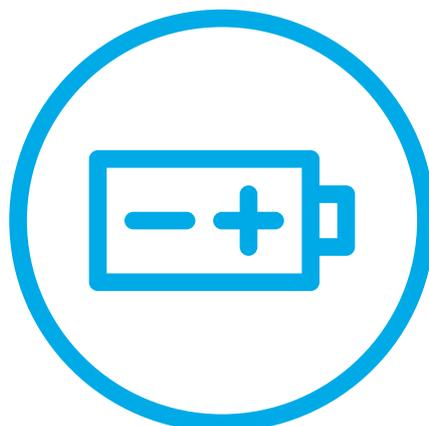
United Kingdom			
Topic	Key features	Insights	Next Steps
Energy emergency planning: priority fuel allocation updated	<ul style="list-style-type: none"> In 2011, the UK Government implemented a plan for priority fuel allocation under situations of emergency. In January 2020, BEIS added additional tools to the plan, including measures to maintain fuel supply and to control supply and demand of fuels amid severe national fuel supply shortages. 	<ul style="list-style-type: none"> The measures included in the plan constitute opportunity for Power and Utilities companies by boosting their resilience under crisis. For instance, the plan adds supply resilience by providing temporary exemption from competition restrictions, and assurances of emergency reserves infrastructure provision. 	<ul style="list-style-type: none"> The plan has been legislated since 2011, so any changes here are incremental and hence built into industrial strategy and decision making already.
Risk Preparedness Regulation (2019/941): BEIS nominated competent authority	<ul style="list-style-type: none"> In January 2020, BEIS was nominated as the competent authority for carrying out the tasks provided for in Regulation (EU) 2019/941 on risk-preparedness in the electricity sector. The primary functions of the competent authority are to develop national crisis scenarios in consultation with stakeholders and to develop a Risk Preparedness Plan in respect of these crisis scenarios. 	<ul style="list-style-type: none"> This regulation seeks to enhance the resilience of the electricity sector, which thus provides opportunity for P&U companies to operate in the market with minimised risk of failure. However, regulation may pose a threat to companies adjusting to comply. 	<ul style="list-style-type: none"> National crisis scenarios to be developed by January 2021 Risk Preparedness Plan to be adopted no later than 5 January 2022.
Heat Networks Investment Project	<ul style="list-style-type: none"> Plans launched in February 2020 to protect customers on heat networks, ensuring fair prices and good services by bringing heat network regulation in line with other utilities. The measures proposed include establishment of Ofgem as heat network regulator, requiring heat networks to report on price and quality of service standards, giving consumers greater transparency and information about their heat, giving developers and investors the tools to establish new heat networks and expand existing ones, and making sure all heat networks are low carbon by 2050. £40m of investment also announced in 7 heat networks in Leeds, Bristol, Liverpool and London. 	<ul style="list-style-type: none"> These plans may constitute either an opportunity or a risk for P&U companies. As above, good regulation should improve market outcomes but pose threats to companies on an individual basis if competition becomes more difficult. The transition to low-carbon is intrinsically costly to these firms. 	<ul style="list-style-type: none"> Measures to grow market, stemming from 2019's application period, are to be invested by March 2022.
Feed in Tariffs (FITs) determinations – Year 11	<ul style="list-style-type: none"> In accordance with the Feed-in Tariffs Order 2012, Articles 37 and 38, the Secretary of State has made the following determinations legally required for administration of the scheme. These relate to: <ul style="list-style-type: none"> the percentage of electricity from each technology deemed to be exported how we recompense licensees' administrative costs (QFCs) the collar and cap range for mutualisation payments. Generation tariffs are not affected by this administrative process. 	<ul style="list-style-type: none"> The Feed in Tariffs scheme incentivizes participation of consumers in household renewable energy generation initiatives e.g. solar panel installation by providing payment for both generation and export from eligible installations. This should provide upward pressure on demand, which provides scope for expansion of supply and hence greater scope for entry by energy firms. 	<ul style="list-style-type: none"> The FIT scheme closed for new applicants, barring some exceptions, on 1 April 2019.

United Kingdom			
Topic	Key features	Insights	Next Steps
New customer compensation payments to further improve switching	<p>In February 2020 Ofgem announced new measures to improve switching:</p> <ul style="list-style-type: none"> From 1 May consumers will automatically receive £30 if they experience delays or mistakes when switching supplier New compensation requirements from Ofgem will protect consumers and further boost confidence in the switching process This follows switching compensation payments introduced last year, which have already delivered over £700,000 to customers 	<ul style="list-style-type: none"> Boosting rates of switching should reinvigorate the playing field for energy suppliers, whose market is currently very sticky with respect to consumers' attitudes to switching between suppliers. This can allow competitive suppliers to gain more market share, and should encourage equitable pricing in the market. 	<ul style="list-style-type: none"> The new standards take effect on 1st May 2020, following 12th February's final decision and September 2019's consultation

France			
Topic	Key features	Insights	Next Steps
Publication of the law on energy and climate	<ul style="list-style-type: none"> The law on energy and climate strength previous objectives of national low-carbon strategy and Multi-Year Energy Programme. The law set a maximum operating life for power plants generating the highest pollution, in order to limit greenhouse gas emissions in the electricity generation sector from January 1st, 2022. The Energy and Climate law aims to modify the calculation of the price supplements in the ARENH (Access to historic nuclear power) to ensure that demand from suppliers for ARENH is commensurate with their requirements, and to avoid effects that are detrimental to the public interest. In addition, the ARENH ceiling was raised to 150TWh from January 1st, 2020. However, the volume limit that determines maximum total volume of ARENH deliveries per year (up to the ceiling) has not been changed for 2020, and remains at 100TWh at €42/MWh. The law sets the terms for regulated sales tariffs <ul style="list-style-type: none"> Gas: for all consumers, to align French law with European Union law. Subscription of new natural gas contract at regulated sales tariffs is now forbidden. Existing regulated tariffs will be discontinued for small businesses within one year, and for all consumers by July 2023 Electricity: decision to transpose the EU directive on the internal electricity market with end of regulated tariffs for business customers except very smallest business types by December 31, 2020 (non-residential customers with less than 10 employees or annual sales, total income or balance sheet total less than €2 million). 	<ul style="list-style-type: none"> Previous energy policies targets are modified as follow: <ul style="list-style-type: none"> Target of "dividing greenhouse gas emissions by four between 1990 and 2050" is replaced by the objective of "achieving carbon neutrality by 2050, by reducing greenhouse gas emissions by a factor of more than six between 1990 and 2050"; Target of "reducing primary fossil fuel energy consumption by 30% by 2030" is replaced by the objective of "reducing primary fossil fuel energy consumption by 40% by 2030"; The time horizon for reducing the nuclear share of France's electricity output to 50% is no longer 2025 but 2035 The law should result in the closure of coal-fired plants by January 1st, 2022. The Energy and Climate law specifies details and conditions for nuclear reactor shutdowns in order to give priority to shutdowns that minimise the economic and social impact, have the lowest impact on the electricity network, and do not entail closure of an entire site. At the request of the French government, based on these criteria, on 20 January 2020 EDF proposed to examine the possibility of shutting down pairs of reactors at the sites of Blayais, Bugey, Chinon, Cruas, Dampierre, Gravelines and Tricastin. 	<ul style="list-style-type: none"> A consultation process is ongoing for the modification of existing ARENH mechanism.

Italy			
Topic	Key features	Insights	Next Steps
<p>“Milleproroghe” Law on protected power and gas market for clients</p>	<ul style="list-style-type: none"> The protected power and gas market for clients, in which the Italian Regulatory Authority for power, gas and water service (“ARERA”) set out the tariffs, will operate until 1 January 2022. On such date, the protected power and gas market will terminate therefore and only the free energy market should exist for final customers. Introduction of the possibility to activate the Collective consumption from renewable energy sources or to build renewable energy community. To this purpose, the electricity’s consumers may associate themselves to become self-consumption of renewable energy and to act collectively in order to build a renewable energy community. In this regard, on 1 March 2020, ARERA published the Consultation document 112/2020/R/eel, proposing an electric energy incomes’ regulation related on the matter of collective self-consumption or shared energy as part of renewable energy community. By 9 May 2020, the interested parties can submit their own observations to ARERA. The incentives provided by article 1, paragraph 954, Law no.145/2018 regarding the incentives for plants generating electricity powered by biogas are postponed, without new or greater charges to the public finance in relation to year 2020. ARERA shall adopt one or more measures aimed at introducing a specific rate for onshore power supply systems to the docked vessels equipped with an installed net power higher than 35 kw. 	<ul style="list-style-type: none"> The postponement of the full operation of the free electricity market will slow down the operation of the free market operators toward the clients. The possibility to activate the Collective consumption from renewable energy sources or to build sharing energy community of renewable energy will increase the capacity of the operators to use the renewable energy sources The incentives’ extension provided for plants powered by biogas has been granted and represents an opportunity for operators. To promote Air pollution reduction in the harbour areas through the widespread of electric technologies. 	<ul style="list-style-type: none"> The Ministry of Economic Development in consultation with ARERA and the Antitrust Authority, by 1 June 2020, must adopt a decree to identify the procedures for a well-informed entrance of the clients in the free energy market, as well as the necessity to ensure competition and a multitude of providers and offers into the free market. ARERA will set out, under a specific resolution, the regulation regarding the incomes related to the collective self-consumptions of power or shared energy, as part of a renewable energy community. ARERA will adopt measures required for the introduction of a specific rate for onshore power supply systems to the docked vessels.
<p>Suspension of all the deadlines of the administrative procedures for Covid-19 Emergency</p>	<ul style="list-style-type: none"> Article 103 suspended all the deadlines of the administrative procedures, upon the request of a party or ex officio, until 15 May 2020. <p>On 24 March 2020, the Energy Services Manager (GSE) published a press release, detailing the administrative proceedings and the obligations for the operators of renewable energy and energy efficiency sectors that are extended. The GSE arranged specific extension such as: the application deadline for incentives submission, initial plant functioning deadlines, completion of the work.</p> <p>The GSE, with a previous press release of 1 March 2020, provided a suspension until 30 April 2020 of all the timelines of the procedures regarding renewable energy sources and energy efficiency measures, including the inspection activities.</p>	<ul style="list-style-type: none"> The suspension of the major deadlines needed to access the incentives represents a warning for the renewable energy and energy efficiency operators. Extension of the validity for several authorization titles in order to facilitate the pursuance of authorized activities. 	<ul style="list-style-type: none"> The administrative deadlines will resume their validity after 15 May 2020, unless a new extension will come for the emergency situation. The Cura Italia Decree shall be implemented into law within 16 May 2020.

Italy			
Topic	Key features	Insights	Next Steps
	<p>Given the new extension until 15 May 2020, the GSE should further extend the suspension period until such date.</p> <ul style="list-style-type: none"> • Article 103, paragraph 2, states that all certificates, licenses, permits, authorizations and qualifications, however named, expiring between 31 January and 15 April 2020, shall remain valid until 15 June 2020. The provision applies also to landscape and environmental authorizations. 		
<p>Urgent measures for the supply of energy, gas and water due to the Covid-19 Emergency</p>	<ul style="list-style-type: none"> • The suspension of electricity, natural gas and water supplies for the lack of payment of the relevant bills by the clients will not be applicable between 10 March 2020 and 3 May 2020. This measure in order to protect the final clients who will not be able to pay on time the energy bills (power, gas and water) during the emergency period regarding COVID-19 (as lastly extended by DPCM of 10 April 2020). <p>The current operators in the protection power and gas market, as well as the sale operators, with PLACET contracts, shall be free to send the bills to the clients in electronic format.</p> <p>In case of non-payment of the bills, the customer may obtain a debt-rescheduling plan without interest costs.</p>	<ul style="list-style-type: none"> • Measures adopted in order to respond to potential clients' non-fulfilments, avoiding the suspension/interruption of energy supplies and facilitating the bills' payment. 	<ul style="list-style-type: none"> • The Authority will verify the restriction's effects caused by Covid - 19 emergency, on electricity, gas and water supply service contracts, taking into account the several extensions granted by the Italian Government to the citizens.



Spain			
Topic	Key features	Insights	Next Steps
<p>Spanish Council of Ministers agrees to forward to the European Commission an updated draft version of the National Energy and Climate Plan</p>	<p>The Spanish Government has been working on its National Energy and Climate Plan (NECP) as one of the key elements included within its Energy and Climate Strategic Framework. The last version has been recently submitted.</p> <p>The Spanish Council of Ministers approved the submission of a first draft version on February 22, 2019 (see Q1 2019 Newsletter).</p> <p>Once this first version was submitted, a Public Hearing took place between February 22 and April 1, 2019.</p> <p>This updated text integrates aspects considered after the Public Hearing as well as other aspects derived from the recommendations made by the European Commission.</p>	<p>The revised NECP text includes new measures and further level of detail. It also incorporates an analysis made in conjunction with REE, the Spanish Transmission System Operator (TSO). This analysis guarantees the electricity supply with the energy mix fixed by the NECP for 2030.</p> <p>The measures included within the Plan shall allow the achievement of the following goals by 2030:</p> <ul style="list-style-type: none"> - 23% of greenhouse gases reduction in comparison to 1990. - 42% of renewable origin on total energy consumption. - 39,5% improvement on energy efficiency. - 74% renewable origin on electricity generation. <p>The NECP expects a set of impacts in several fields of the Spanish economy, among others:</p> <ul style="list-style-type: none"> - It is estimated that, approximately, €241,000 millions of investments associated to renewables energies, energy efficiency or electrification will be developed. - An increase of the GDP of 1.8% by 2030 (between €16,500 and €25,700 millions). - A net increase of employment estimated in a range between 250,000 and 350,000 new jobs. - A target of reduction of the Energy Poverty of, at least, 25% in 2025. - An increase of air quality. 	<p>In the following months, Spain shall submit a final version, which will incorporate the ultimate Strategic Environmental Study.</p>
<p>Spanish Government approves Order TED/171/2020, which updates remuneration parameters related with renewable generation.</p>	<ul style="list-style-type: none"> • Order TED/171/2020, of February 24th, follows the procedure started by Royal Decree-Law 17/2019, of urgent measures regarding the electricity production activity (see Q4 2019 Newsletter). <p>In this sense, the Order sets the specific remuneration parameters for the incoming regulatory period, which started on January 1, 2020 and is expected to end by December 31, 2025. These parameters cover the regulated remuneration that perceive several electricity generation facilities whose source is either renewable, cogeneration or waste.</p>	<p>The Order serves as a reference for those all electricity generation units that perceive a regulated remuneration. Some parameters, as those that cover the investment and the operation of the plants, are set for the first regulatory semi-period (2020-2022) and shall be reviewed for the following regulatory semi-period (2023-2025).</p> <p>Other aspects that shall be considered concerning this Order are the following:</p> <ul style="list-style-type: none"> • The investment remuneration parameters have been calculated considering a 7.09% Remuneration Rate, as it was set by Royal Decree-Law 17/2019. This rule also included a provision by means of which generation facilities currently under arbitration proceedings related with Royal Decree-Law 9/2013, could achieve a constant 7.398% Remuneration Rate for the period 2020-2031 if they renounce those existing arbitration proceedings. • The Order sets the electricity market forecast for the three coming years: 54.42 €/MWh (2020), 52.12 €/MWh (2021) and 48.82 €/MWh (2022). 	<p>This piece of law comes into force on February 29, 2020.</p>

Spain			
Topic	Key features	Insights	Next Steps
<p>Royal Decree-Law 11/2020, of March 31th, of urgent complementary measures to cope with the social and economic impact caused by COVID-19</p>	<p>Due to global COVID-19 pandemic, the Spanish Government has issued several measures, which intend to mitigate its social and economic impact.</p> <p>Royal Decree 463/2014, of March 14th, declared the State of Alarm in Spain. Royal Decree-Law 11/2020 gives continuity to Royal Decree 463/2014 and other approved measures by: (i) strengthening the protection of employees, families and vulnerable groups, (ii) supporting the continuity of productive activities as well as the preservation of employment and (iii) reinforcing the fight against the pandemic.</p>	<p>The Spanish Government has developed several measures through Royal Decree-Law 11/2020, of March 31st. Among others, and concerning the energy sector, this rule:</p> <ul style="list-style-type: none"> • Develops several measures for self-employed and Small and Medium-sized Enterprises (SMEs) as establishing a mechanism for suspending the payment of bills for electricity, natural gas and certain petroleum products in several situations. • Prohibits the suspension in the event of non-payment of electricity, natural gas or water supply for consumers who are natural persons in their primary residence. • Recognizes as “vulnerable consumers” for supply in the principal residence those self-employed workers whose activity has ceased or whose gross revenues have been reduced as a result of COVID-19 and who meet a certain level of income. • Extends the deadline of network connection rights for electricity generation new facilities. • Modifies certain aspects related to foreign investments on strategic sectors of Spanish economy. 	<p>This set of measures will be in force during the upcoming weeks and months due to the State of Alarm in Spain.</p>
<p>CNMC passes 4 new pieces of regulation in the Electricity and Gas Sectors</p>	<p>Spanish Energy Regulator (CNMC) has approved 4 new pieces of regulation, which deal with several regulated activities, concerning both electricity and gas sectors. Following the approval of 8 of the 14 pieces of regulation in 2019 (see Q4 2019 Newsletter), these 4 additional regulations will be formally implemented in the upcoming months.</p> <p>After this approval, only 2 pieces of regulation remain under their elaboration process. Regarding these rules, CNMC expects to reach its final approval during 2020.</p>	<p>The new 4 pieces of regulation have to do with the following topics:</p> <ul style="list-style-type: none"> • Remuneration methodology of the Technical Manager of the Gas System. • Natural Gas balancing rules. • Computation methodology of electricity transmission and distribution tolls. • Remuneration methodology of natural gas distribution. 	<p>These 4 pieces of regulation approved during the first quarter of 2020 will come into force in different dates depending on the approved schedule.</p> <p>The pending 2 rules shall be approved during 2020.</p>

Snapshot on surveys and publications – April 2020

Deloitte

COVID-19 Impact on the Power, Utilities, and Renewables Industry: Accounting and Financial Reporting Considerations – April 2020

The COVID-19 pandemic is impacting major economic and financial markets, and virtually all industries are facing financial and operational challenges. While the impacts of COVID-19 on the Power, Utilities and Renewables sector continue to evolve, we're sharing the latest information on industry-specific accounting and financial reporting considerations specifically related to the pandemic.

[Link to the survey](#)

COVID-19: Virtual Close Preparedness – Power, Utilities & Renewables – April 2020

This paper deals with the complexities associated with the business-as-usual close for Power, Utilities & Renewables (PU&R) organizations coupled with the challenges of conducting a virtual close. There is limited precedent into how a global pandemic such as COVID-19 will impact PU&R organizations as they prepare to complete their first virtual close.

[Link to the survey](#)

Unlocking Growth in Energy Retail: Building Revenue by Giving Customers What They Want – April 2020

This paper, first in the Future-ready digital utility series, provides insights into how retail energy providers can overcome challenges and unlock growth, utilities need to reposition from energy providers to solutions and services providers, building five core capabilities to maximize customer lifetime value.

[Link to the survey](#)

Risk powers performance: Navigating the major risk trends in Energy, Resources & Industrials for competitive advantage – March 2020

Four key drivers continue to catalyze transformation in the business and operations of the industry globally—Regulatory scrutiny, digital transformation, safety and reliability, and sustainability. How are businesses driving and creating value through these catalysts? In this report, we explore 10 specific risk trends characteristic of areas, for which ER&I companies need to prepare.

[Link to the survey](#)

Energy-as-a-Service – December 2019

Energy-as-a-Service (EaaS) is a delivery model that combines hardware, software and services. Solutions should combine demand management and energy efficiency services, facilitate the adoption of renewables and also optimize the balance between demand and supply. The report provides a summary of EaaS and explains how it helps the customers.

[Link to the survey](#)

2020 Renewable Energy Industry Outlook – November 2019

The renewable energy industry is primed to enter a new phase of growth driven largely by increasing customer demand, cost competitiveness, innovation, and collaboration. But will challenges surrounding trade and tariff policy require the industry to prioritize risk mitigation tactics?

[Link to the survey](#)

2020 Power and Utilities Industry Outlook – November 2019

In 2019, natural gas dominated the US power generation mix, as wind and solar saw a rise in capacity. And while some of the year's power and utilities industry trends—cyber risk, scrutiny from regulators, natural disasters—will continue into the new decade, 2020 will likely bring opportunities for the power and utilities industry to lead the clean energy transition.

[Link to the survey](#)

Offshore Wind Capital Projects: An Approach for Owners and Investors to Deliver Strong Project Performance – October 2019

This report states that offshore wind has grown internationally, with most of the development occurring in Europe and the majority of future growth expected in Asia. It identified 10 levers that drive project performance in offshore wind

[Link to the survey](#)

Agencies or research institutes

International Energy Agency

Outlook for biogas and biomethane – March 2020

This report provides estimates of the sustainable potential for biogas and biomethane supply, based on a detailed assessment of feedstock availability and production costs across all regions of the world.

[Link to the survey](#)

2019 Global Status Report for Buildings and Construction – December 2019

This year's Global Status Report for Buildings and Construction provides an update on drivers of CO₂ emissions and energy demand globally from 2017, along with examples of policies, technologies and investments that support low-carbon building stocks.

[Link to the survey](#)

Offshore Wind Outlook 2019 – October 2019

This report provides the most comprehensive analysis to date of the global outlook for offshore wind, its contributions to electricity systems and its role in clean energy transitions. The report is a deep dive into offshore wind, giving a snapshot of where the market, technology and policies stand today – and mapping out how they may develop over the next two decades.

[Link to the survey](#)

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European Commission

Study on energy technology dependence – February 2020

The overarching objective of this study was to better understand the dependence of the European Union on energy technologies and to specifically consider the impact of this dependence on the security of energy supply in the EU and on the EU objective of becoming a world leader in renewable energy technologies.

[Link to the survey](#)

Masterplan for a competitive transformation of EU energy-intensive industries enabling a climate-neutral, circular economy by 2050 – November 2019

The Masterplan is an outcome of work of the High Level Group on Energy-intensive Industries (HLG EIIs) organised in three thematic subgroups on (1) creation of markets for climate-neutral, circular economy products, (2) developing climate-neutral solutions and financing their uptake, (3) resources and deployment.

[Link to the survey](#)

Study on market for decommissioning nuclear facilities in the European Union – October 2019

In the next 20 years, the market size of the D&D market for nuclear power plants may reach €2.2bn annually, with an expected decline in the UK balanced by the progressive growth of the German programme. The completion of this latter will then be balanced by the consolidation of the French programme, which may drive the market to a peak of about EUR 3.0 billion per year in 2045.

[Link to the survey](#)

Eurelectric

Seeking Shared Success: Empowering consumers in the energy transition – September 2019

This report is to understand what is holding back consumers from engaging in the energy transition, and what different players in the energy system can do to overcome these obstacles.

[Link to the survey](#)

Oxford institute for Energy

Hydrogen and decarbonisation of gas: false dawn or silver bullet? – March 2020

This Insight continues the OIES series considering the future of gas. The clear message from previous papers is that on the (increasingly certain) assumption that governments in major European gas markets remain committed to decarbonisation targets, the existing natural gas industry is under threat.

[Link to the survey](#)

‘Finding a home’ for global LNG in Europe: understanding the complexity of access rules for EU import terminals – January 2020

This paper concludes that the development of a dedicated stand-alone LNG-specific regulatory framework at the EU level, which could build on and bring together the LNG-related provisions of the Third Gas Directive and Gas Regulation 715, differing terminal codes and exemptions, would establish a level playing field and simplify the sellers’ task of accessing the terminals.

[Link to the survey](#)

Liberalized retail electricity markets: What we have learned after two decades of experience? – December 2019

This paper argues that the reference design of the retail market in the post liberalization era has not only failed to achieve its original objectives but has also proved to be unfit to keep pace with technological change, consumer preference, and the energy transition.

[Link to the survey](#)

Prices Behind the Meter: efficient economic signals to support decarbonization – November 2019

This Insight emphasizes the importance of encouraging only efficient consumer decisions, in particular with respect to investment and use of distributed energy resources (DER) behind the meter (BTM).

[Link to the survey](#)

A road map to navigate the energy transition – October 2019

This study tries to provide a framework for the energy transition, pointing out that some long-run scenarios have a higher probability than others.

[Link to the survey](#)

Challenges to the Future of LNG: decarbonisation, affordability, and profitability – October 2019

The propositions underpinning this paper are that the global LNG industry, despite a huge expansion of capacity with final investment decisions on projects potentially in excess of 100 bcm in 2019 and 2020, faces affordability and decarbonisation challenges.

[Link to the survey](#)

A mountain to climb? Tracking progress in scaling up renewable gas production in Europe – October 2019

This paper, joint with the Sustainable Gas Institute at Imperial College, London, considers the very significant rate of scale up and the significant cost reductions contemplated by such projections.

[Link to the survey](#)

SE Europe gas markets: towards integration – October 2019

This paper puts all these dynamics into context, and argues that if current interconnectivity plans can be delivered, the region will see improved security of supply and become a functioning gas market region by the mid-2020s.

[Link to the survey](#)



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