

strategy&

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COVID-19: UK industry focus

Where next for power and utilities?





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Where we are today

The power and utilities sector is more resilient than most. It is an essential service and is accustomed to operating in volatile commodity price conditions, but the pandemic has thrown up unique supply and demand shocks.



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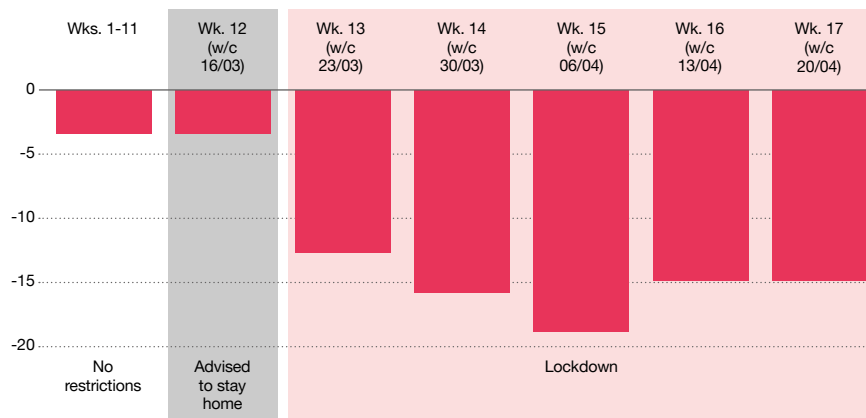
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Demand has been particularly hard hit in the business sector. Many businesses have scaled back significantly. Others have ceased operations. This has been partly offset by higher household use as people work and study from home and stay indoors, but overall demand on a week-on-week comparison with 2019 has been down as much as 19%.

19%

overall demand is down for power and utilities on a week-on-week comparison with 2019

Weekly energy consumption in 2020 as a percentage of 2019
(% reduction 2020 demand vs. same week in 2019)



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The reduction in demand combined with high penetration of renewables has caused instability in the system and increasing periods of negative wholesale power prices. This is affecting usage costs and causing short term funding challenges for networks and low-carbon subsidies. There is now a need for new energy products and services, including demand-side management, time-of-use tariffs and storage technology.

Low wholesale prices are impacting suppliers in various ways. Reduced business use has seen suppliers selling back hedged positions to mitigate their losses. However, for suppliers that predominantly use variable tariffs, lower prices provide some relief.

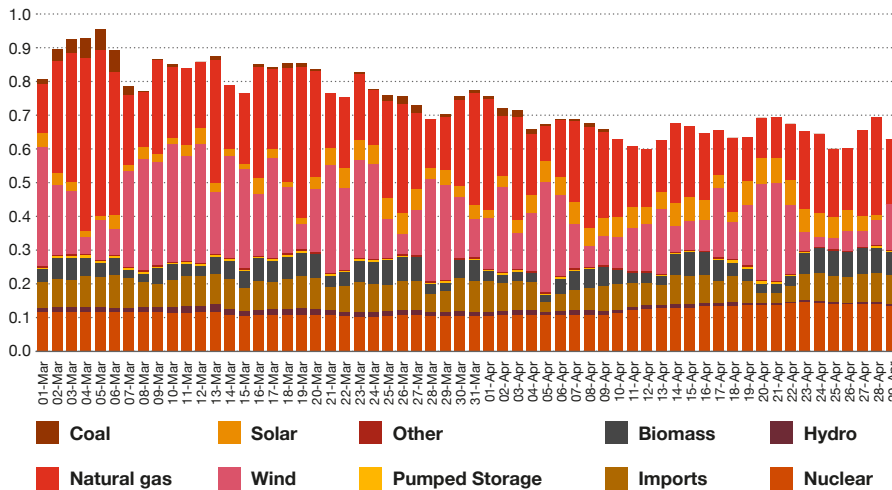
We're seeing high levels of trust in energy suppliers during the COVID-19 crisis, especially among the more vulnerable in society. PwC research showed that 82% of over 65s trust that their supplier will provide support if needed at this time. This has coincided with lower customer switching rates recently.

Changes to working patterns have disrupted other areas of the value chain. Workforce and supply chain challenges on infrastructure projects, for example, are affecting cost and schedule targets. This will impact some significant national programmes, including nuclear new build projects, offshore wind installations, network upgrades and the rollout of smart meters.

COVID-19 is also providing an accelerated testing ground for the energy system of the future. It could become a critical platform to launch the sector into the next stage of the energy transition towards the 2050 target of net zero carbon emissions. Diminished energy use has reduced carbon emissions on a scale never seen before. In the power sector, according to National Grid data, we've seen the longest period of coal-free energy generation since 1882, with demand met by 39% renewables, 30% natural gas, 21% nuclear and 11% imports.

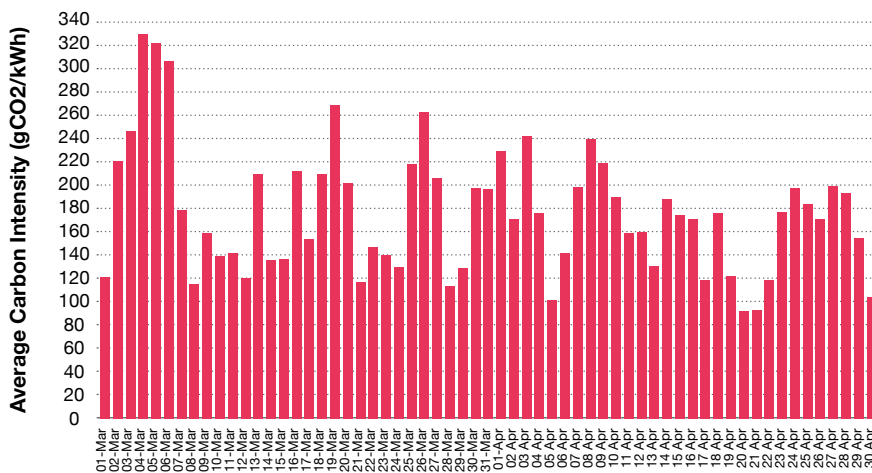
39%
of demand has been met by renewables

Total generation by source – March and April 2020 (TWh)



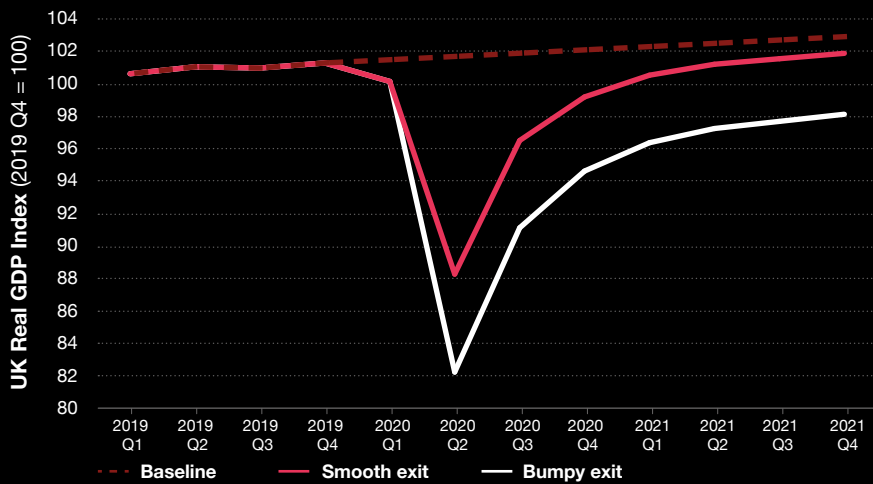
Source: Elexon, Sheffield University, PwC Strategy& analysis

Average Carbon Intensity – March and April 2020 (gCO₂/kWh)



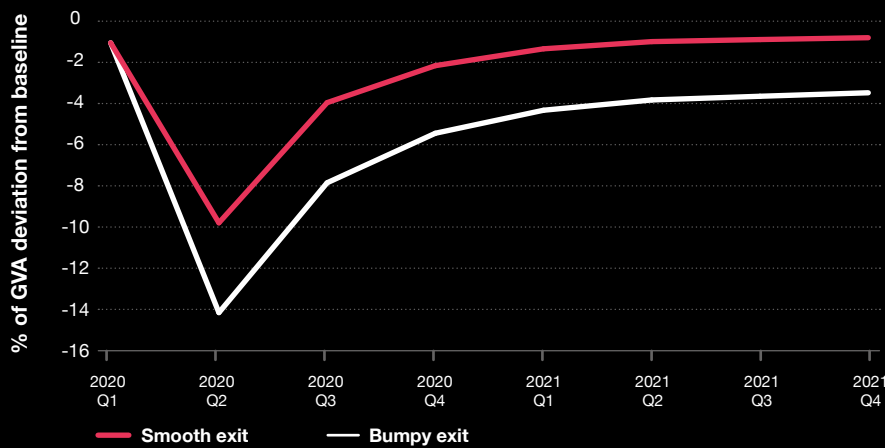
Source: Carbon Intensity forecast, National Grid

UK GDP index (Q4 2019 = 100), quarterly levels in each scenario



Source: Strategy& UK Economic Analysis May 2020

Impact of COVID-19 on Power & Utilities GVA by scenario



Source: Strategy& UK Economic Analysis June 2020

340,000

Current no. of sector employees

'Total number of employees' represents the total number of employees in the power and utilities sector. These figures are deduced from ONS data, specifically the [Business Register and Employment Survey 2018 provisional](#).

LOW

Jobs at risk RAG rating

'Jobs at risk' rating reflects the analysis conducted by the International Labour Organisation. They assessed the global impacts of COVID-19 on different sectors, assessing those most likely to lay off workers due to lower cash flow.

33%

of workers normally come into physically close contact with >20 fellow workers

Physically close contact is defined as a distance of 2m. Source: PwC Research Quantibus April 2020.

57%

of workers can work from home

The Work From Home index is based on a survey carried out by PwC Research, and is the equivalent to the % of respondents saying they can work from home.

What are we learning?

The onset of COVID-19 – and attempts to mitigate its spread – has led to some rapid and significant changes to working practices, customer behaviour and demand for technology across the sector.

Working practices may be a short term challenge

Essential service and construction workers will be brought back to the workplace once lockdown eases. Some may already be back at work. The challenge will be how to serve field and construction workers effectively with support staff still working remotely. The solution? Rapid adoption of technology and upskilling of staff, as well as new ways to engage with customers.

The industry has quickly reinvented itself

The energy retail industry has shown how quickly it can adapt. When the lockdown was announced, suppliers adopted remote working for customer service functions and relocated previously offshored support service lines. This led to a significant and rapid short term transformation in technology and capabilities, as well as customer communications strategy. This has driven a shift in customer behaviour as many adopt self-serve solutions in response to call centre capacity limits. There are now considerable questions over the long term engagement and service delivery model of many utilities.

Over the longer term, power and utility companies that most effectively build on the momentum of these forced transformations will succeed. Any future changes must be built on data and analytics. While individual transformations will differ, companies should use technology to better understand and respond to their customers, workers, assets and supply chain partners.

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Significant opportunities for certain industry segments

Increased household energy demand – due to stay-at-home measures – and high levels of renewable generation are providing significant opportunities across the value chain. Despite falling wholesale prices, renewable generators are less exposed to revenue impacts than gas and nuclear generators because of subsidy payments. Financial fall-out could accelerate the transition to a renewables-dominant generation mix and introduce new products and services, such as time-of-use tariffs and home battery storage technology.

Elsewhere, if home working arrangements remain popular after lockdown, households will increasingly value a digitally enabled relationship with their supplier, particularly those that offer smart technology and access to related services. Several major technology companies are already in the market with a range of products and services for the connected home. Suppliers should use the current high-levels of customer trust to innovate further and broaden their offerings.

Potential programme delivery delays

For network companies, COVID-19 is likely to delay programme delivery under Ofgem’s current RIIO-1 (Revenue = Incentives + Innovation + Outputs) price controls, which will need to be reflected in regulatory performance measures. This may have a knock-on effect on business plans for RIIO-2 (due to start from 2021) through changes in demand patterns or an increased drive towards decarbonisation. Elsewhere, the temporary suspension of the smart meter rollout will see suppliers and the regulator revise delivery timetables, which could affect other new products and services.

Reduced emissions offer a chance to transition to low carbon

The reduction in energy demand has led to a fall in emissions. With the public generally supportive of greater measures to maintain improved air quality and measures to tackle the “next crisis”, businesses should be able to continue their carbon reduction push. However, there will be challenges to this target, such as public transport safety concerns leading to increased vehicle usage and, longer-term, affordability issues being a potential blocker to promoting the transition. As such, a balance between public support and private sector funding will be required to drive forward low carbon investment and bring essential new energy solutions to market.



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How do we respond?

In the short term, power and utilities companies should focus on maintaining business continuity and ensuring financial sustainability. Once the economy has stabilised, we believe there are four areas companies should focus on to encourage growth.

Do the right thing for employees, customers and the economy

As business and households continue to feel the effects of COVID-19, the focus for business must be to balance financial health with doing the right thing for customers and employees – particularly in our consumer-led economy. The power and utilities industry should continue to prioritise employee and customer welfare, by protecting jobs, enabling effective remote working and supporting vulnerable customers.

Accelerate technology-enabled growth and transformation

COVID-19 has forced companies in the sector to abandon traditional ways of working and introduce remote or ‘social distancing’ alternatives. This has driven many to quickly adopt technology or implement different working styles and ways of serving their customer base. Companies must build on this. As the sector emerges from the downturn, technology-led improvements in operational efficiency will drive financial and regulatory performance. Businesses should look to other sectors to help develop new capabilities and operating models that are fit for the future.

Build deep and insightful relationships with customers

So far, power and utilities companies have looked out for customers. Suppliers have supported prepayment and business customers struggling to meet bills. Generators and network companies have continued to operate and deliver essential upgrades and maintenance work. While these measures may affect financial performance, the public recognises the critical role of the sector in supporting essential frontline services such as the NHS. As we begin to exit the crisis, the power and utilities sector should build on this positive perception and increased trust to develop new and revamp old products and services. There is a window of opportunity for suppliers to transform their service models, develop offerings and strengthen their relationships with customers.

Shorten the journey to net zero

Consumers have become aware of the impact of crises and the need for government intervention. They are altering their views and behaviours, breaking down some of the barriers to change. Future government stimulus packages will prioritise investments that boost the economy while enabling the pathway to net zero. Power and utilities companies must now lead the debate.

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The energy system of the future

The lockdown has provided a glimpse of the energy system of the future: low demand, high penetration of intermittent renewable generation and peaks in system instability. This will accelerate the design and deployment of low carbon, innovative flexibility services and open up growth opportunities for companies across the value chain.

In a short space of time, the industry has gained substantial experience of emergent issues and opportunities in the energy system. Forward-thinking businesses must reflect on what they have learned and make strategic moves for the future. The sector must now take the responsibility to drive the transition to net zero and further consolidate the UK’s position as a leader in the green industrial revolution.

Who to talk to

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