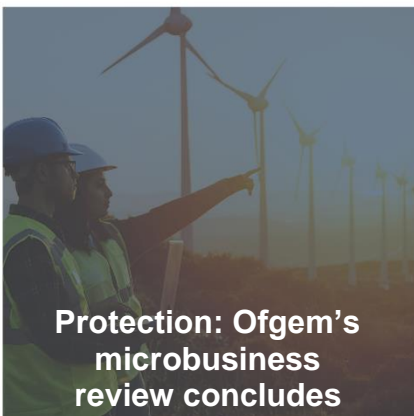


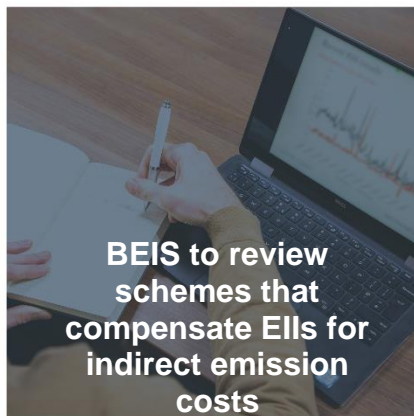
# Energy Spectrum:

## Capturing key developments across the GB energy sector

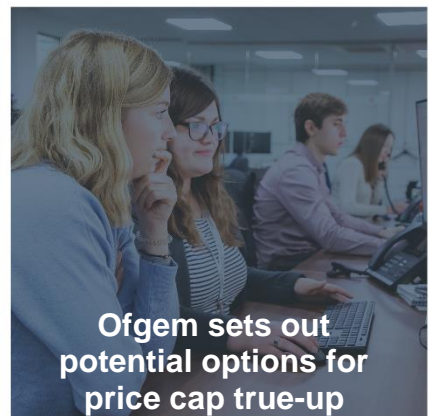
ISSUE 765 – 21 June 2021



**Protection: Ofgem's microbusiness review concludes**



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**Ofgem sets out potential options for price cap true-up**

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# ISSUE 765

## Week in review



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We will be running a short webinar tomorrow morning 22 June at 9am for Energy Spectrum subscribers, to briefly go through some of the main stories in this issue, with Robert Buckley Head of Relationship Development discussing the *Energy Perspective*. We will also look forward to what will be in the next issue.

You can sign up [HERE](#) to register:

**Monday 14/06** – BEIS launched a consultation seeking views on the risk of carbon leakage due to the indirect emission cost from the UK Emissions Trading Scheme (ETS). The CBI calls on government to publish net zero strategy papers.

**Tuesday 15/06** – The Scottish government publishes Scottish Greenhouse Gas statistics. US firm PPL Corporation completes the sale of Western Power Distribution (WPD) to National Grid.

**Wednesday 15/06** – Several organisations and charities in energy and environment sectors have called upon the government to set out a Fair Heat Deal for consumers. EnergyUK's latest switching statistics, show that 417,000 customers switched electricity supplier in May.

**Thursday 16/06** – Chancellor Rishi Sunak launched the UK Infrastructure Bank in an interim form. Trade association Solar Energy UK calls on the government to commit to 40GW of solar generation by 2030.

**Friday 17/06** – The Minister of State for Business, Energy, and Clean Growth, Anne-Marie Trevelyan, confirms that two Capacity Market auctions will be held in 2022. The UK Energy Research Centre (UKERC) releases a briefing paper about the implications of Brexit on the UK meeting its goals to achieve net zero emissions.



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With its formal proposals to [modify supply licences](#) issued at the start of the month, Ofgem is bringing to a [conclusion](#) its microbusiness review. Its [headlines](#) focussed on a “crack down on poor practice by energy brokers” but its proposals are more wide-ranging. As we discuss in this *Energy Perspective*, they have also become more nuanced through a consultation process that started back in May 2019 ([ES 669](#)).

The development of Ofgem's proposals reflects feedback that has been extensive since the start of the review to the extent that the response period for its July 2020 consultation was extended ([ES 726](#)). Ofgem has faced a difficult challenge in a part of the energy market that has become increasingly sensitive and subject to media scrutiny. A lot of that sensitivity has resulted from its main sales channel—third party intermediaries (TPIs or “brokers” as Ofgem refers to them)—standing outside both the regulator's formal remit and statutory professional standards.

### Massive Attack

The feedback Ofgem has worked through includes from three online workshops held last autumn plus a request for information from suppliers. The detail behind its thinking is set out in an impact assessment and representatives from the regulator also attended Cornwall Insight's June 2021 [Energy Supplier Forum](#) to discuss their proposals.

The July 2020 consultation tabled some significant interventions to change both supplier and TPI behaviour. It has rowed back from three in particular: 30-day energy contract extensions triggerable by the customer, a conduct principle that would oblige suppliers to “ensure that brokers they work with conduct themselves appropriately when interacting with microbusinesses” and publishing TPI commissions on supplier bills. But it is still proceeding with a significant reforms including:

- Introducing a 14 day cooling-off period for microbusiness contracts.
- Requiring suppliers work only with TPIs signed up to an approved alternative dispute resolution (ADR) scheme.
- Providing information on TPI costs in contract documents and ensuring customers receive key contract information both pre- and post-agreement.
- Ending the requirement for microbusinesses to provide notice of their intent to switch.
- Improving information and guidance for microbusiness in collaboration with Citizens Advice.

Ofgem's Interim Director of Retail Anna Rossington commented: “Ofgem's proposals will crack down on poor practice and empower microbusiness customers by making it easier for them to get a better deal. We are also sending out a clear signal to industry about the high standards we expect.” To underline the point Ofgem's launch statement claimed one microbusiness had paid TPI commission equivalent to half its bill.

### Safe from Harm

The regulator has decided to continue with its July 2020 proposal for a mandatory 14 day cooling off period for microbusiness contracts, with some adjustments to minimise overlap with the Switching Programme. This follows concerns raised by suppliers over their ability to deliver the changes concurrently with the cooling-off arrangements in the Switching Programme, as well as the cost implications. The regulator estimates that roughly 21,700 microbusiness consumers will cool-off from electricity contracts and 6,700 from gas contracts each year. On our maths these equate to around 1.5% of all microbusiness contracts annually, or about 6% of all switched business electricity meters in the last year as recorded by Energy UK.

While the original proposal would have given microbusinesses the right to cancel contracts by giving notice to the new supplier within 14 days after entering into a contract, the final proposal suggests limiting the applicability of the cooling off period. Therefore, the proposal has been amended so that the 14 day cooling



off period is only valid up to 28 days before the switch occurs. As part of this, it is proposed that the definition of 'principal terms' within the supply licence is updated to ensure that information about cancellation rights is included within the principal contractual terms. Concerns have been expressed, including at our Supplier Forum about communicating to customers how such a variable window would work. It is variable due to up until 28 days at the point when customers can switch so in theory could affect contracts start dates over 42 days. But the ability for customers to extract themselves more easily from contracts that could have been mis-sold is an important new right and should save some distress.

From a systems' perspective, the regulator also considers that the amended cooling off period will have a significantly reduced impact compared with the original proposal and be consistent with work being put in place to facilitate faster, more reliable switching. Ofgem's Impact Assessment (IA) cited two respondents reporting one-off implementation costs of amending IT systems to accommodate a cooling-off period of around £95,000 to around £500,000. It argued that a 180 day timeline for delivery rather than 56 days would also entail lower implementation costs. But as this may take longer to implement than the other measures, Ofgem is proposing that this should take effect from 1 January 2022.

### Special Cases

Also continuing from the July 2020 proposals is the move to obligate suppliers only to work with TPIs that are signed up to a qualifying ADR scheme. Ofgem has moved to address suppliers' concerns raised in the consultation—and again at our June Supplier Forum—of a race to the bottom if more than one ADR mechanism is permitted and also about potential difficulties in determining whether a complaint should be raised against a supplier or a TPI.

The regulator is proposing to introduce a licence obligation on suppliers to abide by any future guidance issued on what constitutes a Qualifying Dispute Settlement Scheme to address concerns around having multiple ADR scheme providers. The regulator has also proposed using the licence to force suppliers to provide information requested by a TPI ADR scheme provider involving a dispute with its existing or previous microbusiness customer. Stakeholder feedback that the Ombudsman may be best placed to act as the ADR provider has been acknowledged, with Ofgem noting that Ombudsman Services are continuing to develop a model for the design and operation of the scheme. An illustrative funding model for the scheme has also been provided by the Ombudsman in the IA and there is a widespread expectation that it will become the primary if not only scheme operator.

It is proposed that the scheme takes effect from 1 January 2022. So if it is to be the Ombudsman it will have its work cut out. Implementation may be possible but signing up participants will be the big challenge, even with the threat of mandation for suppliers indirectly pressuring TPIs. Defining the scheme will be the easy part. Defining who it should cover and getting them to pay for it will be much harder. A funding structure for the scheme will need to be agreed that goes with the grain of the TPI sector. Some might see it as helpful if those TPIs unwilling to pay their share leave the market, but even for after a decade or so of researching the sector it is very difficult to assess the numbers of TPIs in scope (see Figure 1). The largest SME TPIs from our research are Bionic (formerly Makeitcheaper) and Love Energy Savings. Their two business models are also different and embody the challenges ADR scheme operators and suppliers will face. Bionic undertakes its business directly, while Love Energy Savings is one of the leading aggregators, offering smaller TPIs including individuals access to energy contracts from different suppliers. Will aggregators have a responsibility for TPIs that sign up to their platforms? Many TPIs use more than one aggregator, will they have to pay more than once? Is a flat fee appropriate as the IA models or should allowance be made for market share (if it can

**Figure 1: Ofgem IA assessment of fixed and set-up costs of a TPI ADR scheme**

	Set up costs (pa years 1-3)	Fixed running costs pa	Total scheme fixed costs pa	Annual subs per member – based on 1,500 members	Annual subs per member – based on 2,000 members
<b>Low Estimate</b>	£145,000	£400,000	£545,000	£365	£275
<b>High Estimate</b>	£185,000	£485,000	£670,000	£445	£335

Source: Ofgem Microbusiness Strategic Review Impact Assessment

be measured)? Previous attempts at TPI codes of practice have tabled annual costs of £10,000 and above for larger TPIs on a market share measure and have foundered partly on fears of free-riding by smaller TPIs. There is also a tendency for rogue TPIs to disappear and reappear that suppliers and the scheme operator will need to manage. Individuals as well as companies will need to be on the ADR radar.

Perhaps more importantly the indicative level of ADR charges risks perverse incentives. On a 1p/kWh commission rate currently seen to be typical, a £340 case fee (see Figure 2) would be equivalent to the commission earned from a microbusiness electricity contract of the order of £5-6,000/year. There could be the incentive for commissions to increase to cover this new potential cost or customers become underserved. With a tight deadline to implement by the start of next year, communicating the changes and who will pay should be a very high priority. Some might say that those TPIs unaware of or unwilling to pay their ADR dues should not be in the market

anyway and that this could be a shock to force them out. On the other hand, we see a risk to the scheme start-up if insufficient TPIs are signed up and its costs and membership book will need to be very carefully managed if it is to establish credibility.

Teardrop

Two of Ofgem’s proposals concern better information for businesses: providing a

statement of terms and more granular information on TPI commissions. On the latter Ofgem has, rightly we think, scrapped plans for TPI commissions to be included on supplier bills. The regulator has decided that TPI costs should be included in suppliers’ statements of the principal contractual terms, rather than on bills or account statements. The amount displayed should be total TPI costs over the duration of the contract and should achieve more prominence too given the regulator’s proposals for pre- and post-contract information provision. The combination of these two proposals could have implications for the wider business market. On a safety-first principle and also for ease of operations, many suppliers work to a definition of microbusinesses that is broader than the official scope. Therefore, it is feasible that these information remedies will go to customers in the small and medium industrial and commercial market, where some believe there are still issues of hidden and large TPI commissions, but which have been out of scope of this review.

Unfinished sympathy

The above concerns about the timings for the cooling off period and the ADR scheme notwithstanding, all in all this is a carefully thought through and measured package of reforms from Ofgem. The changes follow through on its previous interventions starting from the banning of rollover supply contracts a decade or so ago. Some will be frustrated that this has been such a long process but we started from a point where we did not even have an accepted definition of what a business customer was.

But there remains a sense of unfinished business around TPIs. Concerns about their conduct date back two decades and more. After the trials and tribulations of the different codes of conduct, Ofgem is using the powers it has in a proportionate way to raise the standards of market actors over whom it has no formal remit.

The regulator references the December 2020 Energy White Paper’s commitment to “consulting by spring 2021 on regulating third parties such as energy brokers and price comparison websites”. In that document BEIS stated that “Ofgem does not currently regulate third parties like energy brokers and price comparison websites and we need to ensure that consumers can be confident that they are protected when engaging with any energy product or service through these channels.”

Ofgem’s microbusiness consultation paper states “we understand BEIS will shortly publish a Call for Evidence on consumer harms emanating from the activities of TPIs currently operating in the market. We welcome BEIS’ commitment to take forward work in this area and view it as a positive step.” It concludes: “In the meantime, we believe that the remainder of our reform package will significantly improve outcomes for microbusinesses in the short-term.” This is a positive note on which to end the review. For now.

Figure 2: Ofgem IA assessment of case fees for a TPI ADR scheme

	Case fee	10 cases per annum	50 cases per annum	100 cases per annum
Low Estimate	£340	£3,400	£17,000	£34,000
High Estimate	£400	£4,000	£20,000	£40,000

Source: Ofgem Microbusiness Strategic Review Impact Assessment

James Shaw, [j.shaw@cornwall-insight.com](mailto:j.shaw@cornwall-insight.com)

**BEIS has published a consultation on a review of the schemes to compensate energy intensive industries (EIIs) for indirect emission costs in electricity prices.**

Announced on 14 June, the government has asked for views on the risk of carbon leakage due to the indirect emission cost from the UK Emissions Trading Scheme (UK ETS) and compensation price support (CPS) mechanism (see Figure 1).

BEIS has run a compensation scheme for these costs for certain EIIs since 2013 for the ETS and 2014 for the CPS. Indirect emission costs are caused by the obligation on power stations to buy emission allowances under the ETS and pay a tax on the carbon content of the fossil fuels they use to generate electricity. This increases their costs which are passed onto the wholesale electricity market, translating into an increase in retail electricity prices for EIIs.

The review is expected to provide an assessment of the risk of carbon leakage due to the indirect emission cost from the UK ETS and CPS. BEIS defines carbon leakage as the displacement of production, and associated greenhouse gas emissions, in ways that would not have happened if climate rules and policies across jurisdictions was implemented in an equivalent way.

The review will also evaluate whether mitigating the risk of carbon leakage provides wider benefits, such as levelling up and supporting jobs, ensuring business viability until the point at which industrial decarbonisation technologies can be deployed and increasing productivity. Through the consultation BEIS aim to gather views and evidence on:

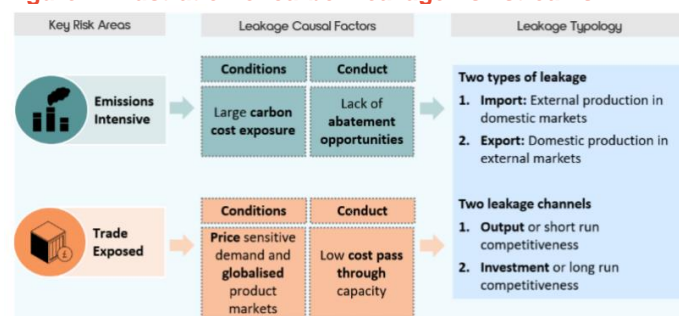
- Evidence of carbon leakage, particularly as a result of indirect emissions costs.
- Sectors most at risk of carbon leakage due to indirect emission costs.
- The design of the scheme.

It is BEIS's current position that there is currently little quantitative evidence to suggest carbon leakage is currently taking place – which they attribute to historically low carbon prices in most markets. However, the consultation does acknowledge the recent gains in the UK and EU carbon markets, stating that their impact is yet to be quantified.

The government expects to continue to consider the full set of policies, both already established and in development, as part of a future carbon leakage mitigations policy. In the longer term BEIS indicates a range of additional measures could be rolled out to address leakage risks for industry which seek to mitigate the competitiveness and environmental impacts of any imbalance between domestic and international policies addressing emissions reductions and improving productivity to enable UK sectors to remain resilient.

The closing date for all consultation submissions is 9 August after which Ministers will take a decision on whether the scheme should continue. It will also be considered how long any new scheme should last for – along with its design. BEIS will inform stakeholders of decisions made at this point and provide updated guidance for applicants should the scheme continue.

**Figure 1: Illustration of carbon leakage risk streams**



Source: BEIS

*There is support for a carbon border tax, with former trade minister Liam Fox calling for one to help protect businesses from countries with less strict climate policies. The EU is also drafting plans to protect energy-intensive industries such as steel, for implementation around 2023.*

## CBI calls on government to publish net zero strategy papers

Nick Palmer, [n.palmer@cornwall-insight.com](mailto:n.palmer@cornwall-insight.com)

Opening the Confederation of British Industry's (CBI) *Road to Zero* conference on **14 June**, CBI Director-General Tony Danker has said "the UK must lead the world by example to avert the catastrophic global impact of climate change". Coinciding with the event, the CBI has **published** a list of actions to develop the government's 10 Point Plan for a green industrial revolution.

The CBI calls for The Crown Estate, by COP26, to announce the timeframe for offshore wind leasing round 5 while continuing work with the Offshore Renewable Energy Catapult to increase value in the UK supply chain, which would support the new Supply Chain Plan requirements in Contracts for Difference (CfD) Allocation Round 4. It also calls on BEIS to launch a review of the non-financial barriers to the achievement of the government's 40GW by 2030 offshore wind target.

The Hydrogen Strategy must be published before Parliament's summer recess (22 July), the CBI argues. It should:

- Confirm the Hydrogen Business Models support mechanism, with the CBI offering the example of a CfD auction with a variable cost for hydrogen production and a fixed payment to cover the CAPEX cost.
- Clarify the role for blending and storage and define "low carbon" hydrogen.
- Commit up to £1bn to hydrogen testing programmes and demonstration projects involving production, storage and distribution.

Within this parliamentary session, the CBI wants the government to legislate for a new financial model for new nuclear power. The government confirmed earlier on this year that it will bring forward legislation for new nuclear financing model and to increase nuclear capacity.

On electric vehicles (EVs), the CBI calls on the government to publish an EV delivery plan by COP26 to deliver the 2030 target of phasing out the sale of new internal combustion engine vehicles. This should include a Charging Infrastructure Strategy to support market delivery across the UK and take into account the role of Ofgem in facilitating anticipatory grid investment.

Concerning building decarbonisation, the CBI recommends the Heat and Buildings Strategy also be published before the summer recess, which:

- Mandates that after 2025, where gas boilers are installed, they should be 'hydrogen ready' and ban the installation of new natural gas boilers by 2035.
- Announces the creation of a National Delivery Body tasked with leading the transition to zero carbon heat.
- Provides clearer regulatory and fiscal incentives for improving energy efficiency and a shift to low carbon forms of heating. These should include scaling up the new Clean Heat Grant Scheme and consideration of backstop regulations to prevent sales or rentals that do not meet defined standards by a certain date.
- Targeting Winter Fuel Payments so that they support those most in need and improve energy efficiency.
- Creates the supportive environment necessary to enable the development of new and existing district heating as well as other low carbon heat and cooling networks.
- Considers a re-balancing of policy costs between electricity and gas to encourage take up of low carbon heating options in the 2020s.

*CC The CBI is highlighting a growing backlog of initiatives from the White Paper and 10 Point Plan with some constructive suggestions on moving things forward.*



## UKERC calls for renewed focus on Brexit energy relationship with EU

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In a new policy brief, the UK Energy Research Centre (UKERC), has called for a renewed focus on the impact of Brexit on the UK's energy relationship with the EU.

Published on [18 June](#), *Brexit Implications for UK Decarbonisation Objectives* looks closely at emissions trading. The UK Emissions Trading Scheme (ETS) launched on 1 January 2021. UKERC highlights that the Energy White Paper stated that the UK ETS will be "the world's first net zero emissions trading scheme" and that they will "consult in due course on how to align the cap with an appropriate net zero trajectory." UKERC says this would require the expansion of the scheme to cover all sections of the economy. The government also announced that the UK ETS would not be aligned to net zero until 2023 or 2024. UKERC argues that this leaves uncertainty in how the UK ETS will work in the future.

The UK ETS is unlinked with the EU ETS, as things stand, but the government has said that it is open to linking internationally in the future. On 19 May 2021, the UK ETS opened for trading with a carbon price of £50 per tonne, slightly higher than the EU's at the time. UKERC says there are "some suggestions" that the UK and EU ETS could be linked once the UK system is up and running, and possibly before COP26, to highlight the importance of international climate change collaboration and carbon pricing.

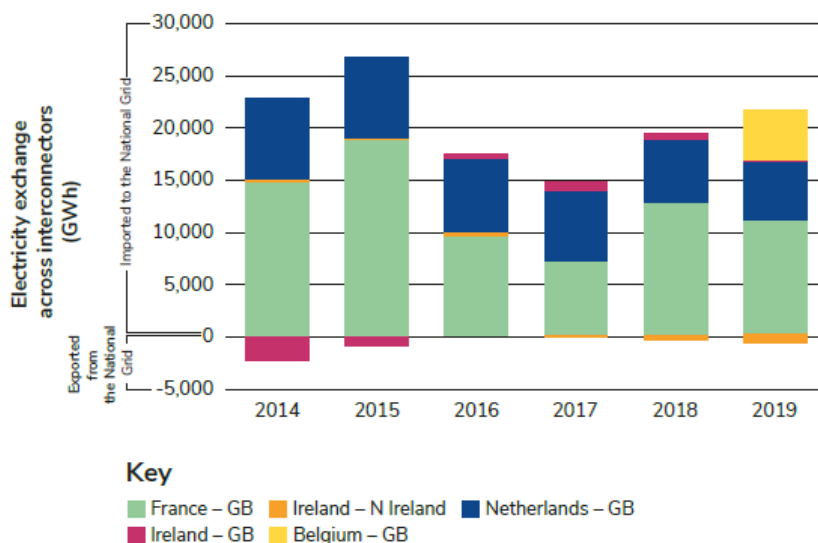
UKERC says that the government needs to recognise that negotiations about how to set up replacement regimes and rules concerning the ETS will be ongoing for years to come and, as such, should ensure there is sufficient civil service capacity in place to concentrate on issues around how to meet legally binding targets. The new systems and rules, when they do come into effect, UKERC argues must provide greater assistance to the UK in its efforts to meet targets.

On interconnectors, GB has 5.7GW of interconnection with continental Europe and Ireland. Since 1 January 2021, EU-GB interconnectors are no longer market coupled, which means that interconnector capacity cannot be sold together with energy at day-ahead markets, making trading less efficient. This will lead to marginally more expensive electricity according to several economic models.

UKERC describes the challenge of creating a policy framework that is aligned with the UK's net zero targets while still enabling the UK to remain competitive, all while adhering to the TCA, as "significant". It warns that the EU may resist any changes that it sees as giving UK industry a competitive advantage to the detriment of EU industry, arguing that it is "imperative" that the ongoing negotiations and dialogues continue.

*“The UK has become progressively more interconnected with the EU's single energy market over recent years and shares considerable energy resource in the North Sea. This increasingly complex set of relationships is currently subject to an arrangement with the deadline five years away. Energy has also been linked to the trading of other resources, notably fish, through the Brexit negotiations, upping the political stakes for future negotiations.”*

Figure 1: Electricity exchange across interconnectors



Source: UKERC, derived from BEIS data

The UK should increase its solar ambitions according to a recent report published on **17 June** by Solar Energy UK. *Lighting the way: Making net zero a reality with solar energy* put forwards recommendation to achieve 40GW of solar power by 2030.

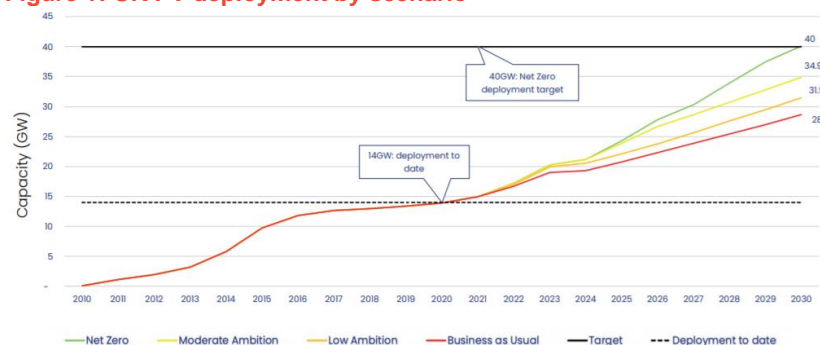
The report highlights analysis by the Climate Change Committee (CCC) on the levels of solar needed to help reach net zero. Currently there is 14GW of solar in the UK with 663MW installed in the 12 months to March and there is 17GW of new solar developments in the planning pipeline. So far 1GW has been deployed subsidy free and the report points to current projections of 1GW being installed during 2021, which would be the biggest yearly increase since withdrawal of subsidies. But to reach the target of 40GW by 2020 annual installation rates would need to be 2.6GW, with Solar Energy UK saying 10% of this could be in Scotland.

The report addressed the three main solar markets in the UK. Utility-scale projects which include many solar panels mounted on the ground. Commercial scale projects involve the installation of solar panels on the roofs of business premises, such as industrial buildings, offices and shops. The residential market where solar installations on private and rented homes. The report puts forward several recommendations that can help remove some of the barriers to deployment to increase installation rates in these three areas. These are:

1. Auctions: Ensure new solar projects are eligible to participate in renewable energy auctions.
2. Planning: Address inconsistencies in the planning process to maximise deployment.
3. Network charging: A shallower 'distribution' connection charging boundary introduced.
4. Public sector funding: Central government support for public agencies to retrofit their buildings with a zero-carbon power supply.
5. Business rates: Reform the rates system so that solar is treated the same way as other power generation technologies.
6. Capital allowances: Incentivise business investment through long-term tax credits.
7. Building regulations: Ensure high energy efficiency standards are implemented as quickly as possible across all new residential and commercial properties.
8. VAT: Solar energy and battery storage technologies should be zero-rated.
9. Retrofit support: Provide long-term support to homeowners and renters to retrofit their homes.

The report also contained projections (see Figure 1) under a range of scenarios: Business as Usual: the government does not actively inhibit solar deployment in future policy changes; Low Ambition: the government makes superficial policy changes; Moderate Ambition: the government makes supportive policy changes; Net Zero: the government uses solar to its full potential to deliver its net zero commitments.

Figure 1: UK PV deployment by scenario



Source: Solar Energy UK

*Solar PV has faced a challenging set of market conditions since the closure of the Feed-in Tariffs and Renewables Obligation schemes. While business models such as corporate PPAs, merchant utility PPAs, and private wire arrangements have gained some traction post-subsidy, deployment rates remain comparatively low. Eyes are turned towards the upcoming Contracts for Difference auction, where we await the framework and budget notice to determine the level of support onshore renewables may receive.*

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The Public Accounts Committee (PAC) held an evidence session on [14 June](#) with BEIS officials, considering the principles of effective regulation.

PAC Chair Meg Hillier (Labour, Hackney South and Shoreditch) asked how BEIS and its arms-length regulators used data to inform regulation. Sarah Munby, Permanent Secretary at BEIS, said issues regarding the benefits of the use of data were largely the same across the public sector. Munby gave an example of the work of the Energy Data Task Force that reports to BEIS and Ofgem and had suggested the creation of a national energy data catalogue and the creation of open, common structures for industry data. Munby noted this taskforce had led to a joint BEIS/Ofgem Energy Data Strategy, to be published later this year.

Munby noted Chris Carr, director of better regulation executive, BEIS, was presently conducting a piece of work, the Regulatory Data Openness Project, on how to encourage data openness across 25 regulators. Hillier questioned Carr further on the workings of this project. Carr also noted the potential for the creation of synthetic datasets that were a new innovation in regulatory bodies.

James Wild (Conservative, North West Norfolk) noted the Fourth Industrial Revolution White Paper had said less than 30% of businesses felt the current approach to regulation supported them in bringing new products and services to market. He asked if any progress had been made.

In response, Munby said lots of progress had been made. She said enabling innovation and allowing businesses to grow via regulation was the main focus of BEIS. She added that BEIS is trying to look at regulation in terms of broad sectors rather than focusing on the work of individual regulators. In this regard she noted the work of the Regulatory Horizons Council that was addressing emerging issues such as nuclear fusion, drones and GM technology.

Felicity Buchan (Conservative, Kensington) opened a debate on the government's upcoming Transport Decarbonisation Plan on 16 June. She said the UK needs a "clear and firm plan" as to how it is going to decarbonise transport to enable the UK to achieve carbon reductions of 68% by 2030 and net zero by 2050. Buchan listed five key asks for the government concerning EVs:

- A comprehensive strategic network of EV charging points. She said she sees this as "almost like the electricity national grid", adding that this is not something that should be left to the free market.
- Focus on the customer experience of EV charging because "confidence is critical".
- Mandate that all new houses, buildings and office blocks have EV charging points.
- More recycling of battery capacity and capability in the UK.
- Consider a zero emission mandate requiring manufacturers of cars to produce an increasing percentage of EVs as part of their output.

Chancellor of the Exchequer Rishi Sunak (Conservative, Richmond (Yorks)) made a [statement](#) on 17 June concerning the launch of the UK Infrastructure Bank. Sunak confirmed that it had begun operating in an interim form and is open for business.

He added that the Bank, owned and backed by the taxpayer, will support and enable private and public investment in infrastructure, with core objectives to help tackle climate change, particularly meeting the net zero emissions target by 2050, and to support regional and local economic growth. HM Treasury and the UK Infrastructure Bank have entered into a Keep Well Agreement to ensure that the Bank has sufficient funds to be able to meet its payment obligations in full as they fall due.

## Chancellor launches UK Infrastructure Bank

Chancellor Rishi Sunak launched the UK Infrastructure Bank in an interim form on [17 June](#). The bank has the task of financing investment for infrastructure projects in the UK, including across energy. It is based in Leeds and will have an initial £12bn of capital to deploy and will be able to issue £10bn of government guarantees and will help to unlock more than £40bn of overall investment, the Treasury said.

In its interim form, the bank is able to issue loans, equity, or guarantees to private projects. The bank will start lending to local authorities later in the summer. The Treasury said this is part of the government's plan to deliver over £600bn in gross public sector investment over the next five years. The Bank's £22bn of financial capacity will consist of £5bn of equity, £7bn of debt and £10bn of guarantees. The bank is part of the government's plan to deliver over £600bn in gross public sector investment over the next five years.

The Chancellor of the Exchequer, Rishi Sunak said: "Opening its doors today, the UK Infrastructure Bank will accelerate our ambitions for tackling climate change and levelling up, while creating new opportunities across the UK as part of our Plan for Jobs." He added: "Through the Bank, we are investing billions of pounds in world class infrastructure that will support people, businesses and communities in every corner of the UK."

## Scotland misses emissions reduction target

The Scottish government published *Scottish Greenhouse Gas statistics: 1990-2019* on [15 June](#), revealing that Scotland reduced its greenhouse gas emissions by 51.5% between 1990 and 2019, missing its target of 55% over that period.

The Scottish government accepted the latest figures were "undoubtedly disappointing", but a spokesman said it was clear "that we have already achieved significant progress in reducing our greenhouse gas emissions". He added: "We are now more than halfway to our target of becoming a net-zero nation. This is something we can all be proud of. We have always been clear that the second half of our journey to net-zero will be more challenging - and it will require urgent, collective action across government, parliament and indeed across every corner of society, in order to achieve it."

Responding to the news, Fabrice Leveque, head of policy at WWF Scotland said: "Today's climate target result makes clear that Scotland needs to do more on climate change. Despite some positive progress in key sectors including transport and heat, the pace continues to fall short of where we need to be if we're to meet our net zero ambitions."

Monica Lennon, Scottish Labour's spokeswoman for net zero, energy and transport, said the government's "rhetoric on climate emergency is not being matched by action". She added: "It's hugely worrying that Scotland's carbon sink is shrinking, with the level of greenhouse gases soaked up by forestry and land use falling sharply since 2011. Empty promises and missed targets are not good enough in a climate emergency. In the year of COP26, when Scotland should be leading the world, we are instead failing on the basics."

## Energy and environment organisations call for a “Fair Heat Deal”

Several organisations and charities in energy and environment sectors have called upon the government to set out a Fair Heat Deal for consumers to ensure everyone can benefit without leaving anyone behind. The open letter, published on [16 June](#) by E3G, expects that heat pumps will have a significant role in the decarbonisation of heat supply in the 2020s, but for consumers to adopt the technology "it must be attractive, easy and fair for every household".

The letter includes a call for the government to offer up-front financial support for households to buy heat pumps with grants that cover the full cost of the heat pump for low-income families. Other households should be provided grants at a level which aims to make the upfront costs of installing a heat pump and complementary energy efficiency measures the same as replacing a gas boiler.

The letter also touched on lowering running costs for heat pumps by removing environmental levies from electricity bill while protecting household in or are at risk of fuel poverty. Green Stamp Duty was also highlighted where this rate is lower for more energy efficient homes as well as zero VAT on products that help decarbonising of homes.



## REA calls on government to fill NDRHI policy gap

Published on 16 June the Renewable Energy Association (REA) has urged the government to deliver a replacement to the Non-Domestic Renewable Heat Incentive (NDRHI), with support for fuel switching to help decarbonise heat in commercial and industrial applications. The NDRHI closed to new applicants on 31 March. The REA also calls for the government to provide post-2027 sector confidence for continued use of existing bioelectricity plants, which it says would enable them to invest in carbon capture and storage technology once the Renewable Obligation ends.

The REA also published on [17 June](#) its response to the biomass strategy call for evidence saying that the government must re-assert its commitment to delivering a strong biomass sector. Mark Sommerfeld, Head of Power and Flexibility at the Association for Renewable Energy and Clean Technology (REA), said: “We welcome the Government’s commitment to recognising the critical role biomass has to play in getting to net zero and the need to for an up-to-date strategy to see this delivered. Biomass already plays a fundamental role in decarbonising the UK, providing the largest contribution to renewable energy across power, heat and transport overall”.

## CCC issues warning on climate change impacts

The Climate Change Committee (CCC) published a report on [16 June](#) detailing priority climate change risks and opportunities for the UK. The *UK Climate Risk Independent Assessment (CCRA3)* technical report identified more than 60 risks and opportunities covering areas such as the natural environment, homes, infrastructure, and the economy. In addition, new evidence shows that the gap between the level of risk faced and the level of adaptation underway has widened.

The CCC states that acting now will be cheaper than waiting to deal with the consequences, but the UK government is yet to do so. The Committee has highlighted eight risk areas that require the most urgent attention in the next two years and included recommendations concerning the climate-proofing of building and electrical infrastructure. The eight areas included:

- Risks to the viability and diversity of terrestrial and freshwater habitats and species from multiple hazards.
- Risks to soil health from increased flooding and drought.
- Risks to natural carbon stores and sequestration from multiple hazards leading to increased emissions.
- Risks to crops, livestock and commercial trees from multiple hazards.
- Risks to supply of food, goods and vital services due to climate-related collapse of supply chains and distribution networks.
- Risks to people and the economy from climate-related failure of the power system.
- Risks to human health, wellbeing and productivity from increased exposure to heat in homes and other buildings.
- Risks to human health, wellbeing and productivity from increased exposure to heat in homes and other buildings.

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Tom Faulkner, [t.faulkner@cornwall-insight.com](mailto:t.faulkner@cornwall-insight.com)

Ofgem issued a working paper on **16 June** outlining its potential options for the true-up process that will be used to ensure COVID-19 costs are accurately captured in the default tariff cap. The regulator previously set an allowance for COVID-19 bad debt costs in the price cap and had set out its intention for this to be trued-up once it had greater transparency of actual costs.

The regulator confirmed in **February** that it would set an allowance of ~£23 for a typical dual fuel credit meter customer for cap period six to enable suppliers to recover additional bad debt costs resulting from COVID-19. As the exact additional costs were unknown, Ofgem adopted a “float and true up” approach, using an initial estimate of COVID-19 debt-related costs (float) to determine the adjustment amount, which will be trued-up in future cap periods when final costs are more certain. Since then, Ofgem has also set out its minded-to position to not set a COVID-19 allowance in price cap period seven. In its working paper the regulator outlines three potential options for setting the “true-up”:

- Option A would use a top-down approach, picking a past period of billed consumption in which to assess suppliers’ bad debt levels. Ofgem would then select a point in time after this period to gather data from suppliers asking them to provide data on the provisions they have made in relation to this period including any movements. The regulator considers this data would allow it to calculate an estimate of the level of debt that suppliers think will not be recovered.
- Option B suggests using suppliers’ bad debt charge from their income statements as Ofgem’s source of data. The regulator states that it would gather the bad debt charge for multiple cap periods and cumulatively compare the incremental bad debt charge with the incremental costs used to determine the allowance in the float. It has also been suggested that this same data could be gathered again at a later stage to further refine the true-up value.
- Option C is a two-stage bottom-up approach in which Ofgem would use suppliers’ data from a period of previously billed consumption to measure what proportion of the billed revenue has been collected by a certain date and then estimate what proportion of the remaining debt will not be recovered. The regulator outlines it could do this using: bespoke forecasts produced by suppliers; suppliers’ provisioning approaches; or historical data on recoverability rates from suppliers.

Ofgem is seeking views from suppliers on all three options, considering that no option is perfect but outlining that its preferred option is option C. This option allows Ofgem to gather different breakdowns of data which means it can identify and control for different factors which affect a supplier’s bad debt. The regulator is not confident that the data approach in option A should be used for the purpose of the true-up as there are practical difficulties of gathering data and it is unclear if the results would be accurate.

While Ofgem considers that option B does have some benefits it is concerned with the inaccuracy of including provisions for periods at the end of the iterative process that are not impacted by COVID-19. The regulator also has practical concerns with suppliers providing consistent breakdowns of the bad debt charge and how this will impact the accuracy of the benchmarking exercise.

Ofgem sets out that it aims to implement the first true-up in cap period 9 which will run from October 2022 to March 2023. The regulator considers that this gives it more time to assess all the options and that the true-up is likely to be more accurate than if implemented in cap period 8. A consultation on the first-true up will be issued in Autumn 2021, with a final decision expected in early August 2022. Responses to the working paper are requested until 14 July.

*“Accurately assessing COVID-19 bad-debt costs was always going to be a challenging task. Ofgem is open about the fact that no option is perfect but is clear that it is looking to gather as much feedback as possible on any potential options for the true-up.”*

# Regulation

## Survey highlights willingness of customers to switch supplier

Rowan Hazell, [r.hazell@cornwall-insight.com](mailto:r.hazell@cornwall-insight.com)

Ofgem published the latest report on household consumer perceptions of the energy market on 11 June. The research shows that supplier satisfaction has dropped over the previous quarter, and that the willingness of customers to switch has hit a new high since surveying began.

The report, undertaken by Accent Research for Ofgem and Citizens Advice, monitors domestic perceptions about the quality of service provided by energy suppliers. Surveys have been running since late 2018, with the latest fieldwork undertaken in February 2021. Around 3,200 billpayers participated in an online survey for the Q121 report, with no face-to-face interviews due to the pandemic. The survey is intended to be representative of domestic energy bill-payers, offering Ofgem and Citizens Advice an insight into engagement and experiences of the market.

The survey found that overall satisfaction with suppliers had fallen to 73%, down from 76% in the previous two quarters, but that it was at the same level as that seen in the first quarter of 2020, as shown in Figure 1. Those aged 16-64 were more likely to be dissatisfied compared to those 65 and over. Standard credit customers or those with a prepayment meter were more likely to be dissatisfied than those using direct debit. Customer service metrics also fell, with more becoming dissatisfied with telephone and online services, as well as bill accuracy and ease of understanding. Overall, 69% of participants were satisfied with customer service, down from 73% in the two previous quarters.

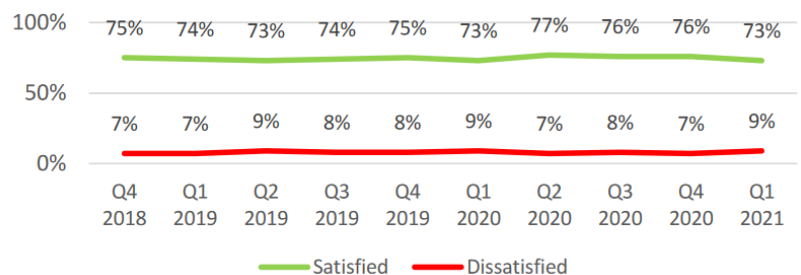
29% of participants had contacted their supplier in the previous three months, with 5% trying but unable to. This was similar to previous quarters, with the report noting that the pandemic had not had a significant impact. The proportion of complaints being formally completed was found to be 25%, down from 31% in Q420. Satisfaction with the complaints handling process has also declined, with only 23% satisfied, a new tracking low.

The proportion of customers considering a change of supplier has risen from 18% in the previous quarter to 23%, the highest since the survey began, and high satisfaction with the switching process has continued. 67% who switched used a price comparison website, in a similar result to previous surveys. The top three reasons for switching remain cost related, with 19% saying that the main reason was that the supplier offered green energy, consistent with the previous quarter and up from 9% in Q119. The percentage of customers saying that they had switched to a supplier for customer service reasons was also 19%, a new survey high.

Half of the survey participants said they had a smart meter, with satisfaction of the installation process hitting a new high at 81%. 70% were satisfied with their smart meter, with the highest levels seen for those who are satisfied with their supplier and those without a disability.

Around 60% of customers in arrears or who self-disconnected had been in contact with their supplier to seek support, with the majority feeling that the contact was sympathetic, fair, and helpful.

Figure 1: survey results for overall satisfaction with supplier



Source: Ofgem

*While overall supplier satisfaction has dropped, the results point to areas that customers are increasingly valuing when making energy choices. Good customer service and green energy offerings maintain their positions as the most important factors after cost, and a rising number of customers considering a switch and high satisfaction with the process demonstrate the opportunities available in the market.*

## Ofgem proposes updates to Enforcement Guidelines following review

Following a review of its approach to enforcement, on [9 June](#) Ofgem issued a consultation on proposed updates to the Enforcement Guidelines. These aim to provide clarity, consistency, and transparency to the regulator's enforcement policies and processes, including: how it may use its enforcement powers; its decision-making process; how redress and remedies will be provided for consumers; and how breaches will be addressed and deterred.

Given the evolution in the energy market and enforcement landscape since the guidelines were last revised in 2017, Ofgem is seeking views on proposed updates to the document to ensure that it remains fit for purpose. This includes changes to the settlement process, which currently has three settlement windows providing businesses with an opportunity to receive a discount on the penalty amount that has been agreed in the settlement.

The regulator is proposing to remove the middle and late settlement windows so that only one settlement window remains, with a 30% discount. Changes to the decision-making process for settlement are also proposed, which would allow the Ofgem enforcement director to make decisions on settlement as an alternative to a Settlement Committee. Having increasingly issued provisional or final orders to address non-compliance in recent years, Ofgem also intends to expand the guidance on the orders framework to provide greater clarity and transparency.

The regulator is also proposing amendments to the Sectoral Penalty Statement, which sets out the factors that are considered when deciding whether to impose a financial penalty and/or a consumer redress order; the penalty amount; and the requirements of any consumer redress order. The updates aim to reflect the new requirements introduced under the Supplier Licensing Review.

Responses are requested until 4 August.

## Views sought on Connection Exclusion changes

The workgroup consultation for two modifications looking to update the Connection Exclusion arrangements was issued on [11 June](#).

*CMP368 Updating Charges for the Physical Assets Required for Connection, Generation Output and Generator Charges for the Purpose of Maintaining Compliance with the Limiting Regulation* was raised following an Ofgem direction for National Grid ESO to further define the charges for connection assets that should be excluded under the Connection Exclusion when considering compliance with EU regulations requiring average annual transmission charges for generators to be within a limiting range of €0-2.50/MWh.

Along with *CMP369 Consequential Changes to Section 14 of the CUSC as a Result of the Updated Definitions Introduced by CMP368*, the proposed changes would ensure that charges associated with local assets which were pre-existing at the time the generator paying those charges wished to connect to the transmission network would no longer be part of the Connection Exclusion, meaning they would be in the scope of the limiting range. Additionally, TNUoS charges and volumes associated with large distributed generators would be included in the Connection Exclusion which mean they would not be considered when determining compliance with the range.

Through the consultation, the workgroup is seeking views on a range of issues, including whether only the volumes of large distributed generators should be excluded and not their charges, and whether Triad charges should be included. Responses are requested until 2 July.

## Ofgem sets out key compliance learnings in Retail Compliance Bulletin

On [9 June](#), Ofgem published its June 2021 Retail Compliance Bulletin. This new publication aims to highlight the regulator's expectations of suppliers; set out the key learnings from its work; and help suppliers to understand their obligations and prepare effectively for regulatory changes. The bulletin focuses on payments and processes, with case studies provided on credit refunds, additional support credit and prepayment meters (PPM). It was noted that as of June 2021, PPM customers will no longer be able to top up their meters using Talexus keys originally issued by npower. As many PPM customers continue to use older top-up cards, even once they have switched energy suppliers, Ofgem notes it is important that suppliers ensure that PPM customers are informed of this change and have access to working top up keys.



The regulator also set out the key lessons learnt for suppliers in terms of compliance, including: the need to ensure that they continue to bill customers correctly when internal processes change; the need to have processes in place to facilitate customer credit balance refunds when requested; making sure they do not take any actions that prohibit customers from switching supplier; and that they self-report to Ofgem on any possible non-compliance or customer detriment as a matter of good practice.

Future issues of the bulletin will be published bi-monthly and will focus on other key areas of concern.

## Ofgem rejects proposal to amend theft scheme start date

On 14 June Ofgem rejected DCP382 2021-22 Electricity Theft Detection Incentive Scheme (ETDIS) Timings. The proposal sought to amend the DCUSA to retrospectively change the start date of the 2021-22 electricity theft detection incentive schemes from 1 February 2021 to 1 April 2021. Theft targets would also have been updated to account for the scheme years reducing from 14 months to 12 months.

The proposer considered that bringing these dates into alignment would ensure that confirmed thefts would be reported and recorded in a consistent way, not falling between any perceived “gap” during the transition between the two sets of regulatory arrangements as governance of this passes from DCUSA to REC.

The theft provisions are migrating to the Retail Energy Code (REC) between April and September 2021, with the scheme to be discharged by the REC Company in 2022. This was implemented through DCP374 Energy Theft Transition into the Retail Energy Code, which Ofgem approved in December 2020. For this reason, Ofgem considers that the modification will not better facilitate the relevant DCUSA objectives because it designated Energy Theft Consolidation as taking effect from 1 April 2021, meaning that these arrangements have transferred to and been superseded by the REC.

Ofgem recognised that there was a discrepancy in the drafting relating to the scheme reporting years between the DCUSA and the REC requirements, but noted the text that DCP382 proposed to amend is no longer in effect and all governance and reporting procedures are now governed under the REC.

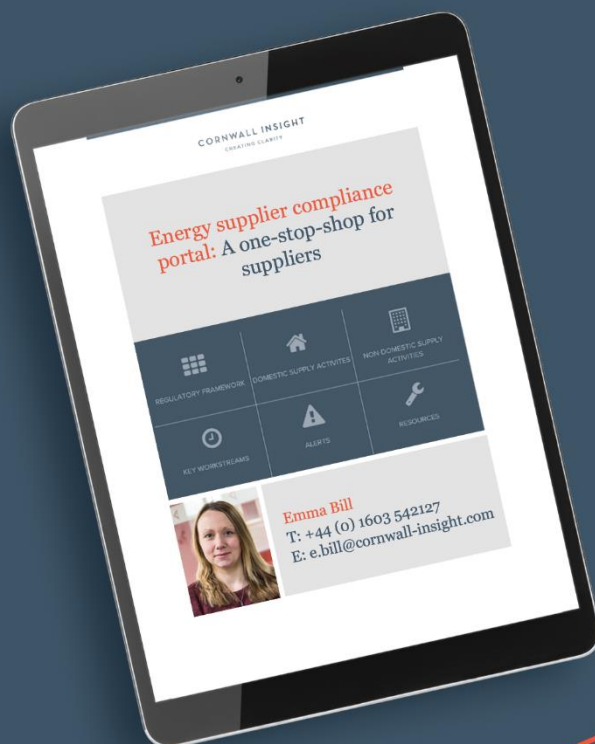
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# Industry Structure

## Energy UK: More than 400,000 customers switch in May

Nick Palmer, [n.palmer@cornwall-insight.com](mailto:n.palmer@cornwall-insight.com)

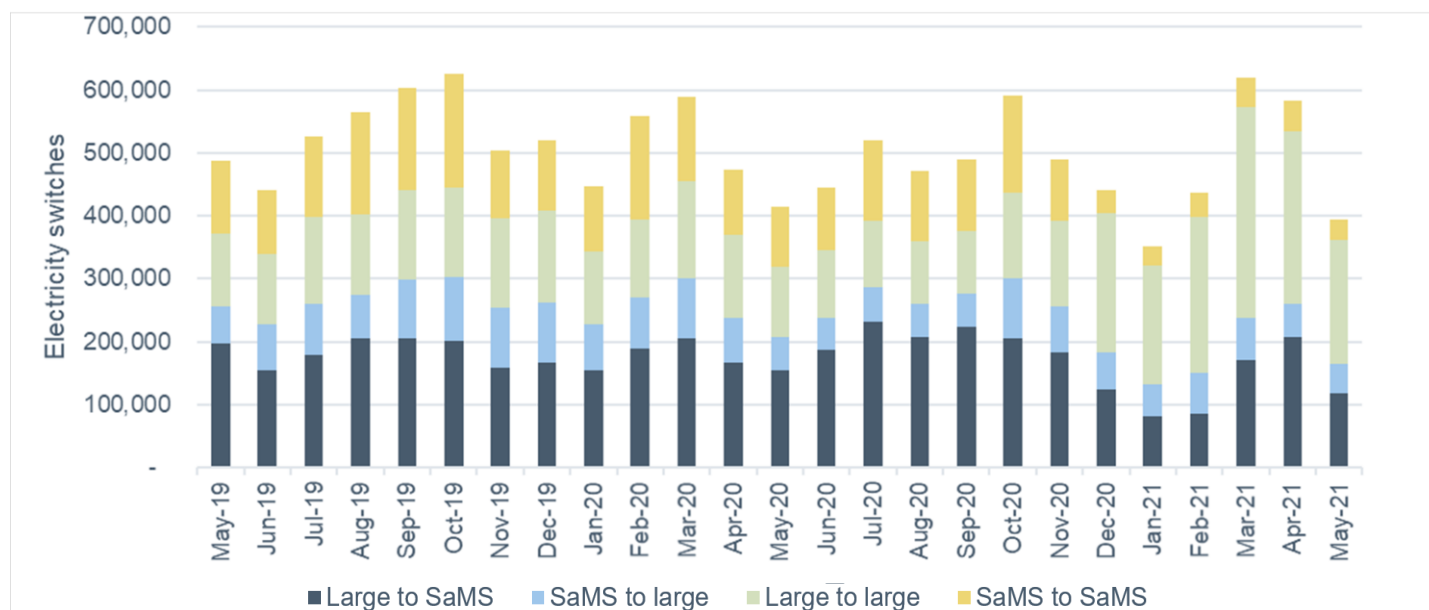
EnergyUK's latest switching statistics, published on **16 June**, show that 417,000 customers switched electricity supplier in May. This represents a 2% drop on May 2020 (425,000), as well as the five-year average of 447,000 switches for May.

In May 2021, of all switches:

- 30% were from larger to small and mid-tier suppliers.
- 12% were from small and mid-tier to larger suppliers.
- 50% were between larger suppliers.
- 9% were between small and mid-tier suppliers.

In May, the net gain by small and mid-tier suppliers was 70,924 (18% of all switches). Net gain is the number of switches from larger to small and mid-tier suppliers minus the number of switches from small and mid-tier to larger suppliers. In total, almost 2.6mn customers have switched to a new supplier in 2021, which is up 2% compared to the same point in 2020. Figure 1 shows the change in domestic electricity supplier switching since May 2019.

**Figure 1: Monthly domestic electricity switches by supplier size**



Source: Cornwall Insight, derived from EnergyUK data

Emma Pinchbeck, Energy UK's Chief Executive, said: "It is important to check you're on the best deal for you by getting in touch with your current supplier or by shopping around. Switching supplier takes only a few minutes but could potentially save you hundreds of pounds on your energy bills."

*“The total domestic number of switches for May 2021, is the third lowest recorded since January 2018. Although May is historically a month when switching levels fall, this year there was marked reduction (37%) between April and May. This follows an April which recorded the second highest switches since Energy UK data began (657,537) with numerous suppliers announcing increases to their standard variable tariffs in April likely contributing to the increase in switching.”*

## Report: GB on track for periods of zero carbon electricity in 2025

A report released by National Grid Electricity System Operator (ESO) has found that Great Britain's electricity network is on track to becoming fossil fuel free by 2025. Published on [15 June](#), the ESO has included data demonstrating the growth in renewable electricity generation and progress towards periods of zero carbon operation of the GB electricity system - an ambition first announced in April 2019.

Currently, the ESO control room needs to draw on conventional power plants to provide system reliability and manage properties such as voltage and frequency. However, by 2025 it will have transformed its operation of the electricity system enabling it to deliver electricity to GB without the use of fossil fuels.

Fintan Slye, National Grid ESO Executive Director, said: "We're confident that by 2025 we will have periods of 100% zero carbon electricity, with no fossil fuels used to generate power in GB. As with coal free operation of the grid, these may be short periods at first but will still be a significant milestone on the road to net zero and these periods will quickly extend."

Slye added: "The growth in renewable sources of power, with record levels of wind and solar, means there will be enough zero carbon generation to meet demand. A key challenge is ensuring the electricity system is ready to accommodate that power. Our engineers are deploying innovative, world first approaches to transform how the power system operates, such as removing the need to draw on fossil fuel based generation for critical stabilizing properties."

## PPL Corporation completes sale of WPD to National Grid

US firm PPL Corporation has completed the sale of Western Power Distribution (WPD) to National Grid for £7.8bn, it announced on [14 June](#). National Grid first [announced](#) its intention to buy WPD in March. The Competition and Markets Authority announced on [10 June](#) that it will launch an investigation into the acquisition, issuing a hold separate order, meaning National Grid will own the WPD asset but not control it until regulatory approval has been received.

"Today's sale recognises the economic value that PPL created by advancing WPD into the premier collection of electricity distribution networks in the UK, a company that year after year delivered operational excellence, superior customer satisfaction and innovative solutions to advance a cleaner energy future," said Vincent Sorgi, PPL president and chief executive officer.

## GIG acquires battery storage portfolio and partners for Scotwind

Macquarie's Green Investment Group (GIG) announced it has acquired its first utility-scale battery storage development portfolio in the UK from storage developer Capbal. In the [15 June](#) announcement, GIG said it has formed a new partnership with Capbal to develop the initial 187MWh portfolio and source additional development opportunities.

The 187MWh portfolio contains 7 projects which are located in highly congested areas of the UK network, including Scotland and South East England. They will provide a number of grid services, including frequency response and will participate in the Balancing Mechanism. Construction is expected to commence on the first projects during 2021.

Announced a day later on [16 June](#), was TotalEnergies joining GIG and Renewable Infrastructure Development Group (RIDG) to bid for sites in Scotland's forthcoming offshore wind leasing round (ScotWind). In February 2021, GIG and TotalEnergies successfully secured rights to a seabed lease in the Eastern Regions zone in the Crown Estate's England and Wales Offshore Wind Leasing Round 4 to develop a 1.5GW offshore wind project.

The announcement highlighted the ambitions of the companies with TotalEnergies targeting the development of 35GW of renewable generation capacity by 2025 and 100GW by 2030. Meanwhile, GIG has over 250 projects under development and construction, with a pipeline of more than 30GW, and is developing or has invested in over 20 offshore wind projects around the world with a cumulative capacity of over 12GW. RIDG has been created to put Scottish companies and communities at the centre of this global opportunity.

## Scottish government approves 450MW Loch Ness pumped hydro storage

A 450MW pumped storage hydro scheme on the shores of Loch Ness was approved on [8 June](#) by the Scottish government. ILL Group said the £550mn 'Red John' project would save 45mn tonnes of CO<sub>2</sub> during its lifetime and should bring 700 direct and indirect jobs to the area.

Mark Wilson, chief executive, said: "There is currently a pipeline of over 5GW of pumped storage in the UK, but we need to work closely with the UK Government to implement the market mechanisms that are needed to drive investment into these projects to ensure we hit our net zero targets."

Cabinet secretary for net zero, energy and transport, Michael Matheson, added: "Scotland is a leader in this field, with excellent hydro-electric power heritage built over the last century and this new scheme at Loch Ness will only add to that."

Matheson continued: "As we add more renewable electricity generation across Scotland, investing in pumped hydro storage will be key to balancing our electricity demand with supply and keeping the system secure, as well as creating high quality, green jobs and enabling a green recovery from the pandemic. That is why we continue to call on the UK Government to take the urgent action required in reserved areas to provide investors with improved revenue certainty and unlock potentially significant investment in new pumped storage capacity in Scotland."

## ESO outlines how it is addressing increasing constraint costs

National Grid Electricity System Operator (ESO) published a report on increasing constraint costs and what it is doing to address this. Constraint costs are when the ESO pays generators to constrain their output due to network capacity limitations.

Published on [17 June](#), the paper includes analysis which shows modelled constraint costs increasing significantly this decade – from c. £0.5bn/year today to between £1bn and £2.5bn/year at a maximum before they then reduce again at the end of the decade when new major transmission investments come online. It highlights the need for up to £16bn of transmission investment over the coming 20 years with constraint costs set to increase during the middle of this decade before reducing again.

Recognising the potential step-up later this decade, the ESO has a medium/long term plan in place to mitigate these projected increases through a range of initiatives on which we are working closely with industry. Please see the ESO's five point [plan](#) to manage constraints on the system for further information.

## Energy supplier Green announces 200,000 customer base

Green announced that it has increased its customer base by over 600% in under a year, growing from 30k members in 2020 to over 200k. In the [15 June](#) announcement, the energy supplier stated that its mobile app is used by 12-20,000 users every day and the company's web app is used by "upwards of 6,000".

Chief Technology Officer Aidon Hudson: "When we set up Green we wanted to bring the same tech-led disruption that we'd seen in the banking industry, to the energy market." Aidon added: "It's fantastic to see more members embracing the link between technology and energy usage in a fully integrated system. New members are joining Green every day and we're expecting to hit over 350k households by the end of 2021."

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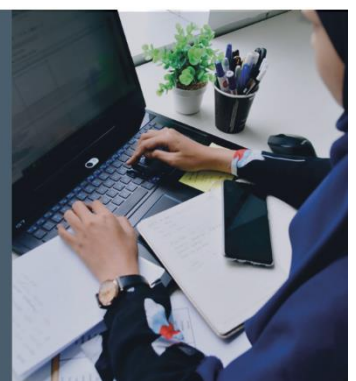
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# Energy Market Watch

## The pursuit for net-zero: decarbonising flexibility

Joe Camish, [j.camish@cornwall-insight.com](mailto:j.camish@cornwall-insight.com)

**As the UK pushes towards its target of net zero by 2050 the flexibility space will need to not only reflect this transition but be able to evolve with it. Flexibility in the UK will have to support and deal with an array of new challenges such as higher demand and penetration from intermittent renewables. But will also have to ween itself off carbon intensive assets in order to support the net zero pursuit.**

Flexibility in the UK has historically been met by large thermal plant. More recently we have seen a growing influx of low carbon sources entering services, notably battery storage in the frequency response space. However, we are seeing growing calls for carbon to be factored into flexibility at a national and local level.

Recently, Jeff Hardy, a senior research fellow at the Grantham Institute for Climate Change and the Environment at Imperial College London, noted that carbon intensity needed to be “baked in” to market and regulatory structures in the coming years, adding “markets are trying to optimise delivering at lowest price, but clearly, at the moment, we need markets that also have a carbon element”. In this week’s *Energy Market Watch* we will take a look at the technology make up of some of the ESO’s major flexibility services and assess the role renewables could take on in the future.

### The Balancing Mechanism

National Grid ESO has several levers it can pull at its disposal to balance the system and retain stability. One of the key tools it has is the Balancing Mechanism (BM), which instructs large-scale or otherwise eligible generators to turn up or down in order to maintain supply and demand in real time.

In recent years, the BM has started to become a broader church for different types of assets, especially smaller, less established technologies like battery storage, aggregated units, and gas reciprocating engines. This is due to measures associated with the ESO’s BM Wider Access project. This aims to improve existing BM entry routes and also create new routes into the service, which has seen the removal of barriers to entry for smaller providers, including the recent creation of the Virtual Lead Party and BM Wider Access API. Despite these recent developments, coupled with greater deployment of wind capacity, the BM remains a fossil fuelled dominated space. This can be observed in the past 12 months of BM activity.

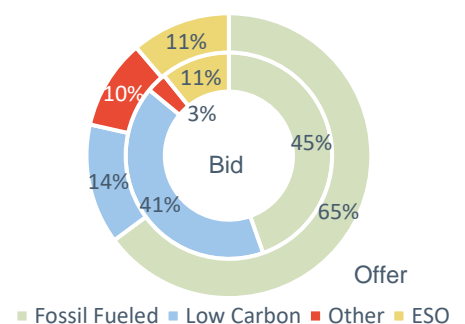
To start, over the course of the last year 31.6TWh of bid (actions to decrease output) and offer (actions to increase output) volumes had been accepted. Low carbon assets (e.g. wind, hydro, biomass and pumped storage) accounted for just 15.0% of these volumes. Meanwhile, fossil fuelled units (e.g. CCGT, OCGT, coal and gas engines) accounted for 61.0% (19.3TWh), predominantly stemming from CCGT units being instructed to turn up. The remaining volumes are made up of “other” technologies such as aggregated units, or “ESO” actions where the technology type is not specified.

This trend can be further expressed when looking at the share of BM actions by number throughout the past year, presented in Figure 1, where fossil fuelled units again accounted for the majority. In total, 54.0% of all actions were linked to a fossil fuelled unit, with low carbon BM units (BMUs) outturning at 29.0% of actions.

Actions taken to balance the system via ramping up output remains particularly dominated by fossil fuel plant. While wind assets are capable of, and commonly used to, balance the system via turning down, the majority of these actions are due to constraint (or “system”) reasons, with limited transmission capacity to carry electricity from north to south at times of high wind output. In these cases, a fossil fuelled plant located elsewhere may actually be turned up to offset the curtailed wind output. This means the number of “energy” balancing actions (i.e. purely to match supply and demand) coming from low carbon assets is even lower, but arguably it’s a positive thing if low carbon assets are not turned down.

Another reason for fossil fuelled plant’s domination in the BM this last year has been to sustain system

**Figure 1: % share of BM actions by number, by technology (Jun 20 – May 21)**



Source: BMRS/Cornwall Insight

stability, which was particularly challenging during COVID-19 lockdowns when demand was suppressed. For large periods of summer 2020 the ESO had to deal with a high penetration of asynchronous generation (e.g. wind), which reduces system inertia (i.e. system frequency may deviate more quickly in an event). In order to maintain system stability and adequate levels of inertia, the ESO instructed synchronous generators (typically CCGT plant) to ramp up. However, some measures have been taken since then to address this issue, such as the introduction of a new, faster acting, frequency response service call Dynamic Containment.

## Response and reserve services

A more dominant fossil fuelled habitat can be observed in the Short Term Operating Reserve (STOR) market. STOR is used by the ESO to balance supply and demand – usually to correct demand forecast errors or during unexpected outages. The newly reopened day-ahead service has been active since April 2021, and upon opening the ESO noted that over 200 units had pre-qualified with a combined capacity of 6.5GW.

Throughout April and May 2021 95.0% of accepted STOR tenders (by capacity) came from fossil units, with the mix consisting of OCGT, gas reciprocating engines, CCGT and diesel units. This period saw daily accepted fossil fuelled capacity average 1,217MW, with the ESO looking to meet its daily service requirement of ~1,300MW. Elsewhere, in the various frequency response markets at the ESO's disposal, the technology mix over the past twelve months bucks the trend. While no renewables (wind or solar) have entered this space (mainly due to the entry requirements), the services tend to be dominated by battery storage assets, especially the Dynamic Containment service, which has been purely met by batteries to date.

Some diesel and aggregated units (which will likely house gas reciprocating engines, along with smaller storage assets) have been active in the Firm Frequency Response (FFR) service; however, their share of accepted volumes pales in comparison to battery storage (77.9%), at 1.9% and 2.2% respectively of annual accepted FFR volumes.

## The future role for renewables in flexibility

As we can see from the services mentioned above, the role of renewables in the flexibility space has been limited to the BM historically, but particularly to turn down. Last summer's Optional Downward Flexibility Management (ODFM) service, rolled out to combat the combination of lower than seasonal-normal demand and high renewables output, providing some renewable assets an opportunity to dip their metaphorical toes into the wider flexibility pool, which for so long has been unattainable for them. But what about in the longer term? If the generation mix in the pursuit of net zero is going to shift to a renewables dominated one, then how could they enter this space in the near future?

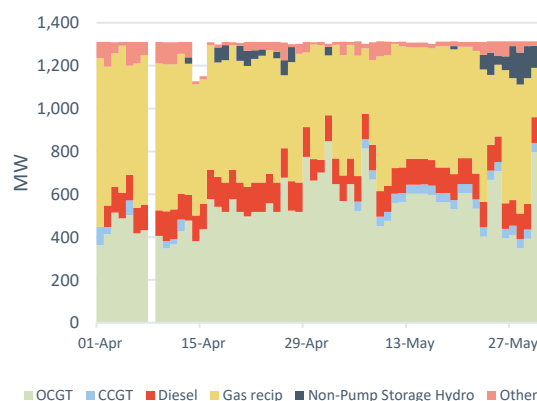
Starting with the battery dominated frequency response services. When it comes to wind and solar, on their own they would not be able to enter these services, as they would struggle to meet the service requirements. However, technically they could enter if they had the Power Available software. Power Available is a live data feed available to the National Grid control room, which tells them what the potential maximum power output of a wind generator is at a given time and they can compare this to the generator's current operating output. The ESO can then accurately calculate the response and reserve capability held on each generator, enabling them to compete and provide real time response and reserve services. There are now roughly 120 wind assets providing a Power Available signal, and work is underway to make a similar signal for solar assets.

Similar potential can be seen in the reserve service space, with the ESO's Reserve Reform consultation (published in March 2021), highlighting the potential for renewables to feasible providers for their proposed reserve service designs (Quick Reserve and Slow Reserve). The ESO hopes that for both of these services, the likes of wind and solar will be technically feasible to enter. However, this is caveated with the need for Power Available to be installed to aid dispatch.

With the roll out of Power Available and with flexibility service procurement trending towards closer to real time, it is hoped that this should provide an opportunity for intermittent renewables to enter flexibility services in the near future – aiding the transition towards net zero while maintaining system stability.

**We report on ESO and DNO flexibility markets in our monthly Flexibility Markets Report. For more details about this service, please contact Joe Camish [j.camish@cornwall-insight.com](mailto:j.camish@cornwall-insight.com).**

**Figure 2: Day-ahead STOR daily accepted service volume by technology**



Source: National Grid ESO/Cornwall Insight

# Wholesale

## Gas

Day-ahead gas rose 3.0% to 71.48p/th, following increased gas-for-power demand, driven by lower wind output in the week. July 21 gas was up 1.4% at 70.40p/th, and August 21 gas increased 1.5% to 70.45p/th. Q321 gas moved 1.5% higher to 70.65p/th.

Most seasonal gas contracts declined last week, down by 1.5% on average. Winter 21 gas increased 0.1% to 77.60p/th, while summer 22 gas dropped 0.1% to 49.55p/th. The annual October 21 gas contract was unchanged at 63.58p/th and was 8.6% higher than the same time last month (58.54p/th), and 67.5% higher than the same time last year (37.95p/th).

## Electricity

Day-ahead power grew 6.9% to £81.25/MWh, generally supported by periods of low wind output throughout the week, set to continue into the following week also. July 21 power climbed 0.6% at £76.95/MWh, and August 21 power decreased 0.3% to £76.90/MWh. Q321 power moved 0.4% higher to £77.93/MWh.

Most seasonal power contracts eased last week, down on average by 1.9%. Winter 21 power decreased 1.2% to £84.50/MWh, while summer 22 fell 2.4% to £58.10/MWh. The annual October 21 contract lost 1.7% to £71.30/MWh, which was 1.4% higher than the same time last month (£70.35/MWh), and 57.8% higher than the same time last year (£45.17/MWh).

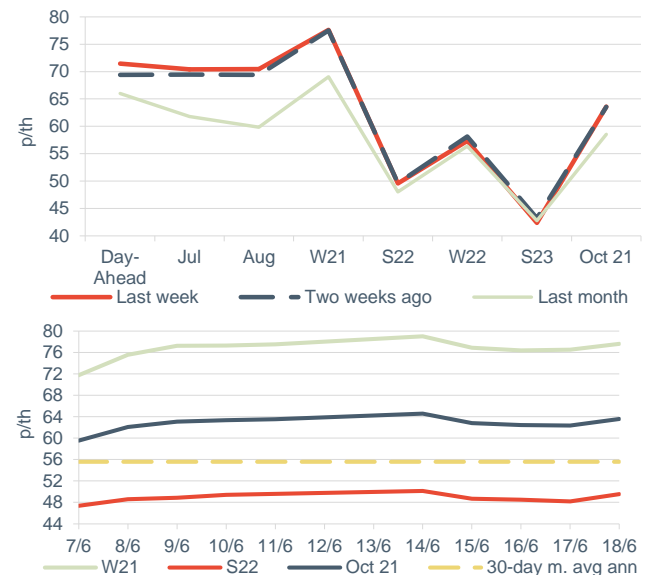
## Oil, carbon and coal

Brent crude oil gained 2.2% to average \$73.57/bl, last week. Prices reached a fresh two-year high of \$74.40/bl on 17 June. Prices generally climbed as the week progressed, buoyed by several bullish factors. At the week's start, prices predominately gained support from a strong demand recovery picture, fuelling market optimism. Vaccination programmes are increasing across Europe, supporting a greater demand recovery outlook.

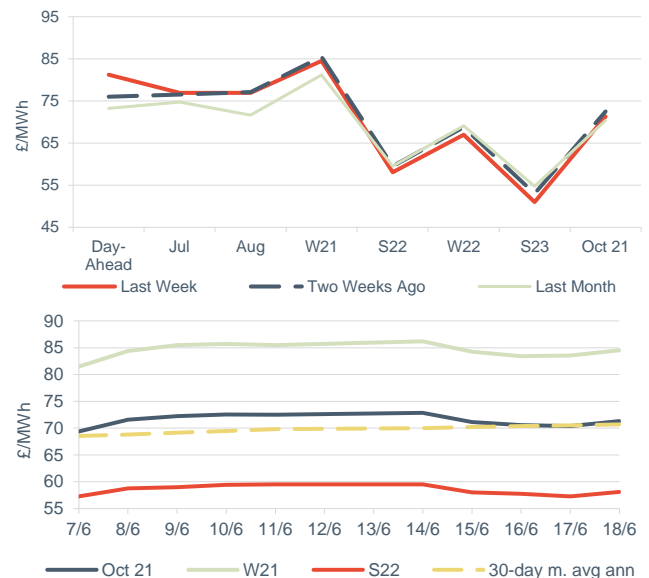
EU ETS carbon prices fell 1.3% to average €51.88/t. Similarly, UK ETS carbon fell 3.2% to average £45.07/t. It was a largely bearish week for carbon markets, across both the EU and UK ETS. Bearish signals from commodity markets weighed on prices last week, particularly at the week's end, fuelled by climbing interest rates.

# Markets

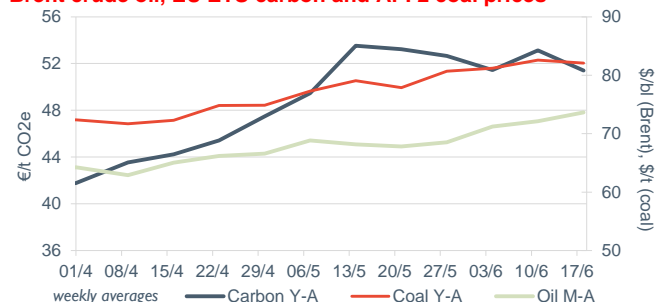
Gas forward curve (top) and seasonal contract movements (bottom) – prices taken 18 June 2021



Power forward curve (top) and seasonal contract movements (bottom) – prices taken 18 June 2021



Brent crude oil, EU ETS carbon and API 2 coal prices



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