

DELIVERING NET ZERO

The British Energy Security Strategy: A Second Wind

On 7 April 2022, the UK government published the long-awaited ‘British Energy Security Strategy’ (the “Strategy”). The Strategy is a relatively short document, set against the backdrop of record high energy prices, driven by increased demand due to COVID economic recovery measures and disruptions to global energy supplies following Russia’s invasion of Ukraine.

The Strategy seeks to incentivise and support new investment in nuclear power and North Sea oil and gas (in what may be seen as a new lease of life for these sectors in the UK) as well as fast-tracking the development of new and existing renewable energy projects, most prominently offshore wind and hydrogen. In this paper, we consider the key take-aways from the Strategy and set out some initial observations on what it could mean for the energy industry over the medium to long-term.

1. The Strategy in context

The International Energy Agency (“IEA”) defines energy security as “the uninterrupted availability of energy sources at an affordable price”. In the IEA’s view, this definition has supply, demand, and temporal dimensions. For example, long-term security relies on measures to improve the access, reliability, and regularity of low-cost energy supplies. Conversely, shorter-term security focuses on an energy system’s ability to cope with sudden supply-demand imbalances. The IEA was established following the 1973 oil crisis, with ensuring energy security as its central concern. Its governing treaty commits member states to implementing supply-side measures—including maintaining emergency oil reserves—as well as demand-side measures—such as programmes to reduce oil use.

The context behind today’s energy crisis calls for a different set of measures. Indeed, the need for a new Strategy arises from several cumulative factors: a heavily-constrained fiscal environment post-COVID, combined with rising energy prices and costs of living, the Russian invasion of Ukraine, and rapidly falling renewable energy costs. Recognising that energy consumption is highly correlated with human well-being, and that expanding energy supply is a crucial aspect of reducing energy poverty, the UK government’s attention is primarily focused on diversifying the UK’s energy supply by promoting renewable and emerging technologies.

2. Great British Nuclear

Leaked to the media several weeks before the Strategy’s publication, the centre piece of the Strategy is the government’s commitment to expanding nuclear power. The Strategy seeks to recover the UK’s ‘global leadership’ in civil

nuclear power and sets an ambitious target of reaching 24GW of nuclear power by 2050, representing up to 25% of projected electricity demand in the UK. For context, nuclear power currently accounts for 15% of total electricity generation in the UK (which was scheduled to fall, with five of six existing plants planned to be brought offline by 2030).

The Strategy restates some previously announced nuclear power policies, along with some new measures: these include the UK government’s existing intention to take one project to a final investment decision (“FID”) this Parliament and its new commitment to take two additional projects to FID by next Parliament. It also re-states the UK government’s existing £2 billion investment commitment in new nuclear projects, including investing £100 million into Sizewell C and £210 million to develop small modular reactors with Rolls Royce.

These commitments and market signals dovetail with the Nuclear Energy (Financing) Act 2022, which received royal assent on 31 March 2022 and which makes the regulated asset base funding (“RAB”) model available for nuclear power projects. See our [briefing](#) for further details on the RAB funding model and enabling legislation.

3. A reprieve for oil and gas

To a mixed reception, the Strategy has breathed new life into North Sea oil and gas. In order to reduce reliance on imported fossil fuels, the Strategy asserts that the UK must fully utilise its North Sea reserves, and aims to encourage private investment by launching a licensing round in autumn 2022 for new oil and gas projects. The government’s intention is also to establish “gas and oil new project regulatory accelerators” to facilitate the rapid development

of new projects. However, it is not yet clear what form these “accelerators” will take. The new licensing round (which would be the first round held since 2020) will consider the forthcoming ‘climate compatibility checkpoint’ and the need for energy security. This honours the government’s previous announcement to introduce a ‘climate compatibility checkpoint’ before each oil and gas licensing round to ensure awards are aligned with wider climate objectives, including net-zero emissions by 2050 and the diversity of energy supply (signalling that lower carbon projects with carbon capture usage and storage (“CCUS”) capabilities may be more likely to receive awards). The UK government has also commissioned a report on the geological science of shale gas and the modelling of seismic activity, noting that it continues to hold an open-minded position about the possibility of exploiting the UK’s onshore shale gas reserves.

The Strategy appears to pre-empt some of its possible criticisms by asserting that there is no inherent contradiction between achieving net zero and maintaining a strong North Sea oil and gas industry. It notes that the flexibility of gas has underpinned the rollout of offshore wind. The government also reports that the UK gas industry has a lower carbon footprint than imported gas, and that the industry also intends to invest billions in the development of nascent clean technologies. The Strategy does not include new obligations for oil and gas companies to invest in clean technologies. However, the North Sea Transition Deal includes commitments from the sector to invest in CCUS and hydrogen. It is currently unclear what effect, if any, the revised emphasis on oil and gas—as set out in this Strategy—will have on the North Sea Transition Deal (see our [summary](#) of the North Sea Transition Deal).

4. More offshore wind and hydrogen, faster

Offshore wind makes a breakaway stand as the UK government’s favoured renewable energy source. The Strategy promises 50GW of offshore capacity installed by 2030, including 5GW of floating wind targets. This is an increase from the 40GW previously suggested by the UK government to reach net zero by 2050. With an offshore wind pipeline widely reported to be 86GW, the increase of this target was perhaps conservative.

Regardless, the scale of transformations required under these new UK government commitments is immense. It would see more electricity generated from offshore wind by 2030 than the UK has ever produced from gas in any previous year to date. Given this fact, there may be legitimate concerns about whether the increased capacity envisioned by the Strategy is indeed realistically achievable within such a timeframe, particularly given the often-long lead times for constructing offshore wind projects. The government may certainly face material risks of underachieving on these targets.

On the other hand, onshore wind failed to take off in the Strategy. No solid GW targets for onshore capacity have been included in the Strategy, and consultation with a limited number of communities is all that is promised. The tone of enthusiasm for onshore generation is definitely muted. Nonetheless, it is worth noting that—given the comparatively short lead times and low installation costs—onshore wind could perhaps remain an effective tool to address the UK’s short term energy requirements. However, political considerations about the popularity of onshore windfarms may have dissuaded the government from further promoting the development of UK onshore wind. While the Strategy intends to introduce measures aimed at cutting down the 13-year lead times for setting up offshore wind projects by around half, this may still leave a six-year lead time for the expansion of Britain’s renewable energy capacity.

The government’s Strategy also devotes an entire section to its commitments to increase UK hydrogen production. The Strategy suggests a strong emphasis on leveraging excess renewable capacity to produce hydrogen that can then be stored. It is likely that 2025 will be an exciting year for hydrogen, with a 1GW target for electrolytic hydrogen to be constructed or operational by that time, along with the design of new business models for hydrogen transport and infrastructure, as well as a certification scheme.

Following the Strategy’s ambition to double the UK’s hydrogen production, to up to 10GW by 2030, the government [announced](#) possible legislative changes to enable delivery of a hydrogen heating grid conversion trial. The government further announced £240 million of funding to support hydrogen production, and £5 million to accelerate CCUS technologies. Moreover, the day after the Strategy’s publication, the government released the outcome of consultations on a [business model](#) for low-carbon hydrogen, design of the [Net Zero Hydrogen Fund](#), and [UK low carbon hydrogen standard](#). The government also published a [Hydrogen Investor Roadmap](#) and a [CCUS Investor Roadmap](#), highlighting investment opportunities for the private sector throughout both the hydrogen and CCUS value chains. Yet, key questions remain about whether the UK can adequately build an internal market for hydrogen within the necessary timescales, as well as the government’s ability to convert the UK’s critical infrastructure to accommodate hydrogen at a similar pace and scale as building the UK’s hydrogen production capacity.

The attitude to solar in the Strategy falls somewhere in between offshore and onshore wind, with a five-fold increase in deployment of solar by 2035 proposed and suggestions that planning rules be updated. However, the government offers no further targets or concrete planning measures.

Tidal and geothermal projects are given a passing nod, but not expanded on in the Strategy. This does feel somewhat like a missed opportunity. Yet, for tidal energy, the

technical limitations may be a factor in the government's hesitancy to set benchmarks. The UK government may have perhaps preferred to rely on experimental demonstration projects, like the recently announced Crown Estate Welsh tidal stream project in Anglesey, before committing to large-scale targets that may not be achievable. Likewise, while the UK may possess geothermal sources, the government seems to consider that this form of power generation still has yet to provide a sufficiently clear track record to merit reliance on it within the Strategy.

5. Expect more on market reform and network design in 2022

On 6 April 2022, the UK government approved the launch of the Future System Operator ("FSO") to oversee the UK energy system. The FSO will be a new public body founded on the existing capabilities of the Electricity System Operator, and, where appropriate, National Grid Gas. While this initiative has long been mooted within government, it represents a significant change to the UK's energy system and market design. Published just a few days after the FSO's launch, the Energy Security Strategy continues this theme, with a section dedicated to "Networks, storage and flexibility" (which includes a nod to the future establishment of the FSO). We can expect more on these topics later this year. The idea that the electricity network itself is a significant hurdle to increasing renewable electricity capacity has been well documented in commentary on the energy transition. What remains abundantly clear from the Energy Security Strategy is how much still needs to change in order for the UK government to facilitate the measures, and levels of renewable power generation, forecasted in both the Strategy and previous policy documents. The government promises a number of reviews, consultations and actions in relation to network infrastructure and market design in 2022, including:

- a comprehensive Review of Electricity Market Arrangements in Great Britain;
- a blueprint for the whole system by the end of 2022 in the "Holistic Network Design" and "Centralised Strategic Network Plan"; and
- the publication of a strategic framework with Ofgem for how networks will deliver net zero.

Further, the UK government will be consulting on changes to the 2024 Contracts for Difference ("CfD") auction, Allocation Round 6, so that it incentivises renewables to locate and operate in a way that minimises overall system costs. This is all welcome news for investors and market participants, who will now be keenly awaiting further details as to what this will mean for them in practice. It will be important that the sector as a whole works collaboratively to ensure that the impact of any (potentially) disruptive changes to network or market design will be positive and implemented with limited friction.



Nuclear

- Develop 24GW by 2050 (up to 25% of total GB demand)
- At least one project to reach FID this Parliament, two projects to do so next Parliament, including small modular reactors
- Creation of the Great British Nuclear Vehicle this year



Oil and Gas

- Licensing round for new oil and gas projects in the North Sea planned for Autumn 2022
- Creation of a regulatory accelerator for new oil and gas to expedite development of new projects
- A Review of the science of shale gas



Wind

- Halve planning and regulation time for new offshore wind projects
- Bring forward up to 50GW offshore by 2030, including 5GW of floating capacity
- Consult on developing partnerships for onshore wind projects for supportive communities, with associated benefits for these communities (e.g. cheaper electricity bills)

H₂

Hydrogen

- 10GW of low carbon hydrogen capacity by 2030, at least 50% from electrolysis
- Annual allocation rounds for the hydrogen business model, moving to competitive price allocation by 2025 and as soon as legislation and market conditions allow
- 1GW of electrolytic hydrogen to be in construction or operational by 2025
- Design transport and storage business models by 2025



Solar

- Consult on amending planning rules to strengthen policy in favour of solar development
- Explore low cost finance options with retail lenders to assist households install rooftop solar
- Design performance standards to promote renewables, including solar PV, in new homes and buildings

Lastly, the UK government's significant commitments in the Strategy to anticipatory investments in network infrastructure, and to dramatically reduce timelines for delivering strategic onshore transmission network infrastructure by around three years, will be viewed positively by market participants. Further details around quantum, pricing and timing in the coming months will help provide clarity to interested parties on these aspects.

6. Balancing supply and demand

Electricity market reforms, combined with plans to scale up renewable energy and emerging technologies, will significantly improve the UK's energy supply over the next 5 to 15 years. To help strengthen energy security in the shorter-term, the UK government's Strategy reiterates several previously-announced commitments aimed at reducing energy demand. These include a temporary five-year removal of VAT on installing energy saving materials (including insulation and low-carbon heating), announced in the Chancellor's Spring Statement, along with a £450 million Boiler Upgrade Scheme that was announced in October 2021.

In addition to this, the UK government intends to introduce measures designed to increase low-cost finance from retail lenders for energy efficiency upgrades. It also intends to improve product standards and labelling for energy efficient products, expand heat pump manufacturing, and introduce new energy performance standards, as well as a dedicated advice service to support homeowners to improve the energy performance of their properties.

These initiatives will supplement those previously announced in the government's [Heat and Buildings Strategy](#), published last year, which announced £3.9 billion of support for energy efficiency. This included £1.8 billion of support targeted at low-income households through the Home Upgrade Grant and Social Housing Decarbonisation Fund, as well as expanding the Energy Company Obligation to £1 billion per year from 2022 to 2026. Moreover, the government has pledged to phase out the sale of new and replacement gas boilers by 2035, and has also introduced [measures](#) to scale up the deployment of heat pumps and networks. The UK government's net zero targets and pricing measures, such as the UK Emissions Trading Scheme and the climate change levy, aim to further reduce energy demand from conventional sources.

Nonetheless, particular concerns remain about whether these commitments do enough to deal with energy efficiency. With one in three households facing [energy poverty](#) when the energy price cap increases again in October this year, and energy efficiency measures widely viewed as one of the most cost-effective and rapidly-implemented solutions to the energy crisis, perhaps the government might have made the goal of reducing energy demand a stronger area of focus. Perhaps further commitments to improve energy efficiency may follow in

the coming months. Yet, against competing fiscal pressures, some media agencies report that the Chancellor may remain unwilling to offer additional funding commitments to support the energy efficiency sector.

Final Remarks

The Strategy is certainly ambitious and forward-looking in scope. Indeed, the UK government's commitments go beyond the UK Climate Change Committee's [proposals](#) for offshore wind, nuclear power and hydrogen. The strong push toward these three key low-carbon technologies, in particular, cements the UK government's commitment to net zero evidenced in prior policy documents, while at the same time supporting the aim of making the UK more energy self-sufficient. This is a tricky balancing act, but the scale of the measures envisaged will offer much encouragement to investors and industry players in the sector. However, as noted above, there are certain areas where questions remain, and where the Strategy's commitments may be regarded as lacking detail.

Further, some urgency in implementing the measures (particularly those pertaining to reducing planning restrictions, consenting and regulatory red tape) may be needed to maintain investor confidence. Ultimately, the Strategy's success will be judged on how the measures will be designed and implemented and, perhaps more importantly, how the different measures will interact and how potential conflicting objectives will be managed (for example, whether high carbon prices might affect plans to increase oil and gas production from domestic sources). What is clear, though, is that the journey towards UK energy security envisaged by the Strategy is potentially complex and highly-intricate in nature. Private actors seeking to navigate through these regulatory changes may encounter legal risks, in respect of which our team of multi-specialist lawyers are able to assist. Should you wish to discuss any of these aspects, please do not hesitate to get in touch with one of our team.

Contacts



Hywel Davies
Partner
T +44 (0)20 7090 3102
E hywel.davies@slaughterandmay.com



Kathryn Emmett
Senior Professional Support Lawyer
T +44 (0)20 7090 4640
E kathryn.emmett@slaughterandmay.com



Michael Corbett
Partner
T +44 (0)20 7090 3476
E michael.corbett@slaughterandmay.com



Aaron Wu
Senior Professional Support Lawyer
T +44 (0)20 7090 3328
E aaron.wu@slaughterandmay.com



Azadeh Nassiri
Partner
T +44 (0)20 7090 5294
E azadeh.nassiri@slaughterandmay.com



Rory Botros
Associate
T +44 (0)20 7090 3449
E rory.botros@slaughterandmay.com



Richard Todd
Partner
T +44 (0)20 7090 3782
E richard.toddi@slaughterandmay.com



Emily Davis
Associate
T +44 (0)20 7090 4680
E emily.davis@slaughterandmay.com



Oly Moir
Partner
T +44 (0)20 7090 3307
E oliver.moir@slaughterandmay.com



Hannah Fitzpatrick
Associate
T +44 (0)20 7090 3457
E hannah.fitzpatrick@slaughterandmay.com