BACKGROUND TO THE ENERGY ACT 2023: REMA – REVOLUTION, NOT EVOLUTION

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Last summer (July 2022), the UK government launched its Review of Electricity Market Arrangements in Great Britain ("REMA"). Garnering 225 responses by the consultation closure in October 2022, the government's response (published in March 2023) stated that REMA encompasses *"all electricity-related (non-retail) markets"*, making it clear that *"all technologies are within scope to the extent that they currently do, or potentially could, participate in these electricity markets"*.

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The opening chapters set out the government's case for change, approach, and assessment of cross-cutting issues. The government's conclusion was that the "*current market arrangements are not fit for purpose*". This will come as no surprise to investors, developers and lenders who operate in the electricity industry. The far-reaching review went on to consider options for an electricity market that would deliver:

- net zero wholesale markets;
- mass low carbon power;
- flexibility;
- capacity adequacy; and
- system operability.

A number of options were dropped and the consultation summary made it clear that further consultation would be needed to develop and take options forward. The government promised that it would "*continue to actively engage across the breadth of stakeholders to better understand the proposals for more transformative changes that disrupt the existing system but offer significant potential future benefits*" and that a second consultation would be published in 2023. This consultation is now expected imminently, making this the perfect time to recap on the first REMA consultation outcomes.

A large majority of respondents agreed with the government's assessment that "*current market arrangements would not deliver the change necessary to achieve decarbonisation by 2035, and that it was right to consider market design changes*".

Such a stark conclusion was to be expected. The current market arrangements were designed in the 1980s to facilitate liberalisation of the electricity market. The design resulted in the Electricity Act 1989, the framework for privatisation of the electricity industry in the 1990s. This is the framework (albeit with piecemeal amendments over the decades) that still governs the electricity industry today even though it is vastly different from the pre-privatisation landscape.

A HISTORY LESSON: INDUSTRY STRUCTURE PRE AND POST PRIVATISATION

The current design of our electricity legislation started from a framework that was intended to break up and privatise state monopolies in Great Britain ("GB").

The Central Electricity Generation Board ("CEGB"), pre-cursor of transmission owner and operator National Grid and various generation companies including EDF, E.ON and RWE, was responsible for:

- generation and transmission in England and Wales;
- providing bulk electricity sales to the distribution companies in England and Wales, and to the Scottish companies (see further below); and
- coordinating and controlling the national grid across GB.

Twelve area electricity boards were responsible for the distribution and supply of electricity to consumers. At privatisation, fourteen public electricity suppliers were created to take on these roles. They were further spun out by the Utilities Act 2000 into what we know as the today's distribution network operators and electricity suppliers.

In Scotland, two companies were responsible for generation, transmission and distribution. These were the South of Scotland Electricity Board, the pre-cursor to what is now Scottish Power, and the North of Scotland Hydro-Electric Board, the pre-cursor to what is now SSE.

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A HISTORY LESSON: CHANGING GENERATION MIX

The Climate Change Act was enacted in 2008. At that time, the UK's generation mix was dominated by large, centralised power plants. According to a briefing by Carbon Brief, in 2008 *"just 56 power stations burning coal, gas, oil or nuclear fuel account for the lion's share of power capacity",* with approximately 80% of UK electricity coming from fossil fuels and another 13% from nuclear.

These large-scale generating stations were historically situated further away from population centres, mainly connecting to the high voltage transmission network. The number of connection requests was much lower than it is today, and investment in transmission and distribution networks was mainly limited to operations and maintenance.

The transmission connection process today still reflects these arrangements, with connecting users expected to bear the whole cost of their own connections and of any reinforcements triggered on the wider network. Cancellation charges are designed to compensate the transmission owners for sunk costs if generation projects were cancelled, as it was expected that any assets would be stranded.

The picture today is vastly different. We currently have c.80 GW of generation connected to the transmission network, with a queue of projects waiting for connection totalling between 230 GW[1] and 340 GW,[2] depending on which sources one relies on. If a generation project is cancelled, there is a whole queue of projects eagerly waiting to push ahead and use the vacated capacity. While some design costs might be wasted, it is highly improbable that assets would be stranded.

These numbers do not include lower voltage distribution connections. A Cornwall Insight report[3] citing Embedded Capacity Registers published by DNOs shows that we currently have c.21 GW of renewable generation connected to the distribution networks, and a further 70 GW waiting for connection.

Unfortunately, neither the transmission owners nor the DNOs have ramped up resources to cope with this demand. While they must bear some of the responsibility for that, it is fair to also recognise the part played by an out-dated framework (both in the legislation and the industry codes) that makes change cumbersome and slow.

NEXT STEPS

The changes contemplated by REMA are welcome, though much delayed. These delays make meeting our net zero goals by 2050 challenging, though we hope that the urgency of the required changes will maintain momentum and help revolutionise our power system to the benefit of all participants.

The Energy Act 2023, granted royal assent on 26 October 2023, creates the powers required to take forward some of these changes, though the further design and deployment of these powers will no doubt require further public consultation in due course.

Having set the scene, we (along with the rest of the electricity industry) are eagerly awaiting further details expected to be set out in consultations due later this year.

If you would like to discuss any of the issues raised by REMA, please get in touch with the author or your usual WFW contact.

FOOTNOTES

[1] Electricity Networks Commissioner – Companion Report Findings and Recommendations, June 2023
[2] Letter of support to facilitate the processing of the TEC Amnesty, Ofgem, 15 August 2023
[3] Waiting to connect: the problems and solutions for network connection queues, Cornwall Insight, 25 January 2023

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