

Context:

Multiple independent analyses, including those undertaken by the Committee on Climate Change and the National Infrastructure Commission, have concluded that roughly 40GW of solar will be needed by 2030 to stay on track with the Government's net zero ambitions. The latest Future Energy Scenarios from National Grid conclude that a minimum of 1.4GW of solar generation must be built every year to 2050.

Currently, grid constraints and connection costs are two of the most significant barriers to renewable energy development. The RIIO-ED2 framework must enable network operators to make the necessary anticipatory investments in the network to allow for the increased levels of variable renewable energy generation on the grid that we know will be required to achieve net zero.

Comments

We feel that the RIIO-ED2 methodology should place a greater emphasis on catalysing the regular and sustained deployment of renewable generation that will deliver the greatest long-term value to the nation. We also feel that OFGEM needs to move away from the current siloed approach to rewarding network companies for performance within discrete categories, or for participation in one-off pilot projects, as this has failed to deliver meaningful improvement at the whole-system level for grid customers or consumers.

Overall the consultation does not appear to recognise the fundamental value of embedded generation in achieving net zero. Virtually all the examples of LCTs provided are of consumption technologies (EVs, heat pumps) and the main reference to embedded generation (in section 8) is ominously punitive by claiming that renewable generation is not paying its fair share. This attitude seems completely at odds with the objective of achieving zero carbon and undervalues the geopolitical advantage to the UK of changing to being less reliant on imported energy for running its economy.

Electricity is fundamental to the creation of GDP and to the nation's competitiveness; while consumer prices have an inflationary effect, the strategic value of ensuring the nation can be internationally competitive as a result to intelligent choices in its energy policy is orders of magnitude more important.

The consultation document's repeated emphasis on "customer bills" and "unnecessary costs" appears to have distracted OFGEM from valuing the strategic merits of infrastructure investment. Nowhere are deliberate societal choices articulated as a trade-off; the tone seems focused on "cheap" rather than "canny investment". This is repeated in para. 3.2.

Technology is moving faster than regulation so to do a review in 2020 that is implemented in 2023-2028 is condemning the nation to being 3-5 years behind the leading edge. The timelines therefore seem incompatible with the Innovation "I" in RIIO.

Although this is a consultation to advise a decision yet to be made, para. 2.27 and 8.6 seems to attempt to pre-ordain or at the very least bias the outcome.

Para. 4.1 continues to emphasise that OFGEM is about, "cheap" and "just keep the lights on" while resilience, flexibility to respond to changing technologies, faster DNO response speeds, and geopolitical advantage are not included as qualities the UK feels are worth buying.

Para. 4.3. presumes that OFGEM is capable of assessing when is, "the right time" to, "inject the necessary funding". The incessant focus being on "cheap" suggests the reality will be that investment will be injected as little and as late as possible thereby stymying renewable deployment and working against the "touch the network once" concept proposed.

Para. 4.5 and 4.6 presume that the only investments that can trigger the reopener are "major" but in our experience, local distribution level assets are in many places completely full and inaccessible to new connections. Upgrading these when a new low carbon project needs access would not constitute "major strategic investments" but they should be allowed nonetheless.

Para 4.24 - Was one reason that the RIIO-ED1 LRE expenditure was underspent because the cost to connect LCTs to the DNO network was uneconomic, for instance when renewable incentives were abruptly eliminated?

Para 4.26 and 4.27 - We observed this behaviour and agree with 4.27.

Para 4.29 - OFGEM's assertion is not logical - there will always be uncertainty as to how the future will unfold so OFGEM needs to design a system that assumes constant uncertainty and not make heavy reliance on forecasts of the future as these are seldom impartial or accurate. For this reason para. 4.31 is incorrect - OFGEM should not attempt to forecast the future but instead rely on logical and realistic possible future scenarios, and ensure that it achieves its goals under every scenario (e.g. the Shell scenario planning method).

4.40 - It appears as if OFGEM is trying to micromanage the DNOs. It would seem more logical, given that neither OFGEM, nor the DNOs can predict the future with any degree of certainty, that Government establishes incentives that drive consumer behaviour change (e.g. planning regulations banning gas boilers, incentives to acquire EVs, etc.) and that the DNOs are allowed the flexibility to respond to customer behaviours that occur in their areas.

Para. 4.41 - Can a renewable developer asking for a generation connection in a constrained part of the network trigger a "touch the network once" upgrade? Also is it credible to assume, with all the uncertainties available, that a single change to the network will be sufficient until 2050? Will the "touch the network once" approach prevent new modifications that are proposed afterwards because they were not envisaged or feasible when the first "touch" was approved?

Para 4.42 - The DNOs will necessarily have to be reactive for instance to renewable developers unpredictably approaching them for generation connections - they cannot be expected to predict where new generation opportunities will appear.

Para 4.49 - Has OFGEM quantified the downside of investing "too early" in a world with near zero interest rates, for a strategic national asset whose discount rate should essentially be zero? Also, given the difficulty in finding suitable locations for new renewable generation, OFGEM needs to shift its mindset that investment in transmission and distribution infrastructure can be labelled as a "stranded asset" - if a project falls through and spare distribution or transmission capacity becomes available, why is it not reasonable to assume that other projects will virtually always take its place simply due to shortages in available capacity?

Para 4.50 - DNOs should absolutely have significantly more monitoring of their assets but OFGEM has historically not considered such investment to be "value for money" even though without it, the DNO's are essentially driving blind. This is an example of OFGEM's "cheap" mindset resulting in unstrategic behaviours.

Para 4.59 - We have not seen evidence supporting this assertion; on the contrary, many DNOs are extremely risk averse and quite reluctant to implement novel technologies.

Para 4.60 - Agree with the described mechanism, but in this context OFGEM seems to equate "Innovation" with "Research and Development". In practice, "Innovation" also requires deployment of new technologies (e.g. NASA TRL7 and TRL8 type initiatives) and not just early stage research.

Para 6.14 - Due to the very short contract durations for flexibility services and the uncertainty introduced by tendering, OFGEM will be aware that the flexibility contracts are insufficient to underpin private investment into new flexibility assets. Instead, developers and investors can only justify these investments by relying on a series of possible revenue sources one or more anchoring the investment meaning that the flexibility services are only "upside". Transferring this uncertainty to private investors increases the cost of capital and return necessary to underpin the investments, and seems at odds with OFGEM's drive for all costs to be as "cheap" as possible. This point applies as well to para. 6.22 as the isolation of flexibility costs is technically arbitrary when the asset providing the service is not economically justified by the flexibility service.

A3.12 - if the government has a zero carbon target and it is already accepted this means that the networks will need to carry 2-3x more power, then surely OFGEM will expect DNOs to make upgrades to capacity that result in quite ample spare capacity for as much as a decade or so as the demand rises. It would therefore be impossible for network utilisation rates to exceed 60% in 2023 and for the DNO to "only touch the network once" by 2050.

A3.32 and A3.37 seem to conflict with earlier statements that OFGEM wanted to reduce the disincentive on DNOs to invest in capacity improvements, and to "only touch the network once" until 2050.