REGEN

Consultation response

Accelerating electricity network connections for strategic demand

Authors: Frank Hodgson fhodgson@regen.co.uk

Merlin Hyman mhyman@regen.co.uk

About Regen

Regen provides independent, evidence-led insight and advice in support of our mission to transform the UK's energy system for a net zero future. We focus on analysing the systemic challenges of decarbonising power, heat and transport. We know that a transformation of this scale will require engaging the whole of society in a just transition.

Regen is a membership organisation with over 200 members who share our mission, including clean energy developers, businesses, local authorities, community energy groups and research organisations across the energy sector. We manage the Electricity Storage Network (ESN) – the industry group and voice of the grid-scale electricity storage industry in GB.

Summary and recommendations

We welcome this consultation on improving demand connections. Key points in this response:

- We support the introduction of prioritisation mechanisms for strategic demand projects, but are concerned by the lack of detail in the proposals. DESNZ should publish more information on the nature of the connections queue, including its composition by sector, capacity, location, and anticipated connection dates.
- On strategic prioritisation, we urge DESNZ to reconsider the role of local democratic input and in particular, input from local authorities: under current proposals, areas outside Mayoral Strategic Authorities cannot submit projects for strategic designation. For example, this would mean there would be no route for local authorities along the south coast of England to put forward ports for strategic prioritisation.
- On data centres, we support aligning network planning with a government data centre strategy. We think this should be co-developed with NESO taking into account both energy and digital infrastructure considerations.

- We strongly support the development of flexible connections for demand at transmission and distribution level, but oppose mandating flexible connections for data centres. Non-firm generation agreements remain insufficiently defined and place disproportionate risk on users; flexible connections should include clear terms, transparent compensation, and an investable risk allocation.

In addition, in our response to Ofgem's call for input we recommended:

- Carefully designed financial commitments linked to project milestones, applied consistently at transmission and distribution.
- Requiring outline planning as part of readiness criteria.
- Rapid action to enable demand customers to have greater ability to self-build.
- Further work to develop practical options for flexible connections utilising onsite storage and generation.

Proposal 2 - Introducing prioritisation mechanisms

7. We propose to introduce mechanisms to reserve future capacity, reallocate released capacity, and prioritise government-identified strategic demand projects within transmission network design batches. To what extent do you agree that these proposals would be an effective approach to enabling faster access to the electricity network for strategic demand projects?

Regen supports the government in having a mechanism to ensure strategic projects aligned to its industrial strategy can connect swiftly.

Introducing such a mechanism would be a major shift in the connections process and we are concerned that the consultation document outlines relatively little detail for industry to understand how this would work. Before such a mechanism is introduced we would like to see more detail and consultation with industry.

In particular, we would like to understand:

- **How will the process involve local, democratic input in areas not in Mayoral Strategy Authorities (MSAs)?** The outline process in Annex B suggests that projects in areas outside MSAs can only be submitted by government departments – Regen strongly suggests the government reconsider this. Local places must have the opportunity to have a say in their economic future through their elected representatives. For example, this would mean that not a single south coast port could be submitted for consideration by local authorities as none are part of MSAs.
- **How will this strategic project designation overlap with parallel strategic planning processes carried out by NESO?** Annex C suggests NESO will also be able to designate projects as strategic under four high-level categories. It is not clear whether this is entirely separate to or is cognisant of the existing NESO RESP Strategic Energy Needs process.
- **How will hybrid sites be considered?** Developing demand alongside generation and storage is an effective way to minimise costs of energy infrastructure. It is not clear how hybrid sites would be treated under this process.
- **How does DESNZ anticipate this will impact strategic projects?** For a change of this significance, we would expect to see more transparency around the nature of the demand queue, including the make-up of projects by sector/technology by number and capacity, their connection locations, the status of each project, and the anticipated connection dates. Without this information it is very difficult for industry stakeholders to fully comment on the proposals.
- **How will disputes be managed?** Regen would like to see a transparent but time-limited dispute process so local areas and industry can challenge any strategic designations by the Government.

Proposal 3 - Strategic Alignment of data centre connections

8. Government is exploring aligning data centre connections to regional infrastructure targets set out in a future data centre strategy. Do you agree that this would be an effective approach to Objectives A, B, and C, set out above?

Regen is positive about proposals to align network planning with a government data centre strategy. We believe the strategy should:

- Be a collaborative strategy co-developed with NESO, moving away from cost-agnostic network planning to form a genuinely whole system plan that takes into account both energy and digital infrastructure factors.
- Become the data centre pathway for the RESP, to avoid duplication.
- Be formally sanctioned by Ofgem to ensure that investors have confidence to develop their projects in the knowledge the regulator is onboard.

10. Do you agree Government should consider the use of flexible connection agreements, particularly for data centres, to support system operability and accelerate connections while protecting consumers from unnecessary costs? Please explain your reasoning and provide any relevant evidence.

11. What are your views on the technical, commercial and operational feasibility of: (i) mandatory or incentivised flexible connection requirements for data centres/very large demand, and (ii) incentivised voluntary flexible connections for other demand projects? Please explain your reasoning and provide any relevant evidence.

12. Do you foresee any risks of implementing flexible connection arrangements either for individual projects or the wider system as a whole? Please explain your reasoning and provide any relevant evidence. In your answer, please comment on whether the risks differ depending on the type of flexibility sought, including:

a. Flexibility activated only during system stress events and scarcity events

b. Flexibility activated during winter peak days, within defined parameters

c. Flexibility applied more broadly during normal operational periods

d. Any other risks.

Q10-12: Regen strongly supports the development of flexible connections for demand at transmission and distribution level. We have recently supported UK Power Networks with a research and engagement project focused on the impact of data centres - one aim of which was to support the development of alternative connections products.

We believe that Transmission Owners and Distribution Network Operators should be required to offer flexible connections, but we do not believe that Government should mandate flexible connections for the following reasons:

- In practice, “flexible connections” for large demand projects means connections would be interrupted under outages. Our research for UK Power Networks found that whilst data centres can tolerate second circuit outage interruptions (by preparing onsite generators for interruptions during planned outages), it is generally not possible for data centres to accept exposure to first circuit outages that could occur at any time. It would be helpful if Government clarified whether it is referring to first or second circuit outage interruptions.
- Data centres typically manage their interruption risk with a mixture of UPS, battery storage and diesel generation. As outages can last hours or even days, battery storage alone is not economical for back-up. The implication is that mandating flexible connections would likely lead to an increased reliance and use of diesel generation which would be counter to the clean power goals.
- Another challenge is that installation of on-site diesel generation is currently permitted by the Environment Agency for emergency backup specifically, not routine flexibility participation, so many data centres would likely require additional permits potentially leading to slower development.

It would be useful for DESNZ to publish evidence that mandating flexible connections would lead to accelerated connection timelines in advance of making a decision.

We consistently hear from our members that non-firm connection agreements for generation are not sufficiently well defined and place excessive risk on the user. We would like to see flexible connections implemented with clear, standardised terms (covering when curtailment can be called, notice periods, and maximum frequency and duration) alongside transparent compensation and charging arrangements. This should be supported by an investable risk allocation that enables developers and their customers to effectively assess and price the risk of interruption.

13. Do you see a role for auctions in the reservation or reallocation of capacity for strategic demand projects? Please explain your reasoning and provide any relevant evidence.

We are cautious around the use of auctions in the reservation or reallocation of capacity for strategic demand projects. Our main concern is that auctions would likely favour projects with the highest revenues or developers with the greatest financial resources. Projects with high social or economic value, but with lower revenues, are unlikely to secure capacity via auctions. We are also concerned that DESNZ has not provided any detail, suggesting these proposals remain at a conceptual stage when solutions are urgently needed. DESNZ should also be aware that there is significant industry opposition to the use of auctions.

If auctions are to be used, Regen suggests that these are used in a targeted manner as part of the queue curation process and that enduring proposals use cost-reflective mechanisms to achieve the objectives set out by Ofgem’s Curate workstream to meet the objectives of

deterring applications from non-viable projects, encouraging proactive self-termination from non-viable projects, and driving timely project progression.