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Innova's Four Targets for Ofgem

*Feedback on Ofgem's open letter on
future reform to the electricity
connections process*

1. Remove Barriers for Small (<10MW) Embedded Renewable Generation Projects

Innova are keen to work with industrial sized energy users to provide behind the meter renewable generation. This has the triple benefit of decarbonising industry, reducing the demand on the electricity network, and providing lower cost electricity to the growth engines of our economy. But grid connections are currently a barrier to these projects meaning industrial users are not able to consider such initiatives in their investment strategies.

Remove the 1 MW Installed Capacity Limit for Transmission Impact Assessments

NGESO have set a very conservative threshold of <1MW of installed capacity before a connection project must go through a Transmission Impact Assessment (Statement of Works or Project Progression). This means small embedded projects that are quick to build and have minimal impact on the transmission network are stuck behind very large generation projects and therefore cannot connect for many years. Ofgem must ensure the new Grid Supply Point (GSP) technical limits ([CMP298¹](#)) removes this barrier and allows DNOs to once again have control over these small scale projects and allow them to be fast-tracked, with minimal impact on the rest of the network. Removing the demand of large industrial users from the network can provide additional capacity for low carbon technologies (EVs, heat pumps etc) with minimal network upgrades.

Socialise the cost of Multi-Purpose Protection Grade Telecommunications

Ofgem note the investment they have allowed in IT and Telecoms infrastructure for network monitoring. Although important one of the key factors limiting Low carbon generation growth at the 33kV and 132kV level is the lack of telecoms infrastructure that can be used for important network protection (e.g. unit protection). Due to the lack of telecoms infrastructure many distributed energy resources are being asked to pay significant sums of money to build dedicated telecoms networks just for protection, and this often makes the connections economically unviable. There is a mutual benefit to all network customers from improved telecommunications networks and yet the cost is put entirely on generation customers. Ofgem should allow DNOs to socialise the cost of telecommunication equipment that can be used for protection, network monitoring, and network control (ANM). Ofgem should also speed up innovation on protection grade 5G solutions such as the UKPN Constellation project, so 5G can be deployed across all DNOs over the next few years.

2. Provide Consistency and clarification across the Distribution and Transmission Interface

Transparent and Fair Process for Managing Distribution Connection Queues

Innova support greater collaboration between the distribution and transmission network owners and operators. In particular, Innova support the creation of technical limits at individual GSPs ([CMP298](#)) and would like DNOs to be able to have autonomy over connection queue within these limits. DNOs should be able to remove projects, add new projects, and change the order of the connection queue without needing approval from NGESO.

Innova supports the optimisation of Distribution Queues and agrees that projects should only be moved up the queue and allowed to connect earlier if it does not have a detrimental impact on other customers, such that customers have increased costs or later connection dates than accepted.

But DNOs must provide a transparent, fair, and clear process for managing connection queues, this will ensure they avoid future legal action and challenges.

NGESO have already revised how they will model energy storage in the network and Ofgem should push for a common approach to energy storage modelling to be adopted by DNOs and TOs.

Standardised Maximum Timescales for Submitting Transmission/ Distribution Impact Assessments.

Where a change to the technical limits is required, Ofgem should be ensuring there are standardised timeframes for all DNOs and NGESO. Innova believe Ofgem should require minimum service levels for the submission of Transmission Impact Assessments and Distribution Impact Assessments (where transmission connections impact the distribution network) to be included within industry codes. Innova believe impact assessments should be applied for within two months from when the need arises.

Fairly Assign Capital Contributions and Liability for Transmission Connection Assets

At present DNOs are passing through transmission connection asset costs to developers in an inconsistent and unfair way. DNOs are interpreting the CUSC differently, causing locational incentives to be a factor when developing renewable energy projects. This issue is not mentioned within the Ofgem Open Letter.

Where a Project Progression shows the need for transmission connection assets (e.g. Super Grid Transformers), embedded generation customers are being asked to contribute significant costs which are not proportionate to the asset capacity they would use. Therefore, generators are paying for an enhanced asset and the DNO can provide the capacity to future customers without the need to provide compensation to the initial customer(s).

Innova believe a new mechanism is required to share the cost of transmission connection assets required by Distribution Networks. Innova believe that new transmission connection assets typically provide benefits to multiple customers and to both generation and demand customers, e.g. new SGTs may increase the overall GSP capacity and allow additional demand users to connect with minimal network upgrades. Embedded generation customers should only contribute to connection assets where it is clear the connection asset is only benefiting the embedded generation customer(s).

Ensure Non-Final Demand Customers do not Change the Security of Supply Requirements for a Network

Energy Storage connections are triggering new Super Grid Transformers (SGTs) because they are being included in Group Demand calculations as per [ENA EREC P2 Issue 7 \(P2/7\)²](#) and the [NETS SQSS³](#).

Energy Storage is a non-final demand and therefore Innova believe the industry is incorrectly applying the standards to energy storage. The triggering of SGTs is creating unnecessary transmission network upgrades which is blocking a significant amount of embedded renewable energy generation. With Ofgem leadership, this could be a piece of regulation that could be easily resolved and allow an immediate increase in the amount of energy storage and renewable energy generation that is able to connect to distribution networks.

[Working Group GSR029⁴](#) has been set up to look at EREC P2/7 and we would like to see Ofgem ensure the group fully consider this issue and push them to conclude this important piece of work within the next 6 months.

3. Improve Speed and Efficiency when Delivering Connections

Ofgem need to incentivise good customer service from DNOs, TOs, and NGESO throughout the lifetime of a project and not just at the connection application stage.

Reduce the timescales for Section 37 Approvals to 3 Months

Ofgem need to review section 37 and provide an action plan to reduce the timescales required to get a section 37 approval for new overhead line poles. Small, embedded generation typically requires one new pole to connect to the 33kV or 11kV network and this requires consent through section 37 of the Electricity Act. It can take the secretary of state more than 12 months to approve these works, and this is typically the critical path for small embedded generators being able to connect.

Mandate the use of Software Solutions to Replace Emails

Innova support the new Connections Portal created by NGESO. The portal has helped make the connections process more transparent and more efficient. Innova would like Ofgem to require all Distribution Network Operators to have their own connections portal. This could be facilitated by the ENA working group to share best practices. If it was beneficial, the NGESO connections portal could be used for all electricity applications and therefore used by both transmission and distribution network operators. NGESO would then be responsible for managing the connections portal and pushing connection offers to the relevant network operator (similar to the local authority planning application portal that exists). This could help make electricity applications simpler, more efficient, and more transparent for all customers.

4. Ensure Connections Reform Only Needs to be Done Once

Innova support the connections reform being led by NGESO and are actively involved in the design sprints. We have and will continue to provide detailed feedback via the NGESO Connections Reform on the different models for connections presented.

Invest in the Networks Ahead of Need Through a Transparent and Challengeable Process

Ofgem states 'Through our RII regulatory price controls, we are enabling strategic investment in network infrastructure to ensure the network can be built ahead of need' but this message does not appear to be consistent with the messages coming from DNO's, TOs and NGESO. Innova believe that Anticipatory Investment (AI) is an exception rather than the default and this needs to change.

If networks invest ahead of need, then they will need to make assumptions about the capacity needed and where this capacity is needed. Ofgem need to put in place appropriate processes to ensure the least regret options are taken and therefore the minimum amount of stranded assets are built. Innova support the introduction of a Centralised Strategic Network Plan (CSNP) and regional system planners to facilitate this, but the assumptions and methodology behind the network plans must be completely transparent and open to challenge.

Provide certainty on Timeline and Costs to Investors

Ofgem must be careful not to increase the uncertainty or risk associated with the connections process to an unreasonable level. Some of the proposed changes to connections reform could reduce investor confidence if not carefully thought about. A reduction in investor confidence which could reduce overall investment in renewable projects and/or increase the financial return required by investors. Both could increase energy prices and therefore have a negative impact on customers and the Net Zero goal.

The introduction of higher entry requirements, application windows, stage gates, or connection capacity auctions could increase uncertainty and the risk profile of connections. Although Innova agree action is needed and could support some variation of these ideas, we feel it is important to consider the behaviour of investors when deciding on solutions.

Ensure the Connection Process is Fit for Future Technologies and Market Conditions

The connections process has struggled to deal with previous trends in connections such as gas peaking plants, solar feed in tariffs, and fast response short duration energy storage. Ofgem need to consider how a reformed connections process will manage with future technology trends such as Long Duration Energy Storage (LDES) and Hydrogen. NGESO does not know the duration of an energy storage project when a connection is applied for. The duration will have a big impact on the way the energy storage operates and therefore the type of connection needed. The connections reform should look at decoupling the technology type from the connection characteristics (e.g. Export/Import capacity, fault level contribution, generation/demand profile). In addition, if the technology type is decoupled from the connection, then this could potentially create a grid connections market where capacity can be more easily traded (projects would still have to meet queue management milestones and pay securities).

Ensure Appropriate Generation Curtailment Limits Which Fairly Shares the Risk of Planned and Unplanned Outages between Customers and Networks

SCR introduces limits to the amount of curtailment a project will have, which is an important step for providing certainty to investors.

Ofgem need to make sure the curtailment thresholds for requiring DNOs to upgrade networks are carefully designed to fairly share the risk between generation asset owners and networks. If the threshold is set too high, then asset owners will not see any benefit from the changes and will need a higher return to mitigate for the possible curtailment which will increase energy prices for consumers. Innova believe the maximum curtailment should be set at around 5% of energy yield per year.

Ofgem must fairly manage the risk of curtailment due to planned and unplanned outages as the industry moves to a flexibility first operation method and increasing utilisation of the Distribution networks. Most embedded generators have non-firm connections and therefore the curtailment due to planned and unplanned outages must be included within the curtailment thresholds set by DNOs, therefore ensuring a minimum availability of connections.

Go Further to Remove Legacy Connection Projects Which are Not Progressing

Innova would like Ofgem to provide more support to DNOs to remove connections that were offered before 2017 and do not have any contractual milestones. Innova does not think much progress will be made if the DNO is required to complete bilateral discussions to move connection milestones and energisation dates. Embedded generation projects that are holding offers from pre 2017 have had sufficient time to develop the projects to a

ready to build stage, and therefore Ofgem should seek ways to change milestones or remove them from the queue without the consent of the offer holder.

References

- 1: *CMP298: Updating the statement of works process to facilitate aggregated assessment of relevant and collectively relevant embedded generation*. ESO. (n.d.-a). <https://www.nationalgrideso.com/industry-information/codes/cusc/modifications/cmp298-updating-statement-works-process-facilitate>
- 2: Engineering recommendation P2 issue 7 2019 security of Supply. (n.d.). [https://www.dcode.org.uk/assets/files/Qualifying%20Standards/ENA_EREC_P2_Issue%207_\(2019\).pdf](https://www.dcode.org.uk/assets/files/Qualifying%20Standards/ENA_EREC_P2_Issue%207_(2019).pdf)
- 3: *GSR029: Review of Demand Connection criteria to align with Erec P2/7*. ESO. (n.d.-b). <https://www.nationalgrideso.com/industry-information/codes/sqss/modifications/gsr029-review-demand-connection-criteria-align-erec>
- 4: *Security and quality of Supply Standard (SQSS)*. Ofgem. (n.d.). <https://www.ofgem.gov.uk/energy-policy-and-regulation/Publications-by-licence-and-licensee/industry-codes-and-standards/standards/security-and-quality-supply-standard-sqss>

End of Report

Questions?

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