Hêdd Roberts

Head of Customer and Commercial
Transmission Owner
National Grid
National Grid House
Gallows Hill
Warwick
CV34 6DA

www.nationalgrid.com

Julian Leslie

Head of Network Capability, Electricity
System Operator
National Grid
National Grid House
Gallows Hill
Warwick
CV34 6DA

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Network Development Roadmap Consultation

Dear Julian

We, as the Transmission Owner (TO) of National Grid Electricity Transmission plc, welcome the opportunity to comment and shape the development of the System Operator's (SO) Network Development Roadmap (the Roadmap). We believe the Roadmap is a useful first step towards expanding the Network Options Assessment (NOA) process. We are looking forward to making contributions in future discussions with all parties involved in the next stage of its evolution.

We support the SO's aims as set out in the Roadmap, in particular

- **Expanding the NOA approach to a wider range of network requirements**: We support the intention to utilise the SO's operational experience and robust forecasting to expand the NOA approach to a wider range of system requirements. We believe this will help to pinpoint investment to create value through reducing balancing costs and can also provide opportunities to improve consistency with regards to managing "Enabling Works" in user's connection agreements and NOA results.

- **Broadening the range of solutions to system needs**: We support competition, and believe that NOA has a role in not only discovering cost efficiencies but also in facilitating the introduction of innovative solutions and new technology. NGET TO is keen to work with other parties to develop solutions which are in the best interests of consumers. A helpful step towards this would be to explore further what information will be required by parties offering solutions, for example an up-to-date model of the network, and how this will be provided.

We think the Roadmap must also go further to ensure these proposals are well implemented and cover all the steps needed for NOA to deliver outcomes that are in consumers' interest. We have set out high-level views below.

- **Transparency of the need for transmission solutions**: For TOs and other parties to participate in the NOA process, offer transmission solutions, and have confidence in the outcomes, it is vital that the SO takes steps to improve transparency of the transmission issues. For example, communicate clearly system needs to specifically cover requirements on time of the day or year, duration, location etc. Without this, TOs and other parties may not be able to participate because they do not recognise the need; sub-optimal solutions may be selected by the NOA (because there are no other options); and additional participation costs will be incurred to develop solutions to problems that might not exist.

  We also believe there may be consumer value in the NOA developing in a way that allows collaborative solutions to be developed by multiple parties. Against this background, the Roadmap could be more explicit on the ways and means the SO will provide the transparency needed to allow collaboration.

- **Plan to expand the coverage of investment drivers:** While we support the direction of travel to increase the scope of the investment drivers considered by NOA, it is important that issues with the power system modelling are considered as well as the inclusion of more complex and analytically intensive drivers such as voltage and stability. The key areas that the Roadmap should consider are ensuring that the simplification of seasonal differences in boundary capabilities is revised, demand security is properly modelled and sensitives around generation opening / closing and interconnector flows are explored.

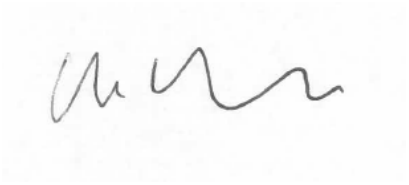
- **Interaction with other SO accountabilities**: It is not clear the Roadmap alone will be able to deliver the SO's stated aspirations. For example, to include other parties

in the NOA process in any meaningful way, they may need access to a secure revenue stream upon which they can take investment decisions. It would be helpful if the Roadmap could identify the broader changes that the SO could make to deliver its proposals in the Roadmap. It will also be helpful for the SO to further clarify their intention to facilitate various markets as discussed at ENA's Open Networks Project.

- **A robust Cost Benefit Analysis (CBA):** The CBA methodology should be mindful of the interaction between NOA commercial non-build solutions and balancing service contracts to address other operability issues.

We hope you find the above points helpful in developing the NOA process to its next stage as set out in this consultation. We are looking forward to working with the SO to deliver solutions which truly benefit consumers.

Yours sincerely



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Appendix – Response to consultation questions

Q1: Do you consider there is value in expanding the NOA to allow network and non-network solutions across the transmission and distribution networks to compete to meet transmission network needs at least cost? What are the downsides or complexities we should consider? How could we go further in promoting competition?

We welcome and support the SO's work to further extend the NOA process to include more options for solutions to meet transmission network needs. We believe competition has a role in not only driving cost efficiency but also in facilitating the introduction of innovative options and new technology. We also believe the greater involvement will strengthen the resultant signal for transmission investment and help to minimise risks of options being recommended because of lack of alternatives.

We think the Roadmap could go further in explaining how the SO intends to ensure the transparency of the extended NOA process, for example communicating clearly system needs to specifically cover requirements on time of the day or year, duration, location etc. The Roadmap should also provide transparency in the methodology of CBA and be mindful of the potential interaction between NOA commercial non-build solutions and balancing service contracts to address other operability issues. For example, the SO may already be benefitting from a balancing services contract which may be replaced or otherwise affected by a new commercial contract awarded through NOA. In such cases, there is a risk that the benefit of NOA commercial solutions may be overestimated if changes in costs for other services outside the scope of NOA are not taken into account. To ensure all potential solutions are assessed on a consistent basis is key, as is transparency of the methodology to be used to enable parties to make appropriate decisions.

We believe that promoting competition can be best achieved when the SO's role is to facilitate network development and operation processes and ensure a level playing field. It would be good to see more clarity as to how the Roadmap interacts with the different proposed models for onshore competition and how NOA process can be used to assess the impact of competition.

Q2: What do you see as the opportunities and limitations of bringing a probabilistic approach into analysis?

This is a welcome step forward in recognising the probabilistic nature of managing transmission network operation and planning risks. We think the Roadmap can go further in explaining the scope of the SO's proposal on how to apply a probabilistic approach to its NOA analysis, for example whether this is applied to generation scenarios, secured events etc.

It is important for the Roadmap to recognise the deterministic nature of the current version of the security standard with which the transmission network owners are still obliged to comply by their licenses.

Question 3: Do you consider there is value in expanding the network needs covered by the ETYS and NOA to a greater extent across the year and to more regional voltage challenges? What are the downsides or complexities we should consider?

We welcome the SO's further work to expand the NOA process to cover more network needs. This will not only secure future operation of the transmission network but also drive great consumer value in optimising solutions addressing multiple system needs.

We have concerns about the practicality of facilitating this ambitious plan. It is worthwhile noting that the current NOA process is based on a level of simplification of transmission network issues, for example the scaling of system generation and demand. We believe the Roadmap should include the steps necessary to provide confidence that decisions relating to the existing investment drivers are robust as well as expanding the scope into more complex areas that will inevitably require further simplifications.

Question 4: Do you consider there is value in expanding the NOA to cover system stability needs? What are the downsides or complexities we should consider?

As per our response to the previous question, we welcome and support the general direction of travel to expand the NOA process, but believe that the SO can do more together with the industry to address its practicality. This applies to an even greater extent where stability needs are concerned, where data quality of relevant commercial confidential information can be particularly important to the outcomes of power system stability analysis. It is also worthwhile noting that flexibility issues beyond current NOA's coverage (for example inertia) may also have impact on the NOA outcome.

Question 5: Which other network requirements do you consider the NOA approach could be expanded to cover in order to drive value to consumers? What are the key benefits and considerations?

We think that the identification of other network requirements in future NOA may be linked to the publication of the System Operability Framework (SOF) which include discussions around the future system operational challenges such as inertia, fault level etc.

Question 6: Do you agree with the proposed approach to phasing information throughout the year? If not, how could we best present this information, with the aim of avoiding publishing all in one large publication per year?

We think it is important to coordinate the production of future NOA with all the relevant information required to achieve robust outcomes, for example the Future Energy Scenarios (FES). And it will be also important for the SO to facilitate the publication to ensure obligations in relevant licenses, standards or codes can be discharged by relevant parties.

The Roadmap could also explain further on how to facilitate a CBA methodology on a regional basis without considering the cost implications from a whole GB market. It is not clear on how

assumptions can be made to ensure that the regional assessment aligns with a whole system view to avoid sub-optimal reinforcements being recommended regionally.

We recognise the challenge and balance on workload for the SO however we believe the Roadmap requires greater clarity on the practicality of the proposed approach to phasing information throughout the year. This will need to include timescales to ensure relevant reinforcement works can be planned and managed in accordance with outage windows during a year and regulatory reporting process can be properly facilitated.

Question 7: What information and in what format would you find beneficial in order to understand the network needs and submit well thought-out options? This could be specific data, guidance to understand the process or support as you go through it.

We believe this information from the SO will need to be in the form such that the solutions can be tuned to meet the system needs. Ideally this will need to specify the location, duration and time of the day or season to which the system need is applicable. It would be good to understand the magnitude of costs relating to each constraint, so that other parties can best target their efforts in proposing solutions to reduce these costs.

For the submission of options, it will be helpful to ensure a wide range of system benefits (for example improvement in power quality) can be captured and recorded in the forms for option proposals. It is important to consider whether other parties submitting options would have sufficient information to assess the impact of their proposed solution on the rest of the network. Existing network owners would use a network model to assess the impact of their proposal on the network, taking into account system stability, harmonics, and constraints elsewhere on the network. It is worth considering whether an up-to-date network model would be available to any party wishing to submit an option, or whether the SO would be obliged to carry out this analysis itself.