

NOA Q&A from Stakeholder Group Meeting

Context

This document will give a high-level view of the NOA process and answer some basic questions as posed in the National Electricity Transmission Stakeholder Meeting.

Questions

What is the NOA?

The NOA (Network Options Assessment) is a mechanism used to develop an efficient, coordinated, and economic system of electricity transmission, consistent with the National Electricity Transmission System (NETS) Security and Quality of Supply Standard (SQSS).

The purpose of the NOA is to assess a range of possible reinforcement options and propose a recommendation to the Transmission Owners (TOs) in Great Britain (GB) as to which to proceed with to meet the future requirements of the National Electricity Transmission System.

The term reinforcement option, or simply option refers to a major National Electricity Transmission System reinforcement. This is defined in the NOA methodology as: a project or projects in development to deliver additional boundary capacity or alternative system benefits as identified in the Electricity Ten Year Statement.^[1]

How does the process work?

The NOA process starts with the FES (Future Energy Scenarios). These outline a plausible range of future background conditions to assess against; and form the foundation for the NOA studies and economic analysis. These scenarios are found in the Future Energy Scenarios publication at fes.nationalgrid.com.

The FES is then used in producing the Electricity Ten Year Statement (ETYS) to determine power flow requirements across the network. For the ETYS, the network is divided into boundaries; while these do not physically exist, power flows can be measured over each adjacent boundary to determine the most constrained areas of the network in need of reinforcement.

After the requirements have been defined, we engage with all TOs inviting them to propose a wide range of options that could meet the future system requirements as outlined in the ETYS. The ESO may also submit potential options at this stage of the process. For each option, the cost and system benefit are required.

Following the receipt of these options, the 'optimisation' process can begin. This involves performing an economic assessment on each of the possible options weighing up the capital cost to implement them versus the constraint cost^[2] saving over time. Analysis is then performed on the optimal list of options and a set of recommendations is made on the reinforcements to proceed with.

1. www.nationalgrideso.com/ETYS

The ETYS is all about understanding what the requirements will be for the National Electricity Transmission System to transfer bulk power over the next decade – where capacity shortfalls might occur – so that as System Operator we can plan ahead to manage the network effectively and securely.

2. A constraint cost is the monetary value incurred in limiting the bulk power flow over a given boundary.

Who is involved in the NOA process?

The NOA process is the accountability of the Electricity System Operator (ESO) but involves collaboration between the ESO and the three onshore TOs – Scottish Power Transmission, Scottish Hydro Electric Transmission, and National Grid Electricity Transmission as well as input from Ofgem.

- Ofgem is responsible for the approval of the NOA methodology to ensure that it meets the requirements of licence condition C27. This methodology is consulted upon annually and determines more specifically the processes and responsibilities within the NOA.
- The ESO is responsible for devising the network requirements using the FES as well as the economic assessment of all possible reinforcement options.
- The TOs propose a list of possible options for investment and weekly teleconferences are scheduled between the ESO and all TOs to discuss ongoing NOA business and provide feedback.
- Market participants may soon become a key part of the NOA process as commercial options are investigated.

What does a NOA recommendation mean? Are the recommendations revisited?

The NOA process recommends the most economic investment options to proceed with to meet bulk power transfer requirements as outlined by the ETYS, based on our future energy scenarios in order to deliver the best overall value for the GB consumer.

Each investment recommendation states whether the relevant TO(s) should proceed, delay, hold, stop, or do not start with the delivery of a reinforcement. This ensures that reinforcements are delivered at the most beneficial time for the consumer.

The NOA process is annual and as such all investment recommendations are revaluated every year to ensure they are still optimal. This means some investment recommendations may change as we gain more clarity of the future energy landscape year after year.

Who challenges decisions made during the NOA process?

The NOA process recommends a list of reinforcement options to proceed with, based on economic analysis conducted by the ESO.

- The NOA methodology is submitted as a draft to Ofgem for approval ahead of publication to ensure the process is aligned with their strategy. We also take this opportunity to engage with wider stakeholders allowing them to submit their feedback on the process.
- Frequent communication with the TOs provides the opportunity for challenge and review of the process, data and results.
- Any marginal decisions are subject to additional scrutiny by the NOA committee, the committee comprises senior ESO management. A marginal decision is where a recommendation on a particular reinforcement is driven by a single scenario or condition,

Who makes the decision to invest?

A recommendation of investment (or otherwise) is provided to the TOs from the ESO following the completion of the NOA process. The TOs make the decision of whether to invest and proceed with the delivery plan. They may decide not to proceed with investment for a number of reasons, however would need to provide robust justification for doing so.

How are options submitted into the NOA process?

Based on boundary capability and requirement data identified in the ETYS; the TOs identify and develop multiple credible

reinforcement options, both build and non-build alike, that will be able to meet future system requirements and deliver the best overall value for the consumer. This is submitted to the ESO via a SRF (System Requirements Form).

The ESO produces and circulates the SRF Part A containing the boundary requirements and base capabilities to the TOs. In response to Part A, TOs provide high level details of reinforcement options that are expected to satisfy the requirements. All submitted reinforcement options must include information on the: affected boundary, a description of the option, cost, system benefit, outage requirements, environmental impact, expected earliest in service date (EISD), and how the given reinforcement impacts other options.

More information on option submissions and the NOA process can be found in the NOA report methodology at: www.nationalgrideso.com/NOA

The TO's business plan timeline does not consider non-TO solutions. How do we manage that risk?

We are investigating the development of the NOA process to allow Distribution Network Operators (DNOs) and market participants to put forward options to meet transmission needs and to be assessed alongside the current transmission options provided by the TOs. As such, the TO's must strive to provide the most competitive solutions and discuss how their solutions are in the best interest of the consumer when compared against a non-TO solution.

How is stakeholder engagement managed in the in the NOA process?

Stakeholder engagement is an important aspect of the NOA process and is described in more detail in Chapter 7 – 'Stakeholder engagement' of the NOA report .

This engagement guarantees that value is continuously added to the NOA. During the process, we ensure that:

- We identify and understand our stakeholder's views and opinions.
- There is always the opportunity for constructive debate throughout the process.
- There is open two-way communication with our stakeholders.
- We report back on how stakeholder views and opinions have been considered and applied to the process.

In general, stakeholders can be placed in three distinct categories:

- Industry (e.g. TOs, Ofgem, independent developers).
- Environmental (e.g. Conservation groups, concerned members of the public).
- Academia (e.g. Universities and other higher education institutes).

Methods of engagement vary by party though typically email communication and survey responses are the most common. Engagement with the TOs is more in-depth, involving weekly teleconference meetings discussing the ongoing NOA process. This is in contrast to conservation groups who are often more interested in the impact of investments on the local area and landscapes.

The ESO, however, does not consult with stakeholders once a project moves into the build phase. This responsibility falls into the remit of the relevant TO who are responsible for the construction of the physical assets.

What is NOA for Interconnectors and how does it relate to the NOA?

The NOA for Interconnectors (NOA IC) is published within the NOA document and sets out to inform the industry of the potential benefits of future interconnection to the GB market. The primary aim is to provide a market signal to facilitate the development of efficient interconnector capacity.

The analysis provides an indicator of the socioeconomic benefits of interconnection; it does not, however, provide any project-specific information and the output of the analysis does not determine nor have any impact on a project or potential project's viability.

The NOA IC is a market and network assessment of the optimal level of interconnection based on Social Economic Welfare (SEW), CAPEX costs of both the interconnection capacity, network reinforcements, and any constraint costs. This information is used to inform the market of the potential of further interconnection capacity to the GB network.

What is the “Optimal level of interconnection” and who sets the level?

The NOA IC determines the optimal level of interconnection based on SEW analysis conducted by the ESO, CAPEX costs of both the interconnection capacity and network reinforcements, and constraint costs. The optimal level is the level of interconnection to other European markets, in terms of capacity, that poses the least risk for consumers in the future. A yearly updated value of the optimum level of interconnection between GB and the European market can be found in the NOA at: www.nationalgrideso.com/NOA.