



Making a positive difference  
for energy consumers

Nicholas Harvey  
National Grid House  
Warwick Technology Park  
Warwick  
CV34 6DA

Direct Dial: 020 7901 7060  
Email: Min.Zhu@ofgem.gov.uk

Date: 21 December 2020

Dear Nicholas,

### **Approval of 2020 Network Options Assessment methodology**

Thank you for submitting the sixth Network Options Assessment (NOA) methodology, which incorporates a chapter on the NOA for Interconnectors (IC).<sup>1</sup>

We<sup>2</sup> have reviewed the NOA methodology and considered whether it meets the requirements set out in standard licence condition C27 of the National Grid Electricity System Operator (NGESO) electricity transmission licence (C27). Our review has included reviewing the changes made to the methodology, compared to the 2019 methodology, to ensure that these are reasonable and help contribute to investment recommendations that are in existing and future consumers' best interests.

In summary, as set out further below, we are satisfied that the 2020 NOA methodology meets the requirements set out in C27, including in terms of making interactive improvements to the NOA methodology and consulting with stakeholders, and we approve the NOA methodology.

---

<sup>1</sup> The submission of the NOA methodologies is a requirement under standard licence condition C27 of the NGESO electricity transmission licence.

<sup>2</sup> The terms 'Ofgem', 'the Authority', 'we' and 'us' are used interchangeably in this document.

## NOA methodology (not including chapter on IC)

We note that the two main changes to the NOA methodology this year are:

1. A new section 7 that sets out the ESO's approach to the early development of options where such development is not carried out by a transmission owner including options suggested by other interested persons. The section was introduced to comply with new requirements in C27 that were introduced in April this year.
2. Changes in section 6 to update the high voltage pathfinder process and to add a new section on the stability management pathfinder process.

We also note that the ESO commissioned the University of Melbourne (UoM) to review the decision-making framework in NOA and to identify areas with room for improvement, in response to our feedback on the NOA methodology last year. One of the recommendations from the UoM's review was to make use of a method called Least Worst Weighted Regret (LWWR), which could be a useful tool for investigating the robustness of marginal recommendations ie those which are driven by a single scenario. We understand that the ESO intends to trial LWWR on marginal options and to compare results against the existing LWR this year.

In relation to this year's developments to the NOA methodology we have the following recommendations:

1. We welcome the introduction of section 7 to this year's methodology. However, we think that the section needs to be further developed in the NOA methodology next year to provide a better indication of what the outcome would be if an option suggested by other interested persons gets a signal to proceed. This should include outlining the roles of both the ESO and the interested party, in particular the actions that the ESO would take to facilitate the options (eg via the ESO's pathfinders), as well as clarifying the type of support the ESO would seek from the relevant transmission owner(s) to help it further develop the option.
2. We support the trial of LWWR and other such tools, that could indicate the robustness of a proceed signal, particularly for marginal options which are driven by only one scenario. We note that there has been some volatility in the proceed signals coming out of the NOA over the last five years. This should be expected to some extent given the changes in inputs, such as the Future Energy Scenarios, and the increasing number and variety of network solutions that are considered in the NOA analysis. Nonetheless, we would encourage the ESO to investigate the volatility of the NOA recommendations over time to provide more insight into the drivers for

this volatility, and to propose ways to better balance stable signal for long-term investment with dynamic re-optimisation.

In addition to the above recommendations, we recommend that another area that is a priority for the development in the 7<sup>th</sup> NOA methodology, which we note some stakeholders highlighted in their responses to the ESO's consultation on the 6<sup>th</sup> NOA methodology, is a need for a clearer and more effective process on the assessment of mid-term non-network solutions. This should include more detail on how the ESO's assessment aims to ensure a level playing field between competing network solutions, the information that third parties are required to provide, as well as ensuring a reasonable period for third parties to submit proposals.

### Chapter on the NOA for Interconnectors

The NOA IC methodology for 2020/2021 introduces mostly minor refinements to the 2019/2020 methodology. This is consistent with stakeholder feedback which indicates that the NOA IC methodology as a whole continues to deliver a valuable product in its current form. Ofgem agrees and, in particular, welcomes the continued use of a range for the optimal level of interconnection. We also welcome that NGENSO has sought to respond to stakeholder feedback within the 2020/2021 NOA IC methodology.

There are, however, some areas in the methodology, concerning the NGENSO response to stakeholder feedback, that we recommend would benefit from further clarity and depth:

1. Stakeholder feedback recommends that NGENSO considers the inclusion of hybrid interconnectors within the NOA IC methodology. We agree with that this would be a positive, albeit challenging, development and therefore welcome the intent of NGENSO to explore this further. We appreciate this is at an early stage, however would welcome further clarity in the methodology, or via a separate document, as to how NGENSO plans to investigate this, for example through additional stakeholder engagement.
2. NGENSO proposes that a key change for the 2020/2021 NOA IC methodology will come from a review of the method used for setting the interconnector baseline level which was introduced last year. We welcome this improvement in response to stakeholder feedback but note that the baseline level of interconnection has a material impact on the NOA IC analysis; it is important therefore that the baseline is credible. We therefore recommend further engagement with stakeholders on these changes.

3. We welcome the analysis of the impact of interconnection on carbon costs and renewable energy curtailment. In line with stakeholder feedback, we would welcome further insight on both of these impacts if it is possible.

Alongside the above recommendations, we have two further requirements for the published NOA IC for 2020/2021:

1. Upon the removal of an assessment of system operability impacts from the NOA IC in the 2019/2020 methodology, last year we requested: (i) that the breadth and depth of the analysis be maintained; (ii) that the new location of this analysis be clearly signposted; and (iii) that, where possible, meaningful conclusions of this analysis be highlighted in the NOA IC. We note that this request was not fully delivered upon. Whilst we appreciate that the NOA IC might not be the best place for the full system operability analysis, we continue to consider this an important consideration for the NOA IC. Therefore, as set out in our 2019/2020 methodology approval letter, we re-iterate our request that some analysis and discussion of the longer-term system operability impacts (potential costs and benefits) of interconnectors be included in the NOA report 2020/21.
2. As noted above, a credible interconnection baseline is important for the purposes of the NOA IC modelling. We therefore request that any material update to the methodology for the setting of the baseline is published as part of the NOA IC 2020/2021.

## **Approval**

Overall, we consider that the 6<sup>th</sup> NOA methodology meets the requirements of C27 and has addressed the main recommendations set out in our letter dated 11 October 2019. We are approving the NOA methodology for the 2020/21 NOA report.

If you have any questions in relation to this letter please contact Anna Kulhavy (Anna.Kulhavy@ofgem.gov.uk) or Andrew Bullimore (Andrew.Bullimore@ofgem.gov.uk ).

Yours sincerely,

**Min Zhu**  
**Deputy Director, RIIO Transmission**