Making a positive difference for energy consumers

Call For Evidence – Transmission Network Use of System Charges

This Call for Evidence is open from 1 October 2021 to 12 November 2021

Primary contact: Harriet Harmon, Head of Electricity Transmission Charging Policy
Responses should be sent to: tnuosreform@ofgem.gov.uk

Background:

In our recent Access and Forward-Looking Charges Consultation[1] we said that there may be a need for a broader review of transmission charging arrangements, in the context of our work on Full Chain Flexibility[2].

We are grateful to those stakeholders who have approached us directly to discuss and share often confidential information in relation to the practical effects of Transmission Network Use of System ("TNUoS") charges on their businesses. Having held discussions with many industry parties – from small-scale renewable developers through to large electricity suppliers – we issue this Call for Evidence to inform:

- The extent to which a broader review of TNUoS would be beneficial;
- Priority areas for reform, were a review to be undertaken;
- How such a review might be taken forward; and
- Timescales for any review and any subsequent modifications to current arrangements.

Stakeholder views:

Through direct engagement, open publications and consultation responses, many of our industry stakeholders have given us their thoughts on TNUoS charges. We believe there are some common themes emerging from the messages we've heard from industry, including:

[1] Page 72 of https://www.ofgem.gov.uk/sites/default/files/2021-06/%281%29%20Ofgem%20Access%20SCR%20-%20Consultation%20on%20Minded%20to%20Positions.pdf
[2] https://www.ofgem.gov.uk/energy-policy-and-regulation/policy-and-regulatory-programmes/full-chain-flexibility

- The charging methodology underpinning TNUoS is perceived to be complicated and to lead to volatility, which some parties find difficult to manage.
- The foundation of the charge being the distance between sources of generation and sources of demand does not consistently lead to charges which provide a useful signal[3] to all users.
- Charges are, for many, unpredictable and for some parties might be a barrier to investment.
- Cost-reflectivity could be improved – in some cases there is a disconnect between the charging methodology and the realities of the network and planning regimes.
- The absolute value of the charges is considered too high in some regions.
- The (comparatively small) size of the demand locational charge may hamper efforts to improve Demand-Side Response among less engaged consumers.

Our emerging thinking:

We have previously discussed many of these issues with industry over the course of our Targeted Charging Review[4] and our Access and Forward-Looking Charges Significant Code Reviews ("SCR"). We recognise that absent a specific TNUoS review, or relevant Connection and Use of System Code ("CUSC") modification proposals, industry has had little opportunity to identify, discuss and debate potential solutions to the issues they perceive in current arrangements. We further recognise that, as a consequence, we have not necessarily been in receipt of exhaustive evidence in relation to the defects our stakeholders believe are present in TNUoS today.

Although this Call for Evidence is asking market participants for their views and supporting evidence, we thought it potentially helpful to share some of our current thinking. We welcome stakeholders' views on the following, in addition to any broader evidence they wish to submit. We currently consider that:

- The model used to create the locational TNUoS charge likely fulfils the terms of the CUSC, but we recognise that in the context of increased/improved flexibility, non-build solutions to network issues and the proliferation of renewable generation sources, the

[3] We consider a 'useful signal' to be one to which a network user can respond, for instance by changing their behaviour or selecting an alternative location for their connection

[4] https://www.ofgem.gov.uk/publications/targeted-charging-review-decision-and-impact-assessment

purpose and design of TNUoS charges in future years may change substantially from current arrangements.

- It is important that charges take into account our work in **Full Chain Flexibility** as well as Net Zero and broader changes in the market, and that they support changes in consumer behaviour that will ultimately lead to lower network investment costs in the longer-term.
- Cost-reflectivity is important: it can facilitate competition by ensuring that parties face charges reflecting the effect their commercial decisions have on the network. Broadly, charges should provide **useful signals** and should reflect the costs which a party's choices confer on the network.
- Similarly, we consider that **reducing complexity** in the TNUoS regime could in principle better serve competition: we note that today's TNUoS charging methodology is c.100 pages of often complex mathematical and engineering principles and calculations. We further consider that this complexity is likely (alongside a dependency on variable inputs and forecast data) adding to the perceived unpredictable nature of the charge.
- We recognise that network charges may have a significant effect on how Net Zero is delivered. We believe that the TNUoS regime should be non-discriminatory[5] and should continue to **recognise the relative value, benefits and disbenefits** of different technologies connecting – or already connected - to the transmission network.

Potential areas for reform:

We have given significant thought to the specific aspects of the calculation of the TNUoS Wider Locational Charge that could be improved to better reflect the network, and the costs driven by different users. We are open to a wide-ranging review of TNUoS which might include Local Charges, however our current thinking is that changes in this area of charging is not a priority at this time – stakeholder views with supporting evidence on this point are encouraged. A non-exhaustive list of the areas we think warrant specific focus is below:

- The extent to which **available capacity** of network assets should be reflected in the charging methodology[6] - we note that it is possible that TNUoS charges may signal that

[5] As is required by Article 18 of Regulation 2019/943 - https://www.legislation.gov.uk/eur/2019/943/article/18
[6] We note that NGC (as was) previously included some concept of this in previous iterations of the charging methodology. In principle the core concept could be reintroduced, with the practical implementation being potentially different.

the incremental cost of connecting at a particular location would be significant, but in practice, by virtue of unutilised capacity in that locale, there may be limited TO investment required. It is equally possible that generators in negative TNUoS zones can drive broader network investment owing to a lack of capacity in the area in which they are situated such that they would receive TNUoS credits.

- Whether – like generation – demand should have different 'backgrounds' in the model used to calculate charges. At present, the transport model (a representative model of the transmission network) calculates the incremental cost of different types of generation being used to meet a static level of demand ("Average Cold Spell" or "ACS" demand – the weather-adjusted expected peak demand at each location on the network). The incremental costs of meeting baseload demand may differ from those of meeting peak demand if it is met by different forms of generation, and it is possible that **additional demand backgrounds** could improve cost-reflectivity for demand consumers as well as generators.
- In terms of generation backgrounds, we are mindful that the FES suggests that over the coming decade there will be a reduction in conventional plant to such an extent that it may not be possible to run the 'peak' background in the transport model, (because ACS Demand will exceed conventional generation capacity). We think that potential **alternatives to the peak/year-round backgrounds** should be explored alongside any consideration of alternative demand backgrounds. We would also therefore see a case for reviewing the **shared/not shared** elements of the Wider tariff and whether they continue to be based on appropriate, cost-reflective assumptions.
- Whilst we recognise that there are live CUSC Modification Proposals[7] in respect of the 'expansion constant'[8], we think that a review of the locational charging methodology could consider **multipliers used within the charging methodology** (e.g. security factors) to ensure that they remain cost-reflective and do not distort the long-run signals provided through TNUoS.
- In March 2020, we held an online workshop with stakeholders to discuss options for reforms to the '**reference node**'[9]. At the time, we stated that we did not consider that we had seen sufficient evidence to suggest that a change to the reference node was

[7] CMP315 and CMP375, as published at https://www.nationalgrideso.com/document/194606/download and https://www.nationalgrideso.com/document/142656/download

[8] The Expansion Constant is a multiplier used within the TNUoS charging methodology to reflect the annuitized cost of transporting 1MW over 1km of 400kV OHL

[9] The broad term used to describe the demand-weighted distributed reference node, the methodology underpinning the 'distance to demand' calculations in TNUoS charges

warranted. Nonetheless,we are open to considering changes to the reference node in the context of other reform areas mentioned herein.

- We note BEIS' recent Call for Evidence on LLES[10], and consider that further work in respect of charging arrangements for **storage** of all sizes may be warranted in the context of its potential to provide solutions to network issues rather than to act solely as a wholesale market participant.
- Arrangements for **Distributed Generators**, **Offshore** connections in the context of our joint Ofgem/BEIS Offshore Transmission Network Review, and the propriety of the **technical data inputs** (for instance, the, "Week 24" data or the Security and Quality of Supply Standards ('SQSS') scaling factors) could all equally be in scope, albeit potentially tangentially/consequentially to the technical issues listed above. The absolute value of the **demand** charge is contingent on many of the technical aspects listed above – we believe that any consideration of changes to generation charges should give **equal attention to the effect** on demand charges and whether the outcomes deliver consumer benefits.

We are not seeking within this publication to create a prescriptive list of areas of the TNUoS methodology that could be reviewed. We invite industry to provide their views and supporting evidence on the areas listed above, plus any other aspects/components that could form part of any review. Supporting evidence in the form of relevant data or analysis that stakeholders may have or may have commissioned in respect of the TNUoS methodology, or aspects thereof would be particularly welcome.

"Quick wins" and our decision-making framework:

Some stakeholders have told us that they believe there are, "quick wins" available that might make a significant difference to the absolute value of TNUoS charges, possibly improving cost-reflectivity. Views and supporting evidence on areas of the TNUoS methodology that might be changed quickly to improve consumer outcomes are also encouraged.

It should, however be noted that as with any change to the TNUoS methodology, these potential, "quick wins" will still be subject to our usual decision-making process. Further,

[10] Large-scale and long-duration energy storage: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1003841/large-scale-long-duration-electricity-storage-cfe.pdf

whilst we have heard the messages of some stakeholders in relation to the absolute values of TNUoS charges, we do not consider simply reducing TNUoS tariffs for some parties (or in some regions) to necessarily be a desirable outcome in its own right, and we expect that changes will be assessed in accordance with our statutory duties, the CUSC Applicable Charging Objectives[11] and the legislative framework in which we operate (which includes, inter alia, the Trade and Co-operation Agreement, and retained European law). We would ask stakeholders to consider their evidence in this context.

Vehicles for change:

An SCR is the process by which we can ensure that a holistic review of all code provisions relating to a particular topic takes place. It has the benefit of being a robust and well-understood process, with a clear and pre-defined scope and a specified end-date. It is not, however, flexible in its delivery: incremental change during the course of that SCR (such as individual modification proposals) is generally precluded, although we note that this can serve to add some certainty for market participants.

Alternative to an SCR is the standard open governance procedure. The TNUoS charging methodology sits within the CUSC, and parties to the CUSC can bring forward such modifications as they see fit, with relative priority determined by the Panel. Ofgem can attend Workgroup meetings as an observer, which (absent another vehicle for reform) may limit our ability to aid in the development of CUSC modification proposals[12]. This approach may make it challenging to review matters holistically, taking into account the full range of industry views, and may be less efficient than some alternatives.

We have in the past used a 'Task Force' approach[13] where industry works together to identify potential solutions to a specified problem in advance of the formal open governance process. There is a potential benefit to this approach insofar as it can resolve questions usually asked during the Workgroup phase, thereby reducing the modification timescales, however it is an informal process which may not result in proposals the Authority can approve.

[11] As defined in the Standard Conditions of the Electricity Transmission Licence
[12] Per Section 8 of CUSC
[13] See both the BSUoS Task Force and the Second BSUoS Task Force: https://www.ofgem.gov.uk/sites/default/files/docs/2018/11/decision_to_launch_a_balancing_services_charges_taskforce.pdf and https://www.ofgem.gov.uk/sites/default/files/docs/2019/11/open_letter_on_the_balancing_services_charges_taskforce.pdf

We have not yet determined how a review of TNUoS might be delivered, if we were to conduct such a review and we invite stakeholders to provide their views on the right vehicle for change.

This Call for Evidence:

We are grateful for the information we have received so far and will add any new evidence gathered through this Call for Evidence to that already helpfully submitted by parties.

Stakeholders are asked to provide views on the issues raised in this call for evidence, with supporting evidence, including but not limited to the following:

- The extent to which they consider that reforms would be beneficial;
- Priority areas of reform – for instance, those aspects of the methodology which might improve predictability or the utility of the signal;
- The correct vehicle for change – for example, an SCR, open governance, Task Forces or some hybrid approach; and
- The timescales to which industry considers any reform programme should work.

We would find responses which consider the context of the Offshore Transmission Network Review, the ESO's ongoing work in respect of market signals, the concept of, "quick wins", and any relevant live modification proposals particularly helpful.

This Call for Evidence is open until 12 November 2021. Responses should be sent via email to tnuosreform@ofgem.gov.uk, addressed to Harriet Harmon, and will be used to inform our next steps, including an assessment of the need for reform.