

## Call For Evidence – Transmission Network Use of System Charges

### Our next steps, and a summary of your responses

**Primary contact:** Harriet Harmon, Head of Electricity Transmission Charging Policy

**Contact:** [tnuosreform@ofgem.gov.uk](mailto:tnuosreform@ofgem.gov.uk)

---

#### Executive Summary:

Transmission Network Use of System (“TNUoS”) charges recover the annual cost of the provision, maintenance, and upgrade/expansion of the transmission system (currently c.£3.5bn). TNUoS charges are levied on generators (c.£800m) and demand users (c.£2.7bn). The methodology underpinning TNUoS charges is designed to send cost-reflective, relative price signals to network users about the incremental effect their choice of location has on the transmission system. Recently, stakeholders have raised some concerns with us around TNUoS charges, including their cost-reflectivity, unpredictability and absolute values. We consider that in the context of on- and offshore network developments, our work on Future System Operator, and the emerging localised flexibility markets, there is a longer-term question as to the function of TNUoS in a less centralised, more flexible energy system. We recognise, however, the nearer-term issues that stakeholders have brought to our attention. We will therefore be:

- Asking National Grid Electricity System Operator (“NGESO”) to launch and lead Task Forces under the Charging Futures arrangements considering the root causes of unpredictability in TNUoS charges and how they might be addressed, alongside an examination of the input data into the current model used to calculate the locational element of TNUoS, to ensure that charges remain cost-reflective; and
- Undertaking a significant programme of work looking at the longer-term purpose and structure of transmission charges, considering in particular the trade-offs between market signals, network planning and network charging signals in fostering a flexible, Net Zero energy system.

## **Background:**

We recognise that our previous charging reform programmes, the Targeted Charging Review and the Access and Forward-Looking Charges Significant Code Reviews (“SCRs”) were launched before the publication of the Sixth Carbon Budget, and the UK’s Net Zero commitments. We understand that network charges will play a role in delivering decarbonisation at lowest cost to consumers over the coming years, and we note the feedback we’ve had from stakeholders about the need to ensure transmission charges are fit for purpose as we move towards a decentralised, more flexible energy system.

On 1 October 2021, we issued a Call for Evidence<sup>1</sup> in respect of Transmission Network Use of System (“TNUoS”) charges to inform:

- The extent to which a broader review of TNUoS charges 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.

We outlined within that Call for Evidence, which closed on 12 November 2021, the views we had previously received from stakeholders and our own initial thinking as to areas which could be covered by a review of TNUoS charges, and potentially appropriate vehicles for such changes.

This publication serves as an update to industry, providing both a summary of responses received, and our planned next steps in respect of TNUoS charging reform.

## **Responses to our Call for Evidence**

We have provided below the common themes of the non-confidential responses received. We are grateful to all stakeholders for their submissions and welcome the continuing debate as to the right direction of travel for network charges.

*The extent to which a broader review of TNUoS would be beneficial*

---

<sup>1</sup> <https://www.ofgem.gov.uk/publications/tnuos-reform-call-evidence>

We asked parties whether a broader review of TNUoS would be desirable, and why. Some responses did not specifically respond to this point but spoke more broadly of a desire to see reductions in the absolute level of the charge faced by generators. The majority of respondents, however, indicated that a broader review of TNUoS would be beneficial, with a range of reasons being cited, including:

- Facilitating the UK's binding Net Zero target is perceived to be difficult in the context of the charges faced by generators in certain charging zones;
- The current methodology assumes a centralised electricity system with few, large generating stations which no longer reflects the reality of the transmission network;
- Charges are volatile and unpredictable, and the underlying methodology should be reviewed to improve investment decisions;
- The methodology uses data or assumptions which are no longer as cost reflective as they once were;
- The divergence between the absolute level of charges in northern charging zones and those in the south of GB has increased and is of concern to some generators;
- Competition between GB generators and those elsewhere in Europe is perceived to be hampered by the current approach to TNUoS charges.

### *Our view*

Whilst we do not necessarily agree with all of the feedback from stakeholders in terms of the 'case for change', we recognise the need for reform in this area. We consider that the unpredictability of TNUoS undermines its ability to deliver a stable long-term investment signal to either generation or large demand users.

We note that the data used in the methodology may no longer be fit-for-purpose or reflective of the most reasonable assumptions as to parties' effects on the network, and we see the value in re-assessment of critical methodology inputs to ensure cost-reflectivity is maintained.

We acknowledge the concerns raised about the divergence between charges in the northern charging zones of GB vs. those in the southern zones. Whilst we accept that the output of the current methodology is designed to be a *relative* signal (i.e. it is not designed to reflect the absolute costs imposed on or benefits conferred to the system by a user), we also recognise that in tandem with a shallow connection charging boundary, users may not receive an

appropriate cost-reflective signal regarding their effect on the system. The current regime means that users can drive investment by connecting at a certain location without facing the costs of that investment in either their connection or use of system charge, which might be close to or less than £0. There is a trade-off to be considered between the stability of the charge and its cost-reflectivity in absolute and relative terms.

Some of the issues in the regime today may have a near-term solution. Starting with the assumption that for the short-to-medium term we will retain today's 'transport model'<sup>2</sup>, we think it is possible for some of the concerns around predictability and cost-reflectivity to be addressed incrementally over the period 2023-6. We do consider however that there are much broader questions as to the longer-term construction of TNUoS charges, and that the answers to those questions cannot likely be implemented in the same timescales. More fundamental issues around the role of markets vs. that of charges in delivering operational and investment signals to network users require us to consider the balance between the longer-term system needs and the nearer-term issues stakeholders have raised regarding the current charging regime.

We believe that looking at these issues separately, whilst recognising the links between them, is likely to lead to improvements in arrangements today, which then potentially pave the way for any broader reforms once those more fundamental questions as to the interactions between markets, planning and charging are answered.

*Priority areas for reform, were a review to be undertaken*

We asked stakeholders to consider which aspects of the TNUoS charging methodology we should focus on in any reform programme. Many respondents did not specifically address this point, but some did agree with our assessment of the potential areas for reform, which included the demand-weighted distributed reference node, the assumptions underpinning Year-Round 'Shared' and 'Not Shared' elements and the methodology input data. We note that we have also received views regarding other considerations, including:

- whether locational signals to generators are still appropriate at all, that is, whether they serve a useful purpose;

---

<sup>2</sup> The Direct Current Load Flow Investment Cost Related Pricing model or DCLF ICRP, the model used to measure the relative effect of an incremental 1MW of electrical load at different points on the network

- the perceived need to have equal and opposite charges for demand and generation in the same location (something which is currently precluded by the approach to establishing the 'zones' used to levy charges);
- whether a form of Locational Marginal Pricing would be a better facilitator of renewables deployment and a flexible system than a continuation of separate wholesale, flexibility, and network charging signals; and
- the need for holistic consideration of Contracts for Difference, Net Zero, network planning and TNUoS reforms.

### *Our view*

We continue to consider the areas listed in our Call for Evidence require further assessment, and we believe that stakeholders have raised some valid additional points. We think that looking at TNUoS reform in two ways: improvements to today's methodology whilst keeping its core assumptions/modelling approach, and longer-term reform factoring in the changing energy landscape is the most efficient way to deliver changes which aid investment decisions now, without necessitating or precluding other reforms later. As we stated in our Call for Evidence, we believe that charges for demand users and for generators should be under equal consideration. The proportion of TNUoS charges paid by demand versus those paid by demand, and the extent to which different types of demand (e.g., residential, industrial etc.) could benefit from different types of signals (i.e., operational signals versus long-run investment) are both important areas for consideration.

### *How such a review might be taken forward*

We asked stakeholders whether Task Forces, a Significant Code Review, open governance or a hybrid approach would best deliver changes. There was significant support for Task Forces for nearer-term reforms to charges, with an SCR for any more material reforms. Stakeholders generally agreed with our view that co-ordination would be important in any programme and that open governance would be unlikely to facilitate that.

### *Our view*

We recognise that an SCR gives a clear structure to change programmes, and that it can be useful in examining cross-code issues. Specifically in relation to TNUoS charging, however, we

are mindful that the SCR process means that CUSC Modification Proposals cannot be brought forward until the end of the SCR, even if there is earlier general agreement between us and industry as to the right course of action. We think that to be able to deliver reforms quickly and efficiently, an SCR is not the best way to deliver the nearer-term changes that might be needed.

In respect of the longer-term consideration of the role and structure of TNUoS, we think that it would be premature to launch an SCR today. That is not to say that we do not think an SCR will ever be needed in this area. We recognise the clear need for consideration of the longer-term interactions and trade-offs between market signals, network charging signals and how the energy system is planned and built. We do not think, however that now is the right time to launch a Significant Code Review, given the current level of uncertainty and will consider the best way to take work forward in this complex area. We therefore do not consider that a 'hybrid' approach can be taken at this time.

The governance procedures underpinning changes to the TNUoS charging methodology are clear and well-understood by market participants. We note, however, that they do not afford a particularly holistic review of charging arrangements and are open only to those who are either CUSC Parties or those designated by us as Materially Affected. We think that given the broad range of topics to be considered, from the treatment of large demand and embedded generation through to the use of DNO and TO data, it is important that a wide range of industry stakeholders and business models are represented and/or can otherwise readily engage in the process for the next steps of TNUoS reforms.

We think Task Forces concentrating on improving predictability and cost-reflectivity, the inherent trade-offs between the two, and the best way to provide a stable foundation for the energy system over the next ~5 years would be highly beneficial. We note that the two BSUoS Task Forces chaired by NGESO offered a structured but flexible way for stakeholders to engage in a complex charging issue. We believe that a similar approach in tackling some specific TNUoS questions will aid in identifying trade-offs, interdependencies, and potential solutions without being bound by the narrower scopes or prescriptive processes underpinning the current code governance frameworks. NGESO currently forecasts, sets and levies TNUoS charges. Under Standard Condition C5 of its transmission licence, NGESO has an obligation to keep the TNUoS charging methodology under review at all times to ensure it achieves the

relevant objectives<sup>3</sup>. NGESO is also the the Code Administrator for the CUSC, STC and Grid Code which contain the processes underpinning TNUoS charge-setting. For these reasons, we believe they are best-placed to be both the secretariat and the Chair of the TNUoS Task Forces.

We will separately work with NGESO to set a Terms of Reference for the Task Forces, which will be shared with industry for comment, and to seek members representing the wide range of network users in GB. We expect to issue further updates before the end of March 2022.

#### *Timescales for any review and any subsequent modifications to current arrangements*

We asked stakeholders for their views as to the timescales any reform programme should work to. There was not a consensus to this question, but we note that many parties stated a desire to work quickly, and to not allow the process or governance rules to stifle delivery of changes.

#### *Our view*

We agree with those stakeholders who expressed a desire to move quickly. We recognise that some issues or areas of debate in TNUoS charges have been ongoing for some time, and we accept the need for a degree of certainty in the near term.

We expect the Task Forces to start with the assumption that we retain the transport model and consider changes to the methodology which would aid in stabilising TNUoS and improving its cost-reflectivity (noting the inherent trade off). That does not mean however that we do not think the Task Forces could make very significant changes to that transport model. Changes to the 'backgrounds', for instance, or a different approach to the demand-weighted distributed reference node are not small and we believe they would have material effects on parties' charges – our expectation is that both would be in scope of the Task Forces. When we say we expect the Task Forces to assume the retention of the current model, that is to say we do not expect the Task Forces to veer into questions of, for instance, Locational Marginal Pricing or the depth of connection charges, which sit well outside of *improvements* to today's approach.

---

<sup>3</sup> As detailed in Standard Condition C5.5 of the electricity transmission licence

In terms of timescales, we think that in practice, Task Forces are unlikely to conclude much before March 2023 given the broad scale of the work they will be asked to undertake and the significant analysis that will likely be required before any CUSC Modification Proposals are brought forward.

We expect then that the earliest implementation of any changes resultant of the Task Forces would be April 2024, but it is possible that other changes to the charging methodology are implemented before then, outside of the Task Force processes.

There are currently CUSC Modification Proposals, such as CMPs 315/375 looking at the Expansion Constant, which could have potentially material effects on the charging methodology, and which the Workgroups consider are capable of implementation in 2023. It will be important to ensure that the Task Forces take into account relevant output from live CUSC Modification Proposals. We do not think it would be appropriate to stop work on those Proposals, but we do believe the CUSC Panel, relevant Workgroups and the Task Forces will need to be mindful of developments across each area of work when considering relevant changes. We will discuss this further with NGESO and CUSC Panel with the aim of ensuring that modifications are not unduly delayed but that we prevent working at cross-purposes.

We think the overall window for delivery of any changes under this Task Force process is likely 2024-6, noting as above that there are other live modifications falling outwith this process and which could deliver changes sooner, if approved. We do not wish to extend any period of perceived uncertainty, but we do acknowledge the significant amount of work required in this area. Communication between us, NGESO, the Task Forces and industry will be critical to the success of any change programme, and we will consider how best to ensure continued engagement so that stakeholders can see and contribute to the direction of travel.

We note the potential to use the Charging Futures Forum, and to establish something like a 'Challenge Group' (similar to that used in our Access SCR) to ensure industry has the opportunity to contribute to the process. As part of the publication of the draft Terms of Reference for the Task Forces, we and NGESO will communicate our initial thinking in terms of ongoing stakeholder engagement with those parties who have an interest in, but are not members of, the Task Forces.

**Next steps:**

We will now work with NGEN to:

- Draft the Terms of Reference for the TNUoS Task Force(s);
- Give consideration to the ongoing engagement with industry during the Task Force process;
- Ensure that the cross-cutting issues of the broader trade-offs between planning, markets and charging are captured and that there are no 'gaps' between the work of the Task Force(s) and that of any longer-term programme of work; and
- Issue further communication over the coming weeks – we are aiming for a further publication within around 4-5 weeks

If you would like to discuss any aspect of this publication, please email [tnuosreform@ofgem.gov.uk](mailto:tnuosreform@ofgem.gov.uk) addressed to Harriet Harmon. We look forward to continuing an open and constructive discussion with our stakeholders on TNUoS charging over the coming months.

Yours faithfully,

Harriet Harmon  
Head of Transmission Charging Policy