SP ENERGY NETWORKS

Network Planning & Regulation

Patrick Cassels
Head of Electricity Network Access
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Your ref

Our Ref

Date
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Contact / Extension
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Sent by e-mail:
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Dear Patrick

Access and Forward-looking Charges Significant Code Review: Consultation on Minded to Positions

SP Energy Networks (SPEN) welcomes the opportunity to comment on Ofgem's 'minded to' position in relation to its Access and Forward-looking Significant Code Review.

Supportive of Increasing Locational Signals in Principle

Increased locational signals for connections are required to accelerate the connection of Low carbon technologies and renewable generation sources in order to achieve the UK's net zero ambitions. However, we fully recognize the predicament Ofgem faces in striking the right balance in stimulating these connections whilst keeping costs as economical as possible.

Ofgem's proposals are targeting a more holistic approach to network design and connections, supporting network companies in their obligation to design an efficient and economical system. SPEN will continue to promote flexibility solutions and there will be a need to ensure that flexible solutions can be effective as part of this approach, where these represent the lowest overall cost to customers.

SPEN Modelling Indicates a £2.00-£3.00 Bill Impact Over the ED2 Period

Whilst we are supportive of the intent behind Ofgem's proposals, we are currently unable to model the precise impact on our network without clear visibility of the accompanying DUoS reform. We would therefore urge Ofgem to publish a decision on DUoS reform as soon as it is able to, as this will have a direct and significant impact on the resulting behaviours of our connecting customers, and consequently on the scale of connections within the RIIO ED2 period. However, whilst we await further clarity on Ofgem's DUoS position, we have utilized the existing charging methodology to provide indicative bill impact estimations of the above policy changes. We estimate this could result in a £2.00-£3.00 impact on the average domestic customer bill by the end of RIIO ED2. We will continue to refine our modelling approach as new information becomes available. We believe it would be helpful for Ofgem to work with the ENA SCR Delivery group to develop similar models which can be used to estimate the impact the accurate bill impacts across all DNOs.

Ensuring Fairness in a Just Transition

We fully appreciate the difficult balance Ofgem must strike in trying to ensure fairness across all parties when introducing such a policy. Domestic customers will ultimately be paying some of the costs that are currently funded by generators. Therefore, it is essential that alongside any final decision, Ofgem clearly sets out how it has assessed and considered the needs of vulnerable and fuel poor customers in particular. Ultimately, we believe that a new sophisticated mechanism is required to be developed which allows the coordinated and economic development of the network, whilst at the same time providing protection to DUoS customers from having to pay for unnecessarily high connection costs.

The introduction of TNUoS charging to Distributed Generation (DG) is likely to have a disproportionate effect on DG connecting in Scotland. Assuming that the existing methodology remains consistent, we could see TNUoS charges in Scotland increasing for generators whilst those connecting in England & Wales would receive additional revenue. As an example, onshore wind installations in South West Scotland would pay £15.76/Kw compared with the same technology connecting in the Cotswold's receiving a credit of £7.94 /Kw. This may result in strong locational signals, but they are extremely broad and may result in a divide across the UK in terms of the ability to financially justify network connections for DG. This should be discussed with Government and devolved Governments in the context of their Net Zero ambitions and the impact that it will have on developers connecting to the network to meet those ambitions. We would welcome further analysis to be carried out by Ofgem in respect of TNUoS impacts.

Allowing Companies' ED2 Business Plans to Respond to Associated Impacts

As the full impacts of the SCR are still unknown, it will be imperative that the existing RIIO-2 price controls build in sufficient flexibility to allow companies revenues to be adjusted should the above policy changes result in any significant increases in expenditure within the price control. It is our suggestion that a new Uncertainty Mechanism is introduced to accommodate any changes to companies' expenditure plans as a direct result of the SCR policies. In particular, an appropriate Uncertainty Mechanism will be necessary to ensure that companies are not faced with additional investments which adversely impact their credit metrics and ultimately financeability.

We have provided detailed responses to your questions within Appendix 1. We would be happy to provide any additional information to support your ongoing development of the SCR. We also look forward to working with the ENA SCR Delivery Group which will play an important part in this process.

Yours sincerely

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Appendix 1: Detailed SPEN Response to Access and Forward-looking Charges Significant Code Review: Consultation on Minded to Positions

Connection boundary

Question 3a: Do you agree with our proposals to remove the contribution to reinforcement for demand connections and reduce it for generation? Do you think there are any arguments for going further for generation under the current DUoS arrangements? Please explain why.

Whilst we agree with the intent of the changes outlined within the consultation, we cannot make a thorough assessment of the implications without greater clarity of the intention and detail of the accompanying reforms to DUoS arrangements.

Ofgem must clearly accept that under the existing DUoS arrangements the likely outcome is to place additional costs on DUoS paying customers including vulnerable and fuel poor customers. This approach may have the desired effect of encouraging and promoting the connection of Low Carbon Technologies and the Renewable Generation to support them but the impact on other customers should be acknowledged and evaluated. The direct impact of implementing the proposed changes is also impossible to accurately evaluate without a clear direction on the planned changes to DUoS charging. This should be progressed as a matter of urgency to allow affected to parties to evaluate the true impact.

One of the main advantages of the recommendations set out in the consultation is to allow for a more holistic approach to network design, allowing network companies to develop strategically efficient solutions that are least cost for all.

Impact on Demand Connections

The consultation implies that removing reinforcement contributions for demand connections will support the electrification of transport (e.g. Motorway Service Areas or private EV Charger connections). In reality, these changes will not materially change the total costs for the MSA, or similar/smaller connections. This is because domestic connections rarely result in significant upstream reinforcement triggering the One Voltage rule or the High Cost Cap and for MSAs much of the upstream connection costs will be categorised as connection assets. The impact is more sensitive for larger demand connections where extensive reinforcement will be incurred.

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Impact on Generation Connections

For Generation Connections the reduction in upfront connection charges could be significant and is very sensitive to the outcome of DUoS charging reform and the impact of TNUoS charges. It is also imperative that alongside these changes network operators have a mechanism that protects DUoS customers from uneconomic network design, driven by the lower cost to connect i.e. there being no disincentive to request firm network access.

It is our view that the impact assessments do not currently take sufficient cognisance of the impact on network fault level; thermal constraints are only one type of network constraint that must be managed when connecting new generation to the network.

Under the existing DUoS arrangements any further reductions in contributions will also reduce locational signals to connect to the network. If the intent of the SCR is to provide locational signals through Access rights and Charging Arrangements, further reductions in Generation connection costs would not contribute to this goal without greater clarity on the expected DUoS reform.

Question 3b: What evidence do you have on the effectiveness of the current connection charging arrangements in being able to send a signal to users and what do you think will be the effect of our proposed changes? How does this vary between demand and generation connections?

As part of our updated RIIO ED2 Final Submission, we are developing a forecast based on the impact of the proposals outlined within this consultation. Within that review we are modelling the historic acceptance rate against connection costs to provide a best view of the impact of the SCR proposals. This forecast will be based on existing DUoS arrangements, with any changes in DUoS reform significantly impacting the modelling outcome. The lack of clarity on DUoS reform will result in significant uncertainty within any modelling that we carry out.

Our experience is that Generation Connections respond more sharply to changes in connection cost than Demand connections with Generation reinforcement costs also being more volatile based on the network constraints at the point of connection. An additional concern as outlined in our response to question 3a is the contribution of Generation connections to fault level, which will remain the same regardless of their utilisation or access arrangements.

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Question 3c: What are your views on the effectiveness of the current arrangements in facilitating the efficient development and investment in distribution networks? How might this change under our proposals where network companies are required to fund more of this work?

The current arrangements require DNOs to provide the lowest cost connection offer, this results in a focus on individual connections, rather than a holistic approach to the requirements and future requirements of customers. Despite these arrangements, DNOs have developed a range of modelling and planning approaches to ensure that we do design the network in an efficient and cost-effective manner. Examples include the development of our Distribution Future Energy Scenarios (DFES) and Long-Term Development Statement (LTDS).

The proposed changes should allow for a more holistic approach to network design, ensuring that sufficient capacity is available to connect to the network, or by facilitating connections via flexible solutions until such time as sufficient network capacity can be made available in a cost effective manner. Historically there has been a high burden on Network Companies to justify strategic reinforcement, to meet the challenges of a Net Zero future in a timely manner industry governance will be required to streamline and standardise this justification process.

The place of flexible network solutions must also be considered alongside these proposals, it will not always be possible or cost effective to provide customers with unconstrained connections in the short term. Flexible solutions will provide both a short-term solution and clear evidence for future reinforcement requirements.

It should be noted that network companies are ultimately funded by DUoS paying customers, so the funding is not displaced to network companies but to bill payers.

Question 3d: Do you agree whether the need to provide connection customers with certainty of price reduces the potential for capacity to be provided through other means such as flexibility procurement? How might this change under our proposals?

The need for certainty for connection customers often stems from the need to demonstrate financially viable investments to financiers. If connections are provided using capacity procured through flexibility tenders there is a risk that the annual costs could fluctuate, but under the current arrangements the liability for those cost fluctuations, or a failure in service provision, rests with the DNO. The issue of liability needs to be reviewed as the Flexibility market matures and experience is gained of the fluctuations over time of said market.

Under the SCR proposals, a more holistic design process would allow DNOs to provide connections using flexible options and supported by a robust governance process would allow DNOs to identify when flexible options no longer provide the lowest overall cost to serve the requirements of connected customers.

Regardless of the market mechanisms in place, there will always be challenges associated with the use of contracted Flexibility as a proxy for network capacity. Constraint forecasting will inherently involve some level of inaccuracy, as will the response of Flexibility service providers to network requirements. Due to these factors some level of risk management will always be a part of connecting customers based on flexible solutions, these risks will need to be accepted or mitigated via technical

or commercial solutions. Current arrangements would see that risk borne by network companies and ultimately DUoS paying customers.

Question 3e: What are your views on whether we should retain the High Cost Cap? Is there a case for reviewing its interaction with the voltage rule if customers no longer contribute to reinforcement at the voltage level above the point of connection?

The purpose of the high cost cap is to provide protection for customers from paying unusually high up-front connection costs. The question will be how often the high cost cap is currently triggered and how often it would be triggered by changing the charging boundary for Demand or Generation connections. If it can be demonstrated that the additional protection is no longer required, then the High Cost Cap could be removed. We would recommend that Ofgem reviews the requirement of the High Cost Cap at a reasonable time after the introduction of the proposals outlined within this consultation.

Regardless of who pays, the high cost cap reflects the overall cost of reinforcement so the boundary itself doesn't matter. The key here is to develop a new more sophisticated mechanism that allows the coordinated and economic development of the network whilst at the same time providing protection to DUoS customers from having to pay for unnecessarily high connection costs.

Question3f: What are your views on the recovery of the costs associated with transmission that are triggered by a distribution connection? Does this need to be considered alongside wider charging reforms or could a change be made independently?

All of the costs associated with distribution connections need to be considered alongside each other, for any Distribution connection under the existing arrangements there are four components of cost:-

- Up front Distribution Connection costs including the apportionment of Reinforcement costs
- Up front Transmission Connection costs
- Ongoing DUoS costs (or credits)
- Liabilities, securities and admin costs (Connection offer expenses, securities, Statement of Works process)

Question 3d of this consultation highlights the need for certainty of price for connection customers, only by understanding all of these components alongside the proposed introduction of TNUoS costs can certainty be provided.

Question 3g: What are your views on the likelihood of inefficient investment under our proposals (e.g., an increase in project cancellations after some investment has been made)? Are there good arguments for further considering introducing liabilities and securities to mitigate this risk?

We cannot comment on the likelihood of inefficient investment. However, the proposals allow for a more holistic approach to network investment, allowing network companies to manage existing capacity to accelerate the transition to Net Zero, supporting Government ambitions and targets. To meet those targets additional network capacity will be required, provided sufficient rigour and governance is put in place to justify those investment decisions ahead of need the risk of inefficient network can be minimised.

Whilst liabilities and securities should be considered as tools to mitigate the risk of inefficient investment, they need to be considered alongside the other costs to connect to fully understand the impact they are likely to have on the behaviour of connecting customers.

Question 3h: What are your views on whether the interactions between our connection reforms and the ECCRs must be resolved before we are able to implement our proposed reforms? How do you factor in the effects of the ECCRs (if at all) into decision making, given the levels of uncertainty around subsequent connectee(s)? What suggestions do you have to make our policy and the ECCRs work together most efficiently?

It is our view that the ECCR and all other relevant regulations should be reviewed, updated and aligned to the charging methodology that is in operation. We are working with the ENA to instigate an ENA Access SCR Delivery Group to identify and implement the required changes to ECCR and other codes to support the outcome of the SCR proposals.

The SCR proposals will eliminate or reduce the number of customers applicable going forward, given the expected reduction in reinforcement costs apportioned to connecting customers. However, without changing the existing ECCR arrangements connecting customers would still be expected to make 2nd comer payments for historic reinforcements funded via DUoS payments.

Access rights Question

4a: Do you agree with our proposal to introduce better defined non-firm access choices at distribution? Do you have comments on their proposed design?

The use of an agreed limit on the hours of curtailment that a customer will experience may be a reasonable and sensible approach where the curtailment is a binary event i.e. full export/import or zero export/import, however this is not suitable where there is a variable level of curtailment.
It should also be noted that the level of forecast curtailment will inherently be an inaccurate measure. Despite best endeavours to provide a robust estimate on the level of curtailment that non-firm customers are likely to experience, the forecast will be based on historic data including feeding arrangements, weather patterns and background demand. A number of factors outwith the control of the DNO dictate the level of curtailment that a customer connected under non-firm will actually experience.

Clarity is also required on how payments are funded in the event of curtailment levels being exceeded and the quantum of payments that should be issued to connected customers.

Question 4b: Do you agree with our proposal to introduce new time-profiled access choices at distribution? Do you have any comments on their proposed design?

The proposals are logical and represent a reasonable approach to time profiled access. As outlined in the consultation there will be a requirement for DNOs to support time-profiled access with suitable systems and processes, both from a technical and commercial perspective. Existing technologies like Active Network Management could provide the technical monitoring and management, supported by suitable contractual arrangements.

The measurement of time profiled access choices will also be dependent on the success of Retail policies such as Mandatory Half-Hourly Settlement, Smart Rollout and Time-Of-Use Tariffs.

Question 4c: Can you identify any benefits to shared access rights, which would indicate we have underestimated the likely take-up?

Although we see a number of benefits for community energy schemes and other examples that would benefit from shared access rights, we have often faced considerable difficulty in working through the technical and tariff related issues associated with providing shared access rights. One of the most common is the intention to use shared access rights to 'net off capacity'. This is on the surface a logical idea but under the current charging arrangements would result in the displacement of DUoS costs onto other bill paying customers.

Question 4d: Do you have any comment on our proposed choice about how to reflect access rights in charges (i.e. connection and/or distribution use of system charges)?

On balance, reflecting access rights entirely in connection charges is probably the most practical solution. It would not be straightforward to disaggregate costs between connection and DUoS. Up-front costs would also make it simpler for customers to 'upgrade' in future if they determine that they would like to move away from restricted access options.

Question 4e: Do you agree with our proposal to not prioritise the introduction of new transmission access choices as part of this Significant Code Review?

It is prudent not to overcomplicate matters, however it needs to be recognised that in many cases Transmission access limitations will override or dictate the level of access that can be offered for Distribution connections. Therefore the Transmission system impact of timed access connections will also need to assessed, possibly alongside a wider review of how Transmission access limitations affect Distribution connected customers.

Question 4f: Do you have views on how access rights should be standardised across DNOs?

Access rights definitions should be standardised where possible, however the particulars of network access within those definitions may be geographically specific. The introduction of standardisation should also be balanced against commercial innovation.

Question 4g: Do you have any views on our proposed timescale of 1 April 2023 implementation?

The start of the next price control period provides a clear separation between connections pre and post implementation. However there are a number of key developments that must be addressed before the proposals can be implemented in that timeframe. These include:-

- The impact on the existing codes and regulations understood and addressed. This will be picked up as part of the ENA SCR Delivery Group.

- Clarity on the DUoS reform that will accompany the changes to Access and Forward Looking Charges
- The definition and agreement of Uncertainty Mechanisms within the RIIO ED2 framework to account for the relative uncertainty caused by the decision on this consultation scheduled post Final Submission of RIIO ED2 plans. This uncertainty is further compounded by the lack of visibility on DUoS reform prior to DNOs Final RIIO ED2 submission.
- Mechanisms defined within the RIIO 2 framework to allow for efficient network development supported by connections activity.

TNUoS charges for SDG

Question 5a: Do you have any evidence that SDG does not contribute to flows in the same way as large generation and, therefore, should not be charged on a consistent basis?

Distribution connected generation will have a proportionate impact on the Transmission network in line with the size of the connected generator. The site specific point of connection and network feeding arrangements will dictate the exact impact on Transmission System power flows. Whether or not Distributed Generation should be charged based on its electrical impact on the Transmission network should be considered alongside the behaviours that Ofgem wish to encourage and the impact that TNUoS charging being introduced will have on the developers. Ultimately Ofgem need to justify the application and scale of TNUoS costs to connected and connecting Distribution customers.

Question 5b: Do you agree with our threshold for applying TNUoS generation charges of 1MW? If not, what would be a better threshold and why?

The introduction of TNUoS charging to DG is likely to have a disproportionate effect on DG connecting in Scotland, assuming that the methodology remains consistent we could see TNUoS charges in Scotland increasing for generators whilst those connecting in England & Wales would receive additional revenue. As an example, onshore wind installations in South West Scotland would pay £15.76/Kw compared with the same technology connecting in the Cotswold's receiving a credit of £7.94 /Kw.

This may result in strong locational signals but they are extremely broad and may result in a divide across the UK in terms of the ability to financially justify network connections for Distributed Generation. This should be discussed with Government and devolved Governments in the context of their Net Zero ambitions and the impact that it will have on developers connecting to the network to meet those ambitions.

This network impact is proportionate to the size of the installation so there is no clear capacity to demarcate where it should and shouldn't be applied other than to consider the administrative burden of doing so at lower capacities.

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Question 5c: Do you have any evidence that distribution connected generation at a grid supply point has a different impact than directly connected generation?

From a power systems modelling perspective both are modelled as infeeds to the GSP. One goes through a transformers and its associated impedances and the other goes connects straight onto Transmission busbar. The impedance of the transformer will result in a slight variation between the two points of connection.

Question 5d: Do you have a preference for one of our options for addressing the local charging distortion? If so, please indicate which option and provide your reasons. Are there any options we have missed?

We do not have a clear preference out of the options provided, Option 1b seems to provide the most proportionate charging whilst minimising the administrative burden. But we do caution that the implications of locational charging should be considered as per our response to Question 5b.

Question 5e: Do you support our position that we should consider transitional arrangements? If so, do you have a preferred option and evidence to support the benefits or risks associated with each option?

Transitional arrangements seem sensible however most connecting or connected customers would prefer certainty over all of the impacts to their connections costs and ongoing Use of System costs at one time rather than being updated with multiple changes to their cost models at separate times.

Question 5f: Have we identified all the options for administering TNUoS generation charges for SDG? If not, what options have we missed, and why would they be preferable to those we have identified? Can you provide any evidence regarding the implications of the different administrative options for your business?

TNUoS charges are administered by National Grid ESO so we do not have any viewpoint on the administrative burden to provide.

There is however a requirement to engage with connected and connecting customers to explain the justification and impact that the introduction of TNUoS charges will have on their existing or planned connections. We expect to do so as part of our ongoing stakeholder engagement programmes, however the justification must come strongly from Ofgem in the form of both documentation and communication to stakeholder groups.

Question 5g: Are there any specific issues you think we need to consider, as part of our work on the future role of network charges? Why are these important to consider?

As previously mentioned, it is impossible to understand the implications and impact of the changes proposed without a full picture of the future of network charges. To understand the full extent of the impact for network companies and our customers we would welcome an urgent response from Ofgem in completing the associated review of DUoS charging.

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General question

Question 7: Do you have any other information relevant to the subject matter of this consultation that we should consider in developing our proposals?

We have been engaging with Ofgem on the SCR consultation throughout the development of these proposals and will continue to do so, as we work towards the implementation timeline. Where we have material that can assist Ofgem in refining the proposals we will share in due course.

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