Jon Parker
Head of Electricity Network Access
Ofgem
10 South Colonnade
Canary Wharf
London
E14 4PU

Head Office
Inveralmond House
200 Dunkeld Road
Perth
PH1 3AQ

gillian.hilton@sse.com

18 September 2018

Dear Jon,

Getting more out of our electricity networks by reforming access and forward-looking charging arrangements

SSE plc welcomes the above consultation. We recognise the need for change. The existing arrangements were put in place at a time when distribution networks were dominated by demand and bulk flows were from large-scale transmission-connected generation down to distribution-connected demand. This is clearly changing.

The new uses of electricity at a local level, for example solar photovoltaics and electric vehicles, are increasing the demand for capacity at a distribution level and changing the pattern in terms of how electricity has historically flowed across the network. To illustrate this, in our Scottish Hydro Electric Power Distribution network area, the majority of our 76 Grid Supply Points will now export energy at some point over the year. These changes are leading to a growing need to manage network congestion at a distribution level.

Against this backdrop, we are largely supportive of many of the reforms put forward in Ofgem's consultation. We agree, in principle, with the proposals at distribution to move to a shallow connection charging boundary, financially firm access, and to introduce cost-reflective distribution use of system charges. A shallow connection charging boundary at distribution will, for instance, help to remove the current distortions between transmission and distribution, and enable greater use of flexibility solutions and a more coordinated

approach to network investment. We believe the above-mentioned changes, coupled with new solutions (for example, Active Network Management, flexibility, etc.), could ultimately address many of the current barriers in terms of ensuring the distribution networks are accessible to new technologies and users, and give both customers and the DNOs clearer signals over their investment decisions and operational behaviours.

Importantly, none of the reforms set out in the consultation are without challenge and it is essential that these reforms are implemented in a practical and affordable way that is consistent with both the safe operation of the network and its physical parameters. Much work is needed to understand these reforms in full and the practical implications – not least the transitional arrangements that would need to be developed, but we believe it is helpful to establish guiding principles. For example, we believe that any reform should ensure that:

(i) Users are not exposed to price signals that they cannot respond to. This is not helpful to the users of the network nor the efficiency of the system;
(ii) As far as possible, discretionary network costs should be levied on those 'user segments' that cause/drive them; and
(iii) Due consideration is given to the potential for perverse incentives and unintended consequences.

To this end, we welcome proposals to introduce a 'core' level of access for domestic and small business users in order to protect this access and these users from costs that they have little or no control over. It may be that further safeguards are needed as this work progresses. For example, we are mindful of customers connected to more remote or sparse sections of the network that could be disproportionately disadvantaged by a more cost-reflective distribution use of system charge. This should be kept under review as this work progresses.

Given the move towards a more whole-system approach, we recognise the benefits in trying to bring closer alignment between the charging arrangements at transmission and distribution to remove, for example, the unintended consequences caused by misleading signals to connect at one over the other. This does not mean the arrangements have to be the same, but we should understand any differences and be clear why these are appropriate. We believe the focus should rightly be on distribution network charging at this time, where the opportunity for benefits of reform are considered greatest.

Notwithstanding the above, one area of transmission charging that we believe may warrant review at this time is the forward-looking demand charges for TNUoS. We believe it may be appropriate to consider whether the tariff elements that are now present in the TNUoS charge to generation should be applied to the TNUoS charge to demand.

The need for Ofgem and industry to work together to take forward reform of network charges is undisputed, but so is the need for a well-managed and coordinated approach. To this end, our support is for Ofgem to lead this review as a whole under a Significant Code Review (Option C), but with clear and careful programming to ensure that industry and key stakeholders can play a significant and important role in tackling some of the more complex areas and detail. At the same time, we believe it is key that the scope of the review is both manageable and focused on the areas that matter. Choices, such as depth or duration of access, which we consider to be impractical or to have little benefit, should be ruled out to ensure the scope of the review is not unnecessarily broad.

Moreover, we do not believe the way to drive this work forward is to introduce a licence condition on the distribution network operators and electricity system operator. We believe this is an unhelpful and unwarranted distraction that will interfere with a well-managed and coordinated approach. We are already fully engaged in this process and are keen to play an active role in the dedicated workstreams that will be a necessary function of this review. A parallel licence condition will result in additional and futile work and we feel strongly that this is not the way to make the most effective progress.

The supporting annex includes our responses to the detailed questions asked in the consultation. Should you wish to discuss any of this response, please do not hesitate to contact me. We would be only too happy to take you through some of our early thinking in this area.

Yours sincerely,

Gillian Hilton
Regulation

ANNEX

Question 1: Do you agree with the case for change as set out in chapter 2? Please give reasons for your response, and include evidence to support this where possible.

We see the reform of network access and forward-looking charging arrangements as a key strand to the Government's Industrial Strategy and Ofgem's future-facing work to enable the energy system transition. We agree with the case for change and the opportunities that this presents in terms of creating a more economically efficient system.

We agree that the three priority areas identified by Baringa are the most important issues to be addressed at this time. Taking each of these priority areas in turn:

Priority area 1: Enabling growth in demand, particularly from new LCTs, while managing constraints on the networks

We agree that the key to delivering a smart, flexible energy system, is to ensure that investment and operational decisions are as efficient and effective as possible regarding the existing and new network infrastructure, and the generation and demand users of the system.

We also agree that parties connected to the distribution networks need improved clarity around the access product and that this is important for understanding what existing capacity exists and how congestion can be best managed.

We recognise the issue at distribution caused by high upfront connection charges where single users are reluctant to trigger the necessary reinforcement, particularly where parties connecting earlier may not have been exposed to the same or similar costs. This inhibits a clear signal to the distribution network operator to invest. Whilst our networks business is more familiar with this from a generation perspective, we have seen evidence of this from a demand perspective in certain areas around London and with the development of data centres and hotels.

Priority area 2: Managing constraints on the distribution networks as a result of growth in distributed energy resources on the distribution networks

We agree that it would be beneficial to review the current price signals given to Distributed Energy Resources (DER). By DER, we mean distributed generation (DG), demand side response (DSR) and storage, and this includes both assets connected to the distribution network and assets behind customer meters.

As identified, the DUoS charging methodology was not designed with these additional resources in mind and, over the years, shortcomings have started to become more apparent:

- DG at HV and LV tends to receive DUoS credits even where it causes additional distribution network costs. This can distort DGs' decisions over whether to connect at transmission or distribution and also where on the distribution network they may choose to connect.
- Time-of-use price signals that are not reflective of real-time conditions can lead to DG dispatching out of economic merit, including periods where their dispatch exacerbates network congestion. This can also distort competition in the wholesale and capacity markets, which can result in a more expensive total system cost of generation and higher carbon emissions than would otherwise be necessary.

We therefore welcome recent developments, for example to address the distortion caused by the TNUoS demand residual payments to smaller embedded generators, the proposals to reform the residual network charge and this review of access and forward-looking charges.

Priority area 3: An effective interface between transmission and distribution arrangements

To have an effective interface, the approaches at transmission and distribution need to be compatible with each other and based on similar principles to avoid distorting each other's operation. We agree that better aligning the access and charging arrangements across both transmission and distribution voltage levels will help to address the perverse behaviours that can be driven by the current arrangements.

Question 2: Do you agree with our proposal that access rights should be reviewed, with the aim to improve their definition and choice? Please provide reasons for your response and, where possible, evidence to support your views.

Yes. We agree that access rights should be reviewed and more clearly defined at distribution. The arrangements at transmission are clearer and therefore we do not believe these warrant revision at this time.

Before users can be given a choice over their access rights or be exposed to a cost-reflective charge for these, the rights themselves need to be clearly defined and universally understood. Examples of the level of clarity that we believe would be useful to an individual user include:

- Whether a user is technically interruptible, i.e. whether they have the practical capability to respond to any instruction from the DNO/SO to vary their level of generation or demand;

- Whether a user is contractually interruptible, i.e. whether a user can meaningfully sign up to a contract to have their use interrupted;
- Whether a user is compensated for interruptions or reduced access as part of an agreed action to best manage congestion;
- The minimum security of supply standards to which the network is built and whether a customer can waive these standards; and
- If and when network will be built for the user.

Whilst supportive of giving network users choice, it is important that these choices have a value to both network users and the system. Superfluous choices need to be avoided. These will not only introduce practical issues, but also risk introducing unintended consequences. For example, if all choices are not wholly cost-reflective all the time, the potential for regulatory arbitrage leading to socially or economically inappropriate decisions and unintended consequences is increased.

Question 3: Specifically, do you have views on whether options should be developed in the following areas as part of a review? Please give reasons for your response, and where possible, please provide evidence to support your views:

a) **Establishing a clear access limit for small users, with greater choice of options (as considered under b) and c) below) above a core threshold – do you agree with our proposal in paragraphs 3.5-3.10 that this should be considered? Do you have views on how a core threshold could be set?**

We believe there is support for clarifying small user access rights and we support the concept of introducing 'core' access for domestic and small business users. If charges are to move towards being more cost-reflective, we see this innovation as an important safeguard for customers, especially vulnerable customers, as new uses of the electricity networks will increasingly lead to the need to reinforce. Establishing 'core' access will protect this access requirement from these more 'optional' increases in network costs.

We recognise that this will not be without its challenges and we list some initial considerations below:

- Establishing what is the appropriate level to define 'core' access will be key. It seems reasonable that this would need to be defined in terms of data that is measurable at a customer meter, such as ex-post capacity and/or a measure of volume that could include a time profile or is declared (such as profile class). It would likely be impractical to pick and choose certain technologies or uses to be considered 'core/non-core' since these would be difficult to measure or keep watch over. It may be helpful to consider 'core' access in the context of underlying network design

requirements, such as 'after diversity maximum demand'. In this way, it may be possible to identify which uses sit within the capabilities of the network and which are likely to contribute to the need for reinforcement. Clearly, the higher the level of 'core' access, the more customer behaviour will be protected from cost-reflective price signals and vice versa. It will therefore be important to carefully consider the most appropriate trade-off between (i) a higher level of 'core' to protect customers from price signals and ensuring that any knock-on increase in their residual charge is fairly allocated and (ii) a lower level of 'core' providing more customer demand with a price signal and incentives that benefit the network.

- In determining how this threshold is set, there are sensitivities that will need to be taken into account. Perhaps a key test to determining whether demand should qualify as 'core' is whether it is fair and/or reasonable to expect network users to respond to varying or different price signals. It is not helpful to the efficiency of the system to subject users to price signals where they are unable to respond to them. For example, customers are unlikely to be able to interrupt their cooking or lighting requirements. Likewise, we would expect off-peak electric heating for those who are not on the gas grid to receive protection within the definition of 'core'. The treatment of electricity requirements in other contexts requires careful consideration.

- It will also be important to assess the degree of autonomy a customer may have in response to price signals. Conversations with our stakeholders, such as National Energy Action, have revealed a number of circumstances that will need careful consideration. For example, embedded generation may be considered 'non-core', however customers in private or socially rented accommodation may have no influence (and may not even receive the benefit) from embedded generation schemes, such as 'rent-a-roof PV' or community CHP, but could be exposed to the additional network costs associated with non-core access.

- Giving customers this 'choice' of access beyond 'core' presents a substantial administrative challenge. Currently, the Standard Terms of Connection, contained within the DCUSA, are automatically obtained by Suppliers through their contract with the customer. Adding this additional stage into the process would not only be a challenge in terms of how to factor this into the future process, but there is also the issue of retrospectively extending this choice to customers already connected and then the ongoing monitoring of this two-way customer interaction.

Whatever methodology is deployed it has to be sufficiently simple so that it can be effectively implemented – covering all aspects from the identification and allocation of

access requirements through to the measurement and billing of them. We believe this work will require a proper working party drawn from a wide pool of expertise. We would welcome the opportunity to contribute actively to the work of such a group.

b) Firm/non-firm and time-profiled access – do you agree with our proposal outlined in paragraphs 3.15-3.21 that these options should be developed?

Firm/Non-Firm

We welcome further exploration of proposals to consider introducing financially firm access rights at distribution.

We consider 'financially firm access' to be about sending the network operator a clear signal as to when and where to invest in the network. Where customers have opted for financially firm access, they will pay a use of system charge that is reflective of an incremental cost to reinforce the network to meet their need. There is no direct requirement on the network operator to reinforce its system or take action, but when the access signalled by the customer is not available, the customer is entitled to compensation payments.

In contrast, where customers have opted for 'financially non-firm access', their use of system charge does not reflect any signal to reinforce or take network action and, as such, their cost to the network and the associated charges that they pay are lower, but these customers would not be entitled to compensation payments should their access be constrained or curtailed.

Financially firm access rights are already established in transmission and are an important component in enabling price discovery to deliver economically efficient dispatch for managing constraints, network reinforcement and cost-reflective network pricing. We therefore see the introduction of financially firm access arrangements specifically designed for distribution as a way of better aligning transmission and distribution and providing distribution network operators with a clearer investment signal (via the Use of System charge).

Indeed, given these benefits, we would suggest that Ofgem gives consideration to the approach in transmission where only financially firm access (to new customers) is offered.

We believe this is more consistent with the proposals around cost-reflective locational pricing and, from an overall market cost perspective, could result in a lower cost to customers.

Key considerations to this approach for review would be how it was funded and the transitional arrangements. First and foremost, this approach has to be affordable. Secondly, we believe an important principle of this work is that the costs paid by users are reflective of the costs they impose on the network and this needs to extend to the funding of financially firm access. In terms of managing existing users, we recognise that it would be inappropriate to expect all users that connected to the network prior to these arrangements to switch to and pay for firm access. The approach and management of all these users' rights and charges require a lot of careful thought and engagement in order to be sensitively and appropriately applied.

Importantly, we believe that wider network design and reinforcement for all demand should continue to be on the basis of nationally agreed network security standards to avoid the risk that users opt for lower cost, less firm access when, in practice, anything but secure access is neither politically nor societally acceptable, for example, in relation to constraining vulnerable households, hospitals, etc.

We are less clear that change to network security standards is needed and, if needed, why the necessary changes are perceived in Ofgem's consultation to be an obstacle to this work. If needed, we believe these standards could be reviewed in similar timescales, as long as this was completed in timescales compatible with RIIO-ED2. Indeed, if changes are envisaged to the network security standards, these would need to be done ahead of RIIO-ED2 and any changes to charging phased in around that time. Changes after the setting of the price control would be unacceptable and, from a charging perspective, would undermine much of the work of this review.

We are concerned that suggestions within the consultation around compensation payments being made to non-firm customers start to confuse the definition of financially firm versus financially non-firm and appears to imply a multi-layer 'tiered' approach to firmness. We believe there is merit in exploring what more can be done to provide network customers that opt for non-firm access rights with greater certainty around the extent of any curtailment. Work to provide consistency amongst the DNOs on the provision of constraint information is already underway under workstream 2 of the ENA's Open Network Project and this is to be encouraged.

Time-Profiled Access

Part of this review is about making efficient use of the existing network and ensuring that the price signals are consistent with this. We therefore agree that options around time-profiled access should be considered at distribution.

The case for charges based on a time-profile compared with fixed capacity may be different for generators compared with demand. This is because generators responding

to wholesale price signals will tend to be incentivised to dispatch at the same time, i.e. when the price is highest. As such, the network reinforcement they cause can be reflected by a combination of their capacity and their underlying operating characteristics. By contrast, demand customers, at least historically have tended to be more diverse regarding the timing of their demand profile.

We would support Ofgem's position that for applying cost reflective network charges, a measure based on capacity would be better than time-of-use tariffs. This is because capacity-based charging tends to better reflect the drivers of network investment, it is likely to reduce distortions to operational dispatch decisions and reduces distortions to behind-the-meter investment and operational dispatch decisions.

c) Duration and depth of access, discussed in paragraph 3.25-3.32 - would these options be feasible and beneficial?

We do not consider choice around duration or depth of access to be a priority area. This is consistent with concerns expressed above around creating superfluous choices for users. In particular, we see little benefit in introducing choice around depth of access. A distributed generator or distribution connected demand customer affects flows on the whole network irrespective of whether it sells or buys electricity from its neighbour or further afield. Choice around depth of access is therefore unrealistic and does not reflect the reality of network flows and their impact.

In terms of duration, our preference would be to limit choice in this area and offer only evergreen rights. We agree that fixed-term access rights may increase the risk for some users and in so doing would lead to higher costs to customers over the longer term. From a networks perspective, we struggle to identify any real and tangible benefits from fixed-term access.

Where there is demand for short-term access at distribution, we consider this may be better managed through exploring separate products specifically designed for short-term access. This is discussed further in our response to Question 5 c.

d) At transmission or distribution in particular, or are both equally important – as discussed in this chapter?

Whilst we recognise that some changes may be required to the arrangements at transmission level as a consequence of this work, we believe it is right to focus efforts on distribution at this stage. This reflects the fact that most of the current challenges relate to the existing arrangements at distribution and it is important not to allow the scope of this work to become unmanageable.

Question 4: Do you agree with the key links between access and charging we have identified in table 1? Why or why not? Do you think there are other key links we have not identified? Where possible, please provide evidence to support your views.

Firmness	It seems reasonable that users with less firm access rights should incur lower charges on the proviso that the charges reflect the costs imposed on the network. If less firm means more expensive ICT infrastructure to ensure that the pattern of flexibility is within the contracted offer, then this needs to be captured/reflected in the charges.
Time-Profiled	Again, it seems reasonable that users with time-specific access should incur lower charges than those with 'round the clock' access if they contribute to lower network costs. A user seeking access at the peak, for example, would not contribute to lower network costs. We agree that a capacity-based approach with different charges for different profiled options would better drive the 'right' behaviours than time-of-use usage charges. Time-of-use usage charges can incentivise perverse behaviours, for example, DG dispatching out of merit for TNUoS TRIAD or DUoS red band avoidance, or small DG growth in areas already constrained for generation.
Duration	We believe there is merit in exploring alternative solutions to short-term access rights as a means of using (and charging for) spare network capacity. We believe all customers should be subject to evergreen rights.
Depth / Local	It is our view that users with 'local' access would still cause the same cost as users with 'deep' access. As such, we do not believe this option warrants being taking forward.

Question 5: Do you agree with our proposal that targeted areas of allocation of access should be reviewed? Please give any specific views on the areas below, together with reasons for your response. Where possible, please provide evidence to support your views:

a) Improved queue management as the priority area for improving initial allocation of access, as outlined in paragraphs 3.41-3.44?

Yes. We agree that improved queue management is a priority area for improving initial allocation and we also agree that the development of targeted auctions in this area should not be taken forward at this stage.

SSEN has recently engaged with stakeholders and Ofgem on an Alternative Approach for Orkney. The Orkney network is at full capacity for generation, meaning that no further generation can connect without significant transmission reinforcement. Through our work on Orkney, we have identified two specific obstacles to this reinforcement that we consider to have wider 'read-across' across our network. These obstacles are:

(i) A static capacity queue, whereby there is no scope to move position within the queue according to the readiness of developers; and
(ii) the disconnect between developers and the network operator's ability to commit to reinforcement works.

In an effort to address these obstacles, SSEN has proposed an Alternative Approach to trial on Orkney. This involves trialling a 'ready to connect' process (rather than 'first to contract, first in queue' principle).

We would be keen to explore whether learning from this trial could be rolled out further, particularly in relation to addressing the present barrier that prevents parties changing their position within the connection queue. We believe there is real merit in considering alternatives to the current 'first to contract, first in queue' principle, given the barrier that this can create in certain parts of the network and the benefits that could be gained from understanding how such changes could be practically applied in terms of varying and managing connection contracts.

Finally, if implemented, we would also expect changes to the connection charging boundary and the use of financially firm options at distribution to go some way to addressing the 'queue' issues that we see currently.

b) Not to consider the potential role of auctions for initial allocation of access as part of a review at this time, as discussed in paragraph 3.44?

We agree that the potential role of auctions for the initial allocation of access should not be considered as part of this review. We do not believe auctions lend themselves to a level playing field, but instead favour those users that are most able to pay or participate in an auction process. Also, it should be noted that auctions more readily offer a facility to manage the 'application' queue, rather than the readiness to connect or 'contracted' queue.

Moreover, for auctions to function, they require a finite product to sell. However, this is not the case regarding network capacity, because in the time it takes for a project to be developed and connected (i.e. c.4 years), network companies can build more network to accommodate new users. As such, in the long-term, providing new users are prepared to pay a price to reflect the cost of building that new network, there is no fixed finite network capacity to auction.

c) To review the areas outlined in paragraphs 3.45-3.48 to support re-allocation of access?

One of the aims of this review is to try to establish charging and access arrangements whereby customers can benefit from as efficient a network as possible. There are many benefits to looking at where existing assets could be used more efficiently. For example, many users of the network will have generic access rights that allow them much wider access rights than they routinely require or utilise.

New access conditions and the exchange of access rights

To a large extent, we would expect firm evergreen access rights, coupled with a shallow connection charging boundary and more cost-reflective UoS charging, to diminish the need for trading of long-term access rights. If a new user wants access, or wants to increase its access, it can ask for this from the network company. By contrast, if a user decides that it no longer needs this access, it can give this back to the network company and stop paying for it. As we see it, the only incentive to trade would be short to medium access rights and a user would only be prepared to sell its access if the price was higher than the cost-reflective network charge that it could avoid by giving it back to the network company.

We are also mindful that at transmission, secondary trading of Transmission Entry Capacity is permitted, but the demand for this transaction is minimal.

However, where there is demand for short-term access at distribution, we consider this may be better managed through exploring separate products specifically designed for short-term access. There may be an opportunity for more market-based approaches, for example, an existing user with 'evergreen' firm rights may be prepared to exchange some or all of its access at certain times with a user who currently has non-firm access yet values the access (at certain times) more highly than the user with 'evergreen' firm rights. However, this is not without its challenges, including the potential for regulatory arbitrage.

Clearly, this could have a significant impact on current distribution network modelling, which tends to rely on summer minimums/winter maximums rather than capacity. Also, care is needed to ensure that users that connected first are not able to abuse this position. However, in practical terms, a cap is provided by the availability of financially firm access, i.e. arguably newer users should not be willing to pay more than the financially firm use of system charge.

Irrespective of the mechanism for exchange, it is essential that these transactions are physically possible and do not lead to the network being operated outside of its

capabilities. To this extent, we envisage exchanges being assessed by the network company on a case-by-case basis or facilitated by an automated system.

Mechanisms to trade curtailment

In terms of Ofgem's proposals to develop mechanisms to enable distribution-connected users with non-firm access to trade with others to reduce their curtailment, as well as continuing to facilitate the bilateral trading that is already happening between interested parties, we believe there is merit in exploring the scope for a more market-based approach.

We are concerned that it is unlikely that bilateral trades between individual users will establish the most efficient merit order for constraint action, particularly given that this merit order would be different for every half hour depending on the underlying prices and market circumstances.

Moreover, if users can trade their curtailment obligations, thereby effectively altering their place in the curtailment queue, then older incumbent users would be able to earn a revenue for this contractual asset. In this scenario, older connection contracts would become more valuable than newer connection contracts, despite the prices users have paid not reflecting this difference.

We recognise that a more market-based approach is not without its challenges. Clearly, it takes time to put in place market arrangements and establish an effective and suitably liquid market involving participants and offerings that are fit-for-purpose. This is particularly true in the case of network constraints, where the network topology and location are key and the success of any market would be dependent upon having sufficient market participants at the local level. We therefore appreciate the value that bilateral arrangements will continue to have in the short/near-term until these wider markets develop. Importantly, irrespective of the mechanism for exchange, it is essential that these transactions are physically possible and do not lead to the network being operated outside of its capabilities.

This all needs careful consideration and we believe a dedicated work group with key individuals needs to be established to fully review the practical options. However, we believe it may be more sustainable to include consideration of a more market-based approach in industry's thinking from the outset of this work.

Question 6: Do you agree that a comprehensive review of forward-looking DUoS charging methodologies, as outlined in paragraphs 4.3-4.7, should be undertaken? Please provide reasons for your response and, where possible, evidence to support your position.

Yes. We believe a move towards a shallow connection charging boundary at distribution will help remove distortions between transmission and distribution, will enable greater use of flexibility solutions to alleviate congestion and enable more coordinated network investment. In relation to this, we believe it is equally important that forward-looking use of system charges are reviewed to both prevent inappropriate cross-subsidies and replace (or even enhance) the investment signal previously given through the 'shallowish' connection charge.

To avoid cross-subsidies and improve investment signals, we agree that segmentation is needed to ensure that customers that benefit from investment should contribute proportionately to the cost of that investment. Location is a recognised and appropriate segmentation at higher voltages (132 kV and EHV). However, we do not agree that location is a meaningful method at domestic and lower voltages (HV and LV). We consider that other more meaningful methods will need to be developed.

EDCM

We believe it would be beneficial to align more closely with the approach already used for TNUoS forward-looking charging signals. Users in this category will tend to be those that compete closest with transmission-connected users and this would be consistent with the ambition to greater align transmission and distribution in order to reduce competitive distortions. In particular, improvements that lead to greater predictability and visibility of charges would be welcome.

CDCM

We believe arrangements at HV and LV should also be comprehensively reviewed. In particular, we believe credits made to embedded generators need to be addressed to avoid the unintended payment of benefits where generation is actually leading to a constraint, and we believe opportunities to better segment forward-looking charging should be explored. As stated above, we do not believe location is necessarily the optimum means of segmentation at this level. There will be a trade-off between making charges cost-reflective and making them volatile or too complicated and lacking transparency for customers to be able to respond to them in a meaningful and efficient way.

We would support the principle that any new distribution charging model should make use of the best information available and be built with the flexibility to improve its analytical

resolution as additional sources of information become available. We would strongly advocate that time is taken to develop and implement an enduring solution.

Usage versus capacity-based charges

We agree that a greater emphasis on capacity-based, or more generally, access-based charges would be better than time-of use-based charges. The advantages of access-based charges are that a user's access is more reflective of the drivers of network investment and it avoids the tendency for time-of-use charges to distort users' operational dispatch decisions.

Question 7: Do you agree that the distribution connection charging boundary should be reviewed, but not the transmission connection boundary? Please provide reasons for your response and, where possible, evidence to support your position.

Yes. We believe a move towards a shallow connection charging boundary at distribution will help remove distortions between transmission and distribution and will enable greater use of flexible solutions to alleviate congestion and enable more coordinated network investment. However, in doing so, it may be necessary to consider safeguards in order to protect customers on more sparse or rural sections of the network from much higher connection costs relative to customers elsewhere on the network. There is already a precedent with the existing Voltage Rule and High Cost Cap, which applies to exceptional reinforcement costs at present. Consideration of a similar rule or cap may be appropriate.

In terms of the transmission connection charging boundary, we agree that this should not be subject to review at this time.

Question 8: Do you agree that the basis of forward-looking TNUoS charging should be reviewed in targeted areas? If you have views on whether we should review the following specific areas please also provide these:

a) Do you agree that forward-looking TNUoS charges for small distributed generation (DG) should be reviewed, as outlined in paragraphs 4.19-4.23?

CUSC modification CMP 264/265 has already addressed the issue of the TNUoS locational price signal provided to distributed generation. As such, we do not consider that this should be a priority area for review at this time.

b) Do you consider that forward-looking TNUoS charges for demand should be reviewed, as outlined in paragraphs 4.24-4.27? Please provide reasons for your response and, where possible, evidence to support your position.

Yes, we agree that there may be a case for reviewing the way demand TNUoS charges are applied. Specifically, we believe the lessons learned during Project TransmiT could be better applied to demand charges. For example, TNUoS charges to generation are already calculated from a combination of 'peak security' and 'year-round' tariff elements and it may be appropriate to consider whether these same tariff elements could apply to some or all demand customers.

Question 9: Do you agree that a broader review of forward-looking TNUoS charges, or the socialisation of Connect and Manage costs through BSUoS at this time, should not be prioritised for review? Please provide reasons for your response and, where possible, evidence to support your position.

We agree that a broader review of forward-looking TNUoS charges or BSUoS should not be prioritised at this time. Whilst subsequent changes may be needed to these arrangements as a result of this review, we are reluctant to extend the current review to include these at this time. We believe it is important to retain a manageable scope and focus on where the benefits of review are likely to be greatest.

Question 10: Do you agree that there would be value in further work in assessing options to make BSUoS more cost-reflective, and if so, that an ESO-led industry taskforce would be the best way to take this forward?

We do not believe there is value in assessing options to make the current application of BSUoS more cost reflective at this stage. This is because the purpose of the TNUoS Year-Round tariff element is already to provide a locational price signal that is cost-reflective of incremental constraint. In this context, it would not be appropriate to attribute the constraint cost element of BSUoS on a locational basis because it would result in double counting - whereby the same price signal would be given and charged for twice.

Similarly, it would be disproportionate and impractical to attempt to unpick potential constraint costs that may be associated with the Connect and Manage regime at transmission compared with transmission constraint costs caused by other factors. It was recognised at the time of implementation that the costs of these short-term transmission constraints should be socialised, given that the regime would deliver a net benefit to customers, and we do not believe this approach warrants re-visiting at this time.

The purpose of BSUoS at present is to collect revenue. As such, it would be more appropriate to consider any changes to BSUoS as part of Ofgem's Targeted Charging Review Significant Code Review.

Question 11: What are your views on whether Ofgem or the industry should lead the review of different areas? Please specify which of SCR scope options A-C you favour, or describe your alternative proposal if applicable. Please give reasons for your view.

We believe Ofgem should lead the review in full (i.e. Option C). As per the ENA's response, an 'Option C' comprehensive SCR approach would maximise consistency and coherence across the different aspects of the SCR. It would avoid the risk of divergence, inconsistency and conflict that could otherwise result from following the alternative options with a twin-track Ofgem and industry-led approach.

We acknowledge the points made by Ofgem in support of its 'initial view' including the desire for quick-wins and believe a single programme has the greatest likelihood of achieving this.

An 'Option C' comprehensive SCR approach avoids weaknesses inherent in the 'Option A' narrow and 'Option B' moderate SCR approaches. Under 'Option B', it is difficult to see how a 'review of allocation of access rights' could be undertaken in advance of a 'review of definition and choice of access rights for small and large users'. Similarly, under 'Option A' it is difficult to see how a SCR could consider 'options to improve definition and choice of access rights' for smaller users with industry considering the same for larger users. Providing such a clear distinction between large and small users may prove difficult to achieve, with a risk that the SCR and industry-led work diverge leading to a regulatory boundary between large and small users, across which there could be unintended consequences. Moreover, any amendments to the forward-looking use of system charge methodology would require Ofgem's approval on a common basis across all DNOs before being factored into the industry's TNEI models ahead of implementation. In view of the timescales involved in this process alone (i.e. the 15 month notice period of demand tariff changes), this would suggest direct involvement and leadership from Ofgem throughout.

Should Ofgem continue with Options A or B, then a significant piece of additional work would be required to identify and mitigate these related interdependencies far earlier than under a single programme of Option C. On balance, we believe this additional work is an unnecessary distraction.

In addition, we consider a focused Ofgem-led stakeholder engagement and consultation process, as part of a single work programme, will be more effective and add greater value to the review process than an industry-led process, due to the prominence of Ofgem and its already established stakeholder communications infrastructure.

In terms of progressing changes that could be made sooner, we see no reason why code modifications could not be raised at key points within the scope of the SCR to address conclusions reached on any given area. Whilst such changes will clearly overlap with the SCR, arrangements under the Connection and Use of System Code (CUSC 8.17.4) and Distribution, Connection and Use of System Agreement (DCUSA Clause 10.22 of S1c) allow modifications to proceed where Ofgem determines this to be appropriate. Hence if a conclusion is reached on a given area early in the SCR process, Ofgem can allow a code modification to proceed in that specific area whilst the SCR is ongoing, without the need to formally amend the scope of the SCR. This arrangement may not allow Ofgem to direct industry to raise code modifications (as it is understood that Ofgem is only able to issue a single (set of) direction(s) on conclusion of a SCR), but we are committed to working with Ofgem throughout this process, and so are likely to be willing to raise code modifications without the need for formal direction.

A separate point is the scope of the review. Consistent with comments made elsewhere in this response, we believe it is important that the scope of the review is both manageable and does not seek to review options or choices that are superfluous. In Chapter 5 of Ofgem's consultation, the scope of this review appears to creep, with reference to 'access rights for larger users'. The Glossary defines 'Large User' as those distribution-connected users who have an agreed capacity (e.g. the majority of users with CT metering) and transmission-connected users. We do not believe it is appropriate to widen the scope to transmission-connected users at this stage.

Question 12: Do you agree with our proposal to launch an 'Option 1' SCR for areas of review that we lead on? Please give reasons for your view.

We have less strong views on which option of SCR Ofgem pursues.

An Option 3 SCR (where Ofgem leads an end-to-end process to develop code modifications) offers a streamlined approach, but marks a divergence away from the standard industry process for modification proposals. The benefits of Options 1 and 2 are that they align with the standard industry process, with a clear route for industry to bring forward alternative proposals, should they feel these better meet the objectives.

Question 13: Do you agree with the introduction of a licence condition on the basis described in paragraphs 5.11 and 5.12 and Appendix 5? Why or why not? Do you have any comments on the key elements set out in table 7 of Appendix 5a, or consider there are any other key elements which should be included? Please give reasons for your view.

Given that we believe Ofgem should lead the review in full ('Option C'), we do not believe there is a need to introduce a licence condition on the ESO and DNOs.

Notwithstanding this position, in the event that Ofgem decides to limit the scope of the Ofgem-led SCR, we do not believe a licence condition is the right way to drive forward the industry-led aspects of this review. It has not, for instance, been necessary to deliver the improvements in access arrangements delivered in recent years.

A statutory consultation would slow down the process and introduce additional regulatory burden on Ofgem and licensees due to the need to unambiguously demonstrate compliance. Whilst a licence obligation would make each individual network company accountable, the progression of discreet areas of work in parallel to and outside of a SCR will require both licensees and non-licensees to work collectively and it would not therefore be possible for a single licensee to meet the new licence obligation on its own.

Regardless of how this work is taken forward, via a SCR or otherwise, we agree that industry must be integral to this process. However, this does not necessitate a licence condition. For the avoidance of doubt, our networks business is committed to delivering improvements to access and charging arrangements.

Question 14: Do you have any comments on the draft wording of the outline licence condition included at Appendix 5b? Please give reasons for your view.

We are firmly of the view that a licence condition is not appropriate in this instance.

The focus should be on establishing the necessary workstreams to progress this work in a coordinated and well-managed way. Introducing a licence condition and associated Guidelines would take time and add unwelcome bureaucracy to a process where stakeholders are already supportive of change and focused on achieving the most appropriate outcome.

Notwithstanding the above, in terms of the draft wording set out in the outline licence condition within the consultation, if this was to be taken forward, we believe this would require substantial work.

Specific upfront work would be required to code all related dependencies, break-points or other mitigations and appropriate success criteria, especially given that this broad topic will rely upon both licensed and unlicensed parties (and noting that engagement with the latter would be outside the control of licensed parties). The language would need a considerable amount of scrutiny to clarify the scope and we would suggest it is unrealistic to put in place a licence condition on DNOs and the ESO that is explicit at this stage in terms of the required outputs given the parallel process of Ofgem's SCR, which will have inevitable cross-over. Moreover, to deliver an interim report, Code modifications and draft Impact Assessment by 30 June 2019 against this wider backdrop of change seems wholly unrealistic.

Question 15: What are your views on our indicative timelines? Do you foresee any potential challenges to, or implications of, the proposed timelines and how could these be mitigated?

Aside from the need to align with RIIO-2 timescales, in particular RIIO-ED2, we do not have any specific views on the indicative timeline at this stage.

Question 16: What are your views on our proposals for coordinating and engaging stakeholders in this work?

Given the breadth of this work, we agree that stakeholder engagement and their full awareness of any proposed reforms are key. To avoid confusion, we believe Option C, whereby Ofgem is the lead for the entire scope of the review, but with dedicated workstreams involving both industry and key stakeholders to advance the detail and complex issues, is in stakeholders' best interests. We agree that from an industry perspective, ongoing engagement through the existing Charging Futures infrastructure is working well and should continue.