

Cenex Response to Consultation on Access and Forward-looking Charges SCR Minded to Positions

August 2021

Introduction

Cenex was established as the UK's first Centre of Excellence for Low Carbon and Fuel Cell technologies in 2005.

Today, Cenex focuses on low emission transport & associated energy infrastructure and operates as an independent, not-for-profit research technology organisation (RTO) and consultancy, specialising in project delivery, innovation support and market development.

We also organise Cenex-LCV, the UK's premier low carbon vehicle event, to showcase the latest technology and innovation in the industry.

Our independence ensures impartial, trustworthy advice, and, as a not-for-profit, we are driven by the outcomes that are right for you, your industry, and your environment, not by the work which pays the most or favours one technology.

As we have focus on low emission transport & associated infrastructure, we have focused our responses on the consultation questions that we believe have a significant impact in these areas.

Consultation Responses

3. 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.

Answer:

We agree with the general intent behind your proposals to remove the contribution to reinforcement for demand connections. From an EV charging infrastructure perspective, this would promote the siting of chargepoints at the locations in which they are needed most. We do have some concerns that there may be frivolous applications for connections if they come at no or low cost to the applicant, which would cause inefficiency in network upgrades. Although we recognise that it may be difficult to address these concerns without potentially causing additional costs to applicants that have no choice of where they need the connection.

Where possible, we also believe that timed profile connections (and other forms of flexible connections) should be offered as lower cost options for connections. This will encourage the optimised use of network capacity.

Vehicle to Grid charging (V2G) could form a significant and valuable source of flexibility in the future. NG ESO have included 1GW of V2G by 2030 in two of their four Future Energy Scenarios. By treating the export from V2G separately to the import of V2G, there is a risk of curtailing V2G uptake which is not as locationally flexible as storage but offers significant economies above storage by using the EV battery.

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?

Answer:

In the IUK project Sciurus (Cenex, OVO, Indra, Nissan) which installed 320 V2G chargepoints in homes across the UK, we were aware that in cases where the DNO connection included additional charges, these were prohibitive for the consumer and in most of these cases installations did not take place. We also found from the results of a participant survey that the incremental cost of a V2G chargepoint above a smart chargepoint needs to come down significantly to promote uptake. If V2G chargepoints incur additional connection costs, this will inhibit uptake.

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?

Answer:

No comment

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?

Answer: It is our view that whilst providing price certainty could reduce the potential for capacity to be provided by the DNO through other means, this price certainty has the opposite effect on developers, enabling them to evaluate the business case for alternatives to network reinforcement – such as local generation and energy storage / V2G. However, for this to be effective energy storage/V2G need to no-longer be classified as generation and instead as Energy Limiting Equipment, or something similar.

Under the new proposal of removing the contribution for demand, this is likely to discourage exploration of these alternatives by the developers and will require the DNO to plan and manage the most effective way to provide reinforcement or procure flexibility instead. It may be in some circumstances that DNOs should recommend on-site storage or flexibility by way of offering a flexible connection if this is likely to be a cheaper route overall than network reinforcement.

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?

Answer:

No comment

Question 3f: 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?

Answer:

No comment

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?

Answer: We agree that it is likely that the proposed removal of the demand contribution could lead in places to inefficient investment. From a public EV chargepoint perspective, there are usually various locations where a chargepoint could be installed. By removing the contribution entirely, installers are unable to identify between two sites which might otherwise have similar business cases but where one requires higher reinforcement costs. In these scenarios where it would be possible to pick from a variety of locations it would be better to have banded contributions (I.E., High, medium and low cost) as this would provide the price certainty needed by developers, while still incentivising efficient use of the network. As Cenex, we regularly work with local authorities and business to help them plan where to install chargepoints, and capacity on the distribution network is a key metric when selecting a site.

Where possible, we also believe that timed profile connections (and other forms of flexible connections) should be offered as lower cost options for connections. This will encourage the optimised use of network capacity.

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?

Answer:

No comment

4. 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?

Answer:

No comment

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?

Answer:

We support the introduction of new time-profiled access choices at distribution. This could realistically provide cheaper and smarter connections to the network. Their design should consider the ability of certain applications to be able to meet the timed connection reductions, and potentially the profile of local generation as well as demand.

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

Answer:

No comment

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)?

Answer:

No comment

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?

Answer:

No comment

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

Answer:

No comment

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

Answer:

No comment

5. 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?

Answer:

No comment

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?

Answer:

No comment

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

Answer:

No comment

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?

Answer:

No comment

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?

Answer:

No comment

Question 5f: Have we identified all the options for administering TNUs 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?

Answer:

No comment

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?

Answer:

No comment

[There is no question 6]

7. 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?

Answer:

With the UK Government having announced a ban on new petrol and diesel cars from 2030 and with hybrids being phased-out by 2035 the transition to electric vehicles (EVs) is set to accelerate. The early adopters of EVs are not representative of those that will adopt in the coming years. Most early adopters have off-street parking that enables them to charge at home. We welcome policy changes that would avoid subsequent adopters having to pay for costly network upgrades when they install a home chargepoint, along with actions that avoid a 'postcode lottery' for chargepoint installation.

Additionally, as many as 60% of all drivers would need to charge their EV away from home, either at work, destinations or public charging facilities. Many of these drivers would not be able to benefit from cheap overnight charging. Grid connection and reinforcement costs form a significant part of the capex of Fast or Rapid charging installations. These costs are in turn passed on to consumers in the form of higher usage fees. This has the potential of causing an EV "fuel inequality" between those who have driveways and those who don't. Cenex welcome action to reduce the cost of publicly accessible EV charging to keep it more in line with private off-street charging rates. However, it should be noted that the proposed changes to remove contribution towards reinforcement costs are likely to favour the business case for rapid charging hubs above on-street slower charging. Indeed, the business case for rapid chargers is already better than for slower charging. However, it is unclear at this stage if rapid charging hubs would give a better consumer experience than on-street residential public charging for those who cannot charge off-street at home.

We note that at this stage in the process, you have ruled out the idea that extension assets could be funded via DUoS charges. We would seek more clarity on how un-looping domestic customers from looped supplies should be charged. We are not sure if the approaches from DNOs are consistent here, and when customers are charged for this work, the charge can be a nasty surprise for a customer who thought the cost of a home chargepoint installation was within reach. Given that looped supplies are likely to be an insufficient approach throughout the network as we electrify both transport and heating, it would seem appropriate for the network to be brought up to standard, with costs being recovered via DUoS charges.

It is also our view that the proposed timescales are too late. These changes need to come in as soon as possible, even if only as a pilot, in order to support EV infrastructure roll-out which is crucial to the successful decarbonisation for road transport, and in particular for high utilisation commercial vehicles (such as last mile delivery vans, taxis, utilities and essential services maintenance and first response vehicles) where time to charge affects the bottom line and often the ability to do the work.



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Having access to a geographically spread EV charging network is essential for some of these vehicles. Additionally, creation of DSO flexibility markets and flexible connections need to follow hot on the heels of any changes to connection charges, otherwise network reinforcement could end up being the default (and not necessarily the best) option.

Finally, it is important that flexibility is compensated for the valuable services it provides. The energy system is under a huge transition, and as we proceed on this journey it is becoming more valuable not just to reduce the energy consumed, but to consume energy at the right time. Thus, flexibility becomes as important as generation.