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Dear Jon

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

We welcome this opportunity to respond to the *Getting more out of our electricity networks by reforming access and forward-looking charging arrangements* consultation issued on 23 July 2018.

The Scottish Highlands and the Islands off the north and west coast represent a large geographical region. The region has a low population density with many pockets of population spread across areas that are often remote. The region is home to a large volume of renewable energy power stations – from small scale, local developments to very large commercial installations. There are many more sites across the region that could be exploited to provide yet more cost effective, low carbon, renewable energy. The region is served by a single distribution network owner – Scottish Hydro Electric Power Distribution and a single transmission owner – Scottish Hydro Electricity Transmission.

HIE along with its local partners - the democratically elected local authorities covering the north of Scotland and the islands; Shetland Islands Council, Orkney Islands Council, Comhairle nan Eilean Siar, The Highland Council and Argyll & Bute Council, make representations to key participants on behalf of industry to influence the way in which regulation of the energy industry is managed in order to ensure the needs and interests of the Highlands and Islands are understood and taken into consideration. HIE also works closely with Scottish Government in relation to regulatory matters.

Our detailed response to the consultation questions are attached. We look forward to seeing the results of the consultation in due course.

Yours sincerely

A handwritten signature in cursive script, reading "Elaine Hanton", written in dark ink on a light-colored background.

Elaine Hanton
Head of Energy: Emerging Technologies and Regulation

In partnership with:-
Shetland Islands Council
Orkney Islands Council
Comhairle nan Eilean Siar
The Highland Council
Argyll & Bute Council

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

We support the transition to a fairer network charging and access future. Currently, the network charging and access arrangements are not suitable for delivering consumer value or a sustainable future.

The Charging Futures workstream is based on the Smarter Systems and Flexibility Plan published jointly by Ofgem and UK government. This is a key plank in the effort to meet the UK's carbon reduction targets. Much of this aspiration is dependent on the delivery of low cost, low carbon energy. Onshore wind has the lowest levelised cost of energy (LCOE) compared to all other technologies for new generation capacity. The Highlands and Islands of Scotland is home to the most efficient wind farm sites in the UK.

However, the region has been dogged by significant deployment blockers including the lack of transmission network capacity, delays in delivery of network reinforcements and extremely high transmission network use of system (TNUoS) charges. High TNUoS charges have recently been compounded by a significant change to transmission loss calculations (P350) that has introduced locational elements of the transmission loss multiplier. The locational nature of TNUoS and TLMs significantly disadvantages projects in this region – we do not believe these issues are adequately addressed through the consultation.

These issues slow, and often stop, the development of new low cost, low carbon generation projects. For example – the average wider zonal TNUoS tariff (for 2018/19) for renewable generation across the north of Scotland is £21.3/kW for intermittent generation and £30.3/kW for conventional low carbon generation. The average tariffs across the remainder of the GB are £0.8/kW and £3.2/kW respectively. This extreme disparity is compounded by extremely high local circuit tariffs for connecting projects connected on islands. National Grid's 2022/23 forecast for local circuit tariffs for Orkney is £67.3/kW, the Western Isles is £100.0/kW and Shetland is £129.8/kW. Apart from these three examples, the average local circuit tariff for the same year is £1.44/kW. The locational methodology for transmission losses is similarly biased.

The extreme impact of locational network charging such as in these examples has the effect of increasing consumers bills and reducing sustainability through:

- Higher wholesale energy prices due to the reduced penetration of renewable generators.
- Higher balancing system costs, specifically those related to transmission constraints through the higher opportunity loss value costs associated with existing wind generation compared to CfD backed and subsidy-free future generation.
- Higher average CO₂ content per unit of energy within the UK market through increased reliance on carbon intensive generators.

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.

We agree that there is a strong case for change in relation to distribution network access arrangements – which we consider is critical to enable the transition to a more flexible and smarter energy system. Although active network management schemes, such as in Orkney, have allowed more generators to connect than would have otherwise been the case, the network owner is not exposed to the cost of the spilled renewable energy that cannot be accommodated. We believe that it is important for the DNO to be exposed to this cost to be able to properly capture the whole system cost associated with this loss. Otherwise, there is no incentive for the network owner to invest in network upgrades and valuable, low carbon electricity production is wasted. This catch 22 situation has already been experienced on Orkney, with no reasonable route to network access for new projects (of which there is a significant potential pipeline) in the existing system which is, in effect, fully subscribed. However, at the same time, no increase in network capacity has been forthcoming for Orkney because the DNO (SHEPD in this case) is not incentivised to increase network capacity although there is significant lost energy from existing projects and lost potential from new projects.

Further we believe that the creation of more network access choices could pave the way for local energy systems – providing new opportunity to reduce the need for wider network upgrades through matching local generation and demand. For example, network access products that are limited to local networks – avoiding the need/ability to export to the wider system. The Highlands and Islands is home to a large number of active community groups that are keen to deliver the benefits of locally generated energy to local consumers (often many living in fuel poverty). The lack of wider transmission network access blocks many of these schemes from progressing.

However, the indicative network charging proposals including locational generation TNUoS charges for embedded generation is likely to disproportionately impact on low carbon, low emissions generators and create, in effect, another subsidy for carbon-intensive, fuelled generators. We consider that the proposals do not reflect the wider societal cost of these fuelled generators, including the costs of increased air pollution and carbon emissions. Given the very high exposure that the Highlands and Islands region has to TNUoS (as discussed above), this issue is likely to be extremely relevant to future deployment of distribution connected projects here.

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?
- 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?

- c) **Duration and depth of access, discussed in paragraph 3.25-3.32 - would these options be feasible and beneficial?**
- d) **At transmission or distribution in particular, or are both equally important – as discussed in this chapter?**

a) No comment

- b) Firmness – firmness of access rights should be reviewed as a matter of priority. At distribution, the lack of well-defined access rights creates additional risk/cost for projects. Connection agreements regularly contain unspecific conditions which projects may be de-energised or curtailed against, even for connections which are not ‘flexible’ or connected under ANM schemes.

We fully support a review of ‘flexible’ connections, including a cap on generator constraint. Currently, the DNOs are not exposed to the value of lost or spilled energy due to lack of network capability. This means that the DNOs are not provided with any signal of the system value of the energy that is lost. Often this can lead to catch-22 situations, like has existed on Orkney, where there is significant justification for network upgrades to accommodate existing and new generation, but the lack of incentive for the DNO to upgrade the network has resulted in delayed deployment of capacity increases.

Time-profile – we consider that time profiling network access is likely to differ across the network depending on the type of network user connected. This may make it difficult to implement such an arrangement and require significant network analysis to understand what parts of the day/week/year are defined as off-peak.

- c) Short term access rights – generation projects are long term investments and therefore we do not see the value in developing a range of short term access right options. The short-term access products available for transmission connected generators are poorly utilised. For continued investment in new generation capacity there needs to be long term access products that last for at least the term of the project (20-25 years), with stable and predictable charges and network availability.

Long term access rights – currently many projects have ‘ever-green’ network access rights. Introducing ‘long term’ access rights instead will increase risks, which will increase costs of new project delivery and in turn increase consumer costs. However, we do agree that network capacity which is sterilised by existing users not making full use of their capacity rights should be looked at.

Depth/local access rights – we support further investigation into the potential value of access rights that are limited to specific networks/geographical areas, given the future potential for local energy systems and peer-to-peer trading to potentially include larger generators.

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.

No comment

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

- a) We support further work on queue management arrangements. Network capacity should be allocated to users which are best able to make use of it. The queue management procedures that have been introduced by the ENA have been effective in reducing the volume of network capacity 'squatting' from speculative developments. However, on the other hand, for those developments that are not speculative, there needs to be timely provision of network connections with reasonable connection charges which are stable and predictable. We note that historically SHEPD has appeared to be more proactive in managing stalled connections than other network companies and we welcome this.
- b) We agree that auctions should not be considered for allocation of network access, under any circumstances.
- c) There is a case for reviewing the current arrangements for the re-allocation of access. There should exist some sort of mechanism for recovering network capacity from network users that are not making good use of it. However, we consider that a set of tests for assessing whether network capacity is being used 'well' may be difficult to establish clearly and fairly. We are also concerned that the access rights reallocation process will not be transparent or equitable.

The re-allocation of network capacity could be an administered arrangement or a market arrangement. If it is a market-based arrangement, this will encourage capacity hoarding behaviour. Also, the circumstances where network capacity can be directly traded amongst larger network users is likely to be limited to relatively unique situations.

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.

We do not agree that a comprehensive review of forward-looking DUoS charging should be undertaken. A recent review of EDCM charging arrangements has concluded that locational use of system charging at distribution has very little impact overall on network user's connection decisions and that connection charges had a much more significant influence on connection choices.

The introduction of more extensive locational charging will introduce unnecessary complexity and loss of transparency/predictability.

This volatility and the difficulty in getting confidence in current and future tariffs was exemplified when the Kintyre-Hunterston subsea link was included in the final tariffs for 2016/17. This one single reinforcement increased the locational element of the wider zonal generation TNUoS charge for zone 7 (Kintyre peninsula) by approximately £6-7/kW. Representing an increase of 50%. Further, the forecasts provided by National Grid were inaccurate. The forecast 2016/17 tariffs provided in July 2015 (9 months ahead of the start of the charging year) indicated an overall charge for intermittent generation of £12/kW, whilst the outturn final tariff for the zone was £18/kW. The charge was underestimated by National Grid by 30% - in a zone which was already facing extremely high locational TNUoS charges.

Although some of the proposed changes may have good justification from a theoretical point of view, the real-world impact of changes to the charging regime is to increase the perceived regulatory risk for new investments. This increase in perceived risk will result in higher costs for project development/delivery and ultimately be passed onto consumers.

The current proposals for changes to network charging and access do not effectively capture the issues surrounding network balancing services – particularly at distribution with the development of the DSO role under Open Networks. There is a risk that the proposals introduced under this Charging Futures work will cut across the system balancing requirements for future DSOs.

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.

Moving the charging boundary for distributed generation to a 'shallow' approach would increase the investment cost for generators and ultimately increase consumer costs. This approach would increase the level of generation use of system charges that sites will be exposed to, therefore increasing the potential volatility of future charges. This would also increase risk and costs for project investors.

The current arrangements, with a 'shallow-ish' charging boundary is a more effective way to influence the behaviour of generators at the point when investment decisions are made as the capital cost associated with the connection is clear rather than wrapped up in future charges which might change significantly based on open governance frameworks, the behaviour of other network users or indeed future significant code reviews. This is compounded by the fact that significant step changes in use of system charging policies cannot be effectively captured when investment decisions are made.

These risks are particularly acute for generation projects that are connected in Highlands and Islands of Scotland as these projects are located on some of the most remote parts of the network.

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?**
- 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.**

- a) Introducing locational generation (or negative demand locational) TNUoS for embedded generation will make it harder for smaller, independent participants to enter the market. This increase in market entry barriers will reduce overall competition. Introducing further locational signals increases the potential for unpredictable/volatile future charges. This will disadvantage independent developers as they will be more exposed to risk of change and likely to have less capability to model/forecast the potential risk. This is a particular concern for us as the Highlands and Islands are exposed to very high TNUoS charges and have many smaller and community project developers that are not able to accept significant levels of risk.
- b) No comment

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.

Yes, we agree. The TNUoS methodology has relatively recently had significant changes introduced under Project Transmit.

Further, the simultaneous review of BSUoS charging methodology alongside all of the other ongoing proposed changes is likely to overwhelm industry with change and compound the perception of high risk associated with changing charging policy – a cost which will be paid by consumers in the future through increased investment costs for new generation capacity. This issue will be acutely felt by project owners, developers and investors in the Highlands

and Islands as the region has relatively high Connect and Manage costs with relatively few network customers. This would compound an already difficult network charging reality for projects across our region.

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 agree that changes to the BSUoS methodology should be taken forward at this time. Industry is unlikely to be able to engage effectively given the volume of concurrent network charging policy changes that are currently being progressed. Such a review will introduce further uncertainty and perception of network charging regulatory uncertainty and risk. The costs of these risks will be passed onto consumers and likely reduce generation competition.

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.

The scope of the review should be limited to the ‘narrow approach’.

Development of network charging policy should be evolutionary, rather than revolutionary. Much of industry struggles to effectively engage with change processes. This can lead to a wider sense of disenfranchisement and risk. This risk gets passed onto consumers through higher investment costs and reduced competition as smaller market participants are less able to forecast, hedge or mitigate against changing network charging arrangements. For example, community led developments are particularly underrepresented and cannot possibly engage or respond effectively to regulatory developments which represent a significant step change or changes that happen in quick succession.

Therefore, the scope of any future significant code review should be limited only to the elements of cross-code issues which are necessary now. Further, many of the changes proposed through this consultation could be managed through normal industry code governance processes.

However, we do consider that the need to review the ‘firmness’ of network access rights at distribution needs to be addressed as a matter of priority and should be included in the baseline scope (‘narrow approach’) going forward.

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.

The justification for launching a significant code review is not clear.

The review of network access rights for large network users at distribution – high priority – is contained largely to the DCUSA and Distribution Code. Further, the development of any

changes to the distribution charging methodologies are also contained to the DCUSA. Therefore, the scope of any cross-code issues appears to be limited.

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.

No comment

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.

No comment

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?

No comment

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

No comment

