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Sent by email to: NetworkAccessReform@ofgem.gov.uk

Reforming access and forward-looking charging arrangements

18 September 2018

Our ref. ANDMH/ARFLC

Dear Mr. Parker,

We welcome the opportunity to respond to the Ofgem consultation on reform of access and forward-looking charging arrangements. The proposals represent a substantial set of reforms that has the potential to increase network utility and aid the delivery of a flexible energy system, an important whole system requirement as we continue to decarbonise the economy.

The Ørsted vision is a world that runs entirely on green energy. In the UK, we develop, construct and operate offshore wind farms and innovative waste-to-energy solutions. We also offer flexibility solutions to our industrial and commercial customers as well as supplying them with electricity and gas. Headquartered in Denmark, Ørsted employs 5,600 people, including over 900 in the UK. Ørsted is the largest offshore wind farm developer, generator and owner in the UK.

The proposals by Ofgem will change the way network users connect and use the network by assessing network user access rights, and their ability to 'release' those rights. We believe that this will allow users to demonstrate a system benefit, and in turn increase the utilisation and flexibility of the network. The review of forward-looking charges, and therefore signals that influence user behaviour will also ensure that network users can have appropriate incentives to offer benefits to the system.

We are also supportive of the Smart Systems and Flexibility Plan¹ developed jointly by Ofgem and BEIS and would like to remind Ofgem about the commitments laid out to 'make markets work for flexibility'. This comes with the need to 'open up new markets, improve coordination across the system, and enable these businesses to realise the true value of their services.

We highlight the main points of our response below:

Network charges that more accurately reflect the benefits and costs of user behaviours are in the interest of network users and consumers.

¹ BEIS, Ofgem (2017) Upgrading our energy system – Smart Systems and Flexibility Plan

Ørsted supports reforms to system charging that can further reflect the benefits of flexibility and deliver a flexible grid as part of a decarbonised energy system. **Network users who can offer a system benefit by being flexible will need to be able to have a route to market.** Through the Targeted Charging Review (TCR), we note that reforming the residual charge away from triads will result in the loss of a flexibility signal to network users, who have lowered system peak demand by 2GW².

We recognise the cost-recovery principle of the residual charge and the case set out within the TCR to reform this part of use of system charges. However, we are hopeful that a flexibility signal can be established within the cost-reflective portion of charges that are being discussed within the access rights and forward-looking charges set of reforms. We are concerned that without a clear flexibility signal, flexibility will be under-valued, and therefore under-utilised.

In this regard, we believe that re-allocation of access rights may provide an opportunity for network users to continue to offer flexibility. In particular, large users who have made significant investments that allow them to offer this system benefit could continue to do so within an open, transparent and fair framework that appropriately values the benefit they bring. **We think these already flexible users are able to respond to 'sharp' price signals that a proposed capacity charge could bring** and engage in a degree of re-allocation of access rights. We would like to see more detail around these arrangements in future workstreams to see how this potential can be maximised.

For customers who are less able to demonstrate flexibility, there also needs to be close consideration to ensure they are not penalised, and that better network utilisation works for them as well. For smaller users, this may come from establishing a 'core' capacity that enables basic demand to be reasonably met.

Large customers who to date have not been able to avoid the triad are unlikely to respond to sharp flexibility signals. However, they may be able to demonstrate flexibility with a duller time-of-use signal. This would enable them to still offer a system benefit and reduced network charge by having a smaller signal to turn down during traditional, set peak times. Offering both a dull and sharp signal would enable a wider range of participants to offer out the different levels of flexibility that they are able to provide.

Long term, sustainable markets provide investment signals, and promote competition

It is important that any newly created markets are sustainable in the long term. A transparent, predictable set of network charges will create investment signals for users looking to connect to the grid and offer planning visibility to network companies. If reforms produce a set of volatile charges that vary greatly from year to year, competition will be harmed as users will not respond to an unclear set of signals.

Additionally, there is a risk within the proposals that an intent to focus on short term access rights development results in price and investment signals that fade within a

² National Grid (2017) [Winter Outlook 2017](#)

short time frame. This has the potential to increase investment risks, and therefore costs to users looking to connect with assets that have a long lifetime. A holistic consideration of all time frames may be more appropriate.

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For all users, visibility of any incoming charges, the clarity of the framework they will operate under, and the stability of both charges and framework should be a universal shared pre-requisite to reforms. Seeking an overly rapid implementation of new charges without careful consideration of these pre-requisites is likely to produce a disruptive and oblique framework that may deter investment and lead to unintended consequences such as the stranding of assets.

Focus on reforms at the distribution level are appropriate

We welcome proposals to focus on reforming access rights and forward-looking charges at the distribution level. As a network user with predominantly transmission connected generation assets, we believe that the current Connect and Manage regime and TNUoS charges have been adequate to manage constraints and drive user behaviour.

However, we believe the distribution level could be further optimised with more market principles to alleviate issues identified by Ofgem such as network congestion³, the increase in decentralised generation, and demand pattern shifts from developments such as projected uptake of electric vehicles. In this regard, we have helped our customers to address issues such as network constraint. Our Energy as a Service products have helped them to participate in the energy markets by enabling them to become flexible market participants. Our customers have been able to offer system benefits such as lowering their peak demand usage and optimising their demand profile through our schedule optimisation product and from our integration expertise with their on-site generation assets.

As network issues continue to negatively impact the system, there is further scope to provide transparency to users at the distribution level on the costs and benefits of their actions. We additionally support long term, step-wise coordination and alignment between transmission and distribution. Reforms to distribution should therefore seek to allow for better convergence as opposed to divergence between the two levels.

Consideration of all current reforms together is required for a successful outcome

We think that only a holistic process which considers all current reforms will produce the right framework. Alongside this consultation, there are other significant reforms taking place which must be taken together:

- **The TCR on residual charges**, and the overall proportionality between cost-reflective and cost-recovery charges need close consideration in order to produce a fair and transparent set of charges. As the TCR and this set of reforms have largely been coordinated separately, we have a concern that the

³The Charging Futures Forum pointed out 20GW of network congestion at the distribution level

response we are making in this consultation becomes difficult to reconcile should the TCR consultation arrive with a different minded-to outcome by Ofgem than where the industry has been led to date.

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- **Market-wide Half Hourly (HH) Settlement reform** – in order for a lot of the proposed review areas to be reformed, increased visibility on the actions of users will be required. In terms of timing of when changes can be implemented, we would require market-wide HH settlement reform to be successfully delivered, as well as any other IT or infrastructure changes, ahead of rollout of reforms to access-rights and forward looking charges.

All the interplay effects require close consideration by Ofgem to turn ideas into a feasible, long-term solution. This should include examining the cost of implementing solutions against the value that network users and consumers will get from these changes.

The appendix overleaf contains more focused answers to the specific questions listed within the consultation. Please do not hesitate to contact myself (andmh@orsted.co.uk, 07827-283-123) should you have further questions.

Yours sincerely,

Andrew Ho

Senior Regulatory Affairs Advisor
Ørsted

Appendix – Response to consultation questions

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This section provides our answers to questions as set out within the consultation.

On issues with existing arrangements

**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**

Yes. We support the overall reform areas to mainly focus on distribution. We have also observed the same issues as those identified in the consultation. We also believe that the core issues stem from the growing demand from EVs and Low Carbon Technologies, managing network constraint from distributed generation and the need for a better transmission/distribution interface.

The National Grid Future Energy Scenario (FES) 2019 is a good indicator of the need to recognise the level of growth we would see in EV uptake and decentralised generation. The decision for FES 2019 to build a specific Community Renewables scenario and realign its scenario matrix to factor in level of decentralisation against speed of decarbonisation⁴ demonstrates the nature of the challenge that lies ahead. Additionally, we have heard from the Charging Futures Forum that there is a 20GW queue of distribution generation projects⁵. This is likely as a result of the First Come First Served connection management framework at the distribution level and the ability for prospective projects to progress without sufficient user commitments to progress the project in a timely manner.

At the transmission level, there is currently an adequate framework in place to address the changes we are seeing in the energy system. We have had an overall lowering of overall peak demand usage over time, which is forecast at 50.7GW this winter⁶, down from 57.4GW in 2009⁷. Additionally, we have been able to offer visibility to the TO in grid planning through User Commitment requirements and through the Connect and Manage framework. We also have financially firm access to the network for our generation assets, and our transmission network use of system charges (TNUoS) are forecast out to five years.

In addition to the drivers pointed out, we wish to mention the increasing sophistication of some customers as a further case for change. We have observed our industrial and commercial customers demonstrating a growing ability and willingness to become more active participants in energy markets. As a way to manage costs, customers are becoming more flexible users of energy, and able to offer benefits to the system. We have helped these customers with our Energy as a Service product which enables them to optimise their run schedules and we are also able to help manage their on-site generation assets. These customers, who are often large demand users, need to also be considered as part of the case for change as set out by Ofgem.

⁴ National Grid (2018) Future Energy Scenarios 2019

⁵ Charging Futures Forum (2018), 23 May, presentation by Baringa

⁶ National Grid (2018) Winter Outlook 2017/18

⁷ National Grid (20018) Winter Outlook 2009/10

On proposals for the scope of review of access arrangements

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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. Improving the definition and choice of access rights would great reflect the range of users on the system that connect to the distribution network:

- **Households** who expect lights to be on as required. We believe that smart, efficient products will help manage costs and enable consumers to be more responsive to signals in the future;
- **EV users** who will expect smart home charging and quick charging at other charge points;
- **Microbusinesses** where energy use is fixed to their customers' needs. These are likely businesses who will find it difficult to be flexible, such as catering businesses who will have high demand at peak hours that correlate with meal times, or other retail businesses that are tied to consumer patterns;
- **Larger customers who can't be fully flexible.** These may be businesses that run at full operational capacity and require 24/7 access to the network;
- **Larger customers who can be flexible;**
 - **Those with onsite generation** who may need less network capacity
 - **Those who don't need to operate during times of peak demand**
 - **Those who can export their power to the grid**
- **Embedded generators with differing production characteristics.** In an increasingly decarbonised energy system, technology such as wind or solar will increase variability, but could be balanced with storage technologies.

Greater access choice may open up options and opportunities to save costs, and free network capacity – a system benefit that should be recognised.

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?**

Yes. We think there is a portion of distribution-connected capacity that should not be exposed to the proposed changes. A definition of essential services, and small users should be closely examined. Small users, which should also include microbusinesses, are customers who have a basic level of demand usage that should be met. Their basic level of capacity would not be able to offer a significant system benefit, but also the individual impact on the system should also be small.

However, beyond this core capacity, there will also be a level of usage which would impact the system. For example, domestic EV usage and its future uptake will see domestic users go beyond the basic level of capacity and begin to impact the local network. There should therefore be a level of usage that should be defined to encourage load to be shifted to manage network constraints where an individual users impact becomes significant.

A definition of core capacity therefore needs to establish this boundary between where an individuals impact on the system begins to significantly affect network usage. There needs to be close examinations and analysis in establishing this definition to avoid an uneven level-playing field being created.

To give a related example, within the TCR we have seen in the initial 'static' analysis in the vanilla options proposed⁸. For capacity-based charging options, the outcome of the analysis on how residual charges are then distributed across user types varies greatly depending on if domestic users are assumed to have a connected capacity of 18kVA, or 4kVA. We would therefore appreciate close cooperation with users in establishing the definitions of what a core threshold would mean.

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?

Defining firm and non-firm for distribution further would be a helpful first step as it offers more certainty to investment if terms are clear. A definition of firm access rights would be one enabler to potentially allow a Connect and Manage style approach to network connection. This would represent a convergence between transmission and distribution network approaches and could help create a level-playing field between generators.

However, if firm access rights at distribution cannot be tabled (as per 3.43), then further definition of non-firm access, and different types of non-firm access is even more important to managing network constraint.

We also agree that there is no need to define access-rights at the transmission level. Peak demand usage at transmission remains on a downtrend for now, and firm access rights are established for dealing with constraints via the balancing mechanism.

On time-profiling, we interpret this as meaning developing a responsive, dynamic signal, which is our preferred option. For network users who can offer flexibility, the maximum benefit to the system would come from a responsive, real-time price signal.

Section 3.18 mentions seasonal, or off-peak access to the network. We think any seasonality or off-peak trends would be more likely to emerge as part of a day-ahead or real-time market. A close to real-time signal would enable renewable generation to participate, as opposed to a long-term, seasonal product which would not be a strong incentive for renewable generators to participate, as it may restrict network access during potential times of high intra-day production. A real-time signal allows generators

⁸ Ofgem (2018) Targeted Charging Review webinar, 29 August 2018

to participate alongside flexible demand users who are already demonstrating flexibility via the system behaviour that the triad has incentivised.

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A duller, time-of-use signal might be more appropriate to try to motivate small, inflexible users to respond to system needs until smart goods, smart EV charging can facilitate a sharper signal for more sophisticated users. This may be a duller signal with less value, such as a Red/Amber/Green set of prescribed times when charges escalate in fixed bands.

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

We think there is merit in exploring both short-term and long-term access rights together. A short-term duration may be appropriate for existing users who have sufficient operational hours and data to determine where they can realise a saving by releasing capacity.

However, only considering short-term access rights will limit the planning perspective for network companies to see when reinforcement may be needed. For prospective users looking to connect, limiting procurement of access rights to a short-term time frame also increases the business case risk and investment cost. A broader consideration of time frames is therefore desirable. For example, balancing long-term procurement of access rights with a use-it-or-sell-it arrangement to release capacity and maintain a liquid market for access rights may be an option that should be considered rather than removing all long-term options from the outset.

Lastly, we agree that exploring local access may not be appropriate to address for the reasons as pointed out in 3.32.

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

These discussions are more appropriate for distribution, given the issues that we are seeking to address. As stated previously in Q1, the state of the transmission network and the existing framework are currently adequate.

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.

We agree with the links made as per our responses to Q3 b) and c).

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?

We agree that queue management at the distribution level should be reviewed due to the issues currently faced with 20GW of queued projects looking to connect. For example, queue management to prioritise projects that can offer a system benefit as well as a benefit to others in the queue should be considered. We have previously stated this in a consultation under the ENA Open Networks Project consultation for Workstream 1, Product 10⁹.

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?

Yes, we agree that auctions are not appropriate. We believe re-allocation of access rights to be a better framework to address issues in a more step-wise manner. Initial allocation may be important to ensure projects are developed.

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

Yes, we agree. We would appreciate more details into how Ofgem views re-allocation of access rights should be implemented. **These details would be the foundation of the framework and subsequent market for access.**

A well thought out framework will enable generators, suppliers and individual customers to have visibility on the route to market to participate and manage their capacity in a way that benefits both the system and user. **We would like to see more details on all parts of 3.45-3.48 to determine if the proposed framework would produce a functioning market that adequately values access.**

On proposals for the scope of review of forward-looking charges

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. The proposals suggested would increase the parity between treatment of users at both distribution and transmission level and aid the creation of a level playing field. Increasing the locational and temporal granularity within CDCM would help to reveal the costs of constraints.

Whilst it is worth reviewing how these charges should be implemented, the following considerations should be factored in:

- Reforms should allow adequate time to build and scrutinise the proposed model, as well as have users and customers understand their charges in reasonable time.

⁹ ENA Open Networks consultation, submitted 11 June 2018

- It should offer a long-term view of charges too so that a sustainable, long-term market is formed. New charges produced should not be overly volatile otherwise users may not want to connect to grid.

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On better predictability of EDCM, we appreciate measure that could also improve predictability or seek to align further with TNUoS signals for the same reasons as CDCM reform and convergence with transmission level frameworks. As with CDCM, reforms should be well thought out and made visible to users with enough advance notice to prepare for changes.

On considering the balance between usage based (volumetric, per kWh) charges and capacity-based charges (per kW), under the assumption that all relevant metering reforms are rolled out, a capacity charge is a better measure to value peak demand and network constraint costs, but a usage-based charge may still have value:

- Large, flexible customers who offer a system benefit can react to a sharper, dynamic capacity charge that is more reflective of system needs. This kind of signal would help smooth out system peaks across the day and its value to the system would also be priced accordingly.
- Customers who may be less flexible could still respond to a usage based, time-of-use Red/Amber/Green style signal. A fixed set of time bands would help businesses avoid general times when a peak may be expected to occur. However, this kind of charge would be less valuable to the system. A fixed set of times could risk merely collating the majority of demand to another time band outside of the most expensive time.

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. Locational charges to DUoS that help identify where constraints exist need to be better revealed, and a shallow connection charge at distribution helps this. Additionally, the shallower connection charge represents a cheaper upfront cost for connecting users. This reform would also aid the convergence of distribution and transmission level practices.

In reviewing how this could be implemented, there will be a need to consider how users who have paid for a 'shallow-ish' charge who have already paid for costs of reinforcement at a higher voltage level.

The transmission connection boundary does not need examination as we have local and wider charges and a framework that is currently fit for purpose.

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?

Yes. Reviewing the basis of TNUoS forward looking charges for small decentralised generators would help promote a level playing field between all generators. If distributed generation is able to become visible to the network as generation instead of negative demand, then some of the distortive effects within charges would be resolved as all generators would be facing charges on a similar basis. Users with on-site generation should still be able to offer a benefit to the system by reducing overall site peak demand.

b) Do you consider that forward-looking TNUoS charges for demand should be reviewed, as outlined in paragraphs 4.24-4.27?

We strongly believe that forward-looking TNUoS charging of demand requires consideration alongside the TCR and review of residual charges. We are concerned that without parallel consideration of all reforms, the overall value of flexibility may become undervalued and therefore under-utilised.

Section 4.25 points to the value of users who have so far used the triad as a means to support the system. This has represented a significant system benefit that ought to continue to be procured and valued appropriately. One area which would affect the value of this is the proportion of charges between those which can be cost-reflective as opposed to cost-recovery. We believe that access rights reform should naturally arrive at placing additional value on cost-reflective behaviours.

We would like to remind Ofgem about the commitments it laid out under the Smart Systems and Flexibility Plan jointly developed with BEIS¹⁰ to 'make markets work for flexibility'. This comes with the need to 'open up new markets, improve coordination across the system, and enable these businesses to realise the true value of their services'. We are hopeful that review areas within this consultation will deliver these markets instead of diluting them.

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 do not think there is a need to prioritise a broader review of BSUoS charges or forward-looking charges in TNUoS at this time. As per section 4.30, the Baringa analysis has shown that there is no strong need to review wider elements of the TNUoS charge (outside of the TCR), and we agree with this conclusion.

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?

¹⁰ BEIS, Ofgem (2017) Upgrading our energy system – Smart Systems and Flexibility Plan

Similar to Q9, for BSUoS, this is not a priority at present for reasons pointed out in section 4.34 where new incoming links could reduce constraint costs.

On taking the review forward

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.

A holistic consideration of all issues together would be our preferred option, which also needs to consider the work of the TCR and market wide HH settlement reform work. At the various Charging Futures Forums, we have expressed our desire to particularly have access rights, forward looking charges and residual charges looked at in close proximity, and ideally to be taken forward together. We have been pleased to see more of this kind of thinking in the lead up towards this consultation but would like to see further evidence that the two sets of reforms are sharing analysis, baselines, and conducting industry feedback in a joined-up manner.

To address more specifically the question of Ofgem or industry leading portions of the access rights and forward-looking charges work, if a moderate to comprehensive approach from Ofgem (option B or C) will allow for better coordination to produce a solution which considers the other reforms too, we are minded to opting for more leadership from Ofgem.

Whilst we greatly value self-governance, an industry-led approach may not necessarily deliver a quicker outcome. The sheer number of participants that this requires to deliver a balanced view would not necessarily be a quick delivery under an industry led approach. It may be more appropriate to have Ofgem as the regulator to balance all views.

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 no firm views on this.

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.

We have no firm views on this.

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.

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We have no firm views on this.

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?

We would suggest taking the required time to correctly implement this set of proposed reforms in tandem with other ongoing significant reviews we are currently going through with the TCR and market wide HH settlement reform.

Thorough analysis and consideration not only allows sufficient scrutiny to identify and rectify unintended consequences, but also allows users to have sufficient visibility of an incoming framework and prepare themselves and customers accordingly.

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

We interpret the proposals as a continuation of the structure of the Charging Futures Forum and the related Task Force and Charging Delivery Body structures. We have been happy with the more recent forum meetings which have included updates to the TCR. Even as the TCR reaches its minded-to conclusion for consultation later this year, we would like to see continued interaction between the two sets of reforms in future coordination and engagement.