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Ofgem

By email only: FutureChargingandAccess@ofgem.gov.uk

Dear Patrick

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

Please find attached in the appendix to this letter our response to Ofgems consultation on its "Minded to Decisions" on the parts of its Access and Forward-looking Charges SCR.

Please contact us if there are any aspects of our response you want to discuss in more detail.

Yours sincerely

**Michael Harding**
Regulation Director

BUUK infrastructure

# Appendix

## BUUK Response to Ofgem's consultation on their minded to position on connection charging 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.***

**In Summary.**

We think the contribution to reinforcement for demand connections should only be removed in certain circumstances. This is where reinforcement is undertaken to meet wider load growth and to provide benefit to the wider customer base. In these circumstances we agree the costs should be socialised and recovered through DUoS charges. Reinforcement undertaken to facilitate the transition to low carbon technologies (LCT) in the home would fall under this description in most circumstances.

We think that under the current DUoS charging methodology (the CDCM) the socialisation and recovery of reinforcement through DUoS charges will lead to undue cross subsidies and discrimination between different classes of customer, e.g. non-domestic customers connected at high voltage subsidising reinforcement driven by domestic consumers. We explain this in more detail in section 5 below.

The term reinforcement is used to describe different types of works (see section 1 below). One such type of work often described as reinforcement is described as work undertaken in advance of need, i.e. to facilitate future new connections. We think costs for this type of "reinforcement" require different consideration. Generally such work is only for the sole/primary benefit of future customers and developers yet to connect. We question why existing customers should subsidise reinforcement of this type. The concept of an *Economic Test* should be considered as an approach to determine the level of support that such reinforcement should receive, i.e. linking support to the future revenues that the reinforcement will generate. Such an approach would protect the wider existing customer base from having to fund reinforcement that only benefits a narrow group of customers. The concept of an *Economic Test* is not new; such arrangement exists for gas connections and is enshrined in the Gas Act[1].

Proposals to reduce the contribution to reinforcement for generation connections appear to be inconsistent with the current CDCM, where generators already benefit through receiving DUoS credits - funded by DUoS charges to demand customers. Socialising reinforcement for generation further increases the subsidies funded by demand customers. We think support to generation should only be linked and limited to the extent that generation provides benefits to the distribution system.

We provide more detailed comments to Ofgem's question below.

### 1. Removing contribution to reinforcement for demand customers.

Reinforcement describes a range of works undertaken to facilitate new or augmented connections. We think these types of work broadly fall into four categories:

A. General reinforcement to provide additional network capacity to accommodate generic or evolutionary load growth by the wider customer base as a whole.

[1] Gas Act 1986, Section 9(1)(b)

B. Specific reinforcement to provide a specific step change in capacity required by an existing individual customer or a new connection request.

C. Works described as reinforcement to provide new infrastructure and network capacity to facilitate future new connections to the distribution system.

D. Works required to connect new extension assets to the existing distribution system.

We think it is important to distinguish between these different categories and to consider appropriate charging arrangements for each category.

*Category A reinforcement*

We agree with Ofgem's proposals to remove contributions towards the cost of reinforcement required to meet load growth brought about by generic 'societal' changes to electricity usage by the wider customer base. Such an approach is a fair and proportionate way of sharing the cost of work required to meet and supports societal changes on electricity use, such as that brought about by the transition to a net zero carbon future and where all customers are likely to change their electricity requirements in a similar way over time.

*Category B reinforcement*

We do not support socialisation of reinforcement costs across the wider customer base where the reinforcement is required to meet step changes in capacity required by a specific customer or by a specific class of customers. Whilst customers may be locationally inelastic, it does not mean that they should not bear the cost burden of reinforcement required to meet their specific needs.

For this type of reinforcement, we think the application of an "*Economic Test*", (whereby the level of financial support for reinforcement is linked to the future revenues that the reinforcement will generate) offers a proportionate approach that would limit the exposure of the wider customer base to excessive, inefficient costs. The use of an '*Economic Test'* is mandated by the Gas Act for gas connections.

*Category C reinforcement*

We are concerned that socialising the cost of "reinforcement" undertaken in advance of need to facilitate new connections will distort competition in connections. IDNOs will not be able to compete where the DNO recovers the cost of providing such "reinforcement" through its price control and across its wider customer base. Financial support offered by IDNOs will be limited to the future revenues that such works will generate. Again, we think the application of an "*Economic Test*" offers an alternative, more proportionate efficient approach that would mitigate some of the competition issues.

*Category D reinforcement*

For new connections, customers should fully pay the cost of connecting new extension assets to the existing distribution system. We currently experience instances where such costs have been socialised.

**2. Removing/reducing contribution to reinforcement for generation customers**

Under the current CDCM, generation already receives benefits of DUoS credits, cross subsidies funded by demand customers through their DUoS charges. Removing the contribution to reinforcement for generation in all but the extreme cases further increase the level of subsidy that demand customers give.

Generation should be required to fund *at least* an element of reinforcement costs associated with providing a connection. Generators should only receive subsidies from demand customers to the extent that they bring benefits and reduce the costs to the distribution system.

**3. Provision of significant infrastructure to support the transition to net zero**

Ofgem uses the example of EV charging infrastructure to highlight concerns that high connection costs present a barrier to investment and that this inhibits the transition to low carbon technologies. Ofgem state:

> *"…the location of electric vehicle charging infrastructure will be largely driven by the national road networks and the points at which consumers will need to charge their vehicles prohibitively high connection costs may inhibit the investment and therefore the deployment of electric vehicle charging infrastructure in some parts of the country".*

Whilst we agree that connection charges should not provide an ***undue*** barrier, for most connections such cost is small compared to the total cost of the overall project, with reinforcement only forming a small part of that connection charge. We acknowledge that in some cases connection costs are perceived as high and a barrier to connection. However, this does not mean that such barriers are undue, nor that existing customers should subsidise the cost of reinforcement through higher DUoS

In many instances there are broader underlying reasons why connections do not proceed. Taking EV charging infrastructure, it will be sometime before the number of EV vehicles reaches a critical mass and where investors in EV charging infrastructure are able to earn sufficient revenue to cover the cost of operation and investment. We think it is neither fair nor proportionate that the existing wider customer base should underwrite investment in securing connections in EV charging infrastructure for the wider national road network, particularly if such customers are fuel poor or vulnerable.

We do not doubt the important and essential contribution that electric vehicle charging infrastructure will make in facilitating the transition to net zero. If the provision of such infrastructure needs to be subsidised, then it should be through alternative mechanisms.

Where reinforcement costs are to be socialised, we think it is appropriate to consider whether this should be across the entire DNO customer base or, restricted to the class of customer benefitting from such infrastructure, e.g. recovered through DUoS charges to infrastructure owners which can subsequently recovered through their charges to users of the EV charging infrastructure.

**4. A shallow boundary does not provide DNOs with more flexibility on meeting future capacity.**

We do not think that moving to a shallower connection charging boundary provides DNOs with more flexibility. The current CCCM includes the concept of the '*minimum scheme'*. This allows a distributor to undertake works in addition to those required to meet a specific connection request. The current CCCM does not prevent DNOs from providing additional connection capacity by alternative mechanisms other than reinforcement.

**5. Recovery of reinforcement costs distorted by DUoS Charging methodologies**

Ofgem has divorced its '*minded to decision*' on the connection boundary from decisions on the reform of DUoS charging. However, the two are closely interrelated. We are concerned that changing the CCCM to remove contributions to reinforcement without reflecting such changes in the CDCM will result in undue cross subsidy and undue discrimination in the allocation of such costs unless changes are made to the CDCM.

This is because the current CDCM is largely reliant on the use of a hypothetical 500MW incremental cost model to allocate costs to network tiers and to customer groups:

- It only models the costs of providing a new 500MW increment which are significantly different from the costs of reinforcement.
- The CDCM does not model nor allocate reinforcement costs. Reinforcement is recovered in the round through trueing up modelled costs to match the allowed revenue.

Such distortions create a disconnect between the margins afforded to IDNOs by the current CDCM and PCDM and the level of reinforcement that IDNOs may need to finance in the uncertain world of transitioning to net zero. We are happy to provide Ofgem with further details of such distortions.

***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?***

Although demand customers may be locationally inelastic (with generation less so), it does not mean that they should not bear the burden of reinforcement costs they bring. We do not a think DNO's wider customer base should be required to subsidise reinforcement for future customers where such reinforcement does not provide wider benefits to existing customers.

The fact that Ofgem has examples of connections that have not progressed is evidence of the effectiveness of the current solutions providing a signal. In many cases customers (particularly generation will have located to cheaper to connect locations, i.e. the connection is not lost, it just connects elsewhere on the network).

**Demand**

For demand connections, charges for reinforcement are typically low when compared to the total investment required for the project of constructing new premises. It is only in extreme circumstances that the charge for reinforcement will present a real barrier that prevents the customer from proceeding with the connection. In such circumstances, we question why it is right for the wider customer base to subsidise the works, particularly if there are no benefits to existing customers.

**Generation**

Prior to the implementation of A&D fees, DNOs received a high volume of connection requests from prospective generators. This was in large part driven by such prospective generators seeking to identify points of the distribution system where generation could connect economically (although we recognise there may also have been an element of gaming by some applicants). At that time identifying connection points where connection charges were low was very difficult for anyone other than the DNO to do without making a connection request to the relevant DNO – even with the presence of "heat maps".

That some connection offers did not proceed because costs were high, but others did where connection costs were lower, demonstrates the success of such policy in that generators only connected to the locationally cost efficient parts of the distribution system.

Moving to a shallow/ shallower connection boundary transfers the risk and burden for inefficient investment to demand customers. It seems inappropriate that consumers should be required to subsidise investment for generation connecting to inefficient (higher cost) parts of the network.

Generators that have previously accepted non-firm connections to avoid reinforcement charges may be incentivised to request that non-firm connections are made firm – given that reinforcement costs will be socialised and recovered through DUoS charges to demand customers (in all but the High Cost Cap instances).

Paragraph 3.18 of Ofgem's consultation states:

> *"Generators are generally unwilling to pay towards reinforcement, so are left to choose a reduced capacity or non-firm connection. Alternatively, and subject to the ECCRs, generators that can delay are able to free ride on those willing to pay for reinforcement. With shallower charges, a more efficient outcome can be achieved with the DNO managing network capacity through strategic investment based on a more holistic understanding of their network.".*

ECCRs play an important role in addressing free riding. Second comers would need to delay by 10 years if they are to avoid free riding. This point should not be underplayed. The move to shallower charges, in absence of changes to DUoS charging methodologies, means that all generators connecting to the distribution system would free ride, with such free riding being at the expense of demand customers who will pick up reinforcement costs for generation in their DUoS charges.

***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?***

Facilitating the efficient development and investment in distribution networks has more to do with how allowances are set and administered under the price control framework than it does with where the connection charging boundary sits.

The proposals will not better facilitate the efficient development and investment in distribution systems. To the contrary, moving to a shallower connection charging boundary increases the likelihood that a DNO will need to undertake inefficient reinforcement. The fact that DNOs will fund future reinforcement will mean that customers may be less "*shy*" about overstating their capacity requirements in connection request.

We disagree with Ofgem's statement that *"…current arrangements hinder the efficient development and investment in distribution networks".*

We think the willingness of DNOs to fund wider works than those required for a connection are more likely to be determined through the RIIO price control mechanism and the level of certainty that the price control gives to DNOs on the recovery of investment.

The connection charging boundary relates to charges made through a connection offer in response to a request for connection. Such charges are calculated based on the costs of the *'minimum scheme'* required to meet the customer's electricity needs. However, the connection charging boundary does not prevent the DNO from undertaking and funding wider development of the network – so long as the charges to the customer are consistent with those required to provide the minimum scheme.

In their document "*Quicker and more efficient connections –next steps*"[2], Ofgem identified three models to facilitate earlier investment to support new connections. One model (Model 1) was *"…where the DNO makes anticipatory investment and the costs are recovered from*

[2] https://www.ofgem.gov.uk/publications/quicker-and-more-efficient-connections-next-steps Ofgem, 30 September 2015

*all consumers"*. Ofgem noted that such an approach was possible under the current regulatory framework stating:

> *"DNOs can already undertake this type of investment and we expect them to do so in circumstances when it's more cost-effective (and therefore cheaper for all consumers in time) than a piecemeal approach. This would be consistent with their obligation to develop and maintain an efficient and economic network".*

However, Ofgem also recognised the challenges of such an approach, stating:

> *"3.4. There are however difficulties in doing this. A DNO needs to forecast what it believes will happen in the future in order to justify why investing early is more efficient than an incremental approach. But forecasting the need for future connections is notoriously challenging: economic conditions, government policy and a whole host of other factors influence what needs to connect and where.*
>
> *3.5. If a DNO invests ahead of need and its forecasts prove to be wrong, then infrastructure will be built that is not needed. This expenditure will still need to be paid for by either consumers or, if we were to consider this spend inefficient, by DNO's shareholders.*
>
> *3.6. We wanted to know what could be done to give DNOs sufficient visibility and certainty to know when early investment was appropriate.*
>
> *3.7. Lots of stakeholders supported this approach, but many also recognised the inherent dilemma facing the DNOs and felt that this could place too much risk on the wider customer base of having to pay for 'stranded assets.*

Proposals to change the connection charging boundary do not address the challenges identified by Ofgem in their analysis of 2015.

**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?**

We do not agree that having certainty of price reduces the potential for capacity to be provided by other means such as flexibility procurement. Certainty of price gives flexibility providers a cost benchmark of a notionally efficient frontier to compete against. What is important that such prices are reflective of costs. We think customers want certainty on price and availability rather than price volatility or availability risk. One of the key criticisms of the EDCM is that it introduced year on year volatility and unpredictability for use of system charges at EHV.

Customers want (need) predictability in the charges that they pay for energy. Customers will require a significant reward for accepting volatility (e.g. very cheap prices, or better availability in a scarce market). Many businesses will agree hedging arrangements with their suppliers to secure price stability and predictability.

Certainty of price, on its own, does not reduce the potential for capacity to be provided through flexibility procurement. It may require a different approach for the setting of prices, i.e. average pricing will typically always yield greater price stability – but this is no different to the trading arrangements for generation where spot prices will have more volatility than contracted decisions that may include hedging arrangements.

**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?**

See our response to question 3b.

**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?**

To achieve consistency between transmission and distribution charging it makes sense that this should be considered alongside wider charging reforms.

Notwithstanding this, we think it is right that those who cause the costs to be incurred on the transmission system should pay the costs. Therefore, where connections to the distribution system cause costs to be incurred on the transmission system, then it makes sense that those who cause such costs should pay the price. However, further consideration is required on how such costs should be recovered from such customers:

- Should the transmission operator charge the customer connecting to the distribution system directly? or,
- Should they charged to the distributor, and the distributor determines how such costs should be recovered and from who?

We think connection charges relating to transmission reinforcement may fall outside the scope of provisions set out in sections 16 to 23 of the Electricity Act 1989 ("the Act"), since this only relates to costs incurred by the distributor. Section 19 of the Act states:

> *"Where any electric line or electrical plant is provided by an electricity distributor in pursuance of section 16(1) above, the distributor may require any expenses reasonably incurred in providing it to be defrayed by the person requiring the connection to such extent as is reasonable in all the circumstances"*

Additionally:

- ECCRs exist in exercise of powers conferred by section 19 of the Act.
- The current drafting of licence conditions 12 to 14 (which requires all connection costs to be treated as requests under section 16(1) of the Act).

The above provisions do not mean that such costs cannot be recovered. However, this may need to be through a different mechanism than the provisions set out by sections 16 to 23 of the Act. Leaving the legal analysis to one side, a connection charging boundary that:

- socialises the cost of reinforcement (subject to the High Cost Cap for generation) across the wider distributor base; but,
- charges upstream transmission costs, (will seem a deeper charge for distribution connections).

gives a confusing, irrational message about the shallowness of the boundary.

**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)? What are the arguments for and against further considering introducing liabilities and securities to mitigate this risk?**

We think the removal of contributions for reinforcement dilutes investment signals and increases the likelihood of inefficient investment. This is because customers will be less 'shy' about asking for higher capacity in their connection requests when they don't have to pay for it.

We do not think that a liabilities and securities mechanism will mitigate the risk. The liabilities and securities mechanism only applies during the construction phase of a connection. Once the connection works are complete and the site is energised such requirements fall away and the DNOs is exposed to the possibility that the customer may not utilise the capacity provided. In most circumstances we see the application of such arrangements as unduly burdensome and excessive. In distribution, connection works are usually over a much shorter timeframe. It is only very rarely that demand connections do not proceed to completion once started. Arrangements already exist in the CCCM for connections that are deemed speculative – these include the capitalised cost of operation and maintenance.

One way to mitigate the inefficient investment risk is through locking the capacity requested in a connection notice to the capacity charge in the tariff for a minimum period (e.g. 5 years). This could be through prescribing that the connection capacity requested be used to determine the capacity charge for a minimum period. This would mean that customers bear some of the risk in requesting additional 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?**

We think that the absence of changes to the ECCRs, or a solution to the issue, will cause undesired consequences for subsequent connection customers (second comers). The initial connection customer will not contribute (or make a reduced contribution) to any reinforcement associated with the provision of their connection. This cost will be borne by the distributor. Second comers wishing to utilise this reinforcement will then be required to fund the initial reinforcement as the DNO becomes, under the ECCRs, an ‘eligible person’ who is required, by law, to demand payment for reinforcement from the second comer. This may lead to situations where customers are incentivised to apply for connections ahead of time to ensure that they are not required to fund reinforcement works which may, in an intervening period, have been triggered by another customer.

Although we think that the incentive to behave in this manner is likely to be minimal the outcome that second comers fund reinforcement when the first comer hasn’t, is an undesirable outcome which should be addressed.

Currently the ECCRs mandates that customers who connect under the current charging arrangement will be entitled to a rebate against the costs they have paid as an initial contributor for reinforcement and network extension assets where and to the extent that such works are used to provide a connection to a second comer.

This will still be the case post implementation of a new connection charging boundary since a first comer who connects after April 2023 will have funded extension assets, which in due course may be utilised in part to provide a connection to a second comer. These arrangements, nor the provisions in the ECCRS can be changed through a change in the connection charging boundary.

## Definition and choice of 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?**

We agree in principle of having well defined access rights; however, it is not clear to us how these will work in practice. Ofgem's minded to decision to remove the contribution to reinforcement makes it difficult to see how customers could benefit through reduced connection charges. Therefore, we think the customer benefits of accepting non-firm access can only be reflected through lower DUoS charges.

Giving customers guarantees on the maximum number of hours for which a customer's access can be curtailed well in advance and on an enduring basis requires:

(a) accurate system data to make such assessment; and/or

(b) distributors to set large "headroom margins" between the level of curtailment offered and the expected demands on the distribution system.

This could result in redundant capacity on the network.

Whilst by acccepting non-firm arrangements customers may be able to connect sooner that they would otherwise, it is difficult to understand why customers would accept non-firm access as an enduring arrangement unless there are clear benefits. Clarity is required on whether arrangements reside with the customer, or the customer's premises, i.e. on what basis do they continue following a change of occupier?

Appropriate arrangements need to be in place where curtailed access arrangements are agreed between DNOs and IDNOs in respect of customers connected to IDNO networks.

To control and manage compliance with non-firm connections and time profiled access arrangements physical control equipment will be required to prevent exceedance of agreed arrangements. Control equipment to manage access to the distribution system should form part of the distribution system, i.e. it should not form part of the metering system under a supplier's control. Distributor requirements to manage constraints on their networks may conflict with those of suppliers seeking to manage their energy positions. Therefore, two types of controls may be required.

**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?**

Yes, but appropriate mechanisms, incentives/penalties are required to ensure compliance with time profiled access, i.e. that agreed capacity limits are not exceeded thereby putting the wider system at risk.

We believe that time profiled access needs to be built into DUoS charging reform. For example, different capacity (or demand) charges for different times of the day.

**Question 4c: Can you identify any benefits to shared access rights that we have not considered, which could impact likely take-up?**

Where generation enters flexibility arrangements with a distributor to use its output to offset demand on the upstream network, such arrangement could provide the same effect as a demand customer curtailing their demand. In such cases the generator may mitigate the need to reinforce the upstream distribution and transmission systems (or allows additional customers to connect).

Where generators enter such shared arrangements and alleviate upstream network constraints and bottlenecks, it seems appropriate that they should be able to avoid the requirement to pay TNUoS charges and be rewarded for the service they provide.

**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)?**

In some circumstances the options available to a customer seeking a connection (at least in the short term) could be either (a) a non-firm connection; or, (b) no connection at all. For such customers, the benefits of accepting non-firm arrangements as a short term solution provides are clear. However, if reinforcement is to be socialised then there is no benefit to consumers accepting such arrangements on an enduring basis. Why wouldn't they simply request the distributor to make such connections firm within a reasonable time?

We note Ofgem's preference is to reflect the value of non-firm access in connection charges only. Given the minded to decision is to move to shallow and shallower connection boundaries and remove the contribution to reinforcement, it is difficult to see how customers will be rewarded through the connection charge for accepting non-firm arrangements on a more enduring basis.

To provide customers with a lower level of firmness, but to charge them the same DUoS charge as customers who have a firm connection would appear to be unduly discriminatory, particularly if such arrangements for new connectees are continued beyond the short term. Further consideration is required on how such customers should be compensated/ rewarded for accepting 'substandard' connection arrangements on any basis other than the short term.

Further work is required to quantify the value that non-firm or time profiled access could bring to the future operation for distribution systems. For example:

- Arrangements for non-firm or time profiled access where the existing network is constrained, and where such arrangements may defer the need for reinforcement and/or allow another customer to connect to the system.
- Mechanisms for determining the financial value of curtailment arrangements, the value of deferred reinforcement on an annual basis. It seems wrong that the value that a curtailed customer brings should be determined on a long run basis where such benefits may not be provided or required in the long run. It makes more sense that such benefits should be calculated on a short run marginal cost basis.

**Question 4e: Do you have any comment on our proposal to not prioritise the introduction of new transmission access choices as part of this Significant Code Review?**

No comment.

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

No comment.

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

We think the implementation timescale of April 2023 is on the edge of being unachievable.

Key to meeting such timescales will be clarity on what Ofgem's final decisions are. This needs to include a clear strategy and plan for delivery. Any delays in publishing such decision will put an April 2023 delivery date significantly at risk.

## Proposals for TNUoS charging for Small Distributed Generation

**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?**

Where generation on the distribution system brings cost to the transmission system then we think it is right that such generation should directly or indirectly bear the burden of such costs - irrespective of the size of the generation.

However, we do not agree with Ofgem's statement in Paragraph 5.18 of their consultation: that *"All generation makes a similar contribution to system flows…"*. As an illustrative example:

> *Consider scenario A where local demand always **fully** utilises the output from existing local generation. To facilitate this the existing local generation constrains its output so that it does not exceed the local demand - such an arrangement might be the subject of a 'flexibility' contractual arrangement with the distributor to alleviate the need for reinforcement of the distribution system. In this scenario the local generation never exports onto the transmission system.*
>
> *Now consider scenario B, where additional generation is connected to the distribution network in scenario A and has the effect that:*
>
> - *the total generation output is greater than the local demand; and*
> - *electricity is exported onto the upstream transmission system as result of the connection of the new generation.*

In the above example, under scenario A, irrespective of its size, generation does not export and does not contribute to electricity export flows onto the transmission system. In scenario B, it is only the additional generation that has been connected, again irrespective of size, that drives the export of electricity onto the transmission system. The additional generation referred to in Scenario B could be a single connection or an aggregate of connections (some less than 1 MW, some more than 1 MW, some with an export MPAN or some that operate 'behind the meter' spilling surplus electricity onto the network.)

As we understand Ofgem's 'minded to decision':

- in scenario A, all generators are deemed to contribute to flows on the transmission system and therefore liable to pay TNUoS charges based on their gross output, i.e. the effect that demand has on that output is not considered), and
- in scenario B, existing generators and new generators are deemed to contribute on an equal basis to flows on the transmission system (subject to size) and are therefore equally liable for TNUoS charges in respect of exported electricity.

We do not understand the rationale underpinning Ofgem's conclusions and why Ofgem consider it to be to be fair, and lead to efficient network operation, to require distribution system connected generation to pay for transmission network it does not export onto, and for charges to be based on gross export.

Further, we do not think that generation connected to a GSP that does not export, should pay TNUoS because another GSP in the same GSP group does.

Also, as an aside, not all generation connected to the distribution system contributes to the efficient operation of the distribution system in a positive way. Whilst some generation may have the effect of reducing the need for upstream reinforcement, other generation will drive the need for reinforcement and increase the cost of operating the distribution system. Therefore, whilst generation will impact the distribution system (as well as the transmission system) differently from a DUoS charging perspective it is treated the same.

To apply a threshold whereby different charging principles apply to generation above that threshold to those that apply to generation below it, appears to be unduly discriminatory. Whilst paragraph 5.12 of Ofgem's minded to decision sets out differences in the wider treatment of generation at 1MW or above, compared to generation below 1MW, we do not understand relevance of these in determining the different costs that generators bring.

The consideration of TNUoS charges for generation connected to the distribution system should not be undertaken in isolation from reform of DUoS charges for generation, which were largely implemented as an ad hoc arrangement to the CDCM (the impact of generation is not modelled by the CDCM). We think that reform of transmission charging for generation connected to the distribution system should be considered at the same time as reform of DUoS charging for generation, and at the same time as wider reform of TNUoS. It is not clear to us that the weaknesses of TNUoS charges identified in paragraph 5.1 of their consultation are properly addressed by charging TNUoS to generation (above 1MW) connected to the distribution system.

**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?**

No, the concept of a threshold, wherever it is, distorts the treatment of different generators.

Although moving the threshold to 1MW means more generation will be liable for TNUoS, it does not address the issue around discriminatory treatment between generation above and below a threshold. Nor does it address the issue that not all generation is the cause of export onto the transmission system. Such an approach leads to what are in effect cross subsidies where generators above the threshold must pay for transmission system used by generators below the threshold.

Separately, we think the moving of the threshold to 1MW may incentivise perverse behaviours. For example generators may seek to connect generation with an output just below the 1MW threshold (or indeed multiple generation connections each below that threshold) to avoid TNUoS charges.

We do not see the logic in Ofgem's argument that because 1MW is the threshold at which generators can participate in the Balancing Mechanism, it is also the threshold for TNUoS, a different set of charges, nor that because generators are required to be on a register, they somehow bring costs that smaller generators do not.

Also, please see our response to Question 5(a) above.

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

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 views on pros and cons. Are there any options we have missed?**

As we have set out in our response to Question 5(a), we disagree with the statement that "*All generation makes a similar contribution to system flows*…". We do not think all generation drives the export of energy onto the transmission system in the same way. We think the position set out in paragraph 5.8 of Ofgem's consultation over-simplifies the issue and fails to recognise the different benefits that generation may bring. Where generation directly causes energy to be exported onto the transmission system, then it is reasonable that it should bear the burden of the costs it brings.  However, we believe there will be circumstances where it is appropriate to discriminate, and where SDG should not be liable for transmission charges (irrespective of its size).

**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?**

No comment

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

The four options identified by Ofgem are on the presumption that all generation at 1MW and above is liable for TNUoS charges. We disagree with this base assumption and are of the view that generators that do not use the transmission system should not pay TNUoS. Therefore, we cannot support the options put forward by Ofgem. We note Ofgem's concerns that a *"…DNO led model appears to be unnecessarily complex…".* However, it seems to us that a DNO (DSO) led model would appear to offer more future potential for developing full chain flexibility for the whole system.

Options 1 and 2 appear to focus only on the operation of the transmission system.

We agree that whatever option is selected there are dual drivers for generation.  The first is the value that the kWh output has to suppliers in supplying its consumers, the second is the value that the generation has to distributors in managing their distribution systems.  Whilst in many circumstances the value of producing output for supplier and distributors will align, there will undoubtedly be circumstance where the values will conflict, for example:

- where a supplier can purchase energy cheaply for its customers (compared to its other sources of generation), but where the production of electricity by that generator does not support flexibility and ultimately bears costs.
- where operating generation as part of managing a local distribution system conflicts with the actions that an ESO may wish to undertake in respect of transmission system.

We think more work is required on option 4 and on considering a holistic solution which will incorporate the benefits of flexibility.

**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?**

No comment.