

TCI Renewables Limited

Scenario 1: DUoS funded Anticipatory Investment, No Initial Customer

TCI supports the concept of DNOs being incentivised to invest strategically in necessary network upgrades, but as referred below must only be done in conjunction with a review of the allocation of such capacity and sharing of interconnection queue information. The conclusion of the Electricity Market Review (EMR) had a fundamental impact on the renewable generation market and there is a critical need to therefore reflect and acknowledge the shift from a qualifying subsidy based system – Renewable Obligation Certificates (ROC) to a competitive process of Contract for Difference (CFD) allocation with common law contracts.

Strategic investment tends to reduce DUoS charges by allowing a more efficient and coordinated network to be built, rather than undergoing smaller and more frequent reinforcement works in an ad hoc manner. TCI believes that it is logical for network reinforcement to be approached in this more efficient and coordinated way, however the introduction of CFD has a material impact on the level of confidence that now exists about any single project securing a CFD contract.

TCI is strongly of the view that ‘queue reform’ needs to take place, such that speculators are prevented from hoarding grid capacity for projects that are simply not moving forward. This problem will only become more acute in the context of the Contract for Difference (CFD) allocation process. It does not seem fair and reasonable that a project that repeatedly fails to obtain a CFD contract is able to maintain its grid queue position. Other jurisdictions, notably in the United States, by way of the Federal Energy Regulatory Commission (FERC) pro-forma tariff impose milestones (typically referred to as ‘non-technical milestones’) on generators to move forward or be removed from interconnection queues, or be overtaken by projects able to proceed. The effective administration of grid capacity will ultimately result in improved confidence that capacity will go to those able to utilize it, as opposed to being hoarded by early moving speculators that lack the capability to progress projects. In the absence of queue reform, speculative investment by the DNO stands a considerably higher probability of being a stranded investment. It is evident therefore that the material impact of the move from ROCS to competitively allocated CFDs demands to be an integral and fundamental cornerstone to the analysis of this consultation.

Q1. Would a DNO be sufficiently confident about future connections demand and the benefits to DUoS customers to justify this approach? If so, in which circumstances?

It needs to be established what type or what level of information DNOs require to enable them to feel confidence about future connections. The DNOs have made good efforts to commence a more informed dialogue with generation customers by way of the various Distributed Generation forums. However, the benefit of such forums is extremely diminished by the DNO’s constraints in respect of sharing the full detail of their interconnection queues. Restrictions of confidentiality on the DNOs sharing their interconnection queue needs to be lifted as quickly as possible. The National Grid TEC register is an excellent tool for developers to identify the potential transmission capacity constraints associated with a particular region or location and it is hugely detrimental for this not to be shared at distribution level. As referred above, DNO

confidence is also diminished if DNO's are not able to effectively and efficiently remove time wasting projects from their interconnection queue. DNO's should, be given greater powers to:

- i. Share the full details of their interconnection queue (name of customer, MW size, location of generator, voltage of connection, date of application and date of acceptance and date of proposed connection
- ii. Have greater abilities to remove generators not moving their projects forward, non technical milestones could include; i) planning submitted within 12 months of acceptance; ii) planning obtained within 24 months of acceptance; iii) CFD obtained within 24 months of acceptance etc.
- iii. Allocate such relinquished capacity as a priority to generators lower down the queue that have satisfied the 'non-technical milestones'

If reform of the manner referred above does not take place then the situation as exists today whereupon the industry believes further investment is required is a totally misplaced opinion in the context of there being thousands of MW in the queue that are not progressing and will never see the light of day. The most cost efficient method of creating new capacity is to remove speculators from the queue.

The CFD contract has a very robust test for project progression, referred to as the Milestone Delivery Date occurring twelve months from contract execution. It seems ludicrous that a generator may have its CFD contract terminated by virtue of failing the MDD yet still hoard network capacity. This surely equates to culpable negligence on the part of the regulator to allow such a perverse course of events that could be the basis of the consumer paying for network reinforcement. The need for queue reform is evident and it is shocking that this did not take place under EMR.

Q2. What other barriers are there to DNOs taking this approach? How might these be overcome?

As referred above, we are firmly of the view that queue reform and sharing of the queue information removes a lot of the issues related to removal of barriers. The DNOs advise TCI that they are prevented from sharing the queue information by virtue of the wording of their licenses. OFGEM should direct them to share the information. Equally, they represent reluctance to remove speculators given that they fear being held to account for not treating all generators equally. If OFGEM were to impose a clear and concise system of 'non-technical milestones' as referred in response to question 1, then the fear is removed.

A clearly perceived barrier, we believe, is the risk to the DNO if the anticipated connectees do not appear or progress their projects. In this circumstance, we believe the DNO loses revenue under the ED1 efficiency incentive. However, further clarity is needed on how this mechanism would work in this instance.

We suggest that customers connecting to a reinforced network paid for by DUoS customers, pay back the appropriate proportion of these reinforcement costs in order to refund the DUoS investment, as per Scenario 2. In this circumstance, not only do DUoS customers benefit from a more efficient and cost effective approach to reinforcement, but they also benefit from some reimbursement of costs when customers choose to connect. The second comer rule is already an established mechanism and should therefore be utilized under this scenario to make grid reinforcement mechanisms more appealing to

Ofgem, Government and DNOs.

The question remains as to how this scenario addresses the issue of transmission reinforcement. The industry is fully aware that many DG capacity restraints are due to restrictions on the transmission system. As a result, any DNO efforts to improve the capacity will need to be done in coordination with National Grid, or only in areas where transmission restraints are not felt. This approach however, would fail to address the restrictions in place across most of Scotland, and more recently in the South West. As stated previously, waiting many years for transmission upgrades reduces the certainty of projects going ahead in the future. We are firmly of the view that queue reform is the low hanging fruit to expedite a more efficient use of existing transmission and distribution assets. The removal of slow moving projects needs to be a priority. For example, a project should be obligated to obtain a CFD contract or risk being removed from the queue. Evidently, if a project is bid into CFD and does not obtain a contract then that generator is de-facto uncompetitive and should be prevented from hoarding capacity and raising the costs of other projects and ultimately consumers.

Scenario 2: DUoS Funded Anticipatory Investment, One Initial Customer

Scenario 2 does not seem entirely dissimilar to Scenario 1, for the following reasons:

- Anticipatory investments in both scenarios rely on having confidence in the future pipeline of projects in the area.
- Both scenarios are initially funded by DUoS customers, in the hope that subsequent cost savings will be made by building a more efficient and coordinated network.
- Scenario 1 doesn't offer reinforcement payback to DUoS customers, however it is suggested that subsequent connectees should pay their share of the reinforcement cost, much like in Scenario 2, thereby rendering them similar.
- The difference in trigger is one solitary connectee, which is arguably an arbitrary trigger when considering strategic reinforcements.

Taking these considerations into account, the two Scenarios seem very similar, apart from the Ofgem endorsement required before committing to network reinforcement expenditure (if the suggested RAV Buyback Model is pursued).

Again, it comes back to the realities of the removal of the ROC and the introduction of competitively allocated CFD contracts. Any approach needs to reflect the reality that there is simply insufficient funding for all projects to gain a CFD. The result will be that there are winners and losers, as referred in our response to question 1 projects that can obtain a CFD should be provided elevated priority to the system over projects that evidently fail to be competitive.

Q3. What are your views on this type of approach and the RAV Buyback Model? Are there any elements which are essential, not required or should be changed – and why?

We believe that the RAV Buyback Model could work, because as stated previously, we believe that the second-comer rule should be utilized to reimburse DUoS customers. Nevertheless, our concern is regarding the “premiums” that could be imposed. Paying “premiums” mean that the base cost of electricity from DG sources would go up and there is a fear that the idea of premiums could be exploited at the detriment of DG connection customers. Connection customers should pay their fair share, through the second comer rule, and any premium (if this route is chosen) should be very transparently calculated to reflect the risk taken by the DNO, on behalf of DUoS customers, in making the strategic investment. Such premium can therefore only be applicable once there is high confidence that the associated reinforcement is entirely valid in the context of the dire need for ‘queue reform’ as referred to in our response to question 1 and 2.

Q4. Please give details of any projects or schemes this type of arrangement could have helped progress which would have not otherwise gone ahead?

It is clearly; i) the need for publicly available information about interconnection queues, ii) lack of firm ‘non-technical milestones’ [to be satisfied to remain in the queue] and iii) the

removal of slow moving projects; that will avoid any such issues. The realization that the conclusions of EMR have been a game changer for the DG sector needs to be more acutely addressed.

Q5. What would justify requiring subsequent connection customers to only be able to connect to the new, enhanced part of the network?

It is believed that this is against the Electricity Act, where connection offers must offer the lowest cost technically achievable (LCTA). Forcing a customer to potentially take a longer, more expensive route to connection, which is not the LCTA, is surely against the Electricity Act. Regardless of the concern however, we believe that once anticipatory reinforcement is made, it is highly likely that if a project is anywhere near the area, the reinforcement will be the LCTA connection. Though, 'time to connect' is a factor that only the generator can assess the value of, and thus in certain circumstances a generator may well be minded to pay in excess of the LCTA in order to derive an earlier connection. In that respect, it is imperative that the choice should remain with the generator.

Q6. What would justify a DNO charging a premium to subsequent connection customers to reimburse DUoS customers for the risk they bear in funding this work? What might be the impact of this? How should the premium be calculated?

See answer to question 3. The risk reward calculation should be made as part of the initial regulatory approval of the spend.

Q7. Over what time period would it be reasonable to expect DUoS customers to be reimbursed for their initial funding?

The five-year threshold seemed arbitrary and presented a disruptive discontinuity. We propose that a longer timescale should be explored, but an important principle of this would be a tapered arrangement rather than a sharp cut-off. This could be fairly achieved by applying a depreciation factor to the assets, in recognition of their age and utilisation factor before the second comer arrived.

Q8. When might it be appropriate for a DNO to have an upfront revenue adjustment to cover this type of scheme? Or should existing mechanisms be used?

The LCTA obligation should trump any obligation on the first comer to fund future capacity that may or may not be utilized by a third party in the future. It is for the DNO and regulator to determine future need and build for it, not the initial connection customer.

Q9. Do you consider that this approach would have any implications on competition in connections?

No.

Scenario 3; Customer Funded Anticipatory Investment, One Initial Customer

Q10. What are your views on the DevCo model and process set out in Appendix 2? Are there any elements which are essential, not required or should be changed – and why?

The model seems interesting and ultimately the market will determine whether it is viable. Our general view is that it is for the market to determine this not the regulator. There are several commercial challenges around this mechanism though, chiefly the topic of DevCo's hoarding unused capacity in a speculative manner or by virtue of inability to execute the business model. Therefore, it is an imperative that 'non technical' milestones (as referred in response to question 1) and effective reform of the level of information shared by DNO's is a pre-condition to the floodgates being opened to multiple DevCo 'infrastructure only' applications. Otherwise, the result will be similar to the current predicament that DNO's feel the networks have no capacity, whereas if slow moving, speculative and dead projects are removed then our view is that this will release more than sufficient capacity to utilise the entirety of funds remaining under the Levy Control Framework (LCF). The mindset of believing that the existing system is at its limits is misplaced and must be fundamentally addressed by making it impossible to hoard capacity without using it. Use it or lose it has to become the driver to 'sweating the existing assets'.

Q11. Please give details of any projects or schemes this type of arrangement could have helped progress which would have not otherwise gone ahead?

We believe there is a project in the Republic of Ireland where this model was applied to good effect.

Q12. What would justify requiring subsequent connection customers to only be able to connect to the new, enhanced part of the network?

Nothing. LCTA has to be the obligation imposed on the DNO, with the option that the customer can elect for a more expensive option for alternative preferences at their sole discretion. The cluster process in Northern Ireland is surely an example of a well intentioned process that is flawed in the context of the demise of the Northern Ireland ROC, introduction of competitively allocated CFD contracts etc. It is not for Ofgem or the DNO to choose the winners and prevent LCTA based competition.

Q13. What would justify a DNO charging a premium to second-comers to reimburse the customer? What might be the impact of this? How should the premium be calculated?

This is a topic for the DNO and regulator to determine in the approval of spend regarding future improvements to facilitate reinforcement for future need. However, in the context of

there being a substantial quantity of stalled projects choking up DNO connection queues that in reality contribute to the perception of the need for reinforcement, the proper administration of the interconnection queue would appear to be pre-condition to any analysis of premiums. Refer to our proposals in response to 1 and 2. The networks have capacity, it is purely being hoarded by stalled projects by proponents incapable of progressing them yet continuing to speculate that their high queue position will somehow deliver value in the future. This is a ridiculous basis on which to base future reinforcement investment that offers a premium to the DNO.

Q14. Over what time period would it be reasonable to expect the customer to be reimbursed for their initial funding?

That is a question for the DNOs and Regulator.

Q15. What would justify the initial investor being permitted to restrict the type of schemes that would connect using the infrastructure it has paid for? For which type of schemes might this be appropriate?

This does not seem equitable as it opens the door to market manipulation.

Q16. Do you have any comments on the recommendations proposed in Appendix 3 to enhance consortium arrangements? What would justify these recommendations? Are there any other changes which would support consortium arrangements?

We are aware of a number of consortium arrangements within the DG industry, facilitated by DNOs or Regen SW. However, we are acutely aware of the complexities of these arrangements, specifically the need for someone to underwrite the scheme. We have been informed that a number of trial consortium arrangements have failed, therefore we do not believe these should be relied upon for the development of national infrastructure. The complexity of this type of approach is considerably complicated by the demise of the ROC and the move to competitively allocated CFD contracts, where there is no certainty that any or all of the participants will be able to move forward.

Scenario 4.1: Active Network Management

Q17. What role, if any, could changes to engineering standards play in helping to accelerate the connections process without damaging reliability levels? In what circumstances would this be appropriate?

Once stalled projects and speculators are removed from the interconnection queues TCI believes that there is significant headroom that could be utilized to increase available capacity on the network. The EHV network needs to be operated more actively. It is surprising that some DNOs are not pursuing these options. There are activities that have been occurring in Scotland for 5+ years that are not being pursued in the South West. There are solutions that have been working in Germany and Japan for decades, but the learning curve and adoption of these methods in the UK seem to be incredibly slow. The industry needs to know when the UK is going to have an actively managed DSO network

with reactive power capabilities, wind versus solar profiles etc. Utilising these routes could release another 20-30% before reinforcement is required.

Q18. Which particular standards might most benefit the connections process if changed?

No comment.

Scenario 4.2: Management of Connections

Q19. What benefits might the introduction of assessment and design fees bring?

It is clear that the introduction of upfront assessment and designs fees would reduce the level of speculative applications, thereby allowing DNOs to respond faster and more comprehensively to a smaller number of applications. It would also prevent developers from speculatively absorbing capacity when they may not have a serious intention of using it. We therefore strongly advocate the introduction of a design fee that prevents a high level of speculation. £25,000 would seem appropriate and that this should be applied retroactively to all projects in the queue – this will assist in flushing out stalled projects and speculators. This is the most cost effective way of creating additional capacity at no cost to the consumer. It seems entirely equitable that such ‘relinquished capacity’ goes to those projects lower down the queue that have satisfied their project milestones.

Q20. Could more flexibility in the way assumed available capacity is calculated help accelerate the connections process? Are there any other improvements to be made in how DNOs manage interactivity between schemes looking to connect to the same part of the network?

Recognising the relationship between solar production and wind production will create additional capacity on the network. Obviously, solar productivity is most prominent in the summer, wind in the winter, therefore flexible arrangements need to be offered to recognize these disparities. We support the flexible connection models currently being progressed by DNOs, but we urge for these mechanisms to be offered as ‘business as usual’ as quickly as possible within DG work plans.

Q21. When might it be reasonable to withdraw capacity it has previously offered to customers?

We recognises that it is difficult for DNOs to terminate connection agreements if the developer is not willing to voluntarily return unused capacity. We would welcome clear guidance from Ofgem to help provide confidence to DNOs that appropriate termination of offers is consistent with the economic and efficient management of the distribution network. As referred in our response to Question 1 & 2, the introduction of ‘non-technical milestones’ will make the topic of termination much clearer and less open to dispute.

Imposing such project milestones to ensure that the a DG project is progressing towards build out is crucial to gaining confidence that existing network assets are utilized prior to further investment. We would welcome the opportunity to discuss these project milestones in further detail if DNOs do not feel they have already received sufficient guidance from the industry – such guidance is often mired in commercial self interest when the reality is clear, it is totally unacceptable to speculate with network capacity without moving the associated project to completion. For example, anyone not qualifying

their renewable project into the next CFD round should be removed from the queue.

Q22. Are there any other changes which could be made to reduce the need for reinforcement?

Where network constraints arise not from thermal capacity limits but system stability considerations such as voltage, DNOs need pro-actively to seek out the most cost-efficient ways of addressing these issues. We understand, for instance, that the WPD network is “closed for business” not because of thermal constraints, but because of voltage issues. The DECC-Ofgem chaired Smart Grids Forum (Workstream 6) is making recommendations on how DNOs could procure reactive power from connectees, including distributed generation and storage, and this agenda needs to be progressed with urgency.

Where a DNO is not using such services to alleviate grid constraints, there is a question as to whether they are operating and allocating network capacity in the most economic and efficient manner.

Scenario 4.3: Deferral of Connection Charges

Q23. What would justify a DNO offering more flexible terms for connection charges? What might be the impact of this?

More projects may come forward if there were minimal upfront payments, however there is a risk that speculative applications could further increase if down-payments were minimal. Deposits would need to be kept high enough to ensure that speculative applications didn't increase under deferred payment circumstances.

Q24. What type of schemes would most benefit from this arrangement?

It is difficult to justify any particular group of projects being the beneficiaries of this type of scheme as it clearly distorts competition in the context of CFD allocation and is thus questionable in the context of EU competition and state aid rules.

Q25. What could be done to protect other customers from picking up any costs which cannot be recovered from the original connection customer?

Refer response to question 24.

Q26. Are there any other measures that would reduce the cost impact of connecting to the network?

Removal of speculators from the existing grid queues is the low hanging fruit and will relinquish thousands of MW of capacity across GB, which should be allocated equitably in queue priority to those lower in the queue that can satisfy the 'non-technical' milestones referred in our response to question 1.

This is a strategically very significant concept – it relates to congested areas of grid where generators need to take a flexible connection in order to avoid paying unaffordable reinforcement costs. Instead of “leaving it at that,” the appearance of many generators on flexible connections would act as a signal to the DNO, and justification to Ofgem, that queue reform (ie removal of speculators) is a condition precedent to reinforcement. It is ludicrous that lower queued projects are connected and intended to be actively managed while higher queued un-built projects hoard capacity. TCI developed a 30 MW project of which 10 MW is to be ‘actively managed’ due to a higher queued biomass plant (remaining un-built some six years after gaining planning consent). The reality is that the 10 MW would not be curtailed as the headroom from the un-built biomass plant would be utilized first. We would be happy to meet with Ofgem and provide the specifics regarding this scenario and equally provide an example of another project where the costs to connect are substantially higher than they otherwise would be in the event that queue speculators were removed from the queue.

Summary

Q27. Which of the arrangements described above would deliver the greatest benefit to the connections process without placing additional risk or cost on the generality of customers, and why?

Swift and appropriate management of the existing network capacity:

1. Direct the DNO's to publish the full queue information, in a style similar to the National Grid TEC Register
2. Remove the ability to hoard capacity for slow moving projects and speculators
3. Acknowledge the realities of a limited LCF and competitive allocation of CFD contracts in any review of the process of allocation of network capacity
4. Introduction of reasonable financial barriers to commencing an application (design fees, acceptance fees etc)
5. Avoid mechanisms that divert the DNO away from obligations to offer LCTA connection offers

Q28. Should wider benefits beyond energy system benefits (such as those provided by NTBMs) be taken account of in DNOs' or third parties' considerations of any of the measures or mechanisms described in this paper?

Yes, wider benefits should be considered, both from within the energy system and beyond. Within the energy system, benefits include:

- increased generation capacity to increase national capacity margin
- increased competition in generation to improve market liquidity
- strategic progress towards decarbonisation of the energy system

Benefits beyond the immediate energy system are far reaching, for example, greater community engagement with and public buy-in into development of national infrastructure.

Q29. Do you have any other suggestions for delivering quicker and more efficient connections?

Refer to our response to question 1, 2, 26 and 27. We would happily meet with Ofgem to discuss the content of our response, in particular the scenarios referenced in response to question 26 regarding our projects being commercially hampered by higher queued speculators that remain in the connection queue un-built (in one case some six years after gaining planning consent).