



14 May 2015

Dear Ms Frerk,

Green Frog Power welcomes the opportunity to comment on Ofgem's open letter on Quicker and More Efficient Distribution Connections. We are very pleased that the issues raised in this letter are being addressed so thoroughly by Ofgem, DNOs and other industry members through this and related forums and discussions.

In this response, Green Frog Power Ltd are representing ourselves and Green Frog Connect Ltd.

Green Frog Power builds and operates power stations in Great Britain, playing a key role in providing National Grid with fast responding back-up power when it's needed. We are a rapidly expanding business, and as such, we rely on Distribution Network Operators (DNOs) to help us achieve our business plans and strategies. Their efficiency and speediness have a direct impact on our business.

Green Frog Connect manages and constructs high-voltage connections to the grid. As an Independent Connections Provider (ICP), accredited by Lloyds Register, Green Frog Connect provide safe, reliable and cost-effective connections. To date, Green Frog Connect have successfully connected 577 Megawatts of generation to the grid and have a number of schemes still in design and construction. Green Frog Connect is the key interface with the DNOs and as such is closely involved with and very aware of the various aspects of getting connected. In this capacity, they are in a strong position to offer insightful perspectives on the efficient operations of distribution connections.

Broadly speaking, we support all of the proposed scenarios and options. With some minor tweaking to fix some troublesome design flaws (noted in detail in our main response) we see no reason why any single option should be preferred over another, and, in fact, why all options cannot be implemented.

We would like to take this opportunity to note some more general observations in relation to improved efficiency and quicker connections.

We would like to see an increased focus on sharing of connections. The rapid increase in installed solar and wind generators is putting pressure on connections availability. However generators like Green Frog Power typically generate when the system is tight, and this is predominately when neither of these other two resource types are generating. We see no reason for why an arrangement cannot be reached between wind, solar and peak generators and DNOs such that connections are shared, with contractual agreements in place to ensure that the connection is never over-utilised. We understand that this is permitted, but, for reasons that are unclear to us, it seems that DNOs are reticent to enter these types of discussions.

We think it is important to maintain increased dialogue amongst all stakeholders to ensure that opportunities and risks around all aspects of connections are well understood. We think it also important for the DNOs to ensure that amongst themselves there is dialogue around the potential for missed opportunities for different types of customers and technologies to share and optimise infrastructure investment.

Ofgem, DNOs and others are engaged intensely in these areas, which we very much welcome. We look forward to continued improvements in these important areas.

Yours faithfully,

Graz Macdonald
Head of Regulatory and Policy Analysis
Green Frog Power Ltd

Scenario 1

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?

Green Frog believes that there will be circumstances in which a DNO will feel sufficiently confident about future connections demand. DNOs will doubtless also have supporting analysis to demonstrate that the cost of meeting anticipated demand will be sufficiently lower overall if done in advance instead of on a piecemeal basis as the projects materialise.

If this approach is adopted, then we think limitations should not be overly prescriptive. We think that it should be sufficient to demonstrate significant cost savings. The savings should be above a threshold, to account for the possibility of the connection requests not materialising. Moreover, we think that the cost-benefit analysis should be audited by an uninterested third party, to ensure a risk-balanced approach.

Additional evidence from developers or local authorities should also be utilised where available, but we would again advise against being overly prescriptive in these requirements.

Evidence gathering could be facilitated by active engagement with developers, the public sector and community groups to better gauge future demand – keeping their “ears to the ground”, so to speak.

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

Taken together, the suggestions above would provide evidence about the long-term efficiency and economic operations of the DNOs. If a DNO elects to make the investment without the above-described evidence base and cost-benefit analysis

then we think it is reasonable that the DNO accept the entire risk of how that expenditure is perceived in the context of their licence conditions.

Scenario 2

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 agree with the suggested approach for the RAV buyback model, and we agree with the criteria suggested. We think that the criteria should remain non-prescriptive to prevent undue limitations which could undermine the benefit of this approach.

However we would like to express concern about some of the other proposed details – including the limitations on connections offered and on the charging of a premium under the second-comer mechanism. These objections are noted in further detail in following responses.

We do agree with the proposal to apply a symmetrical benefit/penalty of 1% of the returns on investment as an appropriate carrot/stick toward achieving just the “right” level of investment.

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

N/A

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

We do not agree that this should be a blanket restriction. If the business case for connection elsewhere is robust, then the connection customer should be able to connect where optimal. In such a circumstance, it would be appropriate for the connecting party to pay the cost. The higher cost of the alternative should provide the appropriate level of incentive to parties to connect where convenient for the DNOs.

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?

We do not agree that a premium over and above the cost of connecting should be charged. We think that the appropriate way for DUoS customers to benefit from this scenario is by lower overall DUoS costs due to an improved and more efficient system. We think that DUoS customers should bear some of the risk involved in lowering these costs. We do not think that additional profit streams should flow to DUoS customers.

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

N/A

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?

If this approach is adopted, and if the details are well-designed, then it will be used when appropriate. With a suitable balance of stick and carrot we think that there is little danger of this approach being over-used.

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

As proposed, we think there could be consequences for competition and innovation in connections and related and dependent fields. If, for example, a customer is unable to gain a connection where optimal for them (and they are willing to pay for it), then this approach has potentially stifled an otherwise viable investment. We do not think this is the policy intent.

Scenario 3

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?

We agree with the basic concepts underlying this proposal – allowing another party to undertake the investment risk that the DNO may be unwilling to take on themselves (even with the proposals included in this consultation) makes sense, *in principle*.

As a private party making an investment in a regulated industry, we agree that they should be entitled to a similar level of return that the DNO would have made if it undertook the investment itself. Since the independent investor does not have the benefit of DUoS charges, we think it is sensible to charge a premium to second customers. A appropriate return should be permitted to flow to the investor, in particular since the overall DUoS costs should be lower overall if the DNO is not undertaking (perceived as risky) investment decisions.

Apart from this however, we think that the restrictions should be similar to the RAV buyback model restrictions we have commented on. We do not agree that the investor should be permitted to restrict future connection (via the DNO) nor should the locations for connections be restricted.

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

N/A

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

We do not agree that this should be an element of the proposed design. We do not believe that it is appropriate to limit the services that could be offered to new potential customers. As with the other scenarios we think that if a customer is not interested in an offered connection (on an enhanced section), then they should be permitted to pay for the cost of an alternate connection.

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?

As noted above, in this case we agree that the private investor should be permitted to receive a return on its investment from the premium charged to second-comers. The premium should be calculated to provide a similar return to what the DNO would have received if it made the investment itself.

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

N/A

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?

We do not agree that there should be restrictions made by the investor, or anyone else, on the type of schemes that can connect. Despite good intentions, we think that these restrictions could have a significant impact on future investment projects that could otherwise be viable.

This approach also runs the risk of introducing non-competitive bidding processes, where one is more focussed on selling the type of project than on selling the economic and social viability of a project. We can imagine scenarios where a project that describes itself in an appealing manner is approved over an otherwise better project, but which perhaps spent less effort on convincing the investors it was the right “type” of project.

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 agree that consortium arrangements will be appropriate under certain circumstances and that where possible, they should be encouraged.

Scenario 4.1

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?

We note that the DNOs have recently undertaken a full-scale review of Engineering Recommendation P2. We welcome this review and look forward to engaging with DNOs, Industry and Ofgem to ensure that the correct and appropriate standards are employed.

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

N/A

Scenario 4.2

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

Green Frog agree that it might be sensible to introduce assessment and design fees. This could result in an overall reduction in the cost of connecting and a reduction in the costs that are carried through to DUoS customers. It may also result in a more efficient outcome, as projects that are least likely to proceed are unlikely to apply for a connection, thus reducing the pot of applicants to those with a higher probability of progression.

However, we would advise against applying such high fees that viable projects are incentivised to significantly delay their applications beyond the date they would have originally submitted them. This would cause a backfire of the intention of introducing the fees, whereby the DNO would have a complete dearth, rather than the current excess of information, upon which to base business plans.

Though it may increase the cost of connections on one side via added fees, we would expect to see a limited increase in the overall connections cost as fewer “dud” projects are requiring assessment and consideration, as well as potentially reducing the risk of poor investment decisions.

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?

Yes. We think that consideration of the types of schemes should be a factor. For example, solar or wind farms and peaking plants could potentially share the same connection, as they are unlikely to be operating at the same time. This could be facilitated either by a risk weighted application of load calculations or by allowing formal contractual agreements between parties, enabling them to share connections.

There are a number of schemes which we have looked at looking at sharing connections with solar developers which we think should have gone ahead but alas, these attempts have yet to come to fruition.

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

We think it would be reasonable and sensible to provide a time limit for activation of a connection offer. So long as the time limit is acceptably long so as to cover the duration of most project development times, we see no issues with this approach.

This could be done on a case-by-case basis. For example, if no attempt has been made to gain planning permission, then it might be reasonable to withdraw the capacity. If the planning process has gone to appeal, for example, then it might be appropriate to extend the validity of the offer pending the outcome. We think that any “rules” used should be treated more as guidelines, in order to enable flexibility.

We think it should also be required that any project that wishes to extend their offer beyond the original time frame should offer some form of guarantee, or bond, which would be returned upon project completion (and forfeited otherwise).

We think it may also be a good idea to offer a partial refund of the assessment and design fees for any project which resigns its connection offer before the time limit for activation. This might provide some incentive for projects which are “dead” to remove themselves from the queue.

We think there is also the potential for partially used capacity to be recovered and used by others. For example, where there is a connection agreement in place for 10MW but only 6MW has ever been exported, then this capacity could be recovered and used elsewhere.

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

Smart(er) grid technology is now available but not utilised to its full potential at present, particularly for large scale. Most generators are able to vary power factor as required or deal with other constraints, so long as they are detailed from the outset. Connection offers appear to be typically a “one size fits all”.

Scenario 4.3

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

It appears to us that there are two key thematic concerns and that they are in conflict with each other – that there are so many connections requests that they are having to be rationed and that there are concerns that the costs won’t be paid for when connection offers are made.

We think that there is scope to provide longer payment terms for connecting customers, in particular where there is a queue. This way the risk of non-payment can be offset by confidence that another customer is just behind the defaulting customer.

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

We believe that flexible terms would be beneficial to all customers.

It is important that a variety of term options are offered to all parties to enable the different types of projects to optimise their viability, based on their own characteristics and preferences. We do not think that the DNOs should offer some options to some and other options to others.

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

We think that in areas with high queueing rates should be able to offer the most flexible payment terms as there would be a high degree of probability that the connection could be transferred to another customer in the case of default.

To deal with the potential for an increase in the queue rates in areas that offer more flexible terms we would propose that there would be little risk involved in offering the same flexibility in low-queue rate areas, since by definition they have a lower rate of connection.

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

Smart grid technology – technology is available, which is able assist with network operations. For example to increase or decrease VARS going into the system.

National Grid have been talking about requesting generators to run at a leading power factor rather than unity, but again, this feels like a one size fits all solution. In other countries VAR/Voltage Management is utilised further so that the voltage on the network can be managed via intelligent systems from the generator's plant.

So far in the UK the DNOs are concentrating on intelligent grids at a very limited level. We think that more consideration could be made with regard to larger scale power plants.

In addition to this more effective communication between the DNOs and the transmission network would help, particularly in areas where a statement of works is required for all generation connections over 1MW. As it stands, this requirement currently leads to significant delays which can kill a project well before it has even been established whether an economical connection on the distribution network could be achieved (and yet – the project may still be in 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?

We think each of the suggestions are sensible and viable (subject to the comments noted in responses to earlier questions), and we see no reason why any one option should preclude another in another circumstance.

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?

We strongly disagree that DNOs should be facilitating an alternative agenda of any type. We believe that doing so would harm the efficient and competitive operations

of connections and could have materially negative consequences on businesses of all types.

If there is a political desire to further the certain projects we think it would be more appropriate to do so on a specialised basis outside of a mechanism in which non-favoured projects are competing.

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

N/A