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Dear Farina,

ENA Open Networks: Commercial Principles for contracted flexibility

Scottish Renewables is the representative body for the renewable energy industry in Scotland. We provide a united voice for around 300-member organisations working across the full range of technologies to deliver a low-carbon energy system integrating renewable electricity, heat and transport.

RenewableUK is the representative body for the renewable energy industry in the UK. We represent over 440 organisations across the value chain in onshore and offshore wind, wave, and tidal industries across the UK.

We welcome the moves by ENA and its members to take a more proactive approach to network design, investment and operation. The Open Networks project is an important vessel for developing the industry framework for delivering an electrical energy system that is going to continue to be fit for purpose and continue to be decarbonised.

Market roles

We are concerned that the DNOs will not have aligned drivers with the SO in the long run. The SO, in its enhanced role and legally separated from the other National Grid companies has clearer drivers to be able to plan an optimal system. However, the DNOs, as businesses with different funding and incentive arrangements from the NETSO, have a financial incentive to increase the overall volume of distribution assets and will not have the same incentive to adopt non-build options.

Therefore, we consider that the system operation function at distribution needs to be performed by a third party, distinct from the DNO companies, not incentivised to deliver a specific solution, but an optimised outcome. We believe that it is in the interests of both industry and consumers for Ofgem to regulate to address this potential market distortion.

Distribution access rights

Fundamentally we consider that the lack of clarity regarding distribution access rights is likely to slow the transition to a full 'DSO' model and result in sub-optimal outcomes. The legal basis of access rights to the distribution system needs to be resolved early. The introduction of Connect and Manage at transmission was a success, in part, because of the clear access rights that existing and new users had to the system. The access rights resulted in clear price signals to NGET regarding efficient network investment.

The arrangements around access rights must be developed to frame the level and type of investment that should be made on behalf of each and every customer.

Local market functioning

We are concerned that the development of flexibility markets may not succeed due to the lack of diverse pools of DER flexibility services at the local level. DNO networks are generally far less interconnected and radial than transmission networks and cover much smaller geographical areas. Therefore, the risk of effective, competitive markets not developing is higher. There is no discussion within the consultation regarding the approach to the criteria for testing the depth and resilience of local markets.

Consultation scope

We consider that there are some significant issues that are not addressed as part of the scope of the consultation that should be framed as key market principles.

There is no discussion about how the DNOs propose to manage the balance of technical security criteria against economic criteria for assessing required network capacity and for supporting investment decisions. Further there is no discussion on the delineation between absolute physical connection capacity (driven by technical standards) compared to wider network investment based on a balance of technical and economic criteria.

There is no discussion regarding the market conditions that must exist in order for DNOs actually go out to market for services. For example, if a new generation project applies to connect to a constrained network how will the least cost, technically feasible connection be determined when there is no information about the costs of flexibility services. How will this risk be managed and mitigated as part of the connections process to ensure that customer connections are not unduly delayed?

We welcome the joined up approach to the Open Networks project that the network companies are demonstrating. However, we consider that it is extremely important that the overall legal framework of the flexibility markets needs to be considered as part of the development of commercial principles. Without flexibility market rules which are detailed, explicit and codified – local flexibility markets across the DNO companies are more likely to become disparate, opaque and potentially distorted. In an energy system where generators need to be competitive against one another across Great Britain, it is simply unacceptable that the network company you are connecting to should unduly impact a DER's commercial position. While the demand for local system services will vary geographically, it is essential that the DNO interface and contract structure for each DER-DNO service is homogenous across the UK.

Our response to the consultation is set out in the attached paper and we would be happy to discuss or provide clarification on any of the points raised.

Yours sincerely

Michael Rieley
Head of Policy
Scottish Renewables

Barnaby Wharton,
Head of Policy
RenewableUK

Consultation Questions

Consideration #1 – What models (procurement and operation) should be used to allow DER to offer multiple services to multiple entities?

Q1: What are your views on the models outlined in Appendix 1, and how they are assessed against the assessment criteria?

- The models are extremely helpful to aid discussion and the assessment criteria seem reasonable. However, the models/assessment fail to capture the important complexities associated with:
 - Identification of system needs.
 - Emerging EU Balancing Network Codes and the associated implementation of Project TERRE and MARI. (We request that the GB SO and DSO plans are developed in line with these).
 - Existing connection agreements and new/future ones (acknowledge that this has been excluded from scope of consultation).
 - Treatment of constrained and unconstrained connection agreements including legacy ANM schemes.
 - Data flows
 - Access rights
 - Technical capabilities including communications and control infrastructure
 - Simplicity and transparency of interface and processes with DER.
 - Cross-network efficiency and cost to the consumer.
- Regarding the models presented we are concerned with any model whereby system operation is the responsibility of the DNOs now labelling themselves as DSOs.
- We are concerned that the DNOs will not have aligned drivers with the SO in the long run. The SO, in its enhanced role and legally separated from the other National Grid companies has clearer drivers to be able to plan an optimal system. However, the DNOs, as businesses with different funding and incentive arrangements from the NETSO, have a financial incentive to increase the overall volume of distribution assets and will not have the same incentive to adopt non-build options.
- Therefore, we consider that the system operation function at distribution needs to be performed by a third party, distinct from the DNO companies, not incentivised to deliver a specific solution, but an optimised outcome. We believe that it is in the interests of both industry and consumers for Ofgem to regulate to address this potential market distortion.

Q2: To what extent do you think it will be possible/desirable to move between different models in time? Please list barriers to implementation where possible.

- A gradual evolution will help to ensure that industry doesn't get left behind and can understand, and communicate to investors, the evolving picture of network availability risk which is a key route to market (therefore business risk) for all DER.
- We suggest that it would be prudent to propose a transitional arrangement for parts of the network that have immediate requirements ahead of implementation of enduring arrangements once the full suite of industry codes and considerations have been accounted for and developed.
- As a preliminary step for moving to any new model – the Open Networks project should establish the process for clear communication between the NETSO and DNOs so that each party is aware of what is going on across the entire system. This is the only way the interdependencies of GB and local level network operation actions can be transparent and coordinated.

Q3: What steps should NETSO and DSOs take to remove complexity when providers are providing multiples services to multiple market participants (both at procurement and operation stage)?

- The roles of the NETSO and the DNO(s) need to be absolutely clear to all DER.
- The single dispatch model (model 5) is the most obvious option for reducing complexity for DER services. However, we do not believe that targeting simplicity for DER providers this way is going to necessarily result in the most efficient network outcome. We are concerned that the single dispatch model would reduce the visibility of the dispatch decisions made and the signals to market. We are keen to explore if there is a way of mitigating this issue with the ENA. The near term and longer term market signals are going to be key to developing a successful and efficient market.
- We support procurement across transmission and distribution that is coordinated. The key areas of coordination include technical performance requirements and contracting structure and timing.
- We do not want to see each DNO adopting different models, systems, processes, contract structures etc. All DNOs should establish the joint software system through the Open Networks Project. This is important for ensuring to ensure consistent user experience for all DER and to reduce overall systems costs for consumers and flexibility providers.

Q4 : What is the role of aggregators and suppliers are helping to remove this complexity?

- Third party intermediaries are likely to be important. Current role of these parties is through the collection of services from smaller parties. Therefore, they become the gatekeepers to market access for smaller parties.
- We are concerned that the industry role of third party intermediaries doesn't put individual DER parties bidding into the market at a systemic disadvantage. This could happen, for example, through poor information and communication from procurement bodies (DNOs/SO).
- Further, we consider that the market should be designed to avoid DNOs or the SO becoming aggregators, as this would create conflicts of interest for these bodies to then contract with commercial aggregators.

Consideration #2: How can DSOs and the NETSO ensure that sufficient visibility and controllability of DER output for managing transmission and distribution network constraints?

Q5: What are the implications for your business of the need for visibility and controllability of DER output?

- We are concerned that the requirements for communications and control infrastructure will be a significant market entry barrier to many pre-existing DER sites. Further, we are concerned that the commercial principles articulated in the consultation do not include a provision to ensure that the technical parameters (including communications and control requirements) associated with flexibility service contracts are proportionate, reasonable and as far as reasonably possible standardised across the system.
- This is likely to be a market entry barrier for parties. However, the communications requirements can simply be included under the market entry requirements for any new market arrangements.
- We consider that the technical requirements associated with the necessary communications and control infrastructure should be standardised across DNOs and that the requirements should be proportionate and the resulting standards should be tested to ensure that they represent good value for the whole system (rather than driven by poorly evidenced overdesign due to perceived risk from network owners).
- We are concerned that controllability is being considered from a 'top down' perspective by the NETSO and DNOs. We want to make it clear that the role of the system operator(s) will be to establish the market framework and economic signals to ensure that flexibility service providers opt to control their own output in a manner that meets the system's needs. We are very concerned if these proposals entail network companies directly controlling DER outputs on a mandatory basis.

Consideration #3: How can ensure the various routes to market for DER can coexist and compete in a coordinated way?

Q6: what are your views on the principles outlined here to ensure the various routes to market for DER can coexist and compete in a coordinated way?

- The principles that have been proposed are positive and we support the effort to establish a set of principles as the basis of the market design.
- However, it is not clear how the proposed list of principles has been arrived at. Further, we do not think the paper presents an exhaustive list of the principles, nor that they cover all of the key commercial points that need to be considered. The list of principles appears to cover a sporadic range of issues in an uncoordinated fashion.
- We propose that the commercial principles should set out the fundamental functional requirements of the flexibility market.
- We consider that these principles must cover the following key areas (not exhaustive).
 - There must be a set of principles associated with the governance of the market arrangements.
 - There must be principles in relation to the process for identification of system need, procurement strategy, information provision and measurement of market performance.
 - The market design must reduce barriers to entry and facilitate competition, be technology agnostic and reflect the overall system value of services.
 - The principles of charging and cost recovery for these services.

Q7: What else needs to be done to ensure distribution network security is maintained for all DER contracted services while at the same time allowing DER the freedom to contract in different markets?

- There has not been a clear articulation of what 'distribution network security' is in this context and how it might be impacted by the implementation of these commercial principles. Therefore, we cannot comment on this item.
- Currently, connection offer agreements are too prescriptive and limit flexibility provision by DER on grounds of 'distribution network security'. We suggest DNOs review what scope there may be for relaxing some conditions so as to enable more DER to offer flexible services.
- We are concerned that in the short to medium term, there is likely to be significant need for DER flexibility services, yet a perceived lack of competition at local level may restrict procurement activity from DNOs. Clear principles need to be established to determine what criteria should be used to result in market tenders.
- We are also concerned that the identification of market need is not going to be clear to industry and that tenders for service provision will remain ad hoc and seemingly unpredictable. This will undermine the ability of flexibility providers to come forward particularly initially through procurement contracts that are relatively short.

Consideration #4: How should DER curtailment for transmission constraints be treated from a commercial perspective?

Q8: What are your views on the principles outlined in this section?

- We do not think that the paper sufficiently sets out 'basic principles' – the paper presents a set of statements of intent.
- It is not clear how the statements of intent included within the paper have been arrived at, what subject areas were considered and what appraisal process was performed to arrive at these statements.
- We support simplicity for pricing structures. The current pricing structure through the BM is simple, conceptually. However, we consider that it is more important to achieve a pricing structure that can best reflect the value that DER can offer to the network and incentivise participant behaviour that will result in optimal outcomes, i.e. the best value sustainable for the consumer.
- We think that the cost recovery mechanism needs be considered carefully. We do not consider that automatically including the costs of system services provided to the DNOs into the BSUoS charging regime is the most appropriate method. Constraint management within a DNO region shouldn't necessarily be borne by users that are not connected to that network.

Q9: What are your thoughts on pricing curtailment? Are there other mechanisms that should be taken into consideration?

- It is very welcome that the Open Networks Project is taking a whole system's view and considering the pricing of transmission system related curtailment for DER.
- The pricing of services needs to be considered more fully, a conceptual stage to understand the full suite of options that exist. Further, the principles of price setting need to be considered.
- The same pricing system needs to emerge across the entire system (across all networks T&D).
- There needs to be a balance struck between various procurement strategies. For example, short term and longer term contracts are both required to reflect uncertainties around varying system needs. This should also be reflected in pricing arrangements – static and dynamic pricing are likely to be appropriate under different contracting circumstances. Nonetheless, the structure of the market should be rational and coordinated to ensure that an economic outcome is achieved.

Consideration #5: How might distribution congestion management activities develop alongside the transition from DNO to DSO?

Q11: What are your views on how distribution constraints could be managed in the future? We have identified one option above. What other options are available?

The consultation proposes a type of 'capacity sharing' arrangement, at least in the interim. We have a number of concerns associated with this proposal including:

Plurality of market mechanisms

- This arrangement would result in several fundamentally different mechanisms for managing system constraints – flexibility market for transmission constraints facilitated by the BM and ad-hoc constraint risk exposure for distribution constraints.
- Further, the arrangement does not align well with paid-for service contracts that DER parties can secure for providing flexibility for managing import constraints (peak lopping) which is a cost signal that DNOs can use to plan future investment.
- The NGET/DNO will not be able to receive an economic signal if the cost of network constraint is borne by DER. Therefore, it is not clear how network investment would be assessed and justified.
- We are also concerned that the arrangements won't align with the likely outcome of the BM Lite proposals. There is the potential that DER sources could be bidding into the BM for transmission constraint management, yet at the same time exposed to constraint risk due to distribution constraints (which for renewable generators is likely to concurrent).

Risk Management

- The option outlined places all of the constraint risk on DER. DER sites are not best placed to manage the risk associated with constraints. DNOs are much better equipped to respond to changing price signals (or price settlement penalties) rather than DER that cannot respond to constraint risk.
- There are weak/no incentives on DNOs to ensure that they minimise network unavailability for DER sources with constrained connections.
- Further, it is difficult for DER to determine the constraint risk due to poor data availability from the DNOs:
 - Historic network availability.
 - Planned maintenance regime.
 - Planned outages for network upgrades.
 - Detailed knowledge of network electrical design and operational/maintenance patterns.
 - Data accuracy validation.

- Currently the DNO Long Term Development Statements are published annually. These documents contain high level information about existing network design and configuration. However, DNOs would be required to publish substantially more network data, with a higher degree of accuracy and more often in order for sites to be able to assess the constraint risk.
- ‘Capacity trading’ is likely to be a temporary, informal arrangement that will vary from DNO to DNO and likely difficult to unpick once enduring flexibility market arrangements are in place. Therefore, this will make it less likely that a properly functioning flexibility market at distribution will actually emerge. It also increases the risk to DER through the assessment of market opportunities and reduces the incentive on DNOs to develop and adopt clear, consistent systems, standards and rules.

Impact on DER deployment

- We consider that a ‘capacity sharing’ market will likely to slow/restrict deployment of new DER due to the high investment risk due to uncertainty surrounding:
 - Constraint risk – which will be placed on the DER parties.
 - The nature of new capacity trading arrangements.
 - The enduring arrangements and the transition to these arrangements.

Alternative approaches to interim arrangements

- We strongly urge the ENA to consider other options for interim arrangements and ensure that the options are robustly identified, developed and rationally appraised to articulate the overall market governance, design and phasing.
- As a minimum, we consider that DNOs should seek to mirror the existing systems that are in place for network constraint management (i.e. the Balancing Mechanism and balancing services contracts). Effective communications processes between the NETSO and the DNOs are going to be of critical consideration to ensure that the market can function properly.

Q12: What are your thoughts on the transition from the current approach to managing distribution constraints to a more active one that is co-ordinated with transmission constraint management?

- The legal basis of access rights to the distribution system needs to be resolved early in the process of transition. The introduction of Connect and Manage at transmission was a success, in part, because of the clear access rights that existing and new users had to the system. This presented a clear signal to NGET.
- A significant output from the C&M process has been that there is a paradigm shift in relation to the value of strategic transmission investment decisions. A similar paradigm shift needs to occur at distribution, with the value of network investment considered in the wider context of investment alternatives (e.g. non-build options). This is a difficult metric to measure but is going to be an important factor in the success of the DSO model.
- We are concerned that the DNOs will not have aligned drivers with the SO in the long run. The SO, in its enhanced role and legally separated from the other National Grid companies has clearer drivers to be able to plan a system which is optimal. However, the DNOs, as businesses with different funding and incentive arrangements from the NETSO, have a financial incentive to increase the overall volume of assets built, will not have the same incentive to adopt non-build options.

Therefore, we consider that the system operation role/s at distribution needs to be performed by a third party – not incentivised to deliver a specific solution but an optimised outcome