Consultation – Key enablers for DSO and the Long-Term Development Statement

ElectraLink's Responses

Question 1: We consider that improvement is required in the visibility of DG and LCTs connected to the distribution network. In addition to DG and LCT connections, can you identify areas for improvement in the current data that is shared in the LTDS?

In the long term, the Granularity of LCT and DG connections should be extended down to LV (aggregated at street level if necessary), to enable the market to identify opportunities and to help LCT/DG owners identify additional value streams from their assets.

Question 2: Can you identify areas for improvement in the presentation of network information in the current FoS?

No response

Question 3: The EDTF and others have identified the need to collate and share 11kV and lower voltage network data. Is there value in creating a sharing mechanism for 11kV and LV network data ahead of the expected roll out of network monitoring and telemetry in RIIO-ED2 and the limited data availability in RIIO-ED1?

The industry is currently looking at creating mechanisms to share both long term planning / forecasting and well as short term / operational data. It would be logical to make provision for a mechanism to share all DNO data and to define how DNO data will be combined with flexibility market data to enable low friction data provision across the industry.

Question 4: Given the complexity of future distribution networks, static data alone may not satisfy user needs. Should the FoS be enhanced to mandate the development of a common network model to allow power system simulation that each licensee must make available for exchange to users and interested parties? If so, what do you consider to be an appropriate standard?

A DNO data sharing platform should be built such that data is updated directly from DNO back-end IT/OT systems as it becomes available. This can be done with existing data sharing technology already used by the industry and accessed through a web portal or API links.

Question 5: From a review of industry publications we consider that interoperable standards will underpin future DSO activities. Should the FoS mandate the adoption of a IEC 61970 CIM and IEC 61968 CIM for Distribution Management, such that data is collated and constructed in a manner similar to WPDs CIM innovation project model? Are these standards mature and what are the likely benefits and costs?

Electricity sector data sharing will need to be fully interoperable with other sectors and data systems. CIM seems a logical choice to help enable this.

Question 6: Should the FoS also be retained in its current Microsoft Excel form? Is there value in this format?

Please see our answer to question 4. Excel is useful in some instances but is labour intensive to keep up-to-date and is not as versatile as machine-readable or web-based data sharing systems for scenarios where large quantities of data is needed, or where data becomes out of date quickly.

Question 7: Ensuring network information remains accessible is a priority. At present there is no formal requirement for the production of heatmaps. In order to ensure future customer can access the required data, should the scope of the LTDS and FoS be extended to mandate the production of heatmaps?

To ensure an acceptable level of customer experience, it is essential that at DNOs present their data in a consistent and easily accessible way. We believe that a common data sharing service, used by all DNOs and hosting LTDS data, as well as other data such as real-time and flexibility data, will be a more efficient way of achieving this compared to the alternative of six different platforms.

Question 8: Would there be benefit to adopting common guidance or formats on information presentation within heatmaps, including the presentation of technical information and cost information? What are the barriers to its adoption?

Please see our response to question 7. The main challenges will be interfacing with a wide range of DNO systems and managing widely differing levels of data quality.

Question 9: The core focus of the LTDS is to assist users to enter into arrangements with the licensee and evaluate the opportunities for doing so. Should the scope of the heatmaps include other network needs, such as flexibility requirements? What is the best mechanism to notify network users of opportunities to enter arrangements with the licensees?

The LTDS has focused on long-term development, for which planning and forecasting data are important. Looking forward, there is increasingly a customer need to access real-time operational data and flexibility data to help flexibility providers / aggregators optimise value for their assets and customers. DNOs would also benefit from a view of where flexibility is located and its status / ability to deliver the flexibility they need. We believe that the LTDS data should be combined with a wider range of DNO data to enable flexibility operation, local energy market operation, peer-to-peer trading and the real-time management of smart charging (to prevent network overloads) through electricity retailers and CPOs. A cross-DNO data sharing platform with a governance structure linking to the Network Code could efficiently achieve this.

Question 10: On what frequency should these maps be updated? Should they be updated as there are changes to the underlying data or periodically?

The heat maps should be updated and made available automatically in near real-time as DNO models are updated.

Question 11: Is there a need for a common methodology or principles for estimating load growth? What potential role could the D-FES play in informing the load growth forecasts on the LTDS?

Yes, this should be standardised across all six DNOs to ensure a level playing field of connection opportunities, flexibility opportunities and constraints for customers.

Question 12: Are there any lessons that can be learned from other industry documents such as the ETYS and the NG FES?

No response

Question 13: Do you agree that the LTDS should be enhanced to present the key assumptions for network requirements forecasting and the uptake in LCTs, or is this a role better served by the D-FES or other documents?

Forecasting of network requirements and LCT uptake are directly related to long-term network development, so they are relevant to the LTDS. That said, we believe that the data sharing obligation on DNOs will expand into a broader set of requirements, as described in our answer to question 9.

Question 14: Forecasting tools have been a focus of a number of innovation projects. Are there any mature tools or techniques that could be adopted to enhance the transparency or robustness of the load growth forecasts?

No response.

Question 15: Do you agree that IDNOs should be issued with a direction to produce a LTDS?

We believe that there will be value in sharing IDNO data, but to avoid customer confusion and an additional layer of complexity for the data users, this data should be integrated seamlessly into the main DNO dataset.

Question 16: What summary information should IDNOs publish? This is currently found in section one of the LTDS FoS, such as information relating to the design and operation of all voltage levels of the distribution network. Please explain your reasoning.

Similar data to the DNOs (where applicable), including network capacity, LCT and DER connections and any forecast changes that would impact the IDNO networks. In future, and to reduce the burden on IDNOS/DNOs, LCT and DER information could be derived using smart meter data analysis (i.e. an evolution of WPD's LCT detection and VM data projects).

Question 17: What information on network data should IDNOs publish? This is currently found in section two of the LTDS FoS. Please explain your reasoning.

Please see our answer to question 16.

Question 18: Do you agree with our proposal on how the LTDS delivery body should be convened and governed?

We believe that the LTDS governance will be expanded into governance to oversee all DNO and flexibility market data sharing. ElectraLink proposed that it would be efficient to include this governance as an annex to the DCUSA code (whereby non-DCUSA users do not have to sign-up to DCUSA), which would eventually be incorporated into a Network Code.

Question 19: Would you like to nominate an individual to take part in the LTDS working group? Please set out reasons for their inclusion and any qualifying experience the nominated person has to function as a strong contributor to the group.

Yes, the development of the LTDS is closely linked with our vision for a common, GB-wide and customer centric DNO/DSO data sharing platform

Question 20: What network monitoring parameters would you like to have access to? At what frequency?

We believe that feeder-level load flow data will be valuable. In future, it may be efficient to derive this information from smart meter data rather than ubiquitous LV network monitoring.

Question 21: What would enhanced 33kV network monitoring enable that cannot be undertaken today?

No response.

Question 22: What would enhanced 11kV network monitoring enable that cannot be undertaken today?

Please see our answer to question 23.

Question 23: What would enhanced LV network monitoring enable that cannot be undertaken today?

Optimal management of EV smart charging, optimal network reinforcement / smart solution decision making, high-granularity network capacity heatmaps.

Question 24: What constraints in data systems architecture do you perceive are limiting network monitoring and visibility?

Lack of access to smart meter data (and lack of a full smart meter roll-out) will increase the cost of achieving full network visibility.

Access to DNO data across a multitude of IT/OT vendor specific solutions will be a challenge, but efficiencies can be made through a centralised approach to uncovering data (e.g. learning from uncovering data from one DNO system can be transferred to other DNOs who have invested in similar systems).

Question 25: What operational data is most important to prioritise opening up first and why?

This should be based on customer use-cases as well as the practicality / cost of uncovering data. We understand that local energy market operators would like to use real time network capacity data to optimise LCT and DG utilisation, but we have not yet undertaken a full analysis of all use-cases.

Question 26: How does a lack of access to this data impact the delivery of flexibility to the system?

The lack of data on LV and 11kV network utilisation data, together with data on where DER assets are, and what their flexibility capability is, is preventing DNOs from being able to efficiently optimise their plans to increase or optimise network capacity. DNOs are not able to target FSPs, which means many potential FSPs are missing out on value, while the DNOs cannot access enough flexibility in locations where it is needed. Opening access to, and increasing granularity of, network and DER data will therefore enable flexibility markets to operate effectively as a BAU solution, independently of innovation funding.

Question 27: Are there any real or perceived conflicts of interest with DNOs owning and operating ANM platforms at scale? What additional protections could be required for ANM customers?

The electronic management of DER is a function that could be delivered by a cross-DNO data sharing platform to help provide the market with a level playing field.

Question 28: In order to preserve optionality over ANM scheme operations, what technical and commercial protections, such as technical ring-fencing, may be required?

No response.

Question 29: Please provide real world examples where lacking timely access to usable network data, or regulatory barriers, have limited your ability to provide a DSO function or support service. Please submit any relevant evidence and documentation of examples cited.

The barrier to DNOs accessing smart meter consumption data has limited our ability to provide LCT detection and virtual LV monitoring with the optimal level of accuracy and granularity. We are currently investigating the usefulness of undertaking these activities without full access to smart meter data.

Question 30: Are there any other issues related to enabling DSO that have not been considered that you think are important? Please provide details of your considerations.

No response