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By email

Dear Alex,

Response to consultation: Key enablers for DSO programme of work and the Long Term Development Statement

Summary

Thank for the opportunity to respond to your consultation regarding the future of the Long Term Development Statement (LTDS). We agree with the assessment that at the time the LTDS was last reviewed, and the format set, the IDNO market was too small to justify its inclusion in the requirement to produce the annual output.

We acknowledge that the market has since evolved and that the IDNO community is of sufficient size to question the justification from excluding them from the requirement to produce LTDS.

Although the number of customer connections on IDNO networks has grown considerably over the past 8 years, there are important differences with DNO networks that should be recognised when considering the value that an LTDS might bring.

IDNO networks are islanded from one another and spread across the country and all DNO networks. In our experience the average size of an IDNO network is around 70 customers with most IDNOs having small numbers of networks in each DNO region. The potential value of LTDS for IDNO networks to stakeholders may therefore be more limited than those produced by an DNO who operate an integrated network within a specific geographic area.

There is no inherent reason as to why a LTDS, in a similar format to that produced by DNO, couldn't be produced by all IDNO. Having 14 or more IDNO and a DNO producing similar LTDS for a single geographic area may not be efficient, nor produce the best output from a stakeholder perspective who may be trying to use them for a practical use.

It is therefore worth considering as part of the consultation process whether an independent party should be used to develop LTDS, either on a regional or national basis, using information provided in a common format by all licenced distribution network operators. This may provide more valuable information to the market and stakeholders, be better aligned to an integrated whole systems approach to providing information, and ultimately help achieve the aims of decarbonisation of the energy sector in a more efficient manner.

Responses to consultation questions:

LTDS

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?

We do use the LTDS published by the DNO for our own network planning purposes. Therefore, the accuracy and the richness of information provided is useful and the inclusion of the distribution connected generation would be potentially helpful.

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

Consistency in the presentation of information from all DNO would be an improvement that we would appreciate. Currently the LTDS are all produced in slightly different formats.

Access to the LTDS is currently challenging as all the DNO encrypt the data and require passwords for users to be able to open the files to access the information. These passwords are changed on a regular basis following good cyber security practice but there isn't a clear reason as to why this is needed and makes accessing multiple LTDS more challenging.

We have also noticed that the information has been dumbed down over the years and instead of showing all of the future thoughts and considerations on the networks they have restricted the future proposed works to the regulated period rather than for ten or more years. This makes it harder to deduce what is planned, particularly as you come towards the end of a regulated period.

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?

Yes, but we believe that the value is probably limited by the restricted amount of data currently available. It isn't clear to us how much data is currently collected and one advantage of sharing this information now would be to provide clarity to this question.

Trialling and agreeing a common format for sharing data would also be a useful activity to start now, in readiness for full implementation in 2023. As an IDNO we operate across all the DNO

regions. Any future obligation upon us to interact and share data with the different DNO would therefore be greatly helped if there is standardisation of approach.

To undertake a level of detail at LV would be quite challenging and as we can see that LV networks tend to require a more site specific solution. It might be better to keep the LV at a level of describing the types of solutions required rather than a specific solution per feeder.

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 common approach from all DNO is useful from the perspective of an IDNO who operates across all parts of the country.

Having each DNO develop their own models is inefficient. If IDNO were also to create their own individual versions the combined output may be confusing and incoherent to consumers and stakeholders who may wish to use the information.

A common open approach, that all DNO and IDNO can use, and that is clear and transparent to the market, would support the LTDS in providing value to the market and in meeting Ofgem's intentions.

This would be useful at the higher voltages but we would question the benefit of doing this at 11kV and below.

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?

We are not familiar with the costs and benefits of the CIM standard and would appreciate more information on what this looks like before supporting its use.

However, the concept of using a common approach is something that we support as it would make it easier for IDNO to understand what they were required to produce.

The use of an international standard would also seem logical at it would come with existing agreed governance and be something that potential users would have confidence in investing and using.

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

Microsoft Excel is widely used and familiar to a wide range of stakeholders. We would therefore suggest that there is some merit in keeping this format as an output.

Heat Maps

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?

We can see the potential value of heatmaps for stakeholders wishing to gain a clear representation of localities where network constraints may apply. Whether it would be relevant for individual IDNO to produce their own heatmaps is something that we are not convinced by. Provision by IDNO of relevant data for the creation of single area heat maps, covering all DNO/IDNO networks in a specific area, would seem a more logical approach, providing the greatest value to stakeholders.

If data is presented in an open and transparent format by all DNO/IDNO it is likely that market-based solutions could provide heat maps for the market to use. The use of competitive market-based solutions should provide for greater innovation than relying upon regulated monopoly solutions.

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?

A common format and approach from all DNO would help facilitate the provision of data from the many IDNO who will be operating within a specific area. This will also aid and support customers with their interpretation of the heat maps.

Clear obligations and regulations will be required to ensure all network operators collaborate and produce data for the creation of heat maps to a consistent and common standard.

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?

Provision of data in the LTDS in a common format should help third parties develop future tools and mechanisms, such as heat maps, to demonstrate the future requirements and function of the electricity networks. Evidence from other countries (e.g. Australia), has shown the potential value of combining multiple data sources into a single view.

Allowing the market to develop services in this area is preferable to regulation trying to second guess what would be valuable for the market in the future. It will drive innovation in the services provided and ensure that the costs of the service are not excessive and paid for by electricity consumers in their network charges.

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

If heat maps are going to be mandated for DNO/IDNO to produce, then requiring them to be updated annually seems a reasonable timescale to adopt, potentially as part of the annual LTDS publication process.

Forecasting of network needs

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?

If IDNO are to be asked to provide this information, then it would be beneficial for there to be a common methodology adopted by all DNO.

Requesting IDNO to provide this information in 14 different formats, as used by the different DNO, or asking each to create their own methodology would be inefficient and costly for IDNO to implement.

Therefore, a common methodology seems the most pragmatic approach to take. Formal governance for this would be needed with oversight from Ofgem. Our preference would be a standard licence condition requiring a common methodology to be used, supported by detail of how this is to be delivered within the DCUSA industry code.

The DFES and the LTDS should be complementary to one another and be aligned in their production times. The LTDS should not be limited to the current price control period and instead should be for rolling 10-year periods to ensure maximum value.

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

A common approach, timescales for delivery and publication are useful in ensuring that the document is of value to consumers.

Co-ordinating the development of a single FES between ESO, DNO and IDNO, a whole system approach, will ultimately provide the most use to all stakeholders. We would logically see this to be a role that the ESO could potentially undertake, using common data provided from all DNO and IDNO, but we appreciate that this may take time and be further down the DSO journey. A good first step would be the harmonisation of timescales and formats between NG SO and distribution networks and to look to other countries to understand how they are predicting growth on their networks.

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?

This information would seem to be key to the understanding of the assumptions that underpin the LTDS.

Whether this is included within the LTDS or signposted to an accompanying D-FES document is a presentational question. Including all the assumptions within the LTDS may make the document more valuable to consumers but risks it becoming excessively long.

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?

We have not been directly involved in any innovation projects and therefore do not have sufficient experience to provide a view on the tools and techniques available. In the interests of ensuring the whole energy system is prepared for the introduction of a significant number of new low carbon technologies (LCT) we believe it would be useful for such tools to be shared and used by all network providers. To date tools and techniques funded and developed by individual DNO have not been shared on a practical basis for all networks to use. This situation should not be permitted to continue if the aspirations for whole electricity system to support a decarbonisation of transport and heat are to be met.

IDNOs and the LTDS

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

The different nature of IDNO networks should be recognised. There is little value in creating an LTDS for very small embedded networks. However, for larger networks, those with HV connections for example, there may be value in LTDS information being made available.

IDNO networks are islanded from others owned that they own and are connected to multiple DNO. Individual IDNO LTDS, and potentially heatmaps, may therefore provide limited value to consumers and be difficult for them to interpret.

The value of IDNO LTDS is therefore more likely to be relevant when combined with the DNO to create regional ones. A combined DNO/IDNO LTDS, and potential regional heatmaps, could provide insight into the locational areas of network constraint or availability that may help existing and future network users plan to provide services.

IDNO networks are currently being created so a lot of the new assumptions and practices are already being built into these networks. So the need to have reinforcement plans so soon after building would be difficult to understand as the network is sized based on the customer's current requirements.

It may be useful for DNOs to identify areas where they have network constraints so that IDNOs can factor this into their plans and encourage flexibility to be built on their networks to support the DNOs.

This would also be a useful way of looking at whole network needs rather than treating networks as separate entities. For example, when a DNO requires support from an IDNO network to assist with an emergency response event a coordinated approach is likely to be beneficial for both flexibility service providers and affected demand customers.

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.

IDNO can publish the information requested in Section One of the LTDS FoS but will only be able to answer questions regarding the types of network that they operate.

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.

At the moment we believe that this information is limited to 132kV networks. We are not aware of any IDNO that operate networks at this voltage and therefore there may be no information to be published. If this were to be altered to include lower voltage networks then IDNO could potentially provide the data. As IDNO networks tend to be smaller islanded networks, the value and use of the information may be more limited, and this could be explained in associated text within the LTDS.

Delivery governance of the form of statement

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

Yes, this seems a sensible approach.

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, our nominee for the group will be Steve Mockford, our Head of Electricity Asset Management. Responsibility for the provision of future LTDS would be with Steve's team and he has experience of drafting LTDS whilst working for a DNO.
Network monitoring & visibility enablers

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

n/a

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

n/a

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

n/a

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

Better visibility of LV network monitoring would help support earlier customer outage identification and allow us to provide a better service to customers.

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

n/a

Flexibility trading enablers

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

n/a

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

n/a

Flexibility dispatch and control enablers

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?

n/a

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

n/a

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.

n/a

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.

In debate to date the role of the IDNO in enabling DSO services has not been considered. Network interaction has focused on DNO to TNO boundaries and the higher voltage tiers. These are typically where conflicts and issues from the management of flexibility are seen at the present time. Our assumption is this will change over the next ten to twenty years and should be explored at the present time.

The DNO to IDNO interaction has not been actively considered. The size of the IDNO market may be small but as the debate around DSO functions moves to lower voltage levels the need to properly consider the implications for customers served by IDNO networks becomes more important.

Yours sincerely

Alex Travell
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