



## Northern Powergrid Response to Ofgem's consultation: DNOs' future role in supporting the rollout of low carbon technologies

### KEY POINTS

- DNOs are already taking an increasing role in collaborative local energy planning under the DSO role of network planning, and we agree with the general direction of enhanced coordination.
- The enhanced coordination role is sensible, but we are sceptical of claims that further benefits arise from DNOs through either funding or delivering LCT installations.
- The benefits of deploying LCTs to vulnerable customers are clear, including helping manage energy affordability and efficiency, lowering carbon footprints and the wider system benefits arising from the flexibility that these LCTs offer. But these benefits are achieved regardless of who deploys LCTs.
- The benefit of coordination is achieving a volume of deployments within a customer group that otherwise would not seek LCTs, not network or further system benefits.
  - There will be some benefits of reduced customer disruption, better visibility of assets and faster connection of LCTs for a small subset of customers.
  - However, coordinating delivery for a subset of customers does not offset the otherwise random uptake elsewhere on the network, thus overall reinforcement volumes undertaken are likely to be similar. Coordinated delivery would have to be extensive to derive any benefit.
  - In addition, economies of scale of carrying out area-based service upgrades are marginal.
- In general, we believe LCTs will provide greatest benefits to customers and the system if DNOs make sure they are connected to an LV network that has sufficient capacity to maximise the scope for flexibility to contribute to creating benefits higher up the system.
  - However, in some scenarios Smart Local Energy Systems can unlock capacity for coordinated LCTs by providing DNO control of assets, accelerating adoption.
  - But this leads to lower overall system participation and as such are most appropriate in niche cases mainly where assets are collectively owned such as community schemes or social housing.
- In respect of an expanded role that drives material new costs into the DNO cost to serve, Ofgem must seriously consider acceptability and affordability. The level of network investment that can be tolerated in customer bills is already a challenge - additional pressure from cross-subsidising LCT installations for some customers would only add to that.
  - "Laying the groundwork" represents a sensible, and low regrets build on proactive area-based upgrades, however customer acceptability of proactive unlooping must be considered.
  - On "Widening participation" and "Focussed intervention" we see no reason to think that DNOs are either best placed to carry out installation works or to finance the works.
    - Delivery or maintenance of LCT and energy efficiency measures is best delivered by parties with existing capability to operate within customer homes.
- Regardless, Ofgem will most effectively enable good outcomes for customers by clearly defining required outputs and setting a well-calibrated incentive framework – not by prescribing the detailed actions that DNOs should take.
  - Revising the Smart Optimisation Output (SOO) licence condition makes sense; it currently drives little customer value, but prescription will drive compliance over innovation and performance.
  - Instead, provided it is recalibrated to deliver real customer benefit, the Consumer Vulnerability Incentive is an opportunity to incentivise achieving vulnerable customer LCT installations – improving a mechanism that is currently set up badly.

## Responses to Consultation Questions

### Overarching rationale

**Q1. Should DNOs play a role in co-ordinating and supporting a cost-effective energy transition through improved planning and supporting/directing targeted delivery? How can they help make the transition more efficient and affordable for everyone, and do they have a role in supporting lower-income households?**

1. DNOs have a critical role to play in enabling the benefits of the energy transition, delivering the networks that allow our customers to adopt low carbon technologies, utilise renewably generated electricity and benefit from participating in flexibility – predominantly system flexibility helping match demand to generation.
2. Predominantly our role should focus on ensuring that network build out is carried out in a way that delivers capacity where it is needed, when it is needed and in the most efficient way. An enabler for this is effective engagement and planning with local stakeholders to understand their ambitions and to, as far as reasonably possible, coordinate our network planning with them to best enable their ambitions.
3. We recognise the important role that we play to help guide our region to a more efficient outcome, delivering a faster and more efficient path towards the level of LCT penetration envisaged through collaboration and coordination with stakeholders.
4. During ED2, as part of their DSO role, DNOs have developed new capabilities in order to support local stakeholders.
  - a. Our Regional Insights team provides direct support for Local Authorities, Housing Associations and other key local stakeholders to help develop decarbonisation plans and feed stakeholder insight back into our organisation to inform our network planning.
    - i. The Regional Insights team has received outstanding feedback from stakeholders, and we continue to see an increasing demand for their services.
  - b. Our Open Data Portal has been developed to offer increasing volumes of network planning and operational data to help support external stakeholders with their understanding of and insight into our planning.
    - i. A central principle to our Open Data offering has been stakeholder need, whereby through extensive engagement we are ensuring that the data that we prioritise sharing is the data that stakeholders are calling for and will value most.
    - ii. Making our data relevant and accessible is key to creating value for stakeholders, as such we have developed bespoke landing pages within the portal for Local Authorities and other groups, serving up the data in formats and visualisations that are most appropriate to their use-cases.
  - c. We have adopted industry leading tools for our stakeholders to support their planning and facilitate data sharing for collaborative planning.

- i. We have delivered the LAEP+ tool to our Local Authorities enabling them to overlay multiple datasets in order to support their Local Area Energy Plan creation. Providing a standard centralised tool enables us to provide consistent support across our area and draws the plans together into a single consistent dataset in order to feed into our own network planning.
  - ii. Our Mass LCT tool leverages network data to allow Local Authorities and Housing Associations to plan the deployment of LCTs in a granular level. The tool allows optioneering of up to 500 properties at once, so stakeholders can determine the most efficient path to deploy assets.
- 5. Whilst our role is to provide a network that delivers the benefits of electrification for all, we believe it is vital that lower income households and indeed other vulnerable customers are not left behind in the energy transition. The benefits of lower energy costs that electrification will bring can only be realised by those that are able to take part, and currently there are significant volumes of customers that are unable to access LCTs – for a number of reasons recognised in Ofgem’s consultation.
- 6. We recognise the importance of ensuring that vulnerable customer have the appropriate routes and support and that we have a role to play in this space. We must ensure that all actors have appropriate roles and responsibilities that ensure the best, most efficient outcomes for this important customer group. However, we must recognise that vulnerable customers’ needs are complex.
  - a. During ED2 our LCT advice service has been incredibly successful and has supported 13,500 customers, providing help and advice and signposting to routes to funding and delivery of LCTs and is on track to support 25,000 by then end of ED2.
  - b. Moreover, our support services have helped vulnerable customers to address immediate needs of fuel debt, disconnection and complex financial needs. We must recognise that vulnerable customers need rounded support to address a whole host of needs – and cannot simply be offered LCTs, when they have more pressing issues.

### **Enhanced Co-ordination**

#### **Q2. Do you agree with the overall rationale and scope of 'Enhanced Co-ordination'?**

- 7. Overall, we agree with the rationale.

#### **Q3. What are your views of the effectiveness of the existing Collaboration Plan requirements? Do you think the enhanced Community Collaboration Plans we have described would be helpful to stakeholders and, if so, how best should they be monitored?**

- 8. The existing Collaboration Plan and wider Smart Optimisation Output licence obligation is ineffectual and inefficient. The requirement to publish an annual report demonstrating progress made against a plan does not itself drive progress, instead it creates an administrative burden. In addition, the requirements of the collaboration plan are unclear and vague.
- 9. We agree with the principles that are set out in Ofgem’s consultation and agree that sharpening the intent of the licence obligation to focus on enabling collaborative planning between the DNOs and stakeholders such as Local Authorities and Housing Associations regarding LCT roll out is a positive one. However, we do not believe that creating annual reporting obligations or setting out key actions that DNOs must take is an effective route to deliver on these principles.

10. Where a clear policy outcome is defined there should be a clear customer outcome that can be achieved by DNOs. For example, if the objective of Ofgem's policy is to maximise delivery of LCTs in low-income households then the most effective way to monitor this is to directly monitor the customer outcome, whilst recognising the DNOs level of control over the outcome.
11. The current Consumer Vulnerability Incentive (CVI) is inconsistent across DNOs with bespoke outcomes and targets set for ED2 leading to a lack of comparability and an uneven distribution of incentive reward. We would suggest that this is an area where a tangible consumer outcome could be used to define part of the CVI incentive, creating an objective measure, provided that targets and incentive rates recognise the level of control over the outcome that DNOs can display.

***Q4. How useful is the data currently published by DNOs, and is it presented adequately?***

12. We consider that other stakeholders are best placed to comment directly on the usefulness and presentation of the data published by DNOs. However, Northern Powergrid's data offerings are informed by extensive and ongoing engagement with our stakeholders and customers. This includes a range of channels such as one-to-one sessions, webinars, our User Forum, and our online community.
13. Through this engagement, we consistently receive positive feedback that the data we publish is useful and supports a broad range of user needs. At the same time, we remain committed to continually improving the accessibility, clarity and overall utility of our data. Stakeholder insights play a crucial role in shaping these improvements, ensuring our data services evolve in line with users' expectations and emerging requirements.

***Q5. What are your views on strengthening the System Visualisation Interface requirement, and would it be valuable for DNOs to collate and publish additional non-network datasets, if so, which datasets would be most beneficial?***

14. We support measures that enhance transparency and visibility of the electricity system for stakeholders. In principle, strengthening the System Visualisation Interface (SVI) requirement of the System Optimisation Output (SOO) can help users better understand network constraints, opportunities and future needs.
15. However, it is important that licence conditions focus on outcomes, rather than defining specific technical solutions. Hard-coding solutions into licence conditions risks locking the sector into approaches that may become outdated or unfit for purpose in future years.
16. The ED2 DSO incentive criteria already encourage the inclusion of relevant third-party and non-network datasets. Northern Powergrid publish a wide range of external datasets on our Open Data Portal and are currently working on co-hosting IDNO and gas network data. In addition, we include LCT uptake data to help stakeholders understand the baseline scale and location of EV and heat pumps.
17. We recognise the significant value stakeholders gain from integrated datasets. Our LAEP+ tool is a good example of this in practice, bringing together a wide range of information for Local Authorities including network data, domestic and non-domestic EPC data, and socio-economic indicators such as income estimates, education levels, fuel poverty, and indices of deprivation to support the

development of robust decarbonisation pathways. It also incorporates NESTA's heat-network-suitability layer, and options for planned new housing developments can be added by the LAEP+ user.

18. We recommend that a review of DNOs' current approaches is undertaken, best practice is updated and recommendations given to ensure the sector can continue to innovate, respond to emerging needs, and deliver maximum value for customers.

***Q6. What are your views on the Working with Local Authorities and others proposals we have set out above? What if any, would be the key elements of this? Are you aware of particular entities who would benefit from such advice?***

19. Local Authorities and Housing Associations represent the two key stakeholder groups that we believe can have greatest impact on maximising LCT uptake amongst vulnerable customers. We are already engaging extensively with these groups and providing support through data and tools in order to help shape their plans and coordinate our network development with their ambition.
20. We recognise the intent of the proposed coordination agreements with Local Authorities. However, we would caution that these agreements might represent further complexity and administrative burden in a system that is already prohibitive to delivering network improvements.

***Q7. How could iDNOs support the proposals in this portion of the consultation? How could either private wire connected properties or licence-exempt networks feature in these proposals?***

21. It should be recognised that approximately 5% of domestic properties are served by iDNO networks. As such, in order to reach as many low-income customers as possible Ofgem should consider the applicability of their proposals to iDNOs.
22. More broadly, we believe a wider review of the framework around connections to iDNOs' networks at all voltages would be of benefit; whilst creating competition is necessary, regulatory arrangements for iDNOs must ensure a level playing field between DNOs and iDNOs.

***Q8. We are keen to understand how these proposed Enhanced Co-ordination activities could best integrate with NESO's RESP processes in the near and long term, and how these proposals could complement, or be in tension with, RESP development?***

23. Northern Powergrid's Regional Insights team is already engaging extensively with Local Authorities and other stakeholders, providing both technical and process guidance to support decarbonisation and regional development. DNOs are in a unique position to offer this end-to-end support, helping to make planning and delivery easier for stakeholders.
24. The intelligence gathered through these engagements, including through use of our LAEP+ tool, provides early insights into emerging plans and priorities at a local level. This information directly informs our DFES forecasts, complementing our bottom-up modelling with real time understanding of stakeholder intentions and regional activity. This type of intelligence is essential for accurate continuous network planning.
25. To maintain a responsive and efficient network development process, DNOs require up to date information on regional plans and activities. This means we cannot be an observer watching from the sidelines; active engagement is required to ensure efficiencies and to avoid delays.

26. NESO's RESP methodology remains high level at this stage, and we await further detail on both their modelling approach and the specific role expected of DNOs. Our understanding is that RESP will model at LSOA granularity and will focus on long term low carbon technology uptake well beyond the immediate planning horizons of local stakeholders, who will continue to rely on DNOs for more detailed and near-term support. DNO Enhanced Coordination activities are likely to feed into NESO's processes and will require gathering information. There is currently no clarity on whether NESO will deliver digital tools to support regional planning.
27. Northern Powergrid is committed to working with NESO to ensure that our regional intelligence, stakeholder insights and up to date understanding of local plans feed effectively into the RESP's three-year cycle. A coordinated approach will help avoid duplicated engagement, inconsistent messaging, and stakeholder fatigue. By integrating DNO insights into RESP development, NESO can benefit from the extensive relationships, local knowledge, and real time intelligence that DNOs already hold, while ensuring that national signals and local plans remain aligned.

### **Expanded Role**

***Q9. Do you think if DNOs adopted the type of Expanded Role described above this would add value and support the rollout of LCTs and EE? Could this model provide an effective and viable way to deliver network and system benefits? If so, could this be achieved while also prioritising support for low-income households?***

28. We believe DNOs can add limited additional benefit beyond coordination. The core system and customer benefits of deploying LCTs are the same regardless of who delivers them. Electrified heating and transport can provide customers with access to the potential benefits of lower energy costs through a decarbonised, flexible and non-gas reliant electricity system, and domestic solar and batteries allow customers to generate and participate further in flexibility.
29. The network must enable these benefits, allowing sufficient bandwidth on low voltage networks to allow customers to leverage their assets as fully as possible to behave flexibly when the system requires it. As such, in the vast majority of cases it makes economic sense to upgrade low voltage networks.
30. For this reason, coordinating deployment of LCTs on our networks will not reduce the amount of network reinforcement that is appropriate to carry out. In addition, unless DNOs were coordinating a significant proportion of the LCT uptake, we envisage very little timing benefit to be realised. This is because the vast majority of LCT uptake will continue in an uncoordinated manner across the country, thus still requiring a continued predict, plan, deliver and react approach to the vast majority of LCT uptake.
  - a. We acknowledge that there would be some minor benefits of reduced customer disruption and faster connections, however this would be for a small set of customers.
31. DNOs are not best placed to plan and carry out works within customer homes. We do not have the existing organisational capabilities or capacity to undertake this work. If the correct conditions and funding routes are provided there is no reason to think that those companies with appropriate competence would not step forwards to deliver on the challenge.

32. There is no obvious reason to think that DNOs would be any more successful in accessing, training and deploying a large-scale consumer product installation and maintenance workforce. On this basis it appears that the primary motivation may be to utilise the DNO to spread the costs of LCT installations over a wider group of consumers, and to recover the costs over a period of time that is far in excess of the life of the asset.
- a. DNOs' core responsibilities cannot be extended to LCT installation to justify funding customer assets through the DUoS charges intended to reflect distribution network costs.
  - b. If this were the case, we think this would be incredibly damaging to the overall customer interest.
  - c. Prima facie, therefore, recovering the cost of this service through DUoS charges would contravene Article 18 of EU Regulation 2019/943, which limits those charges to the costs of running the network and prohibits the inclusion of "unrelated costs supporting unrelated policy objectives". Ofgem would have to consider carefully how such an approach would be lawful.
33. In addition, the capacity for DUoS charges to deliver the necessary network upgrades within ED3 and beyond in an affordable way is already a challenge, without adding an additional pressure. Ofgem must think carefully about what they are prioritising DNOs to fund. The investability framework must be addressed within the ED3 price-control in order to give DNOs the confidence to deploy additional capital for the necessary network upgrades, never mind additionally funding LCT installations.

***Q10. What are your views on us considering these proposals using a network benefit and wider system benefits approach? Do you have relevant information on the likely network, system, consumer or efficiency benefits of such an approach?***

34. We do not believe there are any material network benefits that can be achieved through these proposals. As described in paragraphs 28-30 in order to maximise the system benefits of LCTs it is most appropriate to create capacity in low voltage networks. In addition, coordination would have to be extensive in order to derive some timing benefits.
35. The system benefits of deploying LCTs are the same regardless of who or which party drives the roll-out. DNOs can add no further benefit, only realise the same benefits that any other party would.

***Q11. Do you have any views on the archetypes presented and their implications? Do you have any other approaches we should consider? Do you have any evidence on key components notably:***

***On the technologies and measures that should be supported: Do you have evidence on the relative costs and benefits of different technologies? How could heat pumps and other low-carbon heating technologies be included whilst still offering wider system benefits?***

36. Notwithstanding our comments around network and system benefits, if DNOs were to influence LCT deployment, solar and domestic battery pairings would provide greatest opportunity for optimisation. Solar helps to reduce net demand within a network area by embedding generation, however this is only effective when paired with a battery in order to match generation to network demand peaks.
37. Heat pumps and EV chargers represent a net addition to consumption and demand within a distribution network area, and as such there is little value that coordination of rollout could bring. Particularly when considering that the vast majority of uptake will continue at a natural, randomised

pace across all other customer groups. In addition, consumers can gain greatest benefits from these LCTs by having an LV network that provides the bandwidth to utilise these assets flexibly on the wider system.

*On the identification of suitable properties and consumer engagement: Would DNOs be well placed to proactively identify suitable properties and/or engage with consumers, or are there other actors better placed to perform these functions?*

38. We do not believe DNOs are best place to identify suitable properties and customers, nor engage with consumers to offer solutions.
  - a. From our experience collaborating with energy suppliers on a number of projects, they have much richer customer and property data than DNOs. Through their business needs of customer reach, acquisition and retention they have naturally been incentivised to create a much richer view of customers due to their market position. This also leads them to have far greater capability for consumer engagement, education and onboarding.
  - b. Local Authorities hold responsibility for planning local decarbonisation through Local Area Energy Plans and hold much of the customer and stakeholder data to do so. In addition, local residents engage with LAs on a regular basis through other local essential services, thus LAs are well placed to support individual customers with delivery of LCTs.
  - c. The role of Great British Energy and the Warm Homes Agency are still yet to be fully determined; however it would seem sensible that a central government agency would be well placed to engage with consumers in an impartial, authoritative and trusted basis to guide customers to LCT solutions.

*On the potential funding approaches and implications: what are your views on the feasibility, or risks from these approaches; do you have evidence from other sources that is relevant to these considerations?*

39. Funding LCT installs through the DNO regulated asset base risks undermining the investability in ED3 for network owners. Ofgem must provide the right conditions to DNOs to carry out the necessary network build out for decarbonisation efficiently and at pace. Funding streams in the current price control framework have not given networks sufficient certainty to invest and get ahead of the uptake in LCTs. Adding to that pressure is not in customers' interests.
40. The overall price control framework is at least as important to enabling LCT adoption than the individual policy and process decisions around LCT deployment. Networks must be given the relevant funding and certainty from Ofgem to support continued investment at such a pivotal time.
41. Requiring DNOs to fund LCT installs would:
  - a. Increase the total requirement on capital deployment from network owners in ED3 creating further need to improve investor confidence through timing and certainty of returns.
  - b. Create affordability challenges whereby Ofgem would need to consider very carefully what level of network investment can be tolerated in customer bills alongside LCT deployment.

42. As noted in point 30 with neither think DNOs funding LCTs to be appropriate in the best interests of consumers nor in line with Article 18 of EU Regulation 2019/943.

*On responsibility for installations: what are the risks and opportunities if DNO's were responsible for installations? What are the options for partnerships and how could different responsibilities offer better outcomes?*

43. Creating a role for DNOs to install assets would distract from their core purpose and create a risk to customers of both poorer network outcomes and increased costs.
44. DNOs are fundamentally set up to efficiently develop and operate the *public* electricity distribution system – an asset base that differs significantly from LCT in almost every way. We see no basis to assume that DNOs would have the requisite capabilities to efficiently engage and onboard customers and deploy LCTs within customers' homes given their core capabilities. Our concern would be that in creating a role for DNOs, Ofgem effectively sterilises a market that may otherwise be served more efficiently by other organisations.

*On ownership and control of assets: how can necessary level of network or system benefits be achieved without DNO control and ownership? Does this pose other risks and challenges, and how might these be overcome?*

45. To achieve any network benefits there must be an element of DNO control over assets, whether that be direct or indirect. Notwithstanding our comments around network benefits in paragraphs 28-30 we do see opportunities to leverage LCTs to the benefit of our network. These benefits will mostly be brought about by improving the timing of interventions on our network and helping to manage deliverability. To be clear these options require no DNO ownership of the assets.
46. Our EmpowerFlex trial in collaboration with EON.Next has demonstrated how DNO commercial control over LCTs can benefit the distribution network. The trial seeks to mitigate primary network constraints; whereby modest exceedances are expected on assets over a number of years. By contracting with Flexibility Service Providers in a novel way, front loading payments, we have been able to incentivise the deployment of LCTs into vulnerable customers' households. The Flexibility Services contract then gives us a commercial means to control the impact of those assets on our network and contribute to resolving network constraints.
- a. To be clear this is an example of utilising collaboration to deploy assets to vulnerable customers to manage a network constraint, whilst reinforcement is planned for the future – not achieving a network benefit by reducing the network investment to be carried out.
47. Our Community DSO project is currently trialling approaches to coordinate LCTs within a secondary network area to manage network constraints and provide benefits to customers. Our trials have demonstrated that, whilst technically possible, these concepts are most successful in scenarios where assets are owned centrally by a single entity such as a social housing association. As such we are concentrating on providing a solution to meet the use case of housing associations seeking to deploy significant numbers of LCTs within secondary network areas.
48. The Community DSO concept will be most effective if Ofgem can unlock regulatory and market barriers that allow the local sharing of energy. Changes such as P441 and P415 will support the

commercial model required to maximise the benefit of sharing locally generated and stored electricity, noting that they are currently in train and not yet approved and finalised.

- a. Again, the Community DSO concept is an example of a tool that, in most cases, will help manage the timing and deliverability of network investment, not removing the need for it.

***Q12. Do you have views on whether pilots of these approaches would be valuable? And, if so, whether the pilots should potentially include a range options across archetypes, or whether the scope should be narrowed in advance? What should be the main focus of any pilots?***

49. Ofgem must be clear on the policy outcome it is seeking, prior to embarking on any pilots. Across the three areas of interest of network and system benefits, LCT uptake volumes and enabling vulnerable customers to access LCTs, we believe the latter is of most interest and value.

- a. As we have set out, we believe there is little network benefit in the coordination of LCTs, and the system benefits of LCTs can be maximised through providing sufficient capacity on LV networks.
- b. LCT uptake volumes will be best addressed through broader government policy and funding decisions. Any impact that DNO contribution can make will be minor in comparison.
- c. Enabling vulnerable customers to access LCTs is most important and is a current gap. We must ensure that the least well off in society are able to access the benefits of electrification.

50. With a clear policy intent Ofgem should set out to demonstrate models at scale. There has been significant innovation work exploring models for area-based deployments that Ofgem has referenced in its consultation. Any pilots should seek to test a model to bring benefits at scale.

51. Finally, DNOs, suppliers, Local Authorities and other local actors have carried out a significant amount of innovation work and pilots across place-based approaches to LCT deployment, smart local energy systems and a plethora of other approaches that are additive in this area. A thorough review of the learning of these past activities must be carried out in order to draw together a single centralised view of what has been proven to work best.

***Q13. How could iDNOs support the proposals in this portion of the consultation?***

52. Per points 21 and 22, the part that iDNOs have to play must be recognised, and although we support the creation of competitive environments, we believe regulatory arrangements for iDNOs should be reviewed more broadly to ensure a level playing field.