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Dear Victoria,

RE: Call for Input on Future of local energy institutions and governance

We welcome the opportunity to contribute to this discussion on supporting the local transition to net zero through trusted, responsible and appropriately funded local institutions matched with clear and decisive governance arrangements.

With Government having decided upon the scope and role of the Future System Operator (FSO) it is now opportune to reflect on the strategic direction and current arrangements for Distribution System Operation, in the context of delivering net zero from the ground up ie at a local level. The scale of the challenge is substantial. For instance, we need to replace heat solutions from natural gas boilers at a much faster rate than one per minute between now and 2050 if heat is to be decarbonised. We see merit in raising the questions in the call for input and in this response, we lay out our thoughts on how these objectives can most efficiently be achieved.

Our [RIIO-ED2 Business Plan](#) and in particular [Annex 2](#) (DSO Transition Plan) sets out how we will work collaboratively with local and national energy industry partners to play our part in the energy transition by leading the north west to net zero. Our strategic direction, outlined in Annex 2, is consistent with the thoughts behind the questions raised in the call for input. But it is also flexible to support any outcome proposed by Ofgem.

The transition plans set out by electricity distribution companies in their RIIO-ED2 business plans have significant merit. There are strong arguments that they should be implemented, from 1 April 2023. Indeed, we are already preparing to implement our proposed RIIO-ED2 approach, which will enable net zero at least cost now, deliver strong consumer benefits, and which can be delivered within existing institutional arrangements. This provides the opportunity to contrast and compare approaches selecting the best elements of each to inform the development of future strategy in this area. But we also recognise that a more principle led structural review may be timely to provide clearer guidance on specific areas such as the structure of the market and whole system aspects of the points discussed.

The GB is leading the world in the development of flexible solutions and flexibility markets and the collaboration in Open Networks project is driving standardisation and best practice in products and processes across the DNOs, IDNOs and the ESO. But the flexibility market at distribution level is still



We believe that it is appropriate to frame our answers to your questions through a strategic review of the three energy system functions and our views are set out below.

We welcomed the approach of reviewing the three energy system functions and have found helpful the use of the framework models to pull out the issues and consider the potential options. In considering our response, our approach is guided by the principle that some activities are more efficiently managed and delivered locally, whilst other activities could be better managed and delivered centrally; for example, central deliverables for us include market liquidity and optimised dispatching.

Energy system planning

The challenge of efficient and effective local planning is to ensure that local economic drivers, sub regional LCT adoption rates and local ambition on decarbonisation are combined to produce detailed realistic local plans. This can only be done by close collaboration with a range of local actors such as developers, local authorities and regional government. It has been conclusively shown that whilst national or sub national assumptions can usefully guide transmission planning, distribution planning requires several orders of magnitude of greater granularity to ensure efficient capacity creation. For example, our work with Greater Manchester Combined Authority on the needs of the Airport Enterprise Zone illustrates the level of detail required to achieve a comprehensive plan focused on efficient economic expansion facilitation and decarbonisation of transport. We do not consider it is viable to achieve this level of detail via a central national body. Overly high-level plans risk stifling local ambition or conversely creating wasteful stranded capacity. They also risk lacking legitimacy and having weak ownership with increasingly empowered local government and stakeholders.

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graph TD; A[Local stakeholder info] --> B[Local DSO planning]; B --> A; B --> C[ATLAS forecasts]; A --> C; C --> B; D[Interactions between local stakeholders and DSO planning impact each other] -.-> A; E[Some inputs are taken directly from stakeholder information] -.-> C; F[Learnings from these interactions generate inputs] -.-> B;
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The flowchart illustrates the interaction between three main components: Local stakeholder info, Local DSO planning, and ATLAS forecasts. The flow is as follows:

- Local stakeholder info** (top box) has a downward arrow to **Local DSO planning** (middle box).
- Local DSO planning** (middle box) has an upward arrow to **Local stakeholder info** (top box).
- Local DSO planning** (middle box) has a downward arrow to **ATLAS forecasts** (bottom box).
- Local stakeholder info** (top box) has a downward arrow to **ATLAS forecasts** (bottom box).
- ATLAS forecasts** (bottom box) has an upward arrow to **Local DSO planning** (middle box).

Additional context provided by the diagram:

- Interactions between local stakeholders and DSO planning impact each other (indicated by the bidirectional arrows between the top and middle boxes).
- Some inputs are taken directly from stakeholder information (indicated by the arrow from the top box to the bottom box).
- Learnings from these interactions generate inputs (indicated by the arrow from the middle box to the bottom box).

Our world leading ATLAS forecasting methodology compliments, supports and is coordinated with the creation of Local Area Energy Plans. As it shares and pulls through its detailed engagement process data from the local actors, including developers, IDNOs, planning authorities, LEPs etc.

Figure 14 from [Annex 3b](#) (Load related expenditure: Methodology) of our RIIO-ED2 business plan highlights this process.

Our view is that the DSO role of planning and network development is a regulated DSO activity best performed by the local DSO, that can be done effectively within the current institutional arrangements, working in collaboration with other local and regional bodies, ensuring that the needs of the local transition to net zero is achieved; whilst coordinating with the FSO to ensure local and national actions are aligned to deliver whole systems outcomes.

Market facilitation of flexible resources

Flexibility has a critical role to play in ensuring the affordable transition to net zero. To understand how flexibility can best be facilitated it is important to examine its constituent parts; namely the specification of local capacity requirements, the procurement of flexibility and the evaluation and selection between competing options, including network solutions.

Determining the need for capacity

In our experience the regional DSO, as proposed in our RIIO-ED2 plan is best placed to analyse local network requirements and hence specify future capacity requirements. These requirements stem from both the local adoption rates for LCTs and local economic development. For example, in central Manchester approximately 60% of projected demand growth arises from economic activity whilst LCTs account for the remainder. In other areas such as rural communities almost all growth stems from LCT adoption.

Procurement of flexibility

In our view the procurement of flexibility could be more efficiently done centrally. We have always believed that third parties, not DNOs nor DSOs, are best placed to operate flexibility procurement platforms as they can be directly incentivised to combine the tendering of flexibility across multiple markets, aiding the coordination and stacking of flexibility, driving the development of a liquid market and delivering efficiencies for customers.

In our RIIO-ED2 Business Plan we recognised this potential and committed to tender platform services regularly. Further, a common market operator would be well placed to drive market liquidity by ensuring common processes for flexibility operators, reducing the potentially inherent inefficiencies associated with six regional approaches.

The Energy Networks Association's Open Networks project has made valuable progress on the development of national specifications for flexible services products and contracts and standard processes for tendering and evaluation, including baselining and settlements. Whilst good progress has been made, further work is required to drive consistency across the industry which we believe could be efficiently delivered by a single central body. BEIS or Ofgem may wish to determine which central body should take forward this activity as we anticipate this could stimulate faster progress in developing effective markets for consumers.

Evaluation and selection

The evaluation of competing options, particularly the evaluation of network solutions versus flexibility services is the area where stakeholders require the greatest reassurance. We believe this can be best done centrally helping to ensure stakeholders remain confident in the impartiality and robust decision-making processes. ENWL has led the industry development of the Open Networks evaluation tool; the Common Evaluation Methodology, and we will continue to develop this model to ensure decision making rules are transparent and well justified. Such tools applied through open governance arrangements via a central body would, we believe, significantly alleviate stakeholder concerns whilst optimising decision making.

It is important that network and flexible solutions are evaluated on a consistent basis. In our RIIO-ED2 business plan we noted that whilst flexibility providers are committed to a fixed 'bid'

price, DNO delivered network solutions can be subject to post approval cost variations. This risk asymmetry reduces stakeholder confidence in fair decision making and hence we proposed all DNO network solutions to be committed on a fixed price basis. We would recommend that this approach be adopted by a future central body to ensure fairness.

In summary, whilst the definition of capacity requirements is best delivered by the local DSO, the role of market facilitation aspects of procurement of flexibility and evaluation and selection is a regulated activity that could be effectively performed by a national provider responsible for enabling the development of distributed flexibility which can be used locally and nationally as required. This has the overall benefit of enabling ready access to local and national markets for all customers, thereby driving liquidity, increasing competition, ensuring transparency, removing perceptions of conflicts of interest and enabling net zero at least cost.

Currently the combined DNO/DSO organisation holds clear accountability for all security of supply issues. Security of supply continues to be the most important factor to customers and stakeholders. We note that capacity is closely aligned to network resilience as defined in several network code obligations including Distribution Code, Annex 1, document P2. At present capacity provided through network assets and flexibility is managed by the local DSO to ensure P2 compliance under all credible scenarios. Should flexibility fail then the impact of a sudden loss of capacity, for example due to unanticipated market interactions, could jeopardise supply security. Any potential separation of obligations should in our opinion consider which body is best placed to manage this risk and the associated Interruptions Incentive Scheme and Guaranteed Standard consequences. Failure to do so potentially jeopardises security of supply and customers' and stakeholders' confidence.

Real time operation of local networks

The operation of local electricity networks is again multi-faceted and to understand which elements could be most efficiently performed locally it is helpful to separate the phases of real time network operation into 1) identification of the need to dispatch flexibility, 2) the selection process of which flexible resources to dispatch and 3) the act of dispatch.

Real time need identification and request

Our control systems will actively manage the operation of the network in real time, making the decisions needed to manage constraints using resources, both physical and commercial assets, and coordinating actions for the recovery of network resilience from fault and unplanned events. The identification of the need to activate a flexible resource is inherently a real-time technical decision taken within the control system and hence can only practically and efficiently be done locally. When a flexibility services need is identified a signal is sent from our control system requesting flexibility services are provided at the scale and within the timescales previously agreed.

Selection and coordination of the flexible resources to dispatch

However, the selection of which flexibility resource to utilise to solve a given problem is best done centrally to ensure whole system optimisation of resources. This would require appropriate IT system linkages to operate in the required timescales but our Network Innovation Competition project, BiTraDER, illustrates how this can be readily achieved. The request signal from ENWL's control system is sent to the central body, which selects the appropriate resources to manage the identified need, whilst managing system optimisation.

Dispatch of flexible resources

Finally, the act of dispatch again can be done centrally offering providers a common national interface standard reducing costs and complexity, further benefitting the development of the flexibility market. Having selected the appropriate flexible resources to manage the identified need the central body cascades a dispatch signal to those flexible resources.

Our view is that real-time needs identification of real time network operation is a regulated activity best performed by the local DSO serving local customers; whereas the selection and dispatch of flexible resources, that are coordinated nationally, can effectively facilitate the local transition to net zero at the lowest cost.

Our proposed framework model

The review of energy system functions is summarised in Table 1 below that shows which of the three energy system functions and their constituent parts should be managed locally and nationally. We note, that our proposed model is a variant of Framework model 4, Interacting Organisations.

Energy Systems functions and elements	Local DSO	National body
Energy system planning	Y	Transmission only
Market facilitation of flexible resources	Hybrid approach	
Specification of capacity requirements	Y	
Procurement of flexibility		Y
Evaluation and selection of options		Y
Real time operation of local networks	Hybrid approach	
Real time need identification and request	Y	Only for transmission and system needs
Selection and coordination of the flexible resources		Y
Dispatch of flexible resources		Y

Table 1: Summary of delivery of energy systems functions and elements

Agile RIIO-ED2 Business Plan

We believe that we have proposed a flexible RIIO-ED2 DSO business plan that delivers on local provision of energy system planning and local operation of networks. Our proposed approach of seeking platform services is easily adapted to ensure that a national provider is engaged which supports system optimisation whilst encouraging distributed flexibility. And we will continue to support the activities in the Open Networks project on standardisation so that all tenders reflect the best practice arrangements, particularly in coordination and primacy rules.

We look forward to further discussion with Ofgem following review of our response and as part of the DSO governance work and are ready to support any next steps in this process. Should you have any questions regarding our detailed response please don't hesitate to contact me or Simon Brooke (DSO Compliance Manager, Simon.Brooke@enwl.co.uk) in the first instance.

Yours sincerely,

Steve Cox
Director of Distribution System Operation