Date: 12/02/2025

To: Alasdair MacMillan
Email: Alasdair.macmillan@ofgem.gov.uk
Office of Gas and Electricity Markets

From: Martin Tugwell
Chief Executive, TfN
Transport for the North
Town Hall Extension
Lloyd Street
Manchester
M2 5DB

Response to the Connections end-to-end review consultation

Transport for the North (TfN) welcomes the Government's Clean Power 2030 Action Plan and Ofgem's Connections Action Plan (CAP) which aim to significantly accelerate alignment of strategic planning and connections. We support the proposed core principles outlined in this consultation: to develop a framework of incentives, obligations and requirements pertaining to network companies and the National Energy System Operator (NESO) to ensure improved quality of service and timely connection outcomes.

Our response seeks to highlight the important enabling role that energy infrastructure plays in relation to delivery of wider infrastructure. We outline examples of where this risks constraining growth and highlight publicly managed mechanisms which should be explored to speed up developments in order to reach our economic, social and environmental ambitions.

This response also focuses on key touchpoints and areas of opportunities for TfN's statutory role, and that of our local authorities, to support connections process reforms across the themes highlighted in the consultation.

Our role

TfN is a statutory Sub-national Transport Body (STB) established in 2018. It brings together the North's Mayoral Combined Authorities (MCAs), Local Transport Authorities (LTAs), business leaders and other partners to advise central government on the investment in infrastructure and services needed to enable transformational growth in the region.

Our work is underpinned by an extensive evidence base, one gathered in collaboration with partners across the North and nationally. Our Strategic Transport Plan (STP), adopted by the TfN Board in March 2024, sets out how transformation of the North's transport system is essential to realise the North's economic potential, improve social inclusion and decarbonise the system.

Our vision is that by 2050 the North of England will have become a thriving, socially inclusive region. Our communities, businesses and places will have benefitted from sustainable economic growth, improved health and wellbeing, and access to opportunities for all. This is to be achieved through a transformed zero emission, integrated, safe and sustainable transport system, that will enhance connectivity, resilience, and journey times for all users. For more information, please visit: www.transportforthenorth.com

A whole system approach

We strongly advocate the benefits of a whole system approach being at the heart of infrastructure planning, and we embed this in our way of working across TfN programmes. We share Ofgem's view that planning for single sectors (or vectors, i.e. electricity) in isolation is inefficient, and whole system thinking is necessary to maximise linkages in policy and decision making.

To ensure the North of England realises its ambitions around net zero, investment in energy generation and distribution is required at scale and at pace. Connection queues and predicted connection dates in the late 2030s will significantly impact the infrastructure needed to decarbonise transport and unlock economic benefits. Transport is a key cross-vector system for energy infrastructure planning and delivery, with examples including transport of raw materials for power stations, such as Drax, electricity grid management and application of vehicle-to-grid technology in future; to the energy required to power the green transport solutions on our road and rail networks (see more detail in Appendix 1).

We welcome the positive working relationships we have across the energy sector. Whilst progress has been made, it is clear we could collectively do more to take advantage of our evidence to support energy connections and infrastructure delivery, and the role of public sector led strategic planning.

Addressing limitations in strategic planning and investment

The UK requires a mechanism by which we are able to anticipate, plan for, and invest in the energy infrastructure ahead of need so that it acts as an enabler, knowing that the investment will be repaid subsequently by the growth that it generates. Where possible, enhanced practices to deliver connections infrastructure should build on existing cross infrastructure strengths to shape planning happening in the immediate term for the RIIO ED2 and in the future RIIO ED3 (Revenue = Incentives + Innovation + Outputs for electricity distribution) price control period (i.e. what network companies are expected to deliver from 2028).

The existing capacity of distribution networks and future cross sector infrastructure demands are not as well understood as they can be. This makes the level of investment required to meet the future trajectory of demand from low carbon technologies uncertain. The proposals in this consultation can go some way to supporting the fundamental change in processes and collaborative working we need. We note the national Government's policy paper on 'Improving the grid connection process for electric vehicle charging infrastructure' (Dec 2024) which is a positive step to collective working across organisations. However, these proposals remain voluntary, and we advise this consultation considers the strengthening of related regulatory processes where it ensures a proportionate, consistent and efficient connections process outcomes.

Further to connection process enhancements, Ofgem and national Government should consider opportunities for strategic approaches to speeding up investments in this critical infrastructure to support cross sector outcomes which depend on it.

The National Infrastructure Assessment (NIA) provides a long-term assessment of the energy infrastructure requirements for the UK. The existing regulatory framework provides the mechanism by which investment to deliver that requirement is managed. The key, unresolved issue is delivering this investment

in a timely fashion so that energy infrastructure becomes truly enabling in facilitating the growth in an inclusive zero carbon economy. There have been publicly owned and managed forward funding mechanisms operational in the past that could provide a potential model in this regard. This includes use of investment programmes such as regulated asset bases, revolving infrastructure funds, spatial development companies; as well as the National Wealth Fund. The evidence base underpinning regional and city-regional strategies increasingly provides a robust basis for the establishment of such investment mechanisms. This should be applied by working in partnership with the energy sector, but also more broadly with the Government's Office for Investment.

Our response to specific consultation aspects

Local and pan-regional plans provide valuable data about the energy needs of an area. This includes evidence on how to meet net zero ambitions, capturing local characteristics such as information on transport needs, the built environment, planned development and the industrial base. Our response below outlines key areas which transport and energy can work collectively to deliver planned growth for our people and places.

We recognise that information we have provided may be of use for Ofgem's wider Connections Action Plan and would welcome engagement with relevant teams on the topics highlighted.

Yours sincerely

Martin Tugwell
Chief Executive

1. Formalising systems planning and delivery:

The National Infrastructure Commission's (NIC) systems mapping sets out how systems decisions are currently made, and may be improved in future. This principle can and should be extended to planning and delivery activities to understand how integration and alignment of our actions can improve outcomes. With close collaboration between the NESO, Regional Energy Systems Plans (RESPs), Distribution Network Operators (DNOs) and ourselves, we can enable transformational change and deliver networks which support decarbonisation of both energy and transport, whilst grasping benefits which allow our economy to thrive.

There are, and will be, critical information links between transport and energy functions and planning considerations, which can form the basis for collaborative working to develop outputs for our industry participants. TfN acts as a focal point for trusted information and evidence which can guide policy and implement solutions. This applies to informing investment in energy systems to enable the delivery of transport outcomes which will require a mix of major and minor electricity connections.

We welcome the positive working relationships we have with northern DNOs, through the development of capabilities such as our Electric Vehicle Charging Infrastructure (EVCI) framework, as well as our support of Ofgem's Regional System Plans (RESPs). Whilst progress has been made, it is clear we could collectively do more to take this further. Our extensive evidence base should be more actively incorporated and accounted for in energy planning and delivery. This includes:

- TfN's Rail State of Play, a blueprint for northern rail infrastructure which identifies future transport infrastructure needs which will impact energy requirements;
- TfN's EVCI Framework outlining strategic charging infrastructure needs to support a rapid EV transition;
- Requirements for key freight and logistics facilities;
- Connections required for electric buses and depots;
- Likely interactions and requirements to support hydrogen for transport;
- TfN's regional Decarbonisation Strategy, including assessment of infrastructure resilience;
- TfN's Development log, mapping land use allocations and progress towards commercial and housing development across all areas of the North.

The evidence base we have assembled demonstrates how investment in the North's infrastructure contributes to achieving agreed outcomes on reducing carbon emissions, improving health, and achieving sustainable economic growth. This will require, at a minimum, alignment of analysis, evidence and decision making in transport investment with that in energy systems and digital connectivity.

We recognise an opportunity for connections reform. Our evidence and strategic plans set out how we can support improvements to how we plan, develop and

deliver infrastructure and services. We see continued work with the energy sector as key in making best use of critical whole systems tools to collaboratively enhance decision making and delivery towards our mutual ambitions. This includes better informing interdependent infrastructure investment processes and ensuring they are cognisant of, and aligned to, local and regional requirements. Including:

- Local and regional transport plans (LTPs); Local Area Energy Plans (LAEPs), Local Growth Plans and local spatial planning. This includes local strategic boards set up through devolution deals, such as the North East Strategic Energy Board (NESEB).
- Public investments channelled through national and local governments, i.e. Major Infrastructure Projects and funding such as the Local Electric Vehicle Infrastructure (LEVI), Rapid Charging Fund (RCF), bus electrification plans.
- National Highway's Road Investment Strategy.
- Network Rail's Control Periods for planning and investment.
- Rail Network Enhancement Programme (RNEP) funding enhancements on a case-by-case basis.
- Electricity Distribution investment plans.
- NESOs Strategic Spatial Energy Plan; the Central Strategic Network Plans (CSNPs) and RESPs.
- Delivery of the local electricity networks RIIO Electricity Distribution Price Control (RIIO-ED2) period 2023 to 2028, and (RIIO-ED3) beyond 2028.

Example - TfN's rail State of Play blueprint

We have been working with the industry to better understand the long-term plan for investment in the North's rail network and have produced the State of Play. This provides a single overview of the planned and proposed programmes in the North of England. This could be used to predict where power supply increases will be needed, associated with major programmes, e.g. route upgrades including electrification. Synchronisation of investment in the grid, and upgrades across the rail network is needed to prevent delays to programmes, understand long-term total requirements, and ensure benefits are realised at the earliest possible opportunity.

With further development, the State of Play could be used to identify in advance the date by which power supply upgrades would be required, associated with service changes, e.g. introduction of new services, even where these are not dependent upon other infrastructure changes.

2. Visibility, accuracy and quality of connections data

We agree with the issues identified in Theme 1 of this consultation, having experienced these challenges both within TfN and with our local authorities and delivery partners (Network Rail and National Highways). Connection intelligence is often available in different guises, is not user friendly and overly complex. Pre-application data for specific locations can be hard to come by or only received at a cost which delays decision making within complex transport programmes in their own right. Resolving the issues identified in this section will go some way to providing outcomes sought in this consultation.

We agree with the proposals requiring digital view tools which make connections data available; requiring the creation and maintenance of standards for data visualisation tools; and requiring provision of systems connections data on regular basis.

Our experience shows that shared datasets and analysis can form the foundations for significantly accelerated alignment of strategic planning and delivery. Use of common datasets in this way enables a whole system approach to be embedded quickly, efficiently and at a reduced cost to the public purse. In this regards such an approach would support the rapid drive to deliver decarbonisation whilst focusing on optimising outcomes for our people and places.

Ofgem and wider energy partners should seek to maximise the use of existing tools and evidence, including the data available through TfN, given that this will add value and realise efficiencies in embedding a whole system approach.

We make our datasets, tools and frameworks available to our partners (both across the North and nationally) to support delivery at the most appropriate spatial level. We launched a new service (called the "TfN Offer") in September 2023 that enables those partners to draw on the technical capacity and capability held by TfN in a way that is cost effective and efficient. This approach allows the public sector across the North to better share knowledge and experience.

Example - TfN's national EV Charging Infrastructure (EVCI) Framework

The development of our EVCI Framework has seen transport partners and our DNOs work collaboratively to anticipate infrastructure needs. This tool is used to support local, regional and national strategic planning and deployment of local EV charging infrastructure; to communicate investment opportunities; and de-risk investment decisions across sectors. This is an example of achieving successful outcomes from making a capability openly available and sharing robust data at a granular level. You can view our EVCI visualiser here.

Our approach identifies what is needed, where and by when to support increased EV use and reduce emissions, and then to estimate how much it may cost to deliver both charging and electricity infrastructure. Our EVCI framework projected requirements demonstrate that as much as a fifteenfold increase could be needed by the end of the decade, with 178,000 to 240,000 public charge point plugs required across the North of England. Clearly, the impact on our energy network is significant with a high scenario estimate of 6,816 Gigawatt-hours (GWh) of additional electricity required annually.

Toolkits such as ours can enhance the speed and efficiency of planning and decision making, providing a long term forward look of demand and connections requirements, supporting early-stage assessments, enabling better informed and less speculative applications, and providing a monitoring function for any subsequent reinforcement works.

The work of TfN and its partners to date with the energy sector provides a firm foundation on which to build. The issues covered in theme 1 of this consultation match potential blockages we have identified for future extensions for future collaborative working. We are open to a discussion on benefits of incorporating energy network data such as:

- The state of networks and capacity of grid assets.
- Additional granularity of data, including at secondary sub-station level.
- Indication of likely connections (locations and size) in the pipeline which will influence cross local authority boundary planning decisions.
- Indication of future network capacity.
- Vehicle-to-Grid data
- More regular updates to data, or real time as the consultation suggests.

Our EVCI Framework is released as far as possible under the Open Government Licence (OGL) and is supported by a comprehensive legal and data sharing framework. We note the consultations aims to embed open data values whilst remaining legally compliant and would encourage this approach to enhance collaborations through data.

We note Ofgem's intention to require the ESO and network companies to work together to create single or multiple digital views of connections, capacity and associated factors. We would welcome a discussion regarding opportunities arising from application of our national EVCI Framework when accounting for the impact of demand from electric vehicles. (See Appendix 1 for examples of how we've already applied energy data).

3. **Enhancing standards of service and engagement to accelerate alignment of strategic planning and connections.** (Relating to Themes 2, 3 and 4 of this consultation)

Standards of service should ensure the network operator or NESO is fully aware of resulting impacts to dependent infrastructure requiring these connections. Therefore, either proposal 2a or 2b should take account of impacts on dependent infrastructure such as transport. Standards within network operators' licences may act as a sufficient guideline and be proportionate in some instances. However, the development of minimum service level agreements (SLAs) for major connections would provide added confidence to ensure delivery, especially of wider major infrastructure programmes or those which have a strong benefits and impacts on users.

Connections documents should, were possible, be of a standard format and supported by early access to data and intelligence referenced above. This would reduce the elongated pre-connection periods we experience which will draw on both transport and energy resources. Network operators should prioritise early engagement with relevant local and national authorities, RESPs, and strategic bodies, such as TfN, to understand requirements, rather than responding to new and existing demands in their deployment queue. This forward strategic planning is vital if we are to accelerate alignment of strategic planning and connections.

Outside of the regulatory proposals above, effective communication and engagement will be key to ensure connections processes deliver the best outcomes. TfN operate a number of regional forums with our partners, which encourage and facilitate strategic planning, and we are happy provide further detail as needed.

Example - TfN's Development Log

This toolkit encourages a standardised and comprehensive database to track proposed developments within the North of England. Since 2020, TfN have engaged with Local Planning, Transport and Highways Authorities and undertaken several successful rounds of Development Log data collection, which included processing the development data collected from Local Planning Authorities and National Parks into a standard format.

This includes both residential and commercial projects. This log has the potential to play a role in planning and coordinating infrastructure improvements, ensuring that the necessary support systems, such as transportation and utilities, are in place early enough to accommodate new development and thus enable economic growth.

The data has been extensively used to support pan-Northern and TfN partners' Investment Programme Business Case studies and strategy development. We would be happy to discuss this capability further and the opportunities to further strategic connections planning in the future.

4. Approach to minor connections (i.e. low carbon technologies)

Response to consultation issues and proposals

We recognise the significant increase in demand for these sorts of connections, as well as a range of new customers who may not be as informed regarding network operators' processes. However, these processes could be streamlined or made more effective to avoid delays which have negative impact on our decarbonisation ambitions. We agree that technical and service issues are sometimes preventing minor connections, such as EV charging and other low-carbon technologies, in a timely manner. We have noted inconsistencies between operators in terms of identifying solutions and varying cost estimates.

We also support actions to encourage clearer expectations in terms of timeframes and service provision by DNOs. This is fundamental to our local authorities who are delivering EV charge points to ensure they can plan a range of associated delivery actions effectively. We support automation where it provides clarity, assurance and consistency.

We note para 1.20 refers to the TM04+ proposals which include the introduction of two connections application windows each year. Whilst we appreciate the aim to reduce and manage the connections queue, we are also mindful of the numerous smaller scale connection requests likely, i.e. requests from local authorities delivering the Government's LEVI funding. Consideration should be given to impacts on wider infrastructure programmes and whether this window can be applied to major connections only to ensure speed of delivery for other smaller enabling schemes.

We note the reference to issues around customer notification of connecting assets. We recognise that planning for anticipatory investment and avoiding surprises requires best practice from both sides of the connections process. Increased visibility of data and intelligence should go some way to mitigating this and increasing the customers understanding. However, Ofgem, Network Operators and NESO may wish to consider education and guidance material to shape better customer practices. As mentioned above, TfN can also provide

assistance in better connecting stakeholders across our region and facilitating knowledge sharing.

5. Monitoring frameworks

We support the consideration for regulations in paragraph 2.35 of the consultation for network operators to provide connections data a regular, granular and standardised basis. In particular, the external publication of this data is welcomed. From the TfN work referenced above, we understand the value of making data available to create solutions, but also to monitor and evaluate both performance and infrastructure delivery.

The latter is key so we can maintain effective strategic oversight of how new developments are performing against ambitions across transport and energy plans. This is similar to our approach for EVs when monitoring charge point deployment against our strategy. The Government's Open Data Regulations 2014 took this further by requiring charge point operational data be released by charge point operators.

We would suggest that the price control performance review should begin before the end of RIIO-ET3. Reviewing outcomes at the end of the period in 2031 is entirely right, however it would be pertinent to undertake earlier and more regular gateway reviews during the period to determine if any new actions are required. This would be supported by the enhanced data sharing and visualisation referenced in the consultation.

Example – TfN Monitoring and Evaluation

Our Strategic Transport Plan is supported by a comprehensive monitoring and evaluation framework to ensure that we are measuring progress against priorities and that national delivery bodies are held to account for delivery. Our programmes, such as the EVCI Framework, are built to better enable monitoring and benefits realisation of actions to ensure delivery across the region remains flexible to changing needs or focus. We suggest that the new RESPs should provide such a framework for the energy distribution sector.

February 2025