
Meeting: Transport for the North Board
Subject: Electric Vehicle State of Play
Author: Simon McGlone, Principal Planning and Strategy Officer
Andrew Hough, Planning and Strategy Officer
Sponsor: Martin Tugwell, Chief Executive
Meeting Date: Monday 16 September 2024

1. Purpose of the Report:

- 1.1 To consider and comment on Transport for the North's (TfN's) Electric Vehicle (EV) State of Play report which aims to:
- Review and evaluate progress of EV charging infrastructure deployment across the region against our forecasted requirements.
 - Apply TfN's evidence, and consolidated views of regional partners, to highlight key recommendations which can further enhance the speed and effectiveness of the EV transition.
- 1.2 The purpose of this paper, and accompanying appendices, is to share progress, take any feedback, and secure support for the State of Play report, which will inform our continued work with partners (regionally and nationally) to address barriers for EVCI deployment.

2. Recommendations:

- 2.1 That TfN Board:
- a) Notes analysis of EV uptake and supporting charging infrastructure deployment progress against evidenced future need
 - b) Notes TfN's actions to support partners across the region, including new evidence capabilities available alongside ongoing partner support
 - c) Comments on the State of Play policy recommendations and next steps to work with our partners (nationally and across the North) on operationalising these actions
 - d) Endorses TfN's Electric Vehicle State of Play report at Appendix 4.

3. Scrutiny Committee

- 3.1 TfN Scrutiny Committee considered this report and recommendations at its meeting on 5th September. The Committee endorsed the EV State of Play report and its recommendations in full, providing steers to enhance the report content. This included updates to Recommendation 2 to focus on education which provides trusted information to increase public confidence in the EV transition; and Recommendation 13 to be clear on the vision for all EV charging to be powered by renewable energy generation.
- 3.2 The Committee supported the publication of the State of Play report and that TfN use this as the basis for continuing action, including the shaping 2024/25 business planning activities. The Committee also supported the value of an annual horizon report on the progress with regards to EVs and charging infrastructure.

4. Background:

- 4.1 There is a high level of car dependency in the North, with 61.1 billion miles driven annually by cars and taxis on our region's roads, and over 90% of freight lifted by tonnage moved by road. Motorised road travel is the largest contributor to surface transport carbon emissions in the North of England, with more than 95% of the 26 million tonnes of transport-related carbon emissions per year from road transport. The North's highway network is responsible for 23% of UK road emissions and 6% of total UK emissions.
- 4.2 Our Strategic Transport Plan (STP) sets out the North's ambition to achieve the 'decarbonisation of surface transport' and points to the need for the transition to zero emission vehicles, substantial investment in supporting the shift and management of road vehicle demand to support our vision for a better connected, prosperous, and environmentally sustainable north of England.
- 4.3 The Transport Decarbonisation Strategy (2021) identifies the need for a 56% reduction (11 million tonnes) in transport related carbon emissions by 2030. Whilst consistent and substantial investment in active travel and public transport is required, the transition to EVs is critically important in having the most significant impact on carbon emissions.
- 4.4 This is consistent with the new national Governments priorities for transport, including:
- Transforming infrastructure to work for the whole country, promoting social mobility and tackling regional inequality
 - Delivering greener transport
 - Better integrated transport networks.
- 4.5 To achieve this rapid transition investment in a comprehensive network of charging infrastructure provision is essential to ensure consumer confidence and the necessary speed of change. This reinforces the importance of aligning investment in our energy systems (both generation and distribution) in support of the decarbonisation of our transport system.

5. Reviewing progress against TfN's EVCI Framework:

- 5.1 TfN's [regional EV strategy](#) (October 2022), supported by our innovative and open accessible [EV Charging Infrastructure \(EVCI\) Framework](#), set out the actions required to support the movement of electric cars, vans and HGVs across our region. The TfN Board (March 2022) agreed that realising the potential of EVs, including delivering the associated charging infrastructure, requires a 'whole network, whole system' approach at a regional scale which accounts for user movements across individual local authority boundaries.
- 5.2 Since 2022, public (i.e. local authority EV strategies and application of Local Electric Vehicle Infrastructure fund (LEVI) funding) and private sector activities towards charging infrastructure has significantly increased. However, as shown by the assessment below, further substantial action is needed (both public and private) to meet requirements which support our transport decarbonisation aims. This points to the need for continued ramping up of delivery actions, supported by infrastructure planning (see Section 5) or applying learnings to available policy actions (see Section 6).
- 5.3 ***Electric Vehicle Uptake: state of play***

- Where we are: Between October 2022 and December 2023, the number of EVs in the region increased from 125,000 to 256,000. Whilst this is over a doubling, the reality is EVs still only made up 2.9% of the overall 8.8m vehicles in the region in 2023 (total vehicle numbers have also increased in that time).
- Where we need to be: Evidence from our Decarbonisation Strategy shows that as a minimum 25% of the vehicle fleet will need to be battery electric (2.6 million vehicles) in 2030 (year of the current combustion engine sales ban) to support our decarbonisation trajectory.

EV Charging: state of play

- Where we are: As of May 2024, the number of publicly available EV chargepoint connections (plugs) has increased by 138% (from October 2022) to around 15,200 connections (Zap Map data acquired by TfN).
- Where we need to be: The EVCI Framework provides charging infrastructure need across 5-year increments to 2050. For 2030:
 - The total public charging requirement is 185,000 connections (plugs). This is a x12 increase in delivery over the next six years, which will need to be supported by actions referred to in Section 5 below
 - This will produce an additional 5501 Gigawatt-hours (GWh) per year demand on the electricity grid across the region to support the 2030 public charging requirement (i.e. does not include home charging). This is the equivalent of annual household electricity consumption of around 1.4m households (applying average use according to Ofgem)
 - TfN work estimates the cost of delivering this 2030 infrastructure need (private or public investment) will be £3.9 billion. This considers hardware, software, installation and maintenance costs, but does not include electricity grid enhancements and reinforcements.

6. Actions to support the EV transition across the north:

TfN's EV Charging Infrastructure Framework

- 6.1 TfN's EVCI Framework provides robust, data-driven evidence in a way that is easily accessible to those wanting to use it to guide their strategies and delivery plans. This spatial and temporal route map communicates investment opportunities and de-risks investment decisions (both public and private) across sectors by using comprehensive evidence to increase certainty and confidence of infrastructure need; particularly with regard to identifying the types of charging required, where these will be needed and when.
- 6.2 The EVCI Framework is being actively used by local authorities via TfN's regional EV forum (**Appendix 1**) and TfN offers (30+ requests to date in addition to use of openly accessible toolkit), as well as by national agencies, energy partners and private sector investors alike to inform planning, investment, and delivery actions.
- 6.3 Further to enhancements released in February 2024, TfN is making the upgrades below available to support our partners. These have been identified as priority actions by the TfN regional EV forum and provide previously unavailable, or behind paywall, functions which can actively shape local authority delivery.
 - Enhanced monitoring capability: to evaluate progress and inform deployment options (i.e. LEVI funding allocation). Integration of Zap Map data into our

EVCI tool and provision of further data direct to any local authority who requests this via the TfN offers.

- *Updated EV fleet baseline and projections:* Capturing the latest available, and most granular, registration data from the DVLA in our evidence. Updated fleet projections to track purchasing trends and current combustion engine sales policy.
- *Driveway access and spatial data applications:* TfN has partnered with Ordnance Survey to apply spatial data and satellite imagery to map all driveway access across the region (i.e. ability to charge at home), as well as apply new techniques to understand walking catchment areas to potential charging hubs (car parks). This work is an excellent example of partnership working, delivering added value through sharing technical knowledge and expertise.
- *Energy and connectivity:* Collaboration with northern electricity distribution operators to highlight current and future grid capacity against EVCI Framework evidence. Outputs will be for 2025, 2030 and 2035 to provide TfN and partners with the data needed to work closely with the energy sector on the planning and delivery of key grid upgrades to support EV demand across the region. This includes collaborations with electricity DNOs, Ofgem and National Grid. It will also include the future Regional Energy Systems Plans (RESPs), which Ofgem is seeking to launch (two proposed for the north of England region). These will be operated by the National Energy System Operator (NESO), with a similar remit to that of TfN in working with organisations at local level to better enable planning and delivery.
- *Commercial Viability, attractiveness & inclusivity:* Assessment of commercial viability (likely private sector investment) within the TfN region to inform inclusive planning and delivery decisions (i.e. where focus of public funding should be, or commercial agreements to ensure a whole network outcome).
- *Scenario additions to understand uncertainty:* Two new user behaviour scenarios, one to unpack utilisation and understand charging infrastructure demand if we accepted an element of queuing (i.e. not always servicing peak demand), another to understand the impact if users' preference swayed towards local charging hubs.
- *Multi-modal hubs:* Identification of priority locations for potential freight and passenger hubs by bringing together TfN's EV evidence with other TfN models for rail, highway, and freight.

6.4 Alongside these enhancements (prioritised for TfN's area), by September 2024 TfN will have also rolled out the EVCI Framework to all of England's other Sub-national Transport Bodies (STBs). This was requested, and funded by DfT, and means this enabling capability is now freely available to all constituent local authority partners across England. The extension of the EVCI Framework to other areas of England is a clear demonstration of the value of the development of the Common Analytical Framework, also led by TfN. By working together collaboratively, we are providing a consistent and publicly operated source of intelligence.

Engagement and advocacy:

6.5 The content of the EV State of Play report has been developed through close working with TfN's local and national partners, with TfN EV Regional Forum

(**Appendix 1, below**) operating as a core focal point to support partner use of the EVCI Framework and other live issues. **Appendix 2** provides a summary of the EV State of Play report, along with further examples of TfN’s role in working with multiple agencies to enable the delivery of EV infrastructure.

6.6 Following requests of support from Mayoral Combined Authorities (MCA) and Local Transport Authority (LTA) partners, TfN has engaged with the Office for Zero Emission Vehicles (OZEV) with a view to addressing live challenges in ways that remove barriers and enable delivery of the LEVI programme. This dialogue has been positive and constructive, and we continue to work with OZEV to address live issues that can help address challenges to EVCI deployment. Key topics include:

- i. Urgent timeframe reprogramming to ensure effective delivery and management of risk.
- ii. Need for improved communications, consistency and clarity. Options include adapting TfN’s regional EV forum to support sharing of delivery experience, and impartial monitoring and assurance reviews where requested.
- iii. Opportunities to improve private sector understanding and manage risks.
- iv. Process improvements – greater emphasis on empowering local planning and funding decisions accounting for actions ‘on the ground’, offers a way to simplify processes and accelerate delivery; ensuring a regional whole network outcome; applying lessons from pilots and early LEVI tranches; release of enabling guidance.
- v. Capability funding – resource funding to reflect existing programme delays, review success and coverage of funding.
- vi. Alignment across Sectors – highlighting the importance of multi-organisation approach to support effective delivery and ensuring grid connections required to support expansion of EV charge points.

EV State of Play recommendations to enhance the EV transition:

6.7 The EV State of Play report (**Appendices 3 and 4**) sets out where the region is at this time, and where it needs to be in future, given ambitions in the Strategic Transport Plan. As outlined in Section 4 above, good progress has been made in recent years and lessons have been learned to shape delivery of this important infrastructure. There is still a way to go, with a x12 increase in infrastructure delivery over the next six years required.

6.8 The EV State of Play report highlights key remaining challenges to the EV transition and areas identified by the TfN partners, which can have an enabling effect on the progress of EV uptake and charging infrastructure. We intend to use the report to continue shaping EV infrastructure delivery to meet ambitions for a rapid and equitable transition to zero emission vehicles.

6.9 **Next Steps:** This shows the importance of breaking down barriers and taking a systems approach to address these. With the endorsement of the TfN Board we will publish the State of Play report later this year, and use these recommendations as the basis for continued work with our partners (nationally and across the North) to focus in on what needs to happen to operationalise these actions.

- 6.10 We continue to engage closely with the OZEV and other government departments to facilitate policy and delivery communications between national and local partners, identifying areas of risk or opportunity where TfN can support partners through our regional EV strategy and evidence. We will also continue to apply our EVCI Framework evidence to support national actions such as the National EV Strategy and public funding activities, but also improving our evidence capabilities as new requirements, data and collaborations arise.
- 6.11 With our systems approach, TfN will be seeking to build on positive engagements with the energy sector, including application and engagement with National Grid and Ofgem planning and price control periods, Local Area Energy Plans, our northern electricity DNOs and collaboration with future Regional Systems Plans (TfN has supported Ofgem during their consultations and development).
- 6.12 The draft recommendations fall into six systems thinking themes:
1. Vehicle access – improving new user access as well as information and communication about EVs.
 2. Charging rollout for cars, vans and HGVs – monitoring of deployment (especially public funded activity such as LEVI and the Rapid Charging Fund, (RCF)), speeding up spatial considerations for installations, connections to the electricity grid, improving user experience (digital connectivity and information), and tackling operational and maintenance challenges.
 3. Inclusivity – ensuring charging infrastructure supports all who need to drive, recognising our whole network vision, travel hierarchy and the needs of local residents. This includes regulations and fiscal measures to improve access to EVs and charging more inclusive.
 4. Transport and Energy – building on the strong partnerships TfN and partners have developed with the energy sector, enhancing collaborations and formalising processes to account for local and regional evidence and planning.
 5. Sustainability – ensuring electricity used for EVs is renewably generated, investment in battery production to support both EV transition and economic growth, and that due regard to appropriate production, re-use, and disposal of batteries is considered.
 6. Skills – ensuring the EV transition is supported by further investment in skills and training as part of the green economy, from manufacturing to car dealership and the information communicated to potential users.

7. Corporate Considerations

Financial Implications

- 7.1 There are no specific financial implications to TfN as a result of this report, however, future work proposals which apply to TfN resources referred to in this report will need to be considered as part of business planning and associated governance.

Resource Implications

- 7.2 The activity outlined in this report is delivering on actions within TfN's 2024/25 Business Plan:

Delivers key milestone 9: Secure the agreement of the Board to submit statutory advice to delivery partners and regulatory bodies that will support delivery of investment in Electric Vehicles (EVs).

Contributes to key milestone 10: Continue to develop the 'TfN Offer' to partners across the North and nationally, including roll out of the Common Analytical Framework.

Legal Implications

- 7.3 TfN ensures that all data and analytics applied in the EVCI Framework and associated modelling is covered by appropriate data licence agreements and our communication (both public via the TfN EVCI Framework visualiser and direct with local authorities) complies with any terms of use of the data owner.

This includes TfN taking action when sharing any data referred to in the report directly with our local authorities (i.e. Zap Map data) and other stakeholders such as other STBs, i.e. national roll out of the EVCI Framework.

Other legal implications will be addressed depending on future proposed actions.

Risk Management and Key Issues

- 7.4 There are no risk implications as a result of this report.

Environmental Implications

- 7.5 This report does not constitute, of itself, a plan or programme which sets the framework for future development consents of projects listed in the Environmental Impact Assessment (EIA) Directive and therefore does not stimulate the need for Strategic Environmental Assessment (SEA) or EIA.

This report provides an update on TfN's progress in delivering on a key priority action referred to in TfN's current Decarbonisation Strategy. The transition to EVs is critically important in having the most significant impact on carbon emissions to reach our decarbonisation aims, alongside substantial investment in supporting the shift and management of road vehicle demand.

Equality and Diversity

- 7.6 Implementing the recommendations of the EV State of Play recommendations will support the North's ambition to transform economic performance, decarbonise our transport system and enhance social inclusion. The recommendations outlined have a key focus on ensuring a whole network delivery for EV charging across the region. The recommendations also highlight key considerations for an inclusive EV transition. As plans for delivery develop, a further Equality Impact Assessment (EQIA) will be completed.

Consultations

- 7.7 TfN has worked closely with local and national partners in the development of this work. The content of this report has been developed with TfN EV Regional Forum (**Appendix 1**), with significant engagement held to support partner use of the EVCI Framework. The policy recommendations outlined in this report have also been tested with this group and with other industry stakeholders (both public and private). We continue to engage with OZEV and other government departments to inform and shape national policy, using the State of Play report to inform our work.

8. Appendices

- 8.1 **Appendix 1** - TfN's Regional EV Partnership Group (included below)

- 8.2 **Appendix 2** – State of Play summary slides

8.3 **Appendix 3** – State of Play list of recommendations

8.4 **Appendix 4** – Draft State of Play report

Glossary of terms, abbreviations and acronyms used:

a) TfN	Transport for the North
b) STP	Strategic Transport Plan
c) EV	Electric Vehicle (for the purposes of this paper this refers to electric cars, vans and HGVs)
d) EVCI	Electric Vehicle Charging Infrastructure
e) OZEV	Office for Zero Emission Vehicles
f) LEVI	Local Electric Vehicle Infrastructure fund
g) ORCS	On Street Residential Chargepoint scheme
h) RCF	Rapid Charging Fund
i) OFGEM	Office of Gas and Electricity Markets
j) DNOs	Distribution Network Operators
k) Zap Map	UK eMobility Service Provider, supplier of EV charging infrastructure data
l) DVLA	Driver and Vehicle Licence Agency
m) STBs	Sub national Transport Bodies
n) GW per year	Giga Watts – unit of power used per year

Appendix 1 - TfN's Regional EV Partnership Group

Collaborative partnership which consolidates multi-agency approaches, sharing intelligence and actions to deliver mutual goals.

Purpose:

The aim of the EV Steering Group is to build an enhanced evidence base and help facilitate collaborations, required to support a rapid rollout of EV charging infrastructure (EVCI) across the region. This should ensure trans-boundary road trips (car, van and HGV) are considered, factoring in interoperability across the region and communicate a clear pan-Northern EVCI requirement for optimum results. Outcomes should support and supplement local EVCI development work, investment choices and decision making by those with location specific knowledge.

Objectives of the Group:

The outline objectives of the EV Steering Group are as follows:

1. **To support the effective development and delivery of TfN's EVCI Framework** as set out in TfN's EVCI Framework, which aims to enhance local, regional and national decision making capabilities.
2. **To develop a tangible evidence base to support** user-centred, placed-based and outcome-focused outcomes for EV charging infrastructure in the North. This should which support rapid uptake of EV (where required) and that EV decision making supports objectives for both decarbonisation and inclusivity.
3. **To facilitate a constructive sharing of knowledge and collaboration of EVCI partner expertise across the North**, bringing multiple-agencies together to support delivery of a whole system approach through integration of transport, land-use and energy systems.
4. **As a guiding principle, this group should seek to support clarity, consistency and a 'joined up' approach to EVCI where appropriate.** TfN, via the Steering Group will seek avenues to promote awareness and communicate key messages and evidence supporting the shared vision for the North.

Membership (as of July 2024):

- Transport for the North
- TfN's members (the North's MCAs, LTAs and business representatives).
- National Highways
- Network Rail (Invited)
- Department for Transport / OZEV
- Scottish Power Energy Networks
- Electricity North West
- Northern Powergrid
- Energy Saving Trust
- Ofgem
- Ordnance Survey