



Report to:	Climate, Energy and Environment Committee
Date:	24 October 2023
Subject:	Electric Vehicle Infrastructure Strategy
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Is this a key decision?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is the decision eligible for call-in by Scrutiny?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does the report contain confidential or exempt information or appendices?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If relevant, state paragraph number of Schedule 12A, Local Government Act 1972, Part 1:	
Are there implications for equality and diversity?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

1. Purpose of this report

- 1.1 To provide the Committee Members with an update on the electric vehicle infrastructure work programme being undertaken by the Combined Authority, including the emerging Electric Vehicle Strategy and Local Electric Vehicle Infrastructure (LEVI) Programme.

2. Information

- 2.1 The Mayor of West Yorkshire and West Yorkshire Leaders declared a climate emergency and have established an ambition emission reduction target for West Yorkshire, committing the region to achieving net-zero carbon by 2038. Transport is the highest emitting sector in the region, accounting for 32% of all greenhouse gases emitted and these emissions are dominated by road transport, which accounts for 97% of transport related emissions in West Yorkshire.
- 2.2 The West Yorkshire Climate and Environment Plan (CEP) sets a commitment to accelerate the deployment of electric vehicle charging points across the region with a focus on ensuring equity in provision. It is vital we tackle the climate emergency through the fair and inclusive decarbonisation of our transport network, delivering the right choice of transport, in the right place, at the right time.

- 2.3 The UK Government has committed to net zero emissions by 2050, with the sales of new petrol and diesel vehicles ended by 2035. The zero emission vehicle (ZEV) mandate published on 28th September requires 80% of new cars and 70% of new vans sold in Great Britain to be zero emission by 2030, increasing to 100% by 2035. With advancements in electric vehicle technology, availability of and access to reliable charging infrastructure is recognised as a critical barrier to the adoption of electric vehicles. Therefore, it is vital to ensure a comprehensive and accessible network is established to facilitate the smooth transition to electric vehicles for a cleaner and greener West Yorkshire.
- 2.4 Although electric vehicle (EV) charging behaviour patterns have yet to be fully established, it is widely anticipated that most people will charge at home, overnight as the most convenient and cheapest method. It is estimated that around a third of homes in the UK do not have access to a drive, presenting a significant barrier to the transition to electric vehicles.
- 2.5 Transport for the North (TfN) has developed an Electric Vehicle Charging Infrastructure (EVCI) Framework to support partners in the planning and deployment of local EV charging infrastructure. Their modelling work found that in West Yorkshire a total of 10,600 – 11,980 publicly available chargepoints would be required by 2030, specifically aimed at residential charging. In addition to this, between 4,580 and 5,100 destination chargepoints would be required by 2030, taking the total publicly available chargepoints required by 2030 to between 15,180 and 17,080. The TfN modelling work assumes these chargers will be slower charging speeds at around 8kW, typically charging a vehicle in around 5 – 7 hours. Rapid charges will also be required to support longer distance journeys, 50 - 150kW chargers that can charge a car in 15 minutes to 1 hour. TfN are currently working to develop estimates for the number of rapid chargepoints needed across the north, including for West Yorkshire, which will help inform the emerging West Yorkshire Electric Vehicle Infrastructure Strategy and engagement on future electric capacity planning.
- 2.6 There are currently 981 publicly accessible chargepoints in West Yorkshire, managed by over 25 different operators. The number of devices in West Yorkshire is growing rapidly, expanding by 41% in the last year and by 140% in the last three years. However, market interest in chargepoint delivery has focused to date on urban centres, employment sites and destination charging. Provision is not uniform across West Yorkshire, with limited network coverage in many more rural areas as well as lower income areas. Additionally, 33% (321) of the public chargers are rapid: as sole charging solutions for those without access to off-street parking, this provision does not meet the needs of residents due to their location as well as the added costs associated with rapid charging.
- 2.7 There is a need to accelerate delivery of charging infrastructure across West Yorkshire to meet this demand, and to investigate the ability of the electricity grid to support the



charging network, particularly for rapid and ultra-rapid charging which can have significant impact on grid capacity.

Electric Vehicle Infrastructure Strategy

- 2.8 The new Local Transport Plan (LTP) will deliver on the Mayor's ambition for transport across West Yorkshire, as well as help deliver on the Mayoral pledge to tackle the climate emergency and protect the environment. An Electric Vehicle Infrastructure Strategy is being developed with district partners to support the new LTP. This strategy will establish the objectives for public electric vehicle infrastructure roll out as well as principles for investment, guidance for chargepoint design and an action plan for accelerating deployment.
- 2.9 A set of draft strategic principles have been developed for the strategy:
- **Enable & accelerate EV charging network:** Build the charging network ahead of predicted EV uptake to facilitate transition, support climate agenda and improve air quality, with an emphasis on strategic priorities and 'close to home' charging.
 - **Reduce inequalities and ensure good coverage of the West Yorkshire network:** Strive for equality of access in EV charging, levelling up coverage across West Yorkshire, reducing inequalities and transport related social exclusion (TRSE), ensuring no areas are left behind.
 - **Ensure right chargers in the right places:** Ensure EV charging infrastructure meets the needs of local communities that continues to contribute positively to our local areas and streets.
 - **Ensure easy to use, fair and accessible to all:** Promoting competition and proper regulation to ensure a healthy market with fair prices, good levels of service and supporting a good customer experience for all.
 - **Ensure the West Yorkshire network is resilient, reliable, safe and well maintained:** Work to ensure chargepoints are well maintained, reliable, safe and secure to maximise the usable of the network and increase user confidence in electric vehicle charging.
 - **Support wider transport decarbonisation goals:** Help to reduce the environmental impact of travel & transport by encouraging modal shift & enable alternatives to private car use, and ensuring the use of renewable energy is prioritised to supply chargepoints.
- 2.10 Work is continuing with district partners to develop this strategy, which is being designed to complement and enhance existing EV policy and initiatives of the five West Yorkshire partner councils, anticipated completion early 2024.
- 2.11 This strategy is part of our wider work into alternative fuel for road transport to support our zero emission ambitions, considering the requirements and best technology options for cars and vans, buses and freight, looking at both electrification and hydrogen. This includes a zero emission bus fleet 2036 roadmap, a freight strategy and a hydrogen

study to understand the use case, projected demand, key drivers and constraints of hydrogen in West Yorkshire, which will help to establish a strategy, action plan and policy position on the technology.

Local Electric Vehicle Infrastructure (LEVI) Programme

- 2.12 The UK Electric Vehicle Infrastructure Strategy was published in March 2022 setting out the government's approach to delivering charging infrastructure to 2030, to remove charging infrastructure barriers and accelerate the pace of electric vehicle (EV) adoption. The strategy sets out that the majority of drivers will do most of their charging at home, overnight, and highlights the need to focus interventions on public chargepoints for two main purposes: to enable long distance journeys, and to support those without off-street parking.
- 2.13 To support the delivery of this strategy, the government announced the Local Electric Vehicle Infrastructure Fund (LEVI) fund in Spring 2022, a £450 million fund to 'accelerate commercialisation of local, close to home charging'. This funding is intended to be used by Local Authorities to leverage private investment in chargepoints locally to significantly advance and accelerate chargepoint delivery, targeted at residential areas without access to off-street parking.
- 2.14 From this fund, the following has been awarded to West Yorkshire in 2023:
- **£1,500,000 Pilot Funding** – capital funding to deliver EV infrastructure, focused on residential areas without access to off-street parking (awarded February 2023).
 - **£1,316,000 Capability Funding** – for resources to increase local authority and combined authority capacity and capability for the planning and delivery of EV infrastructure (£236,880 awarded February 2023, £1,079,120 awarded in July 2023).
- 2.15 In addition to the pilot and capability funding, the following was allocated to West Yorkshire in March 2023 (subject to Office for Zero Emission Vehicle approval of suitable proposal):
- **£14,326,000 Capital Funding** - to delivery EV chargepoint infrastructure, focused on residential areas without access to off-street parking.
- 2.16 In total, the full value of the West Yorkshire LEVI programme could be £15,826,000 capital grant funding supported by £1,316,000 resource funding, taking the programme total to over £17,000,000. However, the programme is also required to leverage private investment in EV chargepoints and as such the total value for West Yorkshire is likely to be significantly higher.

Local Electric Vehicle Infrastructure (LEVI) Capital Scheme

- 2.17 Under the LEVI programme, indicative capital funding has been allocated to Tier 1 local authorities (unitary, county council or combined authorities). The LEVI Capital Fund has 2 main objectives:
- deliver a step-change in the deployment of local, primarily low power, on-street charging infrastructure across England.
 - accelerate the commercialisation of, and investment in, the local charging infrastructure sector.
- 2.18 All schemes must primarily benefit residents without off-street parking, although projects can also benefit other groups like tourists, customers, commuters, taxis, and commercial vehicles – if projects still primarily benefit residents, and if doing so increases the scale and commerciality of the project.
- 2.19 Proposals for the West Yorkshire LEVI Capital scheme are being developed in collaboration with the West Yorkshire Electric Vehicle Strategy Group which includes officer membership from the five West Yorkshire district.
- 2.20 Work is underway to identify sites: a methodology for site selection has been developed with the support of the University of Leeds and the Combined Authorities Research and Intelligence Team. Four criteria were used for determining the relative need for public residential charging in each geographic region within West Yorkshire: Housing type (no off-street parking), population density (accounting for rural and urban geographies), vehicle ownership, and commuting mode.
- 2.21 District officers are using the findings of the prioritised location research undertaken by the University of Leeds to identify precise site for chargepoints within their District, considering both on-street and off-street charging options. These sites will then be evaluated for deliverability and fit with funding requirements, and prioritised for the Pilot and Capital LEVI schemes. This work will include consultation with Northern Powergrid to ascertain grid capacity and grid connection potential, and in consultation with chargepoint operators to gauge market interest. The ambition is to level-up coverage across the region with this funding.
- 2.22 Although the total value private investment is not known at this time, it is estimated around 500 – 1000 chargepoints could be delivered through the Capital Scheme. The programme is being designed to meet the draft strategic principles of the emerging Electric Vehicle Infrastructure Strategy and projects will look to ensure equity of access and social value through design and procurement, considering pricing, ease of use, accessibility and working with local communities to ensure charging provision meets local needs. The final LEVI Capital scheme proposal is planned for submission in November 2023.
- 2.23 A paper on the LEVI programme was presented to Transport Committee on 19th September 2023. Members were supportive of the programme and welcomed the work with the University of Leeds to help identify areas of focus. Members also stressed the need to ensure accessibility is a key consideration of site selection and scheme design,



particularly of on-street chargers. The Committee approved delegated authority for approval of the final bid document to the West Yorkshire Combined Authority Chief Executive in November 2023, in consultation with the Mayor, Chair and Vice Chair of the Transport Committee.

3. Tackling the Climate Emergency Implications

- 3.1 To meet our carbon reduction target, a significant increase in the uptake of electric vehicles is required. Supporting the deployment of infrastructure that facilitates the transition to net zero, such as electric vehicle charging infrastructure, is one of the investment priorities in the WYIS. The principal aim of the strategy and programme is to accelerate the proportion of electric vehicles in West Yorkshire to reduce carbon emissions and support West Yorkshire's response to the Climate Emergency.

4. Inclusive Growth Implications

- 4.1 The programme supports the Combined Authority's inclusive growth ambitions by ensuring equity of access to EV charging infrastructure, particularly in areas with higher-density housing areas with no access to off-street parking. The transition to a net-zero transport network carries the risk that costs, benefits and impacts are distributed unequally across society. Without intervention, our engagement with the private sector has shown that the market would be unlikely to deliver in lower income areas in advance of anticipated demand meaning such areas are at risk of being left behind.

5. Equality and Diversity Implications

- 5.1 Equality, Diversity and Inclusivity are central to the West Yorkshire EV Infrastructure Strategy and LEVI Programme - funding will be used to level-up coverage as well as ensure high accessibility standards are delivered throughout. West Yorkshire is a diverse place, and a one size fits all approach is not appropriate for chargepoint network design. Residential chargepoint schemes need to reflect local conditions and priorities, as well as the requirements of local residents and businesses to ensure the best outcomes are achieved.

6. Financial Implications

- 6.1 There are no financial implications directly arising from this report.

7. Legal Implications

- 7.1 There are no legal implications directly arising from this report.

8. Staffing Implications

- 8.1 There are no staffing implications directly arising from this report.



9. External Consultees

9.1 No external consultations have been undertaken.

10. Recommendations

10.1 That Climate, Energy and Environment Committee note the update on the electric vehicle infrastructure work programme being undertaken by the Combined Authority

11. Background Documents

There are no background documents referenced in this report.

12. Appendices

None.