

Ultra-Low Emission Vehicle (ULEV) Strategy for the West Midlands

West Midlands Combined Authority, UK100

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Summary

Transport for West Midlands (TfWM) commissioned Cenex to help create an evidence-based Ultra-Low Emission Vehicle (ULEV) Strategy. The main challenge was to provide an evidence base on which TfWM could build an enduring strategy that particularly focused on the infrastructure, distribution network, business model and procurement around increasing the number of electric vehicles (EVs) in the region.

Our problem

TfWM is responsible for coordinating the investment in the region's transport infrastructure to create a fully integrated, safe, secure network. Over the coming years, TfWM is going to have to overcome a number climate-related challenges, the main two being:

1. Transport is the worst-performing sector in the UK for carbon emissions, contributing 37% of all West Midlands' CO₂ between 2013-18.
2. Air quality is unacceptable in many urban areas, with a recent study finding that life expectancy for 2.8 million people could potentially be reduced by up to six months due to pollution.

To combat these, the adoption of electric vehicles (EVs) is just one of the tools that we can use to tackle these issues. In fact, as price parity between EVs and conventional cars and vans increases, around 1 million EVs are projected to be in the West Midlands by 2040. The problem is that there's a lack of capacity and capability in public sector bodies within the region which is leading to the fragmented development of different charging networks to support this growth. The resulting electrical demand will challenge an already overstretched grid! The ULEV strategy - as developed by CENEX - looks to demonstrate the scale of the challenge of the transition to Ultra Low Emission Vehicles and explore the likely future pathways for doing so. Energy Capital, part of West Midlands Combined Authority, has used this ULEV strategy to develop a corresponding Infrastructure for Zero Emission Vehicles (ZEVz) Strategy which looks to mitigate the impact of ZEVs on the electricity grid.

Overview

TfWM is investing in the transport system. It has committed £5 billion up to 2026 to almost 200 schemes as part of a 10-year delivery plan, which should help it to meet the needs of a rapidly growing population. The expansion of the Midland Metro tram system is just one of the many projects that TfWM is delivering on to meet those needs.

In July 2019, West Midlands Combined Authority committed to Net Zero by 2041, with a 36% reduction by 2022. By November of that year, the WMCA's Programme Board issued a series of reports setting out the case for accelerating the deployment of electric charging and energy infrastructure at scale across the region.

As a result, Cenex was commissioned to come up with a ULEV Strategy. To begin with, Cenex looked at alternative fuels, congestion, economic growth, skills and the wider context of industrial strategy before analysing the current status of the TfMW region. Then, roadmaps were produced to illustrate expected market developments to give context to the projections of EV uptake and subsequent infrastructure demand - as well as the likely location of users. These roadmaps and other evidence-based pieces of research were built into the overall strategy.

A key component of the ULEV Strategy was communication. Without a communication plan to connect the residents and companies of the West Midlands with the EV client group (which is yet to be established), the ULEV strategy may fall at the first hurdle. A communication plan is essential to secure support from residents and companies in the study area to ensure the ULEV Strategy achieves its objectives. In the UK, there is relatively little understanding and awareness of the benefits of EVs among private vehicle owners and, to a lesser extent, fleet buyers and operators. There are also many myths and misconceptions about ULEVs that constrain demand for and uptake of these vehicles. It is therefore essential that strategic, targeted outreach and communications activity is delivered to raise awareness of the benefits of ULEVs among key audience groups.

Timeline / project progress

The project has been recently completed although not yet evaluated.

Stakeholders

Cenex identified potential stakeholders and mapped them to assess the extent to which they might influence or have an interest in the ULEV Strategy. The priority stakeholders are those which are high interest and high influence: public and private sector car and van fleet buyers and operators, trade associations (such as the Freight Transport Association and Road Haulage Association), and vehicle dealerships. DNOs are absolutely vital stakeholders in developing an Infrastructure Strategy that looks to ensure that energy provision does not become a barrier to the transition to Zero Emission Vehicles. The strategy looks to engage closely with the range of regulated utilities including ESO, electricity and gas DNOs to understand the opportunities and constraints and plan the transition accordingly.

Medium stakeholders are those with high levels of either influence or interest: private car owners/drivers, SMEs and sole traders, taxi and private hire fleet owners, operators or drivers, the Chambers of Commerce, landowners, and car park owners and operators.

Whole systems approach

Infrastructure across public and private sectors are developing from private domestic, through workplace charging, destination charging, public on-street charging, and rapid hub type developments. The iZEV strategy will ensure that charging infrastructure forms a cohesive network that gives confidence to prospective ZEV owners that appropriate infrastructure is available and will concurrently allow a range of alternative public transport options to decarbonise - ensuring inclusive access to clean transport.

TfWM is supporting investment in the transport system from partners including Network Rail, Highways England, High Speed 2 and the Department for Transport.

This ULEV Strategy is a good example of regional devolution, allowing regional leaders to set and deliver their own Net Zero strategies (thanks in part to the election of a Mayor of the West Midlands Andy Street).

Impact

The West Midlands is well placed to benefit economically from the increased supply and uptake of ULEVs. The ULEV Strategy complements current regional activity by providing specific recommendations for TfWM and other stakeholders to effectively exploit these opportunities. This strategic transport plan has the potential to create a triple benefit: improving citizen wellbeing, environmental sustainability and the creation of new avenues for export growth within a key West Midlands industry.

WMCA and TfWM are now exploring a collaborative approach to supporting increased ULEV uptake and the provision of appropriate chargepoint infrastructure. That's going to enable a joined up, investable approach that sees funding and delivery of infrastructure managed across the West Midlands region.

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Because the report was only completed in the first quarter of 2020, the impacts are yet to be evaluated. The report, however, does contain a series of recommendations for TfWM and WMCA generally. These include:

- Form a regional Electric Vehicle Supply Equipment (EVSE) Steering Group to prevent exacerbation of the patchwork of ULEV Strategies and approaches
- Form a regional EVSE Working Group to feed into the Steering Group
- Establish a West Midlands EV Taskforce to bring stakeholders into the same room
- Allow the WMCA to take a leading role in ensuring a strategic, effective and efficient approach to transit charging provision across the region
- Commission further work looking at the delivery of Workplace Parking Levies, public engagement, business engagement and more
- Work with the Skills Advisory Panel to identify immediate skills gaps and take steps to help the region adapt to future requirements.

On publishing the report, the WMCA immediately implemented some of these recommendations, including instigating a Steering Group to ensure a coordinated approach to EV infrastructure provision in the region.

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