



New Energy Vehicle infrastructure for the M4 corridor

January 2020



Swindon & Wiltshire
LOCAL ENTERPRISE PARTNERSHIP





Agenda



Objectives of the project



Feedback from stakeholder engagement



Intervention options





Objectives of the project

- To identify the opportunities and barriers presented by the transition to new energy vehicles in the M4 corridor
- To establish any areas where the private sector will not adequately develop the required infrastructure to support the transition
- To identify where the public sector, specifically the LEPs, can add value, and what interventions would make a material difference to the rate of new energy vehicle deployment





Current charging state of play

M4 Corridor

Charging points per 100,000 population (1/10/19)
(UK average = 22)



<https://fnacdn.blob.core.windows.net/web/1/root/new-league-table-reveals-electric-car-charging-availability-across-uk-as-transport-secretary-calls-on-local-authorities-to-do-more.pdf>



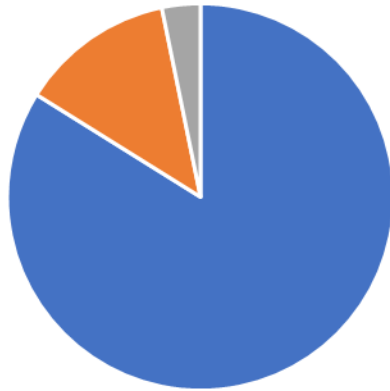
Stakeholder Engagement

In order to understand the barriers to new energy vehicle infrastructure deployment and the opportunities that there might be for the LEPs to deliver meaningful interventions, stakeholder engagement was carried out. This took the form of:

- Three workshops across two weeks in Swindon and Wiltshire, GFirst and Thames Valley Berkshire LEP areas
- 1-2-1 interviews with key stakeholders unable to attend workshops
- Written feedback from stakeholders

31 stakeholders were engaged through the process.

Engagement type



■ Workshop ■ 1-2-1 phonecall ■ Written feedback

Stakeholders by sector



■ EV supplier ■ Public Sector ■ Infrastructure provider
■ Vehicle OEM ■ Transport consultant ■ Vehicle operator
■ Energy ■ Trade association ■ Vehicle supply chain



Barriers to adoption

High cost of vehicles

- All end-user groups
- Lack of awareness of total costs of ownership and benefits

Access to charging/fuelling infrastructure

- All end-user groups
- Domestic users with no off street parking largely precluded from ownership
- Rural domestic users/businesses need longer range vehicles
- Low usage means investment in rural charging is unattractive

Availability of vehicles

- Operators of intensive use/heavier vehicles need hydrogen

Concerns about future grid capacity

- Very location specific – needs to be understood when planning infrastructure/deployment

Lack of consumer/business awareness and understanding

- Perceptions are more negative than reality





Trends in vehicle ownership/operation

Changing attitudes to car ownership

- Increasing use of car clubs and car sharing
- Increasing use of leases rather than purchase or HP
- Autonomous vehicles will revolutionise car ownership

Trends affecting vehicle operation and choice

- Taxation and incentives to switch to low emission vehicles
- Low emission/zero emission zones
- Increasing availability of charging points
- Evolution of charging behaviour (frequent, opportunistic charging)
- Introduction of new technologies (increasing battery range, autonomy, hydrogen)





Education and Awareness

An Education and Awareness programme targeted at domestic users and local businesses to inform them of:

- EV trends and the strategic benefits of offering EV charging facilities on business premises
- Information on what charging facilities are best suited to their customers
- The environmental benefits of EV charging

Similarly a public programme to target consumers with information:

- Economic analysis showing that the total cost (upfront and running cost) of owning an EV outweighs that of a diesel car over a certain time period.
- Myth busting on barriers to EVs
- The environmental benefits of EVs

Lobby government to extend current national campaign



Strategic Outline Business Case: Community and rural access to charging

Challenges:

- A large proportion of the housing stock in the UK is terraced or flats, a large proportion of which will not have access to off-street parking
- Rural residents tend to suffer more with range anxiety and a lack of local infrastructure caused by lower density both of EV users and infrastructure

Interventions:

- A scheme which:
 - a. Accelerates the installation of community charging points on-street or in locations accessible and convenient to local residents without off-street parking at home
 - b. Encourages the installation of a network of charging resources in rural areas, in easily accessible locations on or near principal driving routes





Strategic Outline Business Case: Hydrogen Demonstrator

Challenge:

- Operators of larger vehicles (e.g. buses, vans) need to decarbonize but battery vehicles can not do the required duty (insufficient range, charging times too long)
- Grid capacity constraints prevent large scale battery recharging of large vehicles
- Hydrogen can resolve these issues but there is limited hydrogen refuelling infrastructure which prevents operators adopting hydrogen vehicles

Intervention:

- Proposal for a hydrogen demonstrator along the M4 corridor to trial buses, HGVs and vans
- The demonstrator will bring together local councils, the LEPs and interested private sector organisations, potentially those with distribution operations and/or bus operators, to develop a detailed plan for a hydrogen demonstrator along the M4 corridor.



Recommendations

The LIS Working Group recommends that the SWLEP Board:

approves that work continues to the SOBC stage as follows

- a. The community and rural charging options are progressed as a single SOBC**
- b. The hydrogen demonstrator is progressed as a SOBC**

