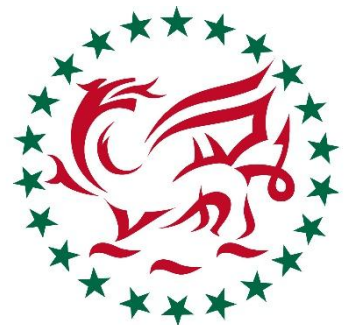


Cynulliad Cenedlaethol Cymru / National Assembly for Wales  
Pwyllgor yr Economi, Seilwaith a Sgiliau / Economy, Infrastructure and Skills Committee  
Gwefru cerbydau trydan yng Nghymru / Electric vehicle charging in Wales  
Ymateb gan Cymdeithas Llywodraeth Leol Cymru / Evidence from Welsh Local Government Association

# Electric vehicle charging in Wales

5<sup>th</sup> November 2018



CLILC • WLGA

## **Introduction**

1. The Welsh Local Government Association (WLGA) represents the 22 local authorities in Wales, and the three national park authorities and the three fire and rescue authorities are associate members.
2. It seeks to provide representation to local authorities within an emerging policy framework that satisfies the key priorities of our members and delivers a broad range of services that add value to Welsh Local Government and the communities they serve.
3. We welcome the opportunity to respond to the Economy, Infrastructure and Skills Committee inquiry into electric vehicle (EV) charging in Wales.

## **Response to questions**

### **The current charging infrastructure in Wales, and to what extent it is fit for purpose**

4. It is difficult to assess whether the current EV charging infrastructure in Wales is 'fit for purpose' in the absence of a clear and agreed strategy which sets out what its actual purpose is. Charging facilities can be – and have been - provided in a number of settings (e.g. at home, at workplaces, public and private car parks, on-street) and for a number of reasons (e.g. to encourage more people to purchase EVs as part of the drive to decarbonise transport; to raise awareness and increase sales of EVs; to help overcome the range anxiety associated with driving EVs; to encourage use of local businesses whilst charging takes place; to ensure tourists using EVs are not put off visiting locations in Wales).
5. Determining the 'right' configuration of EV charging infrastructure and how 'success' is to be measured will depend on its purpose: on what we want it to achieve. If the strategy is to target commercial and public sector fleet first, the location of charging points may be very different to an approach which seeks to influence households and encourage them to charge overnight at home. Similarly, a manufacturer's measure of whether the infrastructure is fit for purpose might be the increase in EV sales per annum. Government's target may be more focused on the estimated level of carbon reduction achieved as a result of switching to EVs. A hotelier may measure success by the number of EV users attracted to stay.

6. Even if we focus on the carbon reduction element, there are key questions as to the source of the electricity being used – is it 'brown' or 'green'? Switching car users to EVs will help to reduce carbon emissions on the highway but will only lead to a net reduction in overall carbon emissions if the electricity the vehicles is using comes from green sources.
7. Whilst local authorities are interested in supporting EV use and a number have installed charging equipment (see below), there are risks for any individual authority in investing too heavily in a local approach, in case a different direction is taken nationally (e.g. use of hydrogen vehicles). Many car journeys cross LA boundaries and therefore this is one area where consistency and familiarity are important.
8. At present then, there is a mixture of different approaches to the installation of charging infrastructure that appears to lack a clear strategy.

**How the infrastructure needs to develop to support an increase in EVs on our roads. How the Welsh Government, private sector and third sector can work together to develop EV charging infrastructure**

9. All stakeholders would benefit from the development of a clear strategy for Wales (aligned to the rest of the UK for cross-border journeys). Local government should be included as one of the list of partners and, together, a network of facilities could be developed that could be used by, and benefit, all. The network would need to be planned collectively with open standards to meet all identified needs and accommodate different types of charging. Strategic locations could be identified (e.g. for north-south journeys) and then publicised via a publicly available map, showing the location of charging facilities and who can access them (e.g. publicly available; public sector only; private use). It should be possible to have an access code (or similar) that enables a standard payment system to allocate costs to users as appropriate.
10. In the same way as electricity users can choose their supplier, an initially publicly funded network of infrastructure could go to the market to identify the best, green source(s) of funding for a specified contract period, to ensure healthy competition. The cost of this infrastructure could be met from borrowing or via a procured private sector provider – to be repaid over time from the cost of each charge. In the medium to long term, development of charging infrastructure might be expected to shift more fully to the

private sector if electric vehicle sales increase demand for charging points and the profitability of provision rises (as with privately run petrol filling stations).

### **Whether the electricity grid in Wales is able to deal with a significant increase in EV infrastructure, particularly in rural areas**

11. Clearly, a rapid uptake in EV use would place considerable demands on electricity supply and may require development of new sub-stations etc. In Mid Wales in particular there are concerns about the ability of the network to cope. However, in densely populated urban areas increased peaks of energy demand are also likely to be problematic. Expert advice from the energy industry is needed to answer this question. There are 'smart systems' under development that enable energy demand and supply to be better balanced throughout the day and night and these may provide part of the answer.
12. It may also be possible to locate charging points close to renewable energy generation locations, served by a private wire, although there could be risks of cost increases associated with a monopoly provider.

### **The potential for electric vehicles to promote behaviour change, for example in terms of vehicle ownership and car sharing initiatives**

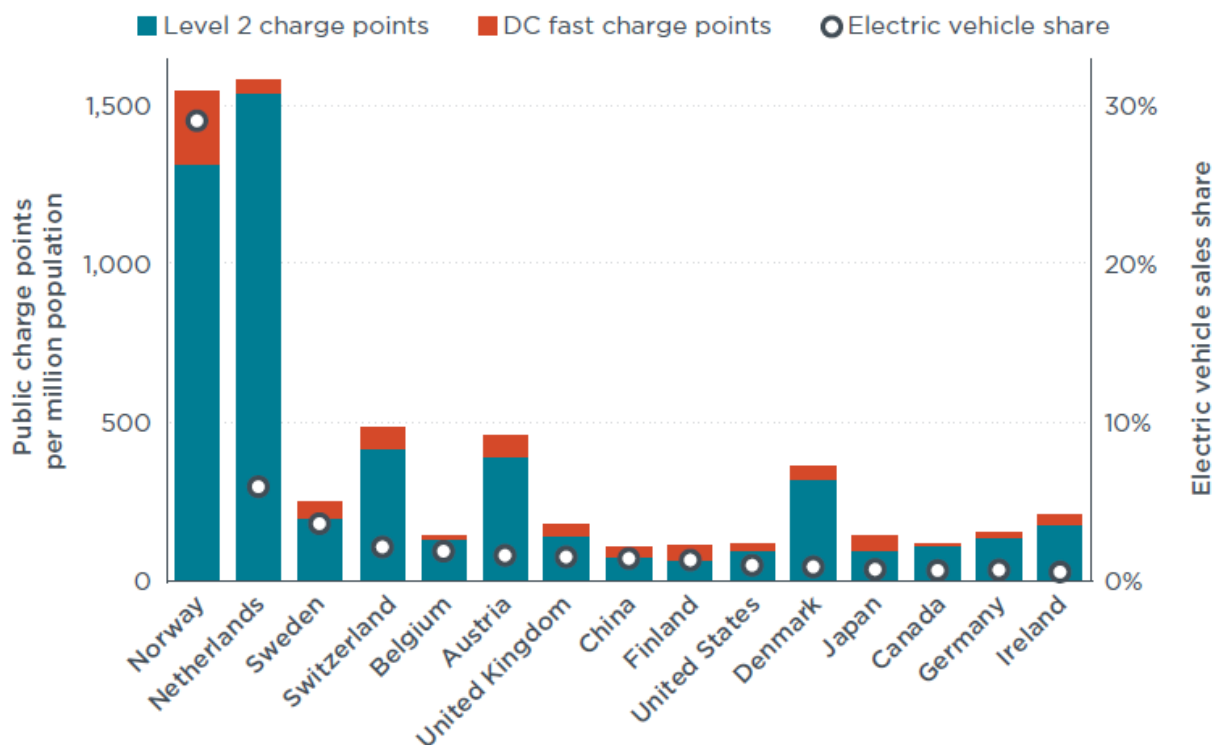
13. EVs can contribute to behaviour change but need to be promoted as part of a concerted campaign that sets out clearly the reasons for and the objectives and advantages of switching to EV use. Given that EVs are still more expensive (even with the Government subsidy payment) there are attractions to the vehicles being leased, rented or shared rather than owned. The concept of 'Mobility as a Service' is important here, with individuals paying for the transport services they use instead of owning their own vehicle.
14. With the advent of smart 'phones and services such as Uber taxis, this form of travel is gaining in popularity. It is also likely to be the method employed for using connected and autonomous vehicles in future.

## **To what extent the Welsh Government has acted upon the recommendations in the Low Carbon Vehicle Report**

15. A number of the recommendations have been taken forward – e.g. new Government premises have included charging facilities and small-scale funding has been allocated to install charging points along the trunk road network. The recommendations called for Welsh Government to encourage local authorities to take similar steps. Whilst there have been some general calls to action – e.g. for the public sector to move to carbon neutrality by 2030 – there has not been a concerted effort to work with local authorities on this agenda. Clearly, there have been increasing financial pressures on local authorities over recent years and it would be difficult for LAs to invest in charging facilities whilst cutting back on other services.
16. Where facilities have been provided it has generally been as part of wider schemes, often dependent on grant funding and/or where the private sector has offered to invest up front because there will be an identified commercial return that will cover their costs over time.

### **Examples of best practice from Wales and further afield.**

17. The International Council on Clean Transportation produced a report in 2017 that looked at: 'Emerging best practices for electric vehicle charging infrastructure' ([https://www.theicct.org/sites/default/files/publications/EV-charging-best-practices\\_ICCT-white-paper\\_04102017\\_vF.pdf](https://www.theicct.org/sites/default/files/publications/EV-charging-best-practices_ICCT-white-paper_04102017_vF.pdf)). This contained the following graph showing that Norway and the Netherlands, which have seen electric vehicle shares of more than 5% of new sales, have public charging infrastructure per capita that is several times that of other leading markets.



**Figure ES-1.** 2016 electric vehicle sales share and public charge points per million population in major national markets.

18. The report found that generally: *"Successful programs have transparently engaged many stakeholders through integration of driver feedback on charger deployment, implementation of smart charging systems, distribution of funding to local governments, creation of public-private partnerships, and consultation with electric utilities"* (page iv).
19. Finally, some examples (i.e. not comprehensive) of EV charging points installed and other local authority initiatives across Wales include the following:
  - Cardiff – pilot scheme, to include six rapid charging points
  - Swansea -held a clean air roadshow to showcase electric and hydrogen vehicle technology and has held discussions with partners in the Swansea Bay city region to provide points across South West Wales
  - Blaenau Gwent, Carmarthenshire and Pembrokeshire have charging points available for use by the general public
  - Monmouthshire and Newport have charging points in a number of their town centre car parks

- Wrexham – has charging points sited in council-owned car parks and, subject to funding, plans to roll more out to locations including Wrexham Industrial Estate and Wrexham Bus Station
  - Powys’s capital strategy for 2018-23 included plans for electric charge points in its council car parks
  - Ceredigion has charging points at its offices that are available for use by the public as well as staff
  - Anglesey has 12 charging points, including seven at the council offices
  - Gwynedd Council installed public charging points at five tourism businesses in Meirionnydd as a pilot project
  - Caerphilly is bidding for funding to provide charging posts for electric buses to operate across the county borough
  - RCT has six charging points, one of which is generally available to the public.
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