Draft Electric Vehicle Strategy Consultation

Frequently Asked Questions

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What is an Electric Vehicle?

Electric vehicles are made up of two main types: battery electric vehicles (BEV), and plug-in hybrid electric vehicles (PHEV)

The key differences are that battery EVs have no combustion engine, relying only an on-board battery which provides energy to an electric motor. Plug-in hybrid EVs have an electric powertrain together with an on-board combustion engine, which enables operation in full-electric mode, using conventional fuel, or a blend of both.

What is the range of an Electric Vehicle?

The majority of electric vehicles have a real-world driving range of 100-250 miles on a single charge, depending on the model. As a result, electric cars are well suited for use as private cars and short-range delivery vehicles. Fully electric vehicles are perfect for city driving, commuting, regular delivery routes, and all short- to medium-distance trips which are predictable. Successful use of a BEV typically requires access to a home or workplace recharging unit and, to permit longer journeys, access to the public charging network.

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What types of charger are there?

There are three main types of EV charging – rapid, fast, and slow. These represent the power outputs, and therefore charging speeds, available to charge an EV. Rapid chargers (50kW) will charge the majority of EVs to 80% in around 30-60 minutes (depending on battery capacity). Fast chargers (7-22kW) typically fully charge an EV in 3-4 hours. Slow (3kw) usually take between 6 and 12 hours.

What is Government Policy on Electric Vehicles?

In its Air Quality Plan, published in 2017 the UK Government set a target to ban the sales of new petrol and diesel cars by 2040.

In 2018 Government released its Road to Zero Strategy outlining a pathway towards achieving this. Key points are:

- The strategy sets out ambition for at least 50% — and as many as 70% — of new car sales to be ultra low emission by 2030.
- Government will take steps to enable massive roll-out of infrastructure to support an electric vehicle revolution.
- The strategy sets the stage for the biggest technology advancement to hit UK roads since the invention of the combustion engine.

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You can find the strategy online:
https://www.gov.uk/government/publications/reducing-emissions-from-road-transport-road-to-zero-strategy

What do chargers look like?

Chargers vary a lot in appearance.

Fast chargers range from wall mounted chargers (mostly commonly used on people's homes) to chargers that resemble bollards.

Rapid charging units tend to be bigger and have a more standard appearance:

The strategy sets out some general principles about what the chargers will look like.

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Do Electric Cars cost more than regular cars?

Electric Cars do currently cost more than a comparable petrol or diesel car. But it is generally predicted that as the EV market develops, battery costs – and therefore vehicle prices – will continue to drop. In the last five years battery production costs have fallen by almost 80%. The battery is one of the largest and most expensive elements of an EV, and with production costs dropping, the time when an EV costs the same as a comparable conventional model (or even less) is predicted by some in the industry to be only a few years away.

Deloitte published research in January 2019 that predicts that EVs will achieve cost parity with conventional vehicles in the UK as early as 2021. From this point, cost will no longer be a barrier to purchase, and owning an EV will become a realistic, viable option for more people.

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Why do we need an Electric Vehicle Strategy?

The Council's preferred approach to providing charging has been to develop a strategy that sets out clearly what our long term ambition is, our priorities for action, and is clear on our requirements.

In developing the strategy we have listened to residents views on their preferences for charging locally, and modelled what different electric vehicle uptake scenarios looked like across the county. We sought to understand both the number of vehicles that would be involved and the number of charging points that might be required to support them.

By doing this we hope to ensure that investment is used wisely with chargers installed in the right places that are fit for purpose.

Why is this strategy focusing on Electric Vehicles, not all Ultra Low Emission Vehicles, such as Hydrogen?

Our strategy is focusing on solutions where we can make the biggest impact on the county's carbon emissions. We looked at the Department for Transport's current and future predictions of the carbon generated by road transport in the County, and79% would be attributable to cars and small vans.

There is still much debate as to which fuel will become the long term solution for vehicles of the future, but we have taken a view that we need to take action now. Currently electric vehicle technology is the most advanced for cars and small vans, and people will be able to make the switch now, or in the very near future.

If we need to develop an alternative fuel strategy in later years we will do so.

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Why do you have an aspiration for a public land solution?

Our strategy includes the aim of enabling a comprehensive and cohesive public charging solution on public land. We believe that if we can consider all public land when planning a charging network there would be significant benefits including:

- providing a joined-up solution, which looks, and is accessed in, the same way across the county making it easier for people to use;
- providing chargers in the best locations for the users, rather than in the places we have the land / space to do it;
- enabling chargers to be delivered faster across the whole county as the chances of finding more feasible and achievable sites will be increased if we maximise potential "in scope" public land;
- accessing significantly more government funding than acting alone, and thereby deliver more infrastructure within the county;

We are approaching all the District, Borough, Town and Parish Councils to see if they would be interested in working with us to achieve this aim.

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If you want to see 50-70% uptake, will WSCC be buying me an Electric Car?

No, we won't be buying individuals EV cars.

We have modelled different EV uptake scenarios to understand the likely number of cars that will see in the County, and the number of public chargers that is required to serve them.

We are concentrating on enabling the provision of chargers so that when people are replacing their vehicles they feel able to switch to electric.

How do Electric Vehicles help save Carbon?

Electric Vehicles have no exhaust emissions. However, carbon emissions are produced during the generation of electricity, the amount will vary depending how the energy is generated.

Electric vehicles charged using standard UK electricity will show a significant reduction in emissions; analysis on current vehicles suggest a reduction of around two thirds compared to an average conventional car. Larger carbon reductions are likely in the future as the UK grid continues to decarbonise.

If renewable or green tariff electricity is used, then life cycle greenhouse gas emissions are effectively zero.

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How do Electric Vehicles help Air Quality?

The main cause of poor air quality is nitrogen oxides (NOx). The main cause of this pollution is vehicle emissions.

Electric Vehicles have no exhaust emissions, so switching diesel and petrol vehicles to electric will improve local air quality significantly.

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Can't I just install my own charger?

If you have access to off road parking, you can install your own charger to charge an electric car. There are Government Grants to help you do this.

Electric Vehicle Home-charge Scheme provides £500 off the cost of purchasing & installing a home charging point and can be claimed on the majority of plug-in vehicles on today's market. You can claim one charging per eligible vehicle and up to two charging points per household. To claim the grant you must have access to off-street parking.

The grant brings the cost of a standard 3 kW unit plus installation to around £300 whilst a faster 7 kW unit would be in the region of £400.

There are certain criteria you have to meet to receive the Grant, these include using an accredited installer.

For more information about this Zap Map provides a good overview: https://www.zap-map.com/charge-points/charging-home/

Our strategy is focusing on providing access to public chargers for those people who can't charge at home, and to reduce the concern of range anxiety by ensure that electric vehicle users can be confident they can charge across the County.

Why is your preferred delivery model using a third party supplier?

Although we have a high level of ambition for electric vehicle take up across the county, we are aware of the rapid pace of change in this innovative and evolving technology. We are cautious about investing tax payers' money in infrastructure that may become obsolete and a redundant asset before it has paid back on the investment to install it. It is crucial to us that tax payers' money is protected from this risk.

Our budget is also under significant pressure, and the capital costs of installing this charging infrastructure can be considerable. If we were to rely on our resources to deliver the infrastructure it would not be delivered as widely and as quickly as we need it to achieve our aims.

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Using a third party supplier enables us to make use of our buildings and land for charger installation, protects the County Council from the risk, but also means that we see some income too.

Why aren't you supporting chargers in street lights?

There are a number of reasons why we are not pursuing using street lights as electric vehicle chargers:

1. Ownership / Responsibility
   is the responsibility of a third party (Tay Valley Lighting) to maintain all our street lights under a 25yr PFI (Private Finance Initiative), this passes all the risk of the street lighting to Tay Valley Lighting. There are some complex and costly legal issues about providing another party access to the lights. Although these might potentially be overcome it will take significant time and resources to do so, and there is no guarantee they can be resolved. We have ambitious aims for EV in the County, and need to be taking early action.

2. Power supply
   Street Light columns have a very low power supply. Most are in the region of 2Kw. With batteries in cars increasing in size, 2kw would be exceptionally slow to charge, and not fit for purpose.

3. Trailing Cables
   WSCC lighting columns are in the main placed at the back of footway as this makes them less vulnerable to damage but this means charge leads would be going across the footway.
   Although we are considering allowing residents to run cables across pavements, we anticipate this will be for a small amount of people who won't have access to public charging. We do not want to install / enable public chargers that require trailing cables as standard.

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When might I see a reduction in my parking charges?

WSCC operates seven Controlled Parking Zones across the County. A reduction in costs of for ultra-low emission vehicles will require a new Traffic Regulation Order, and a decision taken by the Cabinet Member for Highways and Infrastructure.

Any changes will not be seen before April 2020.

Will my car qualify for a discount in parking?

We intend to use a simplified version of Government Grant criteria on what constitutes an ultra-low emission vehicle.

Currently this would be a 50% discount on an annual parking permit for cars that have CO2 emissions of less than 50g/km and vans that have CO2 emissions of less than 75g/km, but they will change over time to reflect more stringent requirements nationally.

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Will there be disruption when chargers are installed?

Installing chargers will involve digging trenches to place wiring.

We intend to work with our supplier to reduce the disruption as much as possible and to make every effort to use opportunities to combine on-going works.

Are the new electric vehicle chargers Chichester District Council are installing part of your strategy?

Chichester District Council own and operate the majority of carparks in the District and had already decided to move ahead with installing chargers.

We will ensure that we plan a network that accounts for these chargers, and in line with our strategy principles we will ensure any charging points we enable are complementary to, and not in direct competition to the chargers installed by Chichester District.

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