

HOW YOUR BUSINESS CAN SWITCH TO AN ELECTRIC VEHICLE (EV)

A step by step plan for electrifying your vehicle.

This case study is a guide to understanding how you can switch to an EV, to help you on your electrification journey. This forms part of Cross River Partnership (CRP)'s Defra Air Quality Grant-funded Clean Air Villages 3 project. For more information, [click here](#).



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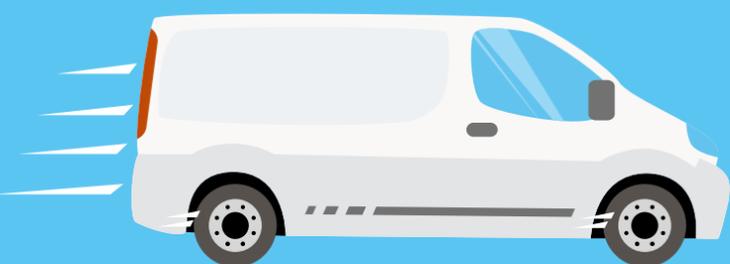
Overview of results

As part of Clean Air Villages 3, CRP worked with businesses who expressed an interest in switching their vehicle(s) to an electric equivalent. CRP gave these businesses (of any size) Clean Car Telematics Dongles to track their vehicle movements, to gain a snapshot of their average mileage (and more). The overview of the results and steps are below.



8 Businesses used the Telematics Dongles

Over 16,000 miles were tracked



18 vehicles were monitored



The average weekly mileage, by vehicle driven, was 129 miles



The average daily mileage was 50 miles per day



Emissions savings

If all 18 vehicles made the switch to EV, then this would result in an annual estimated emissions saving of:

- ✓ Up to 5,770 kg of CO2
- ✓ 16 kg of NOx gases
- ✓ 200 g of PM10

The CO2 saving is equivalent to saving 17,310 square metres of arctic ice.



CO2: High levels of carbon dioxide in the atmosphere collect and store so much heat that the weather patterns change, temperatures rise, and other climate changes occur.

NOx: Nitrogen oxides damages your respiratory system over time. It is also a component of acid rain which is harmful to vegetation, and, as a consequence, animals.

PM10: Particulate matter are tiny particles that can damage your lungs and get into the bloodstream, reaching your heart and brain and increasing your risk of heart attack, and, possibly, stroke and dementia.



Business testimonial

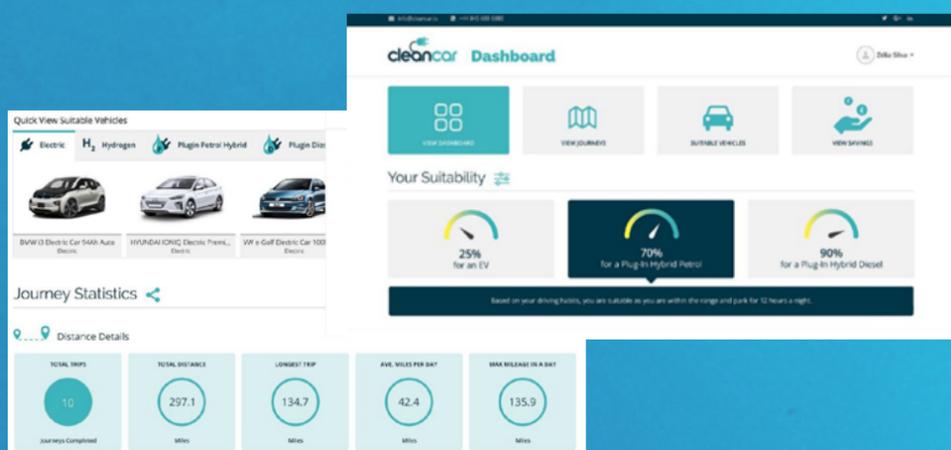
I was initially sceptical about the programme and what we were doing, but the facts and figures we've produced have turned my mind and attention... to the fact that there is an advantage both commercially, economically and environmentally to switch to electric vehicles. Since receiving the data we have now ordered an EV which will be coming in the next few months.

Gavin Pettitt, Supply Chain Manager
King's College Hospital



Process of using a Telematics Dongle

The data was collected and analysed and a report was created for the businesses to demonstrate whether there was an EV on the market which met the needs of the business.



Process of using a Telematics Dongle



OUTLINE OF THE MEASUREMENTS

CRP collaborated with Clean Car to gather vehicle telematics, for businesses considering switching to an EV. Below shows what vital information a Telematics Dongle will provide.



MILEAGE



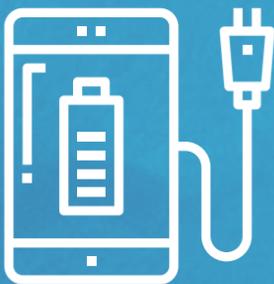
Monitoring and calculating daily mileage and maximum mileage, helps provide an understanding of which EV models on the market have a range most suitable for a business.

SPEED

Monitoring the average speed can impact on EV suitability. For example, if the vehicle is frequently driven at under 30mph, they may suit an EV with regenerative braking, which will charge the battery.



PROXIMITY TO CHARGING POINTS



Awareness and availability of local chargers enables a business to decide whether they need to invest in their own charger or use the network that is already up and running.

TIME PARKED

Many vehicles will be delivering or collecting goods and may therefore be frequently stopping to do so. Understanding this behaviour and when an engine may be switched off has implications for battery usage.





Barriers to switching to an EV

Understanding how you use your vehicle enables you to work towards overcoming these barriers.

I don't have room for a charging point... where will I charge the van?

Electric vehicles are too expensive.

Electric vehicles don't have the mileage / range that I need.

There is no vehicle that meets my needs.



What you need to know about your vehicle if you are considering switching to an EV



Current fuel type:
diesel/petrol



Average mileage:
daily/weekly



Engine size



Routes and charging zones e.g. Ultra Low Emission Zone



Payload



Types of goods and products



Call to action

- ✓ Contact CRP to see if you are eligible for free advice about EVs, as part of an existing programme.
- ✓ Create your own list of measurements from Step 3 for your current vehicle.
- ✓ Check where your local charging points are by visiting Zap Map.



Clean Air Villages 3 was a Central Government-funded, behaviour change programme, which aims to reduce emissions by working directly with businesses, hospitals and communities. In its third year (2020-21) the project worked across 16 air pollution 'hotspots' (villages) within twelve London boroughs. In 2021-22, the project is expanding into new areas as part of Clean Air Villages 4. For more information about the project, and to access further resources and case studies, please visit: crossriverpartnership.org/projects/clean-air-villages-3/

