



## Case study

# Cornwall Partnership NHS Foundation Trust

**Cornwall Partnership NHS Foundation Trust (CFT) is the principal provider of community health, mental health, dementia and learning disability services across Cornwall and the Isles of Scilly and employs more than 3,700 staff.**

**As of early 2018, it had 108 pool cars on a central booking system, 84 company cars and 23 vans as well as over 2,800 grey fleet vehicles.**

**CFT was among the first to be awarded 'Go Ultra Low Company' status in June 2016 due to its commitment to electric vehicles, recharged through solar power.**

### Challenge

The Cornwall Partnership NHS Trust serves a wide and largely rural area and the majority of its services are delivered in the community by professionals which include district nurses, health visitors and community psychiatric nurses. During the course of a year, the Trust's staff travel over 5 million miles to attend patients – enough to go around the world 200 times.

Due to the nature of healthcare, it is difficult to significantly reduce CFT's mileage, so the emphasis is mostly on ensuring all journeys are cost-efficient and minimising environmental impact.

More widely, CFT is working to reduce its carbon emissions by 28% by 2020, against a 2013/14 baseline.

### Process

#### *Initial investment*

Back in 2013, CFT committed to a 'green travel plan' for employees to reduce energy costs and CO<sub>2</sub> emissions.

A grant in 2014 from the Department of Health (NHS Energy Efficient Initiative) enabled CFT to invest in 15 electric vehicles (Renault Zoe), 16 charging points, an online booking system for pool cars, solar panels and teleconferencing equipment.

As the Renault Zoes were unfamiliar to staff, initially some difficulties were experienced as the cars failed to charge. This was addressed through additional training to ensure that instructions were being followed correctly by all staff and also monitoring of failed connections to reduce re-occurrences.

#### *Solar PV arrays*

With the DH grant, a 40kWp ground mounted system was installed at a Trust premise in Liskeard and a 10kWp roof mounted system at a team base in Bodmin. The solar arrays produce around 47,000 kWh per year, far more than the 15 EV pool cars require to recharge (approximately 20,200 kWh per year). This makes the EVs truly zero emission.



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Following a successful tender, the panels were installed by a local contractor which reduced the number of road miles and carbon emissions associated with the project's delivery, and benefited the local economy.

Difficulties were encountered as it emerged that the electricity grid could not accommodate the original design, leading the solar array to be split across two sites.

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This underlines the importance of communicating early with the local Distribution Network Operator (DNO) when planning any microgeneration that will be connected to the grid.

Additionally, the requirement for a full planning application delayed the project.

### *Hybrid additions*

Not resting on its laurels, from late 2017 onwards, the fleet's low carbon credentials have been further enhanced. Older pool cars were replaced by 57 new Toyota Yaris Hybrids. This means that 72 pool cars on the booking system are electric or hybrid. The Trust has since added a further 28 pool vehicles to the system, increasing the total to 108.

### Results

The benefits of CFT's investment include:

- ✔ Total direct savings of around £325,000 per year (the equivalent of 12 nurses) and a 450 tonne reduction in its carbon footprint (tCO<sub>2</sub>e) as result of the EV pool cars, teleconference equipment and solar PV, and mileage reduction
- ✔ Fuel cost savings of £8,000 a year (total); the Renault Zoe pool cars cost approximately 2p a mile to fuel, compared to 12p a mile for conventionally fuelled cars
- ✔ Avoidance of approximately 14 tonnes of CO<sub>2</sub> in tailpipe emissions per year due to the electric pool cars, which travel approximately 80,000 miles a year
- ✔ Before the additions to pool fleet booking system, thanks to the zero-emission Renault Zoes and low-emission Toyota Yaris Hybrids, CFT achieved an impressively low average CO<sub>2</sub> tailpipe emissions figure of 73.5g/km across their 80 pool cars - one of the lowest in the country

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