The benefits of shared electric vehicles in Scotland

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The benefits of electric vehicles in car clubs in Scotland

Car clubs are playing an important role in the decarbonisation of road transport in Scotland. The car club sector in Scotland is diverse and growing. It increasingly provides communities in Scotland with convenient and affordable access to pay-as-you-drive plug-in electric vehicles (EVs). By offering individuals, families and employers the opportunity to experience this technology, it is changing the way people travel by reducing their dependency on privately owned fossil-fuelled vehicles.

Scotland’s car clubs can play an important role in these plans, as they encourage the uptake of EVs by providing their members with access to an EV without the need to own one.

Car clubs also play an important role in encouraging modal shift by decoupling car ownership and use. Car club members are far more likely to walk, cycle and use public transport than the average driver because they pay for their car travel at the point of use.

The Developing Car Clubs Scotland (DCCS) Programme, which is funded by Transport Scotland and managed by Carplus, has helped grow the network of car clubs across the country and accelerated the uptake of EVs in car clubs.

Car club use in Scotland saves over 170 tonnes of carbon dioxide annually, and car club members have disposed of 840 privately owned cars and avoided purchasing a further 2,200 cars – vehicles that might otherwise be on Scotland’s roads.

The Scottish Government has identified ambitions for the almost complete decarbonisation of road transport by 2050. These plans focus on a modal shift towards walking, cycling and public transport, with the widespread adoption of electric cars and vans enabling people to move away from the current dependence on fossil-fuelled vehicles.

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Case study: City Car Club Edinburgh

Edinburgh is one of the UK’s oldest and most successful car clubs.

City Car Club Edinburgh has over 5,300 members and 150 car club vehicles, including 17 battery electric vehicles and 1 plug-in hybrid vehicle.

The first EV to be introduced to the Edinburgh car club fleet is located at the Edinburgh Centre for Carbon Innovation (ECCI).

ECCI is a hub for the knowledge, innovation and skills required to create a low carbon economy, and the ideal location for a shared EV.

The car club EV at ECCI provides convenient and affordable access to an EV to a wide range of users including ECCI, Edinburgh University, the City of Edinburgh Council and residents of Edinburgh.

“Having a City Car Club electric vehicle nearby and with a quick and easy booking system is ideal for staff at The Edinburgh Centre for Carbon Innovation. It gives us a low carbon option for travel to meetings that is both fun to drive in the city and good for our environment.”

David Gunn
Business Manager, Edinburgh Centre for Carbon Innovation

Car club growth

To date the DCCS programme has supported the expansion of the Scottish car club network from 3 to 22 locations over the period 2010-2014, with more locations due to be added in 2015.

Emissions and air quality

The car club vehicles in Scotland are far less polluting than the average car on Scotland’s roads.

In 2014, emissions from car club vehicles in Scotland were, on average, 37% lower than the typical car on Scotland’s roads, and 96% of the Scottish car club fleet was Euro 5 or 6 compliant. These figures will improve further as more EVs are added to the car club fleet.

The car club fleet in Scotland is 96% EURO 5/6 COMPLIANT Limiting air pollution (up from 92.5% in 2013)

In Scotland, car club vehicles typically produce 37% LESS CARBON from tailpipe emissions than the average Scottish car

Members of Scottish car clubs

SNAPSHOT OF EV USAGE

1 electric car
10 months in use
112 different drivers
5,360 miles travelled

People join a car club in Scotland every month

78
Moray Carshare is a community-based car club located in Findhorn and Forres in Moray, in the north-east of Scotland. Moray Carshare has over 80 members and has 11 cars, including 3 EVs.

Moray Carshare is committed to providing affordable and environmentally sustainable travel options within the IV36 postcode area. The car club’s 2 EVs based in Findhorn are charged overnight from a community-owned wind turbine.

I particularly enjoy using the LEAF - I choose it over any other car whenever I can.

I mainly use it for trips to the local area, for shopping, for visits and for outings. It is driving very smoothly, I love the quietness of the motor. And I am keeping a good eye on the usage, making sure that I don’t accelerate too quickly and use more charge than necessary.

I am very glad every time I use it that it is charged by our windmills, that I am not using any petrol or diesel for the trip.

Düren Lau
Moray Carshare member

Case study: Moray Carshare

Decarbonising car use

Car clubs are playing an important role in mainstreaming EVs, by introducing them to a wide range of new users reducing dependence on fossil-fuelled vehicles.

2013-14 saw the introduction of 15 EVs into urban and rural car clubs with support from the DCCS programme.

2014-15 saw the introduction of a further 58 EVs into urban and rural car clubs with support from the DCCS programme.

In July 2015 there were 72 car club EVs in Scotland – more than the rest of the UK combined.

Over the last two years the DCCS programme has supported the introduction of 73 new EVs to Scotland’s car clubs, making this technology easily available to Scotland’s 8,000 car club members.

Car clubs give their members the opportunity to try EVs without the cost of purchasing one. The average car club vehicle in Scotland is used by 32 members and is in use 25% of the time, whereas the average privately owned car is used by just 1-2 people and is in use just 5% of the time.

Car club vehicles are better utilised than cars in private ownership, spending more time in use than the average vehicle. They also offer access to a much wider range of users – often a mix of individuals, tourists, businesses and local authorities and other public bodies.

BY MID-2015 THE SCOTTISH CAR CLUB FLEET WILL BE 30% Electric
Car clubs are successful in a variety of settings – from small rural communities to the largest cities in Scotland. They are used by businesses, public bodies and individuals. By providing a range of petrol, diesel, hybrid and electric vehicles, car clubs allow members to make the most appropriate choice for their journey, opting for an electric car when it is needed for an appointment in town, or a 7-seater for a family outing.

Those car club members who also require a personal vehicle can purchase the one most suited to their everyday needs (e.g. a small fuel-efficient vehicle for the commute to work) rather than buying the largest possible vehicle they are ever likely to need. The flexibility offered by car club membership means that they may choose to buy an electric car for their main vehicle and then hire a conventionally fuelled vehicle from the club when they have to make a longer trip.

Car clubs offer people the kind of flexibility that helps them choose the most appropriate means for their journey. They enable modal shift – and the evidence is that car club members walk, cycle and use public transport more than other drivers.

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Case study: Co-wheels Aberdeen

Co-wheels Aberdeen was launched in April 2012 with support from Aberdeen City Council, regional transport partnership Nestrans and the DCCS programme.

The car club currently has around 1,000 members and 38 car club vehicles, including 20 EVs - currently more EVs than any other car club location in the UK.

Aberdeen City Council is a key user of the car club and over 450 council employees have signed up to the scheme for council business travel. Analysis by the Energy Saving Trust suggests that Aberdeen City Council saves approximately £40,000 annually by replacing its pool cars and grey fleet mileage with car club vehicle usage.

One of the key benefits of car club EVs is that, unlike EVs in Council fleets, they don’t sit unused in the evenings and weekends and the car club EVs in Aberdeen are also available for use by over 550 other car club members in Aberdeen.

Car club members in Aberdeen have really taken to EVs. The car club EVs in Aberdeen are well utilised, sometimes proving more popular than some of the car club’s fossil fuelled vehicles, and a survey of Aberdeen members conducted by Co-wheels showed that 83% wanted more EVs in the car club.

Using Co-wheels for our business travel has already brought huge benefits to the Council and its staff and the EVs have really built on this. Aberdeen has air quality issues so the environmental benefits EVs bring in terms of PM10 and NOx and their ability to cut carbon emissions from business travel are great news. Their nippyness and ease of driving in stop-start traffic also make them ideal for the urban environment.

Initially staff were a bit sceptical but we offered them training on how to drive the cars and how to charge them before their first use.

This, coupled with the chance to drive the cars in real world conditions, has brought much praise from staff. In fact, of the nine cars we book for exclusive use of staff from Co-wheels, the two electric cars are now the best used.

Alan Simpson
Aberdeen Council

By 2050, Scottish towns, cities and rural communities will be free from the damaging emissions of petrol- and diesel-fuelled vehicles.

The Scottish Government is aiming to decarbonise road travel by 2050. This represents a massive shift in travel patterns and vehicles for a whole country. But change happens only one step at a time.

Car clubs are providing their first ever taste of electric vehicles to whole communities.

They are enabling people to choose to travel differently and to make the most appropriate transport choices for their journey.

Car clubs are playing their part in helping people to change the way they travel.

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Further information

For more information on car clubs, the DCCS programme and Carplus, visit the Carplus website:
www.carplus.org.uk

Develop a car club in your area

If you would like to find out more about developing a car club in your area of Scotland, or wish to discuss any other aspect of the DCCS programme, please contact:

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Developing Car Clubs Scotland Programme Coordinator

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Carplus is a not-for-profit, environmental transport NGO that promotes accessible, affordable and low-carbon alternatives to traditional car use in the UK. Carplus is leading the way towards a new era of shared car ownership and use, and works with others to explore ways to capture the benefits of new technology and support behavioural change.

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This report was prepared by Matthew Eastwood and Beate Kubitz, with the help of the Carplus teams in Edinburgh and Leeds, and staff of the car clubs featured.

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