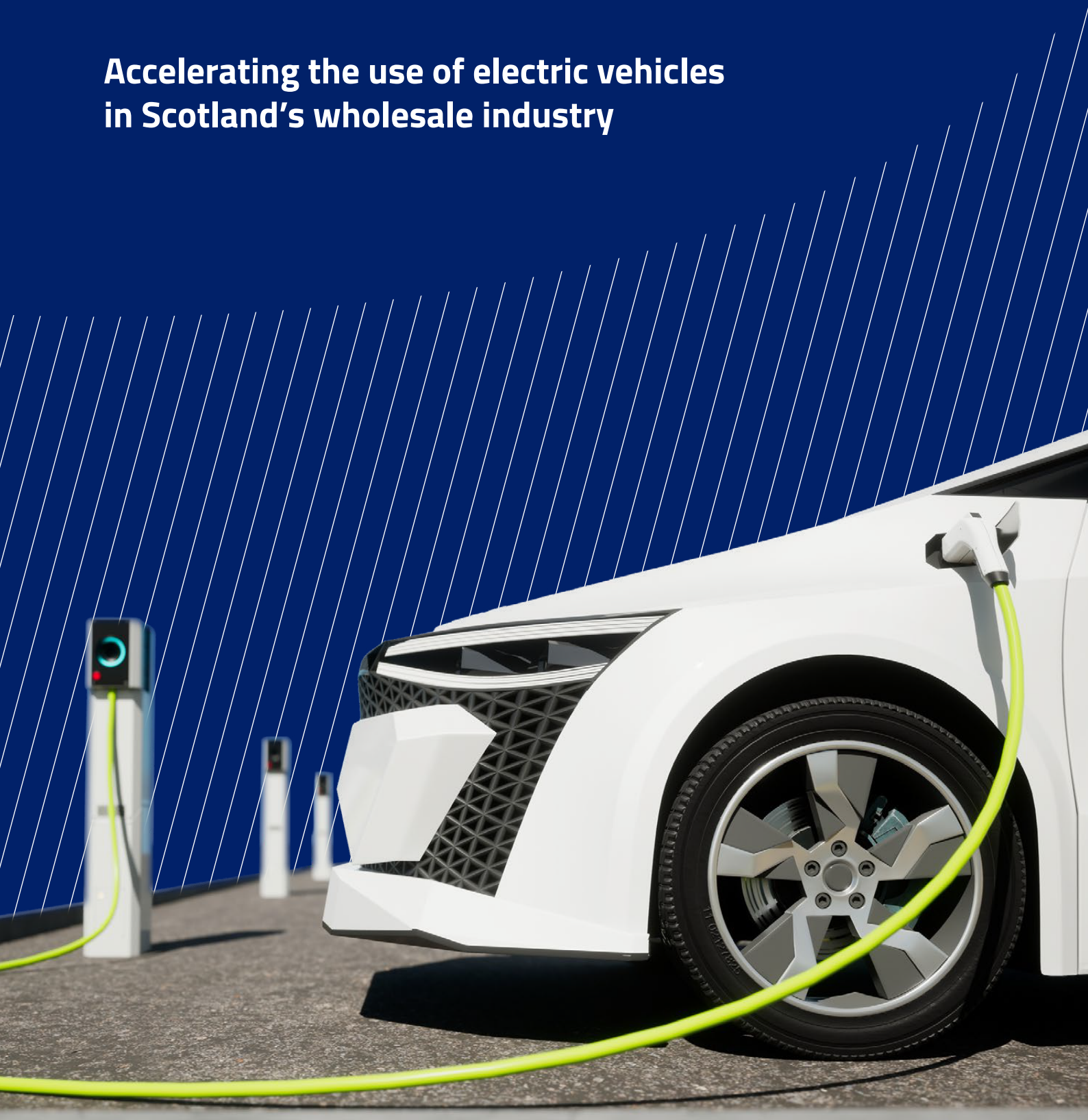
Scottish Wholesale Association

Fleet Decarbonisation Case Studies – Car Fleets

Accelerating the use of electric vehicles in Scotland's wholesale industry



Overview

A shift to low carbon and zero emissions vehicles is underway, spurred on by the Climate Change Act 2019, which requires Scotland to reduce greenhouse gas emissions to net zero by 2045, with an interim reduction target of 75% against 1990 levels by 2030[1].

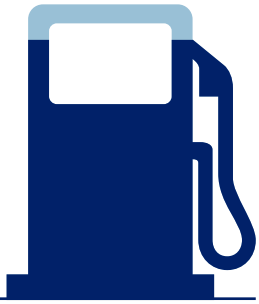
In order to meet this target, demands are increasingly placed on businesses to make changes to accelerate their transition to net zero. Reducing emissions from transport is critical to achieving this.

Definition

The term "net zero" means achieving a balance between the carbon emitted into the atmosphere, and the carbon removed from it. This balance – or net zero – will happen when the amount of carbon we add to the atmosphere is no more than the amount removed.

To help tackle transport emissions and support all its members to achieve a just transition, the Scottish Wholesale Association launched its 'Decarbonising the Wholesale Industry' project in 2021. The project provides opportunities for wholesalers to test, pilot and implement various measures to cut carbon emissions.

Transport is the largest contributor to climate emissions in Scotland, accounting for approximately 29% of total emissions[2]. Figures from the Scottish Wholesale Association's Fleet Emissions Baseline carried out in 2021 show that 88% of its membership vehicle fleet was comprised of fossil fuel vehicles[3]. The Decarbonising the Scottish Wholesale Sector report from 2023 confirms that vehicles make up the vast majority of wholesalers' operational carbon emissions, primarily from HGVs, but with LGVs and cars accounting for 3.4%[4].



88% of the Scottish Wholesale Association's membership vehicle fleet was comprised of fossil fuel vehicles[3]

1 The Scottish Government: Climate change

2 Scottish Greenhouse Gas statistics 1990-2019, Scottish Government, 2021, https://www.gov.scot/publications/scottish-greenhouse-gas-statistics-1990-2019/documents/ and Transport Scotland, Zero Emission Energy for Transport Report, 2022, https://www.transport.gov.scot/media/51571/updated-zero-emission-energy-for-transport-forecasts-national-demand-forecasts-for-electricity-and-hydrogen.pdf

3 Scottish Wholesale Association, 2021, Decarbonisation of the Scottish Wholesale Industry, Fleet Emissions Baseline: https://www.scottishwholesale.co.uk/media/2474/swa-wholesale-decarbonisation-report-fleet-emissions-baseline.pdf

4 Scottish Wholesale Association, 2023. "Decarbonising the Scottish Wholesale Sector – Exploring the sector's carbon emissions and attitudes to climate change https://www.scottishwholesale.co.uk/media/2927/swa-decarbonising-the-scottish-wholesale-sector.pdf

Driving the revolution

Decarbonisation of transport fleets has already been kick-started by a number of Scottish Wholesale Association members.

This case study will showcase actions taken by three wholesalers: **Lomond Fine Foods**, **Dunns Food and Drinks**, and **United Wholesale Scotland**, focusing primarily on their experiences of decarbonising their car fleets, any challenges they faced, and what they learned in the process.

Lomond Fine Foods

Lomond Fine Foods is a family business delivering chilled, frozen, and ambient food across Scotland. Their main operation is located in Glasgow, with additional depots further north in Inverness and Aberdeen. Highly committed to taking action on climate change, they have implemented a number of measures to reduce their environmental impact and have ambitions to achieve net zero carbon emissions by 2025.

Lomond Fine Foods started its transition to low-carbon transport in 2016 when it introduced hybrid refrigeration in two of its commercial trucks. This initial adaptation was the catalyst for change. The sales car fleet was replaced with electric vehicles (EVs) from 2017 onwards. Initially, one PHEV[5] sales vehicle was necessary due to the user being located in the north of Scotland and covering a high daily mileage. However, this has recently been upgraded to a fully electric vehicle.

Definition

Plug-in hybrid electric vehicle, or PHEV, operates using battery power and another fuel such as petrol or diesel. To charge, the vehicle plugs into an electrical power source the same as an electric vehicle. This differs from standard hybrids which charge through regenerative braking. PHEVs typically have an electrical range of around 40 miles, whereas, a self-charging hybrid has just 1-2 miles of electrical range.

[5] PHEV Definition: RAC, 2021. What is a plug-in hybrid car?

Investing in employees

In preparing for the introduction of electric vehicles, the company evaluated their charging provision and installed six free-to-use fast chargers for employees at its main depot in Glasgow.

They also supported the installation of chargers at employees' homes. This installation was possible in all but one case which was due to the employee residing in a tenement-style building. The employee could still benefit from free charging at the depot and through the ChargePlace Scotland network.

Lomond Fine Foods see these steps to decarbonisation very much as an investment in their employees. Along with installing a home charger and providing charging at the depot, the EV company cars provide employees with the benefit of a modern, high-tech vehicle for personal as well as professional use. The feedback from employees reflects this as the transition continues to be well-received, despite a few nervous thoughts when the plans were first announced.

Results and savings made

For Lomond Fine Foods, transitioning their vehicle fleets, starting with company cars, is a very well-worth investment in sustainable practices, and their workforce, which also brings savings. As the EV fleet has grown and been in place for a period of time, more of the cost benefits are also being seen.

Lomond calculates that each electric car saves the company around £3,500 a year. These savings are made up of on average £1,000 on class 1A National Insurance, and savings of around £1,000 on fuel each year, as electricity remains cheaper than petrol and diesel, despite recent price increases. A further estimated £1,000 in savings are made on depreciation, as in comparison to petrol and diesel cars, electric cars are likely to increase their value due to growing demand. Finally, Lomond estimates that a saving of around £500 is made on repairs and servicing each year, as electric vehicles are cheaper due to having fewer moving parts, fluids and 'wear and tear' items than petrol and diesel cars.

"The electric company cars are well received by employees as they get a better standard of vehicle and also save on tax. Internal calculations estimate that each electric company car saves the employee around £250 in tax each month."

Sam Henderson, Managing Director, Lomond Fine Foods

Today, all 23 of Lomond's 3.5–7.2 tonne trucks run with hybrid refrigeration systems. A 7.2 tonne electric van has also been introduced for deliveries in the Glasgow area.

These changes, in combination with introducing route rationalisation, making sure that routes are as efficient as possible, enabled the company to save 71.3 tonnes of CO_2 in 2021–22 compared to 2018–19.

They are not stopping here. A further three 18 tonne trucks with electric refrigeration are on their way, as are plans to explore other new low carbon technologies, such as hydrogen fuel cells.

Lomond Fine Food's efforts to decarbonise their fleets have also allowed them to benefit from the increasing number of tenders coming to market that are demanding sustainable practices. Decarbonisation has become a way of future-proofing the company. In their view, the growing pressure from Government and clients to decarbonise also means that the necessary changes must now be made.

Sam and Barbara Henderson of Lomond Fine Foods

"Failing to embrace transition should be seen as a bigger threat than the new technology."

Sam Henderson, Managing Director, Lomond Fine Foods

Dunns Food and Drinks

Dunns Food and Drinks is a wholesaler based in Blantyre, which serves customers across Scotland. With sustainability and carbon reduction key to their ethos, they have recently invested significantly in a range of sustainability measures, including solar PV panels, LED lights and energy-efficiency measures to support their long-term net zero ambitions.

But while carbon reduction is part of Dunns' values, the direction of government policy has also been a motivating factor for them in considering zero emission vehicles. This, along with a review of many of the company's operations, helped to identify the reduction of carbon emissions from their vehicles as a key priority.

From there, **the company began decarbonising the sales car fleet, which is now 95% electric**, with nine electric cars. The company provides free depot charging for employees and the chargers are also able to utilise energy captured from Dunns' PV panels, further reducing fuel costs for the company.

"People should be realistic about the range [cars and heavier]. Planners should be prepared to rearrange the usual routes so vehicles can be strategically placed."

Advice from Dunns Food and Drinks

United Wholesale Scotland

United Wholesale Scotland operates across Scotland and has three sites located in the central belt. Decarbonising their operations is a key priority, and they have set interim targets for a reduction in carbon emissions, working towards reaching net zero.

Having identified transport as a key source of emissions, United Wholesale Scotland worked with Scottish Wholesale Association affiliate members and cost, procurement, and carbon consultants Auditel to review the field sales team vehicles to investigate if the transition from diesel to EVs was a feasible solution for them. The review by Auditel highlighted that by switching to EVs, costs could be reduced by 15% over the duration of the contract, and carbon emissions by 86 tCO_2e annually. **Today, United Wholesale Scotland has almost fully transitioned the car fleet and now has over 50 EVs.**

As well as transitioning the car fleet, United Wholesale Scotland has been getting involved in vehicle trials. The most recent was testing a 19 tonne Volvo truck, as part of the ongoing Scottish Wholesale Association trial in collaboration with Volvo. This gave them valuable insight into transitioning the heavier vehicles and also allowed for familiarisation with chargers which are used across the truck and car fleet.

"Finance is a huge area for consideration, but not all dependent on cost. HGVs are about 30% of the fleet but account for 80% of the carbon emissions so needs to be decarbonised in line with government targets and internal commitments."

Advice from United Wholesale Scotland

Conclusions and lessons learned

The transition to EV car fleets has been a learning process for each of the wholesalers. There have been profound benefits to transitioning but also challenges along the way.

Infrastructure barriers

As seen in the example of Lomond Fine Foods, providing home chargers for employees was a successful and popular action. However, for employees living in tenement-style accommodation, this proved problematic. They had to rely on accessing the chargers at the main depot and public networks.

While the public network was a lifeline for this employee, there were instances where the chargers were down. It is clear that the public charging network is still a vital provision in the decarbonisation of company car fleets and there are advancements being made into on-street charging provisions that will make home charging for those living in flats possible.

Each of the wholesaler's detailed route logistics for the sales team as a factor to remain flexible. Existing routes could be made more efficient and therefore ease feelings of range anxiety.

Power

The power supply has proven to be one of the most problematic aspects of the transition. As Lomond Fine Foods were taking a holistic view of decarbonisation and sustainability, their energy sources were reviewed. As a result, it was decided that PV solar panels would be installed on the roof to help power the six depot chargers as well as a freezer.

Whilst the company does intend to expand the coverage of solar panels as the EV fleet grows, there will be a point where this will cap as the available depot space is used. As the power demand increases, the grid connection to the depot will likely need to be upgraded which is a very costly procedure.

Definition

Photovoltaic (PV), or solar panels capture the sun's energy and convert it into electricity. Electricity generated by PV panels is most commonly used for powering household appliances and equipment.

Currently, PV panels supplement the energy required and, as such, power is still taken from the grid. PV panels are a common choice for renewable energy integration as they can seamlessly support a range of household items.

However, if there are not enough panels to support all of the electrical devices then the grid will be used in combination. A particularly unexpected challenge was finding a power supplier that uses responsibly and sustainably sourced renewable electricity from the grid.

Costs

Some of the wholesalers were able to take advantage of funding for EV charging infrastructure. This provided an additional motivating factor for them to start the transition of their car fleets. It is clear that continued access to funding is crucial in order to accelerate action. Without it, smaller businesses in particular find cost a major barrier.

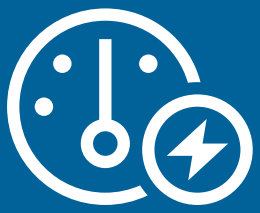
While the upfront cost of EVs can be considerably higher, the total cost of ownership tends to be lower. The running costs of these vehicles provide cost savings in comparison to their fossil fuel counterparts. This is particularly noticeable in the repair and maintenance costs of an EV compared to a traditional vehicle, due to EVs only having around 20 moving parts versus over 2,000 in petrol and diesel vehicles.

As the EV fleet grows and matures more of the cost benefits are being seen. Initially, the company was able to take advantage of available funding streams for EVs.

This case study highlights that transitioning car fleets to EVs will provide savings in the long term, as long as the company can afford the initial upfront cost. However, this also helps to underline that inability to afford this initial investment is preventing others from taking action to transition their car fleets, preventing significant action, and a just transition of the sector as a whole.

Savings

Despite the higher upfront outlay, Lomond Fine Foods have experienced an annual cost saving of around £3,500 per electric vehicle. The savings come from lower fuel consumption costs, National Insurance, depreciation and maintenance costs.



Next steps

The featured wholesalers have committed to achieving net zero emissions before or in line with sector and national commitments and intend to move forward with fleet decarbonisation. The companies are also investigating other alternative fuels such as hydrogen, predominantly for the larger vehicles in the fleet.

While the current transition leans toward electrification for the three wholesalers, it is recognised that the future should be embraced including the monitoring of new technologies to find the right fit for each vehicle moving forward.

Key advice for others

- If there are companies where employees are sceptical, let them feed directly into the plans and give them a chance to air any thoughts or nerves regarding electrification. Lomond staff feel the EVs are a much nicer drive so this is a major selling point to getting people on board.
- Lomond Fine Foods feel EVs are massively worth investing in, especially with the tax savings associated. There is growing pressure from the government and clients to decarbonise so the necessary measures should be embraced.
- The need for sustainability is becoming increasingly prevalent in the wholesale industry. To meet the needs of tenders, transitioning should be seen as futureproofing.

"Failing to embrace transition should be seen as a bigger threat than the new technology"

Lomond Fine Foods

SCOTTISH WHOLESALE ASSOCIATION
The voice of the Scottish Food, Drink and Allied Trades

The Scottish Wholesale Association

The Scottish Wholesale Association (SWA) is the official trade body for Scotland's food and drink wholesaling industry. SWA members are 'the wheels to Scotland's food and drink industry', supplying products to over 5,000 independent convenience stores, 30,000 catering, hospitality, tourism and leisure businesses, and the majority of public sector establishments across Scotland.

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