

WOOLWORTHS

Woolworths is a major retail company in South Africa operating a chain of department stores. The company works with a third party to manage its fleet, which maximises vehicle efficiency and refrigeration technology. The fleet is transitioning to Euro 5 vehicles.

Experiments underway

In addition to trials with hybrid fuels, there is an ongoing trial using axle power. This uses kinetic energy harvested from the vehicle's axle and stores it in onboard batteries to power refrigeration, resulting in zero trailer carbon emissions. The trailer operates on the long-haul route between Johannesburg and Cape Town to maximise the technology and sustainability benefits. Woolworths anticipates a reduction of 27 tonnes of carbon emissions on this route over the year from one trailer. The results of the first truck have been so successful that they are going to expand to a larger fleet.

A key performance indicator for Woolworths is the carbon emissions produced per unit of delivery, which helps the company monitor its sustainability progress. To improve on this metric, Woolworths focuses on creating loading efficiencies that allow for the transportation of both perishables and non-perishables while maintaining product quality.

Additional benefits of these efforts include reduced noise pollution and a lower impact on residential areas. Woolworths also

implements a reverse logistics leg to maximise the return of the vehicle to the depot by carrying packing, delivery equipment and non-perishable waste.

Improving home delivery

Woolworths uses a fleet of 42 electric vehicles managed by a third party to do home deliveries. An initial 18-month trial showed that electric vehicles are viable, offering advantages such as smoother acceleration, better driver experience, regenerative braking, and commercial benefits like improved capacity and load management. The regenerative braking assists the EVs to perform most efficiently in stop/start traffic conditions, the opposite to combustion engine vehicles. The EV panel vans can drive up to 300km per charge and perform the same, in some cases better, than a normal car.

The performance of the EVs has been exemplary with negligible down-time since inception. It is estimated that the 42 electric vehicles save over 400 000 kg of tailpipe carbon emissions annually. The company is assessing opportunities to increase the efficiency of this fleet where viable following successful operations in Johannesburg and Cape Town. The vehicles feature a live telematics system for monitoring, geofencing for range management, and automated speed reduction at distribution centres to enhance safety.



SPAR GROUP

The Spar Group is committed to improving efficiency and cutting transport emissions, with a target to reduce emissions by 50% by 2030 and achieve net-zero emissions by 2050.

EVs for groceries

In 2023, following a pilot, Spar launched a fleet of 65 electric vehicles for their online deliveries, managed through their SPAR2U app.

To replace diesel bikes; 52 of them are electric motorbikes. The new initiative takes place in Gauteng, KwaZulu-Natal, Western Cape, Eastern Cape, and Lowveld.

Spar also incorporated 10 Mellowvans and one electric four-wheel bakkie.

How it works

The system includes driver training and the responsibility granted to retailers to ensure charging facilities. All vehicles are parked overnight at the designated stores. In addition, there is an agreement in place with shopping centre management to allow vehicles to charge via the shopping centre's charging network.

Spar stores are able to opt into the scheme but it's not mandatory as they must provide guarantee of charging facilities. For the motorbikes the batteries are charged in store in a secure location, these vehicles have two batteries. If one is in use the other is on charge. SPAR Central office currently subsidises the charging and electricity bill for the EVs.

The charging approach relies on 50% solar and 50% Eskom charging and the company estimates annual offset per bike to be approximately 3.27 tons of carbon emissions and to decrease over 212.4 tons of tailpipe carbon emissions annually.

