

# FUEL EFFICIENCY

## Fuel additive

Stagecoach uses a next-generation fuel additive, Envirox™, to reduce carbon emissions and improve fuel efficiency. The additive, manufactured by Oxonica, is based on a well-known oxidation catalyst widely used in catalytic converters. The material has been re-engineered using nanotechnology to allow it to be delivered as a fuel-borne catalyst, leading to a cleaner burn within the combustion chamber. The additive has delivered more than a 5% cut in fuel consumption and an associated decrease in vehicle emissions. Stagecoach also currently uses a blend of 5% biodiesel across its 7,000-vehicle UK bus fleet.

## Fuel efficient driving

The Group invests millions of pounds each year in the training of its bus driving team which includes its Safe, Skilled and Fuel Efficient Driving programme. All of the company's 14,400 drivers are required to complete the course as part of a Certificate of Professional Competence.

Stagecoach is also testing a hi-tech in-cab driver system to improve safety, reduce fuel costs and cut carbon emissions. The system monitors dozens of driving manoeuvres, such as speed, braking, acceleration, lane handling and turning. It instantly analyses a driver's performance, providing feedback to the driver using red, amber and green lights on the dashboard.

## Rail coasting techniques

South West Trains has taken part in the development of driving techniques to conserve energy. By 'coasting' from certain points into a station, drivers can not only reduce the amount of energy used, but also wear on the brake pads.

Fuel-efficient driving techniques are also part of our training programme at East Midlands Trains and guidance is issued in its driver manuals. East Midlands Trains is working with Bombardier to modify the Class 222 Train Management System to allow easier shutdown of engines at turn-arounds and the possible en-route coasting of engines.

## Regenerative braking

Our rail operations, including our Manchester Metrolink, Sheffield Supertram and Virgin Trains businesses, have taken steps to exploit the advantages of regenerative braking systems. Instead of losing the excess electrical energy created by braking to the atmosphere in the form of heat it is channelled back into the conductor rail to be used by other trains in the area, saving overall energy.

## Bus idling

Stagecoach UK Bus is refining its modern engine vehicle management systems to reduce engine idling time. In the United States and Canada, we have adopted a wireless GPS system that provides valuable information to address the issue of unnecessary idling of buses. This system sends alerts to the location dispatch to flag up idling times that exceed set parameters.



# 5% CUT

in fuel consumption and  
carbon emissions through use  
of next-generation fuel additive

