

# It's good to go green

As logistics and transport companies try to reduce their carbon footprint, they are turning to a range of solutions - everything from route optimisation technology that cuts miles out of delivery journeys, to hybrid-electric vehicles and policies to prevent unnecessary idling of vehicles. Fortunately, these initiatives deliver a double benefit. While reducing carbon emissions, they also cut fuel use dramatically.

The potential for saving money is what is driving a lot of these "green" initiatives, according to Greg Aimi, director of supply chain at AMR Research, a Boston-based consultancy that has an environmental research department. "We've found that companies tend to want to act when it benefits the business performance," he says.

When it comes to taking action, the multi-faceted approach is the right one, says Mitch Jackson, managing director of FedEx Express's Corporate Environmental Programmes. "There is no single technology or operational solution that will suffice in every situation," he says. "As a result we're implementing a number of initiatives."

One of these is the replacement of its Boeing 727s with Boeing 757s, which have a 20 per cent greater payload capacity and use 36 per cent less fuel. At the same time, FedEx planes now use more ground power supplies when parked at the gate, cutting use of the auxiliary units on the aircraft. This initiative alone has cut fuel consumption by about 5.5m gallons a year.

Seemingly small measures bring big cost benefits when applied to large fleets. Take Wal-Mart's programme of putting separate diesel power units in its trucks. The units mean that drivers need not run their engines to use the heating, air-conditioning or other power-driven facilities within the

cabin. The measure is projected to cut an annual 100,000 metric tonnes of carbon dioxide from the fleet's operations and reduce diesel use by 10m gallons a year.

Another area of focus for logistics operators is in deploying more sophisticated engines. While waterborne transport is by far the most energy efficient, even ocean carriers can make improvements. The waste heat recovery system on board Maersk's PS-class vessels, for example, saves up to 10 per cent of the ship's main engine power.

Back on land, Wal-Mart is developing a dual-mode, diesel-electric drivetrain tractor

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**'It's great if companies can link environmental consciousness to cost satisfaction'**

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which will use a combination of mechanical and electrical propulsion systems, deploying the electric motor during high demand at low speed, such as accelerating from a standstill or climbing steep hills. Then, once at highway speeds, the mechanical system takes over.

FedEx, too, is embracing alternative technologies for its ground fleet. "We've got 93 vehicles out there," says Mr Jackson. "And they have 42 per cent better fuel economy than a conventional vehicle, which equates to a 30 per cent reduction in fuel emissions and a 96 per cent reduction of particulate emissions over conventional vehicles."

UPS's "green fleet" recently passed its 100million-mile mark. The fleet includes hydrogen fuel cell technology vehicles (which emit only water) and UPS will add 50 hybrid electric

vehicles to the fleet over the next year.

Driving more slowly also has a big impact on fuel use something that is true for ships. If vessel operators were to find cost-effective ways of making more 10-day, rather than weekly, arrivals, they would need fewer ships to move the same amount of cargo, says James Corbett, a professor at the University of Delaware's Graduate College of Marine Studies. "The ships would be large and they'd move more slowly, but you'd get the same amount of cargo delivered over the course of the year - and you'd save a lot of energy."

This broader view of the supply chain is one that experts believe will generate significant gains in energy efficiency. Jonathan Wright, a senior executive in Accenture's Global Supply Chain practice, argues that a more holistic approach can help companies improve not only their fuel efficiency but also their overall efficiency.

"Many people think of greening the supply chain as adding cost," he says. "But if you can get your logistics network running efficiently, by definition you'll be reducing your emissions because you're moving stuff around less."

Part of the problem, he says, is that recent corporate consolidation through merger and acquisition activity has left many companies with factories or warehouses in the wrong places. As well as getting facilities sited in the best locations, efficiencies can be gained from collaborating with other logistics providers, who are likely to offer competitive rates to fill otherwise empty backhaul trips.

"There is a direct relationship between carbon emissions and supply chain efficiency," says Mr Wright. "Companies are becoming more environmentally conscious and so it's great if they can link this to cost and customer satisfaction."