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Making the case for Freight Electric Vehicles in Urban Europe (FREVIEW)

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Europe-wide

Topic:

Clean and energy-efficient vehicles
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Link:

[FREVIEW website](#)

At the moment, the vast majority of freight deliveries in urban environments are made by conventional petrol and diesel vehicles. Yet as the EU seeks to transition towards low and ultimately emission free transport, alternatives are needed. That is where FREVIEW comes in.

An EU-funded project, FREVIEW set out to discover if and how fully electric vehicles are viable alternatives to conventional diesel ones. Ten urban logistics operators tested over 80 electric vehicles in eight of Europe's largest cities, ranging from small car-derived vans to 18-tonne trucks. With various cities and operators involved in the project, testing took place in a variety of climates, policy environments, and urban landscapes.

The technology proved mature and robust enough for electric vans and trucks to be included in commercial vehicles fleets in urban operation. The multi-stop and low speed urban environment suits these vehicles very well. Small electric vans, for example, reach peak energy efficiency between 30 - 35km/h, a typical speed range in urban traffic. However, this drops at higher speeds.

The environmental benefits of electric vehicles are obvious. Zero tailpipe emissions means that no nitrogen oxides (NOx) and particulate matter (PM) are produced. Both are incredibly detrimental to health, and diesel exhaust emissions contain them in abundance.

FREVIEW research partners calculated the impact that the wider electric freight vehicle deployment would have in London. Even if "only" 10% of the fleet were electrified by 2021, NOx emissions could be decreased by 402,000 tonnes, PM emissions by 3.8 tonnes, and local CO2 emissions by 284,000 tonnes.

This would amount to a €1 billion annual reduction in health and abatement costs (the cost of reducing 'environmental negatives' such as pollution). Electrifying freight fleets therefore makes a significant public health contribution and requires lower costs to comply with legal air quality obligations.

Other benefits include quieter engines, which leads to less noise pollution both for drivers and people within urban environments. Using electric vehicles for urban logistics will also increase electric vehicle uptake and could prompt the introduction of new concepts and business models.

While the associated environmental benefits and general technical suitability of electric freight vehicles are clear, they remain more expensive than their diesel counterparts. Through operational cost savings and financial and fiscal incentives, a positive business case can be made for smaller models. For trucks it is harder, however; limited supply - influenced by low (perceived) demand - means prices are still high.

To tackle this, FREVIEW launched its [Declaration of Intent](#) to illustrate market demand. As more and bigger suppliers enter the market and battery prices fall over time, the business case for larger vehicles should improve. Constraints also exist concerning charging: related infrastructure would likely necessitate significant development and investment in many locations.

Many of the industry partners who trialled electric freight vehicles have decided to expand this part of their fleet further. For instance, UPS have now electrified nearly a third of their central London fleet, whilst Heineken run a 19 tonne truck in Rotterdam, alongside one 12-tonne and seven 13-tonne trucks in Amsterdam.

FREVUE has shown that electric freight vehicles work for inner city logistics operations. With their associated environmental benefits and an improving business case, the amount of them quietly delivering goods on our streets is only set to increase.

To find out more about the project, visit frevue.eu.
