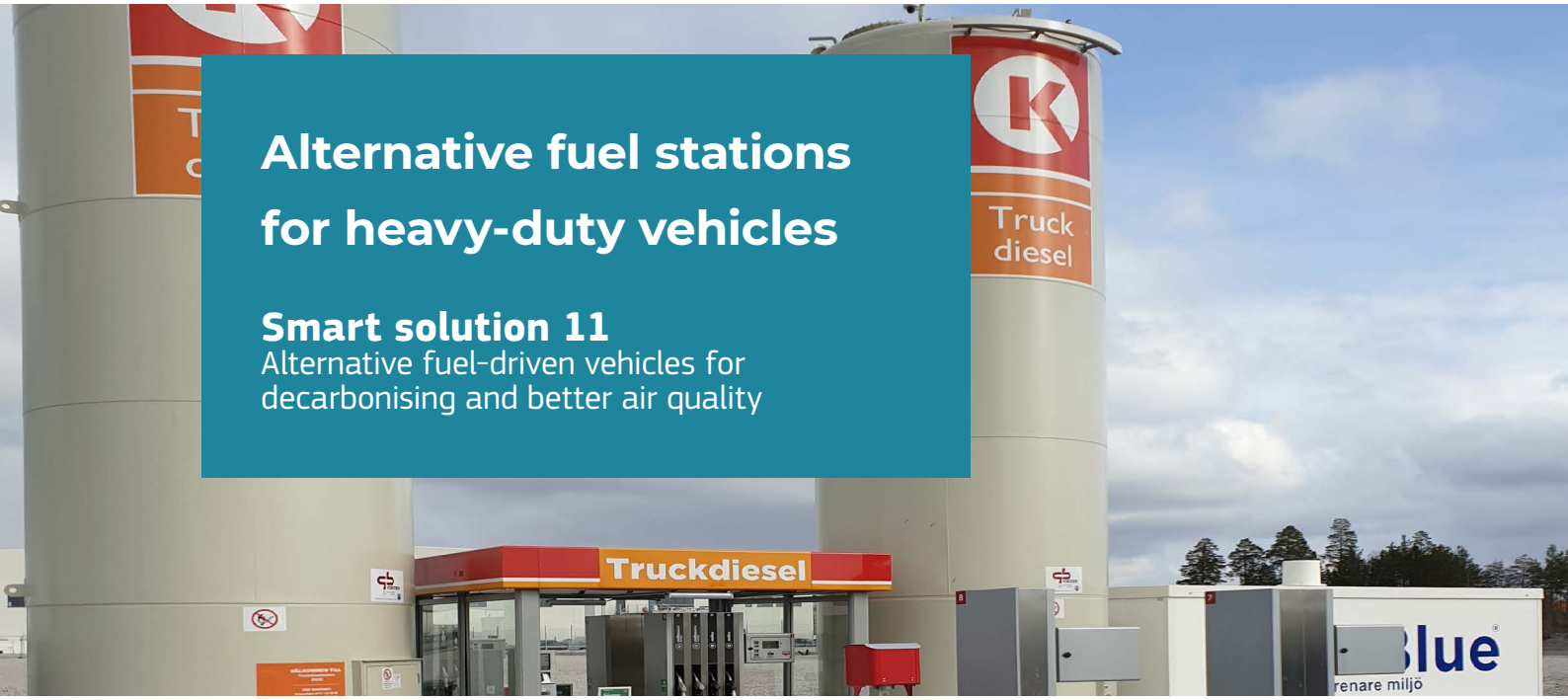


Alternative fuel stations for heavy-duty vehicles

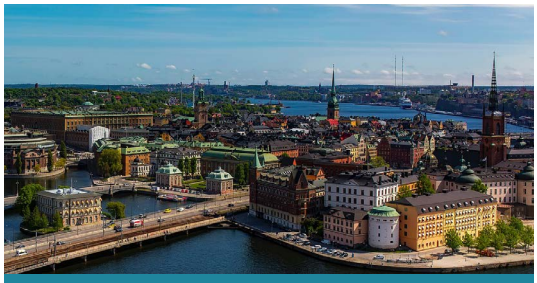
Smart solution 11
Alternative fuel-driven vehicles for decarbonising and better air quality

Measured impacts

7
alternative fuel stations installed at five locations

28%
of vehicles sold in 2018 were alternatively fuelled

10%
increase in alternatively fuelled heavy duty vehicles (excluding 100% HVO-fuelled trucks) from 2016 to 2018



Stockholm

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What is it?

An expanded refuelling network for alternative fuels used in heavy-duty vehicles. Like buses, heavy-duty vehicles require different facilities in fuel stations than cars and other light vehicles such as high-capacity pumps and larger bays.

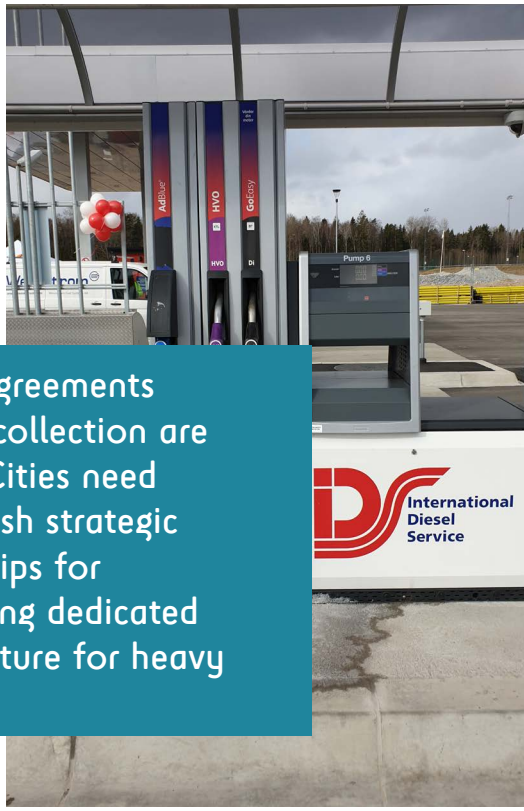
What did GrowSmarter do?

The project funded staff costs, enabling the city of Stockholm to work strategically with stakeholders to identify appropriate sites and assist with the necessary planning applications and secure permits. In total, seven alternative fuel stations were installed at five locations around the city. These fuel stations increase the availability of renewable fuels such as ED95 (bioethanol), CBG (biomethane) and HVO (biodiesel) for use in heavy duty vehicles in Stockholm and the surrounding region.

Lessons learnt

This measure demonstrates that there is demand for use of alternative fuels in heavy goods vehicles on a fully commercial basis. Installation of new pumps on existing facilities located on privately-owned land is relatively uncomplicated, in the sense that installations are made on a commercial basis. However, installation takes much longer if development plans have to be changed, particularly if more than one public sector organisation has ownership of the road infrastructure. Another important lesson concerns the need to reach agreements with partners about data collection, either voluntarily or as part of formal environmental inspection.

Generally speaking, there is an increase of ”clean” heavy duty vehicles in Stockholm in numbers, but not as an overall share of the vehicles operating. This is due to a construction boom increasing the need for transporting goods at a faster pace than renewable fuel production can follow. There is high demand for biofuels and willingness to produce it, yet EU regulations and a lack of raw materials is still holding back production.



Special agreements for data collection are needed. Cities need to establish strategic partnerships for establishing dedicated infrastructure for heavy vehicles.

Upscaling & replication potential

Dedicated infrastructure is required to enable distribution using heavy goods vehicles operating on alternative liquid and gaseous fuels. Cities need to work strategically in partnership with relevant stakeholders to ensure such infrastructure is established and support users in making a transition to alternatively-fuelled heavy goods vehicles. Part of establishing these partnerships is agreements on how data will be collected and handled, so that the city can monitor environmental impacts and identify ways to further accelerate the transition to alternative heavy duty fuels. Another key issue concerns business models, as fuel station operators may have to diversify their business to cover investment costs for alternative fuel infrastructure.

How did the measure work?

Technical feasibility ●●●

The measure is technically feasible and socially accepted among relevant stakeholder groups. The potential to increase biofuel usage in the sector is large.

Economic feasibility ●●○

Fuel station operators may need to diversify their businesses to cover investment costs. The public sector could, where possible, offer accelerate planning processes or offer subsidies on land/ property rights to accelerate roll-out.

Replication potential ●●●

Possible to replicate in various contexts and city environments.

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