

FACTSHEET

Alternative fuels for heavy duty vehicles

SMART SOLUTION 11: ALTERNATIVE FUEL DRIVEN VEHICLES



SUSTAINABLE
URBAN
MOBILITY



- 10 new fuelling stations for alternative fuels – biogas, ED 95, HVO and RME – will be provided.
- Bio-fuelled trucks reduce both local emissions and carbon dioxide emissions and thus reduce negative impacts of transportation.

Stockholm

Industry partners:

- Stockholm Gasnät AB
- OKQ8
- ST1 (Shell)
- Statoil

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What is the solution?

In order to replace fossil fuelled vehicles, both electric and sustainable biofuels are necessary. In Sweden the market for alternative-fuel cars is already developed. However, the market for the heavy vehicles, such as distribution trucks, is moving much more slowly.

To push the market, barriers to the adoption of heavy AFVs need to be removed and incentives introduced. A renewable fuelling station for heavy vehicles is an important step in this process.

Each new station will be required to provide at least two of the following alternative fuels.

Biogas: Methane gas from waste water treatment plants and food wastes in Stockholm. Cleaned and compressed biogas can be used in CNG vehicles.

ED95: An ethanol fuel mix with 95 percent ethanol and 5 percent additive which makes the fuel ignite. ED95 is produced in Sweden from cereals and leftovers from the paper industry. Ethanol is also imported from other parts of the world. ED95 can be used in diesel engines which have been adapted for ED95.

HVO: Hydrogenated vegetable oil, processed vegetable and animal oils with diesel quality. HVO can be used in diesel engines.

RME: Rapeseed Methyl Ester, a form of biodiesel made from rape seeds.

How does it work?

The City of Stockholm recognises that in order to get more heavy vehicles operating on biofuels, filling stations providing biofuels are needed. The City of Stockholm is trying to find suitable locations for these new stations.

The land is leased to filling station operators at a standard price, on the condition that at least two different biofuels are supplied at each station. Some of the stations will be completely new stations and some will be adding alternative fuels to existing diesel stations.



Expected Impact

The new filling stations will make it possible for an increase of heavy vehicles operating on biofuels in Stockholm. This will reduce local emissions and carbon dioxide emissions from fossil fuels. In some cases, noise levels will also decrease. Sustainable economic development will be promoted.

70% of the total volume of goods transported on roads in Sweden remains in the same county. This suggests that the largest goods flow on roads is actually within urban areas. Stockholm has a number of large terminals for goods within the municipality.

Calculations from the Swedish Transport Agency show that the amount of cargo in Sweden overall is expected to increase by approximately 28% by 2020. In Stockholm, an even greater increase is expected thanks to a predicted increase in population.

Potential for replication

Stockholm wants to show that the establishment of fuel stations for renewable fuels accelerates technology development and the transition to fossil free freight traffic. It is quite possible to scale this up elsewhere in the EU.

The renewable fuels being used are available in large quantities for purchase and can easily be grown in various locations in the EU. The City of Stockholm will find space for fuel stations for heavy vehicles in traffic-intensive areas.

By actively working with interested freight companies, fuel companies and automotive industry, GrowSmarter can create a win-win situation where the city is responsible for finding and renting the land and private stakeholder responsibility for the other investments.

