

Local Government Climate Roadmap

Strong and
Comprehensive
Post-2012 Global
Climate Agreement

Copenhagen 2009
UNFCCC COP 15

Poznan 2008
UNFCCC COP 14

Bali 2007
UNFCCC COP 13

LOCAL ACTION FOR CLIMATE PROTECTION AND ADAPTATION — A SERIES OF LOCAL STORIES

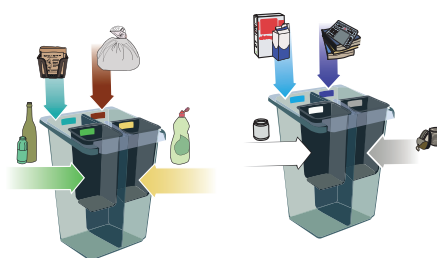
Helsingborg, Sweden

Innovative Helsingborg home to best dump in the world

STORY IN SHORT: The Nordvästra Skånes Renhållnings (NSR) biogas production unit started to operate in Helsingborg in 1996. This ground breaking facility upgrades foodwaste into vehicle fuel which is then used to run a number of city and regional buses. The facility was built to treat pumpable waste that could not be deposited in landfills. In 2005, NSR began the process of digesting the organic component of household waste and the facility was extended in 2006-2007 to double the capacity.

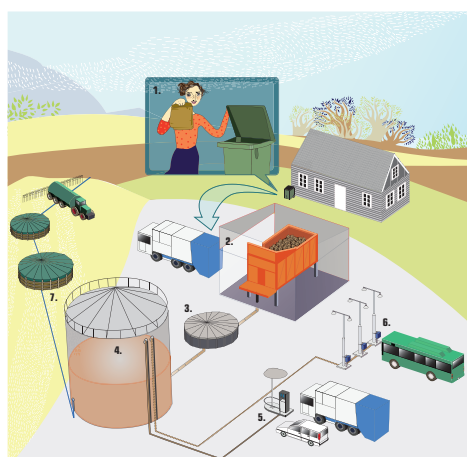
From kerb to car, bus and lorry

Kerbside collection was introduced in Helsingborg and the municipalities of Åstorp and Bjuv in 1996. Since then twice as much packaging material was collected in Helsingborg than in municipalities with no kerbside collection. The city has a well oiled system in place as food waste is collected from the bin at all houses in the region by waste collection vehicles run on Biogas. This waste is then crushed, mixed with water and forced through a screw press.



Next the food waste is pumped to receptor tanks where it is mixed with other organic waste and is now called substrate. The substrate is pumped into tanks, where it is stored for 25-30 days and the biogas is produced. The biogas is upgraded to Vehicle fuel so that cars and refuse collection lorries can fill up at NSR's filling station in Helsingborg.

Recycling scheme



Propane is added to the remaining gas in order to attain the same energy content as natural gas. This gas is distributed via Helsingborg's local natural gas network where it is used as fuel for the city and regional buses that run on biogas.

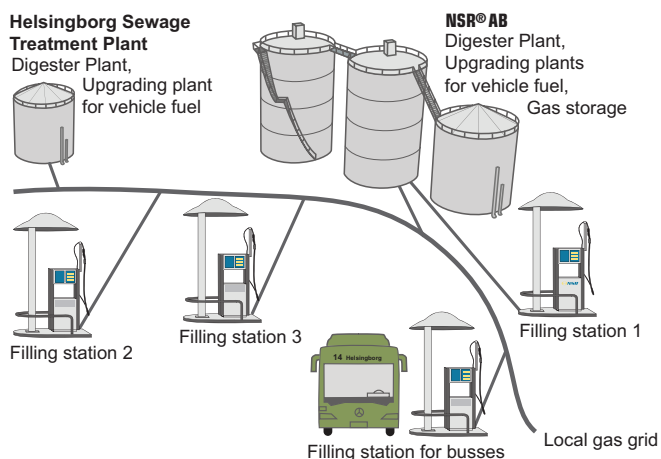
When the biogas has been recovered, the residue forms a quality-certified biofertiliser that is used in agriculture. NSR's biofertiliser is partly distributed through a pipeline system. Pipeline distribution reduces the number of lorry transportations by 5,500 every year, improving road safety and road quality. In addition, carbon dioxide emissions are reduced by the equivalent of 78 tons per year.

Biogas production on the up

In 2008, NSR's biogas facility treated a total of 58,000 tons of waste. From this, biogas was produced corresponding to 27 GWh. The target for 2009 is to treat 70,000 tons of waste and to produce biogas corresponding to 35 GWh. On this quantity of vehicle fuel, a private car could travel 570 million km. NSR is planning to increase biogas production in the future. 58,000 ton quality-certified biofertiliser was distributed to farms in the district around Helsingborg.

Kerbside collection at source

The Waste collection system enables households in the north-west of the Skåne region to separate their waste at source into 10 fractions that are collected directly from the property. All houses and the majority of flats today have kerbside collection of waste, newspapers and packaging.



Biofuel buses in Helsingborg

Once the biogas is produced by the plant it is upgraded to increase the methane content to at least 97 percent. Twenty percent is sold directly from NSR's own biogas filling station in Helsingborg, where private cars and Helsingborg's refuse collection lorries for household waste can fill up. Propane is added to the remaining gas in order to attain the same energy content as natural gas.

This gas is distributed via Helsingborg's local natural gas network where it is used as fuel for the city buses that run on biogas. Many regional buses also run on biogas. Surplus gas that is not sold in NSR's own filling station or is not needed for buses is distributed via the natural gas pipeline and is used as vehicle fuel for private cars or for heating.

Region meets national targets

One of the environmental targets of the Swedish parliament (Riksdag), is that a minimum of 35% of household food waste is to be recovered by 2010. The NSR region reached that target in 2007 and estimates that 47% of food waste will be recovered in 2009. Household food waste constitutes about 25% of the total amount of substrate in the biogas unit.

Nothing goes to waste

All houses and the majority of flats today have kerbside collection of waste, newspapers and packaging. Homeowners deposit their waste in two 370-litre wheelie bins. Each bin has four separate compartments for different waste fractions. Households also have a red box for hazardous waste, which is collected six times a year. An additional service is a 370-litre bin for green waste.

All fractions are collected using vehicles run on biogas. Each vehicle can collect four fractions simultaneously from houses, while vehicles can collect two fractions simultaneously from blocks of flats. Collection of waste from blocks of flats is similar as different waste fractions are collected in separate bins.

Where kerbside collection is not available, household waste is collected as combustible waste. People living in these properties can deposit packaging material at recycling stations where there are separate containers for each fraction. Newspapers, cardboard packaging, metal packaging, soft and hard plastic packaging and coloured and clear glass can be deposited at these stations.



Helsingborg is a small city on the South East coast of Sweden.

City profile & contacts

Helsingborg is one of the oldest cities in Sweden and has a population of 126,754. It is Sweden's closest point to Denmark and is at the centre of a region of about 300,000 inhabitants.

Name: Björn Larsson

Department: NSR AB, Department of Marketing

Email: bjorn.larsson@nsr.se

Website: www.nsr.se



HELSINGBORG



www.iclei.org/climate-roadmap
E-mail: climate-roadmap@iclei.org



The local stories are produced by ICLEI – Local Governments for Sustainability in cooperation with the cities described. They shall enrich the knowledge on local action as contribution to the Local Government Climate Roadmap, a joint activity of local government associations and networks towards COP 15.

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