

Biogas for the municipality of Kalmar, Sweden

The city of Kalmar is situated on the coast in the southeast of Sweden.

This project consisted in an installation of an upgrading system for biogas produced from a waste water treatment plant, and an installation of a gas filling station for buses and cars in the city of Kalmar.

A biogas filling station already existed but the activity needed to be developed. The dispenser and the capacity of the upgrade equipment needed be renewed. This was initiated because a possible market with the local transport company buses was identified and exploited.

There was an agreement signed between Kalmar Water Ltd, Eon Gas and the public transport company for the city of Kalmar (KLT) to supply biomethane in a public gas station and 12 local public transport buses (biogas produced 12 GWh).

ESS played an important mediatory role in the realisation of this project. ESS had direct contact with all partners involved and could identify the potential for developing a supply chain involving a public authority as end-user. ESS has helped to develop the cooperation and provided expertise. In particular, ESS has contributed in writing the public tender for the purchase of the gas upgrading plant and the vehicle (buses). The actual realisation of this project took place during summer 2008. All actors involved finally agreed on going ahead with the plan.

The supply chain actors are:

- Kalmar Water Ltd: biogas and biomethane provider. The company buys biogas from the waste water sewage plant and upgrades it into biomethane for vehicle use (producer);
- Eon Gas who distributes the biomethane for vehicles (distributor);
- KLT, the public transport company of the city of Kalmar who runs 15 of its buses with biomethane (end-users).

By the end of August the upgrading plant and the bus filling station were up and running. The capacity of the upgrading plant corresponds to 1 million litres of diesel per year and 15 local buses are now supplied with biomethane as a result of this action. A few weeks later a public gas filling station for cars was completed: on the 25th of September 2008, the two filling stations were inaugurated. They could supply biomethane for up to 300 cars fuel as well.

The fuelling of 15 buses with biomethane is a success for Bio-NETT and for ESS. This pilot project showed the concrete results expected within the time frame of Bio-NETT. The results are that more biogas are being used exploited and more biomethane is available on the market because an end-user was secure. ESS, through the Bio-NETT project, has succeeded in stimulating a biofuel supply chain.

For more details on the actual realisation of this project, please see of Biofuels Handbook: Best Practice Tools and Pilot Project, "Biogas in the city of Kalmar".