

# Developing a biogas corridor for road transport between Scandinavia and Germany

- A joint Scandria and EcoMobility triple helix workshop



- When:** 28th of February 2012, Part I 9.30-12.30, Part II 13.00-16.00
- Where:** Valby Kulturhuset at Valgårdsvej 4-8, 2500 Valby (Denmark)
- Registration:** Please sign up by sending an e-mail to Jean Endres: [jendres@ruc.dk](mailto:jendres@ruc.dk)  
(Participation is free). **Deadline for registration is the 10<sup>th</sup> of February 2012**

## Workshop subject

Biogas will be an important fuel if the transport sector is going to be independent of fossil fuels. For heavy duty and long distance trucks liquefied biogas might even become the most important fuel, taking into account the limited biomass resources. Biogas for trucks holds many promises

- The technology exists – trucks capable of using liquefied biogas are on the market
- The biogas resources are there – however far from utilized
- Natural gas can provide a bridging technology, meaning that we can start today

The corridors between Scandinavia and Germany – be it via Trelleborg, Gedser or Rødby – will provide excellent demonstrations that the concept works and can provide us with ‘Green Corridors’ for truck transport.

In an earlier workshop<sup>1</sup> two major hurdles were identified: Political commitment and certification.

The three countries involved have very different strategies. Sweden already has a decentralized distribution system of biogas for heavy duty transport, albeit mainly of compressed biogas. Germany has a system for distributing compressed natural gas to passenger cars based on the natural gas distribution system. Denmark has a huge resources of biogas as well as a dense net for distribution natural gas, but no distribution system for transport use. None of the countries have a distribution system for liquefied natural gas/biogas.

Just to use biogas for transport is not necessarily the best strategy. Biogas has to be cleaned in order to have the same quality as transport fuel as natural gas, so in countries with a natural gas net it might be more efficient to use biogas as a fuel in combined heating and power stations and natural gas (as long as it’s available) as transport fuel. With a certificate system it could be ensured that for every unit of natural gas used in transport an extra unit of biogas is produced and used elsewhere in the system.

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<sup>1</sup> “Developing a biogas corridor for road transport between Southern Scandinavia and Germany” (Roskilde University 31st of October)

## Workshop aim

The aim of this workshop is to make a concrete action plan for how to get more political commitment and which steps can be made – also regarding some common standards with regards to certification.

## Workshop organisers

**Scandria** is a cooperation of 19 partners from Germany and Scandinavia funded by the EU Regional Development Fund, which aims at developing a green and innovative transport corridor between the Baltic and the Adriatic Sea. Scandria is backed by public authorities and organizations such as the Berlin Senate, Mecklenburg-Vorpommern, the Swedish Transport Administration, Region Zealand and Region Scania.

**Øresund EcoMobility** Knowledge & Innovation Centre aims at promoting sustainable and climate friendly transport solutions and strives to gather regional competencies in a unified network of universities, industries and regional authorities in the Øresund region (East Denmark and Scania in Sweden).

**Green STRING transport corridor** This project is funded under Interreg Øresund IVA and has its main focus on the establishment of a green transport corridor through the Øresund Region to Hamburg in a manner that will minimize utilization of energy and CO<sub>2</sub> emissions.

## Part I - Political Commitment

The development of a biogas corridor across different nations requires that there is not only consensus between the local governments, but also internally in order to develop the transport sector as a whole. There are considerable investments that are required both from the public and the private sector in order to increase the use of biogas for transport. The development of a system capable of supporting the use of biogas, such as fermentation silos, pipelines, upgrading plants, possible liquefaction plants, filling stations, not to mention the vehicles that possess the technology to use gas as a fuel, are all relatively costly investments that require some sort of guarantee that the venture will be continued and further developed.

From a political point of view these guarantees could be demonstrated by the adoption of different measures such as giving incentives to “first movers” or by supporting the establishment of alliances between the agriculture, waste and other possible biogas producing partners together with the processing and distributing industries. It is worth to mention that a biogas based road transport corridor between Scandinavia and Germany may include the local harbors and ferry industry as partners, as a consequence of the IMO regulation of sulfur emissions from ships.

Another form of demonstrating political commitment could be done by direct regulation and by establishing general frameworks that should be implemented locally. Such frameworks could regard the setting up of goals for GHG reductions or the addition of a percentage of biogas in the fuel mixture for example.

## Part II - Certification

The combined use of biogas and natural gas implies that a certification system is needed to guarantee a common standard to ensure a unified system within for example the EU. This standard could possibly be with regards to a minimum percentage of biogas in the mix; a minimum percentage of Methane in the input biogas (which is known to have a more variable quality compared to raw natural gas); a factual reduction in the CO<sub>2</sub> footprint and the environmental performance of the fuel. In a similar way to what happens to green electricity, the certification could also guarantee that the final product of natural gas for transport would be matched by the use of biogas in another sector.

The development of a certification seal would also contribute to the harmonization of one common name under which the final product should be marketed. As of today, Biomethane, Biogas, Erdgas, Autogas, CNG, CBG, LNG, LBG, Upgraded-Biogas and others are different names given to slightly different products to which methane is the energy-rich element contained on their composition.

Scenario in different countries:

- Sweden has a well-established biogas structure both for heating and electricity generation, but also for use in transport, in which the country has been a pioneer in purification and upgrading of biogas. Sweden also counts with a liquefaction plant, where biogas can be purified and then converted into its liquid phase. Still, in Sweden the demand for biogas is greater than the supply.
- Denmark has a goal set by the national government of 10% use of biofuel for transport by 2020. There is also in Denmark a large potential for the production of biogas, but as of today only 5% to 7% this potential is explored and not for the use in transport, but for electricity generation.
- German federal government's has estimate a potential use of natural gas as a motor fuel of at least 0.5 to 1 % in 2010 and 2 to 4 % in 2020, which refers to around 1.4 million vehicles in 2020. At end of 2009 Germany was still far from being fully exploited the usage of natural gas as motor fuel and only accounted for 0.3 % of total fuel consumption, which response to only 85,000 of Germany's total of some 50 million vehicles are currently fuelled with natural gas.

## Programme

### Part I - Political Commitment

#### Presentations

**09:30** Per Homann Jespersen, Roskilde University (Denmark) and responsible for SCANDRIA strategic corridor approach

#### Introduction to the part I

**09:40** Germany (tbc)

#### Title (tbc)

**10:00** Bruno Sander Nielsen, Trade association for Biogas (DK)

#### The current political obstacles towards the introduction of biogas for the road freight transport.

**10:20** Coffee break

#### Plenary session I

**10:30** Plenary session I – How do we secure more political commitment?

**12:00** Wrap up - Plenary session I

**12:30** Lunch Break

### Part II - Certification

#### Presentation

**13:00** Per Homann Jespersen, Roskilde University (Denmark) and responsible for SCANDRIA strategic corridor approach

#### Introduction to the part II

**13:10** Asger Myken, DONG Energy (DK)

#### Title (tbc)

#### Plenary session II

**13:30** Plenary session – Which steps are needed to get common certification standards?

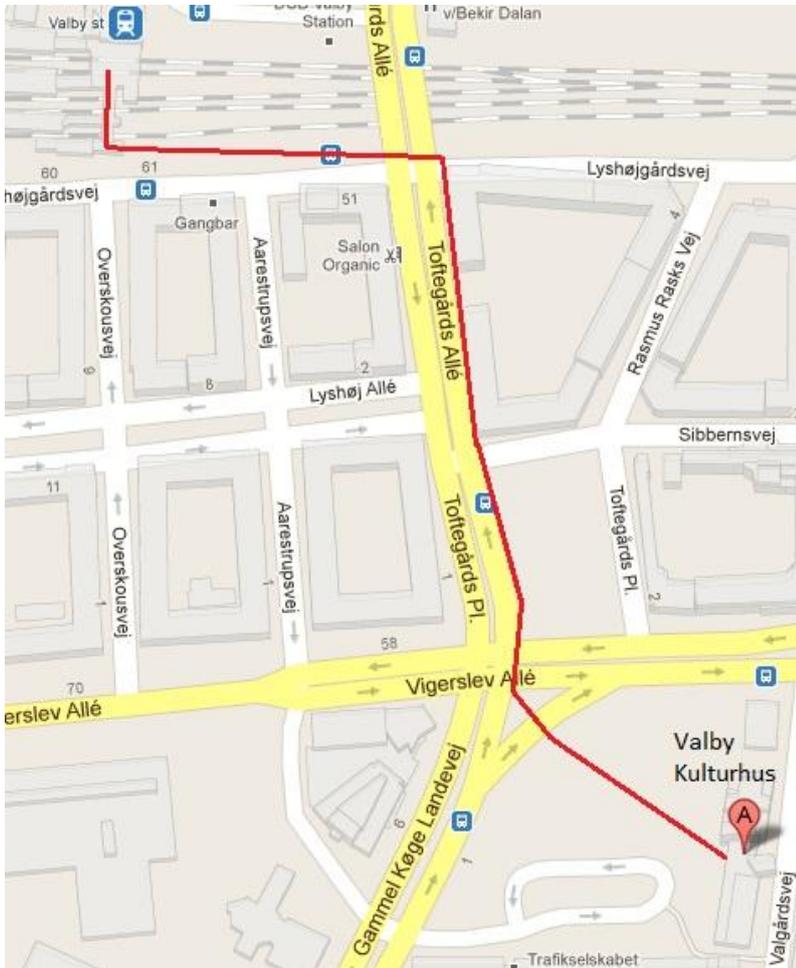
**15:10** Coffee break

**15:30** Wrap up – Plenary session II

## Directions

Address: Valby Kulturhus, Valgårdsvvej 4, 2500 Valby (Copenhagen)

The culture house of Valby is located near Valby Station on the S-train lines C/H to Frederikssund, and line B/Bx to Høje Taastrup. It takes approximately 5-7 minutes to walk from the station.



### By public transport

#### From the Copenhagen Airport

Take the metro M2 (direction Vanløse Station) and change at Nørreport station for S-tog (red "S" sign) line C/H towards Frederikssund or line B towards Høje Taastrup. Exit at Valby Station.

#### From Central Station

Take the S-train line C/H towards Frederikssund or line B/Bx towards Frederikssund. Exit at Valby Station.

*A journey planner is available in English at [www.rejseplanen.dk](http://www.rejseplanen.dk).*

### Arrival by car

There is no parking space linked to the culture house but it should be no problem to find a parking place in the neighbourhood.