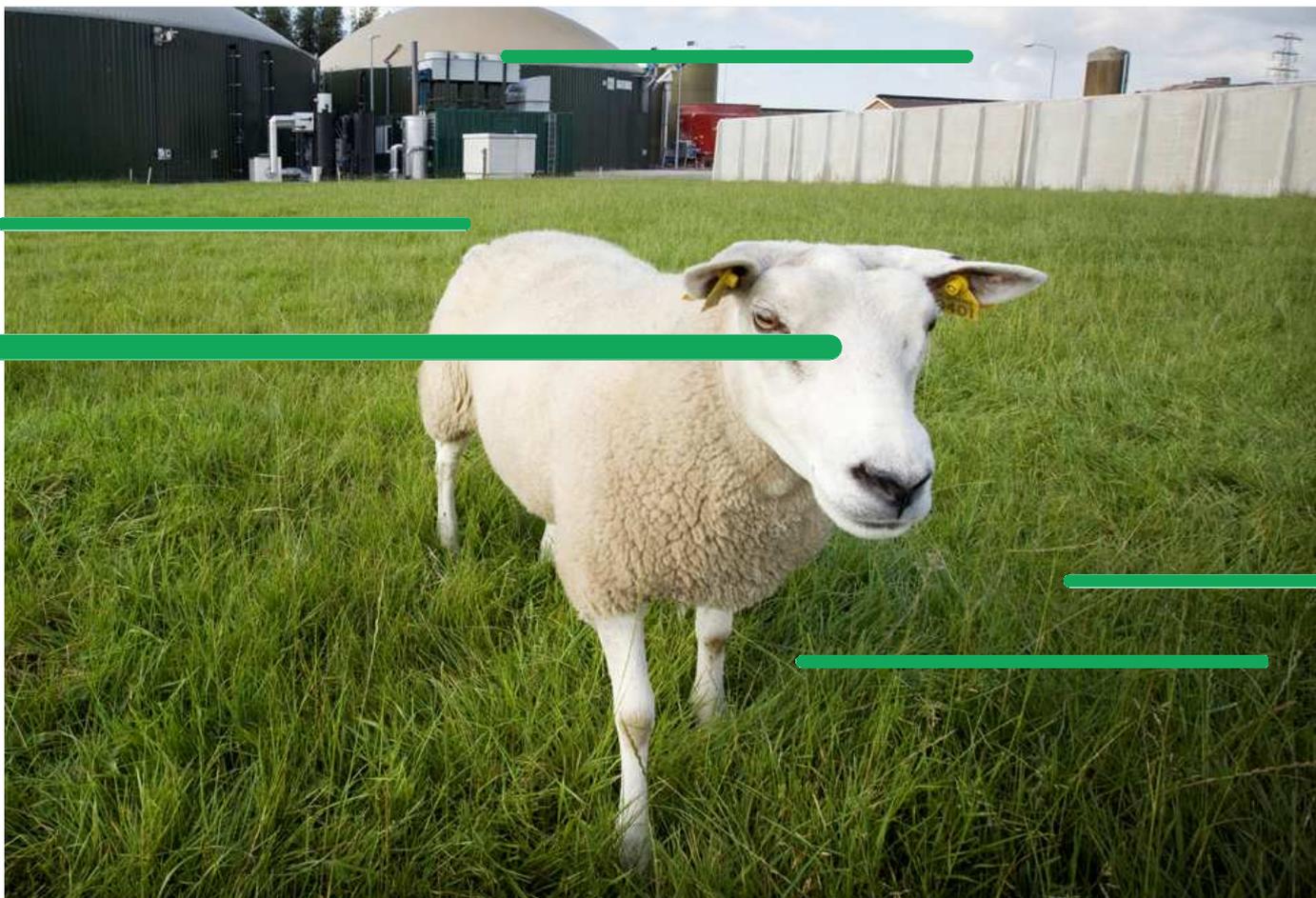


# GREEN GAS GRIDS

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## Sold-out symposium: overwhelming interest in innovative biogas technologies

**December 2013**

Netherlands Enterprise Agency (RVO.nl)



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## Introduction

**A day of inspiring presentations held at the symposium on Innovative Technologies, organised in December by Groen Gas Nederland, NL Agency and GreenGasGrids, provided the latest technological and economic insights into the biogas industry.**



Held in DeFabrique, an old compound feed plant located along the Amsterdam-Rhine Canal, the symposium drew policymakers, engineers, farmers, and other green gas aficionados to sign up en-masse for the gathering. Day chair and Leeuwarden mayor Ferd Crone, "The symposium is sold out, a clear sign that green gas development is forging ahead. Reports also show that the green gas potential is as big as ever."

"The number of speakers at this symposium is a reflection of the number of people who are willing to share knowledge," said the mayor. "There is still much to be developed. No one should keep knowledge to themselves. We have to go through this development together."

## Mobility and production

Xander van Mechelen, director of Groen Gas Nederland, and René Laks, director of GroengasMobiël, delivered the first keynote speech of the day, a dialogue about driving on green gas and the potential of green gas production.

As per the speech by the director of GroengasMobiël, driving on green gas is no longer an abstract, future scenario. Laks, "Green-gas powered cars come in all colours and sizes; the Netherlands has a nationwide network of stations where CNG and/or green gas can be purchased at a steady pump price. In addition, a green-gas powered car costs the same as a petrol-powered car. So, why don't we all switch to driving on green gas?"

"Driving on green gas must become just as widely known and familiar as driving on petrol or diesel," says Laks, answering his own question. "The key issue is the practicability of many subsidy programmes. The real breakthrough for the general public is blocked by the tax system, the additional tax liability. The difference between well-to-wheel and tank-to-wheel. If you look at well-to-wheel, green gas is the cleanest transport fuel available today. This should be incentivised by the government."

Driving on green gas requires green gas to be produced. The green gas market finds itself facing a number of challenges, including in the area of production. Mechelen, "Financing is still a major hurdle. However, the SER agreement (PPC agreement between Ministry of Economic Affairs and the energy sector) includes clear arrangements regarding measures that facilitate the financing of renewable energy projects. There are also regional energy funds that direct capital to solid biogas projects."

"Besides, the prices of co-substrates are high," cites Van Mechelen as another challenge. "Given the scarcity on the biomass market, it is important to valorise low-grade biomass streams. The greatest potential lies in manure and grass, which will have to see an upsurge in the short term. Innovation in technical areas is needed to further reduce the cost price. Groen Gas Nederland has high expectations for large-scale plants, a number of which are currently under construction. In the future, we will rely on wood and aquatic biomass. So, René - even though we need to press forward with all sails set - I think if you start with those cars, we can scale up hand in hand."

## Fossil fuels and sustainable

In the afternoon, Jörg Gigler, director of TKI Gas (an innovation program), delved deeper into the role of green gas in the energy mix of the future. His message: fossil fuels and sustainable belong together. Both gas types are needed to consolidate the Netherlands' strong gas position.

The green gas goal of TKI Gas: realising a green gas production level of 1 billion cubic metre in 2020 and 3 billion cubic metre in 2030 by achieving cost reductions in the supply chain through development and application of new technologies and synergy with other processes.

In his presentation, Gigler likened the green gas projects submitted for subsidy in 2012 to the applications of 2013. "In 2013, there were fewer applications for gasification and supercritical gasification. In fermentation, the focus shifted to projects that increasingly involved low-grade waste streams, particularly manure and mineral products, and the valorisation of these products. A trend that is driven by new legislation. In mobility, the focus is more on LNG than CNG."

TKI Gas aims to help entrepreneurs in submitting their application. "Actually, we still receive a high number of subpar projects," says Gigler, citing this as the reason behind their decision. "It is unfortunate, and a waste of energy on the part of the applicant. Hence our decision to help you; please contact us, we will ensure that you submit the best possible proposal."

But Gigler also had good news. "The Energy Top Team has submitted a proposal to the minister to free up a budget of about fifteen million euros for green gas projects in 2015. Plus there will also be a budget for all those biobased-economy projects, projects that focus on valorising waste streams. Good news that shows that the government is seriously willing to put its money where its mouth is on green gas."

## Knowledge square and workshops



During the symposium, the participants were also treated to a forum discussion about the added value of fermentation for manure processing. Parallel sessions on **low-grade biomass streams, digestate valorisation, mobility, fermentation, gasification and infrastructure** yielded further insight into the technical aspects of the biogas market.

A specially designed knowledge square offered companies the opportunity to present their latest biogas technologies. The space also functioned as a networking environment. An opportunity that visitors enthusiastically availed themselves of during the lunch and closing reception.

The huge turnout at the symposium showed once again that green gas is the way ahead. With the innovative technologies presented, the green gas market can continue to further develop in 2014. Green gas is indispensable for a transition to a more sustainable Dutch energy economy.

## Day programme

### Opening by day chair

Ferd Crone, board member of Groen Gas Nederland and mayor of Leeuwarden

### Keynote speech: Mobility, the engine for green gas

Xander van Mechelen, director of Groen Gas Nederland

René Laks, director of GroengasMobiel

### Parallel morning sessions

#### 1. Low-grade biomass streams

- More gas from difficult to ferment streams, Herman Klein Teeselink, HoSt
- Faster fermentation with higher yields in a changing market, Rik Winters, Bioclear

#### 2. Valorising digestate

- ECOFERM, real-world example of a closed-loop farm, Kees Kroes, veal farmer
- Faster fermentation with higher yields in a changing market. Production of fertilisers and flexible feed through post-treatment, Jan van den Broek, Byosis
- Mineral recovery from biogas acquisition, Frans Middag, Fermtech

#### 3. Mobility

- The future of LNG in the maritime sector, Micah Hes, Port of Amsterdam
- Small-scale LNG production and infrastructure, Jerom van Roosmalen, Osomo
- Orange dreams, mobility as basis for the green gas value chain, now and in the future, Pelle Schlichting, OrangeGas

### Lunch and networking at the Knowledge Square

### Forum discussion: The added value of (manure) fermentation in manure processing

The discussion is led by day chair Ferd Crone, with a brief introduction of all forum members, who include:

- Jan Willem Straatsma, Royal Friesland Campina
- Jan de Wilt, Innovatienetwerk
- Richard van Lijssel, Ecoson

### Keynote speech: Two years TKI

Biogas and green gas innovations in a nutshell - Jörg Gigler (Director of TKI Gas)

## **Parallel afternoon sessions**

### 1. Fermentation

- Business case for mono manure fermentation, Ton Voncken, Groen Gas Nederland
- Small-scale biogas production with upgrading of biogas to natural gas, Herman Klein Teeselink, HoSt
- Elucidation of a fermentation project from TKI 2013

### 2. Gasification

- Gasification of sewage sludge in supercritical water, Peter van Vugt, Waterschap Aa and Maas
- MILENA-OLGA, Jan-Willem Könemann, Dahlman
- Elucidation of a gasification project from TKI 2013

### 3. Infrastructure and application

- TKI measurement technologies: optimising biogas chain and Gatekeeper for small green and/or biogas producers, Leo Brummelkamp, Alliander
- The transport sector from LNG to bio-LNG, Peter Hendriks, Rolande LNG
- Elucidation of an infrastructure/application project from TKI 2013

## **Networking drinks in closing**