

# Biométhane du Bois d'Arnelle: the first project in Belgium to inject biomethane from agricultural biomethanation

## Development Plan Summary (Wallonia, Belgium)

**Overview: 'Biométhane du Bois d'Arnelle' (Biomethane from the Arnelle forest) is a unique agricultural biomethanation project in the Wallonia region (North of Charleroi) in Southern Belgium. Existing biomethanation plants currently use their biogas for cogeneration. The Biométhane du Bois d'Arnelle project wants to go further by purifying biogas to produce biomethane to inject into the natural gas network, making gains in efficiency and performance... A first in Belgium!**

However, at the start of 2015, there was still no regulatory framework and support mechanism in place for producing biomethane. Therefore, the initiator of the Le Biométhane du Bois d'Arnelle project, which will be the first biomethane injection site in Belgium, wanted help to enable the Walloon Government to close these gaps.

would then carry out the project in three phases. Firstly, the work was going to be carried out entirely based on the country where the sector was most fully developed: Germany. Based on the information gathered, the same work would be carried out for the other countries while seeking to gather comparable information to attempt to identify the specific features of each national context.

### Project detail

It is essential to have a regulatory framework and mechanism to support full production and which is suited to the real needs of the sector. To do this, the project initiator wanted to analyse corresponding regulations in place in different countries where the sector had already been developed, as well as the different types of support measures in place (feed-in tariffs, additional measures, etc.). Five countries were put forward: France, Germany, Sweden, Netherlands and the United Kingdom.

To carry out accurate and comprehensive benchmarking, this task was entrusted to a specialist engineering and design office who



Finally, all the work would be compared with the situation in Belgium, more specifically Wallonia, in order to identify similarities, differences with the other contexts, and also the shortcomings that would need to be addressed.

The benchmarking exercise was designed to provide information to the regional authority to assist them in their decision-making process for putting in place sufficient regulation, but also to better direct decisions made during the project development phase.

## Outcome

The Bioénergies competition grant awarded by the BioenNW TWEED Cluster made it possible to carry out comprehensive and high-quality research. This benchmarking exercise helped to identify the advantages and disadvantages, drivers and inhibitors to the development of biomethane injection projects in the five countries studied.

The main drivers are:

- A balanced distribution of costs, roles and obligations between the network manager and producer
- The network manager responsible for the quality of the biomethane injected
- The most flexible, comprehensive and standardised regulatory framework possible
- A support mechanism for stable, sufficient, indexed production provided over the long term
- Additional investment to support production
- The use of biomethane using as many different vectors as possible, including fuel
- The maximum number of types of inputs allowed for biomethane production
- Suitably designed networks and interconnections to increase injectable quantities at any time of year.

The contractual framework and commercial relationships – as well as requirements in terms of biomethane quality – were compared between the different countries and Wallonia, which allowed the identification of the aspects essential to ensuring that a concrete project like Le Biométhane du bois d’Arnelle is viable and achievable.

Indeed, different similarities have been identified between the different countries, both in terms of benefits and inhibitors, demonstrating that certain regulatory provisions are essential for project development. All of the information has been communicated to regional decision makers.

Thanks to this work, development of the project has been able to progress based on the best practices of the different countries studied, without having to wait for a final regulatory framework to be decided by the legislative authority.

However, although the benchmarking exercise has allowed the project to proceed more quickly, it remains essential that a comprehensive regulatory framework, as well as a support mechanism for suitable production, are put in place quickly by the regional legislative authority in order to be able to commence operation of the Le Biométhane du bois d’Arnelle project as soon as possible.

This development plan is part of BioenNW, a €7.9m strategic initiative of the INTERREG IVB North West Europe Programme (2011-2015). BioenNW is led by the European Bioenergy Research Institute at Aston University, UK and sees 11 partners working together to deliver small-scale bioenergy schemes throughout North West Europe.

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