

Forem Environnement: Development of AD training

Development Plan Summary (Mons, Belgium)

Overview: Forem Environnement is a centre of excellence that closely monitors technologies currently being used on the market with a view to adapting the training that it delivers. Forem Environnement already offers a large range of training programmes in the renewable energy sector but in order to expand its service provision, it has identified an under-developed sector in Wallonia: biomethane production. Forem Environnement received support through the BioenNW project to consider installing a biomethane production unit on its site and be able to provide practical training on this anaerobic digestion (AD) system.

Proposed project:

BioenNW partner the TWEED Cluster responded to a series of questions from Forem Environnement by explaining a number of key points relating to the biomass energy sector, specifically AD.

- Finance and economics
 - Investment aid and subsidies for production
 - Expected production
 - Average cost
- Introduction to the current market in the Walloon region
 - Advantages and disadvantages
 - Status of existing facilities
 - The future of the sector
- Technological variants
 - Anaerobic digestion using dry and wet processes
 - Recovering biogas from landfill sites
 - Industrial and agricultural facilities
 - Micro-digester (<10kW)
- Materials
 - Types of input biomass
 - Digestate: spreading or drying
 - Biomethane or combined heat and power (cogeneration)
 - Space and storage



Due to the good knowledge Cluster TWEED has of regional stakeholders, it was agreed that TWEED would organise meetings and visits between Forem Environnement biomethane plant managers. Three meetings took place at three different plants: the micro-biomethane production plant (anaerobic filters) at the Centre des Technologies Agricoles (an agronomic technology centre) in Strée, an agricultural anaerobic digestion plant in Surice, and an industrial biomethane production facility at a food processing company in Lucze-en-Hainaut.

Outcome:

Following a number of visits and meetings with industry professionals, the decision was made not to go ahead with installing a biomethane production plant close to the Forem Environnement building. There were a number of reasons for this. The price of the plant, even one less than 10 kW, was greater than the budget initially set. The location of the plant would not have facilitated the easy, local supply of biomass. Additionally, no fields were available close by to spread the digestate residue. The daily operating of the plant would have created an additional workload disproportionate to the amount of training that could be provided to others utilising the plant as a demonstration facility. Finally, the technical and financial risks linked to trainees operating the biodigester were too high.

A definitive biomethane production training programme has yet to be established. Nevertheless, certain avenues have already been investigated. Therefore, the training that could be provided by Forem Environnement could be linked to the daily operating and regular maintenance of a biomethane facility. Training would not take place on a dedicated plant but rather on existing, functioning AD plants (agricultural, industrial etc). Those in charge of operating these biodigesters could also provide some of the training sessions and site visits. In order to handle digesters in laboratories (pilot scale), a partnership with the Centre for Agronomic Technology in Strée was recommended and a number of job roles, profiles and related training has already been drawn up.

This development plan has been produced through BioenNW – a €9.9m strategic initiative of the European Union 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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