Due Diligence References: Bioenergy

20 MWe straw combustion

Client
Essent BV, the Netherlands
Technology
Biomass combustion

Ecofys identified project risks and opportunities relating to a 20 MWe power plant (based on burning straw) with a projected investment cost of €50 million.

Our services

We supported the client by evaluating the following elements:

- The biomass supply concept
- Techno-economic viability
- The legal and contractual framework
- The risks and opportunities associated with a biomass power plant.

This due diligence assignment covered the entire framework of the project, including site-related aspects, fuel, technology, economics and financing, contracts and legal criteria.

Results

The technical analysis provided detailed information on fuel characteristics, logistics, pre- treatment, handling and storage, the combustion technology and specific requirements related to the use of straw, the power cycle configuration and flue gas cleaning.

The economical analysis made available information on investment, fuel and other operational costs as well as maintenance costs. Special emphasis was placed on fuel price predictions in order to assess the fuel price risks and propose hedging strategies. This information was vital for Essent to be able to make a decision on the investment.

Biogas upgrade

Client
A German bank
Technology
Biogas upgrading and gas injection

A German bank asked Ecofys to examine and evaluate the possible financing of an upgrading project at a biogas plant. The biogas, containing currently 53% methane, needs to be upgraded to natural gas quality so that it can be injected in the gas grid. The planned technology is based on amine scrubbing.

Our services

In order to support the client in its investment decision, Ecofys carried out due diligence, with a special focus on the technical and economic evaluation of the project. We provided a detailed risk assessment and a set of recommendations to ensure that the project could be completed successfully. The analysis also included a number of associated aspects, including:

- Auxiliary energy consumption
- The efficiency of the upgrading system
- Methane emissions, which influence the overall project economics and are important to ensure compliance within the policy framework and facilitate authorization.

Results

A comparison of two technical options and the associated technology suppliers led to a change in the technology supplier that had originally been selected.

Fuel

Biogas upgrading

Further examples of Ecofys due diligence projects:

- Bio-ethanol production, Dominican Republic
- Biodiesel production, Poland
- Using domestic organic waste to generate Bioenergy, Netherlands
- Pellet production, France

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