Oil & Gas Research

Abstract

Financial Challenges in wide-spread adoption of biomass and bioenergy

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Abstract:
Widespread application of biomass, biogas, bioenergy and related technologies require significant upfront investments in such facilities. Whereas investments in solar and wind are booming, investments in biomass and related fields are lagging.

We analyse the challenges in attracting investments, identify common themes and suggest a range of suggestions to improve the investment climate: for policymakers and regulators; for investors; and for the project sponsors.

Over the years, our company has worked on a wide range of such projects; projects in multiple countries, a variety of inputs (manure, municipal waste, agriwaste, industrial waste), different technologies (pyrolysis, digestion, gasification) and revenue models (electricity, fertiliser, fuel). The investment size was between 500k USD and 20 mln USD.

All of these projects have faced significant challenges to find investors, despite proven technology, sound business model and commercial/financial potential.

We have identified the a variety of challenges:

- Feedstock supply: uncertainty of supply and reliance on single/limited supply
- Plant setup: insufficient analysis of expected performance, sensitivity analysis on feedstock and effects, leading to uncertainty and later underperformance
- Limited product understanding such as demand/price of fertiliser
- Regulatory complexity in transporting waste streams or upgraded projects
- Lack of investor understanding of business and technology
- Perception of biomass not being effective technology

We use several methods to strengthen the investment case

- Strengthen legal and business case of the projects
- Quality and completeness of materials provided to investors
- Insist on detailed feasibility study for different configuration, supply and uncertainties

On top of that we think Asian countries can support the industry with a variety of measures that come at no cost or at benefit to the treasurer:

- Controlled, not banned, import/trade in waste products
- Fast-track interconnection permit for electricity sales
- Enforce waste producers to environmental standard to boost feedstock supply

Biography:

Vincent Bakker has over 10 years of experience in the energy industry. He co-founded at Positive Energy, a Singapore-based technology startup simplifying the financing of renewable energy projects, where he supports commercial renewable energy projects in Asia in attracting investments. Due to his work and personal interest, Vincent has a strong background in the financial world, economic/energy policies & regulations as well as the energy industry. Prior he worked at oil major Royal Dutch Shell. Vincent studied Industrial Engineering in the Netherlands and is CGMA accredited.

Recent Publications:

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