

Germany's future biogas market – back to the roots!?

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The presentation highlights the situation of Germany's biogas sector looking at supporting energy policies, climate protecting technologies and market oriented economy of biogas plant operation. Starting from the current situation, it summarizes the development of the sector since the German Power Feed in Law and the Renewable Energy Law (EEG) entered in force in 1991 and 2000, and outlines several technologies that provide increased biogas yields and thus financial benefits for biogas plant operators. The German biogas industry has made remarkable progress in the recent years, now providing 5 % of the national Electricity demand or 3 Mio. households. The EEG obligates grid system operators to give priority to plants generating electricity from renewable energy sources (solar, wind, hydro, biomass and geothermal energy) in connecting them to their grid as well as in purchasing the electricity generated. Although remarkable progress has been made, the market potential is still not satisfied. Key findings are: Nowadays in total more than 10500 biogas power plants are operating achieving an installed power capacity of about 5000 MW. Energy crops are widely accepted as feedstock due to the special situation of Germany's agriculture which is strongly integrated in the European agriculture market; therefore the production of food crops is regulated by market forces and policy rules. But the food versus fuel discussion as well as negative public perception of energy crop production and digestion is one of the many obstacles, which led to a severe reduction of feed in tariffs for new energy crop installations in 2014. Co-fermentation and Biowaste Fermentation as technology option provide plant operators higher gas yields and economic benefits from waste treatment fees are now high on the political agenda. The German government is aware of the economic and ecological potential and facilitates investment in on farm micro scale digestion for the digestion of manure, in order to avoid greenhouse gas emissions from manure storage and handling. In the paper also case studies will be given of trend setting projects and technologies.

Key words: Germany, Enabling political framework for biogas promotion, Co-fermentation, Biowaste Fermentation, Economy of renewable energies, Micro scale digestion.