

Strategic partnerships and holistic investments as market development strategy for German bio energy projects in Southeast Asia

Experience from a cooperation project with GTZ (Dr. Thomas Breuer) and EnviTec (Roel Slotman)



Agenda

- I. EnviTec Biogas in Asia
- II. Strategic partnership between EnviTec and GTZ
- III. Investments for bio energy projects in Southeast Asia

Company overview

- Fully integrated contractor and operator of biogas plants covering the full biogas value chain
- 386 employees (as per 09/2009), India appr. 25
- Based in Lohne / Lower Saxony
- Market leader in Germany and Europe based on installed capacity and revenues
- EnviTec Biogas India Pvt. Ltd. (EBIL) is a joint venture between EnviTec Biogas AG and MPPL Renewable Energy Pvt. Ltd. – together as a private enterprise they will supply renewable energy technology in Asia
- Goal is to become market leader in India and ASEAN


Business Model in India

- EnviTec Biogas India Pvt Ltd (EBIL) has been instructed by Green Planet Energy Limited (GPEL) to execute a project for rural electrification to deliver initially 30 biogas plants in the State of Punjab (India)
- The project will introduce the most updated biogas technology into the rural areas of the State of Punjab
- Other projects with focus on feed stock of Sago & Starch mills waste and poultry litter in districts of Tamil Nadu are under preparation as well as biogas plant solutions linked to dairy industry



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Development cooperation objectives **Development partnerships** **Corporate objectives**

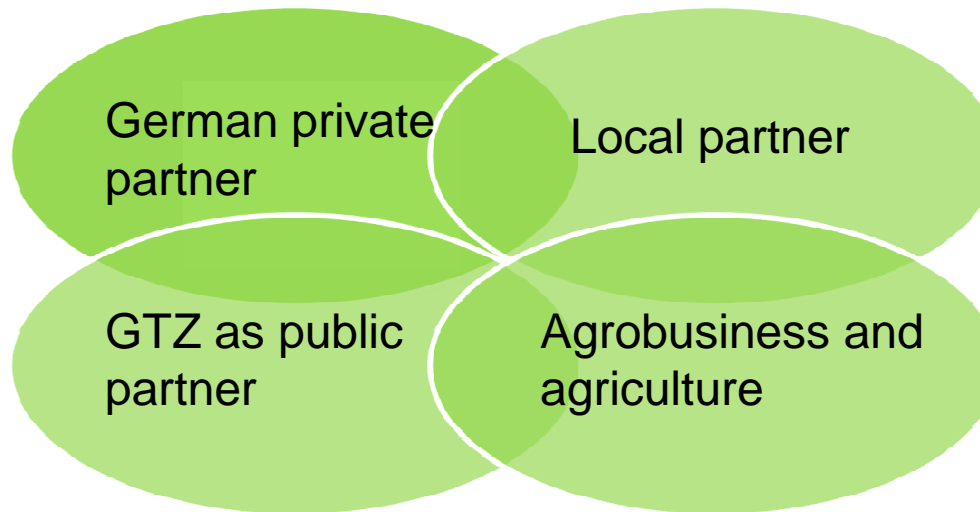
GTZ

- Networks politics, the economy and society
- Acts as a partner for enterprises
- Establishes contacts with local and regional decision-makers
- 30 years of experience in virtually all sectors
- Works for and with the economy
- Balances out different interests
- Manages complex processes

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Strategic partners in bio-energy projects and their fields of activity

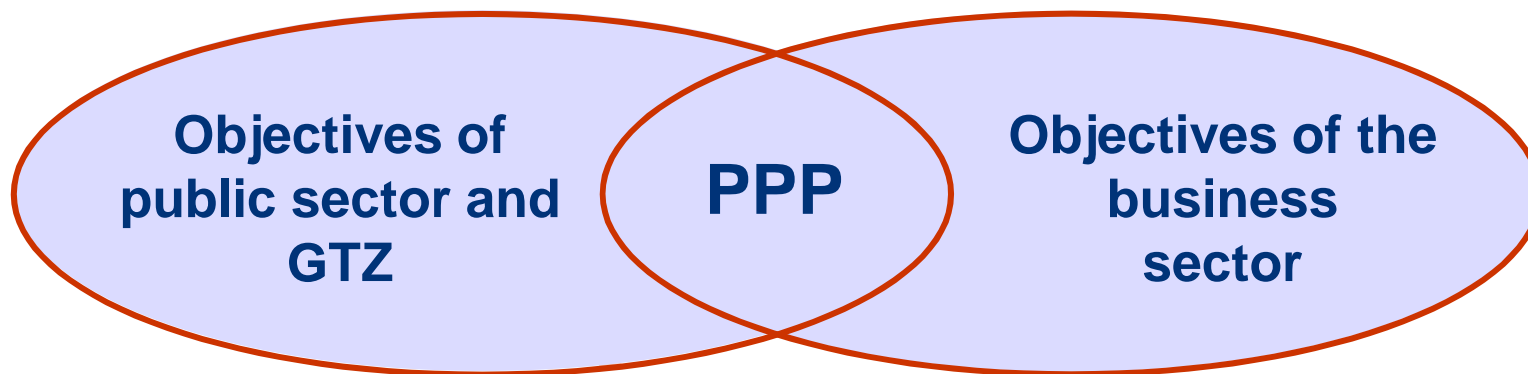


- German private partners: bio-energy technology and investment
- Local Partner: project development and networking
- Agrobusiness and agriculture: feedstock management and organic fertilizer
- GTZ: support of policy framework

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Since 1999: German Government fosters *joint projects* between German development organizations (GTZ, DEG, KfW, SEQUA) and private enterprises



- Poverty reduction
- Environmental protection
- Social equitability
- Improved sales
- Long term business relationships
- Better quality of purchased products

Challenges for the German bio energy technology providers

- Missing bio energy support policies: profitability
- Price and standard of German bio technology providers compared to local ones

Solution:

- Development of strategic investment alliances to brighten income options (electricity and heat, carbon credits, access to commodities, organic fertilizers)
- Redesign German standard to local needs

Main Reasons for a PPP for bio energy projects:

- It is not easy to sell German bio energy technology in the region because the Southeast Asian companies (believe) can sell it cheaper
- Besides adjusting the technology to the price-level of export countries, one has to invest in strong local partners with a strong network
- Private investment as well as public investment (which is the key work of GTZ) has to be provided
- German technology should be sold best as a total package: German and European partners interested in long-term business relationships

Project description:

- The project in the state of Punjab in India is supported by a Public Private Partnership (PPP) which was formed between GTZ, EnviTec Biogas and MPPL for
 - „Providing qualified rural electrification and energy services in India by developing a model for establishing sustainable supply chains of large scale biomass based power generation.“
- This PPP was finalized in 2009 and a new “Strategic Alliance” will start soon regarding other countries in Southeast Asia
- Financing for these projects is mostly covered by project finance with a minimum share of subsidies

Actions initiated to overcome technological barriers:

- The PPP project involved
 - detailed evaluation of Indian market conditions, biomass resource availability and of Indian feed stock
 - as well as attendant implications on biogas plant design and the customising of EnviTec technology (field proven in EU) for Indian market conditions
- Visits were made by EnviTec German engineers to Indian biogas plants as well as by MPPL Indian engineers to German biogas plants
- Without any alteration to the technology or basic engineering, the detailed engineering of the Indian biogas plants was carried out to suit Indian conditions (in particular feed stock, digestate treatment & engine waste heat utilisation)
- Indian feed stock was tested in EnviTec's German laboratory and biogas yield testing facilities were established in India

Main achievements from the partnership:

- Without GTZ 's support EnviTec would not have entered the Indian market
- GTZ 's strong local team and good knowledge about and contacts to the Indian public sector were very helpful to start and implement operations
- GTZ supported with regard to training as well as capacity building
- The cooperation with MPPL as EnviTec's Indian joint venture partner was a crucial success factor as well. Together with MPPL EnviTec successfully participated in a public tender and won the rights to establish power plants in the Punjab
- All three partners – EnviTec, MPPL and GTZ – would like to expand the trustful partnership to other Asian countries within a "Strategic Alliance"

- Developing and formulating standards and guidelines that impact on the private sector
- Conducting education and training measures in areas relevant to business
- Transferring expertise and technology
- Improving the value chain
- Carrying out activities that go beyond the company's core business activities (e.g. social and ecological standards, occupational safety and protection, HIV/AIDS prevention)

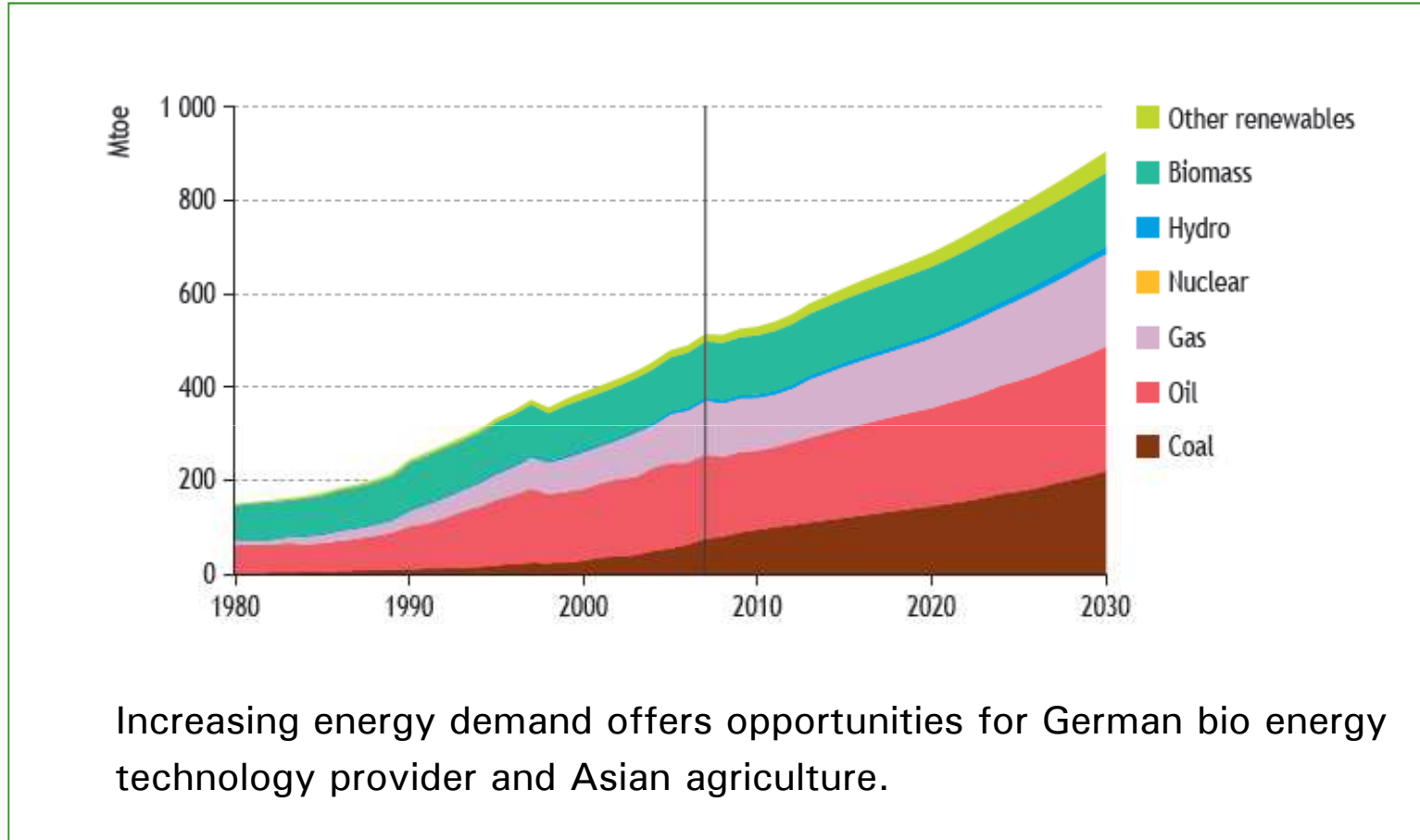


Benefits for the companies of the cooperation with the GTZ	Development cooperation benefits
<ul style="list-style-type: none">➤ neutrality, integrity and credibility➤ sectoral, country-specific and intercultural know-how➤ networks and contacts with governments, agencies and NGOs➤ coordination, mediation and cooperation skills➤ local project planning and management structures➤ financial and human resources	<ul style="list-style-type: none">➤ sustainable and long-running projects since these are in the economic interests of the private company➤ mobilisation of private sector investments in development policy projects➤ creation of job opportunities and income for local population➤ transfer of expertise➤ mainstreaming of development themes in the private sector➤ shift in the way development cooperation is perceived by the private sector

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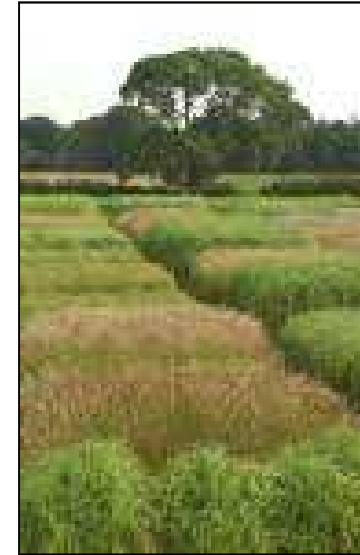
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Primary energy demand in ASEAN countries



Reasons for bio energy in Southeast Asia

- From view point of energy security as well as mitigation of climate change it is imperative to increase the share of bio energy
- Bio energy will be a source of “firm” power at tail end of the grid through distributed power generation facilities
- Bio energy provides a decentralised production of rural electricity
 - Lower invest grid
 - Fuel costs (diesel)
- Electrification of rural areas prevents further urbanisation, with all social aspects
- The benefits of sustainable power supply will also improve the social, welfare and economical value
- Increasing awareness of industry in general is that environmentally responsible is economically sound



Reasons for an investment in bio energy

- Large demand - supply gap in electricity in rural areas
- Conducive government policies and a number of financing options
- Feed-in-tariffs
- Favourable market conditions with grant programs
- Carbon Credits
- Creation of jobs around bio energy
- Electrification leads to settlement of new industries in that region



- The main focus of the investor should be seen in the development of a location and supply chain management
- The marketing of the products - power, heat, carbon-certificates and liquid residues - is another important investment field
- The role of the public investments (PPP/Strategic Alliance condition):
 - Support and search of potential locations
 - Support regarding political basic conditions of bioenergy-friendly investment
- Reduction of less-structured agriculture by organisation and apprenticeship of farmers

While looking for potential locations, you have to take into account further points such as:

- CDM-projects: look after potential locations together with the CDM seller, e. g. important German energy provider and jointly develop these projects (i. e. a strategic alliance with plant manufacturers and energy industry as investors)
- Trade relations with agricultural raw materials to Europe. For further cooperation partners European customer of Commodities could be of interest
- The essential basis of successful bio energy projects in this region is an investment in the agriculture of the appropriate countries. The development of organisations is one essential topic (coordination of farmers in order to reduce costs of transactions), apprenticeship of farmers to ensure composition of biomass and finally to extend agricultural production
- Furthermore, it should be invested in logistics and increasing the efficiency of power generation facilities

Thank you for your attention!

