

# BIOGAS

## ASIA PACIFIC FORUM

18 - 20 JULY 2012 | BANGKOK, THAILAND

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# BIOGAS ASIA PACIFIC FORUM

REPORT ON THE BIOGAS ASIA PACIFIC FORUM 2012,  
18 – 20TH JULY 2012, BANGKOK, THAILAND - ANGVA



The Biogas Asia Pacific Forum 2012 was held at the Pathumwan Princess Hotel, Bangkok, Thailand, 18 – 19th July 2012 with a site tour to an electricity generation plant using biogas from landfill on 20th July 2012.

The event was organized by the International Clean Energy & Sustainability Network (ICESN) of Singapore. It was supported by the Department of Alternative Energy Development and Efficiency, Ministry of Energy, Thailand. The Forum was attended by 150 delegates and 6 exhibitors showcase their products and technologies.

The Director General for the Department of Alternative Energy Development and Efficiency, Ministry of Energy, Thailand, Mr. Krairit Nilkuha, welcomed everybody to the conference and outlined the Ministry's broad energy goals with regards to the development of Biogas in Thailand. Development goals, supported by DEDE was exceeded in 2012, bringing online more biogas projects than required by the 5-year energy plan. Thailand looks set to lead the way in Biogas development and is revising plans to do so.

His presentation was followed by Romel M. Carlos, the Operations Officer, Sustainable Energy Finance, Access to Financial Advisory Services, from the International Finance Corporation (IFC Mekong). Mr. Romel shared key insights into the financing requirements for IFC and encouraged project developers interested in developing Biogas projects in the region to seek financing for their projects.

PTT's latest updates on Biogas as a vehicle fuel was delivered by Mr. Vijit Tangnoi, VP of Process Technology Research Dept from



*Director General of DEDE  
Mr Krairit Nilkuha delivering  
the opening address*



*Romel M. Carlos, PhD, from the  
International Finance Corporation speaking  
on Gaining Access to Funding*



*A mini-exhibition was created to go with the conference for the participants to  
get a better understanding of the technology and services available*

PTT Public Company Limited. Given the latest commercial projects being tested by PTT to deliver CNG quality biogas to supplement the supply of natural gas for the over 300,000 NGVs that ply Thailand's street, there was a lot of interest in the updates on CBG.





Mattias Svensson sharing Sweden's Biogas Experiences



Lee Giok Seng on Biogas's Role as an Alternative Fuel



Andrew Thom, Neuman & Esser on Compression



Jintana Laoruchupong, on Thailand's Policy on Biogas



Nguyen Thi Minh Nguyet on Vietnam's Small Scale Projects



Panel: What Can Be Done to Increase Biogas Acceptance and Usage?  
From L-R: Nguyen Thi Minh Nguyet, MARD, Vietnam; Translator; Jintana Laoruchupong, DEDE, Thailand; Lee Giok Seng, ANGVA, Singapore; Kyle Moyle, ERC, Indonesia; Mattias Svensson, Swedish Gas Technology Centre

Day 2 opened with a presentation by Mattias Svensson, Research Manager of Gaseous Transport Fuels, from the Swedish Gas Technology Centre who shared with the audience Sweden's Biogas development journey. Given Europe's advanced usage of Biogas, Mattias was invited to give the delegates some perspective into the government programmes and policies that encourage the growth of the biogas industry there.

ANGVA's Executive Director, Mr. Lee Giok Seng, gave his presentation on "Biogas: The Renewable and Green Fuel for Natural Gas Vehicles" after Mattias. ANGVA sees the importance for further development of biogas to be channeled to NGV use as CBG is a good substitute for CNG. It is also the most commercial application of CBG at the moment.

After the networking coffee break, we asked the question: "What can be done to increase biogas acceptance and usage?" The lively panel also brought out the question "Is Biogas profitable in the first place?" The panellists gave candid replies covering Vietnam, Thailand, Indonesia, and the rest of South East Asia through the programmes implemented by SNV.

Andrew Thom, Managing Director of Neuman & Esser Group then gave a presentation on "Compression: A Key Step in Biogas Utilization" before lunch.

The topic on "Biogas Sustainability in Thailand: The Role of Renewable Energy Policy" was covered after lunch by Ms. Jintana Laoruchupong, Chief of Biogas Group, Energy Research Bureau, Ministry of Energy, Thailand. She outlined Thailand's government's efforts to promote biogas development and highlighted changes to come in policy and incentives.

We wrapped up the conference with presentations covering Vietnam and Myanmar. Ms. Nguyen Thi Minh Nguyet, Program for Animal Husbandry Sector of Vietnam "under the management of SNV and Department of Livestock Production, Ministry of Agriculture and Rural Development (MARD), Vietnam presented on "Biogas Systems in Vietnam: Sustaining Small Scale Biogas Projects for Poverty Alleviation and Economic Development" while Mr. Htun Naing Aung, Chairman of the Myanmar Industries Association, delivered a presentation on "Biogas Development in Myanmar: Challenges and Opportunities." Vietnam has over 102,000 biogas projects currently running, and is expected to grow. The challenge facing Vietnam right now is in sustaining the momentum and use of biogas. In Myanmar, innovative new applications have been created to sustain biogas growth.



On 20th July about 30 delegates made a site visit to the Panomsarakham Power Plant, about 150 km outskirt of Bangkok, that uses landfill biogas to produce electricity. The electricity produced is fed into the electricity grid of the electric utility company under the government's Feed-In-Tariff programme. This plant is owned and operated by Jaroensompong Company Ltd, a private company that also owned the landfill. Two Caterpillar internal combustion engines are used to produce close to 2MW of electricity per day at this plant.





*Vijit Tangnoi on PTT's Perspective on Biogas As A Vehicle Energy Source*



*John C Y Lee from Caterpillar Inc and Steve J Szymanski from Caterpillar Power Finance on Biogas Power Generation Capabilities and Project Financing Opportunities*

Mr. Vijit spoke candidly on "PTT's Perspective on Biogas as a Vehicle Energy Source". Thailand first biogas (from swine waste) upgrading to biomethane/bio-natural plant will commence operation end of this month in Chiangmai, north of Bangkok. In Phase I (2012 – 2015) of operation, the plant will produce 3 ton/day of bio-natural gas to supply PTT's daughter station about 50 km away from the plant. This daughter station is currently being supplied by trailers from a mother station 380 km away.

Phase II of the plant operation (2015 – 2027) will see production of 6 – 8 tons of bio-natural gas per day.

John C Y Lee from Caterpillar Inc. gave updates on the development of biogas for co-generation and electricity generation. Caterpillar has a couple of successful case studies in Thailand utilising biogas and landfill gas for electricity generation and this is fed back into the grid and rewarded through feed-in tariffs. Steve J Szymanski, Senior International Account Manager for Caterpillar Power Finance - Singapore then shared project financing guidelines and procedures with the audience and showed how financing can be obtained from Caterpillar to fund projects.



*Delegates Enjoying the Networking Lunch*



*Zainal Azman Bin Haji Abu Kasim on Opportunities for Biogas Development in Malaysia*

We began the session after lunch with a presentation by Mr. Zainal Azman Bin Haji Abu Kassim on Accelerating the Green Wealth Agenda: Opportunity for Biogas Development in Malaysia. Malaysia's palm oil plantations provide a fertile development ground for biogas projects and industrial demand for gas makes biogas a viable commercial project.

The day was wrapped up by Mr. Takayoshi Adachi, Senior Research Associate for Taisho Nippon Sanso Corporation and Mr. Matthew Dickinson, Operations Director for BioDome Asia. They delivered technical presentations on technologies that add value on Biogas and designing commercially viable biogas plants respectively.



*Takayoshi Adachi on Adding Value on Biogas*



*Matthew Dickinson on Designing BG Plants*



*Unwinding After A Day of Conferencing*