

A photograph of an industrial facility. In the foreground, a dark grey wall has the text 'BIO-ENERGY SDN. BHD.' in large, gold-colored, sans-serif capital letters. Behind the wall is a large, multi-story green building with a white chimney stack rising from its side. The sky is overcast with grey clouds. To the right, a white metal gate is partially visible.

BIO-ENERGY SDN. BHD.

ROLE OF COGEN 3 AND AIT IN PROMOTING COGENERATION IN ASEAN

CASE STUDY/INSIGHT

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COGEN 3 is a project funded by the European Commission (EC) for the benefit of the Association of Southeast Asian Nations (ASEAN). It was a result of the contract issued to a European company and the Asian Institute of Technology (AIT), Bangkok. The program started in January 2002 and ended in December 2004. The program management unit was set up within the energy program of AIT.

The purposes of the COGEN 3 project were to (i) promote viable and environmentally sound cogeneration demonstration projects, (ii) increase awareness about the cogeneration technology among the ASEAN beneficiaries and (iii) create a platform for further projects, based on the increased economic participation of the EU energy industry. During the COGEN 3 project, pipeline projects equivalent to a cumulative capacity of around 120 MW electricity generation or Euro 150 million were developed.

Several country coordinating teams were hired throughout the ASEAN countries to ensure the smooth operation of the program. The program was managed by the project technical committee and project steering committee with advice from ASEAN and EC authorities. The program also had an office of a European focal point in Sweden.

Within ASEAN countries, country coordinating teams interacted with policymakers from ASEAN, equipment suppliers, banks, financial institutions, biomass cogeneration project developers, end-users and utilities. The program was successful in installing several biomass cogeneration plants during its three year period of the framework. The key cogeneration projects included 2x44 MW sugar cogeneration power plants and one 15 MW palm waste cogeneration plant. Besides, several small cogeneration plants were also supported in Thailand, Malaysia and Singapore. These projects were called full-scale demonstration projects (FSDP).

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During implementation, these projects were regularly followed up by the project management team of COGEN 3 and required supports were given. After implementation also, the FSDP plants were monitored and evaluated. The initial monitoring of the project took place two months after the commercial operation date (COD). The operational monitoring was undertaken after six months from the date of COD.

The COGEN 3 program also developed several pipeline projects in other parts of the region like the Philippines, Vietnam, Laos, Cambodia, etc., and promoted them towards commercial implementation. Project feasibility studies were carried out throughout Southeast Asia including nooks and corners of agro-industry complexes, especially in sugar, palm, rice and wood industries. Several matchmaking services were also carried out between EU supplies and ASEAN end users. Environmental protection activities were also carried out. Also, the CDM concept was promoted through various training programmes among all ASEAN countries.



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The possibility of considering CDM in all these projects was also discussed. The role and support of the United Nations Framework Convention on Climate Change (UNFCCC) for carbon crediting were introduced among the project developers and end-users. For each implemented project, the CO₂ emission reductions were estimated and reported. That was the time when CDM was initiated. Various seminars, workshop, training, study tours, cogeneration weeks were conducted during this COGEN 3 program in ASEAN and Europe. The national cogeneration strategy plans were developed. Guidebooks and specific software tools were prepared for cogeneration project development. Databases were developed for the benefit of end-users and equipment suppliers. All these activities ensured the success of the COGEN 3 program and increased the adoption of the latest cogeneration technologies by the end-users in the ASEAN region.