

Thematic Policy Workshop

“Information for Commercialization of Renewables in ASEAN”

10 March 2005

BIOMASS FOR ELECTRICITY GENERATION

**Department of Energy Technique
Ministry of Industry, Mines and Energy**

1. Introduction

The Energy Master Plan report prepared by NEDO identified significant biomass energy resources from a variety of agricultural residues such as rice husk. Considering that Cambodia's economy is based on agriculture, there is significant potential to harness waste products from these industries, as well as the introduction of specialized energy crops.

2. Biomass for Electricity Generation (1/2)

- **Rural Electrification at Anlong Tamey Village
(Battambang Province, Northwest of Cambodia)**
- **Gasification using Indian technology with capacity 14kW**
- **Using planted tree LEUCEANA on a 4-6 ha land**
- **Supplying electricity to 70 households**
- **Operation time:6:00AM to 10:00 PM**

2. Biomass for Electricity Generation (2/2)

- Investment cost (power plant, transmission line, etc.): <450 US\$ per households for 100W
- Electricity price: 0.25 US\$/kWh against 0.4 US\$ to 0.9 US\$/kWh in other rural areas
- Commune energy cooperative, with the aim of sustainable development

PROJECT OBJECTIVES

- Increase farmer income by growing and selling fuel wood to the energy cooperative, and leaf material in the animal feed markets,**
- Create possibility of employment generation through commercially productive activities requiring electricity, Improve village security through outdoor lighting of pathways, roads and public areas,**
- Make available possibilities of irrigation pumping for commercially oriented agriculture production, Improve the quality of life of villagers through household electrification,**
- Make available education and information through radio and television.**

Planted Tree “ LEUCEANA ”





Fuel wood “ LEUCEANA ”

Cut short “ LEUCEANA ”



Biomass Gasification



Distribution Line



Meters

3. Recommendation (1/2)

- Policy is one of the priorities for rural development with the aim of poverty reduction and sustainable development, government plays the role in formulating and implementing policy, strategy, plan of action, and guidelines

- Community participation

Ex. 70 households have electricity and they participate for maintaining all system (by providing jobs for trees plantation and small O&M team for power plant.)

3. Recommendation (2/2)

- Currently, the information on local biomass manufacturing capability and equipment sources are limited capacity but this situation can be improved**
- Policy, legal and regulatory framework very important for promoting rural energy**
- Demonstration project**
- Awareness and promotion programs such as workshop and publication of documents**

Thanks

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