ICRA Thematic Policy Workshop

Biomass for Electricity Generation

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Presentations

(Based on guideline)

- Comments on the biomass background paper
- Information on local biomass manufacturing capability & equipment souring
- Comments on biomass policy orientation recommendations

Comments on the Biomass Background Paper

A. General Comments

A.1. Based on information from the kick-off meeting, the template of questions and other references, the draft biomass theme-background paper had been developed.

A.2. The first draft of biomass theme-background paper has 59 pages, of which: 25 pages of annexes

A.3. The report covers 7 topics: (i). The case of biomass for electricity production; (ii). The biomass potential in the region; (iii). Status of biomass application in the region; (iv). European know-how; (v) Case studies; (vi). Challenges; and (vii). Recommendations. And 15 other aspects.

A.4. The report provides information (types of source, technologies, costs, case studies that will be good base for exchanging, **sharing information and** knowledge …in development of biomass for electricity generation in each country as well as regional level. However, infomation on equipment and its cost are still limited for developers and researchers...

Comments on the Biomass Background Paper

B. Some Suggestions:

B.1. In the annex 5: “Data matrix”. Please fill in and correct the data and information that has up-dated in column “answer”.

B.2. Please add 150 MW from rice husk in the item of the biomass characteristics (page 5).

B.3. Provide more details on Techno-economic cogeneration systems are only feasible for rice mills with a minimum production capacity of 5 ton/hour (page 6) as well as selling ash.

B.4. Biomass fuel preparation & transportation and gasification: Please provide more information (cost-effective biomass briquetting, 5-500 kWe based on fixed bed biomass – gasifying engine systems for off- grid…).

B.5. In the item 6.2. Biomass conversion costs: Coal-fired plant 180-200 US$/kW ? Please check this figure.

Comments on the Biomass Background Paper

- B.6. In the box of item 3.10: Please change 320 MW by 400 MW and in the table, change 400 MW by 550 MW.

- B.7. In the item 7 “manufacturing capability”: Please up-date information on local boiler manufacturing capability (in next slide).

- B.8. In the item 8, please correct 80.2 % of rural population by 74%.

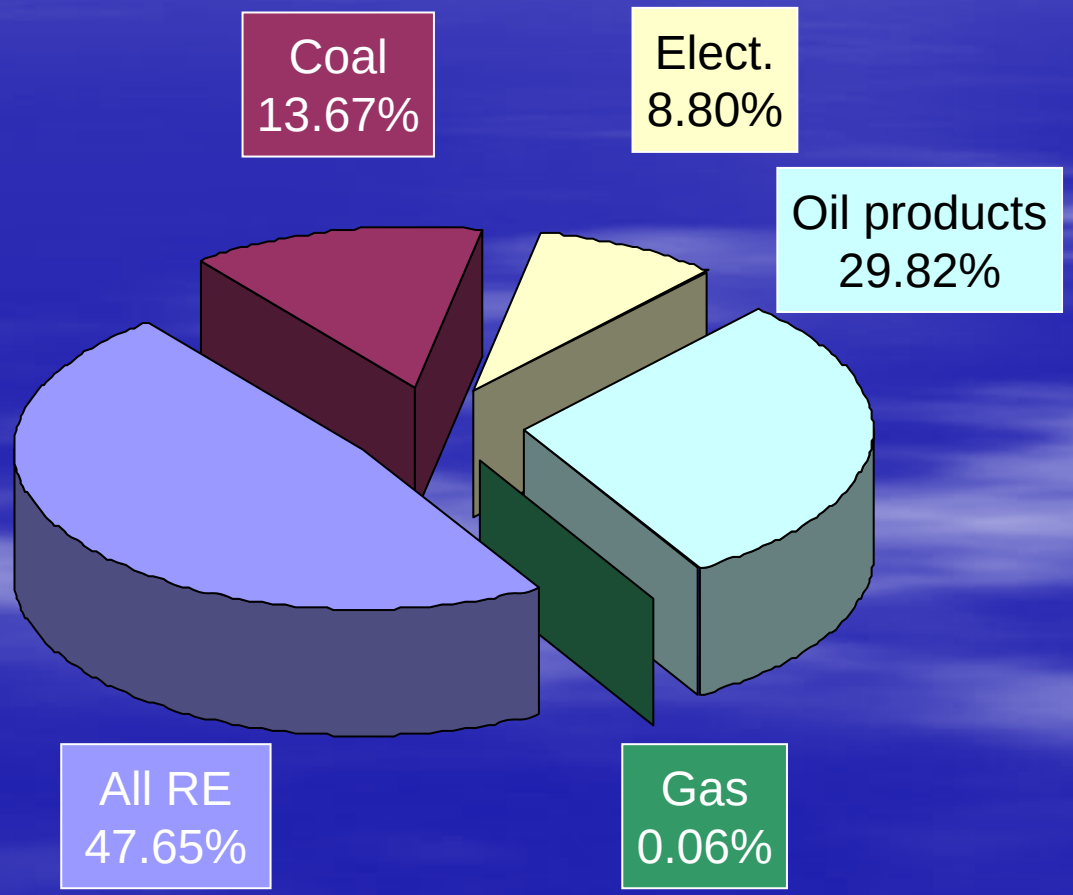
Current Energy Utilation Rate

- **Rural population: 74%**
- **Overall electrification rate (national): 89,97%; (Rural only): 83.58%**

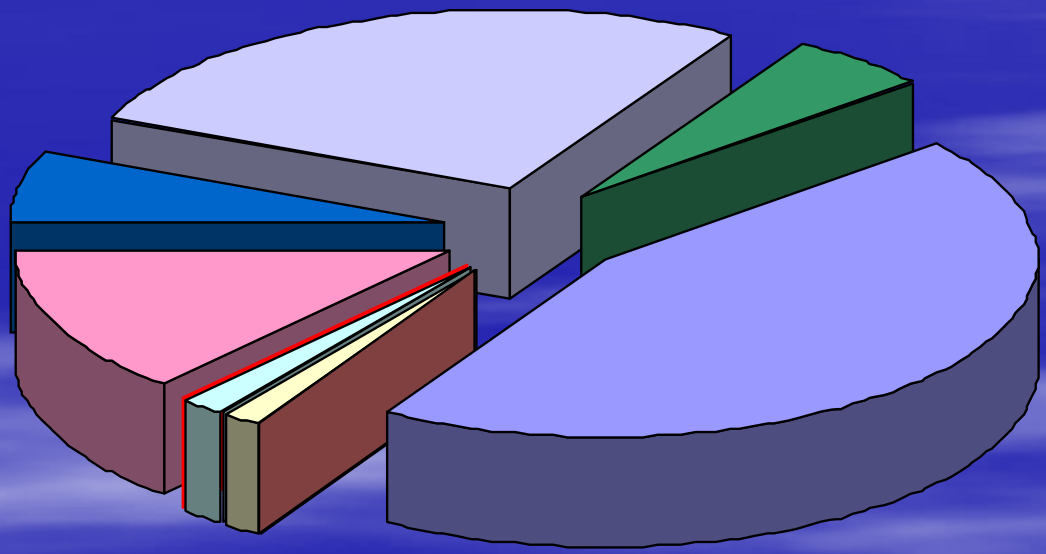
Total Final Energy Consumption (2002, KTOE): 29 383

- **Commercial Energy: 15 383**
  - Coal: 4 017
  - Oil Products: 8 761
  - Gas: 19
  - Electricity: 2 586
- **All Renewable Energy*: 14 000**

**(Most of the RE are Biomass, to generate heat)*



Current Power Utilation Rate



Gas turbine Power Plant 27.128%

Diezel Power station 5.399%

Oil Power Plant 6.263%

Coal Power Plant 13.608%

Win power station: 0.004%

Biomass power Plant: 1.639%

Small hydropower station:1.476%

Solar power station: 0.009%

Larger Hydropower Plant 44.474%

- ✓ Coal: 1245MW
- ✓ Oil: 573MW
- ✓ Gas: 2482MW
- ✓ Diesel: 494MW
- ✓ Hydro: 4069MW

- ✓ Wind: 0.4MW
- ✓ S.Hydro: 121MW
- ✓ MT: 0.8MW
- ✓ **Biomass:150MW**

Information on local biomass manufacturing capability & equipment

Local equipment fabrication ability

- **Promine company**

  The main fabrication ability:

  + Mechanical, high pressure tanks and pipes but not boiler and turbines.

  + Some part of boilers such as bagasse/rice husk conveyors, chimneys, fans…

- **Vietnam boiler company**

  The Vietnam boiler company is a professional society in the boiler construction. The company has the permission certificate to design, manufacture and repair boilers and high pressure devices as following:

Boiler:	*Max. working pressure: 39 kg/cm2* *Max. Capacity: 120 T/h*
High pressure tank:	*Max. working pressure: 40 kg/cm2* *Max. volume: 1000 m3*
Pressure pipe:	*Max: 250 kg/cm2*

Comments on biomass policy orientation recommendations

Information for reference

- Establish the road map of renewable energy development in ASEAN region and should be in line with each country policy/plan. The objective of road map is to implement the recommendation of AMEM and SOME by Teeth ASEAN Summit Meeting in Vientiane on 29 November 2004, where the share of renewable energy in power generation in ASEAN at least 10%.

- Short term: Use biomass as fuel mix in a coal – fired plants. Please make more clear when anthracite coal (low volatile)

- At the national level:

  + Off-gird, not yes consider

THANK YOU