

Developing International Exchange and Cooperation
On Biomass Energy

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1. Trend of development of biomass energy and its significance

The history of energy utilization of human being can be traced back to the primordial renewable energy. Burning wood for cooking and heating was the primitive way of using biomass-energy. Later on, as people found out fossil energy the history has entered into a stage mainly relying on fossil energy. As fossil energy has reached its peak, human being will step into a new developing age of renewable energy. It is by no means a simple return to the primitive period. The new development of renewable energy is based on modern technology and industries.

Fig. 1 indicates the current situation of renewable energy worldwide.

Fig.1 Current Situation of Renewable Energy Worldwide in 2004

Item	Amount	Unit	China's Share
1. Biomass Energy	3,500 (approx.)	Mtce	308 Mtce (approx.), most direct use
2. Ethanol Fuel (Annual Output)	32,655	ML	3 Mt (approx.)
3. Wind Power Generation	47,617	MW	800 MW
4. Geothermal Power Generation	8,932	MW	31.7 MW
5. Direct Geothermal Utilization	28,268	MW	3,056 MW
6. Tidal Power Generation	271	MW	12 MW
7. Solar Cell (Total Installation)	4,331	MW	65 MW
8. Solar Cell (Annual Output)	1,200	MW	50 MW (38 MW of which is exported)
9. Solar Water Heater (Total Installation)	110	Mm ²	68 Mm ² , the 1 st in the world in both output and total installation

Renewable energy is a new sector that develops fastest among the various energies in the world. In recent years, its annual growth rate reaches 25%. Being at its initial stage, the renewable energy in China (except hydro power generation) will enjoy fast growing in the future.

Among various renewable energy resources, biomass energy is a direction with great significance.

It is wise to get prepared for the post-oil period, since Peak Oil will eventually come. The United States has proposed that biomass energy will replace 10% of commercial fuel oil and 25% of oil and gas as materials for chemical products by the year of 2020. Sweden has initiated a strategic thinking of “Be Prepared For a World Without Oil”. Brazil has announced it will wean itself from foreign oil imports completely by the end of the year.

Biomass energy will take increasingly more share in the world energy structure.

2. Possibility of cooperation between China and its neighboring countries in Asia in the field of biomass energy

Agriculture and forestry in southern part of China as Guangxi Autonomous Region, Guangdong and Yunnan provinces enjoy many similarities with Southeast Asian countries. Likewise, biomass sector in northeast part of China as Heilongjiang, Jilin and Liaoning provinces can be found many in common with northeast Asian countries. Those are the material bases for the cooperation on biomass energy.

In terms of biomass energy, raw materials vary, as well as the ways of utilization, including in the form of liquid, gas, solid state and in direct method, like biomass ethanol, biomass diesel, methane, solidified forming fuel, and power generation by combusting domestic garbage, etc. The utilization of biomass energy constitutes an industrial chain. A series of problems need to be solved from raw materials, processing technology, producing process to products and markets. Only when circular economy is achieved and a “win-win” situation in both energy and environment is brought about, can we turn biomass energy into a clean and high efficient energy in a real sense.

Meanwhile, setting up an industrial standard system is necessary for biomass energy industry. It also requires policy support from government to increase its competitiveness in the market.

Exchange and cooperation among Asian countries in the above aspects will benefit all.

3. Exploring possible ways of collaboration

- Exchanging publications and materials
- Organizing forums and visits to exchange experience and hold discussion