Status and Planning on Renewable Energy Development of China

Shi Lishan

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Energy Production and Consumption in China in 2006

	Unit	2006	Increase VS 2005%
Total Energy Production	100million tce.	22.10	7.3
Coal	100 million ton	23.80	8.0
Oil	100 million ton	1.84	1.7
Natural Gas	100 Million M3	585.50	18.7
Power Generation	100 Million KWh	28344.00	13.4
Total Energy Consumption	100 million tce.	24.60	9.3
Coal	100 Million ton	23.70	9.6
Oil	100 Million ton	3.20	7.1
Natural Gas	100 Million M3	556.00	19.9
Hydro	100 Million KWh	4167.00	5.0
Nuclear	100 Million KWh	543.00	2.4

- China is the second largest the Energy Production and Energy Consumption Country, but the energy consumption per capita is low
- Coal is the primary in the Energy Consumption structure, which creates lot of Environment pollution.
- Energy efficiency needs to be improved, with the energy utilization technologies advancement.

“Renewable Energy Law”

It is taken affect from January 1, 2006. It regulated the resource assessment, planning, research, industrilization, investment, price and revenue, indicated clearly on the responsibilities, rights and obligations among Government, enterprises, end users.

“Mid-Long Term Renewable Energy Development Planning”

It established the targets for renewable energy development in the next 15 years, strategic planning and relevant policy suggestions.

1. Status on Resource utilization and Development

Resource (1)

Hydro Power

- Technical potential 540 million KWh
- Economic potentail 400 million KWh
- Biomass
- Residue from Agriculture straw and forest can at least provide 500 million tce. Resource.
- oil plants and energy plants has the potential of provide resource to produce 50 million tones bio-liquid fuel annually.

Resource (2)

Wind

- Potential of 1000 GWh

Off Shore	750 GWh
On Shore	250 GWh

Solar

- 2/3 of the country land’s sun radiation reached more than 2200hrs annual

Utilization and Development

Hydro

Total Installed Capacity

129 GW

Biogas

Annual Utilization

10 billion M3

Wind

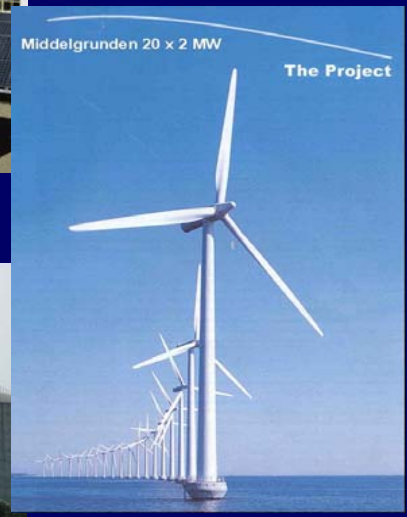
Total Installed Capacity

2.6 GW

Solar PV

Total Installed Capacity

80 MW



In 2006, the total Renewable Energy Resource has been utilized annually has achieved 180 million tce. (excluding the traditional biomass utilization), which is 7.3% of the total primary energy consumption

2. Development Planning and Target

	2010	2020
Hydro	180GW	300GW
Biomass	5.5GW	30GW
Wind	5GW	30GW
Solar	300MW	1.8GW

Targeting 30% Renewable Energy power generation Capacity VS total power generation Capacity

	2010	2020
Biogas	19Billion M3	44 Billion M3
Bio-tebalets	1 Million Ton	50 Million Ton
Fule		
Bio-liquid		
Fuel	2.2 Billion Ton	10 Billion Ton

Encourage the SWH's utilization and integration in urban buildings and rural areas.

2010 150 Million M2

2020 300 Million M2

3. Existing Issues

（1）Need more enforce on Policy and Incentives. With the technology and policies existing, the cost the development and utilization is high, less compatible,need policy support. The mechanism on supporting Renewable Energy development is not sufficient, lack of incentives from economic perspective, lack of coordinative and reliable policies, all in all, we don’t have a sustainable long term mechanism on supporting the sustainable development for Renewable Energy.

（2）Market Mechanism is not sufficient. Lack of clear indicated development target and consistent market demand. Although the government has enhanced its strength on supporting the Renewable Energy technology development, since the lack of policy to secure the market, the lack on consistent market demand creates unsustainable market demand to pull the development of Renewable Energy.

（3）Weakness on Technology development Capacity and Industrial system. Some of the Renewable Energy technologies level are less advanced, many technology and equipment rely on import, meanwhile, the resource assessment, technical standards, products testing, and certification systems are not sufficient, the technical service system needs to be build to support the Renewable Energy Industrialization.

4. Policies and Strategies under planning

（1）Establish a sustainable Renewable Energy market To align with the Renewable Energy Development target, support from Government, policy and market will establish a reliable Renewable Energy market, especially the mandated target for the non-hydro renewable energy power generation will lead the majority energy enterprises to invest in Renewable Energy.

（2）Establish favorable power price and cost share system The cost for Renewable Energy development and utilization is still comparably high. Power price policy should be established with the economic principle to support Renewable Energy development. The difference cost occurred when the grid company purchasing Renewable Energy, will be shared within the total sales power price in the country wide.

（3）Strengthen the financial investment and revenue incentives. Renewable Energy Fund will be established for Renewable Energy Technology R&D, Industrialization establishment, power access solutions for non-electricity areas, and support new technology demonstrations. Meanwhile, support the Renewable Energy utilization and development revenue incentives.

（4）Establish the Renewable Energy Service System. Establish comprehensive Renewable Energy R&D centre, which will devote to Renewable Energy Regulation and Policies researches, development strategies, and Planning, organize key technology R&D, and industrialization, organize and coordinate establishment of the industrial service system.

Thank You