I Overview of renewable energy policy in Asia

Table Existing installed capacity of wind and solar power for the World's top five countries by 2008

Rank	Wind power		Solar PV	
	Country	Installed capacity (GW)	Country	Installed capacity (GW)
1	US		Germany	
2	Germany		Spain	
3	Spain		Japan	
4	China		US	
5	India		South Korea	
—	World Total		World Total	
—	EU-27		EU-27	

Source: REN21, CCM International

The booming market of European renewable energy industry depends on the promotion of policies and incentives by various countries. The release of policies and incentives by some Asian countries actually are based on the experiences of European countries, especially Germany who is the most successful developer of renewable energy in the world.

But there are some disparity between Europe and Asia in renewable energy policies and incentives, shown as follows.

- Many European countries have given priority to renewable energy development through issuing national policies and extending legal supports, but there are few Asian countries having attached sufficient importance to renewable energy development, except China who has obtained remarkable achievements on it.

- Many European countries have determined long-term planning and objectives and greatly support technology development and equipment manufacturing of renewable energies. However, many Asian countries' policy supports are discontiguous and the investments in technology development and innovation are significantly inadequate.

- Although most Asian countries have implemented policies of fiscal supports and tax preferences, European countries generally have a more transparent and clearer execution mechanism for their policies.

- Many European countries have established investments and financing mechanism that is advanced in security for renewable energy development.

- Renewable energy pricing mechanism of European countries is more perfect than that of Asian countries.

- European countries are more active in promotion of CDM and international cooperation.

II China's renewable energy policy analysis

Table Regional distribution of wind power projects in 11th Five-Year Plan

Item	Province	Installed capacity (MW)		Distribution
		Under construction	Under operation	
Key areas	Hebei	[redacted]	[redacted]	Zhangjiakou, Chengde, Huanghua, etc.
	Inner Mongolia	[redacted]	[redacted]	Huitengxile, Huitengliang, Dali, Damao, Tongliao, Bayannaoer, etc.
	Jiangsu and Shanghai	[redacted]	[redacted]	Jiangsu: Rudong, Dongtai, Dafeng, Qidong, etc.; Shanghai: Chongming, Nanhui, etc.; offshore projects of these two areas
	Gansu	[redacted]	[redacted]	Yumen, Anxi, Baiyin, etc.
	Jilin	[redacted]	[redacted]	Taonan, Taobei, Tongyu, Shuangliao, Changling, etc.
	Liaoning	[redacted]	[redacted]	Fuxin, Changtu, Kangping, etc.
	Xinjiang	[redacted]	[redacted]	Dabancheng, Alashangkou, etc.
General areas	Shandong	[redacted]	[redacted]	Jimo, Qixia, Weihai, Dongying, etc.
	Guangdong	[redacted]	[redacted]	Huilai, Nanao, Lufeng, Xuwen, Chuandao, etc.
	Ningxia	[redacted]	[redacted]	Helanshan, Zhongning, etc.
	Fujian	[redacted]	[redacted]	Pingtan, Putian, Zhangpu, Gulei, etc.
	Heilongjiang	[redacted]	[redacted]	Jiamusi, Yilan, etc.
	Zhejiang	[redacted]	[redacted]	Daishan, Cangnan, Cixi, etc.
	Shanxi	[redacted]	[redacted]	Zuoyun, Youyu, Shenchi, etc.
Others		[redacted]	[redacted]	—
Total		[redacted]	[redacted]	—

Source: NDRC/CCM International

✓ Solar energy plan by 2010

✓

The plan focuses on:

1. Implementation of popularization of solar water heater;
2. Launch of solar roofs plan;
3. Construction of large on-grid PV power plants;
4. Trial projects for solar thermal utilization.

Table Key projects and distribution of solar power generation

Category	Objective (MW)	Distribution
On-grid PV power generation	[redacted]	Tibet, Gansu, Inner Mongolia, Ningxia, Xinjiang, etc.
1. PV buildings	[redacted]	Beijing, Shanghai, Guangdong, Jiangsu, Shandong, etc.
2. PV power plants	[redacted]	Lasa, Dunhuang and Ordos, etc.
Power supply in remote areas	[redacted]	Tibet, Qinghai, Gansu, Xinjiang, Yunnan, Sichuan, etc.
Solar thermal power generation	[redacted]	Inner Mongolia, etc.
Total	[redacted]	—

Source: NDRC, CCM International

✓ Renewables utilization plan in rural areas by 2010

The plan focuses on:

- Active promotion of biogas utilization in rural households;
  1. Acceleration of renewable power construction in areas without electricity;
  2. Promotion of solid biomass fuel technologies

■ Other renewable policies and incentives

✓ Low-interest loan

Most renewable energy enterprises have their own financing channels from the state-owned banks with low interest rate. In addition, they can also get low-interest loans from some national funds, such as China Sovereignty Fortune Fund with fund scale of USD300 billion.

✓ **Focus on wind power and solar energy**

China is preparing for the issuance of Revitalization Planning of New Energy (RPNE), aiming to adjust development objectives for wind power, solar energy, hydropower, bioenergy and nuclear power.

Table Predicted adjustment of renewable energies in RPNE

Item	Previous goal by 2020	New goal	Newly increased investment
Wind power			
Solar power			
Solar water heater			
Hydropower			
Biomass power			
Biogas			

Source: CCM International

As can be seen from the above table, China will focus on the development of wind power and solar energy in the future 10 years and also increase the supporting policies and incentives accordingly.

✓ **Intensifying implementation of policies**

Chinese government will enhance policy implementation intensity in order to expand effectiveness of renewable energy policies and incentives in the future years, which needs to improve the dissemination and supervision of the policies.

III India's renewable energy policy analysis

III-1 Major policies and incentives

■ **Integrated energy policy**

India's *Integrated Energy Policy* finally received Cabinet approval in late December 2008 after 5-year preparation. The report from the expert committee that was set up to define integrated energy policy was available in 2006 but it was only a press release of the 2008 version.

This *Integrated Energy Policy* especially places emphasize on energy saving, utilization efficiency and increasing exploration of renewable energies. Indian government intends to make it a plan to strengthen climate protection so as to promote sustainable development of energy and ensure energy security.

The new energy policy determines the energy price and resource distribution according to market situation, which is aimed at enhancing Taiwan's energy market competitiveness. The Planning Commission has worked out an effective program to develop domestic energy resources. The establishment of an oversight committee under the cabinet secretary is to supervise the implementation of the renewable energy development plan.

The *Integrated Energy Policy* is characterized by involving all desirable elements of an enlightened policy, including shift to full cost pricing; establishing a consistent tax structure across each energy sector; public sector autonomy, competitive operation and fixed subsidies.

The integrated energy strategy for the country would imply, at various levels, an integrated approach to the entire sector: consistent data collection and compilation; for defining both the short and long-term energy demand scenarios; for understanding the linkages between development choices in other sectors of the economy (e.g. urbanization, transport and agriculture) and the energy sector; for pricing energy resources in a consistent manner as well as for ensuring consistency in the regulatory frameworks.