Renewable Energy law and Policy in China

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1. Policy consideration in the field of renewable energy
1.1. Policy background

- A unique Chinese situation: rural area energy need (before the first New Energy and Renewable Energy Plan in 1995): 0.12 billion rural population living without electricity, 0.9 billion living on local “natural” resources (straw, stalks, leaves, whatsoever)

- Increasing energy demand (since “open-and-reform”, 1980-present): 2.66 billion tons of coal (equivalent)/year as of 2007 (1.36 in 2000), 50% oil from importation

- Energy structure (heavy reliance on fossil resource energy (coal) causes environmental problems (acid rain etc.) \(\rightarrow\) need to upgrade energy structure: Bad Energy Utilization Structure: China’s CO2 emission comes mostly from coal incineration (67%, 2000), which causes heavy air pollution (9 of the top 10 polluted cities are in China, 2-3% GDP lost)
1.2. Goals in the field of renewable energy

- Eliminating poverty

- Protecting environment

- Substituting resource to fossil energy and an overall upgrade of the nation’s energy structure

- Developing renewable energy industry with the Chinese independent intellectual property rights (renovation)
1.3. Policies and laws in the field of renewable energy

Among others: the 2005 law and the 2009 modification
2. The 2005 Renewable Energy Law

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2.1. Key provisions in the 2005 law (will be further elaborated)

2.1.1. The scope of “renewable energy”
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2.1.5. Cost sharing (for the electricity grid enterprises)
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2.1.1. The scope of “renewable energy” (art.2)

For the purpose of this Law, “renewable energy” refers to non-fossil energies, such as wind energy, solar energy, hydroenergy, bioenergy, geothermal energy and ocean energy, etc.

The application of this Law relating to hydropower shall be set forth by the administrative department of energy of the State Council and be submitted to the State Council for approval.

This Law shall not apply to the utilization of straws or stalks, firewood or dung in the form of direct burning through an inefficient cooking range.
2.1.2. Planning and management

article 7 The administrative department of energy of the State Council shall, in light of the energy demand and the status of the renewable energy throughout the country, formulate a national long- and medium-term total (overall) target for the development and utilization of renewable energy, submit it to the State Council for approval, and publish and implement it after it has been approved by the State Council.


renewable energy constitutes 10% of the nation’s energy consumption by 2010; 15% by 2015

Planning in central and local level following the overall target (art.8)
Administrative management delegated by the law

Article 5 "The administrative department of energy of the State Council shall conduct unified administration of the development and utilization of renewable energy throughout the country. Other relevant departments of the State Council shall, according to their respective functions and duties, conduct administration of the development and utilization of the relevant renewable energy.

The administrative departments in charge of the energy work of the local people's governments at and above the county level shall conduct administration of the development and utilization of renewable energy in their respective administrative regions. Other relevant departments of the local people's governments at and above the county level shall, according to their respective functions and duties, conduct administration of the development and utilization of the relevant renewable energy."
- Within the Central government (the State Council): jurisdictions of individual Ministries

  → The department in charge of comprehensive administration

  NDRC Energy Administration Bureau → National Energy Administration (2008)

  → jurisdictions of individual Ministries: → toward a more coordinative approach (e.g., urban-rural integration)

- Central government and local government

  → Central: planning and management: long term, macro level

  → Local: implementation: micro level, considering local situation (economic development, energy structure etc.)
2.1.3. “Mandatory” purchase and service by the electricity grid enterprise

Art. 14, The relevant electricity grid enterprise shall, through entering a grid synchronization agreement with the enterprise that has obtained an administrative license for or report for archival purposes on electricity generation by using renewable energy, purchase the full amount of the synchronized electricity, as covered by its grid, of the project of synchronized electricity generation by using renewable energy, and provide synchronization service for electricity generation by using renewable energy.
2.1.4. Pricing electricity generated by using renewable energy
State control; price differentiation

Article 19 The on-grid electricity prices for projects of electricity generation by using renewable energy shall be determined by the administrative department of price of the State Council in light of the conditions of different areas and the characteristics of electricity generation by using renewable energy of different types, and according to the principle of helping promote the development and utilization of renewable energy and the principles of economy and rationality, and be adjusted in a timely manner by the same department in light of the development of the renewable energy resource utilization technology. On-grid electricity prices shall be published.
2.1.5. Cost sharing (for the electricity grid enterprises)

Article 20 If the cost arising from the purchase by an electricity grid enterprise of electricity generated by using renewable energy at a price fixed under Article 19 hereof is higher than the cost as calculated based on the average on-grid electricity price for electricity generated by using conventional energy, the balance therebetween shall be apportioned by adjusting the selling price of the electricity. The specific measures for such apportionment shall be formulated by the administrative department of price of the State Council.
2.1.6. Funding

Article 24 The financial authorities of the state shall set up a special fund for the development of renewable energy, which shall be used for supporting:

...
2.2. Measures in several sectors

2.2.1. In general

Article 10 The administrative department of energy of the State Council shall, according to the national planning for the development and utilization of renewable energy, formulate and publish a renewable energy resource industry development guidance catalogue.
2.2.2. Electricity generation from wind energy

- No specific provision in the 2005 law

- Rapid growth after the 2005 law

wind power capacity nationally: from 1.26 million KW to 24.12 million KW (2005-2009), 12.02 KW increase in the year of 2009, 33% of the world increase.

- Why: wind availability (in northeast, north and north west of China) ; technology availability; “Mandatory” grid synchronization?
2.2.3. Bio-energy related (heat, fuel)

- the law

Art.16, The state shall encourage the clean and highly efficient development and utilization of biomass fuels and the development of energy crops.

Enterprises operating a gas or heat pipe network shall accept the access to its network of the gas or heat produced by using biomass resources, provided that the gas or heat meets the technical standards for access to the urban gas or heat pipe network.

The state shall encourage the production and utilization of biological liquid fuels. Each petrol selling enterprise shall, in accordance with the relevant provisions of the administrative department of energy of the State Council or of the local people's government at the provincial level, incorporate biological liquid fuels that meet the national standards into its fuel selling system.
- Even equipped with a clause of legal responsibility: if not incorporate biofuels into the fuel selling system in due course

Article 31 Any petrol selling enterprise that violates Paragraph 3 of Article 16 hereof by failing to incorporate biological liquid fuels that meet the national standards into its fuel selling system and thus causing economic losses to the relevant biological liquid fuel production enterprise shall be liable for such losses and be ordered by the administrative department of energy of the State Council or the department in charge of the energy work of the relevant people's government at the provincial level to make corrections within a specified time limit and, if it refuses to make corrections as required, be given a fine not exceeding the amount of the losses suffered by the relevant biological liquid fuel production enterprise.
- Notwithstanding the above-mentioned provision, there is less progress in the field

→ The problem of “provided” clause: who decides the technical standards

→ Less active response from the ministries in the central government (slow follow-up)
2.2.4. Solar energy relevant

- The law

Article 17 The state shall encourage entities and individuals to install and use solar water heating systems, solar heating and refrigeration systems and solar photovoltaic electricity generation systems.

The administrative department of construction of the State Council shall, in conjunction with other relevant departments of the State Council, formulate technical and economic policies and technical criteria for the combination of solar energy utilization systems with the construction of buildings.

Real estate development enterprises shall, in accordance with the technical criteria referred to in the preceding paragraph, take into account the requirements for using solar energy when designing and constructing buildings.

With regard to a building already completed, the user may install a solar energy utilization system that meets the relevant technical criteria and product standards, provided that such installation shall not adversely affect the quality or safety of the building, and except that it is otherwise agreed to by the relevant parties.
- Rapid growth

Solar water heating manufacture: 40 million sq. meters (of solar panel)/year; 125 million sq. meters installed, 60% of the world total;

photovoltaic battery manufacture: no.1
2.3. Further administrative measures to implement the law

- **Notice of the Ministry of Finance, the National Development and Reform Commission and the National Energy Administration on Issuing the Interim Measures for the Administration of the Collection and Use of the Renewable Energy Development Fund (11-29-2011)**
  财政部、国家发展改革委、国家能源局关于印发《可再生能源发展基金征收使用管理暂行办法》的通知

  电网企业全额收购可再生能源电量监管办法

  国家发展改革委关于印发《可再生能源电价附加收入调配暂行办法》的通知

  国家发展改革委关于印发《可再生能源发电有关管理规定》的通知

- **Notice of the National Development and Reform Commission on Issuing the Trial Measures for the Management of Prices and Allocation of Costs for Electricity Generated from Renewable Energy (01-04-2006)**
  国家发展改革委关于印发《可再生能源发电价格和费用分摊管理试行办法》的通知
3. The 2009 Modification
3.1. Planning:
- The law

Paragraph 2 of Article 8 shall be changed into Paragraph 3 and be amended as: the administrative departments in charge of the energy work of provincial governments “shall, according to the national plan for the development and utilization of renewable energy resources and the mid- and long-term target for the development and utilization of renewable energy resources for their respective administrative regions, work out plans for the development and utilization of renewable energy resources for their respective administrative regions together with other relevant departments of the people's governments at the same level, submit them to the people's governments at the same level for approval and the energy department of the State Council and the State Electricity Regulatory Commission for archival purposes, and implement them after they are approved.”

- enhancing the authority of the central government in planning; lesson from the rapid but not well-disciplined growth in wind electricity generation
3.2. system of guarantee in ensuring compliance to the “mandatory purchase and connection clause”

- The law

Article 14 The relevant electricity grid enterprise shall, through entering a grid synchronization agreement with the enterprise that has obtained an administrative license for or report for archival purposes on electricity generation by using renewable energy, purchase the full amount of the synchronized electricity, as covered by its grid, of the project of synchronized electricity generation by using renewable energy, and provide synchronization service for electricity generation by using renewable energy.

Article 14 shall be amended as: “The state applies the system of guaranteeing the purchasing of electricity generated by using renewable energy resources in full amount.

...
3.3. Compensation to the power grid industry

- The law

Article 20 shall be amended as: “If the cost arising from the purchase by a power grid enterprise of electricity generated by using renewable energy resources at an on-grid price fixed under Article 19 hereof is higher than the cost as calculated according to the average on-grid electricity price for electricity generated by using conventional energy resources, the difference shall be covered by collecting additional charges to the price of electricity generated by using renewable energy resources in the sale of electricity around the whole nation.”

Article 22 shall be amended as: “The selling price of electricity for the public independent power system of electricity generated by using renewable energy resources as constructed with the investment or subsidy of the state shall be determined according to the local standards for classified selling prices of electricity. If the reasonable operation and management cost is higher than the selling price of electricity, the difference shall be compensated for in the way as provided for in Article 20 of this Law.”
3.4. a new and revised set-up of a renewable energy fund

Article 24 shall be amended as: “A renewable energy development fund shall be set up by the national finance, and the sources of funds shall include the annual special-purpose funds arranged by the national finance, the additional income to the price of electricity generated by using renewable energy resources as collected according to law, etc...”
4. Certain observations on the Renewable Energy Law in China
4.1. What have been achieved

- Eliminating poverty in rural area
  - ratio of electricity accessibility
  - gas or heat produced by using biomass resources

- Restructuring energy supply: the growth of renewable energy concentrated in the field of hydro-electricity

- Developing renewable energy industry: in the field of solar water heating, wind mill and Solar Photovoltaic Generation
4.2. Ongoing issues

- inefficiency in utilizing wind energy

- Inadequate(?) compensation to power grids

- Less progress in biomass energy

- High cost (environmental cost) in the industry of Solar Photovoltaic Generation
4.3. My observations

4.3. 1: legislative perspective

- The shadow of power struggle among ministries in legislation: the problem of hydro-power;

- A more democratic process (public opinion/participation etc.)

- Fragmentation of environmental law
4.3.2. judicial perspective: consequence of fragmentation and the problem with other laws and regulations: the problem of lack of coordination

Environmental Protection Law of the People's Republic of China (12-26-1989)


5. An outlook: the relevance to Climate Change
• Reconsidering objective and purpose of the renewable energy law
• Avoiding fragmentation

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