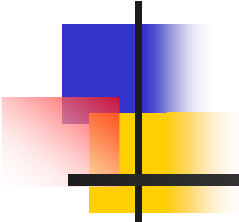


中国可再生能源发展情况和可再生能源法介绍

Introduction to Renewable Energy Development and Renewable Energy Law in China



关一松

中国资源综合利用协会可再生能源专业委员会

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Chinese Renewable Energy Industries Association
(CREIA)

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介绍提纲 Agenda

1. 可再生能源立法的背景
Background of RE Law
2. 法律制定的基本思路和基本原则
Basic ideas and principles of RE Law
3. 可再生能源法中建立的制度和政策
Systems and policy identified in the RE Law



第一部分 立法的背景
Part I. Background of RE Law
中国可再生能源的潜力
Potential of RE Resources in China

- 水力资源蕴藏量丰富，经济可开发总量4亿千瓦，居世界首位，且分布广泛 Sufficient hydro resource is reserved and widely distributed. Total capacity which can be exploited is 400 GW, the largest in the world.
- 风力发电陆上可开发量2.5亿千瓦，总的可开发量超过10亿千瓦 Onshore wind resource capacity is 250 GW, total resource (onshore & offshore) capacity is over 1000 GW.
- 太阳能资源丰富，2/3陆地年日照超过2200小时，年辐射量平均5000兆焦/平方米，相当于170千克标准煤的热量 With great potential solar energy resource; over 2200 hours of sunlight on 2/3 of the earth, with an annual average radiation of 5000WJ per quarter meter, and the heat is equivalent to that of 170kgce.
- 生物质能资源：6亿吨标准煤/年，估计2020年可以达到8-10亿吨标准煤/年 Biomass: 600 Mtce/year, up to 2020, it is estimated that total capacity will reach 800 -1000 Mtce/year.

中国可再生能源的发展现状(1)

Status of Chinese RE Development (1)

- 水电：已经建成水电总容量1亿千瓦，年发电量3000亿千瓦时，约占全国发电总量的20%，其中小水电占3千5百万千瓦 Hydro: Total capacity of existing hydro power station is 100 GW and annual power generation is 300 TWh, up to 20% of total power generation in China, with 35 GW from small hydro power stations.
- 风电：已经拥有40多个风力发电场，2004年总装机容量达到764兆瓦 Wind: Over 40 existing wind farms, with total installation capacity of 764MW in 2004.
- 太阳热水器技术成熟，年生产量超过1200万平方米，累计安装量超过6000万平方米 SWH: Matured solar water heating technology, with over 12 M m² of annual manufacturing capability and over 60 M m² of total installation capacity.

中国可再生能源的发展现状(2)

Status of Chinese RE Development (2)

- 太阳能发电：发电技术在发展之中，形成了300兆瓦的生产能力，累计安装量超过50兆瓦 PV: Manufacturing capability of 300MW has been realized during the development of power generation technology, with total installation capacity of over 50MW.
- 生物质能利用 Biomass utilization
 - 沼气：拥有成熟的大中小型沼气生产技术，年利用量45亿立方米 Biogas: China has the technologies for all scales of biogas plant and can utilize 4.5 billion M³ per year.
 - 生物质发电：190万千瓦 Biomass Generation : 1900MW
 - 液体燃料（乙醇）：拥有自主知识产权生物乙醇生产技术，生产量已达100万吨 Liquid fuel (ethanol): with own intellectual property of ethanol production technology, the production has reached 1 M ton

开发利用可再生能源面临的主要问题

Main challenges to RE Development and Utilization

- 可再生能源的发展没有提高到保障能源安全的战略高度，尚未纳入能源发展的主导战略，缺乏明确的发展目标和切实可行的规划措施

The development of RE has not been raised to the strategic level of energy security guarantee, has not been involved into the leading strategy of energy development. Lack of development target and practical planning measure

- 政策的连续性和稳定性差，缺乏有效的经济激励政策和稳定的法律保障措施，缺乏行之有效的投融资机制

Existing policy is lack of continuity and stability, lack of effective economic incentive and stable legislation guarantee measurement, lack of practical investment and financing mechanisms.

- 研究开发能力弱，制造技术水平较低，缺乏完备的可再生能源产业体系

Research and developing capability is weak; Producing technology is not developed; Lack of integrated RE industries system.

- 开发利用成本相对较高，缺乏市场竞争力

The costs are relatively higher, which lead to lacking of competition

- 公众关注不够，没有形成全社会积极参与和支持的局面

Short of public attention. No active participation and support from public.



可再生能源立法的有利条件 Feasibility of the legislation

- 具有良好的可再生能源资源条件、技术基础和实践经验 Plenty of RE resources, excellent technology bases and practical experience;
- 能源供应紧张和环境压力，对可再生能源发展提出了新的要求 New requirement on RE due to the insufficient supply of power and pressure of environment;
- 已经出台一些促进可再生能源发展的政策和措施 Existing promotional policies and measures for RE
- 形成了可再生能源发展的规划目标 Planning target of RE development
- 其他立法的具体实践提供了范例 Practical experience from other legislation
- 有良好的可再生能源发展的国际大环境，有成功的立法经验可供借鉴 Excellent international environment of RE development and successful experience on RE legislation

第二部分 法律制定的基本思路 and 原则

Part II

Basic Ideas and Principles

- 基本思路 Basic ideas
- 遵循的基本原则 Basic Principles

基本思路

Basic ideas

- 确立可再生能源在国家能源战略中的重要地位
Identify the significant role of RE in the national energy strategy
- 消除可再生能源开发利用市场障碍、营造可再生能源发展的市场空间
Eliminate the market barriers in RE development and utilization
- 建立可再生能源发展的资金保障体系
Establish an ensured financing system for RE development
- 建立促进可再生能源发展的文化氛围
Establish the cultural atmosphere to promote the RE development



遵循的基本原则

Basic principles

- 国家责任和全民义务相结合的原则
Combination of government's responsibilities and entire citizens' obligation
- 政府推动和市场引导相结合的原则
Combination of governmental promotion and market guidance
- 现实需求和长远发展相结合的原则
Combination of current demand and long-term development
- 国内实践和国际经验相结合的原则
Combination of domestic practice and international experience



第三部分 建立的制度和政策

Part III Systems identified in the RE law

- 总量目标制度 System of national RE target
- 优先上网制度 System of on-grid priority
- 分类电价制度 System of differential price
- 费用分摊制度 System of electricity price sharing
- 专项资金制度 System of special capital
- 信贷优惠政策 Loan Measures
- 税收优惠政策 Tax Measures



总量目标制度

System of national RE target

■ 实施总量目标制度的目的Purpose

- 确立可再生能源的战略地位
Establish the strategic status of RE
- 明确市场发展的规模
Identify the scale of market development
- 引导技术发展方向
Guide to the trend of technology development

■ 总量目标制度规定的内容Content

- 发展的总量
Total volume
- 目标的期限
Terms to reach the goal
- 适用的技术种类
Type of technology
- 发展的重点区域
Priority areas of development



优先上网制度

System of on-grid priority

- 实施优先上网和分类电价的目的Purpose
 - 充分发挥可再生能源的资源优势和特点
Take the advantages and characters of RE resource
 - 保障可再生能源发电顺利上网
Ensure that RE electricity would be on grid
 - 降低上网过程中的交易成本
Reduce the cost to connect to the grid

- 优先上网的内容Content
 - 规定可再生能源发电优先上网
RE electricity has on-grid priority
 - 电网企业按照政府规定的价格，全额收购可再生能源的全部上网电量
Power grid enterprises must purchase all the power generated by RE
 - 界定发电企业和电网企业的关系，要求电网企业投资建设和管理可再生能源发电系统的送出工程
Identify the relationship between power grid enterprise and RE generation enterprises. Power grid enterprises should invest in and construct transmission connection components of grid-connected renewable power projects



分类电价制度

System of differential price

■ 实施分类电价的目的 Purpose

- 减少审批程序
Simplify the approval procedure
- 明确市场投资回报
Confirm the return from market
- 促进投资者进入
Promote involvement of investors
- 限制不正当竞争
Restrict unfair competition

■ 电价水平的确定方式

How to determine the price

■ 政府定价

Determined by Government

- 按社会平均成本或先进成本进行测算的分类电价

base on the average or advanced cost

■ 招标电价

Bidding Price



分类电价制度

System of differential price

- 分类电价制度的内容 Content
 - 分类确定 Items need to be identified
 - 电价水平 Price
 - 适用期限 Application period
 - 调整办法 The way of adjusting
 - 听证制度 Hearing
 - 定期修订 Adjust the price regularly
 - 社会公告 Announce to public in time

费用分摊制度

System of electricity price sharing

■ 实施费用分摊制度的目的 Purpose

- 落实公民义务
Identify citizen's obligation
- 实现责任共担
Share of responsibility
- 体现公平
Principle of fairness

■ 费用分摊的方式 Method

■ 费用分摊的适用范围 Scope

全国分摊的有：

In whole country :

- 上网的可再生能源发电
Grid-connected RE
electricity
 - 边远无电地区独立发电系统
Stand alone power
generator in rural areas
- 地区分摊 In the region
- 生物质燃料 bio-fuels



专项资金制度

System of special capital

- 专项资金的用途 It is used for:
 - 可再生能源开发利用的科学技术研究、标准制定和示范工程；
Science&technology research, establishment of standards and pilot project for development and utilization of RE □
 - 农村、牧区生活用能的可再生能源利用项目；
Construction of RE projects for household in rural areas. □
 - 偏远地区 and 海岛可再生能源独立电力系统建设；
Construction of stand alone RE power generators and other projects in remote areas. □
 - 可再生能源的资源勘查、评价和相关信息系统建设； □
Assessment and evaluation of resources, establishment of information systems for RE
 - 促进可再生能源开发利用设备的本地化生产。
Support the localization of the manufacture of RE equipment.



专项资金制度

System of special capital

- 专项资金的可行性 The feasibility of special capital
 - 是国际惯例 International convention
 - 我国有实践经验 Local practical experience
 - 中小企业发展基金 SME development fund
 - 节能专项资金 Special capital for energy saving
 - 农业发展专项资金 Special capital for agriculture development
 - 环保资金专项等 Special capital for environment protection
 - 来源Source :
 - 中央和地方财政 Central and local finance
 - 费用分摊结余 Balance of price sharing



信贷优惠政策 Loan Measures

信贷优惠政策的目的 Purpose :

- 减少审批程序 Simplify approval procedure
- 降低交易成本 Reduce transaction cost
- 延长项目还贷期限 Extend the loan payment period
- 降低发电成本 Decrease the cost of electricity generation

信贷优惠的内容 Content :

- 对列入国家可再生能源产业发展指导目录、符合信贷条件的可再生能源开发利用项目，金融机构可以提供有财政贴息的优惠贷款
Financial institutions may offer preferential loan with financial interest subsidy to renewable energy development and utilization projects that are listed in the national renewable energy industrial development guidance catalogue and conform to the conditions for granting loans.



信贷优惠政策

Loan Measures

提供优惠信贷的渠道：

Channels of supplying favorable loan

- 国家政策银行 Policy banks
- 国有控股银行 National banks
- 双边援助资金 Bilateral aid fund
- 国际多边援助银行或金融机构，例如世界银行、亚洲开发银行和国际金融公司等

IBRD, e.g. World Bank, Asia Development Band and International Finance Company, etc.



税收优惠政策

Tax Measures

■ 税收优惠的目的 Purpose

- 降低投资费用
Reduce cost of investment
- 降低产品成本
Reduce cost of product
- 引导投资方向
Guide the direction of investment

■ 税收优惠的内容 Content

- 国家对列入可再生能源产业发展指导目录的项目给予税收优惠
Tax priority will be given to those projected involved in the Guidance Catalogue of RE Industry Development

■ 税收优惠的实施办法

The way of implementation

- 由国务院税务主管部门制定
Issued by taxing authority



立法进展

Current Legislation Progress

- 已于2005年2月28日通过

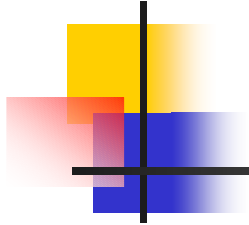
The Law passed on Feb 28, 2005

- 将于2006年1月1日生效

The law will take into effect on Jan 1, 2006

- 目前正在着手进行细则的制定工作，细则有望与年底之前出台

The implementation regulations are under development, which are expected in the end of this year.

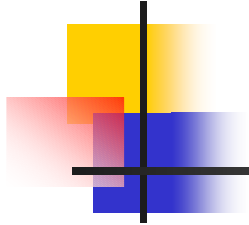


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谢谢！
Thank you!