

中国节能目标与对策措施 Implementation of the Energy Intensity Improvement Target

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主要内容 Contents

一、“十一五”节能目标

1. Energy conservation
target of the 11th Five-
Year Plan (FYP)

二、实现途径

2. Approaches to achieving
the target

三、十项重点工作

3. Top 10 priorities

“十一五”节能目标 Energy Conservation Target of the 11th FYP

- “十一五”节能目标的含义 ● Significance of 11th FYP Energy Saving Targets
- “十一五”节能目标的背景 ● Background
- “十一五”节能目标的属性 ● Characteristics

“十一五”节能目标 Energy Conservation Target of the 11th Five-Year Plan

- “十一五”节能目标的含义
 - 到“十一五”期末，万元国内生产总值（GDP）能耗下降到0.98吨标准煤，比“十五”期末（2005年）降低20%左右，年均节能率4.4%，“十一五”期间共实现节能5.6亿吨标准煤（按GDP年均增长率7.5%环比计算）。
- Significance
- By 2010 Reduce energy consumption per 10,000 RMB (US\$ 1,250) to 0.98 tce (ton coal equivalent), equivalent to:
 - Reduction of 20% from 2005.
 - Annual reduction of 4.4%.
 - 560 million tce of energy savings.

“十一五”节能目标 Energy Conservation Target of the 11th FYP

- “十一五”节能目标的背景
 - 贯彻科学发展观和构建和谐社会的必然要求。
 - 能源短缺成为制约我国经济社会发展的突出瓶颈。
 - 解决我国能源问题的根本出路是坚持开发与节约并举，节约优先，效率为本。
 - 1980年至2004年，我国累计节能10.86亿吨标准煤，年均节能率4.1%，减排二氧化碳7.32亿吨（按碳计）。这表明，经过努力“十一五”节能目标是可以实现的。
- **Background:**
 - The target is essential for establishing a harmonious society.
 - Energy shortages impede economic and social development.
 - To solve China's energy problem is to “simultaneously develop energy sources and prioritize energy saving.”
 - China's annual energy savings rate from 1980 to 2004 was 4.1%, showing that the energy conservation target can be achieved.

“十一五”节能目标Energy Conservation Target of the 11th FYP

- “十一五”节能目标的属性：约束性指标
 - 国家节能目标：中国最高权力机关——全国人大第一次以法律文件形式确定了节能目标，是必须完成的约束性指标，具有法律效力。
 - 各级政府要将“十一五”节能目标纳入经济社会发展综合评价、绩效考核和政绩考核。
 - 各级政府要通过合理配置公共资源和有效运用行政力量，确保实现。
 - 表明中国向世界发出的强烈政策信号：坚持走以人为本、全面协调可持续发展的科学发展道路。
- **Mandatory Targets:**
 - Mandatory energy conservation targets for local governments and key central government departments put forth by China's National People's Congress.
 - Government performance evaluated against the attainment of energy saving targets
 - Responsibility of all levels of governments to achieve the target through distribution of public resources and effective administration.

实现途径

Approaches To Achieving the Target

- 结构节能
 - 技术节能
 - 管理节能
 - 改革节能
- Structure adjustment
 - Technology
 - Management
 - Further Reform

实现途径

Approaches To Achieving the Target

- 通过调整结构节能
 - 大力调整产业结构
 - 推动服务业加快发展
 - 积极调整工业结构
 - 优化用能结构
- Structural adjustments:
 - Substantial restructuring of the sector structures.
 - Acceleration of service sector development.
 - Active readjustment of the industrial structure.
 - Optimize the energy-utilization structure.

实现途径

Approaches To Achieving the Target

- 通过技术进步节能
 - 加快先进节能技术、产品研发和推广应用
 - 全面实施重点节能工程
 - 培育节能服务体系，发展节能服务产业
 - 加强国际交流与合作
- Technological Improvement:
 - Accelerate R&D for advanced energy conservation techniques and products, as well as their dissemination and application.
 - Implement key energy conservation projects.
 - Promote the development of an energy conservation service framework.
 - Further international exchanges and cooperation.

实现途径

Approaches To Achieving the Target

- 通过加强管理节能
 - 健全节能法律法规和标准体系
 - 加强规划指导
 - 建立节能目标责任制和评价考核体系
 - 建立固定资产投资项目节能评估和审查制度
 - 强化重点耗能企业节能管理
 - 完善能效标识和节能产品认证制度
 - 加强电力需求侧和电力调度管理
 - 控制室内空调温度
 - 加大节能监督检查力度
- Management Improvement:
 - Improve energy efficiency (EE) legal regulations and standards system.
 - Strengthen planning implementation.
 - Establish responsibility system & evaluation system incorporating EE objectives.
 - Establish EE evaluation and appraisal framework for fixed capital investment projects.
 - Strengthen EE management in major energy-intensive enterprises.
 - Improve framework for EE labeling, product certification, and regulatory framework.
 - Strengthen DSM and electric power dispatching management.
 - Control indoor air temperature.
 - Strengthen EE oversight and inspection.

实现途径

Approaches To Achieving the Target

- 通过深化改革节能
 - 深化能源价格改革
 - 建立节能降耗的稳定投入机制
 - 实行节能税收优惠政策
 - 推进城镇供热体制改革
 - 实行节能奖励制度
- Further Reform:
 - Further energy price reform.
 - Broaden sources of funding to provide stable EE investment.
 - Implement preferential EE tax policies.
 - Improve urban heating system reform.
 - Implement EE incentives.

十项重点工作

Top Ten Priorities

- 落实节能目标责任制
- 控制增量、调整存量，优化产业结构
- 抓好十大重点节能工程
- 抓好千家企业节能行动
- 建立健全节能保障机制
- 加强节能法制建设
- 加强能源统计和计量管理
- 组建国家节能中心
- 推动政府机构节能
- 加大节能宣传、教育和培训力度
- Implement EE objective-based responsibility system.
- Control growth, adjust existing entities, optimize industrial structure.
- Implement “Ten Key EE Projects”.
- Implement “Top-1000 Enterprises Program”.
- Establish a sound EE guarantee system.
- Strengthen EE legislation.
- Improve collection of energy statistics and metrological management.
- Establish a national energy conservation center.
- Improve EE in governmental agencies.
- Further EE publicity, education, and training.

十项重点工作

Top Ten Priorities

一、落实节能目标责任制

- 分解落实节能指标（国函[2006]94号）
- 实施能耗指标公报制度
- 建立和完善节能考核制度

I. Implement EE objective-based responsibility system:

- **Allocate and implement EE targets.**
- **Implement to publish energy consumption indexes.**
- **Improve evaluation system for EE performance.**

十项重点工作

Top Ten Priorities

二、控制增量、调整存量，优化产业结构

- 严把能耗增长的源头关，建立固定资产投资项目节能评估和审查制度
- 加快淘汰落后生产能力、工艺、技术和设备，对不按期淘汰的企业，依法责令其停产或关闭
- 大力发展第三产业和高技术产业

II. Control growth, adjust existing stocks, optimize industrial structure:

- **Tightly manage sources of energy consumption growth & establish EE evaluation system for fixed capital investment projects.**
- **Accelerate phasing-out of outdated production capabilities, processes, technology and equipment. In cases of past-due phase-outs, enterprises should be ordered to stop production or shut down**
- **Rapidly develop tertiary and high-tech industries.**

十项重点工作

Top Ten Priorities

三、实施十大重点节能工程

- 支持节能重点项目和示范项目及高效节能产品的推广应用
- 研究制定支持十大重点节能工程的相关配套政策和措施
- 强化对重点项目实施情况的监督检查
- 进一步加大资金投入

III. Implement “Ten Key EE Projects”:

- Support major EE programs, demonstration projects, and disseminate the application of high EE products.
- Develop supporting policies and measures for the implementation of the “Ten Key EE Projects”.
- Strengthen the supervision and appraisal of implementation of major projects.
- Increase investment in EE.

“十一五”十大重点节能工程简介(一)

10 Important Energy Saving Work in the 11th-Five-Year Plan

主要内容

- 燃煤工业锅炉（窑炉）改造工程
- 区域热电联产工程
- 余热余压利用工程
- 节约和替代石油工程
- 电机系统节能工程。
- 能量系统优化工程
- 建筑节能工程
- 绿色照明工程
- 政府机构节能工程
- 节能监测和技术服务体系建设工程

Main Contents:

- Retrofit coal-fired industrial boiler and kiln
- District combined heat and power
- Utilization of residual heat and pressure
- Oil saving and oil replacing
- Energy saving from electrical motors
- Optimization of energy demand & supply system
- Energy saving from buildings
- Lighting efficiency improvement
- Energy saving from governmental agencies
- Establishment of energy saving supervision & technical support system

“十一五”十大重点节能工程简介(二) Cont'd

工程目标及效益

- 可实现节能**2.4**亿吨标准煤。
- 对实现“十一五”单位**GDP**能耗降低目标的贡献率近**40%**。
- 对实现“十一五”主要污染物减排目标将发挥重要作用。

Goals & Effects:

- **Reduce 240 million tons of coal consumption.**
- **Contribute almost 40% of the 11th-five-year energy saving goal.**
- **Play an important role in reaching the 11th-five-year pollutants reduction goal (10% for major pollutants).**

十项重点工作 Top Ten Priorities

四、开展千家企业节能行动

- 落实千家企业节能目标责任制：国家发改委已与30个省政府和14家中央企业签订目标责任书；各省也与千家企业签订目标责任书。
- 加强对千家企业节能行动的跟踪、指导和监督
- 定期公布千家企业能源利用状况
- 建立健全保障措施

IV. Implement “EE Action in Top-1000 Enterprises”

- **Implement EE objective-responsibility system and evaluation system.**
- **Strengthen monitoring, guidance, and supervision of “EE Action in the Top-1000 Enterprises”.**
- **Periodically publish energy utilization status of the top-1000 enterprises.**
- **Establish guarantee measures.**

千家企业节能行动简介（一）

Energy Saving from Top 1000 Enterprises

- 钢铁、有色、煤炭、电力、石油石化、化工、建材、纺织、造纸等9个重点耗能行业规模以上独立核算企业，2004年企业综合能源消费量达到18万吨标准煤及以上，共998家。
- 据统计，千家企业2004年综合能源消费量为6.7亿吨标准煤，占全国能源消费总量的33%，占工业能源消费总量的47%。
- 998 companies in the steel, nonferrous metal, coal, electricity, oil refinery & petrochemical, chemical industry, building materials, textile, and paper and pulp sectors, each of which consumed more than 180,000 tons of coal in 2004.
- These companies consumed 670 million tons of coal in 2004, which accounted for 33% of the national total energy consumption and 47% of the industrial energy consumption.

千家企业节能行动简介（二）

Cont'd

- 关于“千家企业节能行动”中的企业节能目标
 - 每个千家企业都有一个明确的节能量
 - 节能量按产品单耗环比计算
 - 节能量主要来自技术节能和管理节能
- 通过开展千家企业节能行动，“十一五”期间将实现节能近1亿吨标准煤，占到国家“十一五”技术节能目标（技术节能按40%考虑，约2.2亿吨标准煤）的近一半。
- Requirements & goals for each enterprise:
 - The amount of energy consumption reduction is well defined.
 - Energy intensity is calculated based on energy consumption per unit product.
 - Most energy consumption reduction is contributed by technology and management improvement.
- These companies could save 100 million tons of coal in the 11th Five-Year Plan, which accounts for almost half of the energy saving target from technology improvement in the Plan (if technology improvement contributes 40% of the energy consumption reduction, about 220 million tons of coal could be saved).

十项重点工作 Top Ten Priorities

五、建立健全节能保障机制

- 深化能源价格改革，包括电力、石油、天然气、煤炭、供热价格及能耗超限额加价等。
- 加大节能资金投入：节能纳入各级财政预算资金；鼓励企业直接融资和利用国际金融组织、外国政府贷款；金融机构加大信贷支持。
- 实行节能税收优惠政策：制定《节能产品目录》，严格控制高耗能、高污染、资源性产品出口，研究制定燃油税收制度，改革资源税等。

V. Establish an Energy Conservation Mechanism:

- Reform the energy pricing system (electricity, petroleum, natural gas, coal and heat supply), and increase the price for energy consumption that exceeds quota.
- Increase the sources of energy conservation funds.
 1. Establish a special fund for energy conservation;
 2. Encourage enterprises to self-finance and utilize loans from international financial organizations and foreign governments;
 3. Encourage financial organizations to increase credit support.
- Implement preferential tax policies for energy conservation: develop a 'List of EE Products'; discourage the export of products high in energy intensity, high pollution discharge and resource utilization; study and develop the fuel tax system, and reform the resource tax.

十项重点工作 Top 10 Priorities

六、加强节能法制建设

- 健全节能法律法规和标准体系：严格节能管理制度，明确节能执法主体，强化政策激励，加大惩戒力度
- 加快实施强制性能效标准及标识制度
- 加强节能执法监督

VI. Strengthen the Energy Conservation Legal System:

- Amend the *Energy Conservation Law*, establish regulations and standards system.
- Strengthen monitoring and enforcement of the *Energy Conservation Law*.
- Speed up implementation of a compulsory EE labeling system.

《节约能源法》修订工作简介（一） Amendment of the Energy Conservation Law

- 《节能法》修订已列入全国人大常委会立法计划，初步定于2007年提请全国人大常委会审议。
- Amending the Energy Conservation Law is listed in the working plan of the NPC Standing Committee and the proposal is to be submitted to NPC Standing Committee for review in 2007.
- 修订原则：
 - 注重完善节能的基本制度
 - 注重体现市场引导与政府管理的有机结合
 - 注重增强法律的针对性和可操作性
- Amending Principles:
 - Improve systems related to energy saving.
 - Improve coordination between the market and government management.
 - Improve the law's focus and ease of operation.

《节约能源法》修订工作简介（二） Cont'd

- 修订重点：
 - 节能管理体制
 - 节能主要制度
 - 建筑、交通以及商用和民用节能
 - 节能激励政策
 - 法律责任
- Amendment Focus:
 - Energy saving management system
 - Primary energy saving regulations
 - Energy saving in buildings, transportation, commercial, and residential sectors
 - Incentives for energy saving
 - Liability
- 建立和完善以《节能法》为核心，配套法规、标准相协调的节能法律法规体系，依法强化监督管理。
- Improve and establish a law and regulation system to encourage energy saving, based on the *Energy Conservation Law*, and supplemented by other regulations and standards.

十项重点工作 Top Ten Priorities

七、加强能源统计和计量管理

- 各级政府为统计部门提供必要的工作保障
- 充实统计人员，完善统计制度，改进统计方法，建立科学的节能统计体系
- 强化对单位GDP能耗指标的审核
- 加强能源计量管理

VII. Strengthen Energy Statistics and Measurement Management:

Government at all levels should

- Provide necessary support for Statistic Departments.
- Recruit statistic staff, improve statistic systems, ameliorate statistic methods, and establish a scientific statistic system for energy conservation.
- Strengthen the audit and verification of energy consumption targets per unit GDP.
- Strengthen energy measurement management.

十项重点工作 Top Ten Priorities

八、组建国家节能中心

在整合现有相关机构的基础上，组建国家节能中心，开展政策研究、固定资产投资项目节能评估、技术推广、宣传培训、信息咨询、国际交流与合作等工作。

VIII. Establish a National Energy Conservation Center:

- Integrate current institutions.
- Establish a National Energy Conservation Center in order to carry out policy study, energy conservation evaluation for capital investment projects, technique dissemination, publicity and training, information consultation, and international exchange and cooperation.

十项重点工作 Top Ten Priorities

九、推动政府机构节能

- 把节约资源的理念和要求贯穿到履行职能的各个环节
- 抓好政府机构建筑物和采暖、空调、照明系统等的节能改造，及其日常节能管理
- 实施政府节能采购
- 严格公务车节能管理

IX. Promote Energy Conservation in Government Agencies:

- Main energy conservation targets for government agencies:
- Integrate requirements of resource saving into daily work.
- Retrofit the government's public buildings, heating, air-conditioning and lighting systems.
- Implement the government procurement for energy conservation products.
- Reinforce the energy conservation management of official business vehicles.

“十一五”政府机构节能主要目标 Government Energy Saving Goals in the 11th-Five-Year Plan

- 实现节电20%，节水20%，单位建筑和人均能耗降低20%;
- 创建一批节约资源示范单位;
- 初步建立节约资源的制度、标准、管理和组织协调体系;
- 逐步建立节约资源的量化管理体系和信息化管理平台。
- 20% reduction in electricity, water consumption, and energy consumption per unit of building area and person.
- Set up several resource-saving demonstration models.
- Establish the regulation, standards, management, and organizing and coordination system.
- Establish a quantitative analysis and management system for resources saving and information management platform.

十项重点工作

Top Ten Priorities

十、加大节能宣传、教育和培训力度

- 认真组织开展一年一度的全国节能宣传周活动，加强经常性的节能宣传和培训
- 广泛宣传，动员全社会节能
- 将节能纳入教育体系和技术培训体系
- 搞好节能系列科普宣传
- 加强对广大职工的节能教育，开展节能合理化建议活动

X. Strengthen Energy Conservation Publicity, Education, and Training:

- Widely publicize and mobilize energy conservation awareness.
- Integrate energy conservation into the education and technical training systems.
- Initiate activities on the popularization of science for energy conservation.
- Strengthen energy conservation education for all staff, and carry out energy conservation recommendation activities.
- Organize and implement annual National Energy Conservation Publicity Week, and strengthen energy conservation publicity and training.