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Energy Efficiency in China: Policies and Opportunities

中国的能效政策和机遇

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Frederick Weston
魏雷克

The Regulatory Assistance Project

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China's Energy and Environmental Goals

中国的能源和环境目标

- 16% energy intensity, 17% carbon intensity, and 4 other pollutants reduction goals in 12th FYP
- 40-45% carbon intensity reduction and 15% non-fossil goals by 2020
- General desire to control total energy and electricity consumption
- Control of coal consumption under discussion
- MEP's air quality management programs for "3 Regions and 6 City Clusters"
 - AQM rule identifies end-use energy efficiency (EE) as a means of reducing local air pollution
- 在“十二五”期间，能源强度降低16%，碳强度降低17%，以及另外四种污染物减少指标。
- 2020年前，碳强度降低40-45%，非化石能源比例达到15%。
- 控制总能耗和用电量的普遍愿望
- 煤耗控制正在讨论中
- 环保部“3个区域6个城市”空气质量
管理计划
 - 空气质量管理规则将终端能效作为一种减少地方空气污染的手段。

Current Policies to Promote EE

目前促进能效的政策

- Top 10,000 Industries Program
- Differential pricing for industries
 - Retail electricity price rises as the enterprise's manufacturing efficiency goes down
- Energy Efficiency Power Plants (EPPs)
 - End-use energy efficiency investments aggregated to produce savings that replicate the output of a conventional power plant
- Demand-Side Management (DSM) Rule for grid company investment in EE and load reductions
 - 0.3% annual reductions in peak load and energy
- DSM Cities Program
 - Municipal requirements for reducing electricity demand
- 万家工业企业项目
- 工业差别电价
 - 零售电价随着工业企业生产能效的降低而升高。
- 能效电厂 (EPPs)
 - 终端能效项目组合产生节能量可以替代传统电厂。
- 需求侧管理条例 (DSM rule) 规定电力公司投资能效和减少负荷。
 - 每年减少最大负荷和电量的 0.3%
- 需求侧管理城市项目
 - 城市层面要求减少电力需求

Challenges

挑战

- Are the EE goals sufficient to support achievement of the overall energy and CO₂ intensity goals?
- How are EE investments to be paid for?
- How can EE be used to address China's energy shortage problems?
- As OECD countries rethink their business and regulatory models for EE in a climate constrained world, what is the model for China?
- 能效目标是否足以支持实现能源和碳强度指标？
- 能效投资如何回收成本？
- 怎样利用能效来解决能源缺乏问题？
- 作为OECD国应该重新思考处在气候限制的世界中能效的经济运作和监管模式，哪种模式更适合中国？

Some Policy Responses

一些政策答案

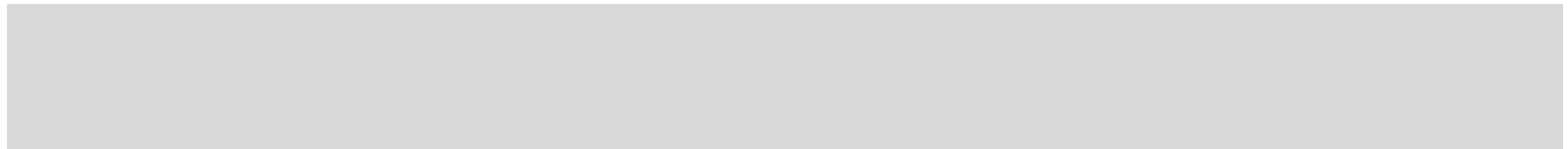
- “Scientific energy planning” (integrated resource planning), but China first needs an “avoided cost” methodology
- Regulatory reforms to make investment in EE profitable
- Reform wholesale generation pricing practices to better reflect the value of alternative resources
 - Reward availability, not production
- Building and appliance efficiency standards
 - By one estimate, over 80% of China’s building stock in 2050 *has not yet been built*
- Better integration of energy and environmental policy
- “科学能源规划”（综合资源规划），但是中国首先需要一种“避免的成本”方法学。
- 改革监管制度使得投资能效变得有利。
- 改革电力批发定价机制来更好地反映替代资源的价值。
 - 奖励可用资源，而不是产出电量。
- 建筑和电器能效标准
 - 据估计，2050年超过80%的建筑存量目前还未建造。
- 能源和环境政策更好的结合

About RAP

The Regulatory Assistance Project (RAP) is a global, non-profit team of experts that focuses on the long-term economic and environmental sustainability of the power and natural gas sectors. RAP has deep expertise in regulatory and market policies that:

- Promote economic efficiency
- Protect the environment
- Ensure system reliability
- Allocate system benefits fairly among all consumers

Learn more about RAP at www.raponline.org



Global
US
China
EU

The Regulatory Assistance Project

Home Office (US)
50 State Street, Suite 3
Montpelier, Vermont 05602

phone: 802-223-8199
fax: 802-223-8172

www.raponline.org