Energy-Efficient External Power Supply Labeling Program in China

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Outline

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Part 1
China’s Energy Efficiency Situation and Policies
The Trend of Urbanization in China
Energy Efficiency Situation in China

- Low level of energy efficiency and high energy saving potential.

- At present, energy consumption per million dollars of GDP is 3.1 times the world average and 4.3 times that of the OECD, despite the decline in GDP unit energy consumption of 60% in the past twenty years.

- The efficiency of China’s energy system--including production, transformation, and end-use consumption--is more than 10% lower than the average of other countries.
In 1998, the Energy Conservation Law of the People’s Republic of China was issued.

On April 4, 2004, the State Council issued the “Notice on the Carrying Out of Resources Conservation Activities Nationwide”.

On December 17, 2004, the Ministry of Finance (MOF) and National Development and Reform Commission (NDRC) jointly issued the Procurement Policy for Energy Efficient Products.

In 2005, NDRC and the State Administration of Taxation (SAT) will jointly compile a catalog of energy and water efficient products and equipment to be subject to reduced product taxes.
In 2005 and 2006, resource conservation activities will be conducted nationwide to promote the conservation and comprehensive utilization of energy, raw material, water and land.

- Government agencies are expected to take the lead in resource conservation activities.
- Expand the product categories of energy efficiency certification and market access.
- Research and develop incentive policies regarding finance, taxation and pricing. NDRC shall expand the EE labeled product catalog as a joint effort with MOF and SAT.
- Increase the number of energy and water efficiency products included in the government procurement program.
On December 17, 2004, MOF and NDRC jointly issued the Procurement Policy for Energy Efficient Products. Government organs at all levels, public sector non-profit units and organizations, when using fiscal resources for procurement, must give priority to the purchase of energy efficient labeled products. CECP has provided technical support and was responsible for compiling the List of Energy Efficient Products based on CECP label certification. The Chinese government will update the energy efficiency product list regularly and more EE labeled products will be included. The current list includes refrigerators, AC, lighting products, computers, printers, fax machines, TVs, toilets and faucets.
The Appliance Sector in China

- China has become one of the largest producers and consumers of appliances.
- Appliance production has grown at an annual average rate of 32.1% in the last 20 years.
- Demand for appliances is still increasing rapidly in the domestic market. Exports have boomed.
- China has big potential to improve appliance energy efficiency.
Part 2
Brief Introduction to China CECP, the CECP Logo and Certification Procedures
Brief introduction of China CECP

- Established in 1998.
- Founded by NDRC & AQSIQ (State Administration of Quality, Supervision, Inspection and Quarantine).
- Non-profit third party organization.
- National authorized & well known.
Main Tasks of China CECP

- Implement a voluntary certification program for energy efficient, water-saving and environmental-friendly products.
- Support the work of China Compulsory Certification.
- Conduct fundamental research regarding energy, resources and environmental protection to provide technical support for policy making.
- Promote energy efficient, water-saving and environmental-friendly products and remove market barriers.
- Develop international cooperation in the field of energy efficiency, water conservation and eco-labeling.
Make it easy for buyers

------ China EE certificate and label
China EE Label Certification Implementation Framework

NDRC & AQSIQ

EE Standard Institute (CNIS)  CECP  Manufactures

Testing Labs
China EE label Certification

Procedures

1. Accept application.
2. Sign the certification service contract.
3. Manufacturer field audit.
4. Products testing.
5. Assessment of the field audit and product testing reports.
6. Approval.
7. Annual supervision and inspection.
Manufacturer Field Audit

- The audit team is made up of 2~4 persons including registered auditors and professional experts.

- The audit mainly focuses on:
  - Product R&D process;
  - Purchase process of key components;
  - Production process;
  - Testing process.
Product Testing

- Take samples for testing.
- CECP qualified labs perform the tests.
- Test samples with uniform testing procedure and measures.
- Tests include:
  - Key performance specifications;
  - Energy consumption specifications.
EE Labeling Product Categories

- **Home Appliances**: Refrigerators, air conditioners, electric water heaters, residential micro-wave ovens, rice cookers, washing machine, etc.
- **Lighting Products**: Ballasts for fluorescent tubes, double-capped fluorescent lamps, CFLs, high-pressure sodium lamps and the associating ballasts, metal halide lamps and the associated ballasts, etc.
- **Industry Products**: Air compressors, electric motors, line traps for AC power system, electric power fitting, power control devices, etc.
- **Standby power Products**: Color TVs, DVD/VCD, printers, copiers, fax machines, computers and displays, etc.
- **External power supplies** are a newly labeled product.
Part 3
China Power Supply Energy Efficiency and Labeling
The Growing Market for Power Supplies in China

- The development of the Chinese information technology and household appliances industries.
- A huge number of mobile phones, computers and other electronic devices are widely used in China.
- An increasing number of power supply manufacturers are based in China.
The Efficiency of AC/DC Power Supplies in China

Efficiency of linear AC/DC adapters
The Efficiency of AC/DC Power Supplies in China

Efficiency of switch AC/DC adapters

- Efficiency: 40.00%, 45.00%, 50.00%, 55.00%, 60.00%, 65.00%
- Load: 0.00%, 20.00%, 40.00%, 60.00%, 80.00%, 100.00%

Graph showing the efficiency of switch AC/DC adapters with load percentage.

- Line: Efficiency
- Pink line: Average
2001 Power Supply Production and 2007 Production Forecasts

- **Worldwide:**
  - 2001: 10% of World
  - 2007: 17% of World
  - Forecasted Growth over Period = 11%

- **Asia:**
  - 2001: 10% of World
  - 2007: 17% of World
  - Forecasted Growth over Period = 7%

- **China:**
  - 2001: 10% of World
  - 2007: 17% of World
  - Forecasted Growth over Period = 98%
Now and Near Future in China

- Develop MEPS for external power supplies;
- Completed the technical specification and testing procedure for certification and launched the endorsement EE labeling program;
- Work with government, industry associations and manufacturers to promote high efficiency power supplies in China.
- Add power supplies to the government procurement list.
Since 2003, China CECP and US EPA have been working closely to:

- Develop harmonize specifications and testing procedures;
- Harmonize timelines;
- Collaborate on labeling procedures;
- Promote high efficient products both in China and USA.
- Work with other countries to do promote international harmonization on power supply efficiency.
Part 4
Suggestions
Suggestions (1)

1. In the energy efficiency standards and labeling field, international cooperation on harmonization and mutual recognition has become increasingly important.

2. China is one of the world's largest producers and consumers of power supplies. Improving energy efficiency of power supplies in China is very important for the global environment.

3. In the energy efficiency standards and labeling field, China CECP is eager to strengthen cooperation with other countries, especially the US.
4. In the past six years, CECP has certified more than 30 types of products for energy efficiency. CECP would like to share our experience with other countries where appropriate.

5. Power supplies contribute much to energy consumption. We hope a larger number of US manufacturers with join the China CECP and US Energy Star labeling program to reduce energy consumption.
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