Analysis on CP Promoting System and Its Results in China

China National Cleaner Production Center

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Core-objective is......

Introducing Cleaner Production Promting Systym

WHAT A Results of Promoting CP in China

HOW Issues and recommendations
1. CP Promoting System

- Regulatory System
- Administrative System
- Technical Supporting System
- Education and Training System
In 1993, the first CP project “Promoting CP in China” was initiated by the World Bank in China.

After nearly two decades, China has formed an all-round promoting system for CP.
Forming process of China Cleaner Production policy

1989-1992
Introduction & Digestion

1993-2002
Legislation

2003-
Rules & Regulations
Introduction & Digestion

1989 - Introducing the idea and method of CP

1992 - Opening the prologue of China CP
Regulatory System

October, 1993
- The second conference of prevention and control of national industry pollution
- Determining the strategic position of CP

March, 1994
- The China Agenda 21 Century
- Promoting the CP technology

Legislation

April, 1997
- The Some suggestions on implementation of CP
- Incorporating CP into the environmental management

June, 2002
- The CP Promotion Law of People's Republic of China
- Integrating CP in the related laws
1.1 Regulatory System

- **Rules & Regulations**
  - Compulsory CP audit system
  - Assessment and acceptance system of CP audit for key enterprises
  - CP standard system
The general regulatory system from promoting CP in China has been described

- **CP Promotion Law**
  -- Legal Foundation

  - Technical Regulation
  - Managerial Regulation
  - Funding Regulation

- **Interim Measures for CP Audit**
  -- Technical guidance on CP audit practices

- **Guideline for Assessment and Acceptance of CP Audit in Key Enterprises**
  -- Quality Control of CP audit in key enterprises

- **Management Measures for the Special CP Funds Supplied by the Central Government to the Local Government**
  -- Support for CP funding

- **Rules on CP Audit Procedures for Key Enterprises**
  -- Detailed rules for compulsory CP audits

Regulatory System for Promoting CP in China
1.1 Regulatory System

❖ CP Promotion Law is just fitting for the national situation of China

◆ Defining the specific responsibilities of each governmental body at national and local levels

◆ Making detailed description on the implementation of CP and encouraging measures
1.1 Regulatory System

- Different from developed country

- Under this circumstance

- Poor capability

- Developing Country (China)

- Poor environmental behavior update
1.1 Regulatory System

One of the **CP Promotion Law** strong points

The law requires **two categories** of enterprises carry out CP audit.

Enterprises cover those enterprises that exceed the national or local discharging standards or exceed the total volume control targets for pollutants set by the relevant local people's governments and those enterprises that use toxic and hazardous materials in production or discharging toxic and hazardous substances.
1.1 Regulatory System

Technical Regulations

Interim Measures for CP Audit
- Putting forward specific requirements audit
- Providing detailed procedures
- Bring compulsory CP audit

Rules on CP Audit Procedures for Key Enterprises
- Key Enterprises
- Key Enterprises that should carry out compulsory CP audit
1.1 Regulatory System

Managerial Regulations

Guideline for Assessment and Acceptance of CP Audit in Key Enterprises

- The Guideline stipulates **two-step procedure**, the first step is the **assessment** of the CP audit and the second one is the **acceptance** of the CP audit.
- The Guideline helps the environmental administrations control and monitor the quality of compulsory CP audit at a higher level, and guarantees the real effectiveness of the CP audits.
1.1 Regulatory System

Funding Regulations

- Management Measures for the Special CP Funds Supplied by the Central Government to the Local Government

- **The key industrial** : petrochemical, metallurgy, chemistry, light industry, textile and building materials

- **The small sized enterprises** : with less than 2000 employees, or with less than RMB 300 million yuan (about USD 44 million) of the sales, or with less than RMB 400 million yuan (about USD 59 million) of the total assets
1.1 Regulatory System

Funding Regulations

The Special CP Funds will be allocated in the term of subsidy for the following CP projects:

- All the CP projects focusing on the source reduction of pollutants, including improving the product design, using nontoxic raw materials and cleaner or renewable energies, and applying advanced low-material-consumption technologies and equipments.
- All the CP projects reducing pollutants from the process control, such as updating the production lines, improving management level and strengthening the on-site monitoring.
- All the CP projects that reuse or recycle all the waste materials, water and energy.
- All the CP projects that apply mature CP technologies and processes, which are appropriate for demonstration and dissemination.
- Other CP projects that can be demonstrated and promoted.
1.2 Administrative System

The State Council

National Development and Reform Commission
- Organizing and coordinating CP promotion throughout the nation.

Ministry of Environmental Protection
- Supervision on CP implementation
- Promotion and supervision on the compulsory CP audits in key enterprises

Ministry of Industry and Information Technology
- Preparing and organizing the implementation of CP promotion policies in industries and information technology industry
- Participating in drafting CP Promotion Planning

Other Ministries and Commissions
- Each performs its own functions according to the law and its defined responsibilities by the state council

Local Government
Drafting and implementing the local CP promotion Planning

Chart 2 Administrative System for Promoting CP in China
1.2 Administrative System

National Development and Reform Commission (NDRC)

- Organizing the drafting of the CP Promotion Law
- Issuing the Interim Measures for CP Audits jointly with MEP
- Publishing the three CP Technology Inventories
- Publishing the CP evaluation indicators system
- Initiating a project of CP demonstrative Cities
- Organizing a large number of activities and campaigns
1.2 Administrative System

Ministry of Environmental Protection (MEP)

- Publishing the Rules on CP Audit Procedure for Key Enterprises
- Publishing the Guideline for Assessment and Acceptance of CP Audits in Key Enterprises
1.2 Administrative System

- Promoting the process of pollution reduction

Electricity: 3.69 billion kWh
Coal: 7.04 million tons
Water: 380 million tons
Wastewater: 60,462,646,700 tons
COD: 95,000 tons
SO2: 71,000 tons
Atmospheric emissions from boiler Dust

Achieving obvious environmental and economic benefits
1.2 Administrative System

- Promoting the process of pollution reduction

Figure 1 reflects trends of economic benefits through the implementation of Cleaner Production program from 2004 to 2007.

![Graph reflecting economic benefits](image)

Figure 1 implementing cleaner production program of economic situation for 2004-2007


1.2 Administrative System

- **Ministry of Industry and Information Technology (MIIT)**

  - Preparing and organizing the implementation of CP promotion policies in industries and information technology industry

  - Participating in drafting CP Promotion Planning
1.3 Technical Supporting System

Technical Supporting System for Promoting CP in China

- CP Audit Methodology
- Sector-based Guideline for CP Audit
- Sector-based CP Standards
- Sector-based CP Evaluation Indicators System
- National Inventory of CP Technologies in Key Industries

Chart 3 Technical Supporting System for Promoting CP in China
1.3 Technical Supporting System

CP Audit Methodology

- Sustaining CP
- Options implementation
- Feasibility analysis
- Option generation and screening
- Assessment
- Pre-assessment
- The planning and organization
1.3 Technical Supporting System

CP Audit Methodology

The updated methodology has three major characteristics

- Compulsory CP audit
- CP audit aims at compliance of emission standards
- CP audit put focuses on the generation of mid/high cost options
1.3 Technical Supporting System

Sector-based Guidelines for CP Audits

In 1990’s
- Chemical raw materials
- Silk dying
- Electroplating
- Brewing

Now
- Nearly 100 sectors
  - Hotels
  - Fertilizer
  - Steel
  - Petroleum refining etc..

Nearly 100 sectors
1.3 Technical Supporting System

Sector-based CP Standards

3 levels
- International advanced level
- Domestic advanced level
- The general level

6 categories
- Production process and equipment
- Resources and energy utilization
- Products
- Pollutants generation
- Wastes reuse and recycling
- Environmental management

42 sectors CP standards (2008)
1.3 Technical Supporting System

Sector-based CP Evaluation Indicator System

- Nitrogenous fertilizer
- Electroplating
- Steel
- Battery
- Pulp and paper making
- Dying sectors etc (24)

National Inventory of CP Technologies in Key Industries

- 57 CP technologies
- 56 CP technologies
- 28 CP technologies
1.4 Education and Training System

Basic Education

• Over a half of the colleges and universities has set optional course for CP

Vocational Training

• By the end of 2008
  226 National Training Courses
  over 12000 trainees

Governmental Officer Training

• For governmental officers

Education and Training System

Propaganda and Dissemination to the Public

• Though propaganda and dissemination
• For high-level management and operators

100 thousands of people
1.4 Education and Training System

Propaganda and Dissemination to the Public

Figure 2 reflects the number of staff received CP training from 2004 to 2007.

**Figure 2**: Training of cleaner production auditing for 2004-2007

- The number of trainees

Unit: person

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Trainees</th>
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<tbody>
<tr>
<td>2004</td>
<td>10000</td>
</tr>
<tr>
<td>2005</td>
<td>20000</td>
</tr>
<tr>
<td>2006</td>
<td>30000</td>
</tr>
<tr>
<td>2007</td>
<td>40000</td>
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</table>
2. Results of Cleaner Production Policy in China

- Realizing CP audit form pilot to expansion
- Strengthening CP capacity building of technical advisory services
- Promoting the process of pollution reduction
- Converting concept to practice
2. Results of Cleaner Production Policy in China

- Conversing concept to practice

- Proposing the concept of CP later and setting up pilot in a few enterprises—Awareness of CP is still relatively vague

- Cleaner Production Promotion Law (2002) determining the legal status of CP and promoting the compulsory CP audit of key enterprises—Awareness of CP has improved
2. Results of Cleaner Production Policy in China

- Promoting the process of pollution reduction

Implementing CP

- Electricity: 3.69 billion kWh
- Coal: 7.04 million tons
- Water: 380 million tons
- Wastewater: 60,462,646,700 tons
- COD: 95,000 tons,
- SO2: 71,000 tons
- Atmospheric emissions from boiler
  Dust

Achieving obvious environmental and economic benefits
2. Results of Cleaner Production Policy in China

- Promoting the process of pollution reduction

Figure 1 reflects trends of economic benefits through the implementation of Cleaner Production program from 2004 to 2007.

Figure 1 implementing cleaner production program of economic situation for 2004-2007.
2. Results of Cleaner Production Policy in China

- Strengthening regional CP of technical advisory services

- Training courses of national CP audit

- Building more than 300 industries or local Cleaner Production centers
2. Results of Cleaner Production Policy in China

- Strengthening regional CP of technical advisory services

Figure 2 reflects the number of staff received CP training from 2004 to 2007.

![Graph showing the number of staff received CP training from 2004 to 2007.](image)
2. Results of Cleaner Production Policy in China

- Realizing CP audit form pilot to expansion

  Propelling CP audit through pilot demonstration

  Developing CP audit from a point to a plane

  2005
2. Results of Cleaner Production Policy in China

Realizing CP audit form pilot to expansion

Figure 3 reflects the condition of the key enterprises’ clean production audit

![Graph showing the number of published key enterprises and the number of key enterprises that have carried out audits from 2004 to 2007.](image)

Fig. 3 Cleaner production audit work of key enterprises for 2004-2007
3. Existing Issues and Counter Measures Recommended

issues
- Legislation
- The macro level
- Encouraging Mechanism
- Research, Development and Dissemination
- Information Disclosure

Suggestions
- Contraction
- Focusing on CP
- Establishing and Improving
- Strengthening
- Enhancing

Finding a cleaner development road
Thank you for your attention