The Pilot Study of Demonstration Voluntary Approaches for Industrial Environmental Management in China.
Content Framework

Promotion Manual

- The background of the voluntary approaches and the applicants in the EU
- The prospective analysis of the voluntary approaches that is implemented in China
- The methods and steps of the implementation of voluntary approaches in China
- The pilots and cases of voluntary approaches in China
The background of the voluntary approaches and the applicants in the EU

Background

• One of the many environmental policies
• The inevitable demand of the historical development
• Mix with the traditional means
• Solve specific environmental issues
• Significant effect
• … …
1. The definition of the voluntary agreement
   - Commitments or agreements between enterprises and government departments
   - Objectives, tasks and schedule

2. Characteristics of the voluntary approaches
   - Flexibility, applicability, low cost, taking the energy-saving and environmental protection into account, improve the relationship between business and government

3. Type of the voluntary approaches
   - Consultative voluntary approaches, unilateral commitment approaches, etc.
Target sectors (enterprises)
Dutch steel industry, including two Iron and Steel Company: One is Hoogovens Staal Company, The other is Nedstaal Company.

The implementation period and the target of the approaches
The late 1980s, the Dutch steel industry signed a voluntary approaches of 10 years with the management, formulating the long-term approaches target of 20% energy saving, with a base year 1989.

The results of the approaches implementation
The steel industry’s energy consumption in 1989 (the base year) is 61.2 PJ while in 2000 the energy consumption was 58.1 PJ. The effectiveness of long-term voluntary approaches is to improve the energy efficiency by 17% (the basic target), with a total energy saving of 79.8 PJ; In pollutants emission reduction, compared to 1989 the base year, in 2000 CO2 emissions is reduced by 854,000 tons. The total reduction of the CO2 emissions during the implementation period is 5.8 million tons.
The prospective analysis of the voluntary approaches that is implemented in China

Various types of old problems of environmental pollution and ecological destruction is not resolved, while facing new problems.

Environmental pollution and ecological destruction

Strategic demands for sustainable development

The rapid growth of resources and energy

Improvement needs of environmental management

Span demand of environmental Kuznets inverted U-shaped curve

Need a more flexible means to encourage outstanding

In recent years, China's economic development has led to a rapidly growth of resource and energy needs, but the efficiency of use of resource and energy is low.

The necessity analysis of the implementation of the voluntary approaches means of environmental management in China
The prospective analysis of the voluntary approaches that is implemented in China

**Advantages**
- The practice of the scientific concept of development
- Changes in economic system
- Transformation of government functions
- Raising of public and corporate awareness
- Encouraged to learn the advanced experience of foreign countries
- Feasibility study and pilot viable

**Disadvantages**
- The environmental quality of the enterprises need to be improved
- Inadequate supervision mechanism
- Inadequate incentives
- Implementation of the approaches may face difficulties
- The difficulties facing by new things
The methods and steps of the implementation of voluntary approaches in China

<table>
<thead>
<tr>
<th></th>
<th>Benchmarking</th>
<th>EPS</th>
<th>EEI</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditional voluntary</td>
<td>whole process</td>
<td>$E = Q \times A$</td>
<td>$EEI = \frac{E_n}{E_0 \times P_n}$</td>
<td>Including the related concepts and tools of the energy-saving potential scanning working group, energy-saving rate, material and energy balance accounting.</td>
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<tr>
<td>Equal consultation</td>
<td>Analysis and comparison</td>
<td>The quality of programs</td>
<td>Intuitive expression</td>
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<tr>
<td>Target</td>
<td>Identify gaps</td>
<td>Program acceptance</td>
<td>Comprehensive energy efficiency</td>
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<tr>
<td>Measure</td>
<td>Prepare</td>
<td>The final results of the programs</td>
<td>Used to check and summary</td>
<td></td>
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</table>

**Key concepts and tools**
The methods and steps of the implementation of voluntary approaches in China

01 Government regulatory agencies
- Environmental Protection Agency
- Development and Reform Commission
- Economic Commission
- Other party......

02 Business and industry associations
- Large industrial enterprises
- Small industrial enterprises
- Commercial enterprises
- Industry Association

03 Relevant third parties
- Intermediary
- Public
- NGO
- Media
- Steering Group of Experts
- ......

“The Related parties of voluntary approaches”
The methods and steps of the implementation of voluntary approaches in China

“The steps of the implementation of voluntary approaches”

Preparation

The signing of the approaches

The implementation of the approaches

Preparation and the signing of the approaches

The implementation of the approaches, check and summary

[The Focus of the Promotion Manual]

Promoting voluntary approaches means of environmental management in China, in the promotion phase it should be focused on the preparation and signing of the approaches stage. A good start is half the success.
The methods and steps of the implementation of voluntary approaches in China

**Promotion and training**
- The promoting of the Manual
- The basics
- Relevant training
- Case Study

**Planning and organization**
- Regulatory agencies or industrial enterprises are willing to make the appropriate organization and planning.

**Preparation**
- Purpose
- Object
- Form
- Points and content
- Summary

**The initial intention**
- On the basis of willingness, government administration and the target company can sign a preliminary letter of intent or memorandum.
Methods and procedures implemented by the voluntary approaches

**Signed an agreement**

Agreement of all parties to consult on the details of the agreement, determine the measures of the management side, the goal of the agreement, period, the implementation-side measures and other related content.

**List of measures**

Listed the list of energy saving through survey, the site visits, benchmarking contrast, process analysis and other methods to the enterprise.

**Energy saving potential scan**

Establish the Working Group of saving potential scan, do the EPS work to all lists, to find an acceptable degree of the highest energy saving measures.
Methods and procedures implemented by the voluntary approaches

The parties of the agreement
Responsibilities and obligations
Energy saving and emission reduction measures
Agreement target
Duration of the agreement
Incentives involved

Management side, the business side and the middle square

Supervision and inspection and summary

Other content

Should be explicit

Energy conservation and emission reduction targets

Short-or medium-and long-term
Enterprise shall periodically summarize, regularly supervise and inspect work, calculate EEI implement energy saving measures on the basis of the agreement.

An annual summary of the agreement, submit the final report, analysis of agreement effect after the end of the agreement.

Methods and procedures implemented by the voluntary approaches

Implementation of the Agreement
Methods and procedures implemented by the voluntary approaches

- Summary of the pilot
- Feasibility Analysis
- The pilot process
- Intend to survey
- Pilot targets and deadlines
- Pilot regions and the object

Pilot
The pilot case of voluntary approaches in China

“willingness to survey of Voluntary agreement”
The pilot case of voluntary approaches in China

“Pilot cities and the pilot objectives”
The pilot case of voluntary approaches in China

- Energy efficiency targets
- Emission reduction targets
- Pilot period

2-3 years

Pilot target and Pilot period
The pilot case of voluntary approaches in China

- **2009**
  - Implementation of the Agreement
  - The effect of the agreement have begun to appear

- **2008**
  - Implementation of the Agreement
  - The smooth implementation of various measures

- **2007**
  - Train—EPS—Consult—Sign the agreement
  - Preparation and signing of the agreement

- **2004 ~ 2006**
  - Feasibility of the sky
  - Feasibility study
  - The Survey of willingness
  - Key enterprises
The pilot case of voluntary approaches in China

“Implementation of the Case of the Chinese cement plant”

The first year
- Waste heat power generation project launched
- Other measures to reduce emissions

The second year
- Waste heat power generation project is completed
- Variable electrical renovation project
- Other emission reduction projects

The third year
- The smooth functioning of cogeneration projects
- The completion of Other emission reduction and energy saving measures

Implementation of the Case of the Chinese cement plant
Possible changes of EEI index in the implementation period of the voluntary agreement of the pilot enterprises
Thank You!