
中国环保科技政策支持环境保护

S&T Support for Environment Protection in China

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Ministry of Science and Technology, P. R. China

Outlines

- I. Current Status of Environmental Protection in China
 - II. Policy Support to the Eco-technology Industry Development
 - III. International Cooperation Eco-technology
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I. Current Status of Environmental Protection in China

□ China is facing challenges from the shortage of resources and degradation of environment

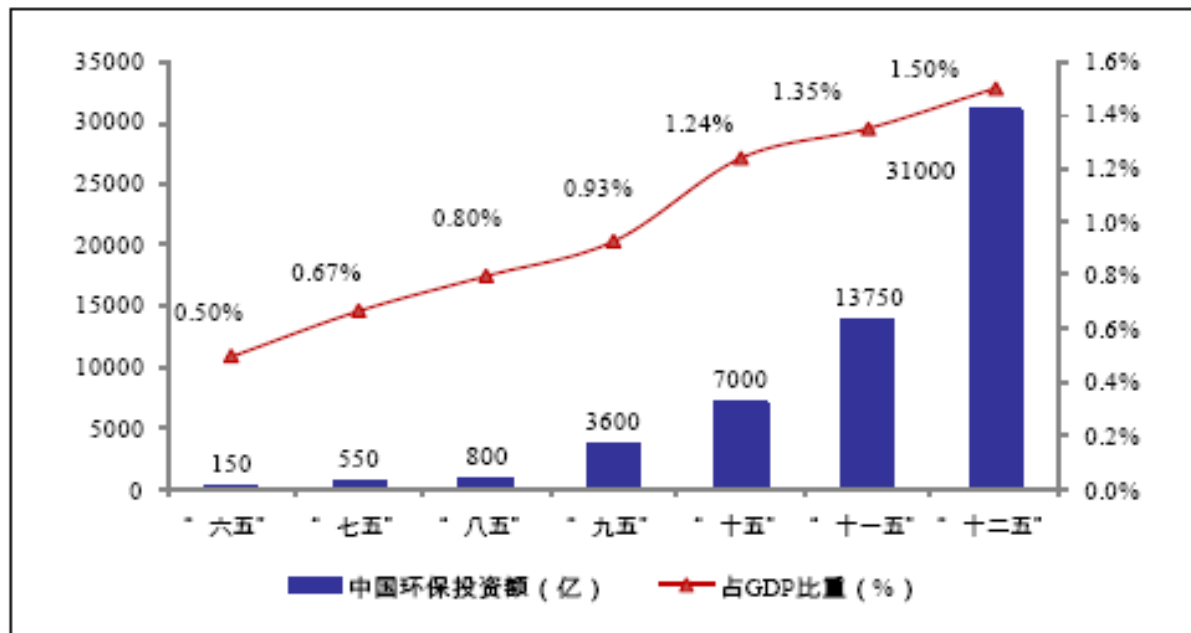
- ◆ Waste and low efficiency remain prominent problems, efficiency rate is lower than the world's average
 - ✓ 3300 million tons of industrial solid waste was produced in 2011, with the utilization rate being 60.5%
 - ◆ Severe environment pollution
 - ✓ 70% water is polluted, 40% of which is heavily polluted
 - ✓ 26% key cities failed to preserve standard air quality in 2010 (66% in 2006)
 - ◆ High increase of legal cases of environmental health
 - ✓ Ministry of Environmental Protection handled 171 emergency environmental issues in 2009, 26.7% increase over 2008.
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I. Current Status of Environmental Protection in China

- ◆ Establishment of *the Law of Environmental Protection of PRC* (1989) ; Enforce the implimentation of the Laws and Regulations on Eco-Protection
 - ◆ In 2011, 1.07million companies in the lead battery industry was checked for eco-protection
 - ◆ Enlarge the government invest on eco-protection
 - ◆ 15% annual increase in investment in environmental protection industry since 2001
 - ◆ Total investment in environmental protection industry reached 1.375 trillion RMB in 2001-2005, 96.4% increase over the previous five years, taking 1.35% of GDP
 - ◆ Strengthen the governance of the most polluted industries of electricity, cement, steel and chemical, improve the infrastructure construction in urban waste water, refuse and hazardous waste.
 - ◆ Established 2832 urban centralized sewage treatment facilities in 2006-2010, the daily sewage treatment capacity reached 125 million cubic meters.
 - ◆ Promotion the public awareness of Eco-protection
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I. Current Status of Environmental Protection in China

China's Eco-Protection Investment Amount and Its' Rate in GDP



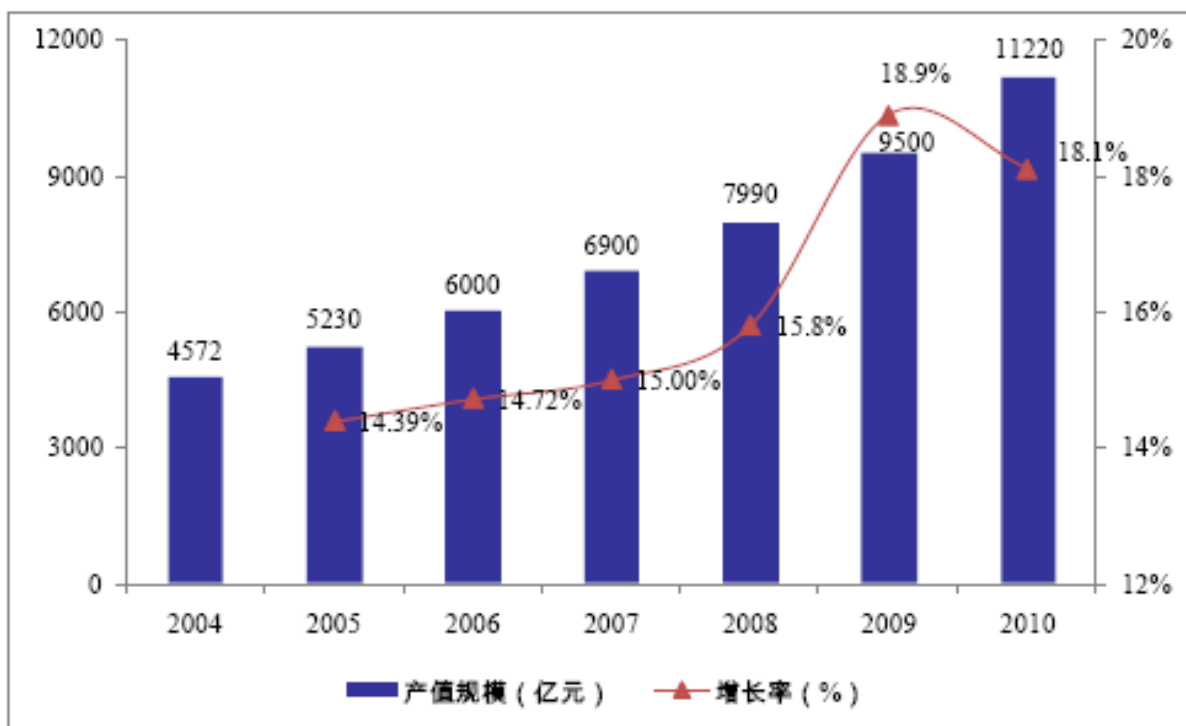
数据来源：赛迪顾问 2011，02

I. Current Status of Environmental Protection in China

- China's environmental protection is increasing rapidly
 - ◆ A steady fast growth
 - ✓ Increase at 15%-20% in 2006-2010, faster than the growth of GDP, a fair scale industrial system is established.
 - ✓ More than 3000 types of environmental protection products, covering each area in pollution control and ecology preservation.
 - ✓ Output of the industry in 2010 exceeded 1 trillion RMB.
 - ◆ Environmental protection has become the No. One key industry in the national emerging strategic industries
 - ✓ The State Council appointed environmental protection as a leading industry among the seven emerging strategic industries, which will be a pillar industry in 2020.
 - ✓ Key areas to develop: desulfidation & denitration in thermal power plants, sewage treatment, solid waste treatment and environmental protection services.
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I. Current Status of Environmental Protection in China

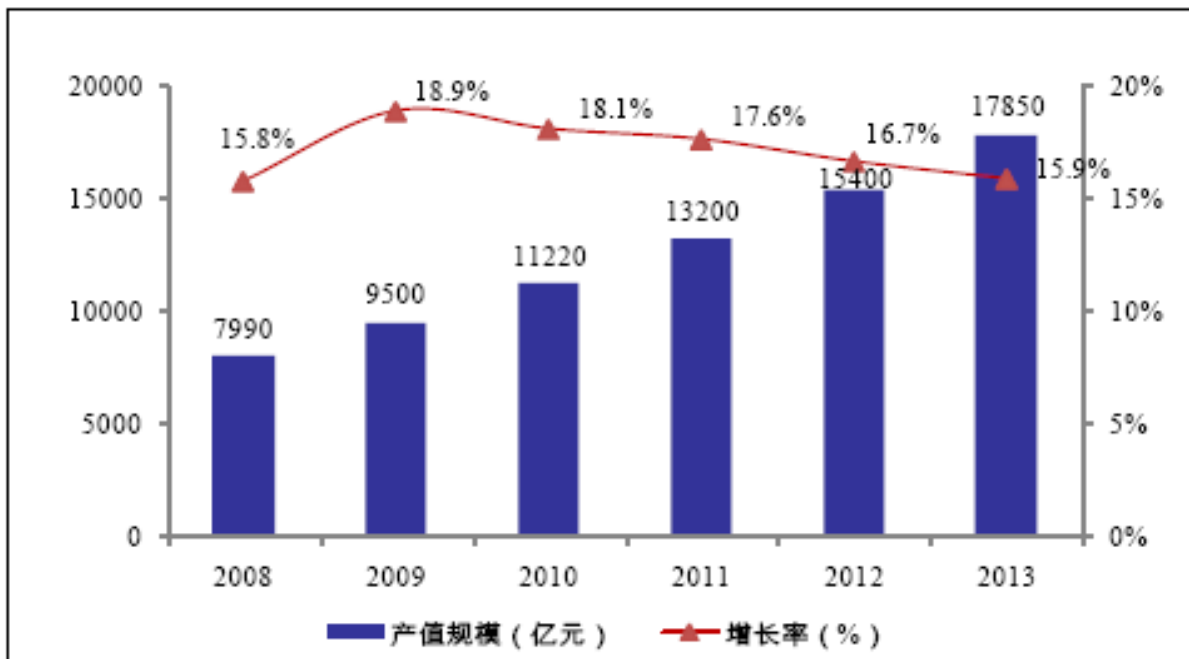
Output and Increase Rate of China's Eco-protection Industry (2004-2010)



数据来源：赛迪顾问 2011，02

I. Current Status of Environmental Protection in China

Forecast of the Output and Increase Rate of China's Eco-protection Industry (2011-2013)



数据来源：赛迪顾问 2011，02

II. Policy Support to the Eco-technology Industry Development

□ National Strategy and Technology Schemes

- ◆ National Mid and Long Term Development Plan for Science and Technology (2006-2020) appointed resources, water and mineral resources, environment as priority areas in S&T development.
- ◆ In 2011, the State Council issued "Attitude on Key Task of Eco-protection" and 2011-2015 National Plan on Eco-Protection.
- ◆ The *Natioanl 12th Five Year Plan of S&T Development* targets at establishing a supporting and sustainable system for resources and environment
- ◆ MOST is implementing the *Technology Action of Energy Saving and Emission Reduction*, aiming at solving the technical bottlenecks
- ◆ Ministry of Environmental Protection issued the *National 12th Five Year Plan of S&T Development in Environmental Protection*
- ◆ S&T Cooperation in eco-protection is listed as a key component in the *International S&T Cooperation Development Plan*

II. Policy Support to the Eco-technology Industry Development

□ Improve the Management Systems on Environmental Technology

◆ Central Government Agencies

- ◆ the Ministry of Science and Technology is administrating the S&T development strategy, international cooperation, stipulating national S&T projects, coordinating research organization, organizing key projects, solving major technical bottlenecks.
 - ◆ Central Government Agencies related to eco-protection
 - ◆ Ministry of Environmental Protection,
 - ◆ Ministry of Education,
 - ◆ Ministry of Water Resources,
 - ◆ Ministry of Housing and Urban-rural Development,
 - ◆ Bureau of Environmental Resources of Chinese Academy of Sciences.
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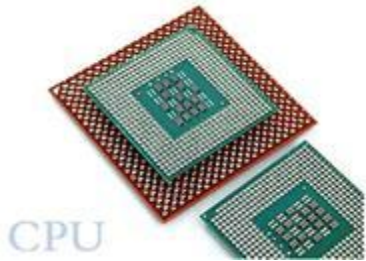
II. Policy Support to the Eco-technology Industry Development

☐ Improve the Management Systems on Environmental Technology

- Research Organizations undertaking the national eco-protection S&T projects:
 - ☐ Research organizations in Ministry of Environmental Protection
 - ☐ Research organizations in Chinese Academy of Sciences
 - ☐ Environment Departments in Universities
 - Local Government and Enterprise
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II. Policy Support to the Eco-technology Industry Development

National Science & Technology Major Projects



electronics,
chip, software



IC equipment



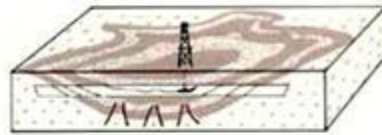
broadband
communication



nuclear plant



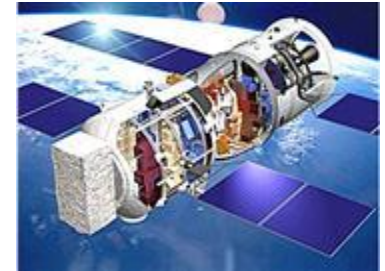
numerical control
machine



oil & gas



water pollution
treatment



manned space,
lunar exploration

II. Policy Support to the Eco-technology Industry Development

□ Water Pollution Control and Treatment, the National Sci-Tech Major Projects

- ◆ In the 11th “Five Year” Plan, The Water Project included 33 sub-projects, 238 Research Topics, spending 11.266 billion CNY
 - ◆ State Treasury spend 4.543 billion CNY
 - ◆ Through the integration of technology research and development, demonstration projects and the application of the results and transformation, promote the adjustment of industrial structure, promote local and pollution control process, speed up the transformation of economic development has played a positive role.
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II. Policy Support to the Eco-technology Industry Development

The Water Project had a batch of new technology breakthrough which is used in the protection in large-scale pollution control projects, and strong support for improving the water quality of Taihu Lake, Dianchi Lake, Liaohe, Songhua River Basin and other key.



The Eco-System of Liao River was recovered, more than 30 species of fish were "re-found", such as the famous Sword Fish.

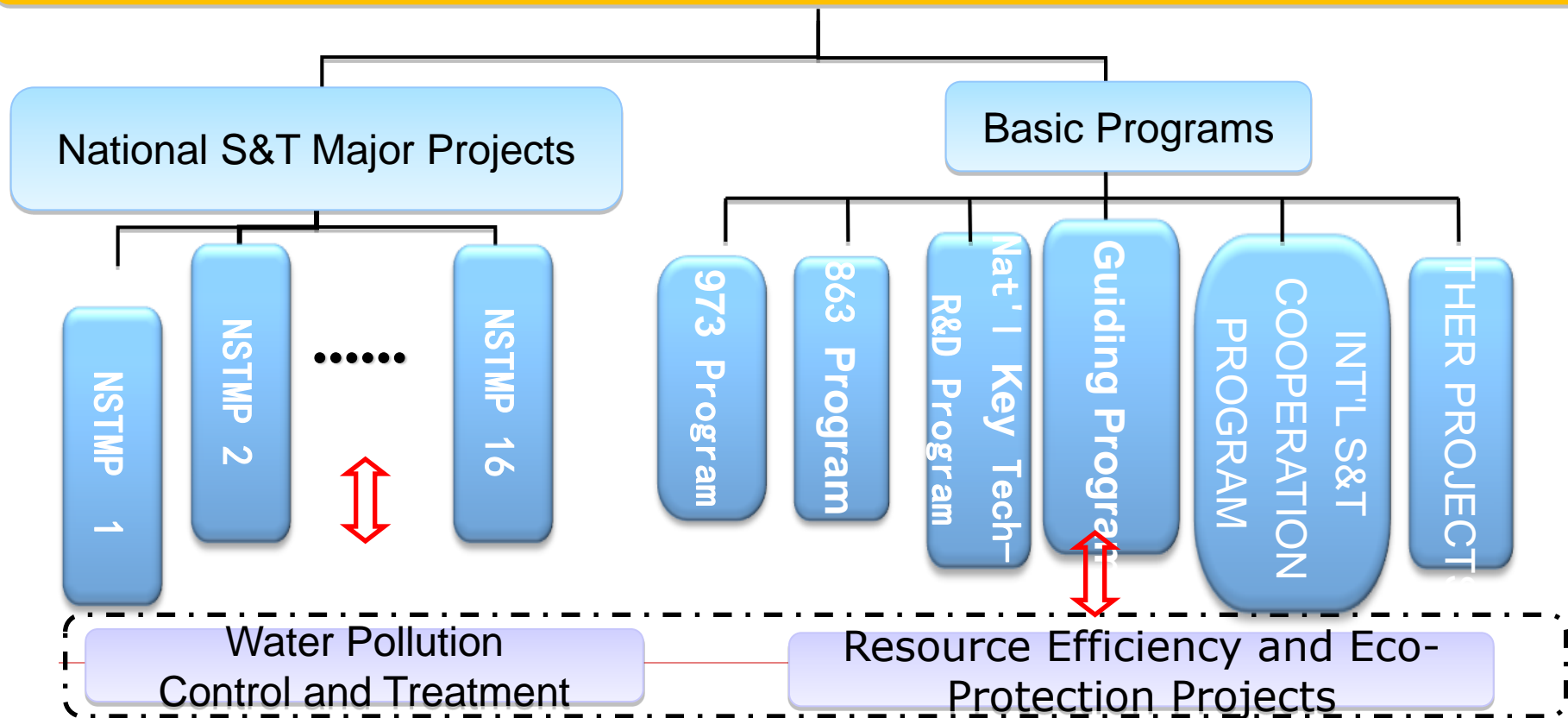


Initial construction of the drinking water safety engineering and technical system and the regulatory system to ensure the quality and stability standards directly benefit a population of over 25 million.

II. Policy Support to the Eco-technology Industry Development

◆ National Eco-protection Technology Scheme

The 12th “Five-Year” Plan for Science & Technology Development



II. Policy Support to the Eco-technology Industry Development

Eco-Technology Projects in National Science and Technology Schemes 2011

| National Programs | Projects on Environment & Resources |
|--|--|
| 973 Program | 56 |
| 863 Program | 55 |
| Nat'l Key Tech R&D Program | 75 |
| INT'L S&T COOPERATION PROGRAM | 20 |
| China Spark Program | 223 |
| China Torch Program | 81 |
| National Key New Product Program | 84 |
| Innovation Fund for SMEs | 585 |

II. Policy Support to the Eco-technology Industry Development

□ Water Pollution Control and Treatment, the National S&T Major Projects

- ◆ Organized and Implimented by the Ministry of Environment Protection, the Ministry of Housing and Urban-Rural Development and the Ministry of Science and Technology
- ◆ Breakthroughs in Key Technologies
 - ✓ Control on the Source of the Pollution
 - ✓ Enhance the the ability to of monitoring, controlling and early warning
 - ✓ Improve the water quality of the environment
 - ✓ The safety of drinking water

II. Policy Support to the Eco-technology Industry Development

□ Construction of Eco-tech Industry Zones

- Yichang Hi-tec Zone——Fine chemicals industry and circular economy park
 - ◆ Industrial chain, both convergence
 - ◆ All raw materials entering the cycle in the entire park, and no pollution but products come out.



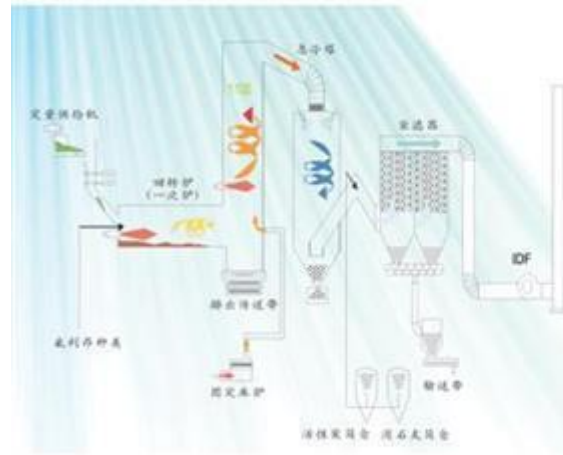
Recycling System

II. Policy Support to the Eco-technology Industry Development

□ Construction of Eco-tech Industry Zones

■ Suzhou Hi-tech Zone——Circuit-board Production Chain

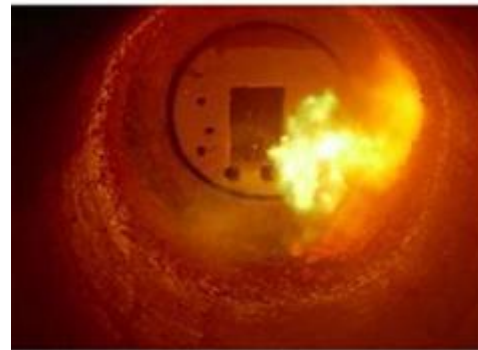
- ◆ Recycle use of scrap and copper waste generated in the production process of the IT industry;
- ◆ Extract the gold, silver, copper and other metals, used in the production cycle again.
- ◆ Annual recycling 450 kg of gold, 200 kilograms of silver, 200 tons of copper, the output value amounting to billions of dollars



干式处理流程图



急冷塔实物照片



燃烧炉内部燃烧情况



产品金和银

II. Policy Support to the Eco-technology Industry Development

□ Construction of Eco-tech Industry Zones

■ Yixing Hi-tech Zone, focusing on the Eco-tech Industry

- ◆ Established in Nov. 1992, by the State Council.
 - ◆ After 20 years development, Yixing Zone became the industrial Park on the eco-tech industry focusing on R&D, designing, engineering, equipment production and operating project. The Eco-tech Cluster brewed a batch of influencing business in China.
 - ✓ Business on water treatment, solid waste processing device, air pollution control, environmental protection, pharmaceutical and new materials, environmental monitoring and instrumentation
 - ✓ Jiangsu Province (Yixing) Environmental Protection Industry Technology Research Institute, the National Environmental Protection Equipment Testing Center support platform
 - ✓ Work closely with Finland, met with the Lahti Science and Business Park became friendly park, set up overseas offices in Finland, set up a Sino-Finnish clean technology docking center, cooperation with Finland carbon asset management company, the Asian Development Bank, the establishment of the total size of 10 billion clean Technology investment Fund.
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III. Strengthen the International Cooperation

□ Eco-Protection is the Focus of International Cooperation

- ◆ Interested in: HR. Technology, New Operation Model, Capital and Market.
 - ◆ Multifunctions on Cooperation: Exchange and Mutual Visit, Cooperation on Research, Co-established Labs, Joint Ventures.
 - ◆ What we have now:
 - ✓ US-CHINA CLEAN ENERGY RESEARCH CENTER
 - ✓ Sino-Italian Environment and Energy-efficient Building
 - ✓ China Europe environment and sustainable development cooperation
 - ✓ UNDP China Clean Development Mechanism Development
 - ✓ China UK Coal Emissions Cooperation
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III. Strengthen the International Cooperation

- **Chineka Project**——Garbage pyrolysis and gasification combustion power generation flue gas separation resource recycling technology
 - ◆ Partners:
 - ✓ Chinese side: Jiande Hengming Environmental Protection Co., Ltd)
 - ✓ Spain side: Traco Iberia S.L
 - ◆ Cooperation Model:
 - ✓ Technology Transfer from China to Spain
 - ✓ Commercialized in Spain to satisfy EU standard to enter into European and international markets
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Thanks for your attention !

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