

# 中国环境保护公司

China National Environmental Protection Corp

**中国固废领域最具实力的行业引领者**  
**中国固废十大影响力企业**

聚合点滴·创生无限

Going Green, Investing Green

绿色**中环**·美丽**中国**

**CNEPC**

**Comprehensive Approach to Solid Waste Disposal  
& Introduction about Hefei Project**

Speaker : Ms. Xiao Lan, CNEPC



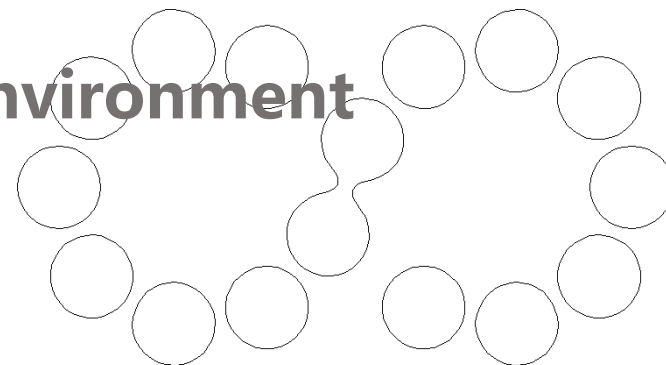
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## About CECEP

### 始终专注于节能环保产业

Be Committed to Energy Conservation and Environmental Protection Industry

### 中国节能环保领域最大的科技型服务型产业集团

China's largest technology-based and service-oriented industrial group in energy conservation and environmental protection field

A unique  
SOE in EPEP  
industry

474

474 subsidiaries  
of all levels

7

7 listed  
companies

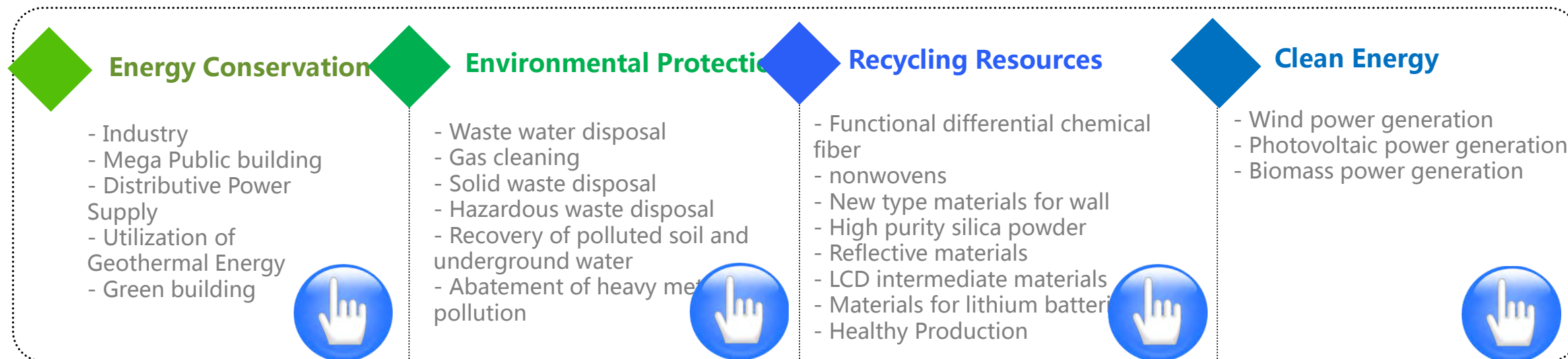
30

Located in 30  
provinces

60

Business covering 60  
countries and regions

# CECEP • Integrate Industry Chain with Decations to:



**CECEP has established the integrate industry chain for engery conservation and environmental protection, based on its synthetical services in the ECEP industry, incl. supervision & evaluation, programming & consultancy, EPC, financial solutions to various businesses.**

## CECEP • International Collaborations:



CECEP contributes a lot to Chinese and Worldwide ecological environmental protection.

CECEP has become Chinese namecard in environmental protection industry.



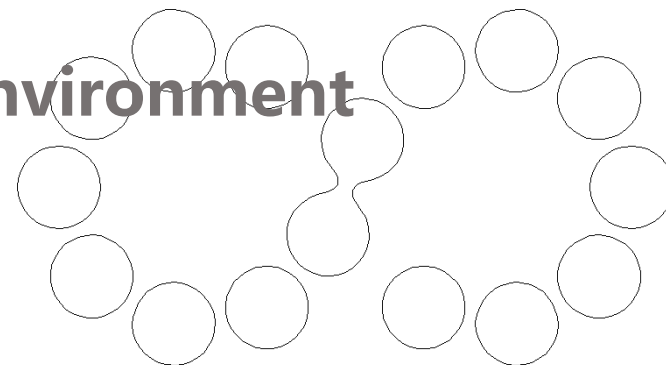
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## About CNEPC • Highlights:

Wholly-owned subsidiary of CECEP



Initiated and established by MoEP in 1985



Total assets amounting to RMB10 billion



10% market share



Top 10 most influential solid waste disposal enterprises in 5 successive years



Top 10 investors in the industry of power generation from waste incineration

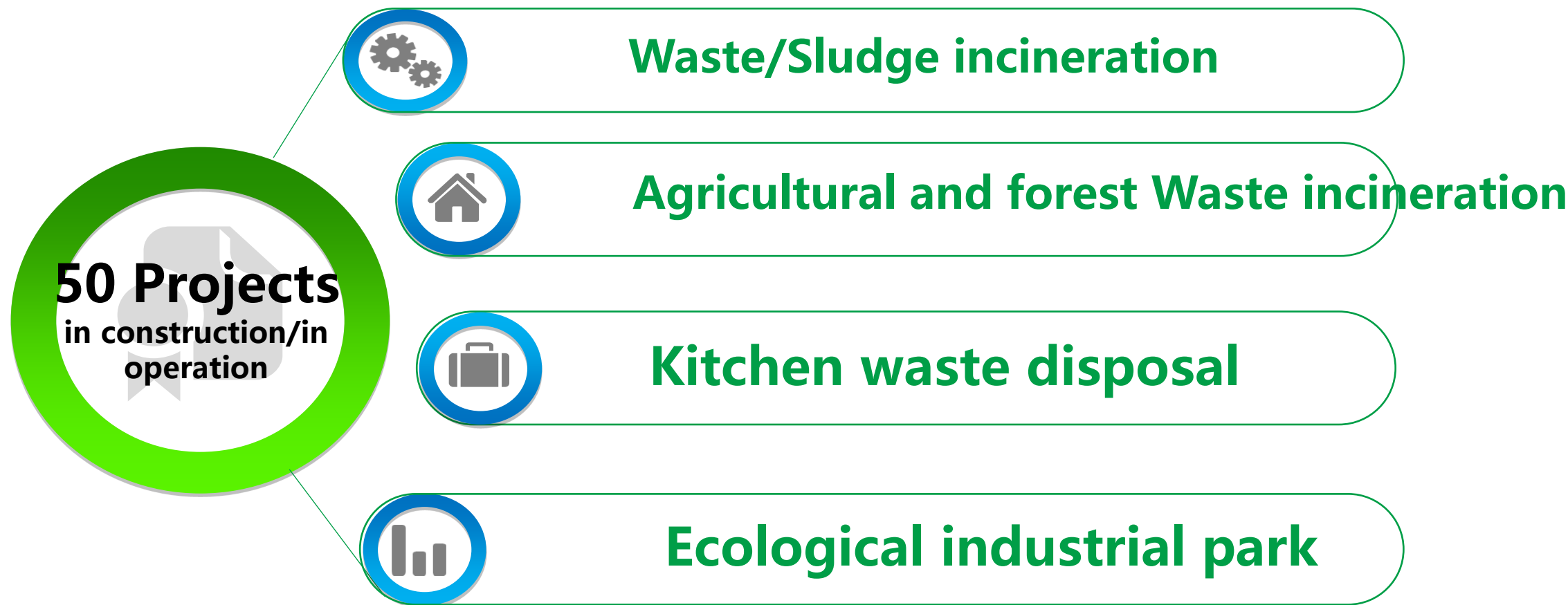


Top leader of high strength in Chinese solid waste disposal industry





## Focusing on areas:



## To provide syn-solutions to solid waste disposal:

CNEPC has the capability to provide such a solution for a city or a region.

### Ecological park

- waste sorting center
- **household waste incineration (as the core)**
- kitchen waste disposal center
- hazardous waste disposal center
- harmless disposal center of dead livestock and poultry
- sludge disposal center
- waste water disposal center
- biogas generation center with anaerobic
- R&D center
- Education base for environmental protection



## Top leader • Demonstrations:

**No. 1 in China**

demostrative project  
disposing sludge with  
own intellgnt  
property



Shaoxing project,  
Zhajiang provnince

**No. 1 in China**

"indirect incineration  
method"brand new  
household waste  
recyling system



Xiamen project,  
Fujian province

**No. 1 in China**

waste incineration  
plant with grates by  
introduing and  
absorbing foreign tech



Chongqing project,  
Chongqing city

**No. 1 in China**

demostrative project  
disposing biomass with  
direct incineration tech  
of our own IP



Suqian project,  
Jiangsu province

**The most modern  
in China**

**the most modern and  
advanced incineration  
plant**



Hefei project,  
Anhui province

## Top leader • Achievements:



**In north China:** Qiqihar, Heilongjiang  
**In south China:** Xiamen, Fujian  
**In west China:** Tianshui, Gansu  
**In East Chia:** Yantai, Shandong  
**Covering most Hebei:** 7 cities  
**Leading Shandong:** 4 plants in  
**Far reaching Yunnan:** Honghe  
autonomous state

Projects are located in different 30 cities of tens provinces, and we have strong capability in technology adaptation, team spirit and project managment.

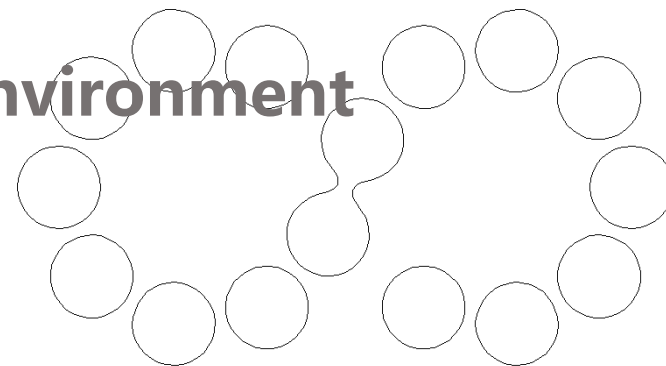
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## A glance:

The most typical modern waste disposal project of big size in China

**Hefei household waste incineration power generation project**



The only waste incineration plant with the character of environmental protection and public welfare in Hefei. Total investment: RMB1.15 billion, Capacity: 660k tons of waste per year, Power generation: 200000k kWh annually.

The Project is separated into two phases, phase I of 1000 tons per day is in operation, phase II financed by EUR30000k KfW loan is almost built and will enter trial commercial run in Oct this year.

## Utilization of KfW loan:

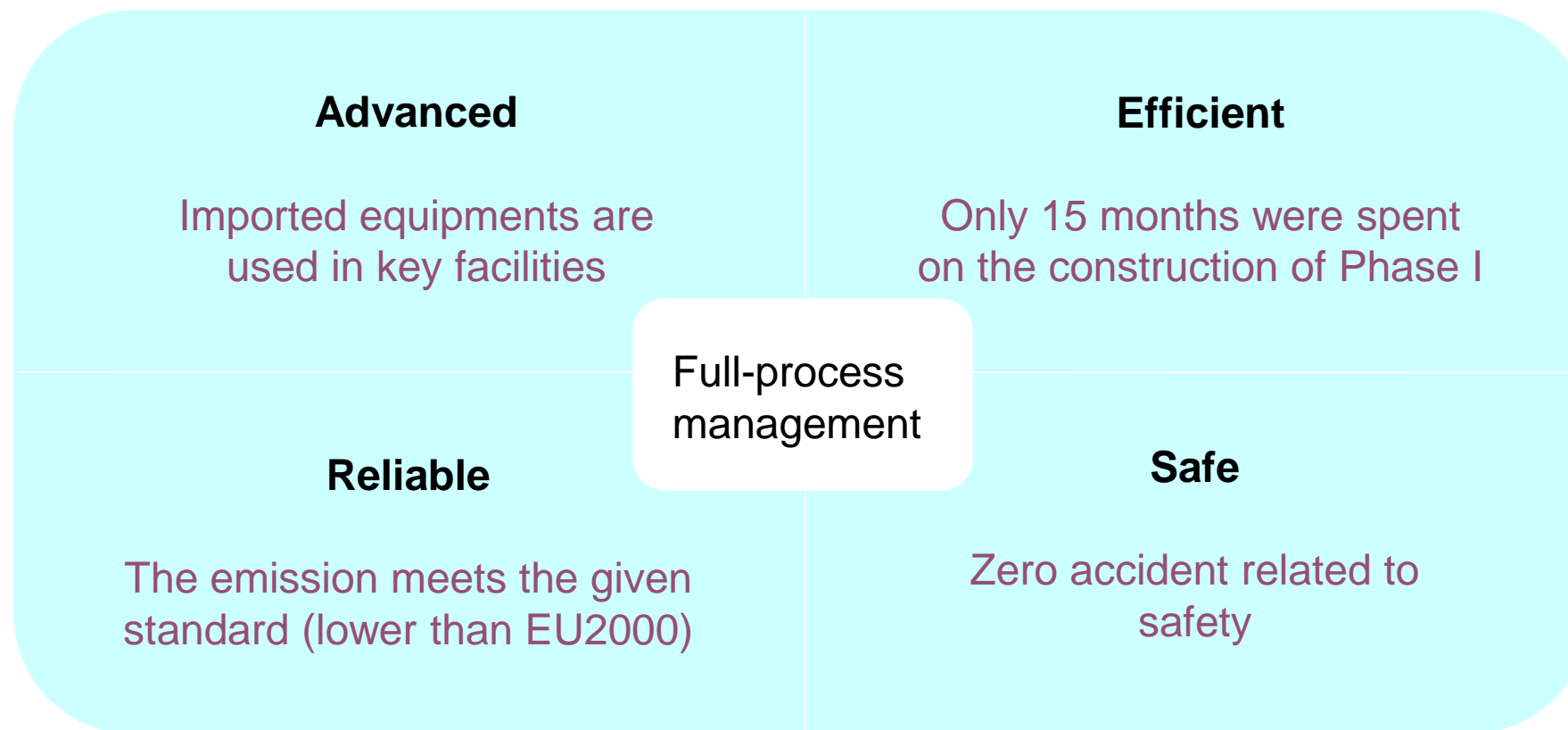


€ 3'000'000



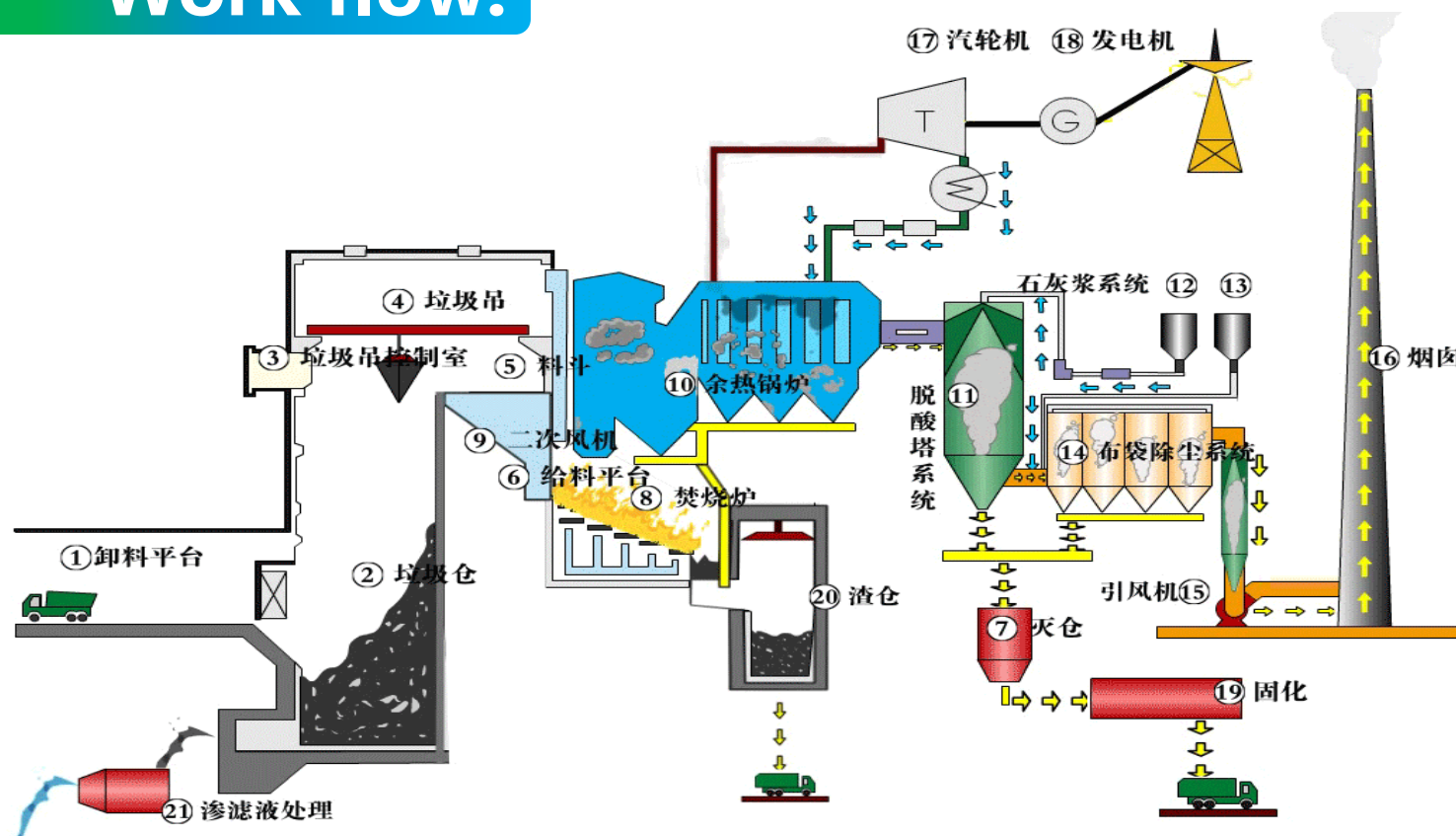
- ◆ Initiated in early 2013
- ◆ Utilization of KfW loan in good parallel with the construction of project
- ◆ the best case in terms of implementation
- ◆ Currently the ratio of disbursed against the contract value is **66%**
- ◆ 90% or more disbursement is likely to happen within the year
- ◆ the remaining fund will be withdrawn in next Q1

## High quality in construction:





## Work flow:



In Hefei project we adopt the most advanced incineration technology with mechanical grate and gas cleaning technology, by importing key equipments which are applicable to household waste -high moisture content but low heat value- in cities of China.

## Demonstration base:

Hefei project has been built to a demonstration base for environmental protection education in Hefei, and played a key role in applying for the "Sanitation and Civilization City" successfully.

- since 2014, 150 visiting events have happened, and we have entertained 1000 visitors in total.
- The visitors include or come from :
  - (1) leaders
  - (2) authorities
  - (3) other companies
  - (4) social entities



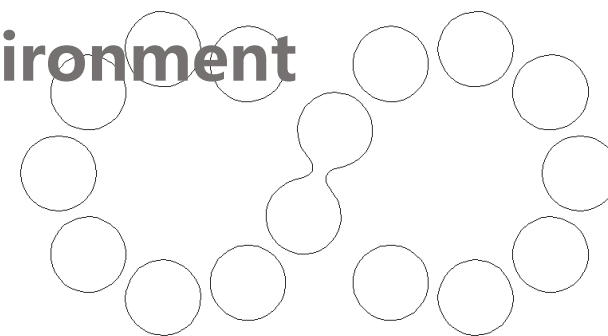
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## The waste dilemma:

As the population keeps increasing and the urbanization is moving forward quickly

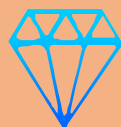
**The situation of waste disposal is getting serious**

China is suffering the greatest pressure from waste worldwide



**7 billion**

the existing waste volume in Ton



**750k**

occupation area in Chinese acre



**3-4%**

yearly growth rate of waste volume



**200m**

yearly waste volume by Y2020 in Ton

## Current disposal status:

### The incineration is now the efficient solution to the waste surrounding cities in China

#### Utility advantages:

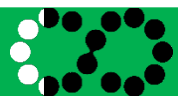
- being disposed harmlessly and sufficiently
- more reduction in volume
- small occupation to save land resource
- waste recycling for energy

#### Government support:

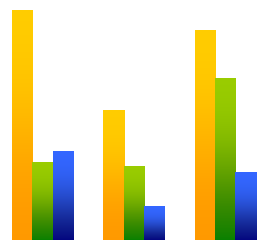
《"The 12th 5-year" construction plan for harmless disposal facility for household waste in cities and towns countrywide》 requires: by 2015, the incineration will reach 35% of harmless disposal capacity, and **48% in east China.**

#### Technical matureness:

- with 20+ years of localization since this technology was introduced to China in 1988, now local manufacturing is mature.
- The operating teams are experienced and run the plant successively, safely and stably.



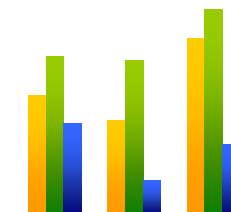
## We have achieved a lot:



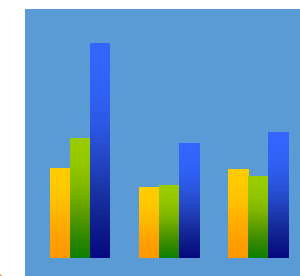
During the 12th 5-year, total investment in this industry amounts to RMB800 billion, double as the 11th 5-year



There will be almost 300 incineration plants in operation and in construction by Y2015 end, and the capacity will reach 100m tons per year.



According to current incomplete statistics, the daily capacity of operating plants is 220k tons, and 120 tons of plants in construction.



# A promising industry:

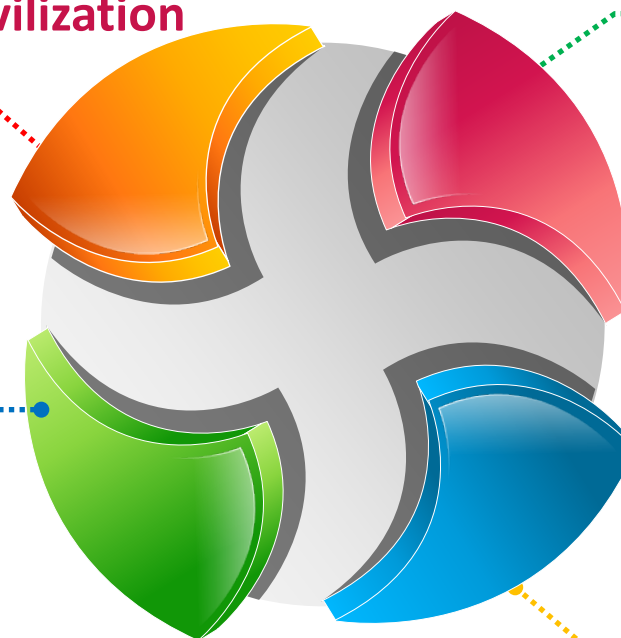
## The institutional reform on ecological civilization

People are more conscious  
Central and local governments care  
Ecological civilization is a political assignment

《The overall institutional reform plan for ecological civilization》

## Urbanization & new rural construction

The urbanization development and new rural construction is paid much attention, where the waste disposal industry has a lot of potential.



## More potentials in “13th 5-year

The incineration capacity will grow up, and the construction management will be more refined.

## Positive financial policy, PPP model

MoF implements positive financial policies, i.e. push PPP model with efforts to encourage private funds involve in some municipal infrastructure areas, which will activate the industry.

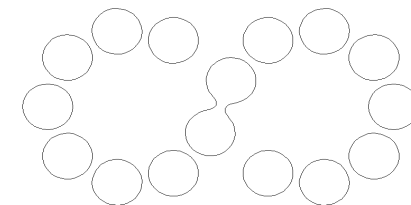
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## Work together

- ◆ Such a developing industry needs great support from Chinese government and overseas.
- ◆ Germany leads other countries in the area of environment protection, especially the waste disposal industry, as the flagship in whatever manufacturing or project construction & operation.
- ◆ Looking forward to more communication and collaboration with German peers in management, technology, and financial aspects.



## Cherish the Environment



**Let's make the sky bluer  
and the earth greener and  
the water cleaner**

**We wish human being  
lives with the earth more  
wonderfully and  
harmoniously**



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