

# 2018 Annual Results Presentation







## Development Facilitated By Transformation from 2013-2018

Considering the limitations related to site selection, scope and disposal volume of waste treatment by cement kilns, the Company signed a cooperation agreement regarding waste incineration technology for power generation with Kawasaki HI on 12 November 2013 and promoted the technology across China





Ventured into the treatment of solid and hazardous waste by cement kilns, offerin dual impetus to drive the development of the environmental protection business.

To increase the economic efficiency of the project, proposed to convert the CKK project into a project allowing collaborative treatment of general solid and hazardous waste at the interim work meeting held on 17 July 2018. The project has been launched in Ningguo and Baoshan on a trial basis

#### 2013

After the listing, the Company started to develop the CKK business and attempted to transform the environmental protection business

Developed grate furnace power generation projects

**In late 2015**, injected capital into Yaobai Environmental Protection and ventured into the treatment of solid and hazardous waste by cement kilns

**In late 2017**, put its wholly-owned Wuhu Solid & Hazardous Waste Project into operation, which is a new profit growth point in addition to the grate furnace power generation technology, offering **dual impetus to drive** the development of the environmental protection business

### 2018

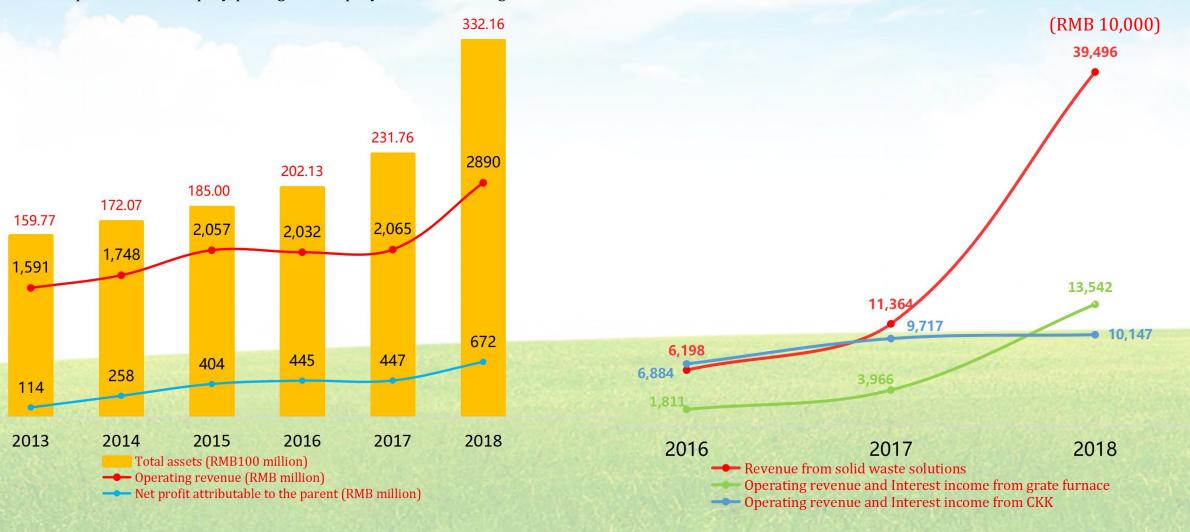
Explored the collaborative treatment of solid and hazardous waste by cement kilns

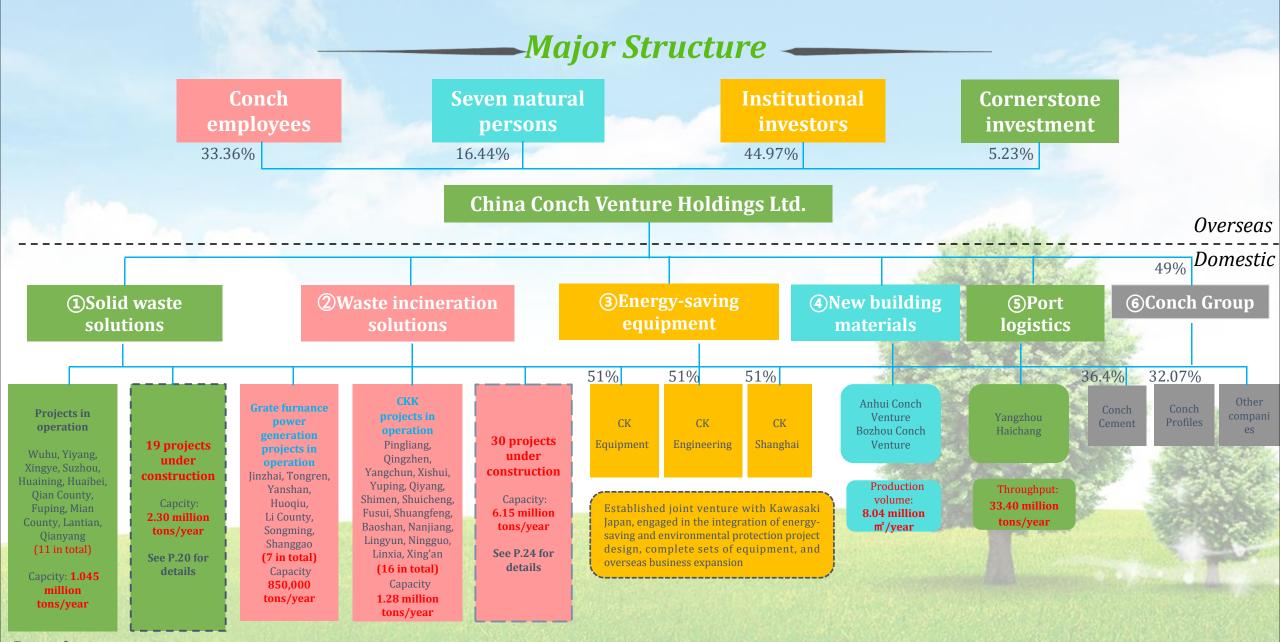


## Steady Improvement in Performance from 2013-2018

From 2013-2015, benefiting from the overseas residual heat power generation contracts and expansion of the CKK project, the Company's performance grew rapidly; from 2015-2017, the Company's environmental protection business entered the transition period, with most of the projects being at the early stage or construction stage.

Since 2018, the Company has been devoted to develop the environmental protection business. Solid waste solutions and grate furnace power generation businesses have promoted the development of the Company, putting the Company on a fast track of growth.





#### **Remarks:**

- 1. Cornerstone investors: including China National Building Material Co., Ltd., TCC Investment Group, and Asia Cement Co., Ltd.
- 2. Equity data as of February 2019.





# Operational Performance

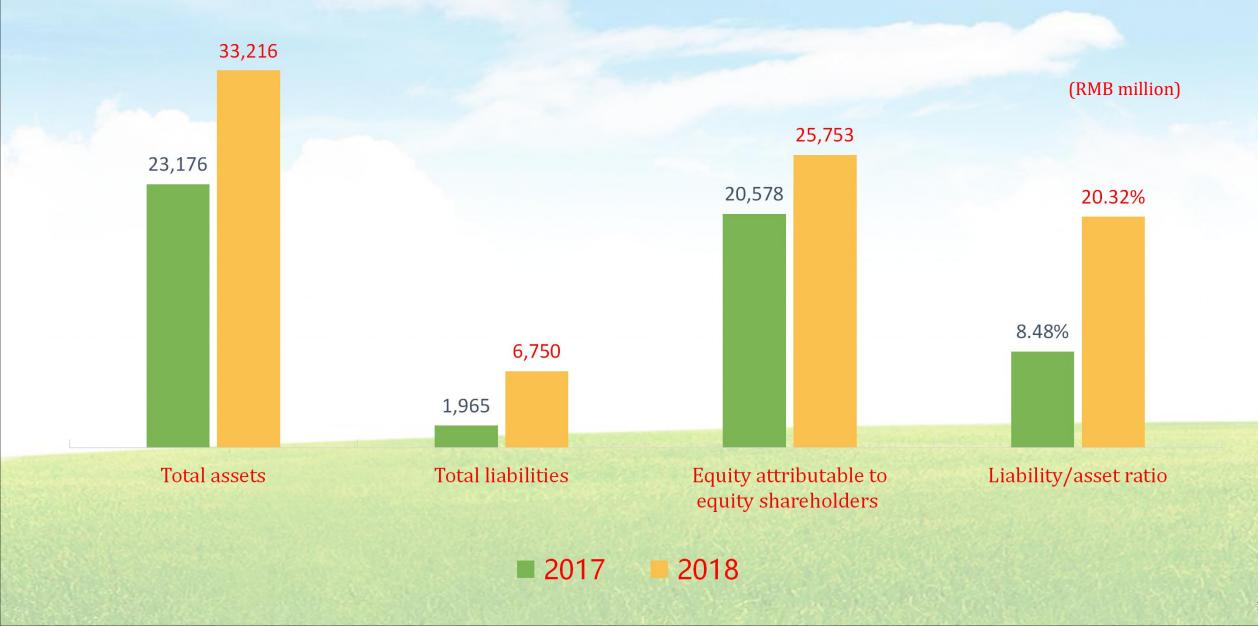




# Net Profit Attributable to Parent Company (Excluding Non-recurring Items)

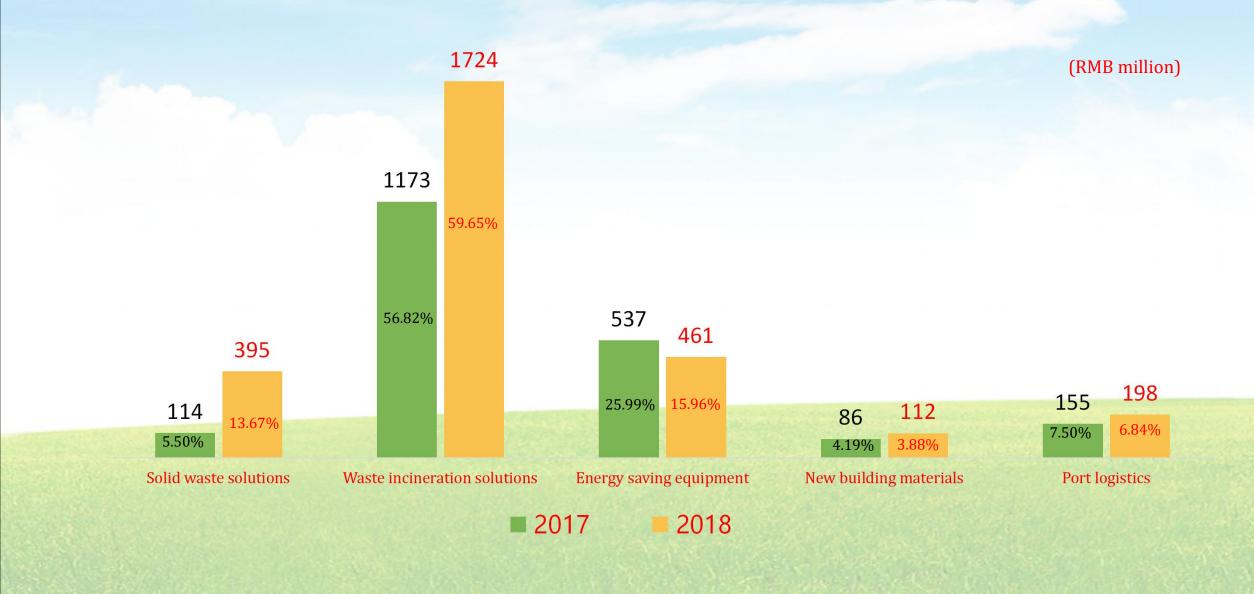
(RMB million)

Туре		2018	2017	Change
Net profit of principal activities attributable to parent company (excluding non-recurring items)		672	447	50.21%
Non-recurring	g Items			
	Interest income	(22)	/	/
Convertible bonds	Interest expense	37		
	Subtotal	15		
Offshore distribution Withholding tax		42		
Net profit of principal active parent company (before excepted)	luding non-recurring	729	447	62.94%



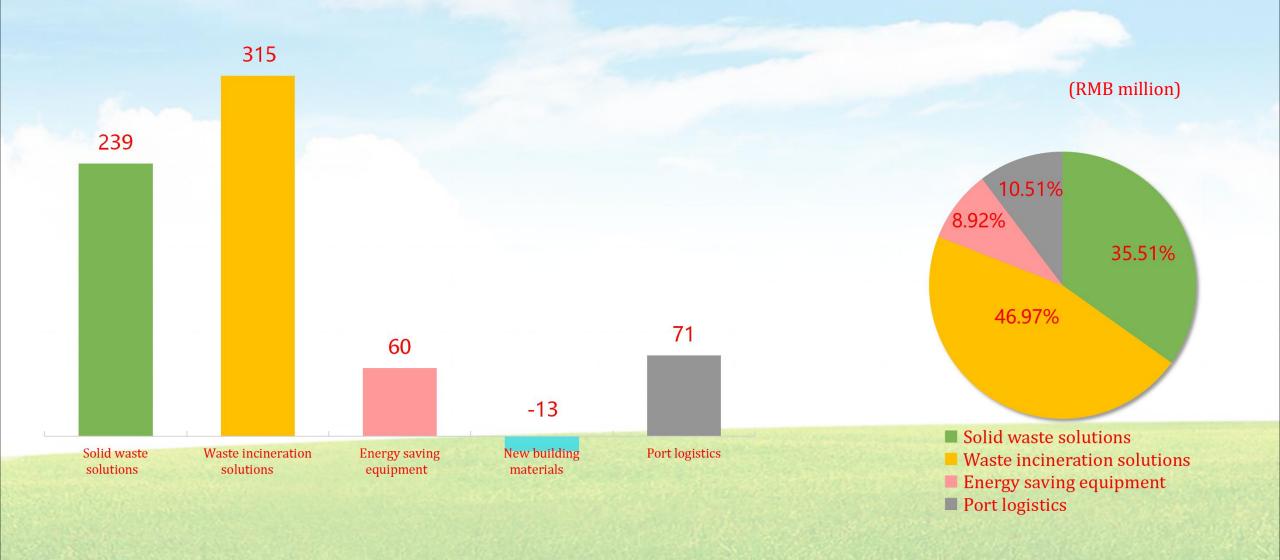


# Revenue by Segments and Proportion



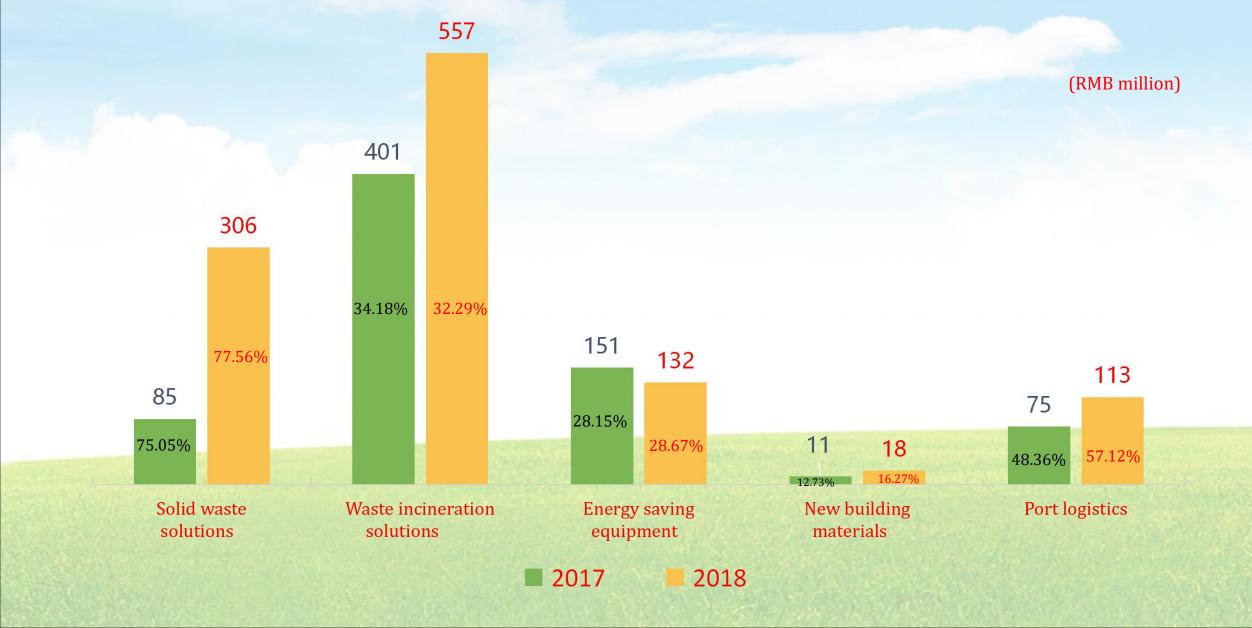


## Net Profit Attributable to Parent Company by Segments and Proportion





## Gross Profit and Gross Profit Margin by Segments







## **Development Overview in 2018**

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#### **Project Development**

In 2018, the Company exceeded its targets and signed **18** new environmental protection projects. Among which, **6** were solid waste solutions projects, **11** were grate furnace projects and **1** was water treatment project.



Signing ceremony for 2×500,000 tons/year domestic waste power generation project in Xianyang

# 2

### **Project Construction**

During the year, the Company undertook the construction for **34** projects, **18** of which were existing projects and **16** were new projects. **8** solid waste solutions, grate furnace and CKK projects were put into operation.



Suzhou's 100,000 tons/year solid waste solutions project put in operation

# 3

# **Management Enhancement**

**Solid waste solutions segment:** innovative management structure produced good result after a year of execution

Grate furnace segment: benchmarking management system gradually improved operational quality
Safety management: passed ISO quality, environment and occupational health and safety management system certification; established safety committee and health and safety management institution



Feng County's 100,000 tons/year waste incineration solutions project in stable operation

# New contracts for waste solutions projects since 2018

#### 2018.01

The Company obtained a good start in business order and acquired solid waste solutions project in Liangping, Chongqing City (100,000 tons/year)



#### 03.28

The Company signed contract for solid waste solutions project in Qingzhen City, Guizhou Province (100,000 tons/year)





#### 02.27

The Company obtained solid waste solutions project in Tongchuan City, Shaanxi Province (100,000 tons/year)

#### 05.10

The Company signed contract for solid waste solutions project in Xianyang City, Shannxi Province (300,000 tons/year)

#### 06.22

The Company signed contract for solid waste solutions project in Linxiang City, Hunan Province (100,000 tons/year)

#### 2019.01

The Company obtained solid waste solutions project in Yangchun City, Guangzhou Province (100,000 tons/year)

#### 2019.01

0

The Company obtained solid waste solutions project in Dazhou, Sichuan Province (200,000 tons/year)



#### 07.25

The Company obtained solid waste solutions project in Baoshan City,
Yunnan Province (100,000 tons/year)

#### 2019.01

The Company obtained solid waste solutions project in Yiyang City, Hunan Province (100,000 tons/year)

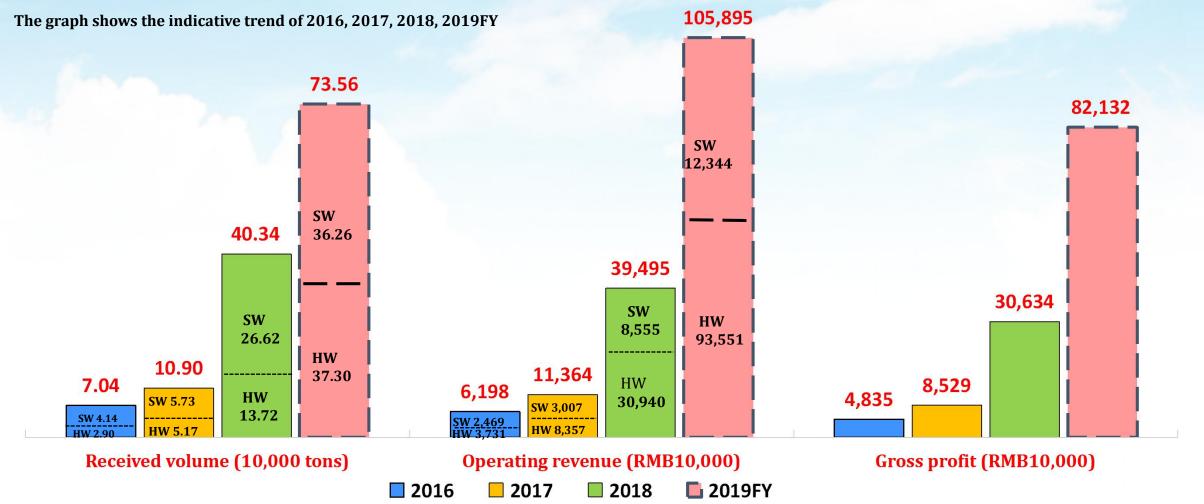
#### 2019.02

The Company obtained solid waste solutions project in Ningguo City, Anhui Province (100,000 tons/year)



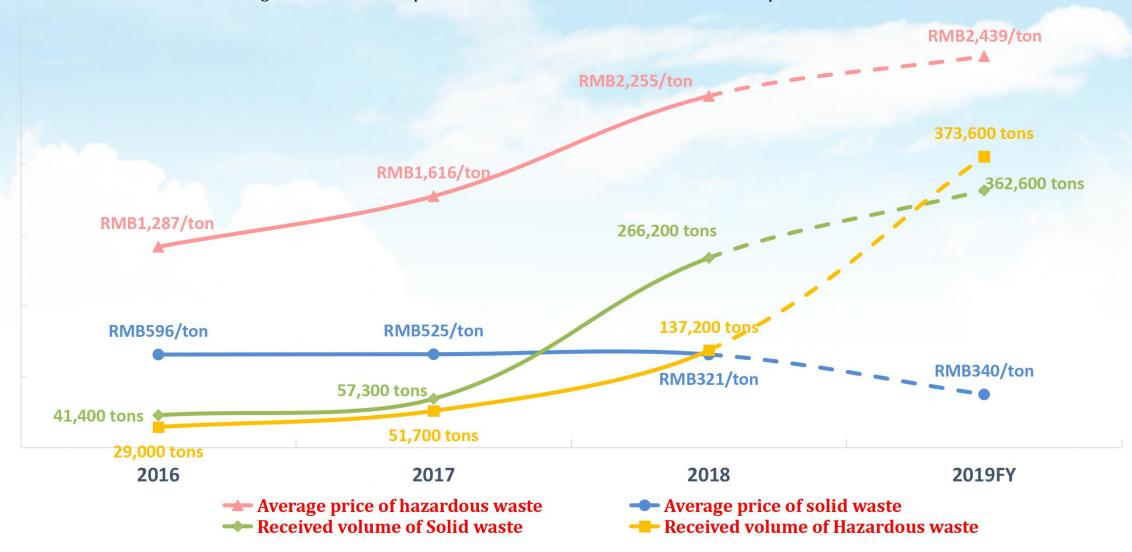
As of 2018, 11 projects located in Wuhu, Xingye, Suzhou, Yiyang, Fuping, Lantian, Qian County, Mian County, Huaining, Huaibei and Ganyang were in operation.

- The received volume was 403,400 tons; of which: 137,200 tons of hazardous waste(HW) and 266,200 tons of solid waste(SW);
- Realized operating revenue of RMB 395 million; among which RMB 309 million were from hazardous waste, accounting for 78.34%, and RMB 85.55 million were from solid waste, accounting for 21.66%;
- The gross profit margin was RMB306 million; the comprehensive gross profit margin of the products reached 77.56%, including: 81% for hazardous waste and 66% for solid waste.





• In 2018, with the successive implementation of the 5 projects, Jiangxi Yiyang, Anhui Suzhou, Guangxi Xingye, Wuhu Phase II and Shaanxi Qianyang, the solid waste solutions sector saw significant increase in profit. The chart shows the trend of volume and price in 2016, 2017 and 2018 and 2019FY.





## Data on Solid and Hazardous Waste Solutions in 2018

	Treatment variety	Receiving capacity	Average price including tax/excluding tax (RMB)	Operating revenue	Net profit	
Wholly-owned	General solid waste 182,900 tons		199 (231)			
subsidiaries	Hazardous waste 74,900 tons		2,612 (3,030)	RMB232,100,000	RMB167,590,000	
Joint ventures	General solid waste 83,300 tons		590 (684)			
under Yaobai Environmental	Hazardous waste	Hazardous waste 62,300 tons		RMB162,860,000	RMB118,410,000	

#### **Remarks:**

- 1. The solid waste disposal varieties of Wuhu, Yiyang and other wholly-owned subsidiaries are mainly municipal sludge. The solid waste disposal of Yaobai Environmental includes the fluorine-containing Samsung Electronics and municipal sludge.
- 2. Wuhu Environmental Protection, Yiyang and other wholly-owned subsidiaries dispose 19 kinds of hazardous wastes including: HW02 pharmaceutical waste, HW04 pesticide waste, HW06 waste organic solution and organic solvent-containing waste, HW08 oil/water, hydrocarbon/water mixture or emulsifier, HW11 fine (steaming) residue, HW12 fuel, coating waste, HW13 organic resin waste, HW39 phenol waste, HW45 waste containing organic halide and HW49 other waste.

Yaobai Environmental dispose 24 kinds of hazardous wastes including: HW06 waste organic solvent and organic solvent waste, HW08 waste mineral oil and mineral oil waste, HW09 oil/water, hydrocarbon/water mixture or emulsifier, HW11 fine (steam) residue, HW12 fuel, paint waste, HW17 surface treatment waste, HW32 inorganic chloride waste, HW33 inorganic cyanide waste, HW49 other waste and HW50 waste catalyst.



## Solid and hazardous waste project performance illustration

No.	Construction status	Project location	Processing capacity	Hazardous waste qualification	Date of operation	Remark
1		Lantian County, Shaanxi Province	90,000 tons/year		Jan 2015	General solid waste
2		Fuping County, Shaanxi Province	100,000 tons/year	100,000 tons/year	Apr 2016	
3		Qian County, Shaanxi Province	70,000 tons/year	63,600 tons/year	Apr 2017	
4		Huaining County, AnHui province	70,000 tons/year		Sept 2017	General solid waste
5		Mian County, Shaanxi Province	45,000 tons/year		Oct 2017	General solid waste
6	Completed	Huaibei City,AnHui Province	70,000 tons/year		Dec 2017	General solid waste
7	Completed	Wuhu City, Anhui Province	2×100,000/year	Phase I 68,000 tons/year Phase II 55,000 tons/year	Dec 2017	
8		Yiyang County, Jiangxi Province (Phase I)	100,000 tons/year	85,000 tons/year	May 2018	
9		Xingye County, Guangxi Region(Phase I)	100,000 tons/year	95,000 tons/year	Aug 2018	
10		Suzhou City, Anhui Province (Phase I)	100,000 tons/year	45,000 tons/year	Aug 2018	
11		Qianyang County, Shaanxi Province	100,000 tons/year	100,000 tons/year	Oct 2018	
		Subtotal	1.045 million/year	611,600 tons/year		



## Solid and hazardous waste project performance illustration

No.	Construction status	onstruction status Project location Processing capacity		Expected date of operation	Remark	
12		Zhong County, Chongqing City	$2 \times 100,\!000$ tons/year	Apr 2019		
13		Yiyang County, Jiangxi Province (Phase II)	100,000 tons/year	Jun 2019		
14		Wenshan City, Yunnan Province (Phase I)	100,000 tons/year	Jul 2019		
15		Xianyang City, Shaanxi Province	300,000 tons/year	Aug 2019	General solid waste	
16	··· P	Liangping Area, Chongqing City	100,000 tons/year	Oct 2019	General solid waste	
17	Projects under construction	Xingye County, Guangxi Region (Phase II)	100,000 tons/year	Oct 2019		
18		Tongchuan City, Shaanxi Province	100,000 tons/year	Oct 2019		
19		Qingzhen City, Guizhou Province	100,000 tons/year	Oct 2019		
20		Sishui County, Shandong Province	100,000 tons/year	Nov 2019		
21		Guangyuan City, Sichuan Province	100,000 tons/year	Dec 2019	General solid waste	
22		Qiyang County, Hunan Province	100,000 tons/year	Dec 2019		
		Subtotal	1.40 million tons/year			
23		Suzhou City, Anhui Province (Phase II)	100,000 tons/year			
24		Wenshan City, Yunnan Province (Phase II)	100,000 tons/year			
25		Baoshan City, Yunnan Province	100,000 tons/year		(Changed to solid and hazardous waste solutions from CKK)	
26	Approved for construction	Ningguo City, Anhui Province	100,000 tons/year	/	(Changed to solid and hazardous waste solutions from CKK)	
27		Yangchun City, Guangdong Province	100,000 tons/year			
28		Linxiang City, Hunan Province	100,000 tons/year			
29		Yiyang City, Hunan Province	100,000 tons/year			
30		Dazhou City, Sichuan Province	200,000 tons/year		General solid waste	
		Subtotal		900,000 tons/year		
		Total		3.345 million tons/year		

# New contracts for waste incineration solutions projects since 2018

The Group exceeded its targets for the year. During the reporting period, the Group obtained 11 new grate furnace power generation projects, the most in the history. The Vietnam Thái Nguyên project represented a breakthrough of the Group in the overseas market.

#### 2018.01

The Company obtained a good start and acquired the waste power generation project in Shizhu, Chongqing (100,000 tons/year)

#### 02.28

The Company acquired the waste power generation project in Xishui County, Guizhou Province (2x140,000 tons/year)

#### 05.10

The Company acquired the waste power generation project in Xianyang City, Shaanxi Province (2x500,000 tons/year

#### 07.01

The Company acquired the waste power generation project in Thái Nguyên, Vietnam (180,000 tons/year)

#### 08.23

The Company acquired the waste power generation project in Manzhouli, Inner Mongolia (140,000 tons/year)

#### 01.24

The Company acquired the waste power generation project in Shucheng County, Anhui (140,000 tons/year)

#### 05.10

The Company acquired the waste power generation project in Tongchuan City, Shaanxi Province (180,000 tons/year)

#### 06.19

The Company acquired the waste power generation project in Fuquan City, Guizhou Province (100,000 tons/year)

#### 07.25

The Company acquired the waste power generation project in Baoshan City, Yunnan Province (2x140,000 tons/year)

#### 10.24

The Company acquired the waste power generation project in Zhenxiong County, Yunnan Province (2x180,000 tons/year)

#### 12.02

The Company acquired the waste power generation project in Lujiang County, Anhui Province (2x180,000 tons/year)

#### 2019.01

The Company signed a framework agreement for the waste power generation project in Suiyang, Guizhou Province (100,000 tons/year)

#### 2019.02

The Company signed a framework agreement for the project in Suzhou City, Anhui Province (140,000 tons/year)

#### 2019.02

The Company acquired the waste power generation project in Mang City, Yunnan (2x100,000 tons/year)

#### 2019.03

The Company obtained the waste power generation project in Luxi County, Yunnan Province (2x100,000 tons/year)

#### 2019.01

The Company signed a framework agreement for the waste power generation project in Wuwei County, Anhui Province (2x180,000 tons/year)

#### 2019.01

The Company acquired the tender for the waste power generation project in Hanshou County, Hunan Province (100,000 tons/year)

#### 2019.02

The Company acquired the waste power generation project in Ningguo City, Anhui Province (140,000 tons/year)

#### 2019.03

The Company acquired waste power generation project in Tengchong city, Yunnan Province (2x100,000 tons/year)

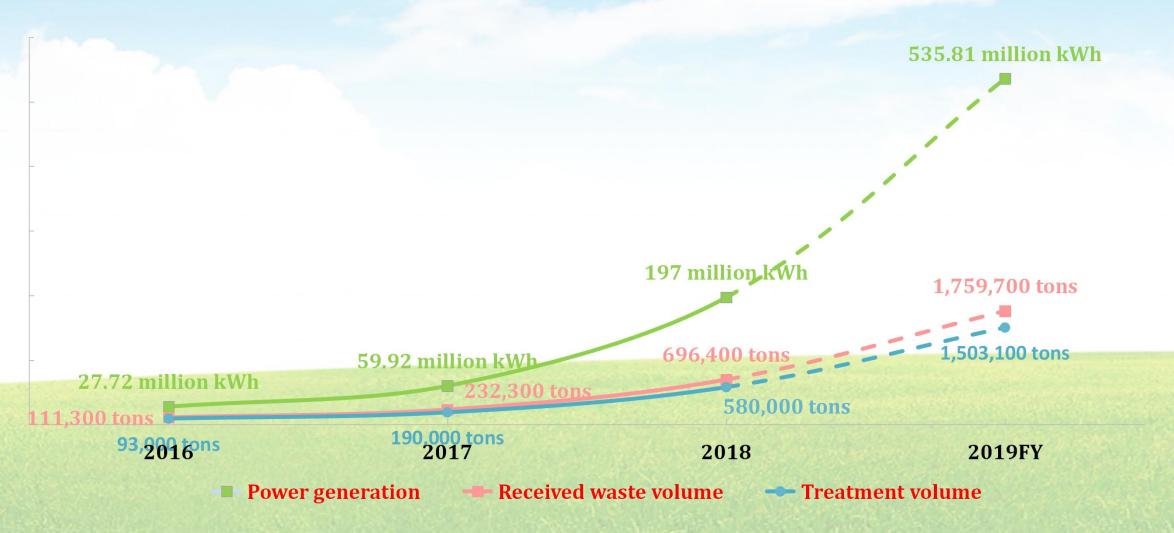
#### 2019.03

The Company acquired the waste power generation project in Jiuquan, Gansu (2x180,000 tons/year)



During the reporting period, the Group developed an innovative management model and a benchmarking management system for the grate furnace segment, thereby further improving the quality of production and operation and posting power generation of 197 million kWh, received waste volume of 696,400 tons and treatment volume of 580,000 tons.

The graph shows the indicative trend of 2016, 2017, 2018 and 2019FY





## **Grate furnace power generation project performance illustration**

No.	Construction status	Project location	Processing capacity	Expected date of operation	Remark
1		Jinzhai County, Anhui Province	100,000 tons/year	Jan 2016	
2		Tongren City, Guizhou Province	$2 \times 100,000$ tons/year	Jul 2017	
3		Yanshan County, Yunnan Province	70,000 tons/year	Aug 2017	
4	Completed	Huoqiu County, Anhui Province (Phase I)	140,000 tons/year	Jan 2018	
5		Li County, Hunan Province (Phase I)	100,000 tons/year	Apr 2018	
6		Songming County, Yunnan Province	100,000 tons/year	Jan 2019	
7		Shanggao County, Jiangxi Province	140,000 tons/year	Feb 2019	
	Su	btotal		850,000 tons/year	· · · · · · · · · · · · · · · · · · ·
8		Huoqiu County, Anhui Province (Phase II)	140,000 tons/year	Mar 2019	
9		Yiyang County, Jiangxi Province	$2 imes100,\!000$ tons/year	Phase I: May 2019 Phase II: Jul 2019	Two phases of construction
10		Shache County, Xinjiang Region	2×100,000 tons/year	Jun 2019	
11		Bole City, Xinjiang Region	100,000 tons/year	Jun 2019	
12	Projects under construction	Sishui County, Shandong Province	140,000 tons/year	Jun 2019	
13	construction	Yang County, Shaanxi Province	100,000 tons/year	Sept 2019	
14		Li County,Hunan Province (Phase II)	140,000 tons/year	Oct 2019	
15		Baoshan City, Yunnan Province	2×140,000 tons/year	Dec 2019	Two phases of construction
16		Fuquan City, Guizhou Province	100,000 tons/year	Dec 2019	
17		Lujiang County, Anhui Province (Phase I)	180,000 tons/year	Dec 2019	
18		Shizhu County, Chongqing City	100,000 tons/year	Jan 2020	
19		Xianyang City, Shaanxi Province	$2 \times 500,000$ tons/year	Jun 2020	
	Su	btotal		2.68 million tons/year	



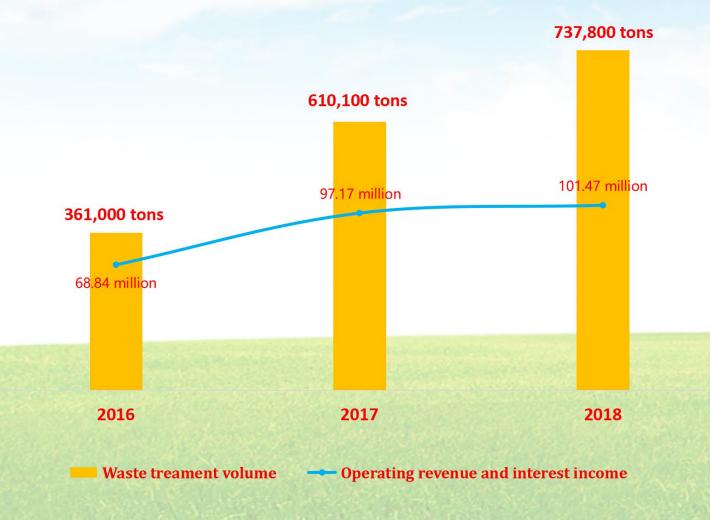
## **Grate furnace power generation project performance illustration**

No.	Construction status	Project location	Processing capacity	Expected date of operation	Remark
20		Huoshan County, Anhui Province	140,000 tons/year		
21		Shucheng County, Anhui Province	140,000 tons/year		
22		Xishui County, Guizhou Province	2 imes140,000 tons/year		Two phases of construction
23		Zhenxiong County, Yunnan Province	2 imes180,000 tons/year		Two phases of construction
24		Tongchuan City, Shaanxi Province	180,000 tons/year		
25		Thái Nguyên Province, Vietnam	180,000 tons/year		
26		Manzhouli, Inner Mongolia	140,000 tons/year		
27		Lujiang County, Anhui Province (Phase II)	180,000 tons/year	/	
28	Pending approval	Mang City, Yunnan Province	2×100,000 tons/year		Two phases of construction
29		Suzhou City, Anhui Province	140,000 tons/year		
30		Wuwei County, Anhui Province	$2 \times 180,000$ tons/year		Two phases of construction
31		Ningguo City, Anhui Province	140,000 tons/year		
32		Suiyang County, Guizhou Province	100,000 tons/year		
33		Hanshou County, Hunan Province	100,000 tons/year		
34		Tenchong city, Yunnan Province	2 imes100,000 tons/year		Two phases of construction
35		Luxi County, Yunnan Province	$2\! imes\!100,\!000$ tons/year		Two phases of construction
36		JiuQuan, GanSu province	2 imes180,000 tons/year		Two phases of construction
	Su	btotal	3.40 m	illion tons/year	
	•	Fotal	6.93 m	illion tons/year	



During the reporting period, operating revenue from the Group's collaborative treatment of domestic waste by cement kilns projects was RMB101 million, while waste treatment volume was 737,800 tons.







## **CKK** projects performance illustration

No.	Construction status	Project location	Business model	Processing capacity	Remark
1		Pingliang City, Gansu Province	ВОТ	100,000 tons/year	
2		Qingzhen City, Guizhou Province		100,000 tons/year	
3		Yangchun City, Guangdong Province		70,000 tons/year	
4		Yuping County. Guizhou Province		30,000 tons/year	Co-developed with China Nationa Building Material Company Limite
5		Xishui County, Guizhou Province		100,000 tons/year	
6	***	Qiyang County, Hunan Province		100,000 tons/year	
7		Shimen County, Hunan Province		70,000 tons/year	
8	Completed	Shuicheng County, Guizhou Province		70,000 tons/year	
9	Completed	Fusui County, Guangxi Province		70,000 tons/year	
10		Shuangfeng County, Hunan Province		70,000 tons/year	
11		Baoshan City, Yunnan Province		100,000 tons/year	
12		Nanjiang County, Sichuan Province		70,000 tons/year	
13		Lingyun County, Guangxi Province		30,000 tons/year	
14		Ningguo City, Anhui Province		100,000 tons/year	
15		Linxiazhou, Gansu Province		100,000 tons/year	
16	***	Xing'an County, Guangxi Region		100,000 tons/year	
Subtotal			1.28 million tons/year		
17	Project under construction	Yingjiang County, Yunnan Province	вот	70,000 tons/year	To launch production in Mar 2019
Total			1.35 million tons/year		



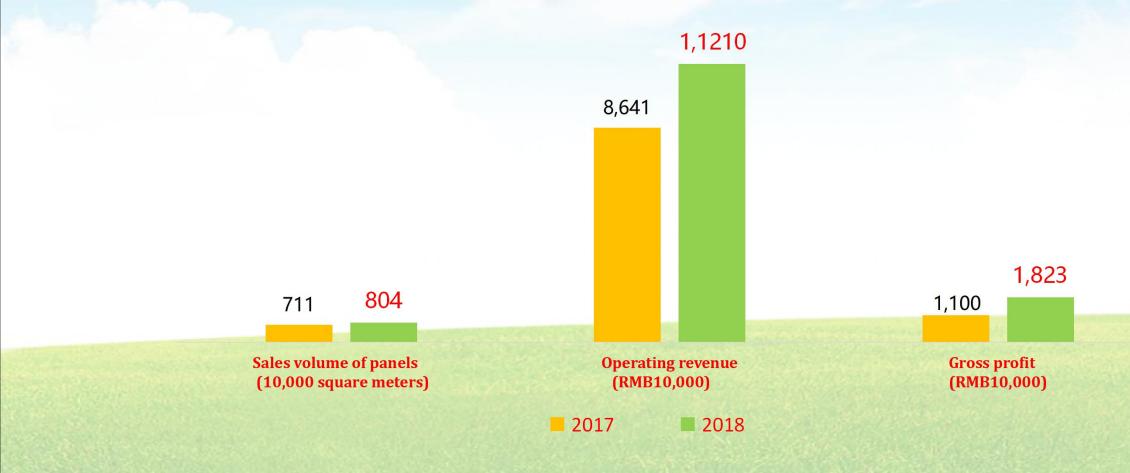
## **Waste Disposal Revenue Composition**

	2018		2017		Change in amount	Change in more suitan
Revenue Composition	Amount (RMB1,000)	Proportion (%)	Amount (RMB1,000)	Proportion(%)	(%)	Change in proportion (Percentage point)
Construction revenue	1,486,735	86.26	1,036,475	88.34	43.44	-2.08
Waste treatment by cement kilns	82,492	4.79	213,494	18.20	-61.36	-13.41
Grate furnace waste power generation	1,404,243	81.47	822,981	70.14	70.63	11.33
Operating revenue	143,220	8.31	65,100	5.55	120.00	2.76
Waste treatment by cement kilns	40,235	2.33	35,499	3.03	13.34	-0.70
Grate furnace waste power generation	102,985	5.98	29,601	2.52	247.91	3.46
Interest income	93,668	5.43	71,724	6.11	30.60	-0.68
Waste treatment by cement kilns	61,236	3.55	61,668	5.26	-0.70	-1.71
Grate furnace waste power generation	32,432	1.88	10,056	0.85	222.51	1.03
Total	1,723,623	100.00	1,173,299	100.00	46.90	-



## New Building Materials Business Review

- During the reporting period, the Group further consolidated the advantages in the core markets and developed external markets, leading to increases in both volume and prices as well as better operational efficiency.
- Accumulated sales of ACA panels reached **8.04** million square meters, an increase of **13**%; operating revenue was RMB **112** million, an increase of **29.73**%; product gross profit increased by RMB **7.24** million or **65.80**%





# **Port Logistics Business Review**

- During the reporting period, the Group continued to improve stevedoring techniques, enhance operational efficiency and adjust the structure of product sources in order to gain a larger market share.
- Throughput once again hit a record high of **33.4** million square meters, an increase of **21.45**%.
- Operating revenue was RMB198 million, an increase of 27.61%; product gross profit increased by RMB37.99 million or 50.71%.







## **Development Mindset**





In the next five years, with a focus on the environmental protection business, the Group will accelerate the transformation of the energy-efficient equipment manufacturing business and strive to open up a new chapter for the new building materials industry, while at the same time maintaining the stable growth of the ports logistic business, in order to realize the "1133" development goals and become China's largest integrated environmental protection group with a leading global presence.

("1133" refers to the signing annual disposal capacity of solid waste treatment reaching 10 million tonnes, the signing annual disposal capacity of grate furnace power generation reaching 18 million tonnes, the volume of production and sales of new building materials "ACA" boards reaching 31 million sq.m., and port throughput reaching 36 million tonnes)



## **Development Plan of Solid Waste Solutions Business**

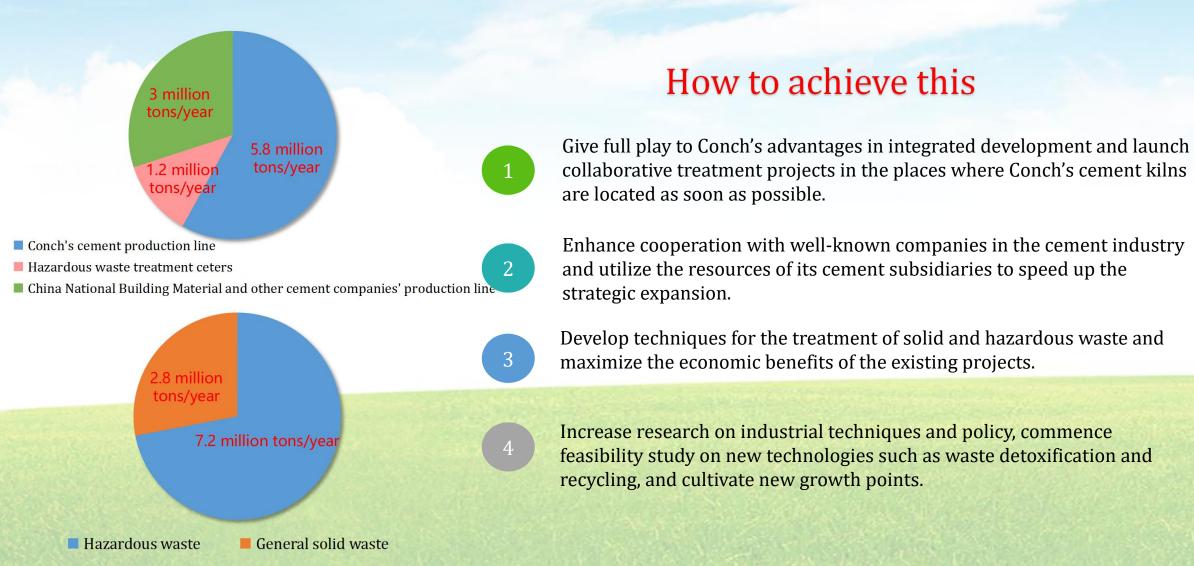


Note: The Company plans to achieve the signing annual disposal capacity reaching 10 million tonnes and production scale reaching 8.6 million tonnes for the solid and hazardous waste solutions business by 2023.



## **Development Plan of Solid Waste Solutions Business**

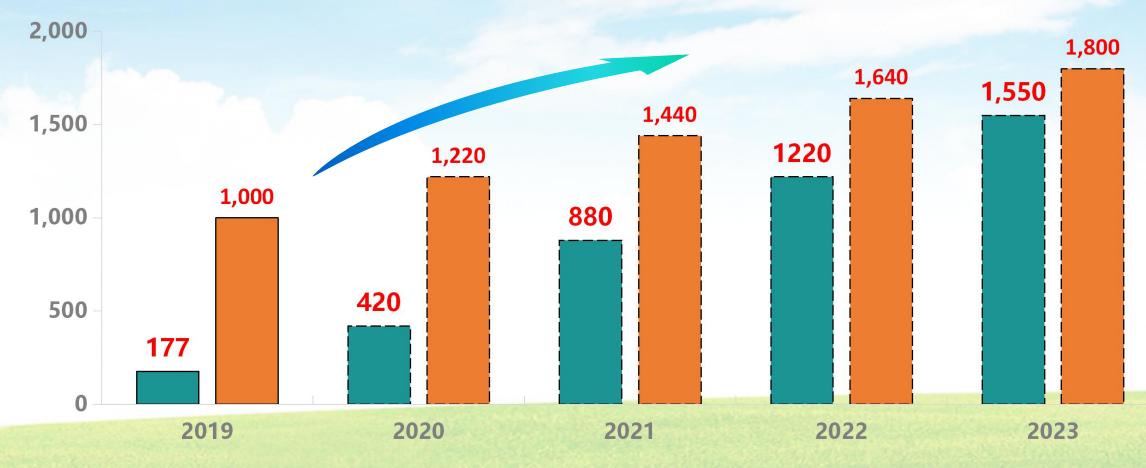
The Company plans to achieve the signing annual disposal capacity reaching 10 million tonnes: construct comprehensive hazardous waste treatment centers in the places where the cement kiln collaborative projects are located and achieve annual production capacity of 1.2 million; increase Conch's cement production line annual processing capacity to 5.8 million tons; increase China National Building Material and other cement companies' cement production line annual processing capacity to 3 million tons.





## Development Plan of Waste Incineration Solutions Business

### **Development Plan of Grate Furnace Power Generation Projects for 2019-2023**



■ Production scale ■ Contract scale

(10,000 tons/year)

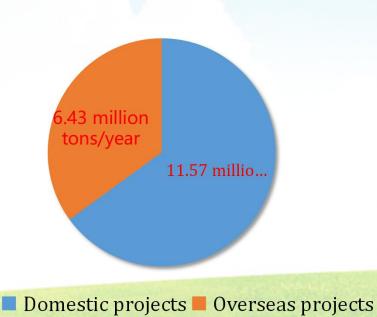
Note: The Company plans to achieve the signing annual disposal capacity reaching 18 million tonnes and production scale reaching 15.5 million tonnes for the grate furnace power generation business by 2023.



## **Development Plan of Grate Furnace Business**

The Company plans to achieve the signing annual disposal capacity reaching 18 million tonnes by 2023 by acquiring projects with economic benefits and in line with investment return expectations. Contract scale of the overseas projects will account for 35% of total contract scale.

## How to achieve this



- Develop the domestic market and acquire more projects; adhere to "Belt & Road" initiative to speed up the launch of the overseas projects and make new breakthroughs.
- Enhance cooperation with famous companies in the industry and complement each other in terms of resources and technologies to promote the healthy and sustainable development projects.
- To speed up the planning process, construction and operation, strengthen the construction execution and adhere to work schedule.

## **Organization Assurance**

Pursuant to the Five-Year Development Plan, strive to strengthen the management and coordination and establish a standard management system and a comprehensive professional management system to provide strong organizational assurance for the future growth of the Company.

## **Technology Assurance**

Improve the upgrade for the existing environmental protection technology and conduct feasibility study on using cement kilns to treat general solid and hazardous waste;
Introduce, learn, digest and promote new environmental protection technologies, develop ash washing, polluted soil treatment and other environmental protection technologies, and venture into new environmental protection sectors.



#### **Talent Assurance**

Implement "612 343" talent nurturing scheme: labour size surges sixfold, with the number of operational management members increased by 100, senior management members by 200, technical staff by 3 times, business development staff by 4 times and overseas staff by 300; Implement "Thousand People Programme" and "Hundred People Programme" to increase the number of staff of the Company from 2666 to 15,000 within five years.

## **Capital Assurance**

By leveraging on the support from favourable domestic policy and financing advantages in the international market, increase capital investment. Make RMB **260** million project investment by 2023 to help achieve the Company's strategic goals.

