

FY2018 Results Presentation

March 2019



DRIVING GROWTH

AND EXPANSION

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1. Company Overview
2. Operational Highlights
3. Financial Highlights
4. Growth Strategy



Company Overview



Jinjiang Environment

- ✓ First mover and leader as well as the first private operator in the Waste-To-Energy (WTE) industry in the PRC
- ✓ Established PRC's first WTE plant using Circulating Fluidised Bed (CFB) incineration technology in 1998 and built a track record spanning over 20 years
- ✓ Listed on the mainboard of the Singapore Exchange on 3 August 2016
- ✓ As at 31 December 2018, 15 facilities out of 20 WTE facilities in operation are under BOO model

Results Overview



As at 31 December 2018

RMB million	FY2018	FY2017	Change (%)	4Q2018	4Q2017	Change (%)
Revenue	3,030.8	2,715.1	11.6	921.9	858.6	7.4
WTE Revenue	2453.2	2,324.0	5.6	699.9	659.6	6.1
Gross Profit	1,043.2	1,034.6	0.8	242.6	352.9	(31.3)
Profit Before Tax	748.3	819.2	(8.7)	190.4	264.6	(28.1)
Net Attributable Profit	541.1	601.2	(10.0)	162.3	204.7	(20.7)

WTE BUSINESS

EMC BUSINESS

Description

- Treatment of municipal solid waste and generation of steam and electricity with the following revenue streams:
 - **Waste treatment** (contracted with local government)
 - **Electricity generation** (tariffs decided by central and local governments)
 - **Steam supply** (fee decided by local government or company)
- Majority on Build-Own-Operate (BOO) model and the rest on Build-Operate-Transfer (BOT) model

- Provision of EMC services to Metallurgical, chemical and power generation companies since 2014
- **Scope of services** include:
 - Energy saving and residual heat utilisation
 - Operational optimization and equipment selection advisory
 - Management and operational support
 - Technical advisory on energy saving

Scale and Capacity

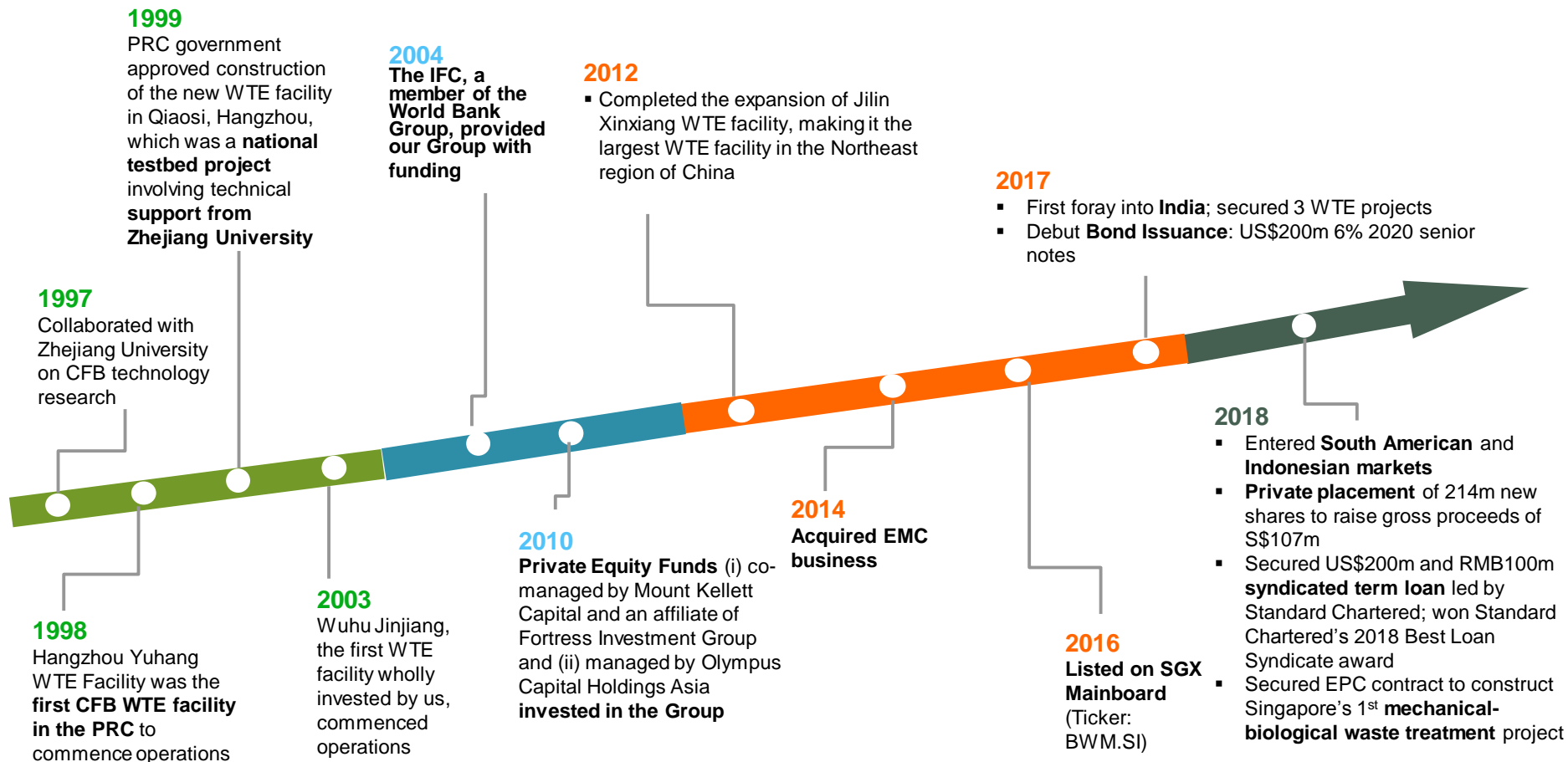
- **WTE facilities in operation: 20** in 12 provinces, autonomous regions and centrally-administered municipalities in the PRC
- **WTE facilities under construction & expansion:**
 - 6 in China, 1 overseas
- **WTE facilities in preparation stage:**
 - 18 in China, 4 overseas
- Presence in **India, Brazil and Indonesia**
- **Current waste treatment capacity of 29,240 tons/day**
- When fully completed and acquired (China and overseas), **total capacity will increase to approximately 67,256 tons/day**

- Current portfolio of **34** EMC projects, of which **28** have produced energy-saving results and the remaining **6** are undergoing construction
- **42** technology consulting projects have been implemented

As at 31 December 2018

Important Milestones

Established in 1998, Jinjiang Environment is the first private and a leading Waste-To-Energy (WTE) operator (by treatment capacity) in the PRC.



**First private WTE operator in PRC
(1998—2003)**

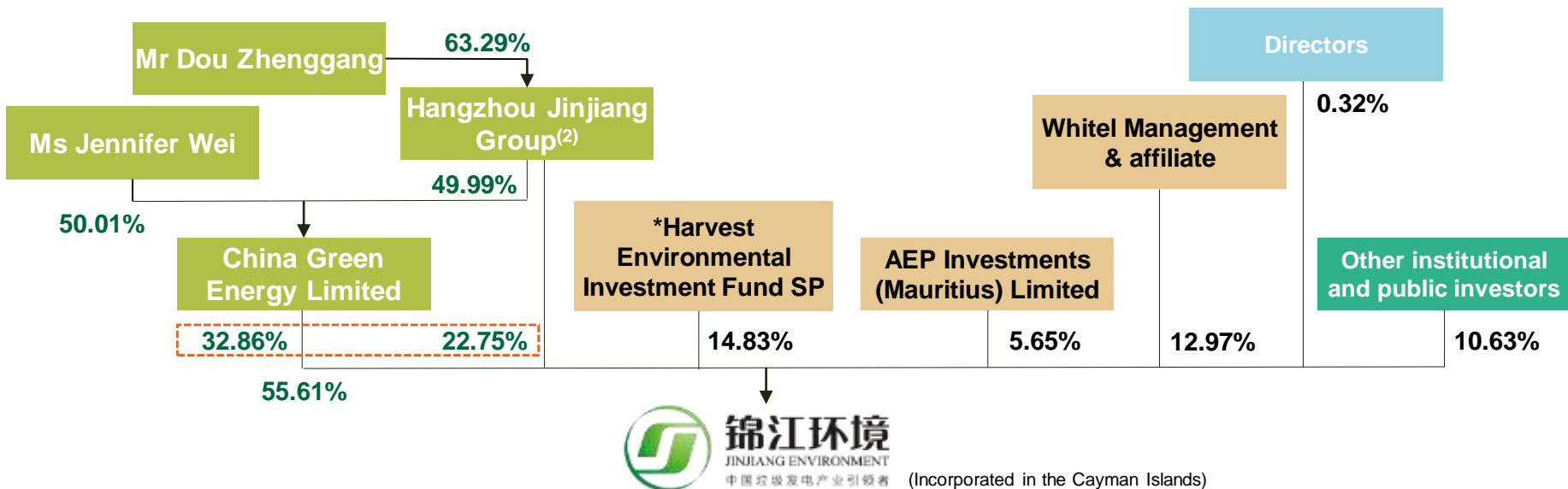
**Rapid Expansion
(2004—2010)**

**Stable Growth
(2011—2017)**

2018

Strong Shareholding Structure

Strong shareholder background provides firm support for company's development⁽¹⁾



- | China Green Energy Limited | Harvest Environmental Investment Fund SP | AEP Investments (Mauritius) Limited | Whitel Management Company Limited | Other institutional investors ⁽³⁾ |
|--|--|---|--|---|
| <ul style="list-style-type: none"> China Green Energy is an affiliate of the Hangzhou Jinjiang Group The Jinjiang Group is China's top 500 private enterprise, engaging in environmental protection & energy, non-ferrous metal and chemicals business | <ul style="list-style-type: none"> A fund managed by Harvest Global Capital (Cayman) Investments Limited, a wholly-owned subsidiary of Harvest Global Capital Investments Limited | <ul style="list-style-type: none"> A fund wholly owned and managed by Olympus Capital Olympus Capital is US-based private equity, founded in 1997 | <ul style="list-style-type: none"> An affiliate of Hopu Investments | <ul style="list-style-type: none"> Company's shares are subscribed by many renowned institutional investors during IPO, including Great Eastern Life (Malaysia), Hailiang International and UOB AM |
- (1) Based on 1,443,246,800 shares as of 31 December 2018
 (2) Through wholly-owned subsidiary
 (3) Based on SGX's announcement on 3 August 2016

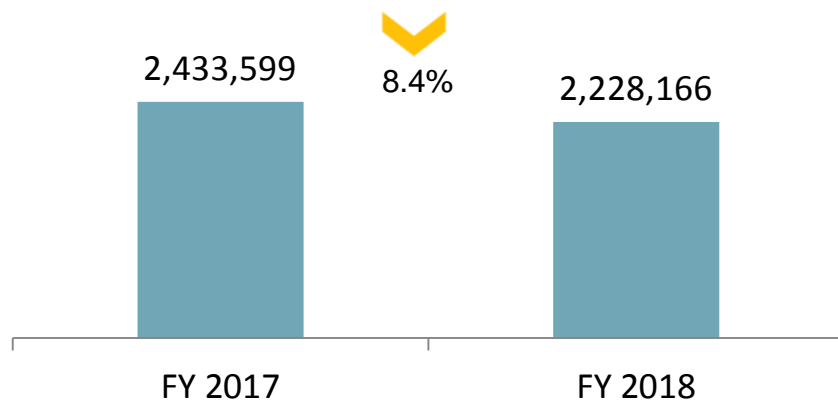
Operational Highlights



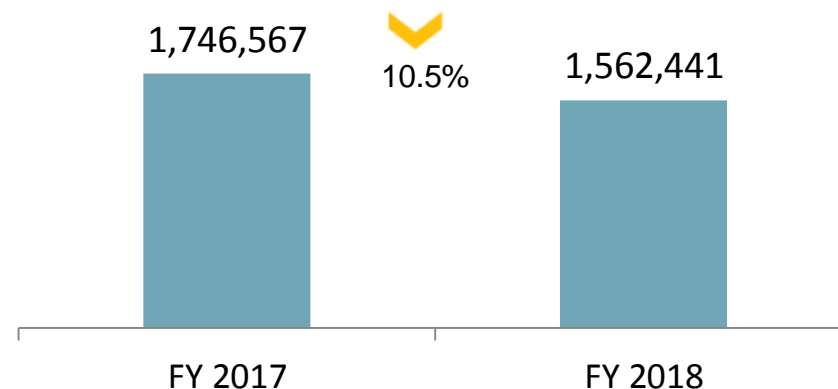
Operational Analysis

As at 31 December 2018

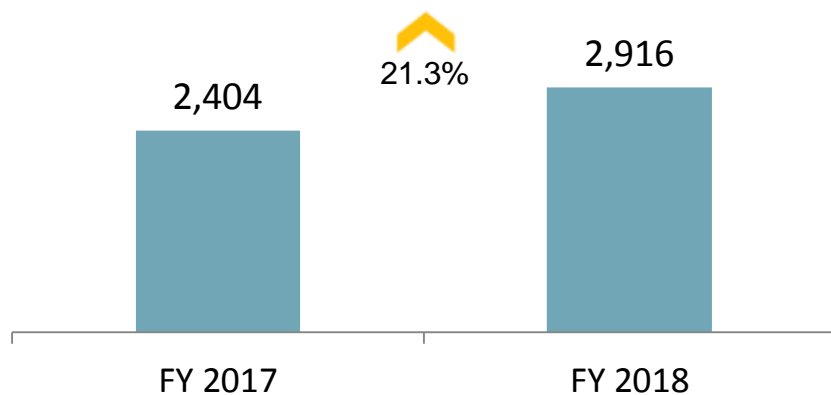
Electricity Generated ('000 KWh)



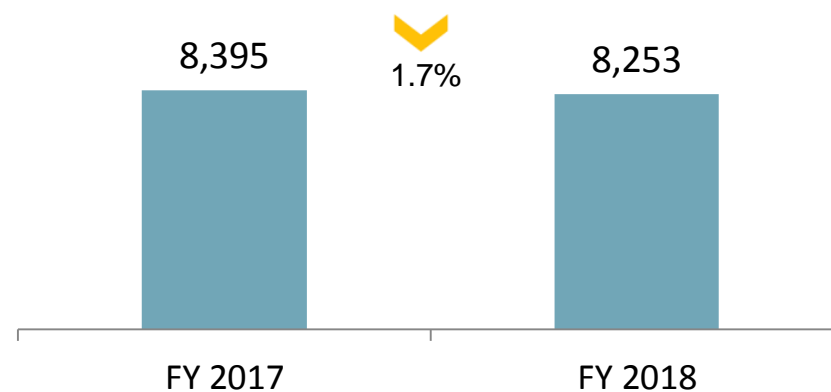
On-Grid Electricity Supplied ('000 KWh)



Steam Supplied ('000 tonnes)



Waste Treated ('000 tonnes)



In response to the rapidly growing demand for waste disposal in the future, the Group began to upgrade 8 waste-to-energy facilities that have longer operating time and higher waste capacity, in the second half of 2017. This affected the overall supply of waste and the growth of power supply. Following the start of operations of the Zhuji Bafang WTE Facility, the amount and coverage area of heat supply increased significantly.

Extensive Portfolio in the PRC with Growing Overseas Footprint



Jinjiang Environment

Total Capacity

67,256 tons/day

China Projects

No. of projects	Project Category	Capacity
24	Operational (including 4 resource recycling projects)	29,240 tons/day
6	Construction & Expansion	8,670 tons/day
8	Upgrading	5,000 tons/day
18	Preparatory (existing)	16,250 tons/day
6	Resource recycling	3,000 tons/day
Total		62,160 tons/day

India Projects

No. of Projects	Project Category	Capacity
2	Preparatory	2,106 tons/day
1	Construction	1,165 tons/day
Total		3,271 tons/day

Brazil Project

No. of Projects	Project Category	Capacity
1	Preparatory	825 tons/day
Total		825 tons/day

Indonesia Project

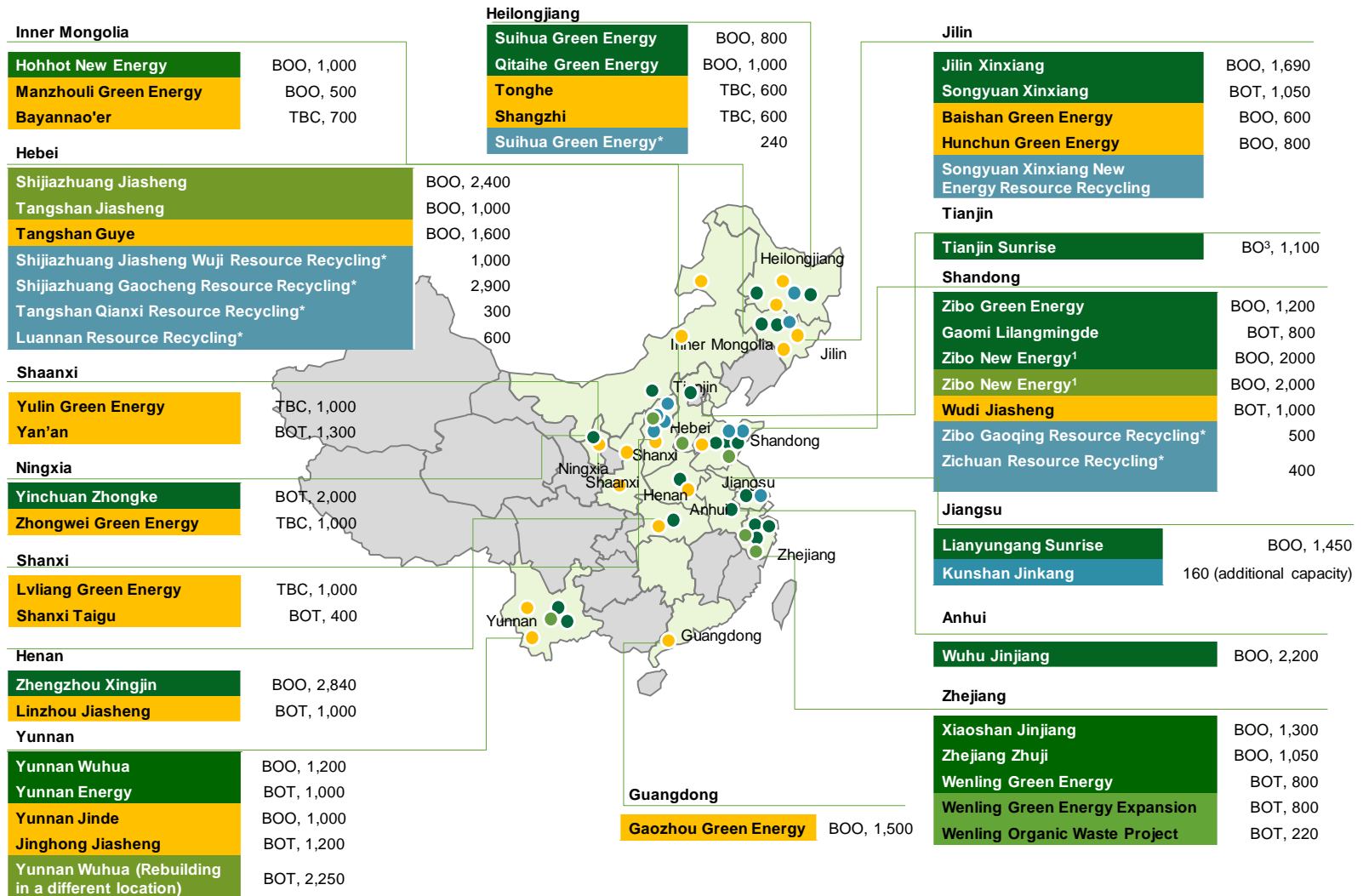
No. of Projects	Project Category	Capacity
1	Preparatory	1,000 tons/day
Total		1,000 tons/day

As at 31 December 2018

Our Extensive Footprint in China

Installed Capacity (ton/day)

● In Operation ● Under Preparation ● Under Construction or Expansion ● Ceased per government policies ● Waste recycling projects



As at 31 December 2018

Upgrading and Expansion of WTE Facilities

Large-scale technical upgrading project involving some of CJE's presently operating WTE facilities when completed will significantly expand WTE capacity, increase operational efficiency, reduce emission levels and proportion of coal used

As at 31 December 2018, 8 WTE projects undergoing upgrading.
Upon completion in 2019, **total capacity increase = 5,000 tons/day**

Expand
WTE
Capacity

Increase
Operational
Efficiency

Reduce
Emission
Levels

Reduce
coal usage

- Carried out in stages to minimise disruption
- Total CAPEX = Approximately RMB 1 billion
- Waste management investment of 200,000 yuan/ton, much lower than an investment in a power plant
- As at end of December, a total of RMB530 million had been paid to contractors in relation to the upgrading and capacity expansion project

Project Progress:

- As of 4Q2018, the upgrading of the Zichuan and Wuchang WTE Facilities has been completed
- At present, some of the newly-operational units have achieved stable operations, with significant improvements in waste treatment capacity and boiler efficiency, while the negative financial impact of the upgrading project has been significantly reduced
- In 4Q2018, significant improvements were achieved in waste treated, power generated, on-grid power supply and WTE business revenue (excl. BOT construction revenue)

Added Recent Business Updates

Linzhou WTE Facility

October 2018

- ✓ Opening ceremony held on October 28
- ✓ Key project of Henan Province, Anyang City and Linzhou Planning Venous Industrial Park

WTE Capacity: 1,000 tons/day (First phase 500 tons/day)

Waste Treatment Fee: RMB55/ton

Model: BOT

Implemented technology: Grate Furnace Process



Benefits

- ✓ Received RMB15 million of special subsidies from central finance for ecological civilisation construction.
- ✓ Annually, it can treat 365,000 tons of urban and rural domestic waste harmlessly and generate 160 million kWh of electricity.
- ✓ Saving landfill land of nearly 100 mu, providing economical, environmental and social benefits.

Added Recent Business Updates

Leting WTE Facility

November 2018

- ✓ Leting municipal solid waste comprehensive treatment WTE PPP facility
- ✓ Concession period of 30 years

WTE Capacity: 450 tons/day (municipal waste) + 100 tons/day (solid waste) + 60 tons/day (sewage)

Waste treatment fee (municipal waste): RMB98/ton

Model: BOO

Implemented technology: Grate Furnace Process



Benefits

- ✓ Located in the heart of the Bohai Bay and the core area of the Beijing-Tianjin-Hebei metropolitan area, and at the same time surrounded by Jintang port area and adjacent to Caofeidian port area, it is capable of handling the requirements for “two major port areas” as well as spillover load originating from the port
- ✓ The Group's 8th WTE facility in Hebei Province is a significant part of the Group's overall development strategy in Hebei

Added Recent Business Updates

Wenling Organic Waste Project

4Q2018

- ✓ Construction of the Wenling Organic Waste Project started, signalling a start for the development of the ecological vein industrial park model
- ✓ A smart comprehensive waste disposal project designed with the latest best-in-class technology

Waste Treatment Capacity: 150 tons/day for kitchen waste + 20 tons/day for drainage oil + 50 tons/day for manure

Model: BOT



Benefits

- ✓ Promotes sharing of resources and the development of the industrial ecological chain through harmless waste treatment and the transformation of waste into resources with WTE facilities as the operational core
- ✓ Brings into effect synergies to create a more economical and environmentally-friendly recycling ecological vein industrial park
- ✓ Attainment of zero emissions for the industrial park

Building a presence in India

Gurgaon project (In Construction)

Gurgaon integrated waste management project

Location	Gurgaon, Haryana
Area	27.83 acres
Capacity	1,165 tons/day
Business Model	BOT model (22-year concession period)
Waste Subsidies	WTE Facility before operation: 1000INR/ton (approx 100 RMB/ton*) WTE Facility in operation: 333INR/ton (approx 33RMB/ton*)
On-grid electricity price	10.91INR/kWh (approx 1.091 RMB/kWh*) (fixed electricity price: 7.05INR/kWh & government subsidy: 3.86INR/kWh)
Collection Coverage ¹	60%

Project Scope:

- Collection and transportation of MSW from households and businesses
- Pre-treatment and mechanical separation of MSW
- Treatment of biodegradable waste by composting
- Recycling and sale of waste materials
- Production and sale of Refuse Derived Fuel
- Power generation from combustion of Refuse Derived Fuel
- Operation and maintenance of a landfill for residual inert waste components

Lucknow integrated waste management project

Location	Lucknow City, the capital city of Uttar Pradesh
Area	104 acres
Capacity	1500 tons/day
Business Model	BOT model (30-year concession period)
Waste Subsidies	1,604 INR/ton (approx 160 RMB/ton*)
On-grid electricity price	7.5 INR/kWh
Collection Coverage ¹	45%

Gwalior integrated waste management project

Location	Gwalior, Madhya Pradesh
Area	63.75 acres
Capacity	606 tons/day
Business Model	BOT model (21-year concession period)
Waste Subsidies*	1,701 INR/ton (approx 170 RMB/ton*)
On-grid electricity price*	6.39 INR/kWh (average price) (approx 0.64 RMB/ton*)
Collection Coverage ¹	53%

Brazil is one of the “BRIC Five Countries” with an **annual waste output that reaches as high as 83 million tons**

- High market potential for waste treatment
- Rising waste production levels and collection rates
- Current waste disposal method is landfill; no waste incineration and power generation facilities

Sao Paulo
(In preparation of construction)



Barueri WTE Project

Location	Sao Paulo, most populated city in Brazil
Acquired	20 April 2018
Capacity	825 tons/day
Business Model	BOT (commissioned in December 2020, 30-year PPP concession period, 15-year electricity trading concession period)
Waste subsidies	300 tons: about 117.7 real / ton (approx RMB196/ton*), the other 525 tons about 90 real / ton (approx RMB150/ton*) , according to the annual inflation index price adjustment
On-grid electricity price	Electricity price in May 2018: R\$0.290/KW (approx RMB0.48/KW*), and annual price adjustment according to the price index of the five major power companies (PPA agreement purchase amount 11.5MW, 15 years)
Total Investment	360 million real (approx RMB600 million*)
Project Progress	<ul style="list-style-type: none"> • April 2018 - an investment agreement was signed with a local partner, affirming the relationship between the two parties. • August 2018 - the establishment of the Brazilian investment platform company was completed. • Loan application made to local banks



Palembang
(In preparatory stage)

Palembang WTE Project	
Acquired	June 2018
Method	Acquired 95.0% stake in Indonesian Green Energy Co., Ltd.
Investment	120,000,000 USD
Capacity	1,000 tons/day
Business Model	BOO (30 years concession period from start of operation)
Waste Subsidies	US\$22/ton
On-grid electricity price	According to the “ Presidential Regulations of the Republic of Indonesia ” No. 35, 2018 on WTE, if the total installed capacity of the project is less than or equal to 20MW, the benchmark electricity price is US13.35 cents/KWH; if the total installed capacity is greater than 20MW, the benchmark electricity price is calculated based on US14.54cents/KWH - (0.076* Internet power)
Advantage	<ul style="list-style-type: none"> • Largest port and trade centre in South Sumatra • Ninth most populous city in Indonesia • Aug-Sep 2018 – Palembang will hold the 2018 Asian Games together with Jakarta, the capital of Indonesia • Significant market potential for waste treatment
Project Progress	<ul style="list-style-type: none"> • Approval of the various procedures before the start of construction. • A franchise agreement has been signed with the Palembang City Government and is currently actively negotiating with the Indonesian State Power Corporation to sign the PPA.

Latest Debut in Singapore

Singapore MBT Project

Contract	Contracted to provide EPC services and management of operations and maintenance to Singapore's 1st MBT plant (5 th in Asia)
Owner of plant	MBT plant is owned by JE Synergy Pte Ltd (Joint Venture between Jinjiang Group and Eastern Green Power)
Project Duration	Until 31 March 2020
Concession Period	20 years
Capacity	500 tons/day
Contract Sum	S\$66,563,000



Tuas South Ave 2, Singapore
新加坡大士南路2号



Benefits

- ✓ A cornerstone of the Group's future overseas collaborations, supporting its plans to expand overseas and become a global leader in the WTE industry
- ✓ Ability to apply its capabilities and know-how honed from long track record of EPC projects
- ✓ Being the 1st MBT project in Singapore, it is a high-profile demonstration of JE Synergy Engineering's engineering and construction capabilities
- ✓ Builds credentials to secure similar EPC projects in future

Strong Management Team

Key management team members have more than 20 years of industry experience



Wang Yuanluo
Non-Executive, Non-Independent Chairman
Date joined: 1995

- > 20 years industry experience
- Executive President, China Environment Service Industry Association
- Vice President, China Association of Circular Economy
- President, Zhejiang Provincial Renewable Energy and Clean Production Industries Association



Zhang Chao
Executive Director, CEO
Date joined: 2017

- Responsible for overseeing day-to-day operations
- Deputy GM & general counsel to China Energy Conservation & Environmental Protection; executive director to China Energy Law Research Association; Vice President to China Industrial Energy Conservation & Clean Production Association
- Extensive industry experience of more than 15 years coupled with rich management expertise



Wang Wuzhong
Deputy GM
Date joined:1992

- Scope: environmental protection, safety, daily operation and R&D
- > 20 yrs industry exp
- Senior certified engineer
- Expert in China Asson of Comprehensive Resource Utilisation
- Member, Zhejiang Environmental Supervisory Association



Wang Ruihong
Executive Director, Deputy GM
Date joined:1999

- Scope: General admin management, market branding and legal compliance
- > 20 yrs accounting & corporate finance exp
- Registered Accountant
- Senior professional mgr for environmental protection



Xu Yongqiang
CFO
Date joined:1999

- 45 years accounting and financial management experience
- Rich experience with publicly listed companies
- Accountant accredited by the Hangzhou Intermediate Accountants Professional Committee



E Hongbiao
Deputy GM
Date joined:1992

- Responsible for supervising the construction and development projects and assisting in the operation and management of sewage and waste disposal
- More than 20 years of experience
- Hangzhou Human Resources and Social Security Bureau Economist Certification



Choo Beng Lor
Financial Controller & Joint Company Secretary
Date joined:2016

- Over 20 years of accounting experience
- Chartered Accountant, Singapore Institute of Chartered Accountants

Financial Highlights



Achieving Strong Revenue Growth

Revenue Breakdown

WTE business is the main revenue contributor

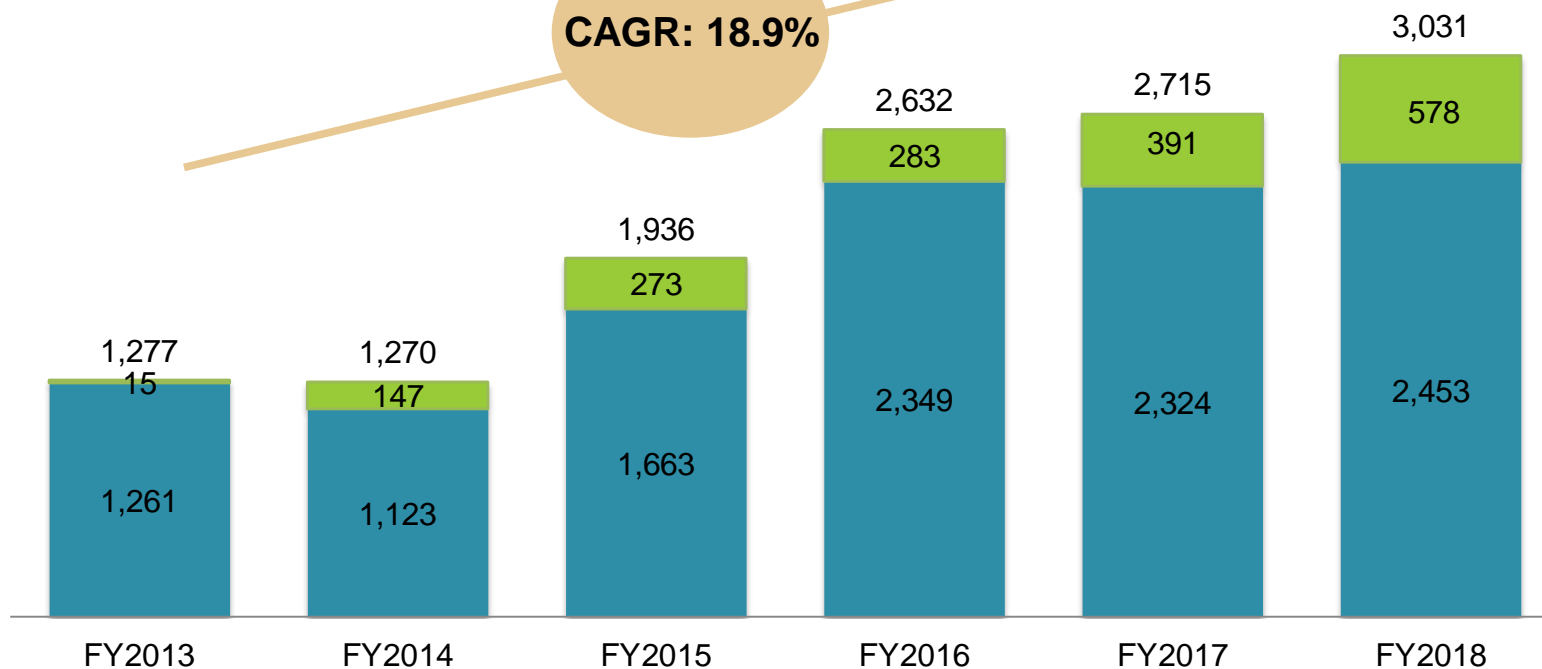
As at 31 December 2018

(RMB million)

■ WTE
■ EMC

CAGR: 18.9%

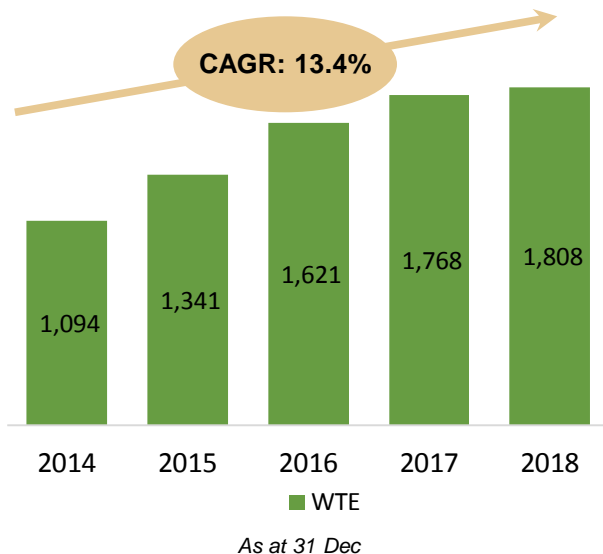
Increase in all business segments with BOT Construction and EMC segments driving the increase



For the financial year ended 31 December

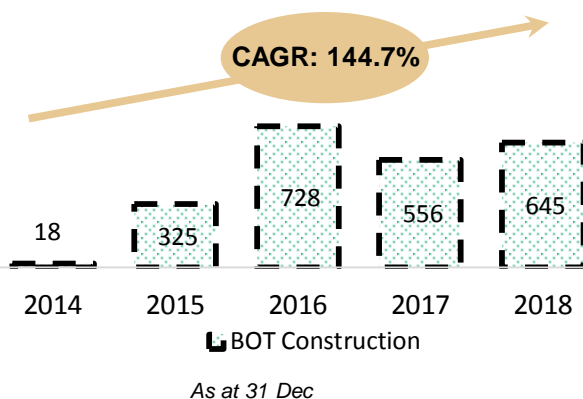
Achieving Strong Revenue Growth

Segment Revenue (RMB million)



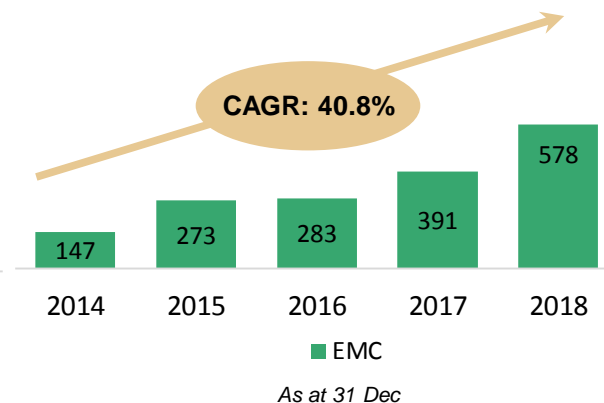
Slight growth in WTE revenue to:

- Commencement of waste collection and transportation operations in India
- Increase in steam supplied from Zhuji Bafang WTE Facility increased steam sales revenue
- Expansion and upgrading of eight power plants reduced revenue due to lower amount of waste treated and electricity generated



Strong BOT Construction Services performance due to:

- Addition of BOT construction projects including Wenling, Suihua, Kunming Wuhua and projects in India
- Financial income under the concession service increased by 29.8% year-on-year to RMB 37.76 million



Stellar EMC business performance due to:

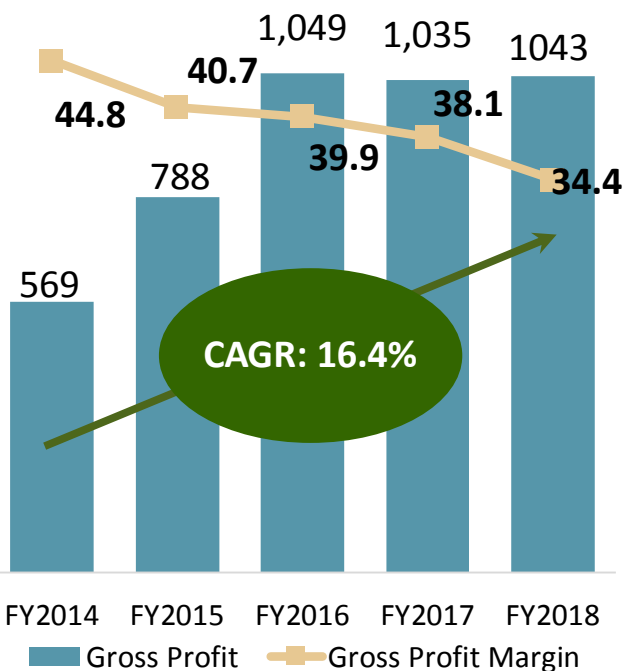
- Project technical and management services income rose in tandem with an increase in contractual agreements
- Existing contracts of Hangzhou Zhenghui taken over in connection with its acquisition by the Group

Stable Profitability

For the financial year ended 31 December

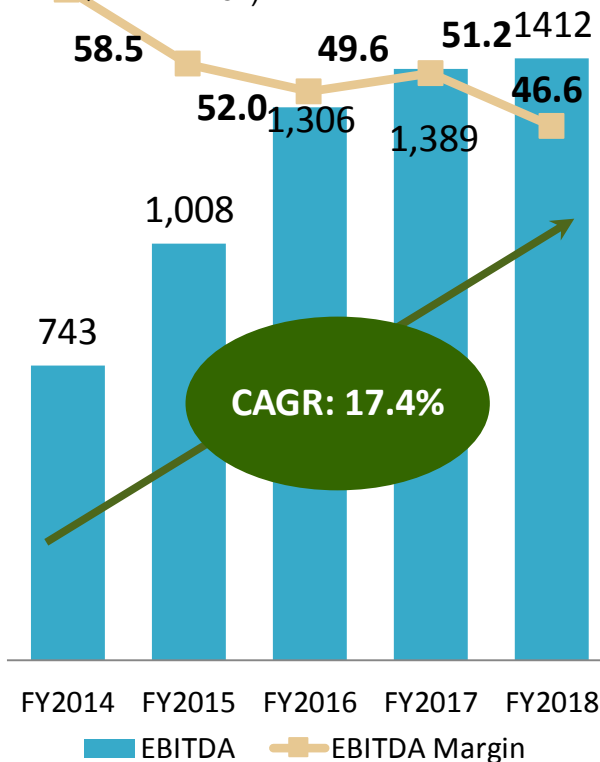
Gross Profit & Gross Profit Margin

(RMB million)



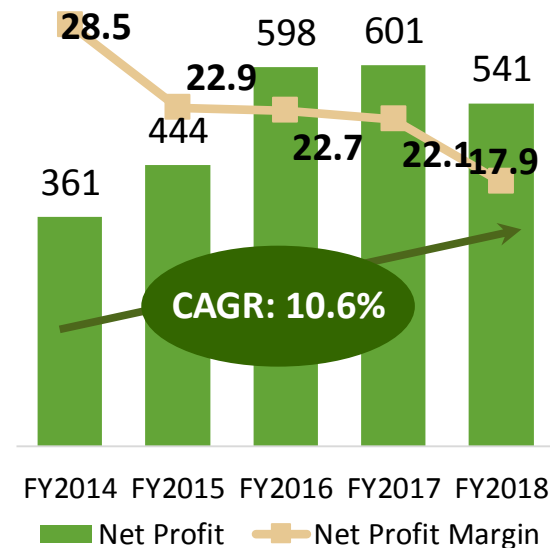
EBITDA* & EBITDA Margin

(RMB million)



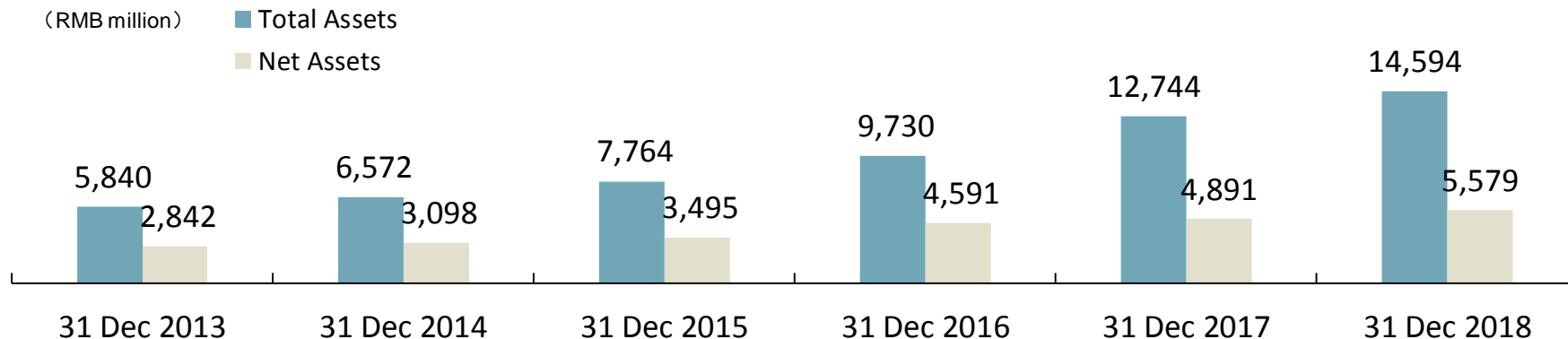
Net Attributable Profit & Profit Margin

(RMB million)

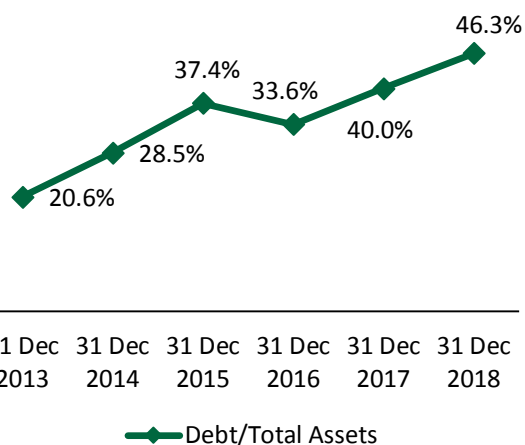


Healthy Capital Structure

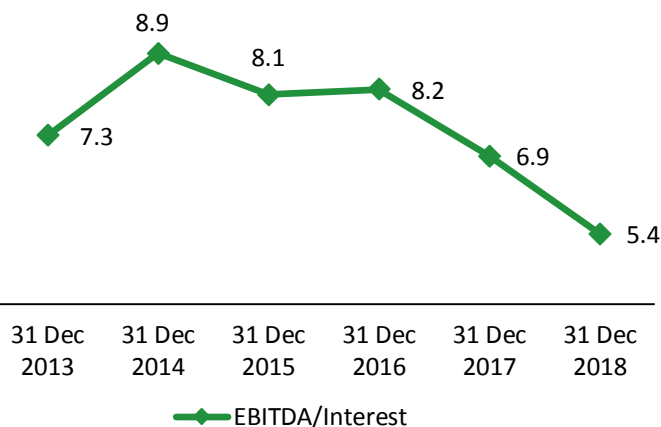
Total Assets & Net Assets



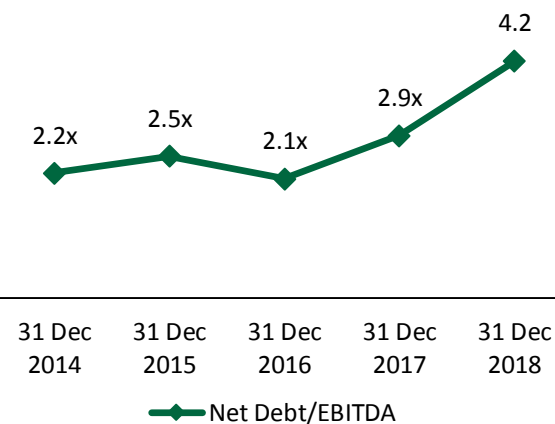
Interest-bearing Debt/Total Assets



EBITDA/Interest



Net Debt/EBITDA



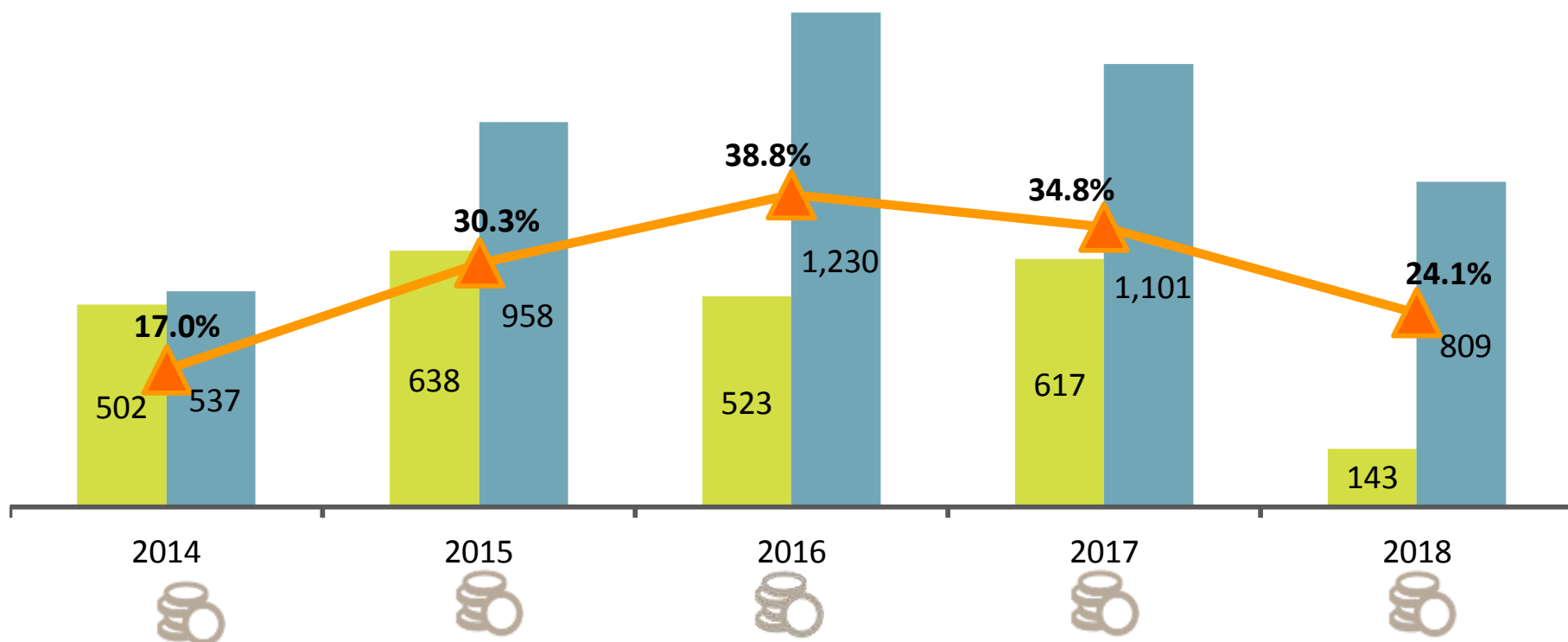
Healthy Operating Cash Flow

(RMB million)

- Operating Cash Flow
- Cashflow adjusted for BOT
- Cashflow Yield ¹

Operating cash flow yield of
24.1% as at 31 Dec 2018

For the financial year ended 31 December



¹ Market cap of S\$663.9 million and exchange rate of S\$1 : RMB5.05 as at 31 December 2018

Growth Strategy



In the future, we will ...

1. Maintain leading market position

- Expanding waste treatment capacity of existing facilities
- Through organic and inorganic growth opportunities

2. Continuously improve technical capabilities

- Adopting advanced pre-treatment technologies from Europe, in synergy with our own
- Enhancing operating efficiency and reduce emissions at our WTE facilities

4. Expand internationally

- Seeking project opportunities from the “Belt and Road Initiative”
- Specific focus on Southeast Asia and other developing countries
- Enhancing our brand image and international recognition

3. Diversifying in the WTE value chain

- Expanding our WTE business to related areas such as sludge treatment
- Growing our EMC and third party project management businesses



1. Maintain Leading Market Position

3 main strategy pillars for capacity expansion and growth

Increase the capacity of waste treatment in existing facilities, and pursue organic growth



To achieve leaps and bounds when total installed WTE capacity reaches **67,256 t/d** upon completion of all domestic and overseas expansion and upgrading projects

Enter under-penetrated regions and introduce CFB

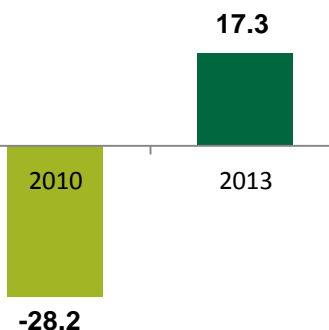
- CFB technology suitable for newer, less developed markets where municipal solid waste has low calorific value and high moisture content
- Enhance brand recognition by local governments in new markets

Acquire underperforming facility with growth potential

- Management restructuring
- Operational system improvement
- Technical upgrading

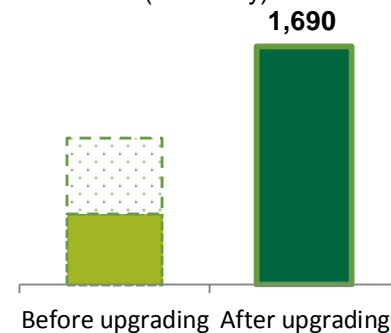
Lianyungang Sunrise
(acquired in 2011)

Net Profit (RMB million)



Jilin Xinxiang
(acquired in 2011)

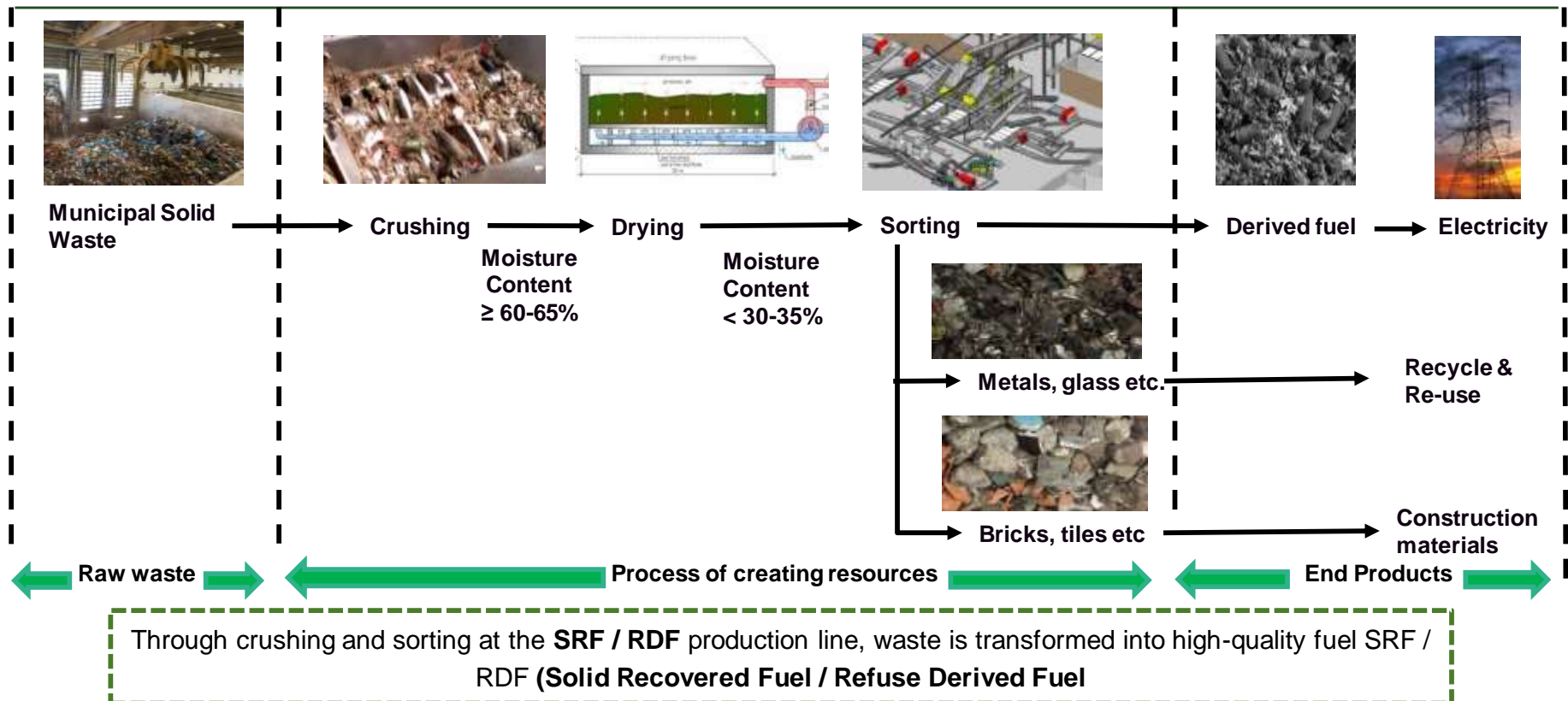
Waste treatment capacity
(Tons/day)



2. Continuously Improve Technical Capabilities

- Introduce advanced pre-treatment technology from Europe, coupled with our own R&D
- In January 2018, the company established a wholly-owned subsidiary, Waste Tec GmbH, in Solms, Germany, to combine waste drying and sorting technology with CFB technology, laying a strong foundation in the European Market
- Raise operating efficiency and reduce emissions at our WTE facilities
- Improve operational efficiency through Moving Grade Technology and its related technology – including overseas projects, 6 projects in preparation will adopt this technology

Waste Pre-treatment Procedures



3. Diversifying in the WTE Value Chain

WTE

- Expand the scope of WTE business to the relevant areas
- Further develop EMC and third-party project management business

Potential diversification areas for WTE

1. Turning waste into resources

- **Currently, there are 10 waste recycling projects**
- **Benefits from waste recycling projects**
 - Taps opportunities in rising waste amount in various markets
 - Enhances quality of waste sent for WTE conversion
 - Adds to CJE's total waste treatment capacity



2. Sludge Treatment

- Currently there are 5 municipal sludge treatment projects (Anhui Wuhu, Zhejiang Wenling, Heilongjiang Qitah, Hebei Shijiazhuang, Shaanxi Yan'an); total capacity of 1,320 tons / day



3. Animal Carcass Treatment

- Invested in Wenling City's animal carcass treatment project in 2014; planned treatment capacity of 5 tons of treated carcass per day (1500 tons/year)



3. Kitchen Waste

- In 2018, the company invested in the construction of a comprehensive organic waste disposal project in Wenling City, with construction scale of 150 tons of kitchen waste. At the same time, it can co-process 20 tons/day of drainage oil and 50 tons/day of manure



3. Develop EMC

EMC

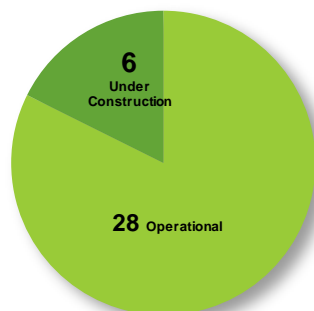
➤ EMC complements the WTE business and can bring:

- ❖ Business and operational synergies
- ❖ Enhance management experience and expertise in the energy industry

➤ EMC

- ❖ High profitability
- ❖ Helps in business diversification from investment and operations to services

EMC



Project Technical and Management Services



➤ As of 31 December 2018

34 EMC projects have been implemented

- ❖ 28 have achieved energy savings
- ❖ 6 projects are under construction and are expected to realise energy savings in 2019

42 Project Technical and Management Services have been implemented

- ❖ 4 newly signed EMC contracts

Added in 2018

- ❖ 8 EMC projects
- ❖ 18 Project Technical and Management Services

4. Expand Internationally

- ✓ **Seeking project opportunities from the ‘Belt and Road Initiative’**
- ✓ **Improve brand image and international reputation to be a world-class WTE management company**

- Riding on the “Belt and Road Initiative”, to strive to internationalise its WTE business and establish demonstration projects in its investment countries.
- Prioritise its expansion in Asian countries (such as Indonesia, Vietnam, Malaysia and Singapore) and other developing countries.
- Asian countries and other developing countries have waste characteristics similar to China (low calorific value) giving our differential-density CFB technology an advantage.
- We have developed relevant capabilities and have proven that we can make our technology adaptable for the processing and management of other types of waste.
- Created an overseas business division, with a focus on overseas expansion plans.

- ✓ **Focusing on Asia and other developing countries**

Jinjiang's plans in India's WTE market

- Acquired Ecogreen Energy to actively bid for WTE projects in India
- Secured 3 projects in 2017
- Promote our CFB technology and establish the first WTE plant using this technology
- Boost performance of our domestic engineering business through the WTE EPC contract
- Active explore more WTE contract opportunities

Foray into Latin America

- Invested a 51% stake in a Brazilian WTE company in April 2018
- Planned WTE capacity of 825 t/day
- First WTE and first Public-Private-Partnership WTE project in Brazil

Debut in Indonesia

- Secured a concession to construct and operate a WTE facility with a capacity of 1,000 tons/day in Palembang
- Significant market potential for waste treatment being the 9th most populous city in Indonesia

Thank You

