



**ENN 新奥**

ENN Energy Holdings Limited

# 2021 Interim Results Company Presentation

23<sup>rd</sup> August 2021



# Solid Results amid Challenging Environment



Retail gas sales vol up **22.3%** to **12.43 bil m<sup>3</sup>**



Added C/I customers with **10.20 mil m<sup>3</sup>** installed designed daily capacity & **1.18 mil** residential customers



Added **20** city-gas and IE projects, further expanded operating regions



Core profit growth of **18.4%** to **RMB3.69 bil**

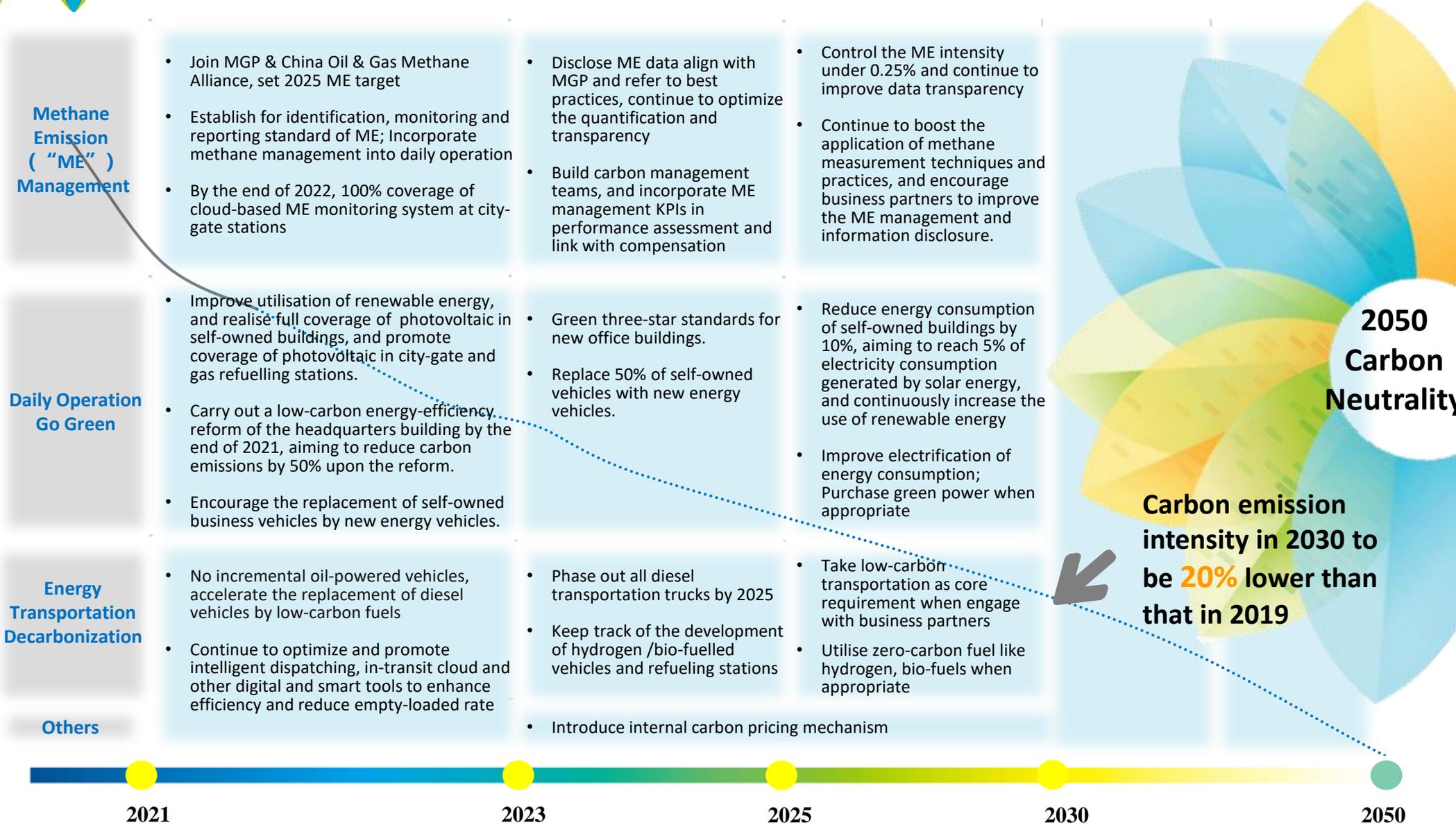


Generated free cash flow of **RMB1.47 bil**



First interim dividend declared of **HKD0.59/share**

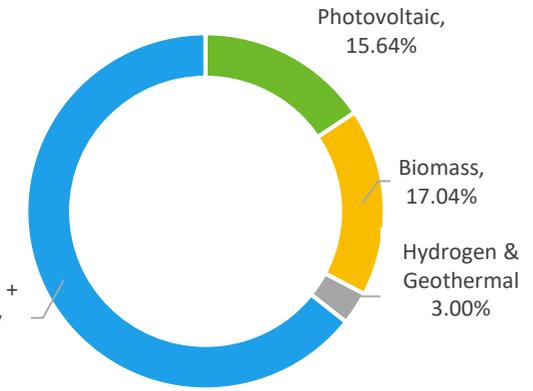
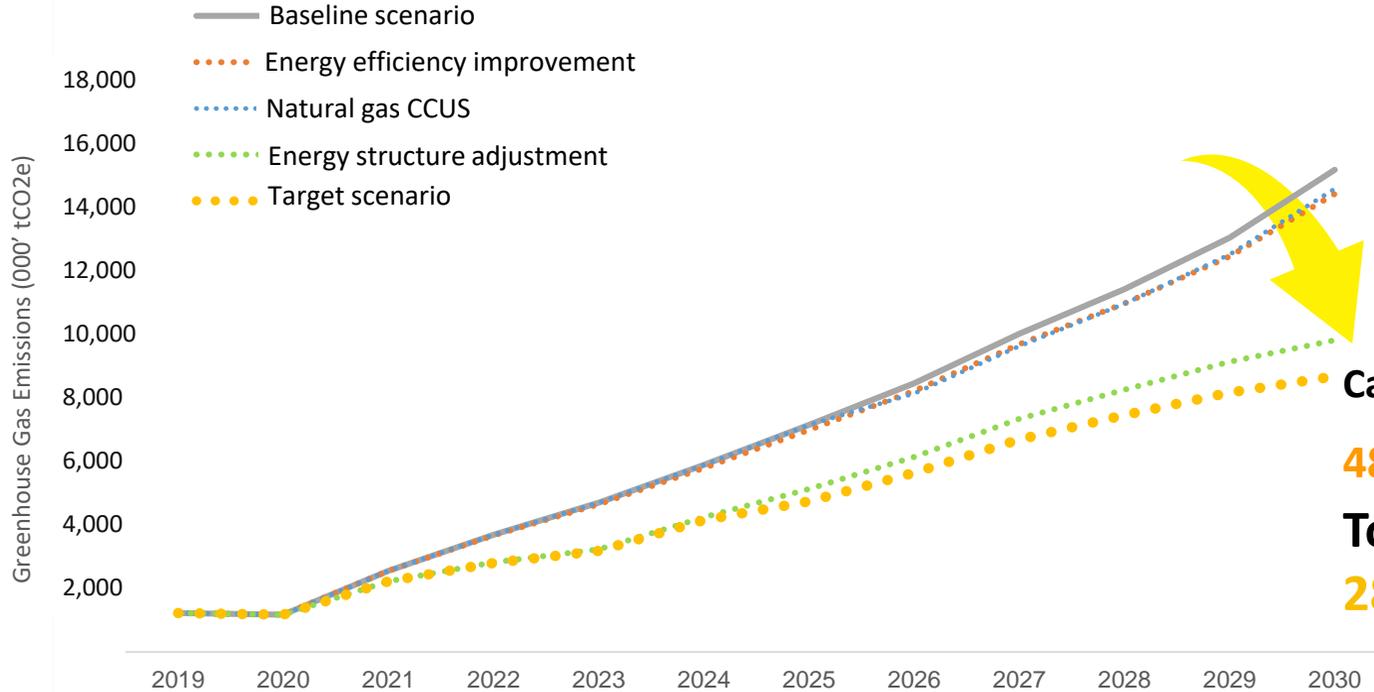
# Carbon Neutrality Roadmap - City Gas





# Carbon Neutrality Roadmap - IEB

## Forecast of Carbon Emissions from Energy Generating Facilities of IE Projects



2030 Energy Structure

Share of renewable energy **36%**

**Carbon emission intensity in 2030 to be 48% lower than that in 2019**  
**Total emission reductions 28.68 million tons CO<sub>2</sub>e**

Action 1

**System efficiency improvement:**  
Improve system efficiency by 5% by 2030

Action 2

**Energy structure adjustment:**  
Share of renewables in the energy mix in 2030 increase to 36%

Action 3

**Natural gas decarbonization:**  
CCUS to offset 5% of carbon emissions from natural gas consumption each year from 2025



**Photovoltaic**

Photovoltaic installations reaching 9900 MW in 2030, **16%** of IEB energy mix



**Biomass**

Increase in annual biomass consumption from 0.5 million tons in 2021 to 3.27 million tons in 2030, **17%** of IEB energy mix



**Hydrogen & Geothermal**

Introduce hydrogen energy from 2025 **3%** of IEB energy mix by 2030

# Upholding our Safety-Oriented Principle

## Pay High Attention to Safety

- ENN's Chairman Wang, Vice Chairman Mr. Zheng, President Mr. Zhang and other senior management have performed security inspections, incl. construction security management, old pipelines replacement & retrofitting, digital and smart safety applications and other aspects of member companies
- Adhere to the safety principle of **"Safety Issues are Well-acknowledged, Visible and Properly Managed"** and **"Security is the Brand of ENN"**



## Strengthen Process Monitoring

- Use smart security platform to conduct real-time monitoring of member companies' security data
- Perform engineering and operational security supervision and inspection and special security assessment
- Oversee every member company's efforts in guaranteeing safety and link such efforts to performance evaluation
- Require every member company to conduct a comprehensive emergency drill at least semi-annually



Smart security platform



Each regional company organizes a **skill competition** each year

## Pipeline Network Safety

- Complete the replacement & retrofitting of old pipelines
- Leak testing + corrosion testing
- Pipeline positioning + GIS
- SCADA + online simulation



## Citygate Station Safety

- Conduct safety assessment and control hidden hazards
- Process safety + leak testing + site inspection + peripheral security
- Real-time monitoring by laser camera
- Identification of unsafe behaviors via AI camera equipment



## Engineering Safety

- Contractor management optimization
- Platform monitoring of key processes to guarantee engineering governance
- Management and control of dangerous operations
- Full-process visualization control and data tracking



## User Safety

- Provide regular door-to-door inspection
- Optimize indoor design solutions
- Install alarms, self-closing valves, secure smart gas meters and other indoor security monitors
- Encourage users to use IoT meters
- Carry out safety promotion events to enhance user safety awareness
- Provide 24-hour hotline [95158]



Penetration rate of IoT meters of C/I customers reached 42%

# Strong Safety Assurance Capabilities

## Set a Solid Foundation

## Ensure Security

### High-pressure Pipeline Network

- ✓ Completed cathodic protection installations
- ✓ Use bluetooth leak detectors, laser inspection vehicles, remote monitoring, Beidou positioning and other smart devices to check the effectiveness of cathodic protection measures and pipeline corrosion protection

### Medium and Low-pressure Pipelines

- ✓ **Pipelines have been constructed for 20 years or more:**
  - ✓ Retrofitting and repairing completed
- ✓ **Pipelines under 20 years:**
  - ✓ Completed pipeline corrosion testing and evaluation
  - ✓ Repair pipelines that corrode easily, and if it is difficult to make such repairs, strengthen cathodic protection and check the effectiveness of cathodic protection measures
  - ✓ Bury low-pressure steel pipelines, check pipeline positioning before completion of the above work, and record information into GIS

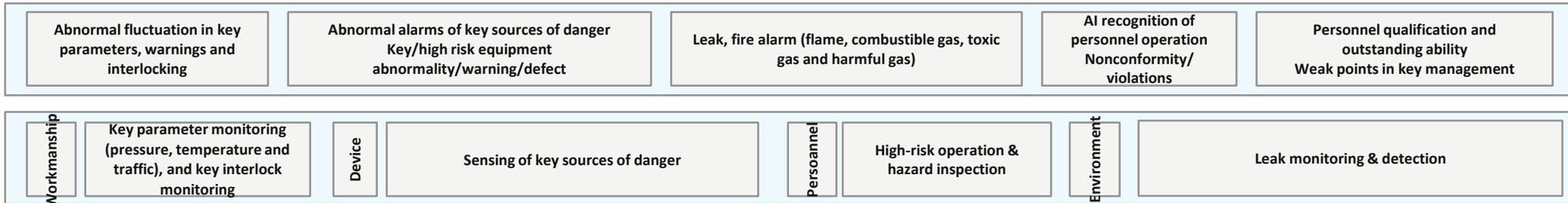
## Emergency Response

## Professional and Efficient



- ✓ Formulate an **integrated emergency management system** to cover all business scenarios
- ✓ Arrange for all production business personnel to participate in **emergency drills** as requested and assess the results of such drills
- ✓ Arrange for all enterprises to dispatch **emergency rescue teams** to **coordinate emergency management efforts** with local government
- ✓ Ensure allocation of all **emergency supplies**
- ✓ Boost the construction of **emergency storage stations**, and improve the emergency gas storage and peak regulation capacity
- ✓ Consistently **check and improve** emergency response capacity in anti-epidemic, anti-flood and other emergencies

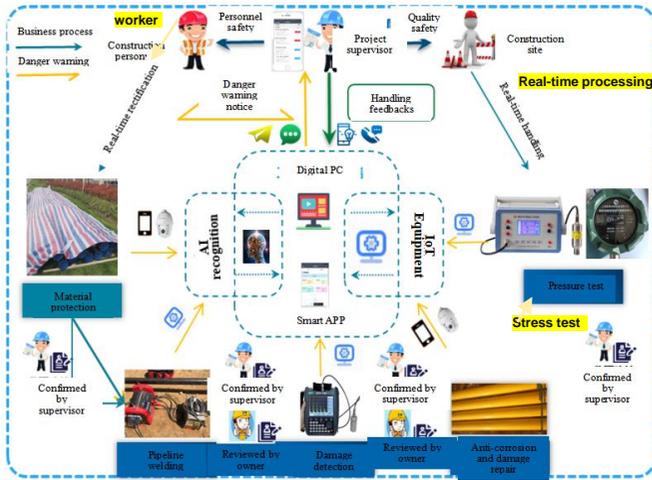
## IoT Monitoring Timely Warning



# Improve Safety by Applying Digital and Smart Products

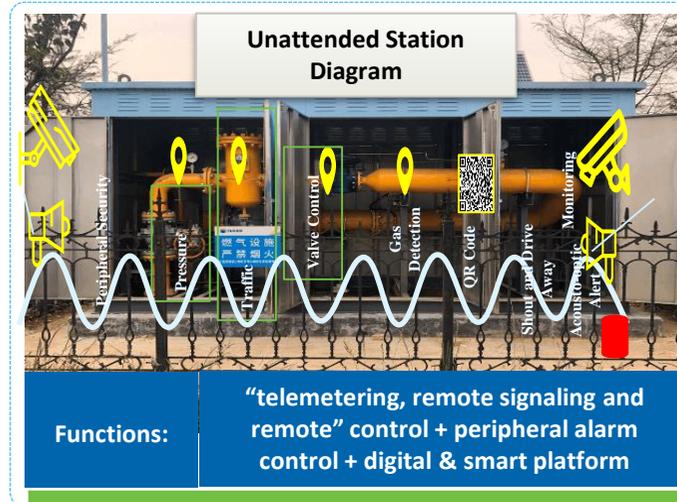
- Establish a standardized, digitalized and smart safety management structure for all business scenarios

## Construction Visualization



Scenario	Functions
Material Collection & Inspection Reporting	Protection of materials and AI recognition of pipeline blocking
Assembly and Welding	AI recognition and detection of personnel wearing and operation qualification
Damage Testing	Strict control of input parameters of automatic hot melt machines/electric welders
Anti-corrosion and Patching	Pipeline painting and AI recognition and detection
Blowing and Sweeping	Using smart pressure data acquisition equipment for real-time monitoring of pipeline testing process

## Unattended High and Medium-pressure Citygate Stations



Device	Functions
Stress Transmitters /Alarms	Collect real-time pressure data, real-time perception of gas leak in the station and timely alerts of abnormal conditions
AI/Digital Fence	Real-time intrusion prevention, remote shouting and driving away, risk identification, audible and visual alarm, targeted messaging by classification and category
Electric Ball Valve	Remote control, risk identification and audible and visual alarm

## Patrol Inspection by Laser Camera



7*24 Hours Efficient Patrol
<ul style="list-style-type: none"> <li>• <b>Real-time Perception:</b> 7*24 hours 360° combustible gas testing</li> <li>• <b>Systematic Coverage:</b> 200+Full coverage of point locations</li> <li>• <b>High Precision:</b> The degree of precision of laser leak detection reaches 2.5ppm; give prompt alert of any leakage discovered, and take a picture for precise positioning</li> <li>• <b>Timely Handling:</b> Second automatic alert triggering, targeted messaging on PC and APP and handling data remains</li> <li>• <b>Digital and Smart Remains:</b> Event perception, warning and handling, and after-event analysis of data remains</li> </ul>



# Content

1. Results Review
2. Financial Highlights
3. Development Strategy
4. Appendix

# Robust Growth

(RMB mil)	1H2021	1H2020	Change
<u>Key financial data</u>			
<b>Revenue</b>	<b>41,232</b>	<b>31,543</b>	<b>↑30.7%</b>
<i>Segment Revenue</i>			
<i>Retail Gas Sales</i>	23,138	18,191	↑27.2% Vol growth, gas price hike
<i>Integrated Energy Business</i>	3,662	2,101	↑74.3% Higher utilization, new projects commenced operation
<i>Value Added Business</i>	837	663	↑26.2% Enriched product mix & service
<i>Wholesale of Gas</i>	9,768	7,919	↑23.3% LNG price hike
<i>Construction &amp; Installation</i>	3,827	2,669	↑43.4% More connections & stable fee
<b>Gross Profit</b>	<b>7,042</b>	<b>5,602</b>	<b>↑25.7%</b>
<b>EBITDA</b>	<b>6,634</b>	<b>5,407</b>	<b>↑22.7%</b>
Profit attributable to Shareholders	3,765	2,693	↑39.8%
<b>Core Profit*</b>	<b>3,685</b>	<b>3,112</b>	<b>↑18.4%</b>
<b>Core EPS (RMB)</b>	<b>3.26</b>	<b>2.77</b>	<b>↑17.7%</b>

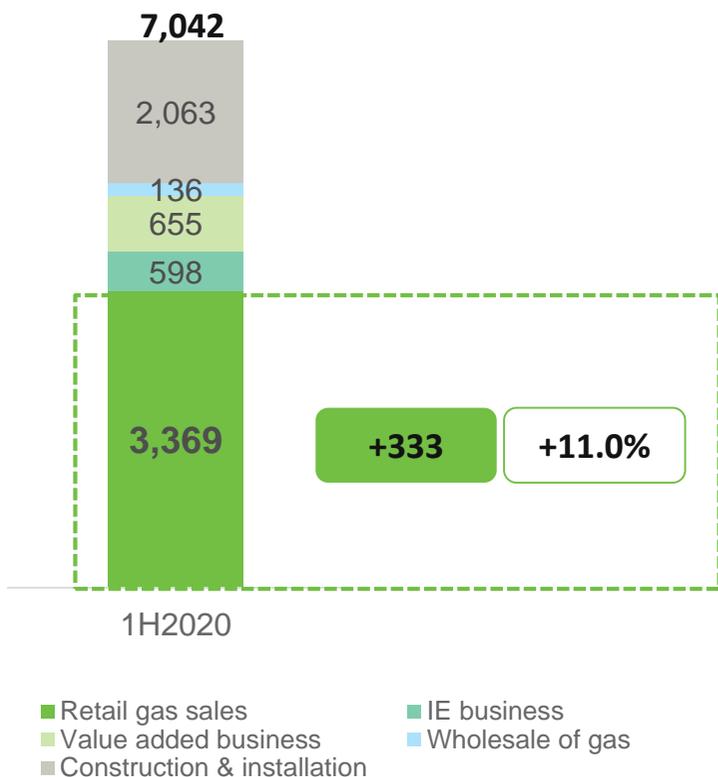
\*Core Profit = Profit attributable to shareholders - other gains and losses (excluding net settlement amount realised from commodity derivative contracts) and share-based payment expenses

# Retail Gas Sales Business

- Natural gas consumption remained rapid growth driven by growing economy & low-carbon policy
- Adopted flexible pricing strategy and diversified resources to expand gas sales volume, seizing opportunities brought by the dual carbon goals, clean heating and coal replacement

## 1H2021 Gross Profit (RMB mil)

### Yoy Change



## Interim Performance

### C/I volume (mil m<sup>3</sup>)



### Res volume (mil m<sup>3</sup>)



### Vehicle gas refuelling station (mil m<sup>3</sup>)



### Change in dollar margin

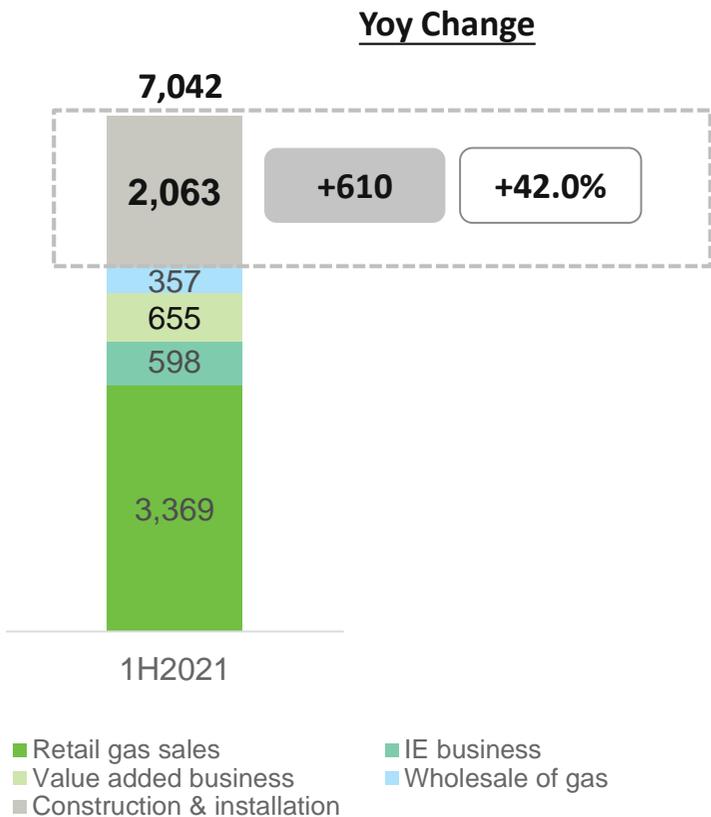
(RMB/m <sup>3</sup> )	1H2021	1H2020	1H2019
Residential	2.93	2.83	2.76
C/I	2.93	2.77	3.29
Vehicle gas station	3.78	3.51	4.08
ASP	2.95	2.81	3.24
Average cost	2.34	2.14	2.60
<b>Dollar margin (ex VAT)</b>	<b>0.56</b>	<b>0.61</b>	<b>0.58</b>

- ✓ Change in customer mix, i.e. higher share of large customers
- ✓ LNG price surged due to strong demand
- ✓ Citygate price hike, delayed pass through to residential users

# Construction & Installation

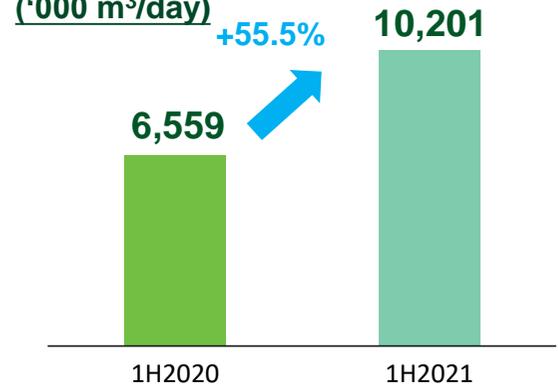
- Continued to explore C/I users development potential, push forward industrial coal replacement progress
- Urbanisation & people's pursuit of quality life, brings huge opportunity of urban residential users development

## 1H2021 Gross Profit (RMB mil)

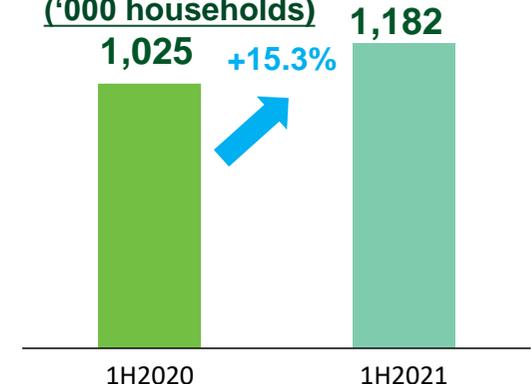


## Interim Performance

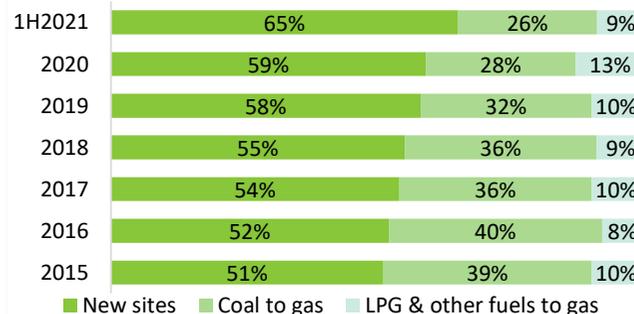
### New C/I installed designed capacity ('000 m<sup>3</sup>/day)



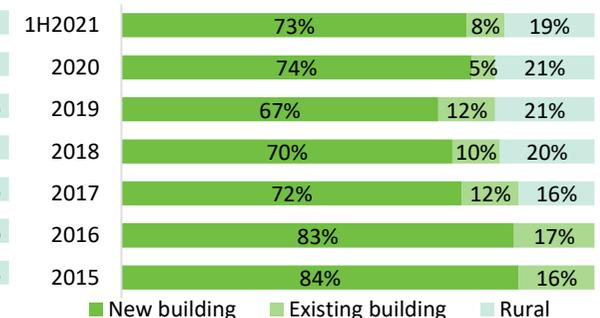
### New residential customers ('000 households)



### New C/I customers breakdown



### New residential customers breakdown

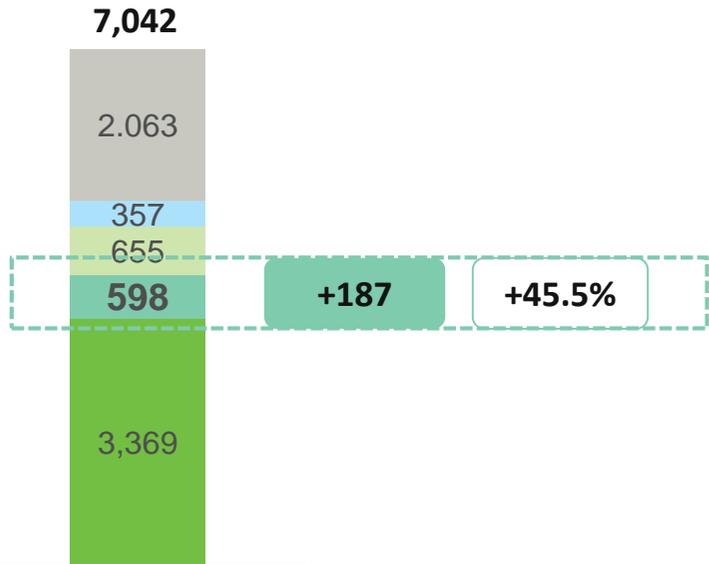


# IE Business

- Projects gradually ramped up, integrated energy sales increased significantly
- Provided customers with low-carbon/zero-carbon energy solutions which were customer-oriented, adaptive to local conditions, renewables prioritized use

## 1H2021 Gross Profit (RMB mil)

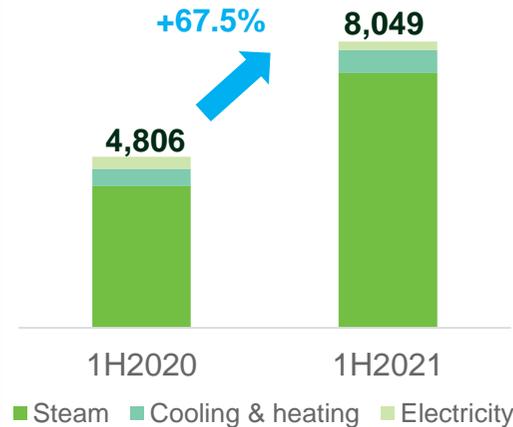
### Yoy Change



- Retail gas sales
- Value added business
- Construction & installation
- IE business
- Wholesale of gas

## Interim Performance

### IE sales vol (mil kWh)



### Operating projects



135

### Projects under construction

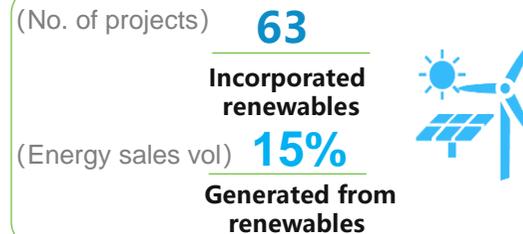


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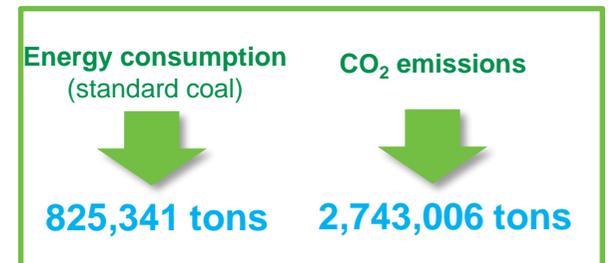
Energy sales potential

>34 bil kWh

### Clean energy solutions for customers

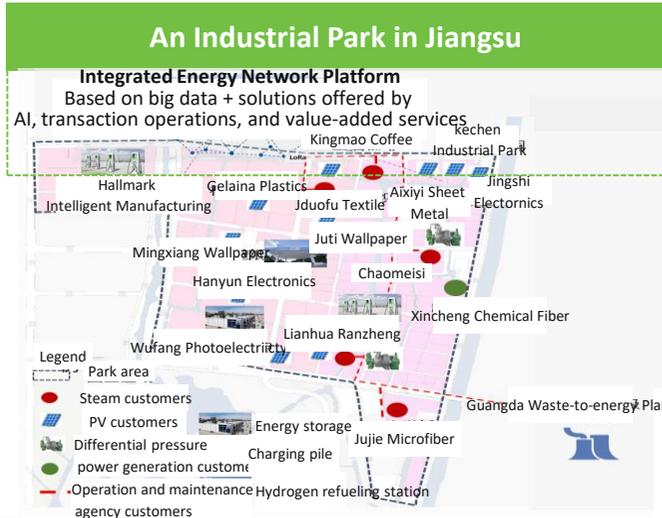


### Positive environmental impact for customers



# IEB – Industrial Park

- Developed the industrial park's IEB and support regional low-carbon improvement adaptive to local conditions and by focusing on energy saving and high efficiency, prioritizing the use of renewable energy and utilizing multi-energy sources



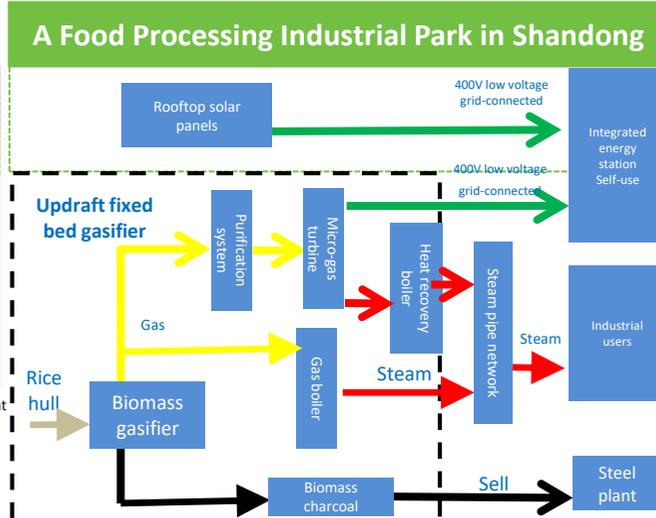
- ✓ Plan: Waste heat from garbage-burning power plant + steam differential pressure to generate electricity + distributed PV + thermal oil boiler hosting + energy management platform + medium and long-term gradual development of “zero-carbon” smart energy demonstration project through electricity services, energy storage, hydrogen and carbon sinks
- ✓ **Total investments: RMB99.77 million, average annual revenue: RMB107 million**
- ✓ **IRR: 15%, payback period: 7 years**

Steam  
541,000 tons/year

Reduce Coal  
104,000 tons/year

Clean electricity  
8.95 million kWh/year

Reduce CO<sub>2</sub> emissions  
250,000 tons/year



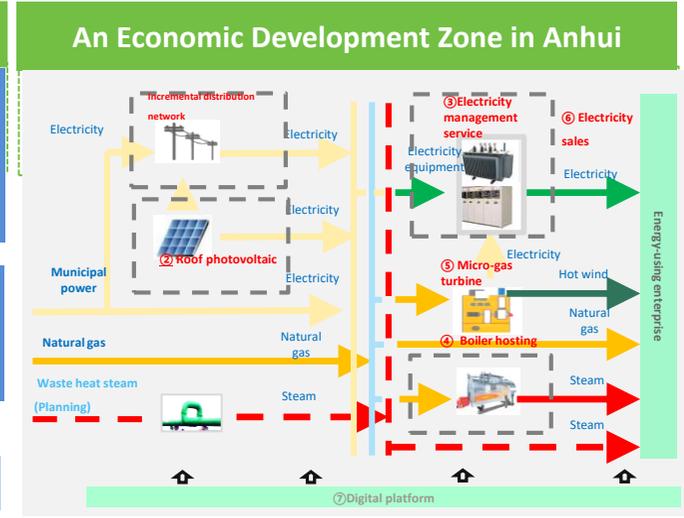
- ✓ Plan: Biomass integrated energy station + steam pipe network + Solar power generation + biomass charcoal + safety technology, energy-saving technology service and electricity services
- ✓ **Total investments: RMB59.18 million, average annual revenue: RMB46.92 million**
- ✓ **IRR: 20%, payback period: 5 years**

Steam  
132,000 tons/year

Reduce Coal  
220,000 tons/year

Biomass charcoal  
18,000 tons/year

Reduce CO<sub>2</sub> emissions  
58,000 tons/year



- ✓ Plan: Solar power generation + natural gas distributed power generation + power and thermal facilities energy saving and operation services + biomass waste heat steam + green power trading services
- ✓ **Total investments: RMB26.57 million, average annual revenue: RMB67.58 million**
- ✓ **IRR: 15%, payback period: 7 years**

Steam  
55,000 tons/year

Reduce coal  
29,000 tons/year

Electricity  
110 million kWh/year

Reduce CO<sub>2</sub> emissions  
196,000 tons/year

# IEB - Solar

- Boosted the sales of gas, electricity and heat leveraging on distributed solar, established smart integrated energy system in the region
- **19** projects in operation and under construction, installed capacity of **55MW**, expect to reach **400MW** by the end of the year

### Policy support:

- Notice on Organizing the Application for the Pilot Scheme for the Development of the Roof Distributed Solar of the Whole County (District, City) by National Energy Administration
- **23 provinces (autonomous regions, municipalities)** have issued pilot documents for the promotion of rooftop distributed solar

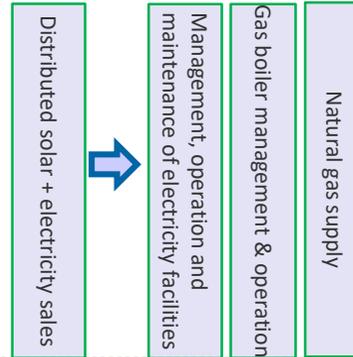
### Customer needs:

- In the context of the dual carbon goals, customers' demand for cost and carbon reduction as well as energy efficiency have increased

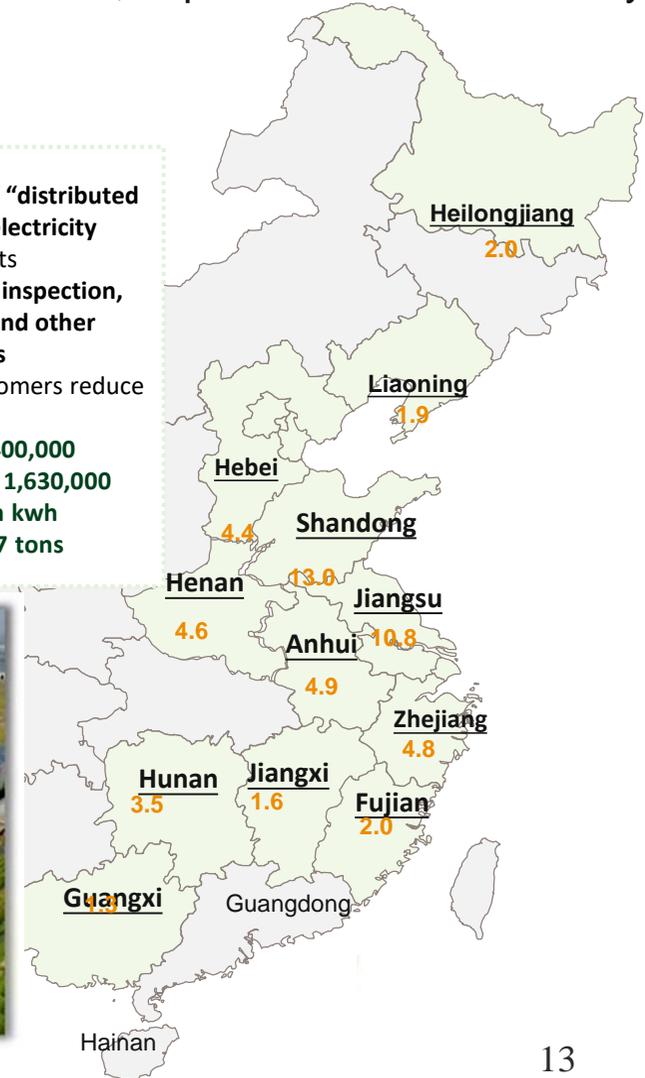
### Resources advantages:

- ENN Energy has huge C/I user rooftop resources (>3GW)
- Synergy between citygas concessions, integrated energy projects and incremental power distribution networks

### 2MW Solar Project of Daqing Dongcheng Water Plant

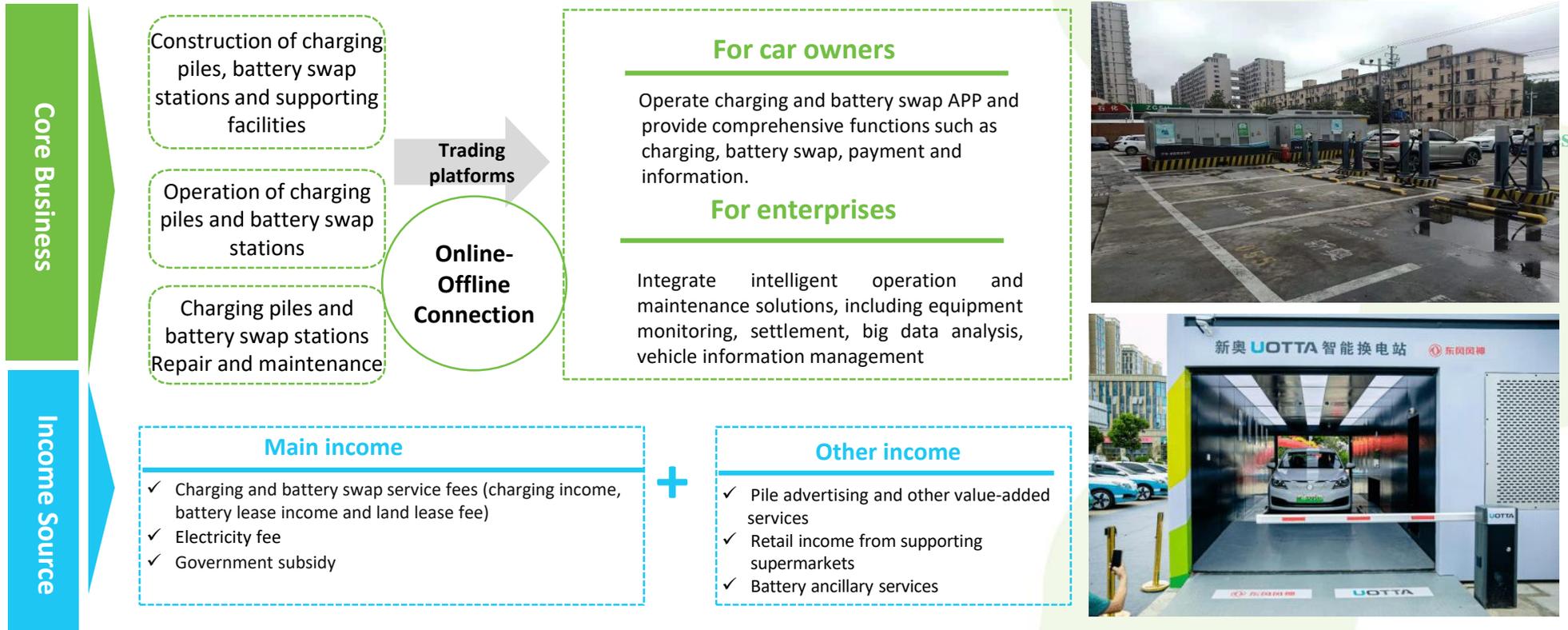


- To adopt a combined model of “distributed solar + rooftop waterproof + electricity sales” to reduce electricity costs
- **Energy-saving service, regular inspection, operation and maintenance, and other services for electricity facilities**
- Boiler management helps customers reduce heating costs in winter
- Investment amount: **RMB 10,400,000**
- Average annual revenue: **RMB 1,630,000**
- Power generation: **2.73 million kwh**
- CO<sub>2</sub> emission reduction: **23,397 tons**



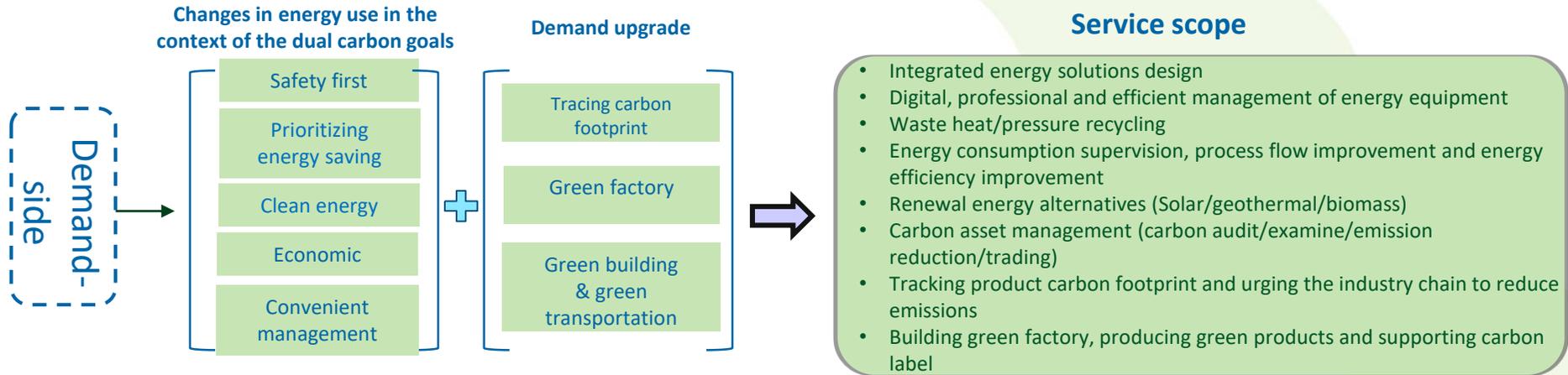
# IEB – EV Charging and Battery Swap Station

- Utilized existing gas refuelling stations and customer resources to actively carry out EV charging and battery swapping business, tap into energy storage, facilitate the achievement of the dual carbon goals
- **13** charging stations in operation & more than **20** stations are under construction, **1** battery swap station in operation & **5** stations are under constructions, mainly located in Shanghai and Quanzhou

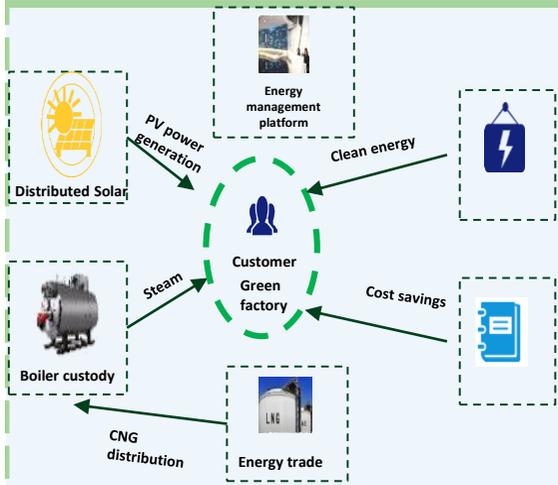


# IEB – Integrated Services

- Proactively expanded demand-side energy services incorporating carbon asset management, to enhance customer loyalty

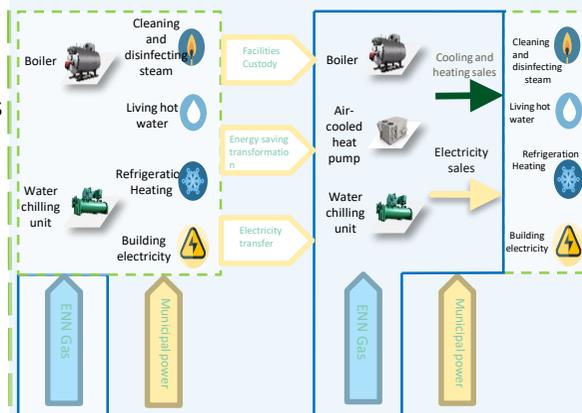


## Dalian CBAK Power Battery Co., Ltd. Project



- Conduct multi-business collaboration, provide **solar + electricity sales + bill optimization + boiler management** and other services on demand
- Create **green factories** which are equipped with clean energy such as **solar and electricity sales** and increase the proportion of renewable energy
- Save about **RMB 1.2 million** in energy costs for customers

## Qingdao Mangrove Tree Project



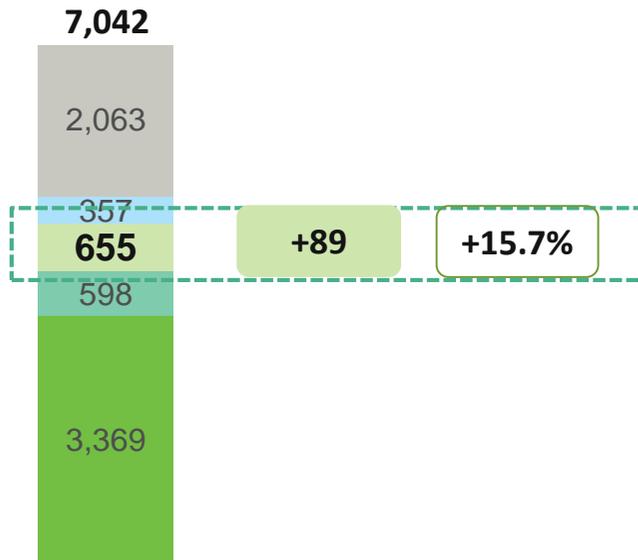
- Management & operate the existing energy facilities, install flue gas heat recovery and equipment insulation to reduce losses and achieve carbon reduction
- Build new **air-cooled heat pumps** to improve efficiency
- **Digital intelligence platform**
- **Manage the power distribution system as a custodian**, increase frequency conversion for electric facilities, achieve a balance between use and supply and reduce power consumption;
- Save about **RMB600,000** in energy costs for customers

# Value Added Business

- Tapped into full range of home lifestyle services leveraging on kitchen solutions, innovative and diversified product mix and in-depth understanding on customer needs
- Strive to expand market share with kitchen products sales, heating solutions in Yantze River areas and smart home security products

## 1H2021 Gross Profit (RMB mil)

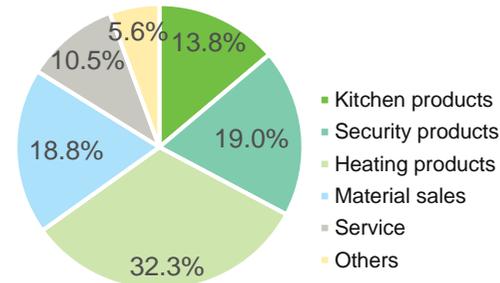
### Yoy Change



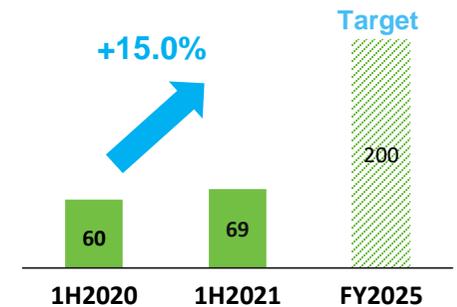
- Retail gas sales
- Value added business
- Construction & installation
- IE business
- Wholesale of gas

## Interim Performance

### Revenue breakdown



### Value creation per household (RMB)



### Rising penetration rate

#### New customers

19% ↑

1H2020: 14%

#### Existing customers

8% ↑

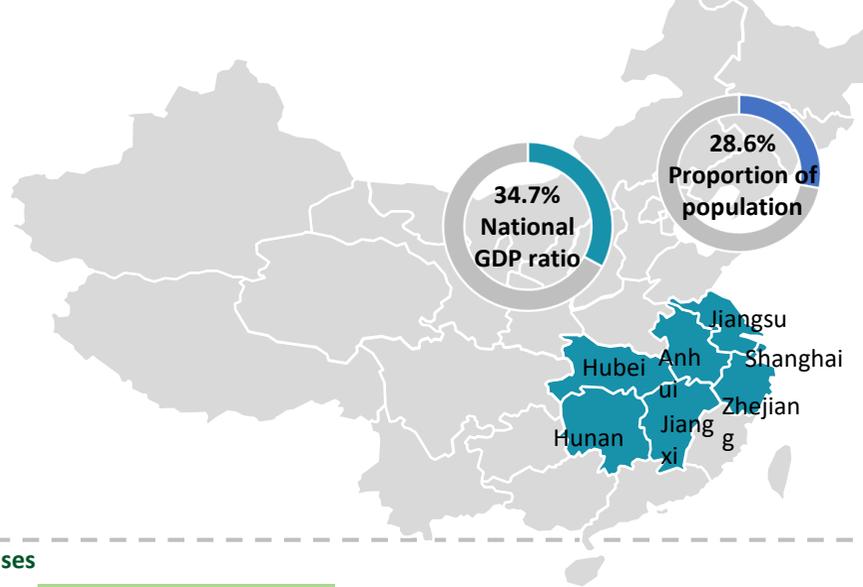
1H2020: 6%

### Enriched product mix

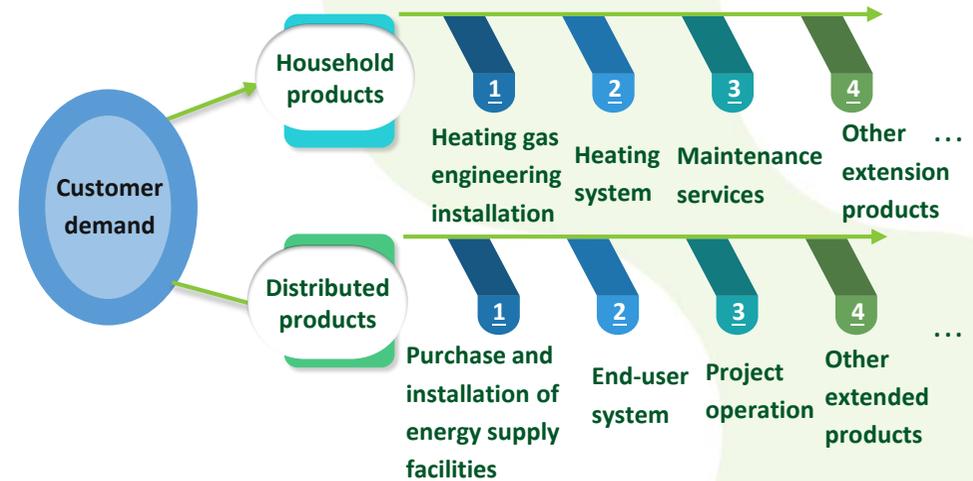
- ◆ **360°Kitchen**: Cooking stove, range hood, gas heater
- ◆ **Security**: Automatic shut-off valve, alarm
- ◆ **Heating**: Heating plates, wall-mount heater
- ◆ **Concealed installation**: Metal pipes concealling
- ◆ **Insurance**: Gas & home insurance
- ◆ **Window-Alarm Linkage smart security product**
- ◆ **LoRa IoT smart applications**
- ◆ **Commercial kitchen, water filtering, energy saving materials**

# VAB – Clean Heating in Yangtze River Areas

- It is estimated that the heating market in the middle and lower Yangtze River areas will reach RMB **400-500 billion** in the next ten years
- Currently covers a heating area of **6.03 million square meters** and a contracted area of **15 million square meters**



- Integrate resources, enrich the series of heating equipment supporting products, capitalize on the our customer base, through different product combinations to provide customers with **one-stop and the most cost-effective** products and services



## Typical cases

### Shuimu Yunding



- ✓ Place of project: Huai'an, Jiangsu
- ✓ Heating area: 298,000 m<sup>2</sup>
- ✓ Technical solutions: Distributed, gas heat pump + floor heating
- ✓ Product portfolio: Natural gas + floor heating + extended products

### Dongyuan Yinaowan

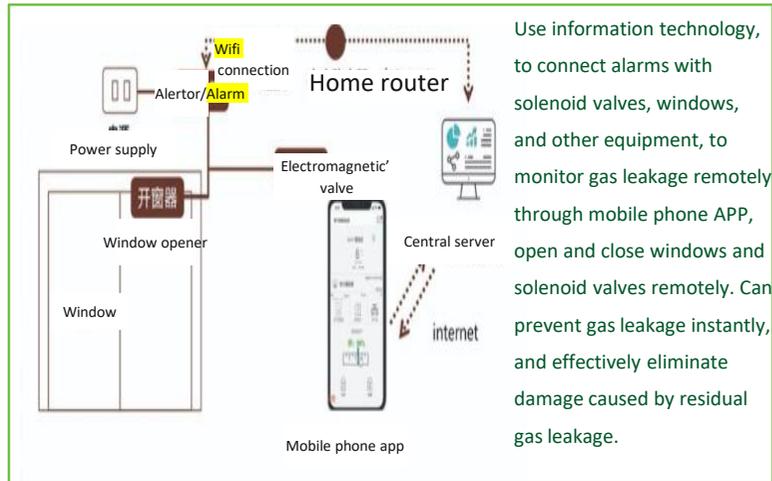


- ✓ Place of project: Xiaoshan, Zhejiang
- ✓ Number of homes heated: 260
- ✓ Technical solutions: Individual home heating, wall-mounted boiler + floor heating
- ✓ Product portfolio: Natural gas + heating services + extended products

# VAB - Innovative Products and Services

- Based on precise understanding of customer needs for aesthetics, safety and smart home, adopting LoRa, a remote data collection system, and a variety of intelligent applications, to expand value added business

## Window-alarm linkage system



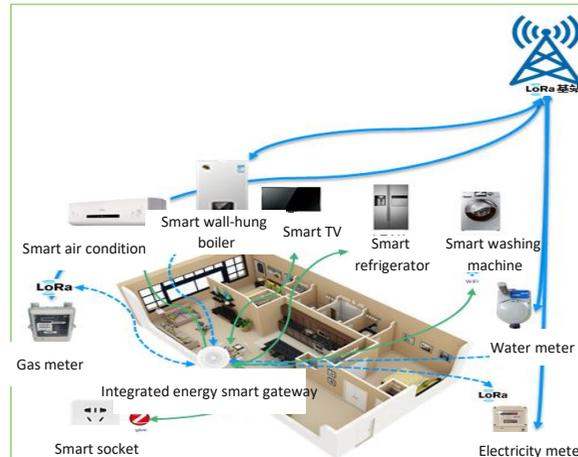
### Customer needs:

- Safe, convenient and smart products

### Core strategy:

- Product: Window-alarm linkage system + window + design + installation
- Target customers: Real estates developers, C/I users and customers whose alarms expired

## LoRa IoT Smart Application Products



### Customer needs:

- Pursuing personalized and high-quality energy supply
- Government's demand for smart industrial park construction

### Core strategy:

- Enriching end-user smart products and smart services solutions based on IoT
- Target customers: Real estates, municipal administration and industrial parks

## Concealed pipe installation



### Customer needs:

- Safe, beautiful and comfortable home environment

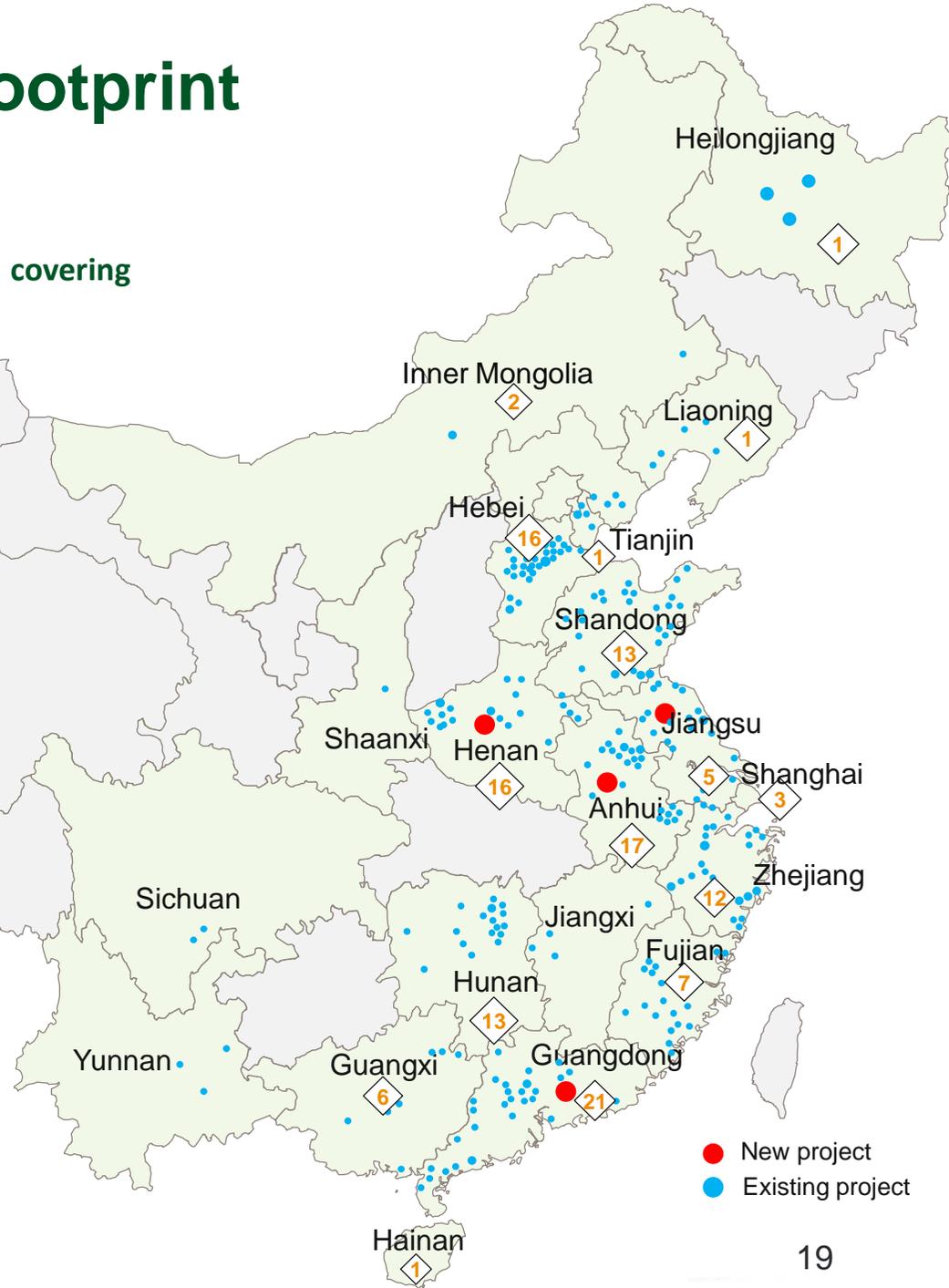
### Core strategy:

- Product: Concealed combination packages including copper pipes, metal bellow, etc. Target customers: Real estates, property management, renovation companies and other ecosystem partners

# Expanding Operational Footprint

Added **20** new city-gas projects and integrated energy projects, covering **21** provinces, cities and autonomous regions

Total Projects	New Projects
<p>City-gas Project 239</p> <p>○</p>	<ol style="list-style-type: none"> <li>Ruyang Industrial Cluster District, Henan</li> <li>Lvsigang Town, Qidong, Jiangsu</li> <li>Qianjiang Industrial Park, Chizhou, Anhui</li> <li>Lantang New Industrial Town, Zijin County, Guangdong</li> </ol>
<p>Integrated Energy Project 135</p> <p>◇</p>	<ol style="list-style-type: none"> <li>Shanxu Project, Guangxi</li> <li>Yizhou Economic Development Zone, Guangxi</li> <li>Xiangjiang Happy City Project Hunan</li> <li>Dongjiang Garden, Shandong</li> <li>Evergrande Jinbi World Project, Henan</li> <li>Mayu Industrial Park, Jinzhou, Hebei</li> <li>Shexian Economic Development Zone, Hebei</li> <li>Yingjiangji Development Zone, Anqing, Anhui</li> <li>Xinxiang County, Henan</li> <li>Yangkou Photovoltaic Power Station, Shandong</li> <li>Hydrogen Production Project for Shixing Pharmaceutical, Huludao, Liaoning</li> <li>Huilong Wuhe Ecological Project, Anhui</li> <li>Minhong Fiber Project, Fujian</li> <li>Jinjiang Yibao Material Project, Fujian</li> <li>Zhongche Project, Hunan</li> <li>Nanxun Project, Zhejiang</li> </ol>



● New project  
● Existing project

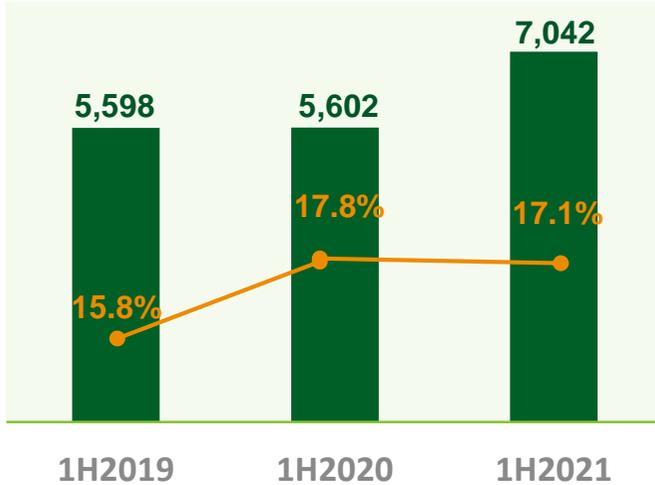


# Content

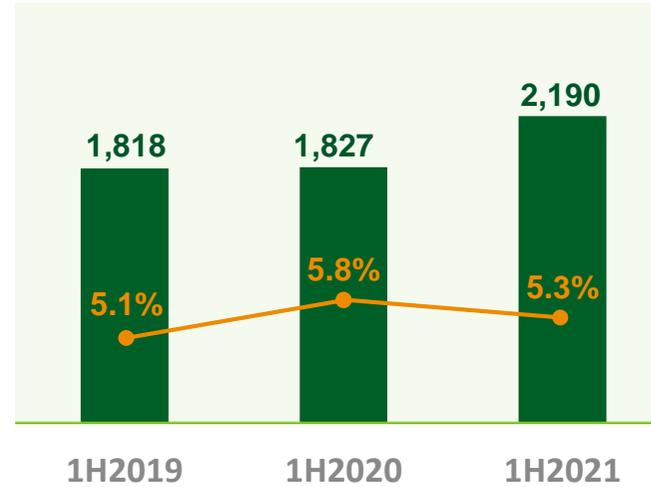
1. Results Review
- 2. Financial Highlights**
3. Development Strategy
4. Appendix

# Key Financial Metrics

Gross profit & gross profit margin (RMB mil)



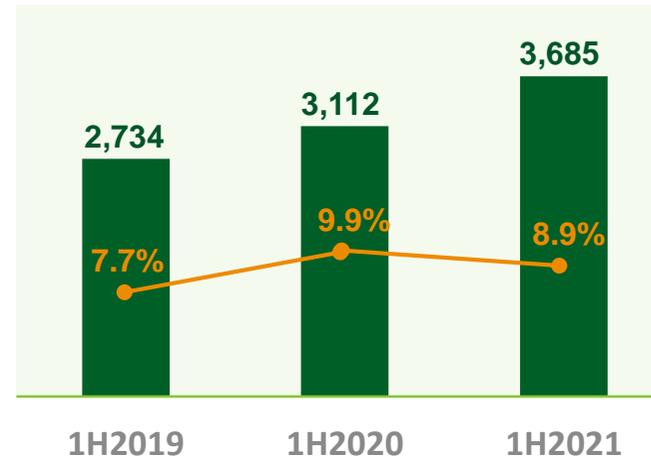
SG&A, SG&A to revenue ratio (RMB mil)



EBITDA & EBITDA margin

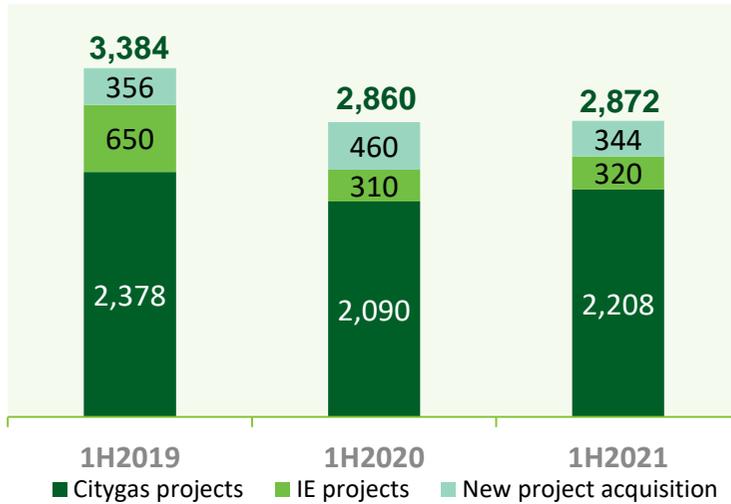


Core profit & core profit margin (RMB mil)

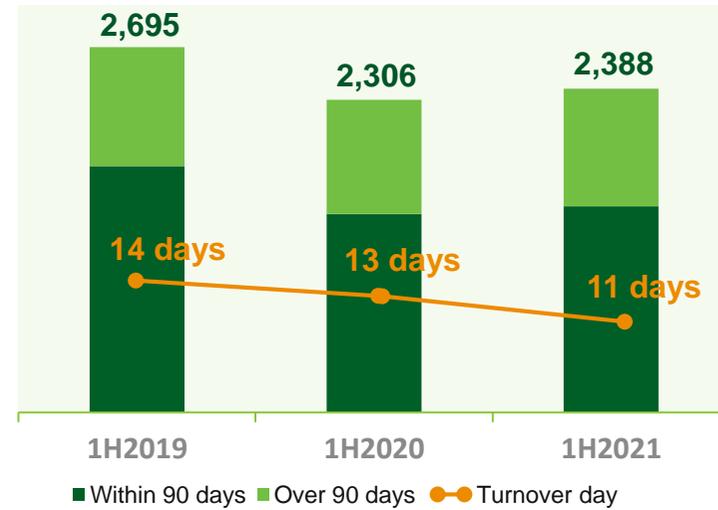


# Superior Financial Management

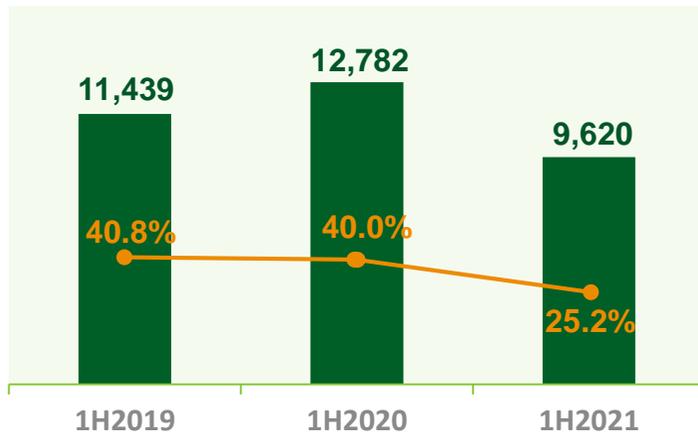
CAPEX (RMB mil)



Account receivables & turnover days (RMB mil)



Net debt & net gearing ratio (RMB mil)



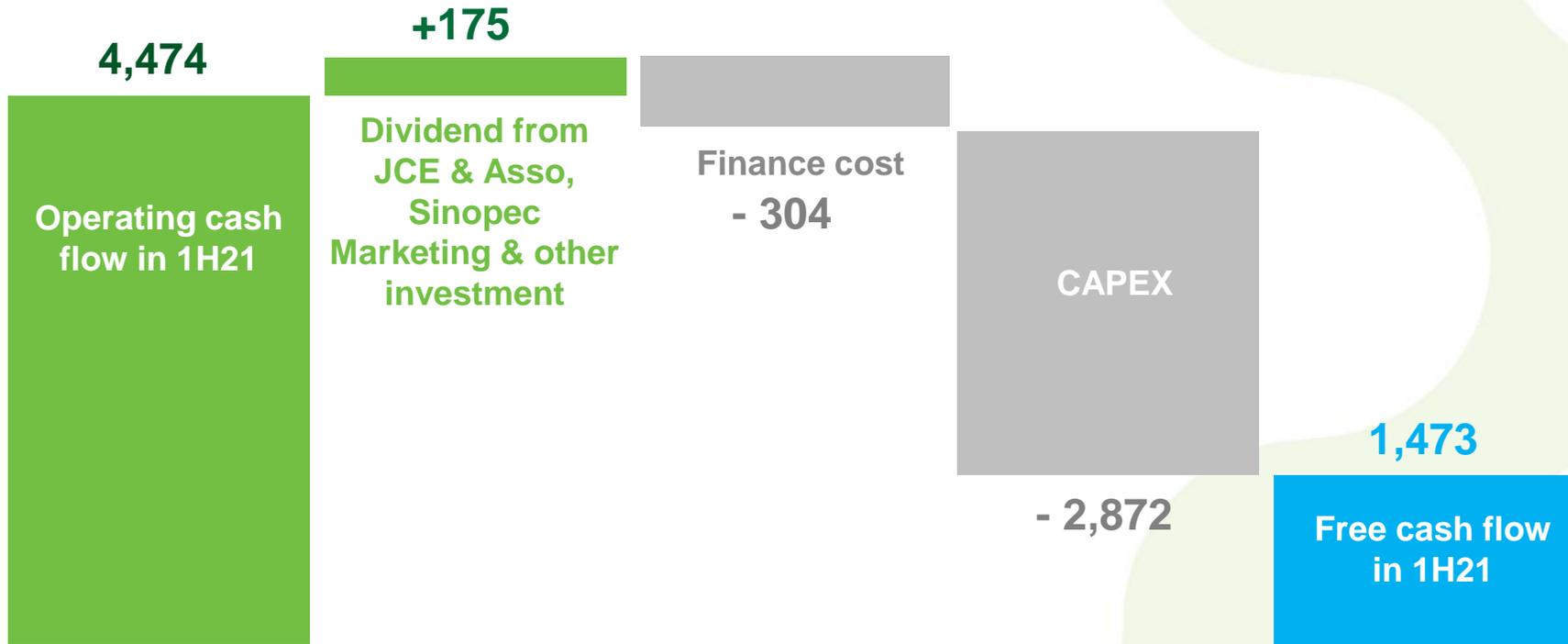
Total debt & cash on hand (RMB mil)



# Cash Flow Analysis

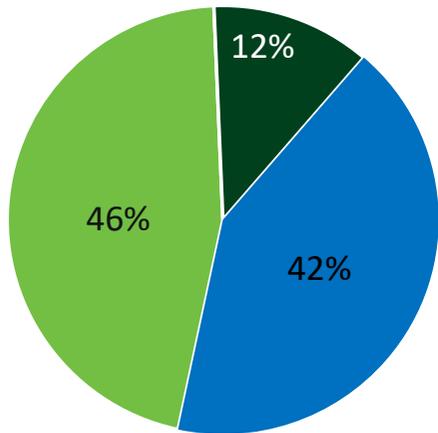
- Steady growth of business and superior financial management, operating cash flow recorded an increase of **RMB1,261 mil**
- Free cash flow increased by **RMB1,384 mil**

(RMB mil)



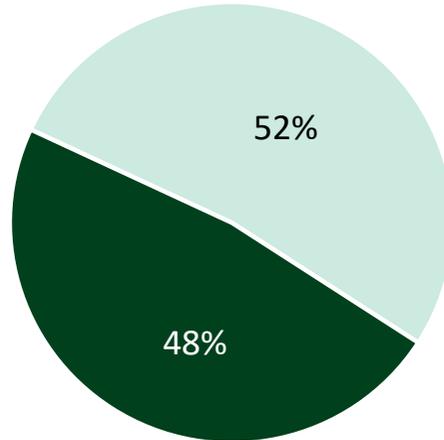
# Ample Financial Resources & Liquidity

Debt structure (by currency)



■ USD bonds  
■ RMB bonds & loans  
■ USD bank loans

FX risk exposure management – long-term USD debt



■ Unhedged  
■ Hedged

➤ Low interest rate environment, and preferential rates obtained by project companies

	1H2021	2020	2019	Change
Avg. effective interest rate	3.14%	3.63%	3.90%	↓ 49 bps

Investment-grade credit ratings

Rating agency	1H21
<b>S&amp;P Global Ratings</b>	<b>BBB</b>
<b>MOODY'S INVESTORS SERVICE</b>	<b>Baa2</b>
<b>FitchRatings</b>	<b>BBB</b>

Sufficient financial resources

RMB mil	Available quota
Unutilized credit facilities	12,061
Green bond quota approved by NDRC	5,000



# Content

1. Results Review
2. Financial Highlights
- 3. Development Strategy**
4. Appendix

# Opportunities and Needs Driven by Market Changes

## Changes in External Environment

## Opportunities and Needs

### Green and Low-carbon Development

#### Changes of Customer Demands

- Green Factory • Green Building
- Green Transportation
- Low-carbon Industrial Park
- Green Consumption
- Low-carbon Lifestyle
- Energy + Carbon Trading
- Carbon Asset Management

#### Energy System Reform

- **Energy structural adjustment:** Manage coal consumption, stimulate gas consumption and development renewable energy
- **Energy-efficiency prioritization:** Develop and utilize the value chain of energy
- **Pattern upgrade:** Develop distributed energy system, multiple and complementary energy support, and form the integration between energy load, energy supply, energy grid and energy storage, and the integration of gas, electricity and heat energy supply

### Energy System Reform

#### Marketization

- Direct supply to large-usage customers
- Liberalization of city-gas distribution network
- Market-based pricing for both upstream and downstream

#### Strict Supervision

- ROA on gas distribution
- Compliance pricing
- Strengthened safety inspection

#### Accelerate Integration

- Concession rights evaluation
- Scale up gas projects
- Lean management on pipeline network

### Industrial Digitalization

#### Society

Digitalized carbon footprint management

#### C/I Customers and Industrial Park

Smart Energy

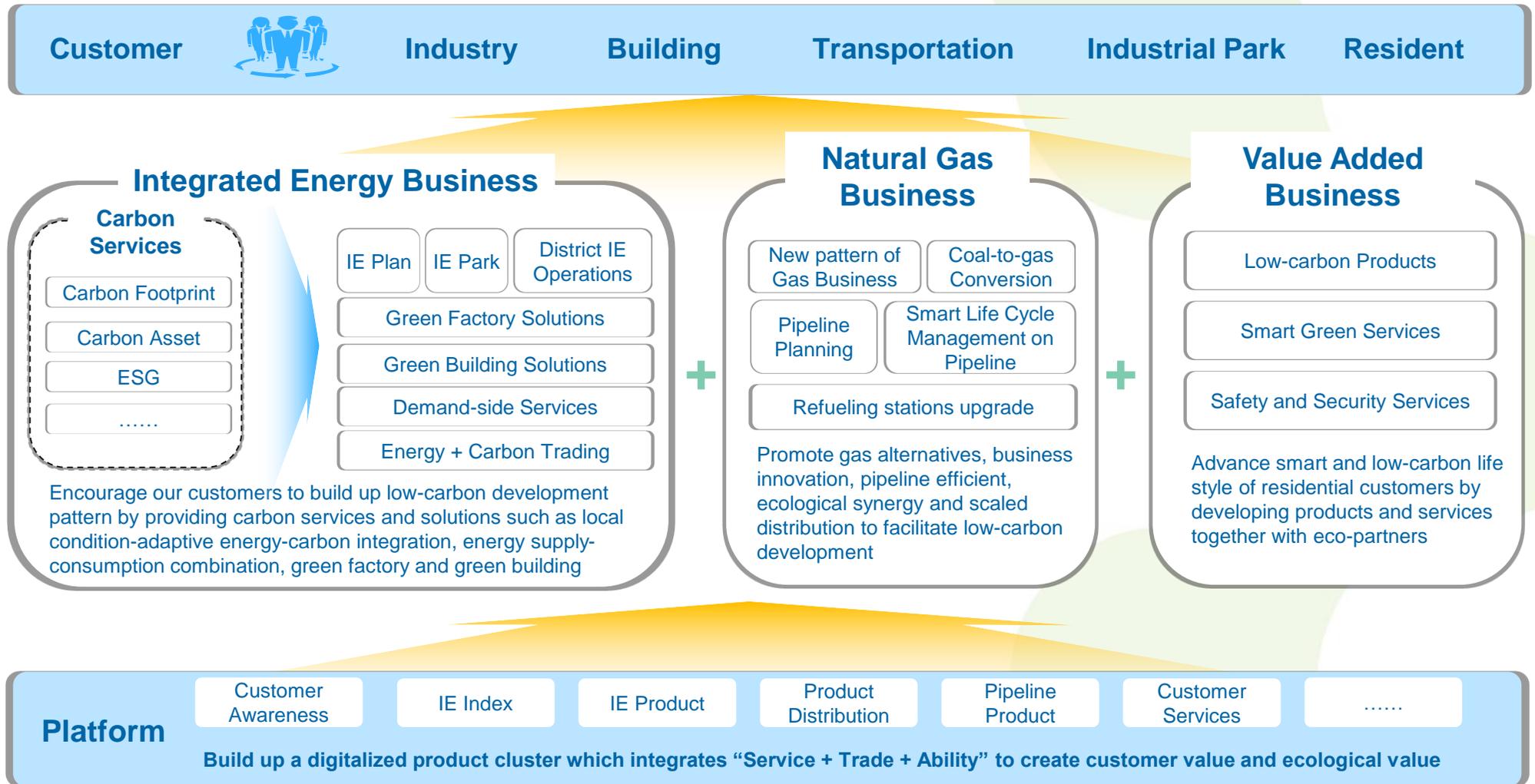
#### Government

Intelligent monitor on energy and carbon

- Golden opportunity for IE business development
- Rapid growth of natural gas consumption
- Innovation, safety management, digitalization are becoming the key factors to meet customer demands and realize sustainable development

# Energy-Carbon Integration and Digitalization

For developing the “Energy-carbon Integration” solutions for customers and moving forward to the new era, we keep investigating changes of customer demands, business upgrade and digitalization.



# Enhance the Quality & Quantity of Gas Business Development

Seizing the development opportunities, we executes innovatively, digitally and ecologically to optimize and upgrade our gas business

## Gas Distribution Business



Develop the low-carbon energy plan for customer's energy reduction needs

Carbon Benchmark

Carbon + Energy + Investment



Satisfy customer's needs on energy with diversified product portfolio

Gas Package



Carbon Management



Extended Services



Provide portfolio includes resources optimization + digital operation + carbon management, etc. to empower ecological development



## Pipeline Network Operation



Digitalize the entire industrial chain covering planning, designing, engineering, operation and maintenance

Intelligent Planning

Digital Engineering and Operations

Smart Dispatch

**Government Coordination**

Safety Monitoring on Citygas Pipeline Network

- Risk Screening
- Gas Leakage Management
- Third-party Destruction Management
- .....



Advance smart pipeline planning and construction to improve customer transportation capacity



Avoid methane leakage

Laser Monitoring System on Methane

Pipeline simulation system

Pipeline Risk Assessment

## Digital Products

Customer Awareness -related Product

Smart Distribution Product

Smart Operation Product

Digitalized Engineering Product

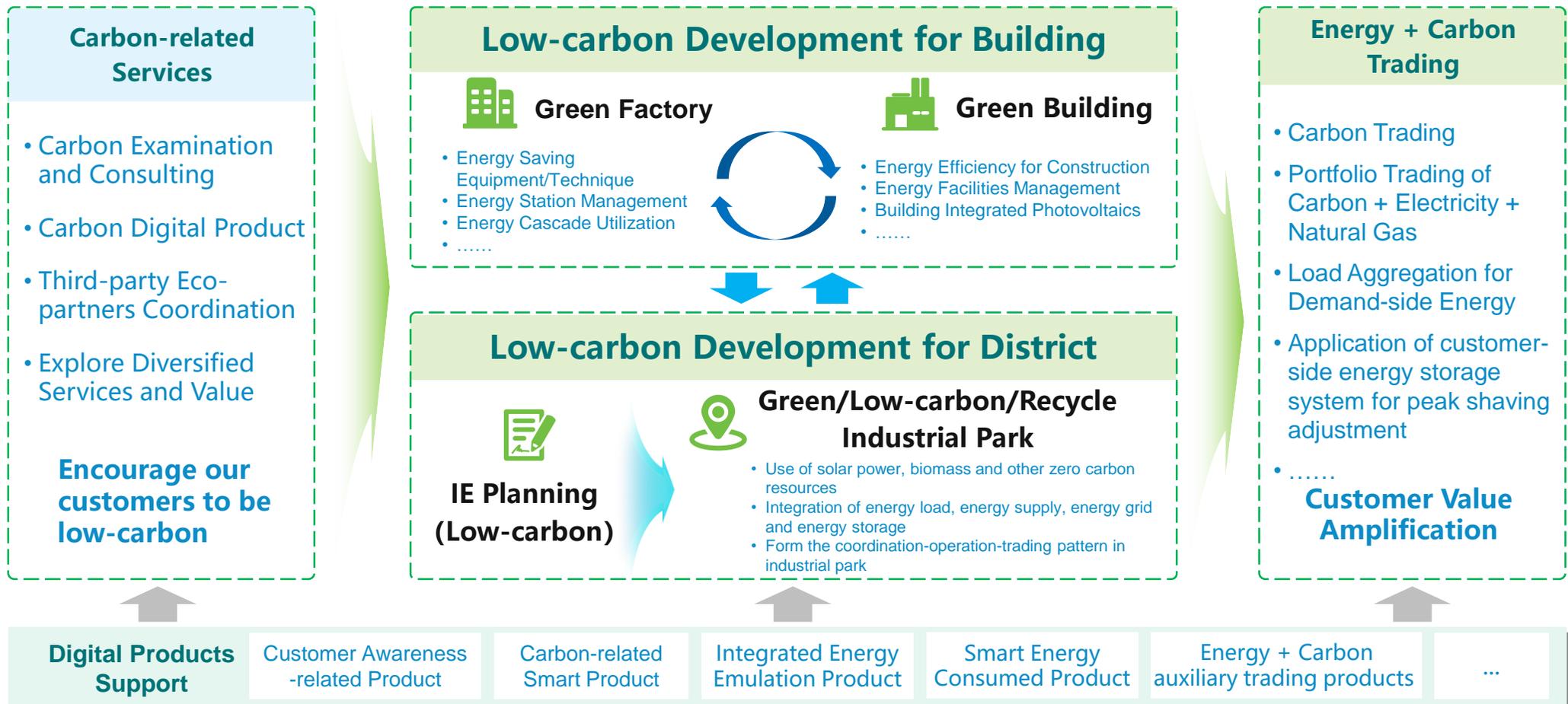
Smart Dispatch Product

Digitalized Safety Product

...

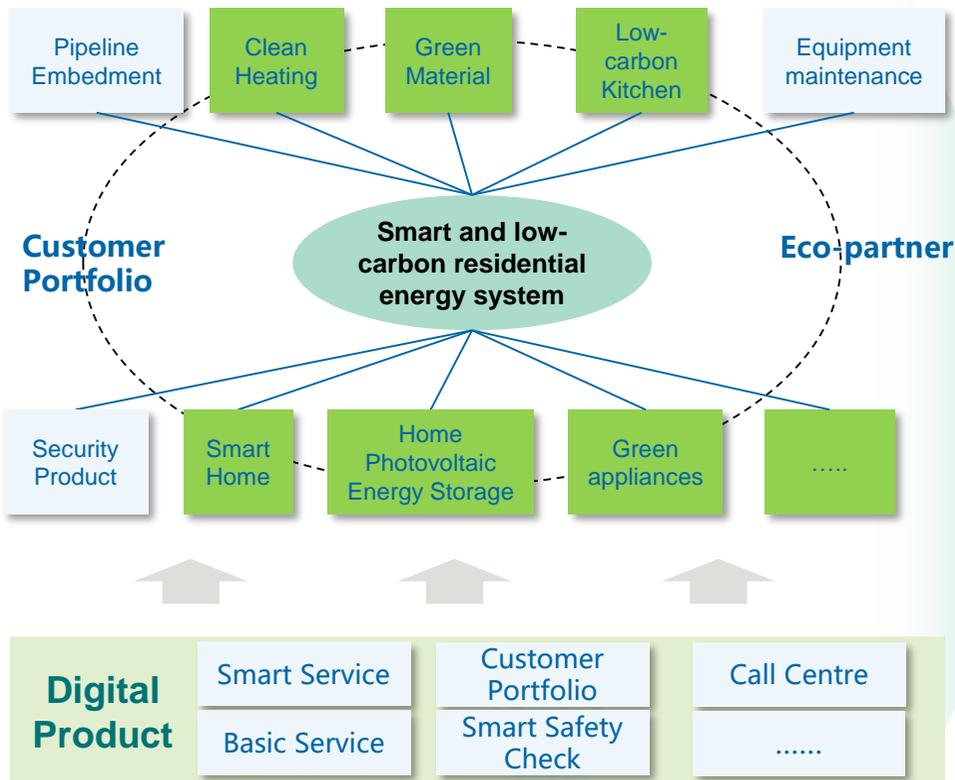
# Develop IE Services incorporating Energy & Carbon Management

Diversifying services to meet the low-carbon needs of industry, building, industrial park and city, supporting our customers to realize carbon reduction and facilitating development of IEB



# Advance VAS Development with Various Measures

Providing diversified products to residential customers with product innovation and green product coverage, supporting residential customers to cultivate intelligent and low-carbon lifestyle, creating greater value



Apply digitalization to understand our customer precisely



Establish diversified “Online + Offline” communication channels



Provide smart, low-carbon and high-quality products + services



Advance the value-sharing mechanism thus to motivate talents and expand business

# Q&A

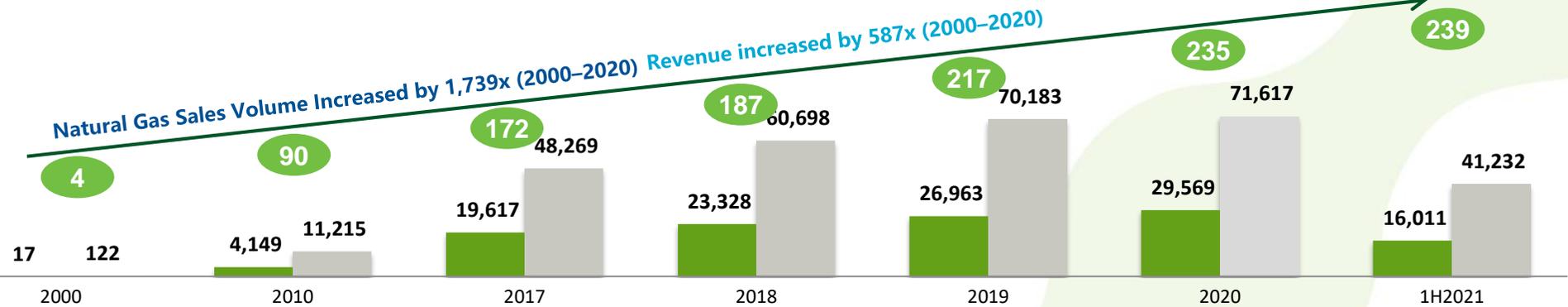
# ENN – To Build an Industry-leading Integrated Energy Service Provider

## Company Profile

- Established in 1993, ENN is one of the leading private-owned clean energy distributor in China.
- ENN's principal business includes investment in, and the operation and management of gas pipeline infrastructure, vehicle/ship gas refueling stations and IE stations, sales and wholesale of piped gas, LNG and other energy, integrated energy business, sales and distribution of piped gas, LNG and multiple energy forms. It also develops integrated energy business and wholesale of gas business, while providing other energy-related value added business.
- ENN was listed on the GEM in 2001 and transferred to the Main Board of HKEX (stock code: 2688) in 2002

## Key Business Segments

Retail Gas Sales Business	Integrated Energy Business	Wholesale of Gas	Construction & Installation	Value Added Business
				
<ul style="list-style-type: none"> <li>• Sell piped gas to residential households and C/I customers</li> <li>• Construct and operate CNG/LNG gas refueling stations</li> </ul>	<ul style="list-style-type: none"> <li>• Based on customers' need, provide multi-energy products according to energy sources available locally, and customize integrated energy solutions</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct natural gas wholesale business to fully utilize its advanced dispatch system, logistics fleet and upstream resources</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct gas pipeline construction and installation for residential and C/I customers</li> </ul>	<ul style="list-style-type: none"> <li>• Provide energy-saving technology, retrofitting services, and inspection and maintenance services</li> <li>• Provide gas-related products and material sales</li> </ul>



■ Total Natural Gas Sales Volume (million cm)

■ Revenue (RMB million)

● # Number of City-gas Projects

# Application of Low-carbon Energy - Hydrogen

➤ **Government's front:** President Xi pointed out that China would take strong regulations pledged to reach peak level of carbon emission by 2030, and carbon neutral by 2060 during the General Assembly of the United Nations

➤ **Characteristics of H2:** High heat value, zero emission, burns fast

➤ **Competitive Edge:**

- H2 can be blended into natural gas pipelines at specific concentration (10% or below according to international practice) and pressure, can be supplied to commercial and residential users as fuel, reduce carbon emission
- ENN's technological know-hows of operating CNG & LNG transportation & storage provide support to develop compressed H2 or liquified H2 business
- Possesses resources and technology of natural gas to hydrogen production

➤ Founding member of "Yangtze River Delta Hydrogen Infrastructure Industry Alliance", aims at exploring the development of hydrogen refueling infrastructure following policies of "Yangtze River Delta G60 Hydrogen Corridor"

## Hydrogen Supply Project – A Pharmaceutical Company in Liaoning Huludao

### Overview:

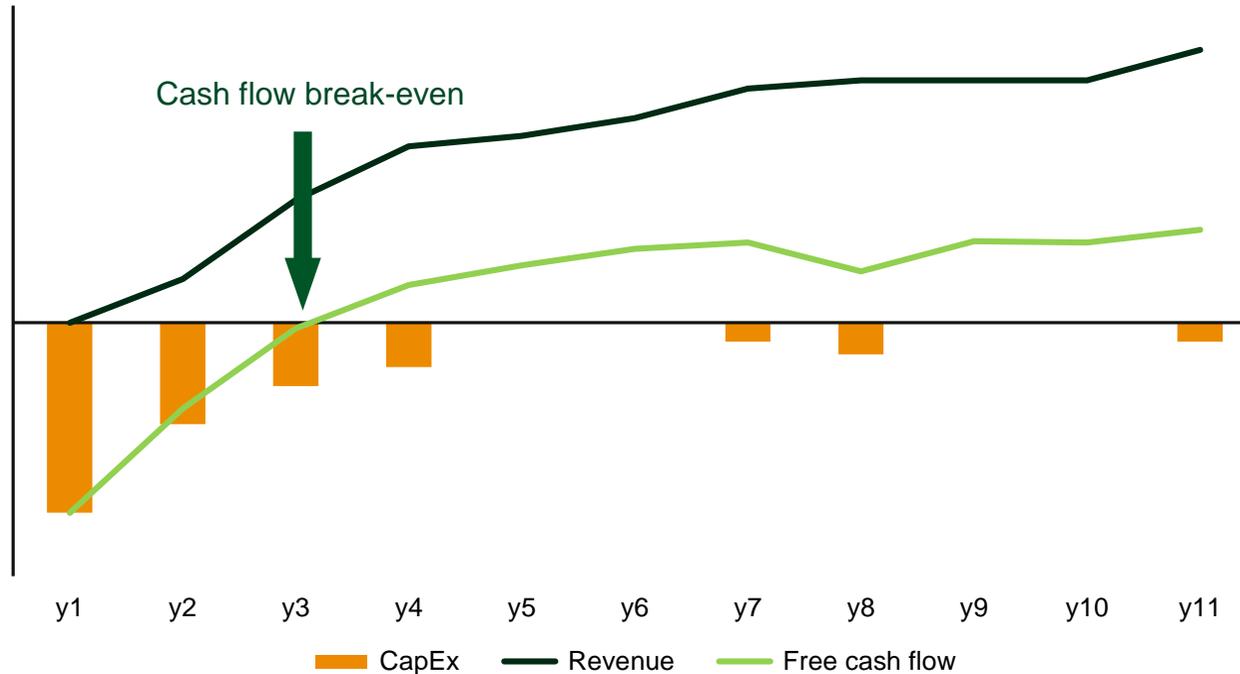
- Summary
- H2 production capacity: 1,500m<sup>3</sup>/h
- Customer's need: 12.48mil m<sup>3</sup>/year
- Use of existing pipelines, factories and land for free, reduced investment cost, revitalized customer's assets
- Investment amount: RMB17.39mil
- Expected return: IRR 20%
- Status: Commenced operation in June 2021



### Natural Gas to Hydrogen:

1. Compressed and gasified feedstock gas
2. Desulphurization
3. Conversion
4. PSA H2 extraction

# Typical Industrial Park IE Project - Cash Flow Projection



## 1. Stable & Recurring Income

- Integrated energy solutions reduce customers' overall energy bills **↓10%**
- Selling the types of energy customer need increases their stickiness

## 2. Rapid Cash Flow Generation

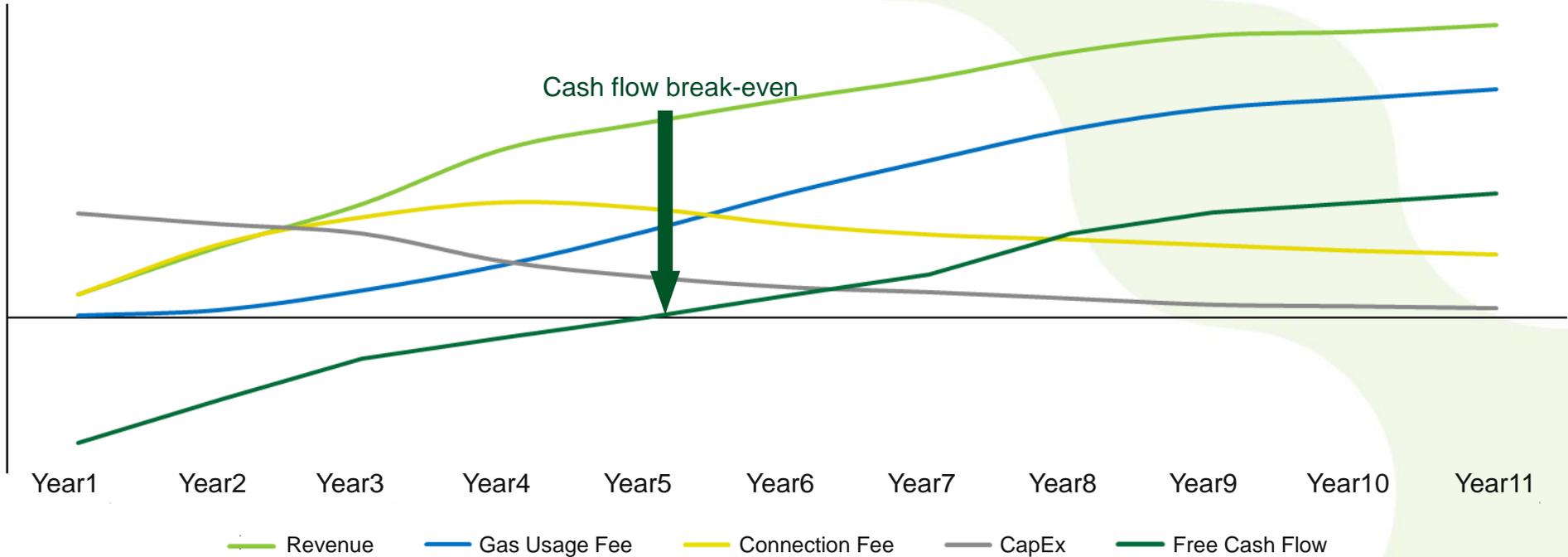
- Capex are invested by stages depending on the number of customers and their energy consumption scale
- Our projects are mostly industrial parks with existing customers, once the energy stations completed, energy sales can be generated
- Payback period: **7-8** years

## 3. Low Risk

- Diversified customer base in industrial parks helps reduce cyclical risks of certain industry
- Sign minimum energy offtake volume and establish automatic passthrough mechanism with customers
- Market-oriented business model with low regulatory risk

# Simplified Model for a Typical City-gas Project

Revenue/Cost



- Connection fee dominates in early years when the project companies are signing up new customers
- Gas usage increases as projects mature, becoming the major source of recurring income
- Prior to the completion of the whole pipeline network in cities, revenue will be generated as soon as gas supply becomes available in certain districts. Each connection contract normally takes 6–12 months to complete
- In general, gas projects would generate positive free cash flow after 5 years of operation

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