

Technovator International Limited 同方泰德国际科技有限公司 (1206.hk)

A Leading Integrated Energy Saving Services Provider

August 2015

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- Acquisition of the Intelligent Businesses
- 2015 Interim Financial Highlights
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Acquisition of the intelligent businesses from THIF



- ➤ Entered into agreements on 28 July 2015, to acquire from THTF the intelligent transportation business, intelligent building business and intelligent urban heating network business for a total consideration of RMB528,000,000.
- > The intelligent businesses have solid technical strength, clientele and market outlook.
- The acquisitions will facilitate the Group to optimize the business layout, strengthen the existing urban integrated energy saving business, optimize resources allocation, enhance business efficiency and create a good synergy.

	Net asset value ¹ (RMB)	Net profit after tax ² (RMB)	Consideration ³ (RMB)
Intelligent Transportation	80,778,000	22,654,000	197,000,000
Intelligent Building	134,740,000	3,788,000	173,000,000
Intelligent Urban Heating Network	99,935,000	8,434,000	158,000,000
Total	315,453,000	34,876,000	528,000,000

Note1: The unaudited net asset values as of 31 March 2015

Note2: The unaudited net profit for the year ended 31 December 2014

Note3: The valuation as at 31 March 2015 according to the Valuation Report

Leading market share and strong industry experience





Intelligent Transportation Business

- •Provide intelligence integrated solutions for the main electro-mechanical systems such as Integrated Supervision and Control System (ISCS), Platform Screen Doors (PSD) and Building Automation System (BAS)
- •BAS business rank first, and ISCS business in the top three domestically
- •Covering 1071 km mileage, and 38 subway lines with 40% market share



Intelligent Building Business

- •Provide building intelligence integrated solutions which center around the Building Automation (BA) that has been developed and debugged by THTF with the energy saving algorithm
- •Over thousand projects, more than 20 years industry experience
- •Flagship company in the industry, with the brand name and total project amount ranking first



Intelligent Urban Heating Network Business

- •Provide integrated solutions for heating plant and network including Supervisory Control And Data Acquisition (SCADA)
- •Covering 12 provinces, municipalities and autonomous regions, hundreds of cities, with 800 million sm of heating supply area
- •Leading company in the field and dominates more than 60% market share

With a large number of solid customer resources



Shanghai Hongqiao Integrated **Transportation Hub**



北京地铁















州地铁









Shenzhen North Station

Transportation Hub

Intelligent transportati on business Intelligent urban heating network business

Intelligent building business Covering 12 provinces, municipalities and autonomous regions, hundreds of cities, with 800 million sm of heating supply area, dominating more than 60% market share

- Heilongjiang• Shandong • Inner Mongolia
- Jilin
- Henan
- Gansu

- Liaonina
- Xinjiang Shanxi
- Beijing
- Shaanxi
- Hebei

Customers include heating companies and cogeneration power groups











> Public Buildings

- •Chairman Mao Memorial Hall
- •The Great Hall of the People
- •Zhongnanhai Huairen Hall
- Kunming International
- Horticultural Exposition
- National Palace cultural
- relics libraries
- ·National Art Museum art gallery
- ·Shanghai Museum
- Beijing Exhibition Center

➢ Gov't Buildings ➢ Coml / Office Buildings

- Ministry of Public Security •
- Ministry of Justice
- · Supreme People's
- **Procuratorate**
- · National Railway Administration
- · Xinhua News Agency
- National Meteorological Center
- Provincial and municipal office buildings, etc.

- CCTV new site
- People's Bank of China
- China Everbright Bank
- Import and Export Bank of China
- Bank of China Shanghai Branch
- Bank of Communication Shanghai Branch
- Shanghai Pudong Development Bank
- Baidu Technology Park

> Hotel Buildings

- Beijing Hotel I&II
- Mandarin Oriental Hotel -CCTV new site
- JW Marriott Hotel Shanghai Changfeng
- Shanghai Ritz-Carlton Hotel
- · Hyatt International Hotel -Shimao North Bund
- Sheraton Hotel Sichuan Jiuzhaigou
- Renaissance Hotel Sanya Haitang Bay

Data Centers

- CCB Beijing Base I
- · ABC Data Processing Center
- BOCOM Data Center (Shanghai)
- China Post Information Center **Data Center**
- Baidu International Building (Shenzhen) IDC room
- Daging oilfield production command center room
- · PetroChina Huabei Oilfield Information Network Center

- > Hospital **Buildings**
- > Gymnasium **Buildings**
- > School **Buildings**

Case: intelligent transportation



Chongqing rail transit line No.6 - ISCS project II

Project overview

- Total contract amount of RMB 160 million
- Project consists of Integrated Supervision and Control System (ISCS), Building Automation System (BAS), automatic fire alarm system (FAS), Power Supervisory Control and Data Acquisition System (PSCADA), Access Control System (ACS) etcs.
- The length of Chongqing Rail Transit Line No.6 amounting to 72.26 km, and will serve as the core traffic artery
- The Line across the Yangtze River and Jialing River, runs through Chongqing five administrative regions, connecting the three CBD, as well as the future administrative center of the city

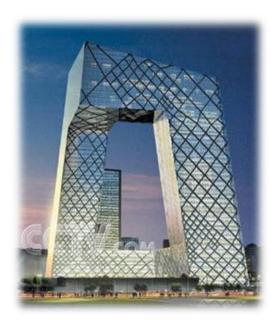




Case: intelligent building



CCTV new site - intelligent building total solution project





Project overview

- Total contract amount of approximately RMB 340 million
- Includes the design and implementation of a total of 14 intelligent sub-systems
 - ✓ Property and facilities management system
 - ✓ Integrated management system
 - ✓ Building automation system
 - ✓ Security system
 - Public broadcasting and emergency broadcast system
 - ✓ Smart card system
 - ✓ Network system

- ✓ Communication system
- ✓ Structured cabling system
- ✓ Cable system
- ✓ Public and business information display system
- ✓ Room works
- ✓ Indoor signal coverage system
- ✓ Hotel rooms and facility management system
- Integrate and unify management of each sub-system, which can function independently and operate in conjunction with each other
- CCTV new site is the largest public cultural building, with about 450,000 square meters construction area

Case: intelligent urban heating network

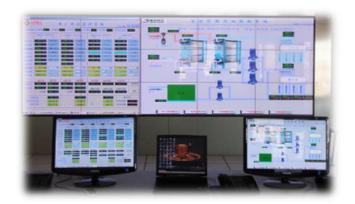


Taiyuan heating power company centralized heating supply

Project overview

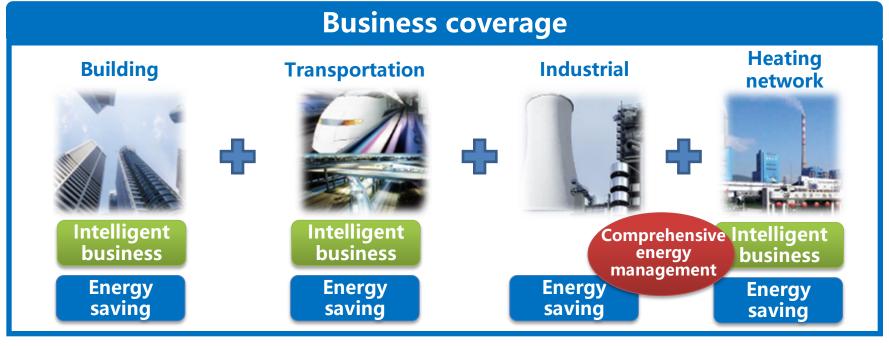
- Taiyuan heating supply covers a total area of over 90 million square meters, covering four power plants and four heat source plants and 830 thermal stations
- Over 15 years business relationship with Taiyuan heating power company, since the beginning of cooperation in 1999
- Heating source monitoring and control system: effectively improve the combustion efficiency of the boiler, effectively matching supply and demand load, saving coal and power consumption of the system
- Heating network monitoring and control system: through the use of computer monitoring and dispatching systems, timely and accurately control and adjust operating parameters of the heating network, improve the heating capacity of the heating system and reduce pollutant emissions.
- Multi-sources optimization control and scheduling system: Multi-source and network operation, so that different sources can flexibility match and improve the efficiency of heating network, thereby effectively reduce the costs and improve system reliability and improve the heating quality.
- **EC300 control system**: With the independent development of various types of proprietary software to achieve seamless integration of systems to meet the overall optimization of control and information needs of thermal heat enterprise operations management system.

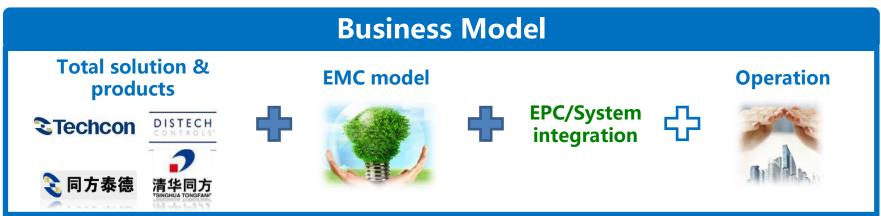




Optimization of strategic business layout and a good synergy



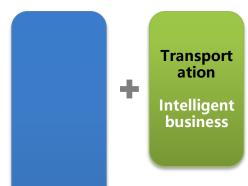




Huge growth potential for intelligent and energy saving businesses



Intelligent and energy management of urban infrastructures



- China' s urban rail transit grows very fast. At the end of 2014, a total of 22 city's subway mileage amounting to 3173 km, and the subway mileage is expected to increase to more than 8,000 km in 2020.
- Urban rail transit' s ventilation and air conditioning systems consume energy seriously, and thereby constitute one of the most important energy saving potential area. The estimated total annual saving potential in 2014 was 1.8 billion kWh of electricity, and is estimated to increase to 7.8 billion kWh in 2020.

Energy Saving Intelligent business

- Public buildings and commercial real estate 's new construction area amount to approx. 400 million sm each year, and total investment for intelligent building amount to RMB 320 billion per year.
- According to the State Council's goal, the construction area of green buildings will reach more than one billion sm by 2020, the proportion of urban green buildings will be increased to 50%. It is expected that the 13th Five-Year period will witness greater efforts to promote energy audit, and the increasing number of key cities promoting public buildings energy saving retrofit.
- Urban heating network Intelligent business
- As the urbanization accelerates, centralized heating networks have been expanding to larger scale.
- Meanwhile, with more and more environmental protection and energy saving requirements, heating supply are undergoing transformation and heating sources switch from backward coal-fired boiler heating to cogeneration and waste heat recovery. And with urban central heating network continuing to expansion and transformation, energy-saving has much potential.



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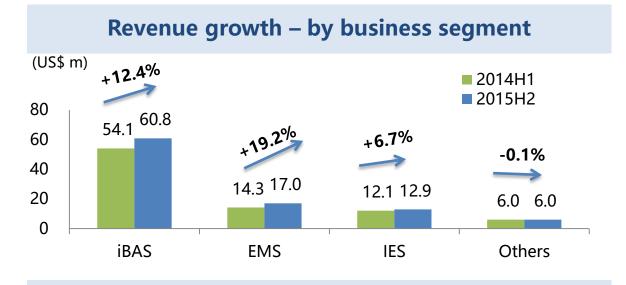
Financial highlights



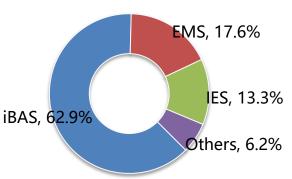
For the 6 months ended 30 June	2014H1 (Restated)	2015H1	Change
	(US\$ m)	(US\$ m)	Change
Revenue	86.4	96.7	+11.9%
Gross profit	31.6	34.8	+10.4%
Operating profit	13.3	15.6	+17.1%
EBITDA	18.3	21.6	+18.1%
Net profit	7.4	10.2	+39.2%
Profit attributable to equity shareholders	6.6	9.8	+48.7%
Gross profit margin (%)	36.5%	36.0%	-0.5 ppt
Operating profit margin (%)	15.4%	16.1%	+0.7 ppt
EBITDA margin (%)	21.2%	22.3%	+1.2 ppt
Net profit margin(%)	8.5%	10.6%	+2.1 ppt
Profit attributable to equity shareholders margin (%)	7.6%	10.1%	+2.5 ppt
Basic EPS (US\$)	0.0108	0.0144	+33.3%
Basic EPS (HKD\$ equivalent)	0.0837	0.1116	+33.3%

Revenue analysis

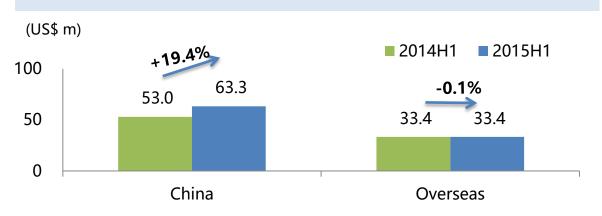




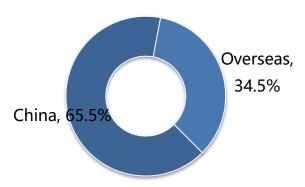








Rev. breakdown – by region



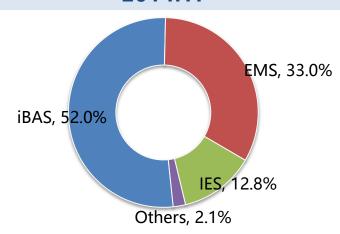
Segment profit analysis



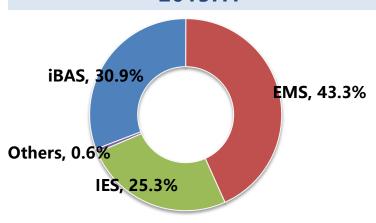
Driven by margin improvement from EMS & IES

For the 6 months ended 30 June	2014H1	2015H1	Change
Segment profit margin (%)	21.6%	22.5%	+1.0ppt
- iBAS	17.9%	11.1%	-6.9ppt
- EMS	43.1%	55.4%	+12.3ppt
- IES	19.8%	42.7%	+22.9ppt
- Others	6.5%	2.1%	-4.4ppt

Segment profit breakdown – 2014H1



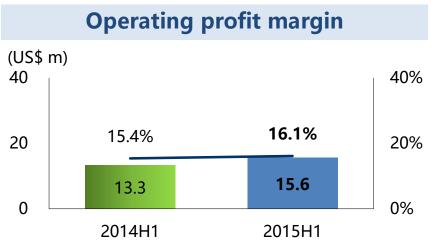
Segment profit breakdown – 2015H1

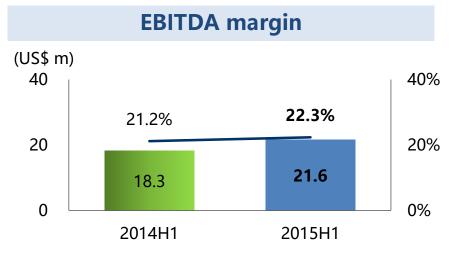


Profitability analysis





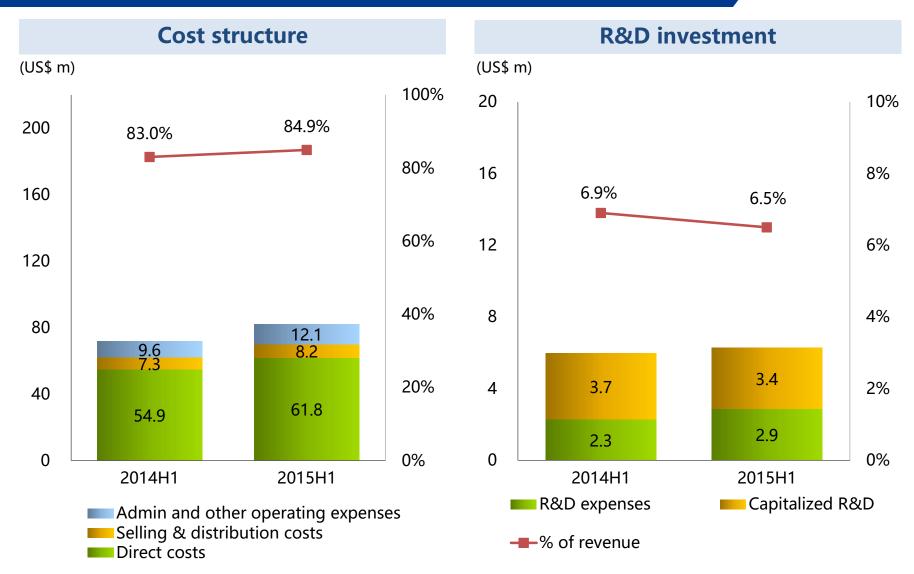






Cost structure & R&D investment





Other financial figures



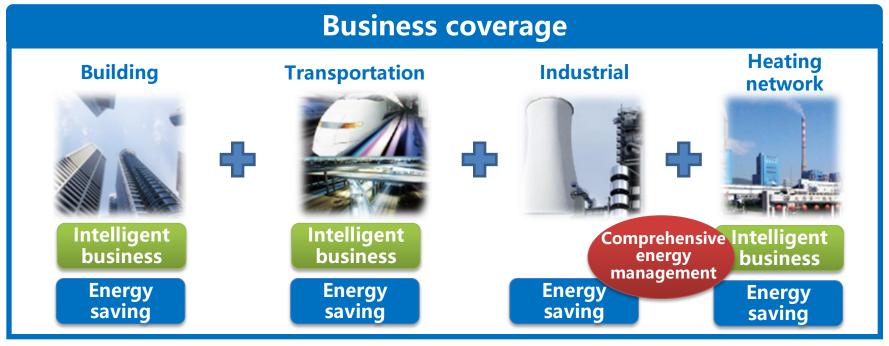
	31 Dec 2014 (Restated)	30 Jun 2015
Net Assets (US\$ m)	134.1	241.2
Total Assets (US\$ m)	362.2	457.1
Cash & Cash Equivalents (US\$ m)	74.3	134.9
Loan & Borrowings – short term (US\$ m)	63.7	61.1
Loan & Borrowings – long term (US\$ m)	38.5	33.6
Net Cash/(Net Debt) (US\$ m)	-27.9	40.1
Current Ratio (times) (Current Assets divided by Current Liabilities)	1.45	2.19
Loan & Borrowings Ratio (%) (Loans and Borrowings divided by Total Assets)	28.2%	20.7%
Inventory Turnover (Days)	45	55
Trade Receivables Turnover (Days)	175	267
Trade Payables Turnover (Days)	215	244



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Leading provider of integrated energy-saving services







Milestones



2005~07

2008~10

2011~13

2014~

Building energy saving

+ Heating energy saving

+ E-cloud platform

+Industrial ES +Transportation ES + Intelligent business

+ Waste heat recovery

Techcon building automation products

+ Distech Control products + ezIBS integrated building

management system

+ Techcon EMS + Techcon FFC technology +Dehumidifying blast technology on blast furnace

- PRC + Singapore
- North American + Europe

+ EMC model + "Govt-Corp-Bank cooperation mode"

+ Operation

- Founded in Singapore, and established in Beijing
- Launched the forth-generation international open standardscompatible TECHCON Control System, registered TECHCON trademark
- Launched ezFAS webconnected remote fire alarm system
- Launched ezCSS city security solution
- Private equity firms, Zana and CTC Capital, invested in Technovator

- Acquired Distech Controls
- "11th 5-Year" National Science and Technology Building Energy Efficiency Innovation Award
- The first batch to enter "China Energy Management Service Provider List"
- Joined EMCA, became a member of Energy Saving Service Industry Committee
- Participated in the formulation of «Technical code for engineering of building automation system), topic covered in China's 11th Five Year Plan
- Recognized as a high and new technology enterprise
- Top 10 China Building Automation Brand, China, Intelligent Building Industry Renowned Brand

- Listed on the Main Board of the HKSE on Oct 27, 2011
- Distech Controls introduced strategic investment partners
- Entered into strategic agreement with Chongqing Municipal commission of urban-Rural Development, Bank of Chongqing in relation of the EMC model, successfully initiated the
 - "Govt-Corp-Bank cooperation mode"
- Techcon E-cloud Service successfully applied to Chongqing, Wuhan, Hunan and Inner Mongolia
- Successful monetization of scientific research - Techcon EEC
- Participated in the formulation of GB 50339 《Code for acceptance of quality of intelligent building systems》
- Won the China Intelligent Building Brand Award

- Acquired Tongfang Energy Saving Engineering Technology Co., Ltd., enhanced business lavouts
- Announced disposal of Distech Controls in March 2015
- Launched top-up placing of 129 m shares at HK\$5.95 per share and raised approx. HK\$750 m in April 2015
- Signed agreement in July 2015 to acquire intelligent businesses from THTF
- Became the core provider of building energy saving services in Shanghai, successfully realizing the energy saving retrofit for landmark projects, like Shanghai Grand Stage, Shanghai Swimming Stadium & shanghai East Asia Exhibition Hall

Benefit from the favorable policy and booming energy saving market in China



Unprecedented Opportunity of Energy Saving Industry in China

- ✓ Low energy utilization rate and serious environmental problems drives the development of energy saving industry;
- ✓ A series of favorable policies and regulations, issued by Government, to regulate and reduce energy consumption, guide and promote the development of energy saving industry;
- ✓ EMC is advocated by the Chinese government and sales of energy saving services under such model is expected to increase by 30% per annum;
- ✓ Actual needs of enterprises to reduce energy cost & rising awareness of energy conservation;

Energy Development Strategy Action Plan (2014-2020)

released by the State Council on 19 NOV 2014

- Promote Energy Consumption Revolution: focus on the implementation of energy efficiency improvement plan. Adhere to the strategy of giving priority to energy conservation, focus on industrial, buildings and transportation sectors, formation of energy-efficient production and consumption patterns by innovative development.
- > Industrial Energy Saving: implementation of 10 key energy-saving projects, carry out enterprise low-carbon energy action plan. Promote the recovery and use of waste heat and pressure of industrial enterprises. Further promote the industrial demand-side management.
- > **Green Building**: strengthening building energy planning, implementation of building energy efficiency improvement projects, implementation of 75% Energy-Efficiency Design Standard for Residential Buildings ASAP, accelerate green building construction and renovation of existing buildings, implementation of public building energy consumption quota and green building rating and labeling system. **By 2020, the proportion of green buildings to total new constructed buildings is expected to reach 50%.**
- > **Green Transportation**: improve the overall transportation system planning, accelerate the construction of comprehensive transportation system.
- Advocate altering the traditional energy consumption patterns in urban and rural areas: adhere to combination of centralized and decentralized energy supply, promote energy usage transformation in urban areas, enhance the energy efficiency levels in urban and rural areas. develop urban integrated energy planning, develop distributed energy, scientific development of cogeneration, encourage qualified region to develop Combined Cooling Heating and Power (CCHP).

Leading provider of integrated energy-saving services, inherited from Tsinghua & Tongfang



Technovator (HKSE:1206)

Listed on HKSE in 2011

- The first commercial entity listed overseas under the umbrella of Tsinghua University.
- Inherits the technology and experience in energy saving field from Tsinghua University & Tongfang.
- Dedicated to provide integrated energy saving products, solutions & services.





Tsinghua University Heating and Ventilation Department set up in 1952



- Nurtured a large number of industry experts;
- Prestigious University with technology leadership in China

Tongfang (SSE:600100) Listed on SSE in 1997



- Listed high-tech company, Top 500 Brands in the world
- 34.6% controlling shareholder of Technovator*

Devoted & experienced management team





Mr. Lu Zhicheng Chairman

- Over 20 years of experience in professional teaching, management, and investment
- Received various provincial, ministerial, and national technological progress awards
- Worked as a general manager of Beijing Tsinghua Artificial Environmental Engineering Co. in 1989. This Company was restructured and with other companies formed Tongfang, which has been listed on Shanghai Stock Exchange since June 1997



Mr. Zhao Xiaobo CEO

- Bachelor' s degree in Thermal Engineering from Tsinghua University in 1993
- Executive Master degree in Business Administration from Tsinghua University in 2005
- The vice-chairman of Intelligent Building Branch of China Construction Industry Association
- Participated in various projects that received awards including the building & low-carbon technology innovation award issued by Ministry of Science and Technology of the PRC



Mr. Seah Han Leong COO

- Worked as a Sales manager of Honeywell covering the Great China
- Worked as a managing director of TAC Controls Asia Pte Ltd
- Received various awards including Winners Club Award by Honeywell Asia Pacific Inc. and President' s Club Award by Honeywell Inc



- Over 16 years of experience in building automation, energy savings and new product development
- Member of the Young Presidents' Organization and the Entrepreneur Organization in Montreal

Mr. Étienne Veilleux CEO of Distech Controls



Mr. Paddy Leung CFO

- Member of Hong Kong Society of Accountants
- Member of the Institute of Internal Auditors
- Over 10 years of experience in accounting, auditing and due diligence, including transaction services in PricewaterhouseCoopers, group internal audit in Swire Group and audit assurance services in KPMG

Strong R&D capabilities & core technology competencies



Building Energy Saving Research Institute

- The sound and integrated "production + academic + research" platform
- Develops proprietary products and solutions, and gains a large number of patents
- Collaboration with domestic tier-one universities and research institutions
- Brought together a number of well-known experts in the field of building energy efficiency
- Expand its energy efficiency application to industrial, transportaion and heat supply network fields

Dr. Zhao Xiaoyu

Head of Building Energy Saving Research Institute

- 20 years of experience in building energy saving research with expertise in variable air volume system, heating, ventilation and air conditioning control system, energy storage system and heat pump system.
- Participated in the study of major topics covered in China's 11th Five Year Plan and led/ compiled in the formulation of more than 10 national or industry requirements and regulations
- Received the State Technological Invention Award, Beijing Scientific Technology Award and named as National Building Energy Saving Technological Innovation Individual

Core Technology – Module Cascade Algorithm Control

One of the key study of 11th Five-Year Plan, successful monetization of scientific research -Techcon EEC

Energy saving is 30% more than traditional air-conditioning system

	Method	Algorithm
Technovator	Using module to control overall energy consumption of air-conditioning system to enhance efficiency	Module cascade algorithm uses air transmission temperature as middle variable, avoiding instability of water valve adjustment, thus extending product life and stabilizing return air temperature, as well as room temperature, ultimately saving more energy
Conventional control	Each equipment independently controlled which cannot control and manage overall energy consumption	Directly control operation according to room temperature and humidity; lagging, control deviation and instability problems can easily arise

Comprehensive building energy-saving products and solutions



Energy saving products & solutions



Overall energy saving rate 15% - 45%



E-CLOUD Service Centre



- Real-time data analysis and management
- Itemised monitoring
- Provide comprehensive energy saving solutions and strategy formulation through remote assessment of experts at the Energy-saving Research Institute
- Compare energy consumption among buildings

Building Automation Products











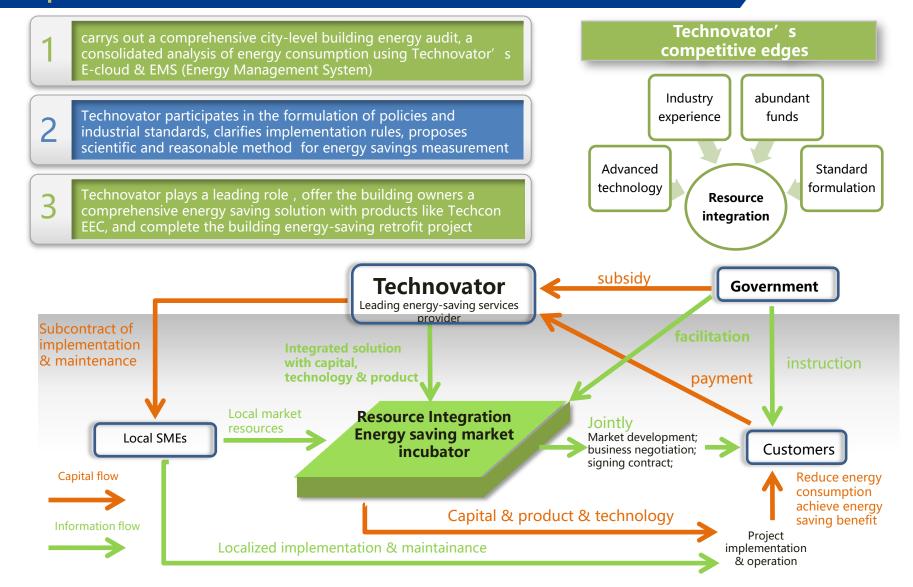




Distech Controls

City-level promotion by the Govt-Corp-Bank cooperation mode





Case: city-level building energy saving



Pilot city-level energy saving

Chongqing



Large-scale city energy saving

- signed the EMC Strategic Agreement in 2011 Jun;
- energy consumption monitoring for 200 large public buildings;
- energy-saving retrofit for approx. 2 million sq.

Hunan



Province-level energy saving

- signed the EMC Strategic Agreement in 2013 Jul;
- · included in the first batch of the energy efficiency monitoring for large public buildings;
- energy-saving retrofit for 600 thousand sq.

Wuhan



The first city-level E-cloud centre

- ADF finances the energy-saving projects for public buildings;
- The first city-level E-cloud center located in Wuhan:
- energy consumption monitoring for 30+ municipal buildings.



Project overview:

- Chongging demonstration project;
- Located in the heart of the Jiefangbei CBD, covering 160K total sgm, with multiple indoor and outdoor performance spaces, 2 outdoor plaza and 5 commercial entrance, 62 escalators, 30 elevators, 1320 parking spaces;

Energy-saving measures:

- EMC model with nominal investment cost of RMB10 million, 70:30 benefit sharing within 5-year period, with 21/2 payback period;
- Achieved overall energy saving on AC systems, public areas lighting, and elevator systems, using Techcon EEC, LED products;
- Comprehensive energy-saving ratio at 20%+



Case: transportation energy saving



Energy Saving Retofit for Forest Park South Gate Station of Beijing Subway Line No.8





Project overview

• Completed in 2014, with the energy saving retrofit and control optimization for subway station's ventilation and air conditioning systems, applying EnCs subway energy saving technology, to dramatically reducing energy consumption without affecting comfortable level within station

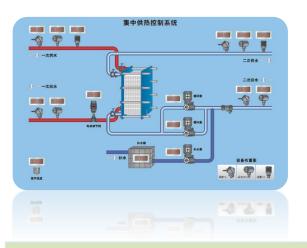
Energy saving effect

- EMC model with contract size of RMB 2.63 million
- With 90:10 benefit sharing within 8 years
- Estimated energy saving ratio of 50%+, annual electricity saving of 800,000 kWh

Leading-edge technology in the field of urban & industrial energy saving



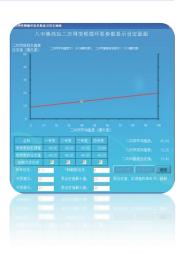
Heating control technology





Cooling and heating balance technique





Chiller control technology



Absorption cycle technology



Heat pump technology



Case: heating supply network energy saving



Guodian Taiyuan Thermal Power Plant I – central heating energy saving

Project overview:

- Covered 1,200m sqm heating supply area, with 1 monitoring center &180 thermal stations;
- Enhanced the O&M of heating supply network to ensure fast and efficient network adjustment;
- Reduced heating energy consumption & reduced operating costs.

Energy saving effect:

- **EMC** model with nominal investment cost of RMB48.55 million; with benefit sharing period of 7 heating seasons;
- Estimated energy saving of 6%+., annual saving of up to RMB 10 million for customers;
- Entitle to government subsidy of RMB 2.25 million









Case: industrial energy saving



Technovator entered into the industrial energy saving fields, and further enhanced its business layouts, through the acquisition of Tongfang Energy Saving Engineering Technology Co., Ltd. from the parent company.

Jinzhou Energy Saving Heat and. Electricity Co., Ltd - waste heat recovery project

Project overview:

- Jinzhou heating supply area of 3.7m sqm in 2013, and expected to reach 6m sqm in 2016, its heating supply period covers 147 days each year;
- Applied 2x40.5MW absorption heat pump units to preheat heating network backwater, and to recover waste heat from circulating cooling water produced by unit No.1&3, thereby achieving 660 to 800K sqm additional heating supply to the city.

Energy saving effect:

- **EMC model** with nominal investment of RMB33.87 million, with estimated annual revenue of RMB10.68 million;
- With 85:15 benefit sharing within 6 heating supply seasons;
- Expected payback period of 3.7 years.





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Prospects and future strategy



Lines & Models

- Potential M&A to expand urban energy-efficient technology and market;
- Effective integration post M&A, maximize the synergy effects and the overall value;
- Explore diversified business models: "Product + EPC / EMC + Operation".

Markets

- Accelerate "Govt-Corp-Bank cooperation mode" to achieve city-level building energysaving, increase market share by winning key projects;
- Intensive marketing efforts on energy saving in the fields of heating supply network, industrial and transportation.

R&D

- Strengthen R&D in the traditionally-advantageous technology
- Continue R&D in promising energy saving technology in the fields of industrial, transportation & heating supply network
- Software application R&D for E-cloud, control algorithms and regional energy station.

Favorable industry policy

China's leading comprehensive energy saving service providers

Comprehensive advantage

pointy

Inherited from Tsinghua & Tongfang 一 同方泰德 TONGFANG TECHNOVATOR

Leading-edge technology in urban & industrial energy saving

÷

+

Devoted management team

Comprehensive products & solutions

Strong R&D & Core Technology

+

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THANK YOU Q&A



For further information & enquiries, please contact our IR Department at **HK:** <u>janet_lai@thtf.com.cn</u>

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