

BROAD ENERGY MANAGEMENT CONTRACT (EMC)

COMPANY AND SERVICE PROFILE



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BROAD Energy Service Co., Ltd.

BROAD Energy Service Co.,Ltd. (BROAD Energy) is a subsidiary of BROAD Group and founded in 2009, responsible for energy management contract (EMC). By utilizing various low carbon technologies, products and the market mechanism, BROAD Energy provides customers with design, investment, construction and operation of large-scale central air-conditioning, industrial cooling & heating systems, along with building energy-saving retrofitting.

BROAD Energy is a pioneer and leader in EMC of central air conditioning and district energy in China. It has been operating an over 80 million m^2 area with an annual carbon emission reduction of 1.4 million tons.



CUSTOMER VALUES

Risk free

BROAD supplies technologies, invests funds, under takes risks and shares energy saving profit

Worry free

BROAD ensures safety, faultless operation and 100% satisfaction. Customer can

focus on its core business

Energy saving

BROAD ensures high comfort by green carbon reduction technology, energy saving & durable products with over 30 years of operational experience

Cost saving

BROAD ensures initial investment savings, no hidden risks in equipment, no energy waste and low operational energy consumption

Assets adding

The life span of the equipment is the same as the building.

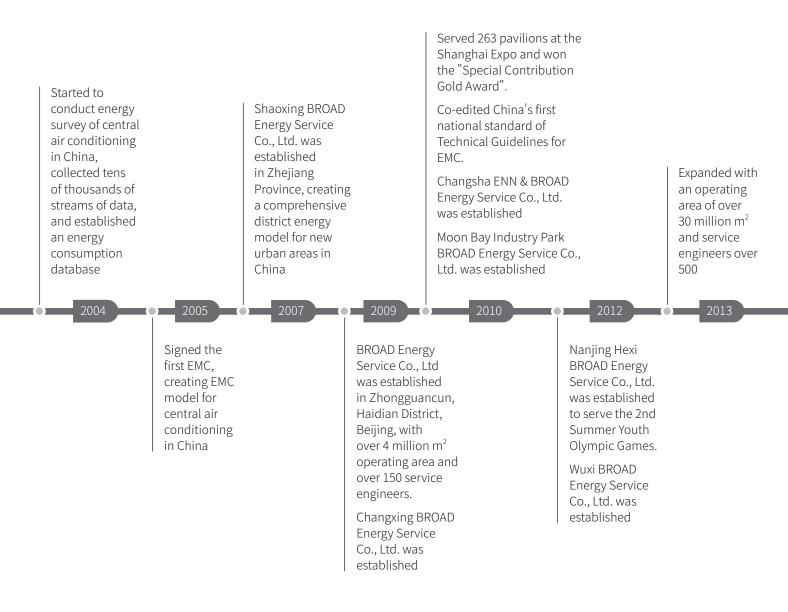
Packaged system occupies less space.

Property right converted to the customer after contract validity

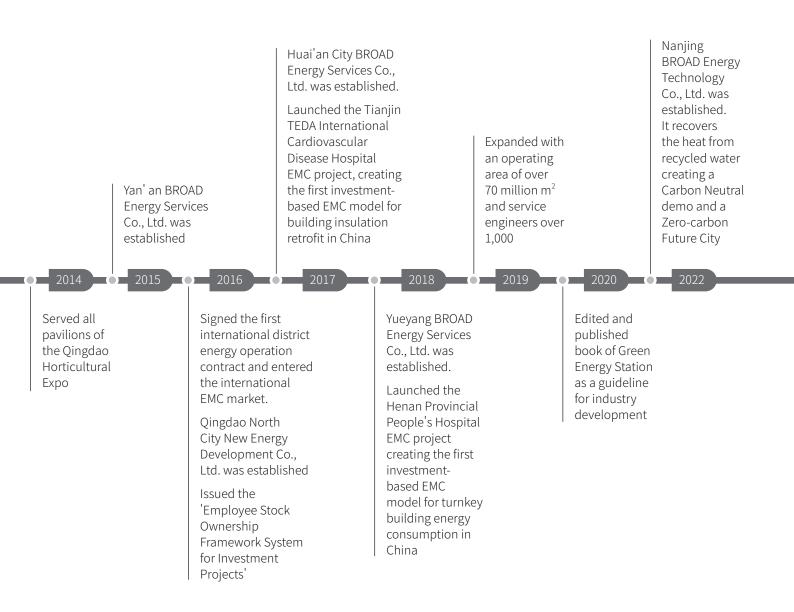
Increased profits from carbon trading



DEVELOPMENT HISTORY







CORE COMPETENCIES



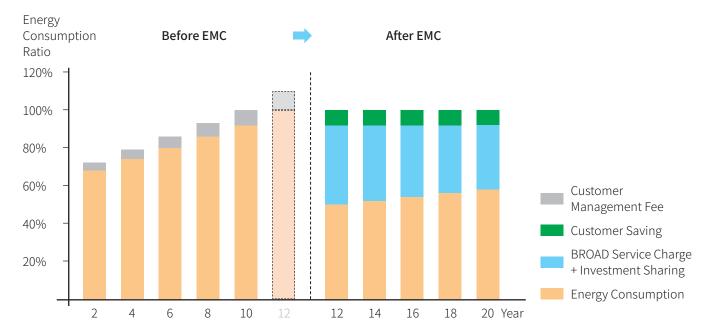


EMC Introduction

The total solution of diagnosis, design, construction and operation

BROAD EMC is based on BROAD's over 30 years' experience in central air conditioning system service, operations management and massive global operation data analysis. It utilizes natural gas, electricity, industrial waste heat, wind, solar energy, geothermal energy, reclaimed urban water and other energy sources according to local conditions on the foundation of BROAD's various energy-saving products and technology applications. With multi-energy complementation, cascade utilization, energy storage and comprehensive supply as the core, and through the computerized and intelligent management, the efficient use of energy can be realized.

BROAD EMC not only provides customers and urban areas with cooling, heating, electricity, steam and sanitized hot water but also offers all-round services including consulting, diagnosis, design, construction and operation. With central air conditioning energy-saving technology, building energy-saving retrofitting and the total solution of urban comprehensive energy applications, BROAD EMC can maintain the optimum balance between comfort and energy consumption.



Comparison before and after EMC retrofitting

EMC Mode 1

Entrust EMC

BROAD takes over the A/C system operations management, including chiller maintenance and water quality management services, meanwhile customer just covers the energy cost. Both sides update the energy cost benchmark every 3 years



Customer shares 50% of the profit saving with BROAD

Service Scope



A/C system operation



Water quality management



Machine room equipment maintenance



A/C patrol inspection



Machine room equipment A/C terminal management



Machine room security



Mode 2

Energy Consumption EMC

According to the site conditions, BROAD implements the energysaving retrofitting/construction and takes over the cost including air conditioning energy cost, maintenance cost of chiller and terminals



Energy consumption is **10~40%** less than that the customer's self-management

Investment payback period is 5~10 years

Service Scope

A/C system entrust EMC



Chiller retrofitting/ construction



Cooling tower retrofitting/ construction



Standardized machine room construction



Distribution system retrofitting/construction



Heating retrofitting/ construction



A/C system energy purchase settlement

EMC Mode 3

Building Energy Consumption EMC

According to the building energy consumption of water, electricity and gas, BROAD implements energy-saving retrofitting, and takes over the cost including building energy cost, operations and maintenance cost of chiller and agreed upon equipment



Energy consumption is 3~15% less than the customer's self-management

Investment payback period is 7~12 years

Service Scope

A/C system energy consumption EMC

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Utilization of the intelligent Utilization of the management system



Retrofitting of the boiler system



Retrofitting of other equipment



renewable energy



Retrofitting of lighting system



Building energy purchase settlement



Mode 4

Building Heat Insulation Retrofitting EMC

According to the building envelope and fresh air supply, BROAD implements building heat insulation and energy saving retrofitting, and takes over the cost including air conditioning/ building energy cost, operation & maintenance cost of chiller, and agreed upon equipment



Compared with customer's selfmanagement, energy consumption is **40~60%** less for A/C system energy consumption EMC, or **15~25%** less for building energy consumption EMC

Investment payback period is 15~30 years

Service Scope

A/C system/Building energy consumption EMC

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External wall insulation







Interior shade

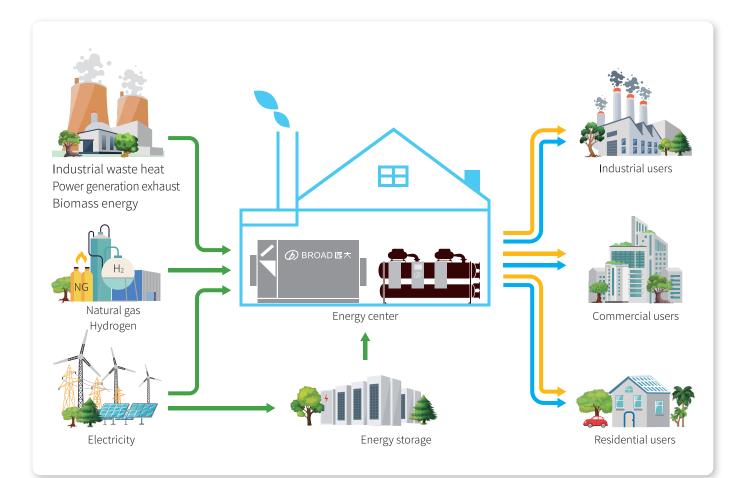


Heat recovery fresh air machine

DISTRICT ENERGY

Technical Proposal

BROAD District Energy is based on one or more centralized energy stations as the core, and utilizes industrial waste heat, power generation exhaust, biomass energy, natural gas, hydrogen energy, and water sources adapted to local conditions in the region, providing multiple users of cooling, heating, electricity, steam, and hot water in the area through distribution pipeline network, and achieves the best energy utilization effect with the least emissions.





Values

For Country

Intensive and efficient utilization of resources

Optimize energy supply and demand structure

Reduce the peak demand of the grid

Improve energy supply safety

Reduce the transmission loss of peak load balancing

Honor commitments for international emission reduction

For City

Ease the contradiction between energy supply and demand

Attract investment upon zerocarbon flagship

Secure the stable urban operation

Improve urban air quality

Create a green city signature

Meet urban emission reduction goal

For the User

Professional worry-free service Zero risk energy supply

assurance

Zero risk noise reduction

Zero hidden dangers fire safety

Increased in the area of quality improvement

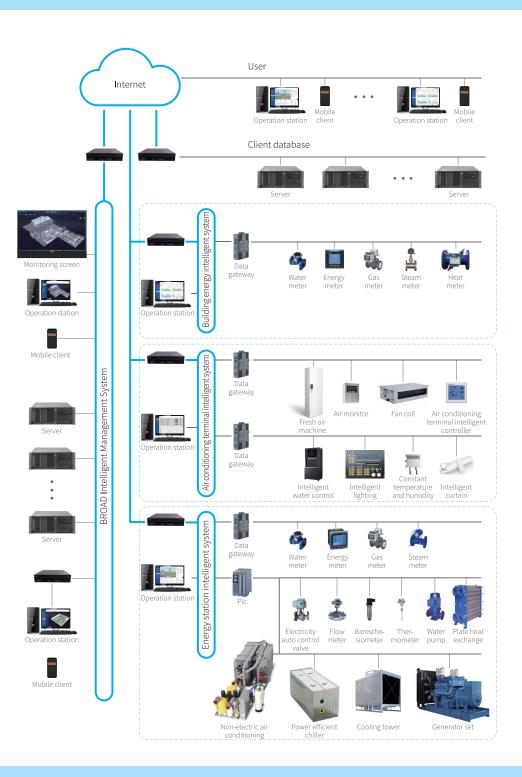
Reduce the cost of investment



INTELLIGENT MANAGEMENT SYSTEM

Energy Efficiency Management Platform utilizes remote centralized control technology, digital AI technology, and an intelligent monitoring system to achieve real-time prediction, optimization, and dynamic adjustment of building and air conditioning systems, enabling intelligent management and unmanned management of machine room

Integrated COP> 5.0







System Type

Intelligent system of energy station

Application:

Operational monitoring and management of single energy station, multi-energy station, district energy station

Function:

Real-time display Classified management Remote monitoring System energy consumption Statistical statement Historical query Alarm management Load regulation

Intelligent system of terminals

Application:

Energy-saving monitoring and management of fresh air machine, AHUs, fan coils, split system air conditioners, etc.

Function:

Data acquisition Statistical statement Historical query Centralized management Metered charge Operational analysis Alarm management

Intelligent system of building energy consumption

Application:

Consumption monitoring and management of building water, electricity, gas(steam), etc.

Function:

Equipment monitoring Statistical statement Self-proportional analysis Analogical analysis Energy consumption analysis Alarm management

TECHNICAL ADVANTAGES









Carbon Reduction Consulting

In 1996, we pioneered Global Internet Monitoring system for central air conditioning, with massive energy consumption data and annual consulting construction area of more than 200 million m²

Carbon Reduction Diagnostics

With experience in the operation and management of thousands of buildings, we can provide energy consumption surveys, audits, and system diagnosis, analyze the potential for carbon reduction, and issue carbon reduction reports

Carbon Reduction Design

We can realize all-round carbon reduction design from load calculation, energy combination, equipment customization and system configuration according to the customer's existing energy system and energy demand

Carbon Reduction Proposal

Based on the carbon reduction report and the advantages of BROAD's energy-saving products and technology integration, we can customize a comprehensive energy proposal with the highest energy efficiency



PRODUCT ADVANTAGES



Non-electric Chiller

Green energy: industrial waste heat, power generation exhaust, natural gas, etc.

Energy saving and high efficiency: chiller energy efficiency is 15~30% higher than its peers. Saving investment: three functions in one unit, reducing the machine room footprint. Safety and durability: titanium heat exchange tube, product lifespan of 60 years.

Power-efficient Chiller

Energy saving: reduce energy consumption by 40% compared to other electric chillers. Cost saving: magnetic oil free with zero friction technology, saving 90% maintenance cost. Space saving: 30% lighter and 40% smaller than other electric chillers.

Packaged Water Distribution System

Miraculous electricity saving: water system zero resistance, energy saving 76%. Complete bacteria killing: automatic dosing to eradicate bacterial reproduction. 100% soft water: corrosion and scale inhibition to ensure

chiller energy efficiency. Cost and space saving: 50% footprint reduction.

Clean Fresh Air Machine

No NO₂ buildup: 100% fresh air. No dust: indoor air is 100 times cleaner than outdoor air. No bacteria: static electricity bacteria killing. A/C energy saving: 80% heat recovery.

Wind Power

Aluminum alloy wind blade, 3 times more durable than fiberglass, 100% recyclable.

Huge blade tip, more wind catching, less noise.

Site assembly, containerized transportation, global accessibility. Ultra-high tower with self-climbing crane, everywhere in the world can be a wind park.

CONSTRUCTION ADVANTAGES



Construction Specialization

First-class qualification of electromechanical installation, professional management system and standardized procedure, scientific planning and management of safety, quality, progress and cost.

Quality Standardization

Compiling engineering construction process standards for equipment and air conditioning system in machine rooms, establishing construction quality rules and acceptance standards to ensure the project quality.

Process Streamlining

Strictly follow the process standards and construction procedures to control the progress and quality of the project, standardize all aspects of construction, and ensure system safety, stability and energy saving.

Management Standardization

Establishing standards and standardized management from carbon reduction consultation, survey, diagnosis, design, drawing, procurement, implementation, acceptance, operation and post-construction evaluation.



OPERATIONAL ADVANTAGES



High Service Reputation

Operations team with over 1,000 operators provides users with "careful, patient, sincere, comfortable, worry-free" service, and pursues 100% user satisfaction.

Professional Service Team

Complete talent system of R&D, design, production, engineering, service and operations ensures safe, stable and efficient operation.

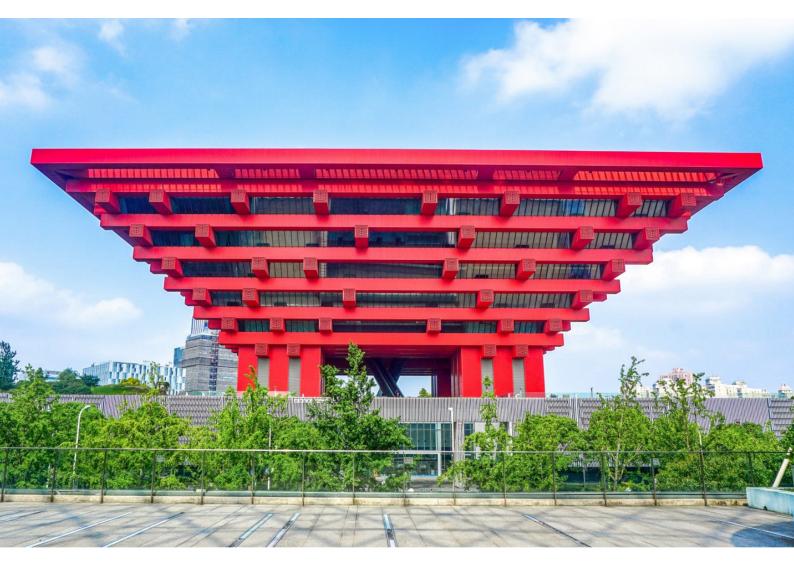
Rich Maintenance Experience

Providing more than 30 years maintenance services for ten of thousands of central air-conditioning systems, ensuring zero failure and pursuing the same life span of the equipment and the building.

Complete Management System

Established a complete operation and service system to achieve standardized, normalized and refined operation and management.

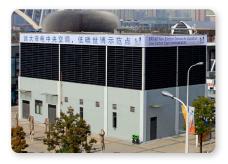
TYPICAL CUSTOMER BRIEFING



Shanghai World Expo 2010 - District Energy

The first registered World Expo hosted by China, the entire 22 energy stations were built and operated by BROAD to provide air conditioning service for 263 pavilions. BROAD was awarded the "Gold Award for Special Contribution " for the World Expo operations assurance by the Shanghai Expo Bureau

- BROAD Energy Supply: 2.2 million m²
- Annual Carbon Reduction:
 73,000 tons
 Equivalent to planting 4 million trees/year







Nanjing Hexi New Town - District Energy

Nanjing Hexi New Town is a new urban center with five major functions of finance, business, trade, exhibition and culture. It is the largest waste heat district cooling/heating system in China, and utilizes energy cascade with power plant waste heat as the main energy source and electricity and natural gas as the auxiliary sources

- BROAD Energy Supply: 15 million m²
- Annual Carbon Reduction: **120,000** tons Equivalent to planting 6.6 million trees/year



TYPICAL CUSTOMER BRIEFING



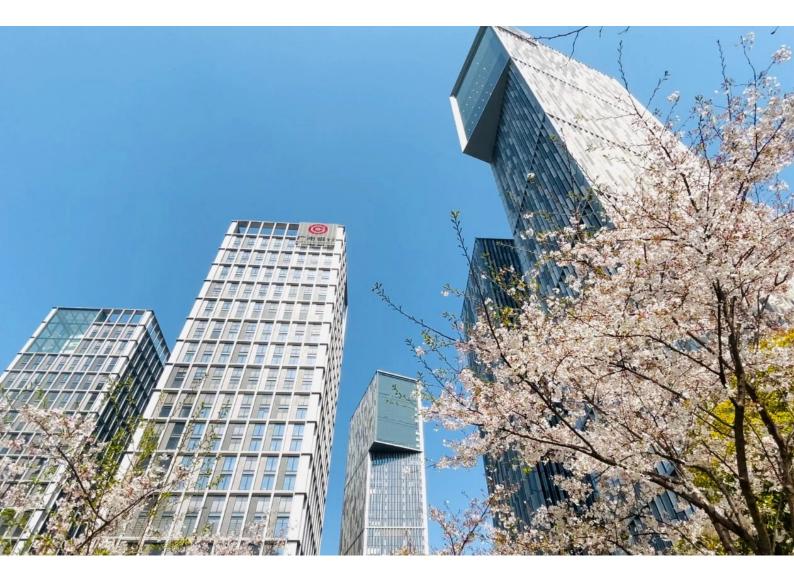
China-Singapore Suzhou Industrial Park Moon Bay - District Energy

Suzhou Moon Bay centralized cooling and heating project is the first cooling station in China to apply for green building certification, and plays a demonstration role in promoting green cooling stations

- BROAD Energy Supply: 1.1 million m²
- Annual Carbon Reduction: **17,000** tons Equivalent to planting 940,000 trees/year







Nanjing Financial City - District Energy

Located in the core area of Hexi New Town CBD, it is a key project to promote the transformation and upgrading of Nanjing's financial services, and is positioned as "an internationally standard, landmark financial enterprise cluster area"

- BROAD Energy Supply: 1.1 million m²
- Annual Carbon Reduction:
 25,000 tons
 Equivalent to planting 1.37
 million trees/year



TYPICAL CUSTOMER BRIEFING



Yueyang Municipal Office Building — Building Thermal Insulation Retrofit EMC

Using BROAD packaged air conditioning, clean fresh air machine, building thermal insulation retrofit and EMC, achieving win-win for energy saving and fiscal funds saving, awarded as the first batch of "Zero Carbon China" excellent cases

- BROAD Energy Supply: 17,700 m²
- Annual Carbon Reduction:
 513 tons
 Equivalent to planting 28,000 trees/year







Henan Provincial People's Hospital — Building Energy Consumption EMC

Founded in 1904, it is one of the first national 3A hospitals (top level in China), and has won many honors such as the Outstanding Contribution Award for Hospital Logistics Construction in the Forty Years of Reform and Opening Up, and the National Energy-saving Public Institution Model Unit

- BROAD Energy Supply: 600,000 m²
- Annual Carbon Reduction: 27,000 tons

Equivalent to planting 1.49 million trees/year



TYPICAL CUSTOMER BRIEFING



Xiangya Hospital — Air Conditioning Energy Consumption EMC

Founded in 1906, it is a 3A hospital (top level in China) under directly supervision of the National Health Commission, an affiliated hospital of Central South University, which is directly under the Ministry of Education, and an important center for clinical diagnosis and treatment, medical education and scientific innovation in China. It is well-known as "South Xiangya"

- BROAD Energy Supply: 260,000 m²
- Annual Carbon Reduction: **12,000** tons Equivalent to planting 640,000 trees/year







Anhui Gujing Group — Air Conditioning Energy Consumption EMC

Gujing Group is one of Top 8 famous liquor enterprises in China, originated from the Gongxing Caofang in the year 1515, ranked NO.1 among the liquor enterprises in Anhui Province, and is one of Top 500 manufacturing enterprises in China

- BROAD Energy Supply: 70,000 m²
- Annual Carbon Reduction:
 1,218 tons
 Equivalent to planting
 67,000 trees/year



TYPICAL CUSTOMER BRIEFING



Haining, China Leather City — Air Conditioning Energy Consumption EMC

The largest leather product manufacturing, sales and logistics base in China, the leader in China's leather industry and its largest, most influential and most competitive enterprise, and the express center for leather pricing, market intelligence and fashion trends

- BROAD Energy Supply: 800,000 m²
- Annual Carbon Reduction: **16,000** tons Equivalent to planting 900,000 trees/year







Nanchang Binjiang Hotel — Air Conditioning Energy Consumption EMC

One of the founding members of the China State Guesthouse Association, under the Jiangxi Provincial Party Committee Office, it has long served as the Jiangxi Provincial reception base for the Party and state leaders for important meetings

- BROAD Energy Supply: 67,000 m²
- Annual Carbon Reduction:
 1,336 tons
 Equivalent to planting
 73,000 trees/year



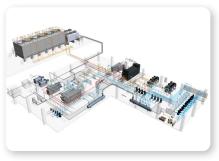
TYPICAL CUSTOMER BRIEFING



It is a women and children specialty hospital that is built according to 3A medical institutions (top level in China) and the JCI international standards. It is committed to creating a "regional women's and children's medical center" in the central and southern regions of China.

- Women&Children's Hospital of Hunan Air Conditioning Energy Consumption EMC + Energy Station Intelligent Management System
 - BROAD Energy Supply: 130,000 m²
 - Annual Carbon Reduction: 3,770 tons

Equivalent to planting 210,000 trees/year







Guizhou Daily — Air Conditioning Energy Consumption EMC + Air Conditioning Terminal Intelligent Management System

A provincial-level public institution directly under the provincial party committee, publishing the provincial party newspaper "Guizhou Daily" and magazine "Contemporary Guizhou", and hosting a national first-class news website.

- BROAD Energy Supply: 70,000 m²
- Annual Carbon Reduction:
 1,218 tons
 Equivalent to planting

66,000 trees/year



TYPICAL CUSTOMER LIST — District Energy



India DLF Gurgaon City



Qingdao World Horticultural Expo



Changxing Headquarters Economic Park



Yan'an New District



Shaoxing Didang New District



Zhoushan Donggang New District



Building Energy Consumption EMC



Hunan Provincial People's Hospital



Hospital of Zhejiang University in Ningbo



The Second Affiliated Hospital of Nanjing Medical University



Jiangsu Cancer Hospital



TEDA International Cardiovascular Hospital



Xianning Central Hospital

TYPICAL CUSTOMER LIST — Air Conditioning Energy Consumption EMC



Jiangsu Provincial Maternal and Child Health Hospital



The First Hospital of Lanzhou University



Changsha Huangxing South Road Pedestrian Commercial Street



Anhui Provincial Children's Hospital, Fudan University



Fudan University



Sheraton Xi'an Cerise Hotel



– Intelligent Management System

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Zhengzhou International Trade Center



Ningxia Medical University



Tengzhou Central People's Hospital



Jinan Qilu Gate



The First Affiliated Hospital of Henan Polytechnic University



Air Force Research Institute

BROAD GROUP MISSION

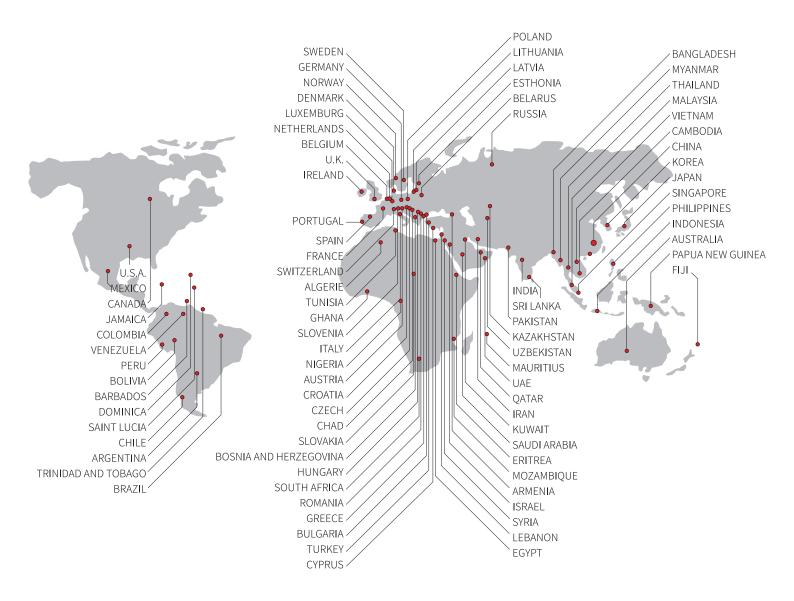
BROAD Group is a privately-owned enterprise founded in 1988 in China with RMB 30,000. The company has developed hundreds of hi-tech products and has never copied any technology of its peers since inception. The mission of BROAD Group is "For Humanity's Future: Using original low carbon & durable technology for the earth. Using original clean & safe technology for humans." Headquartered in Changsha, BROAD Group has exported products to over 80 countries. BROAD subsidiaries are listed below:

- 1. BROAD Air Conditioning Co., Ltd., established in 1988, manufactures non-electric air conditioning systems and district heating and cooling systems powered by industrial waste heat, power exhaust gas or natural gas with the mission of "continuously deepening research, development and service, leading the world's direction in energy efficiency"
- 2. BROAD Clean Air Technology Co., Ltd., established in 2005, produces Fresh Air Machines with 80% heat recovery, filtering PM2.5 by 99.9% and bringing in 100% fresh air. The company also produces commercial, household and portable air purifiers and air monitor with the mission of "clean air shared by all humanity"
- 3. BROAD Nearly Zero Energy Building Co., Ltd., started in 2005, specializes in the design and construction of retrofitted buildings, energy conservation sharing and carbon credit trading with the mission of "recoating existing buildings and reducing carbon footprint by 10 times, for warm winter and cool summer"
- 4. BROAD Energy Service Co., Ltd., founded in 2009, provides clients with investment consulting, design, implementation and operational service of large central air conditioning systems and industrial heating and cooling systems by means of BROAD low carbon technologies, products and energy management contract (EMC), with the mission of "optimizing resources, being worry-free, money-saving and low carbon"
- 5. BROAD Renewable Resources Co., Ltd., established in 2008, produces clean oil from industrial and transportation waste mineral oils as raw materials with the mission of "eradicating waste oil pollution for the world"
- 6. BROAD Sustainable Building Co., Ltd. set up in 2009, supplies ultra-strong and ultra-light stainless steel B-CORE slab series of products which is transforming the world's construction and transportation industries from the foundation. The mission is "building an everlasting civilization." It owns the following subsidiaries:
- 1) BROAD Holon Co., Ltd. manufactures factory-made stainless steel B-CORE Holon buildings with the mission of "providing all humanity with truly superb housing"
- 2) BROAD Wind Power Co., Ltd. produces breeze power generation system with the mission of "letting wind power spread across every corner of the earth, benefiting all humanity"
- 3) BROAD B-CORE Road and Bridge Co., Ltd. develops elevated B-CORE expressway, bridges and vertical factories with the mission of "preventing expressways from cutting apart natural habitats"
- 4) BROAD Lightweight Transportation Co., Ltd. develops stainless steel B-CORE shells of cars, airplanes and ships with the mission of "making transportation vehicles lighter and safer"
- 5) BROAD Vacuum Loop Co., Ltd. develops stainless steel B-CORE extremely hi-speed vacuum tubes and train bodies with the mission of "fulfilling the dream of the time tunnel with intercontinental transportation"
- 6) BROAD B-CORE Slab Co., Ltd. produces B-CORE Slabs for BSB and its partners, with the mission of "setting up the safest factories with the highest efficiency in the world"





BROAD GLOBAL MARKET - 2022





BROAD ENERGY JOINT VENTURES

Yan'an BROAD Energy Service Co., Ltd.

Address: BROAD Distributed Energy Center, Baota District, Yan'an City,Shanxi Province Zip code: 716000 Phone: 0911-8886901 Email: yayd@BROAD.net

Qingdao City North New Energy Development Co., Ltd.

Address: 9th Floor, Times Square, No. 168 Shandong Road, Shibei District, Qingdao City Zip code: 266000 Phone: 0532-80933187 Email: jns-qd@BROAD.net

Changsha Xin'ao BROAD Energy Service Co., Ltd.

Address: No. 786 Wangxian Road, Xingsha Town, Changsha County, Changsha City, Hunan Province Zip code: 410100 Phone: 0731-89981740 Email: yypx@BROAD.net

Yueyang Huarun BROAD Energy Service Co., Ltd.

Address: No. 9 Yueyang Avenue, Yueyang Economic and Technological Development Zone Zip code: 414000 Phone: 0730-8344249 Email: nyly@BROAD.net

Shaoxing BROAD Energy Service Co., Ltd.

Address: BROAD Energy Center, Didang New City, Yuecheng District, Shaoxing City, Zhejiang Province Zip code: 312000 Phone: 0575-88622770 Email: sxyd@BROAD.net

Changxing BROAD Energy Service Co., Ltd.

Address: Economic Development Zone, Changxing County, Huzhou City, Zhejiang Province Zip code: 313100 Phone: 0572-6201755 Email: cxyd@BROAD.net

Nanjing Hexi BROAD Energy Service Co., Ltd.

Address: BROAD Energy Center, Qing'ao Village, Jianye District, Nanjing City, Jiangsu Province Zip code: 210000 Phone: 025-86583840 Email: njhxyd@BROAD.net

Nanjing BROAD Energy Technology Co., Ltd.

Address: Room 508, Building 2, No. 2 Shuanglong Street, Qinhuai District, Nanjing City, Jiangsu Province Zip code: 210000 Phone: 025-83306885 Email: njny@BROAD.net

Wuxi BROAD Energy Management Service Co., Ltd.

Address: Wuxi Bus Passenger West Station, Qianzhou Town, Huishan District, Wuxi City, Jiangsu Province Zip code: 214182 Phone: 0510-83399234 Email: wxyd@BROAD.net

Zhongxin Suzhou Industrial Park BROAD Energy Service Co., Ltd.

Address: Moon Bay Cooling Center, No. 399 Chuangyuan Road, Suzhou Industrial Park Zip code: 215123 Phone: 0512-62898997 Email: zxyd@BROAD.net

Huai'an Comprehensive Energy Service Co., Ltd.

Address: B1206, No. 9 Jiankang East Road, Huai'an City, Jiangsu Province Zip code: 223001 Phone: 0517-89888528 Email: BROADxh@163.com

Yixing BROAD Energy Service Co., Ltd.

Address: No. 6 Energy Center, Yixing People's Hospital, Yicheng Street, Yixing City, Jiangsu Province Zip code: 214200 Phone: 0510-85076957 Email: yxyd@BROAD.net



BROAD ENERGY'S MISSION: OPTIMIZE RESOURCE ALLOCATION, SAVE MONEY AND LOW CARBON



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100g

To protect forest & water sources, please imitate us to adopt compact layout & thin paper printing

First edition October 2023 Quantity: 1,000 BY336-23 © 2023

