

ENERGIZING THE WORLD, BRIGHTENING THE FUTURE  
赋能世界发展 共建美好未来

# ENERGY CHINA INTERNATIONAL



First-class integrated energy solutions provider  
**一流的能源一体化方案解决商**



First-class EPC contractor  
**一流的工程总承包商**



First-class infrastructure investor  
**一流的基础设施投资商**



First-class integrated eco-environment  
restoration facilitator  
**一流的生态环境综合治理商**



First-class integrated urban developer and  
operator  
**一流的城市综合开发运营商**



First-class supplier of building materials,  
industrial products and equipment  
**一流的建材、工业产品和装备提供商**



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Overview

企业简介

China Energy International Group Co., Ltd. (Energy China International), established in 2021, is a wholly-owned subsidiary of China Energy Engineering Group Co., Ltd. (Energy China), managing the development of international business on behalf of Energy China. Energy China International took the lead in the investment of international business, market development, supervision and management of engineering projects, etc. As a Fortune 500 multinational corporation providing total solutions and services for global energy and power, infrastructure and green low-carbon development, Energy China has 256 branches abroad, covering business in 147 countries and regions, with 416 projects under construction and over 100,000 international employees, one of the leading companies of globalization in China. By leveraging its strengths in life cycle of projects development including investment, EPC and O&M, Energy China International will fully integrate the high-quality resources of Energy China, provide green, low-carbon, safe and energy-efficient energy power and infrastructure for global customers and be committed to becoming an industry-leading, world-class multinational corporation with global competitiveness.

中能建国际建设集团有限公司（简称“中国能建国际集团”）是中国能源建设股份有限公司（简称“中国能建”）的全资子公司，于2021年成立，代表中国能建归口管理国际业务发展，担负中国能建海外投资、市场开发、项目实施和监管等方面的引领统筹职能。中国能建作为一家为全球能源电力、基础设施、绿色低碳发展等提供整体解决方案、全产业链服务的世界500强跨国集团公司，在海外设有256个分支机构，在建项目416个，业务覆盖147个国家和地区，国际从业人员超10万人，是中国“走出去”的领军企业。中国能建国际集团将全面整合中国能建优质资源，充分发挥“投建营”一体化优势，为全球客户提供绿色、低碳、安全、高效的能源电力和基础设施，致力成为具有全球竞争力的“行业领先、世界一流”跨国公司。

# International business system

## 国际业务体系：1+2+N+X

By systematically laying out the global market and leveraging its six regional HQs, Energy China shoulders its mission as an integrated platform to lead and coordinate its affiliated companies to develop international business, building a new system for survey, planning, engineering, projects development, equipment manufacturing, operation and management, project investment, etc., and provide high-quality services for global customers.

公司系统布局全球市场，打造国际业务引领统筹的一体化平台和六大区域市场，构建以勘察规划设计、工程建设、装备制造、运营管理、项目投资等龙头企业、骨干企业为支撑的国际业务新体系，为全球客户提供高质量服务。

<b>“1”</b>	 <b>China Energy International Group Co.,Ltd.</b> 中国能建国际集团	
Americas and Oceania Regional HQ 美大区域总部	Southeast Asia Regional HQ 东南亚区域总部	South Asia Regional HQ 南亚区域总部
Eurasia Regional HQ 欧亚区域总部	South East Africa Regional HQ 东南非区域总部	Northwest Africa Regional HQ 西北非区域总部
<b>“2”</b>	 <b>China Gezhouba Group International Engineering Co.,Ltd.</b> 葛洲坝国际公司	 <b>China Power Engineering Consulting Group International Engineering Co.,Ltd.</b> 中电工程国际公司
<b>“N”</b>	 Leading companies 龙头企业	
<b>“X”</b>	 Key companies 骨干企业	



Highlighted leading companies  
代表性的龙头企业

China Electric Power Planning & Engineering Institute 电力规划总院有限公司	China Gezhouba Group No.1 Engineering Co.,Ltd. 中国葛洲坝集团第一工程有限公司
China Energy Engineering Investment Corporation Limited 中国能源建设集团投资有限公司	China Gezhouba Group No.2 Engineering Co.,Ltd. 中国葛洲坝集团第二工程有限公司
Northwest Electric Power Design Institute Co.,Ltd. of China Power Engineering Consulting Group 中国电力工程顾问集团西北电力设计院有限公司	China Gezhouba Group No.3 Engineering Co.,Ltd. 中国葛洲坝集团第三工程有限公司
Southwest Electric Power Design Institute Co.,Ltd. of China Power Engineering Consulting Group 中国电力工程顾问集团西南电力设计院有限公司	China Gezhouba Group Construction Engineering Co.,Ltd. 中国葛洲坝集团建设工程有限公司
North China Power Engineering Co.,Ltd. of China Power Engineering Consulting Group 中国电力工程顾问集团华北电力设计院有限公司	China Gezhouba Three Gorges Construction Engineering Co.,Ltd. 中国葛洲坝集团三峡建设工程有限公司
Central Southern China Electric Power Design Institute Co.,Ltd. of China Power Engineering Consulting Group 中国电力工程顾问集团中南电力设计院有限公司	China Gezhouba Group Mechanical& Electrical Construction Co.,Ltd. 中国葛洲坝集团机电建设有限公司
China Energy Engineering Group Shanxi Electric Power Engineering Co.,Ltd. 中国能源建设集团山西省电力勘测设计院有限公司	China Gezhouba Group Electric Power Co.,Ltd. 中国葛洲坝集团电力有限责任公司
China Energy Engineering Group Zhejiang Electric Power Design Institute Co.,Ltd. 中国能源建设集团浙江省电力设计院有限公司	China Gezhouba Group Road & Bridge Co.,Ltd. 中国葛洲坝集团路桥工程有限公司
China Energy Engineering Group Hunan Electric Power Design Institute Co.,Ltd. 中国能源建设集团湖南省电力设计院有限公司	China Gezhouba Group Municipal Engineering Co.,Ltd. 中国葛洲坝集团市政工程有限公司
China Energy Engineering Group Guangdong Electric Power Design Institute Co.,Ltd. 中国能源建设集团广东省电力设计研究院有限公司	China Energy Engineering Group Tianjin Electric Power Construction Co.,Ltd. 中国能源建设集团天津电力建设有限公司
China Energy Engineering Group Jiangsu Power Design Institute Co.,Ltd. 中国能源建设集团江苏省电力设计院有限公司	China Energy Engineering Group Zhejiang Thermal Power Construction Co.,Ltd. 中国能源建设集团浙江火电建设有限公司
EMPRESARIOS AGRUPADOS 中电工程西班牙 EAG 公司	China Energy Construction Group Co.,Ltd. 中能建建筑集团有限公司
China Gezhouba Group Cement Co.,Ltd. 中国葛洲坝集团水泥有限公司	China Energy Engineering Group Anhui No.2 Electric Power Construction Co.,Ltd. 中国能源建设集团安徽电力建设第二工程有限公司
China Gezhouba Group Explosive Co.,Ltd. 中国葛洲坝集团易普力股份有限公司	China Energy Engineering Group Guangdong Power Engineering Co.,Ltd. 中国能源建设集团广东火电工程有限公司



Highlighted key companies  
代表性的骨干企业

China Gezhouba Group Water Operation Co.,Ltd. 中国葛洲坝集团水务运营有限公司	China Energy Engineering Group Northeast NO.1 Electric Power Construction Co.,Ltd. 中国能源建设集团东北电力第一工程有限公司
China Gezhouba Group Investigation & Design Co.,Ltd. 中国葛洲坝集团勘测设计有限公司	China Energy Engineering Group Northeast NO.2 Electric Power Construction Co.,Ltd. 中国能源建设集团东北电力第二工程有限公司
Northeast Electric Power Design Institute Co.,Ltd. of China Power Engineering Consulting Group 中国电力工程顾问集团东北电力设计院有限公司	China Energy Engineering Group Northeast NO.3 Electric Power Construction Co.,Ltd. 中国能源建设集团东北电力第三工程有限公司
East China Electric Power Design Institute Co.,Ltd. of China Power Engineering Consulting Group 中国电力工程顾问集团华东电力设计院有限公司	China Energy Engineering Group Shanxi Electric Power Construction Co.,Ltd. 中国能源建设集团山西电力建设有限公司
China Energy Engineering Group Anhui Electric Power Design Institute Co.,Ltd. 中国能源建设集团安徽省电力设计院有限公司	China Energy Engineering Group Jiangsu NO.1 Electric Power Construction Co.,Ltd. 中国能源建设集团江苏省电力建设第一工程有限公司
China Energy Engineering Group Yunnan Electric Power Design Institute Co.,Ltd. 中国能源建设集团云南省电力设计院有限公司	China Energy Engineering Group Jiangsu NO.3 Electric Power Construction Co.,Ltd. 中国能源建设集团江苏省电力建设第三工程有限公司
China Energy Engineering Group Guangxi Electric Power Design Institute Co.,Ltd. 中国能源建设集团广西电力设计研究院有限公司	China Energy Engineering Group Hunan Power Construction Co.,Ltd. 中国能源建设集团湖南火电建设有限公司
China Energy Engineering Group Xinjiang Electric Power Design Institute Co.,Ltd. 中国能源建设集团新疆电力设计院有限公司	China Energy Engineering Group Guangxi Hydroelectric Construction Bureau Co.,Ltd. 中国能源建设集团广西水电工程局有限公司
China Energy Engineering Group Equipment Co.,Ltd. 中国能建集团装备有限公司	China Energy Engineering Group Heilongjiang Energy Engineering Co.,Ltd. 中国能源建设集团黑龙江能源建设有限公司
China Energy Engineering Group Science and Technology Develop Co.,Ltd. 中国能源建设集团科技发展有限公司	China Energy Engineering Group Northwest Power Construction Engineering Co.,Ltd. 中国能源建设集团西北电力建设工程有限公司



6 regional HQs worldwide

## 全球6大区域总部

### Americas and Oceania Regional HQ

#### 美大区域总部

Headquartered in Lima, Peru, our business covers 51 countries in Americas and Oceania including Brazil, Mexico, Argentina and Peru.

总部位于秘鲁首都利马，市场区域涵盖巴西、墨西哥、阿根廷、秘鲁等51个美洲和大洋洲国家。

### South Asia Regional HQ

#### 南亚区域总部

Headquartered in Islamabad, Pakistan, our business covers South Asian countries including Pakistan, Bangladesh, Iraq, Sri Lanka, Nepal, Afghanistan and India. We also carry out business in Mongolia and South Korea.

总部位于巴基斯坦首都伊斯兰堡，市场区域涵盖巴基斯坦、孟加拉、伊拉克、斯里兰卡、尼泊尔、阿富汗、印度等国家，同时也在蒙古和韩国开展市场业务。

### South East Africa Regional HQ

#### 东南非区域总部

Headquartered in Nairobi, Kenya, our business covers 25 countries and regions in Eastern and Southern Africa including South Africa, Angola and Kenya. We also carry out business in 11 Western and Northern European countries including the United Kingdom, Germany and the Netherlands.

总部位于肯尼亚首都内罗毕，市场区域涵盖南非、安哥拉、肯尼亚等非洲东部和南部的25个国家和地区。同时也在英国、德国、荷兰等11个西欧和北欧国家开展市场业务。

### Southeast Asia Regional HQ

#### 东南亚区域总部

Headquartered in Kuala Lumpur, Malaysia, our business covers 15 countries and regions including Indonesia, Malaysia, Philippines, Vietnam, Thailand, Laos, Cambodia, Singapore, Japan, Hong Kong, Macau and Taiwan.

总部位于马来西亚首都吉隆坡，市场区域涵盖印度尼西亚、马来西亚、菲律宾、越南、泰国、老挝、柬埔寨、新加坡以及日本、中国香港、中国澳门、中国台湾等15个国家和地区。

### Eurasia Regional HQ

#### 欧亚区域总部

Headquartered in Dubai, UAE, our business covers 43 countries including UAE, Uzbekistan, Saudi Arabia, Russia, Bosnia and Herzegovina, covering three sub-regional markets in Central Asia (Russian-speaking), Middle East and Central and Eastern Europe.

总部位于阿联酋迪拜，市场区域涵盖阿联酋、乌兹别克斯坦、沙特、俄罗斯、波黑等43个国家，覆盖中亚（俄语）、中东和中东欧三个次区域市场。

### Northwest Africa Regional HQ

#### 西北非区域总部

Headquartered in Abuja, Nigeria, our business covers 41 countries in Western and Northern Africa, including Nigeria, Côte d'Ivoire, Egypt, Equatorial Guinea, and Democratic Republic of the Congo.

总部位于尼日利亚首都阿布贾，市场区域涵盖尼日利亚、科特迪瓦、埃及、赤道几内亚、刚果金等非洲西部和北部41个国家。



# Competitive advantage

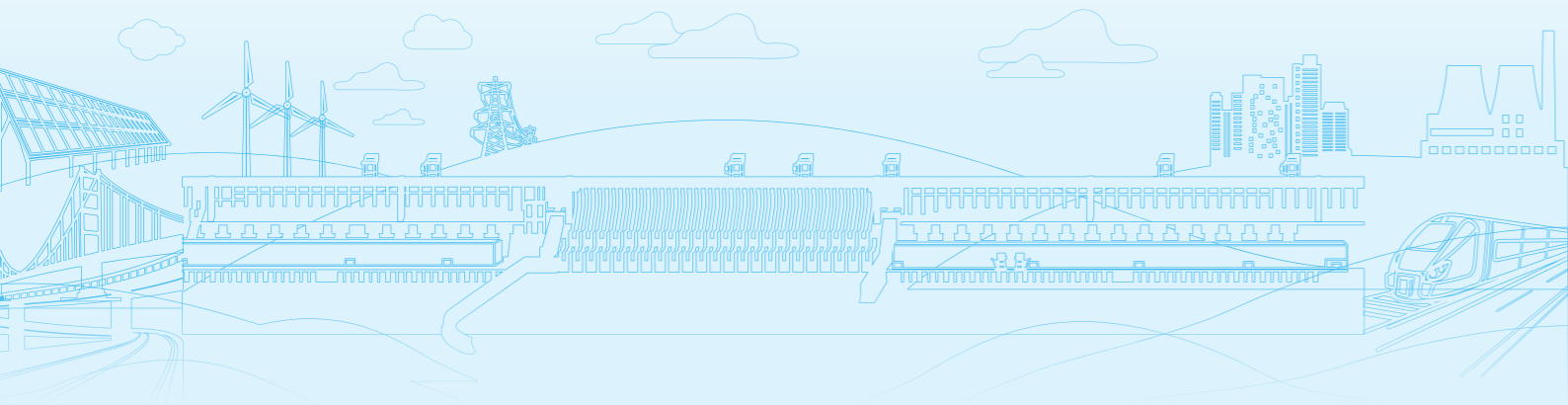
## 竞争优势



Global leading technology  
**全球领先的技术优势**

Energy China tops the world's construction technology in the fields of river diversion and closure, dam construction, high-strength concrete, excavation and support of large underground tunnels, blasting, installation of extra-large hydraulic turbines, etc. We possess cutting-edge technologies in nuclear power conventional islands and nuclear islands, megawatt-class ultra-supercritical coal-fired units, gas turbines, UHV AC and DC power grids, and renewable energy such as offshore wind power and photothermal technology, representing the highest level of planning, survey, engineering, construction, equipment manufacturing, O&M and commissioning in China's energy and power industries.

在大江大河导截流、筑坝、高强度混凝土、大型地下洞群开挖支护、爆破、特大型水轮机组安装等领域占领世界施工技术制高点，拥有核电常规岛和核岛、百万千瓦级超超临界燃煤机组、燃气轮机、特高压交直流电网，以及海上风电、光热技术等可再生能源前沿技术，代表中国能源电力行业建设规划、勘测、设计、施工、装备制造、运维调试的最高水平。




Integrated development  
**一体化发展优势**

Possessed strong operation and management capabilities of non-renewable energy, smart energy, green energy and micro-grid systems.

具有传统能源、智慧能源、绿色能源、微电网系统的运营管理能力。

Leveraged the synergies from the integration of R&D, design, manufacturing and service in the field of energy power and infrastructure.

具有能源电力和基础设施领域装备研发、设计、制造、服务一体化优势。

Owns the most competitive companies with planning and consulting capabilities in energy and power sector in China, and has undertaken hundreds of major projects' survey and engineering services in dozens of counties and regions.

拥有中国最具竞争力的能源与电力规划咨询企业，已承担数十个国家和地区数百项重大工程勘测设计服务。

Engaged in water, cement and new energy investment and operation businesses worldwide, and will complete over US\$15 billion of international investment by 2025.

在全球广泛开展水务、水泥和新能源投资与运营业务，到2025年，将在海外完成投资超过150亿美元。

Established a wide range of strategic partnerships with well-known financial institutions globally, and has assisted host countries with raising more than US\$100 billion for 105 projects.

与国内外知名金融机构广泛建立战略合作关系，累计帮助东道国为105个境外项目融资1000多亿美元。

Possessed strong project planning, management and EPC capabilities in the field of energy, power and infrastructure development.

具有能源电力和基础设施建设领域强大的项目策划和EPC管理能力。



Multi-industry integrated development  
**多元产业融合发展优势**



**Integration of holistic urban development and smart energy**  
城市综合开发与智慧能源融合

The integration of green, efficient and smart energy systems with holistic urban development which brings in industries makes the city more vibrant and dynamic.

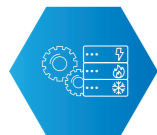
绿色、高效、智慧能源系统与城市综合建设高效融合，产业导入与城市综合开发高效融合，让城市更具有发展活力。



**Integration of integrated transportation and smart energy**  
综合交通与智慧能源融合

The integration of green, efficient and smart energy systems with integrated transportation facilitates the building of a smart energy system featured in clean and low-carbon and further realize the transformation of transportation energy.

绿色、高效、智慧能源系统与高速公路建设高效融合，构建“交通+能源”清洁低碳一体化综合智慧能源体系，推动交通能源低碳转型。



**Integration of equipment solutions providing and projects development**  
装备制造与工程建设融合

The integration of large and special equipment manufacturing, equipment manufacturing of energy storage, heat storage technology, cold source system, with projects development allows for more tailored equipment that can accurately serve projects development.

具有装备成套优势以及大型、特种装备制造，储能、储热技术、冷源系统装备制造等，与工程建设高效融合，让装备更具有个性化和精准服务工程建设功能。



**Integration of building materials industry and project development**  
建材产业与工程建设融合

The integration of building materials industry with projects development business such as mine development, cement manufacturing and civil explosion facilitates the production and efficient use of green building materials.

将建材产业与矿山开发、水泥制造、民爆等服务工程建设高效融合，推动绿色建材生产和应用有效衔接。



**Integration of environmental protection industry and building materials industry**  
环保产业与建材产业融合

Leveraging Energy China's world-class technology in the cement and eco-friendly aggregates industries as well as a mature production line of the co-processing of solid waste in cement kilns, we have effectively integrated environmental protection industry with building materials industry.

具有水泥、绿色砂石等行业技术领先优势，具有水泥窑协同处理城市生活垃圾的成熟生产线，将环保产业和建材产业高效融合。



Integration of the whole industrial chain resources of green energy  
**绿色能源全产业链资源整合优势**

In June 2018, Energy China, along with the leading companies of the renewables energy industry, established International Investment Alliance for Renewable Energy (IIARE), which is China's first alliance organization covering the whole life cycle of planning, investment, construction and operation of renewable energy projects abroad. IIARE currently has 18 members and is committed to building a top international strategic alliance in the renewable energy industry. Since its establishment in 2018, IIARE has signed contracts of renewable projects with an amount of more than US\$30 billion in 38 countries, contributing to global energy restructuring and carbon emission reduction.

2018年6月，联合新能源行业全产业链龙头企业发起成立中国首个覆盖境外新能源项目规划、投资、建设、运营全生命周期的联盟组织——新能源国际投资联盟，目前拥有18个会员企业，致力于打造新能源行业国际顶级战略联盟。从2018年成立至今，在全球38个国家实现新能源项目签约300多亿美元，为全球能源结构调整和碳减排贡献了积极力量。



Industry status  
**行业地位优势**

**Vice-chairman Member of China International Contractors Association**  
中国对外承包工程商会副会长单位

**Vice-chairman Member of China Chamber of Commerce for Import and Export of Machinery and Electronic Products**  
中国机电产品进出口商会副会长单位



**No. 269** in the 2022 Fortune Global 500  
2022年世界500强企业第**269**位



**No. 2** in the ENR 2022 Top 150 Global Design Firms  
2022年ENR全球工程设计公司前150强第**2**名



**No.13** in the ENR 2021 Top 250 Global Contractors  
2021年ENR全球承包商250强第**13**名



**No.6** in the list of Chinese Going Global companies in terms of internationalization  
国际化综合实力稳居中国“走出去”企业榜单前**6**位

# Hydropower projects

## 水电

As a world-leader in the hydropower industry, Energy China has 50% of the market share of large and mega hydropower development, continues to set new records for overseas hydropower development by Chinese companies and represents the highest level of hydropower in the world.

全球水电行业的引领者，拥有世界上50%的大型、特大型水电建设市场份额，不断刷新中企海外水电建设记录，代表世界水电最高水平。

Engineered and developed more than **1000** hydropower projects of various types  
设计、建设了 **1000** 多个各类水电工程



Total installed hydropower capacity of around **190GW**  
水电总装机容量约 **190** 吉瓦



Participated in the development of more than **20** large-scale overseas hydropower projects  
参与 **20** 余座境外大型水电工程建设



**1. Three Gorges Dam Project, China**  
World's largest water conservancy project, with a total installed capacity of 22,500MW, has won FIDIC Centennial Award for Excellence in Major Civil Engineering Project; Energy China was contracted with more than 65% of the total workload

**2. Baihetan Hydropower Plant Project, China**  
World's second largest hydropower plant, with a total installed capacity of 16,000MW; world's largest single-unit hydroelectric generator with a capacity of 1,000MW and 16 units developed independently by China.

**1. 中国·长江三峡水利枢纽**  
世界最大水利枢纽工程，总装机容量22500MW，菲迪克百年重大土木工程项目杰出奖，承担65%以上工作量

**2. 中国·白鹤滩水电站**  
世界第二大水电站，总装机容量16000MW，安装16台中国自主研发、单机容量为1000MW水轮发电机组，为全球单机容量最大



**1. Neelum-Jhelum Hydropower Plant, Pakistan (Construction)**

With a total installed capacity of 969MW, accounting for 12% of Pakistan's hydropower generation capacity to date

**2. Yeywa Hydropower Plant, Myanmar**

Largest hydropower project in Myanmar with a total installed capacity of 790MW

**3. Tekeze Hydroelectric Project, Ethiopia**

Ethiopia's largest hydropower plant, with a total installed capacity of 300MW, the first overseas hydropower project that has won Luban Award - the most prestigious award in China's construction field

**4. Santa Cruz NK/JC Hydropower Project, Argentina (EPC)**

Largest project in China-Latin America cooperation, with a total installed capacity of 1310MW; largest project for international investment by Chinese enterprises to date, with a total investment amount of approximately US\$5.3 billion; will enhance the power supply in Argentina nationwide by 6.5% after completion

**1. 巴基斯坦·NJ水电站（施工总承包）**

总装机容量969MW，占目前巴基斯坦水电发电量的12%

**2. 缅甸·耶涯水电站**

缅甸境内总装机容量最大的水电站项目，总装机容量790MW

**3. 埃塞俄比亚·特克泽水电站**

埃塞俄比亚最大水电站，总装机容量300MW，荣获海外水电项目首个中国建筑领域最高奖项鲁班奖

**4. 阿根廷圣克鲁斯NK/JC水电站（工程总承包）**

总装机容量1310MW，中拉合作的重大项目，项目总投资53亿美元左右，是中国企业目前海外最大电力投资项目，项目建成后可提升阿根廷整个国家电力供应的6.5%



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# Thermal power projects

## 火电

Energy China is a world leader in the market share and integrated development capability of thermal power projects. Our strengths include core engineering technology and project management experience in the fields of megawatt ultra-supercritical coal-fired power generation, large-scale circulating fluidized bed power generation, large-scale combined-cycle power generation of gas and steam turbines, ultra-clean emission, etc. We were contracted with the planning, consulting, survey, engineering, construction, commissioning and other parts of thermal power projects of all capacities.

火电建设一体化能力和业绩全球居首，拥有百万千瓦级超超临界燃煤发电、大型循环流化床发电、大型燃气-蒸汽联合循环发电、超洁净排放等核心设计技术和工程管理经验，可承揽全部容量等级火电工程的规划、咨询、勘测、设计、施工、调试等业务。

Occupy **80%** of China's market share in the engineering of thermal power projects  
拥有 **80%** 中国火电设计市场份额



Occupy **60%** of China's market share in the development of thermal power projects  
拥有 **60%** 中国火电建设市场份额



Involved in the development of more than **100** units with GW-class coal-fired power  
主导或参与建设的百万千瓦级煤电机组超过 **100** 台



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### 1. Jiangsu Taizhou Power Plant Phase II (2×1000 MW) Project, China (Engineering & Construction)

World's first megawatt ultra-supercritical secondary reheat unit project, with the lowest coal consumption and the highest power generation efficiency in the world, won the gold medal of National High Quality Engineering Award

#### 1. 中国·江苏泰州电厂二期2×1000MW机组工程（设计建设）

世界首个百万千瓦超超临界二次再热机组项目，供电煤耗、发电效率均处于全球最优水平。获国家优质工程奖金奖

### 2. Java No. 7 2×1050MW Coal-fired Power Plant, Indonesia (EPC)

Largest capacity of single thermal power unit with independent intellectual property rights invested and built by a Chinese company overseas, most efficient and environmentally friendly power plant with largest installed capacity, highest parameters, most advanced technology and best performance in the history of Indonesian power development, has won top prize in the Asian Power Awards 2021, known as the Oscars of the Asia energy industry

#### 2. 印尼·爪哇7号2×1050MW燃煤发电工程（工程总承包）

中国企业在海外投资建设的单机容量最大，拥有自主知识产权的火电机组，印尼电力建设史上装机容量最大、参数最高、技术最先进、指标最优的高效环保型电站，获得亚洲电力行业奥斯卡2021年度煤电项目金奖

### 3. Vinh Tan Phase I Power Plant, Vietnam (2×620MW) (EPC)

First super-critical coal-fired power plant with W-shaped furnace in Vietnam

#### 3. 越南·永新电厂一期2×620MW机组工程（工程总承包）

越南首个超临界W火焰炉燃煤电厂



**1. Syrdarya Gas-fired Combined-cycle Power Plant, Uzbekistan (EPC)**  
Largest gas-fired combined cycle power plant project in Central Asia, with world's highest combustion temperature, largest power capacity and highest efficiency of single gas turbine unit and zero waste water discharge design plan

**2. 1180MW Bhikki Combined-cycle Power Plant, Pakistan (Engineering & Construction)**  
World's most efficient 9H-class combined cycle power plant

**3. Guangzhou Zengcheng Gas-fired CCHP Trigeneration Project, China (Engineering & Construction)**  
Installed 2×670MW gas-fired CCHP trigeneration units, which are the world's most advanced H-class high-efficiency gas turbines supplying clean energy such as electricity, steam and heat

**1. 乌兹别克斯坦·锡尔河1500MW燃气联合循环电站 (工程总承包)**  
中亚最大燃气联合循环电站项目，采用世界上燃烧温度最高、单体功率最大、效率最高燃气轮机和“废水零排放”设计方案

**2. 巴基斯坦·必凯1180MW联合循环电站 (设计建设)**  
世界上最高效率的9H级联合循环电站

**3. 中国·广州增城燃气冷热电三联供项目 (设计建设)**  
项目建设2×670MW燃气—蒸汽联合循环冷热电三联供机组，是目前世界最先进H型高效燃机，可供应电力、蒸汽、热力等清洁能源



# Power transmission and distribution projects

## 输变电项目

With world-class capabilities of engineering and construction in power transmission and distribution, Energy China has completed 90% of the engineering work in China's UHV transmission and distribution market, and possesses core competitive advantages in UHV transmission and distribution, UHV AC/DC transmission, flexible AC/DC transmission, digital power grid, smart grid, etc. Energy China can undertake planning and consulting, survey and engineering as well as EPC work of transmission and distribution projects of all voltage levels.

拥有世界一流的输变电工程设计、建设实力，完成中国特超高压输变电市场90%的设计业务，在超高压输变电、特高压交直流输电、柔性交直流输电、数字化电网、智能电网等领域具有核心竞争优势，可承揽全部电压等级输变电工程的规划咨询、勘察设计及总承包业务。

Occupy **90%** of market share in the engineering of China's UHV transmission and distribution market



拥有中国 **90%** 的特超高压输变电市场设计份额

Has contracted power transmission line projects above 220kV of over **18,000**km in survey, engineering and EPC



勘察设计、总承包 220kV 以上输电工程逾 **180000** 千米



### 1. Kunliulong DC Project with Liubei Converter Station, China (Survey & Engineering)

World's first UHV multi-terminal flexible DC converter station, with the most complex and cutting-edge grid technology

### 1. 中国·昆柳龙直流工程柳北换流站 (勘察设计)

叠加最复杂最前沿的电网技术于一体，是世界首个特高压多端柔性直流换流站

### 2. Jindongnan-Nanyang-Jinmen 1000kV UHV AC Test Demonstration Project, China (Survey & Engineering)

World's first 1000kV transmission project in operation, won the National Science and Technology Progress Special Award and the National Quality Engineering Gold Award

### 2. 中国·晋东南-南阳-荆门1000kV特高压交流试验示范工程 (勘察设计)

世界首个投入运行的1000kV电压等级输电工程，获国家科技进步特等奖、国家优质工程金奖



### 3. Changji-Guquan ±1100kV UHV DC Transmission Project, China (Survey & Engineering)

A UHV transmission line project with the highest voltage level, largest transmission capacity (12,000MW), longest transmission line (3293km) and the most advanced technology in the world

### 3. 中国·昌吉—古泉±1100千伏特高压直流输电线路 (勘察设计)

线路全长3293千米，输送功率12000MW，世界上电压等级最高、输送容量最大、输送距离最远、技术水平最先进的特高压输电工程

### 4. Belo Monte ±800kV UHV DC Transmission Line Project, Brazil (Survey & Engineering)

Brazil's first and world's fourth ±800kV UHV DC transmission line

### 4. 巴西·美丽山±800kV直流输电项目 (勘察设计)

巴西第一条、世界第四条±800千伏特高压直流输电线路

# Renewable energy and integrated smart energy projects

## 新能源及综合智慧能源

As a world leader of energy transformation, Energy China has world-leading design and development capabilities in the fields of integrated smart energy, wind power, photovoltaic (PV) power, biomass, waste-to-energy, etc. Energy China has 50% of the domestic renewable energy market, with a total installed capacity of over 280GW. Energy China is committed to providing customers with a package of solutions for projects development and storage applications in the field of renewable energy. Energy China is a problem solver, a technology leader and a supplier of clean, efficient, green and smart energy in the field of renewable energy.

引领能源转型，在综合智慧能源、风力发电、光伏发电、生物质发电、垃圾发电等领域拥有世界领先的设计、建设能力，承揽中国50%的市场份额，总装机容量超280吉瓦。致力于为客户提供新能源领域工程实践和储存应用的一揽子解决方案，成为新能源领域的问题解决者、技术领导者和清洁、高效、绿色、智慧能源的供应者。

Occupy **50%** of China's market share in renewable energy

占据中国 **50%** 新能源市场份额



Total installed capacity of renewable energy exceeding **280GW**

承揽新能源业务总装机容量超 **280** 吉瓦



### 1. Lu'an Megawatt-class Hydrogen Energy Comprehensive Utilization Demonstration Project, Anhui, China

China's first megawatt-class full chain power generation system featured pure water electrolysis hydrogen production, high-pressure hydrogen storage and hydrogen fuel cell. The project adopts megawatt-class hydrogen generation system with PEM technology and hydrogen fuel cell system

### 2. Smart Energy Demonstration Park Project, Guangdong Electric Power Design Institute, China

With technologies such as internet of things, big data and cloud computing, this project integrated technological resources of energy automation, informatization, energy metering and monitoring, and built an interactive regional interconnective platform featured *source-network-load-storage* that is supported by *energy+building* model



### 1. 中国·安徽六安兆瓦级氢能综合利用示范项目

中国首座兆瓦级电解纯水制氢、高压储氢、氢燃料电池全链条发电系统，项目采用兆瓦级质子交换膜（PEM）纯水电解制氢系统及氢燃料电池系统设备

### 2. 中国·广东院智慧能源示范园区

应用物联网、大数据、云计算等技术，整合能源自动化、信息化、能源计量监测设施，以能源+建筑搭建“源—网—荷—储”互动的区域能源互联网



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- 1.中国·河北张北风光储输示范工程**  
当前世界规模最大的风、光、储、输示范工程，获2018年菲迪克优秀工程奖
- 2.中国·内蒙古乌拉特中旗100MW光热发电项目(工程总承包)**  
中国首批光热示范项目中单体规模最大、储热时长最长的槽式光热发电项目，年发电量约3.92亿千瓦时
- 3.中国·山东德州丁庄水库一期200MW光伏发电项目(勘察设计)**  
当前世界单体最大水上漂浮式光伏电站
- 4.迪拜·950MW“光热+光伏”混合发电项目**  
采用“一塔三槽+光伏”太阳能发电组合，是目前世界上最大的光热+光伏综合电站项目

 PV and photothermal projects  
**光伏光热**

- 1.Zhangbei Wind-Solar-Storage-Transmission Integrated Demonstration Project, Hebei, China**  
World's largest demonstration project of renewable energies integrating wind, solar, energy storage and power transmission, won 2018 FIDIC Outstanding Project of the Year
- 2.Wulat Middle Banner 100MW Photothermal Power Project, Inner Mongolia, China (EPC)**  
Among the first batch of photothermal demonstration projects in China, the trough-type photothermal power generation project with the largest single unit scale and the longest heat storage duration has an annual power generation capacity of approximately 392 million kWh
- 3.Dingzhuang Reservoir Phase I 200MW Floating PV Project, Shandong, China (Survey & Engineering)**  
World's largest single floating PV power plant on water
- 4.950MW CSP+PV Solar Power Project, Dubai**  
Adopted the technology of CSP with Tower & Trough, world's largest CSP and PV integrated power project



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Wind power projects  
**风电**

**1. Jhimpir Wind Power Project, Pakistan**

**2. Gia Lai Wind Power Project, Vietnam (EPC)**  
 Largest wind power project in Vietnam, with a total installed capacity of 300MW

**3. Zhuhai Jinwan Offshore Wind Farm Project, Guangdong, China (EPC)**  
 With a total installed capacity of 300MW, it can provide clean electricity of nearly 800 million kWh per year

**1. 巴基斯坦·吉姆普尔风电场**

**2. 越南·嘉莱风电项目（工程总承包）**  
 装机300MW，越南最大风电项目

**3. 中国·广东珠海金湾海上风电场项目（工程总承包）**

总装机容量300MWW，每年可提供清洁电能近8亿千瓦时



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Energy storage projects

**储能**

**1.Fengning 3600MW Pumped Storage Hydropower Project, Hebei, China (Construction)**

World's largest power plant of pumped storage with a total installed capacity of 3600MW

**2.Jintan Salt Cavern Compressed Air Energy Storage (CAES) Project, Jiangsu, China (Survey & Engineering)**

World's first non-supplementary compressed air energy storage power plant, with energy storage power and storage capacity of 300MW in phase I

**3.Hubei Yingcheng Compressed Air Energy Storage Power Plant, China (Investment & Construction)**

2×300MW class non-supplementary compressed air energy storage demonstration project, with world's multiple firsts in single-unit power, energy storage scale and conversion efficiency (70%)

**4.Mintey Phase I Battery Energy Storage Plant, UK (Engineering & Consulting)**

With an installed capacity of 99.8MW, it is currently the largest grid-side single battery energy storage plant in Europe and has been put into commercial operation on June 30, 2021



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**1.中国·河北丰宁抽水蓄能电站(建设)**

世界装机容量最大的抽水蓄能电站,总装机容量3600MW

**2.中国·江苏金坛盐穴压缩空气储能项目(勘察设计)**

世界首个非补燃压缩空气储能电站,一期储能功率和储能为300MW

**3.中国·湖北应城压缩空气储能电站(投资建设)**

2×300MW级非补燃压缩空气储能示范工程,单机功率世界第一,储能规模世界第一、转换效率世界第一(70%)

**4.英国·门迪一期大型电池储能项目(设计咨询)**

装机容量99.8MW,是欧洲目前最大的电网侧单体电池储能电站,2021年6月30日投入商业运营



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Nuclear power projects  
**核电**

Energy China has the capabilities of survey, engineering, consultation and development of reactor nuclear power units with various capacity levels, technical routes and types. We have participated in the site investigation, engineering and construction of more than 40 nuclear power projects. We occupy 90% of market share in design and consultation and 60% of market share in construction in China's nuclear power industry.

具备各个容量等级、各种技术路线、各类型反应堆核电机组的勘察设计、咨询和建设能力，参与40多个核电工程常规岛与核岛的勘测、设计、施工，拥有中国核电常规岛设计咨询90%的市场份额，施工60%的市场份额。



**1. Taishan Nuclear Power Plant Phase I  
2×1750MW Project, Guangdong, China  
(Survey & Engineering)**

Largest single-capacity nuclear power plant in the world, largest project in cooperation between China and France in the field of energy

**2. Fuqing Nuclear Power Plant (Engineering & Construction)**

There are 6 GW-class nuclear power units, of which units 5 and unit 6 are ACP1000 *Hualong 1* reactors. It is China's self-developed third-generation nuclear power plant

**3. Fangchengang Nuclear Power Plant Phase I  
2×1080MW Project, Guangxi, China (EPC)**  
Phase II Unit 3 & Unit 4 (2×1180MW) adopts *Hualong 1* technology

**4. Karachi Nuclear Power Project, Pakistan  
(Engineering & Construction)**

China's first exports of complete set of 1100MW commercial pressurized water reactor nuclear power plant, first export reactor of *Hualong 1*



**1. 中国·广东台山核电站一期 2×1750MW 机组工程（勘察设计）**  
世界单机容量最大核电站，中法两国在能源领域的最大合作项目

**2. 中国·福清核电站（设计建设）**  
6台百万千瓦级核电机组，5、6号机组为 ACP1000 “华龙一号”示范项目，是中国自主研发的第三代核电站

**3. 中国·广西防城港核电站一期 2×1080MW 机组工程（工程总承包）**  
二期 3、4号 2×118万千瓦机组工程，运用“华龙一号”技术

**4. 巴基斯坦·卡拉奇核电工程（设计建设）**  
中国首次成套出口的 110 万千瓦级商用压水堆核电站，“华龙一号”海外首堆

# Water conservancy projects

## 水利

Energy China has become the leading force in promoting the water projects in China and the world, participating in a series of major water projects and sponge city projects all over the world. Focusing on irrigation, water supply and sea water desalination, we provide an integrated solutions for the efficient and rational use of global water resources.

中国及世界水利建设主力军，广泛参与全球重大水利工程及海绵城市建设。以灌溉、供水、海水淡化等领域为重点，为全球水资源高效合理利用提供一体化解决方案。



### 1.South-North Water Diversion Project Crossing the Yellow River

The project crosses the Yellow River from 40 meters underwater, with a single tunnel of 3,450 meters long, which is the largest water conservancy project crossing rivers in human history

### 2.South-North Water Diversion Central Route Project, China

World's largest water diversion project, with a total length of the main water diversion route of 1432km

### 1.中国·南水北调穿越黄河工程

工程从水下40米处横穿黄河，单洞长达3450米，是人类历史上最宏大的穿越大江大河的水利工程

### 2.中国·南水北调中线工程

世界最大的调水工程，输水干线全长1432公里





Water conservancy projects  
**水利**

- 1.Umm Al Quwain Desalination Project, UAE (EPC)**  
World's second largest desalination plant with membrane technology, which provides 680,000 tonnes of clean drinking water per day, benefiting 2.2 million people in the UAE
- 2.Kpong Water Supply Expansion Project, Ghana (EPC)**  
Largest water supply project in Ghana, won the National Quality Engineering Award
- 3.Marcel Water Plant Project, Angola (Construction)**  
Angola's largest water distribution center with automatic control operation, which can supply 200,000 tonnes of water per day

- 1.阿联酋·乌姆盖万海水淡化项目 (工程总承包)**  
全球第二大膜法海水淡化厂，每日可供68万吨洁净饮水，惠及阿联酋220万居民
- 2.加纳·凯蓬供水扩建项目 (工程总承包)**  
加纳最大的供水工程，获国家优质工程奖
- 3.安哥拉·马萨尔水厂工程 (施工总承包)**  
安哥拉目前最大的自动化控制配水中心，每日可供水20万吨



# Eco-environmental protection projects

## 生态环保

Energy China takes the strategic mission of being the *First-class integrated eco-environment restoration facilitator*, leveraging strengths in various fields such as soil conservation, solid waste disposal, green building materials, green civil explosion, mine rehabilitation, as well as our capabilities in planning, consulting, financing and investment to drive the EPC business of eco-environmental protection.

秉承打造“一流的生态环境综合治理商”战略使命，聚焦土壤治理、固废处理、绿色建材、绿色民爆、矿山修复等优势领域，以规划咨询与投融资业务为切入点，牵引带动生态环保总承包业务。



**1. Malabo Waste Water Treatment Project, Equatorial Guinea (EPC)**  
Largest and most advanced environmental protection project in Equatorial Guinea, with a daily treatment capacity of 20,000 tonnes

**1. 赤道几内亚·马拉博污水处理项目（工程总承包）**  
赤几规模最大、最先进的环保工程，日处理能力2万吨

**2. Kality Wastewater Treatment Plant Project, Ethiopia (O&M)**  
It can treat 100,000 tonnes of wastewater per day, and is the largest wastewater treatment plant that has been built in Ethiopia

**3. Yunnan Dianchi Dredging and Water Treatment Project, China**

**4. Hubei Wuhan Hanjiang Bay Ecological Restoration Project, China**

**2. 埃塞俄比亚·卡利提污水处理厂（运维）**  
可日处理污水10万吨，是埃塞俄比亚已建成的最大污水处理厂

**3. 中国·云南滇池清淤和水体治理**

**4. 中国·湖北武汉汉江湾生态修复项目**





Eco-environmental protection projects  
生态环保

1. Jinjie Power Plant CCS Demonstration Project, Shannxi, China

It can achieve 150,000 tonnes/year of carbon dioxide capture, with a capture rate of 90% and concentration exceeding 99.5%

2. Haikou Yawei River Water Restoration Project, China

3. Fushan Circular Economy Industrial Park-Domestic Waste Integrated Treatment Project, Guangzhou, China

Largest waste-to-energy project in China, which can treat an average of 4,000 tonnes of domestic waste per day, with an annual processing capacity of more than 1.4 million tonnes and an annual power generation capacity of 1.1 billion kWh



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1. 中国·陕西神木锦界电厂碳捕集工程

可实现15万吨/年二氧化碳捕集，二氧化碳捕集率高达90%，捕集的二氧化碳浓度超过99.5%

2. 中国·海口鸭尾溪水治理项目

3. 中国·广州福山循环经济产业园生活垃圾综合处理项目

中国处理量最大的垃圾发电项目，可日均处理生活垃圾4000吨，年处理垃圾超过140万吨，年发电量11亿千瓦时



3

# Integrated transportation projects

## 综合交通

With the advantages of integrating investment, EPC and O&M in the field of integrated transportation such as highways, long-span bridges, ports, waterways, railways and metros, Energy China has participated in the investment and development of hundreds of projects around the world with a total mileage of over 3,000km and played a major role in the building of a modern integrated transportation system.

拥有高速公路、大跨度桥梁、港口航道、铁路、轨道交通等综合交通领域投建营一体化优势，参与全球数百个项目建设与投资，高速公路投资运营里程超3000公里，在现代综合交通体系建设中发挥主力军作用。

### 1.Third Bridge Project in Bamako, Mali (Construction)

China-Mali friendship bridge, with a total length of 2294m

### 2.Jinan-Tai'an Expressway Project, Shandong province, China (Investment & Construction)

### 3.Lhasa-Nyingchi Section of Sichuan-Tibet Railway Project, China

A world-class landscape corridor with a total length of 435km, known as the most beautiful *plateau sky road*

### 4.Port project in Cabinda, Angola (Construction)

Largest oil port in Angola and an important part of maritime transportation in Cabinda, with 2 berths for a total of 255,000dwt oil tankers



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2



3

### 1.马里·巴马科第三大桥项目 (施工总承包)

中马友谊大桥，总长2294米

### 2.中国·山东济南-泰安高速公路 (投资建设)

### 3.中国·川藏铁路拉萨至林芝段

全长435千米，穿越世界级的景观长廊，被称为最美“高原天路”

### 4.安哥拉·卡宾达港口项目 (施工总承包)

该项目是安哥拉最大的油港，卡宾达海洋运输的重要组成部分，两个泊位总共可泊载重25.5万吨的油船



4

Integrated transportation projects  
综合交通



1.M4 Motorway Project, Pakistan (Construction)  
North-South Transportation Corridor in Pakistan

2.Wuhan Metro Line 27, China (Construction)

3.Hong Kong–Zhuhai–Macao Bridge Project, China  
Longest bridge-tunnel system sea-crossing in the world, won the FIDIC Engineering Project Award

4.Walvis Bay – Kranzberg Railway Line Rehabilitation and Upgrade Project, Namibia (Construction)  
One of the priority development projects of Harambee Prosperity Plan of the Namibian Government, a regional economic artery



1.巴基斯坦·M4高速公路项目  
(施工总承包)  
巴基斯坦南北交通运输走廊

2.中国·武汉轨道交通27号线  
(施工总承包)

3.中国·港珠澳大桥  
世界最长的交通跨海通道，该工程获菲迪克工程项目奖

4.纳米比亚·鲸湾港至克兰兹博格铁路修复升级项目 (施工总承包)  
纳米比亚政府“团结繁荣计划”确定的优先发展项目，区域“经济大动脉”

# Municipal projects

## 市政

With the capability of offering life cycle of projects development including investment, EPC and O&M in the large-scale infrastructure projects, Energy China is deeply involved in the development of municipal projects in countries with *Belt and Road Initiative* to improve people's livelihood and promote social progress.

凭借在大型基础设施领域的投建运一体化专业优势，深度参与“一带一路”沿线国家市政工程建设，推动当地民生改善和社会进步。

### 1. South Al-Mutlaa Residential Project, Kuwait (Construction)

Largest municipal project in Kuwait, covering approximately 30 square kilometers; Designed with a rainwater harvesting system, it is a modern sponge city with green and technology elements that solves housing problems for 400,000 local residents

### 2. Mega Reservoir PRPSs Project, Qatar (Package E - Abu Nakhla) (Construction)

It integrates desalination, water storage and water supply, and has built 15 reservoirs, with a single reservoir capable of storing 500,000 cubic meters of water, which is the largest single reservoir in the world

### 3. Underground Space PPP Project in Jiangbei New Area, Nanjing, Jiangsu province, China (Construction)

Largest underground space project in Asia with the top one challenge in construction and the best prospect in profitability

### 1. 科威特·穆特拉基础住房项目（施工总承包）

科威特规模最大的市政项目，项目占地约 30 平方公里，设计有雨水收集系统，是现代绿色、科技、海绵城市，为当地40万居民解决住房难题

### 2. 卡塔尔·大型供水工程E标项目（施工总承包）

集海水淡化、蓄水、供水于一体，建有15个蓄水池，单个蓄水池可储水50万立方米，是世界上单体最大水池

### 3. 中国·江苏南京江北新区地下空间PPP项目（施工总承包）

目前亚洲规模最大、施工难度最高、效益前景最好的地下空间项目



# Real estate development projects

## 房建

Equipped with extensive experience in the design and construction of office complexes, super high-rise buildings, residential buildings, hospitals, schools and functional buildings as well as outstanding technical advantages in smart buildings, new energy applications, energy conservation and environmental protection, we can provide chic and distinctive architectural effects and achieve natural integration with the environmental landscape while meeting the functional requirements of buildings.

拥有丰富的办公综合体、超高层建筑、居住建筑、医院、学校、功能性建筑的设计建设经验，并在楼宇智能化、新能源应用、节能环保等方面具备突出技术优势，可在满足建筑功能要求的前提下，构思新型别致、主题鲜明的建筑效果，实现与环境景观自然融合。

1. Tufu Bay Capella Resort, Sanya, Hainan, China (Investment & EPC)

1. 中国·海南三亚土福湾嘉佩乐度假酒店（投资建设）



1



2

2. Yachay Knowledge City Project, Ecuador (Construction)

The project covers an area of 44 square kilometers, integrating education, scientific research, technological innovation, industrial production and commercial development. It is an important project for the benefit of the people of Ecuador

3. Shanghai Zijun Mansion Project, China (Investment & EPC)

Obtained China Green Building 3-star, German DGNB Gold double certification, won Gold Award of 14th Jingrui Science and Technology Award for Sustainable Communities and Shanghai Green Building Contribution Award



3

2. 厄瓜多尔·雅蔡知识城项目（施工总承包）

项目占地44平方公里，集教育、科研、技术创新、工业生产、商业开发于一体，是厄瓜多尔重要惠民工程

3. 中国·上海市紫郡公馆商品房项目（投资建设）

获中国绿色建筑设计标识三星级、德国DGNB双认证以及第14届精瑞科学技术奖可持续社区金奖、上海绿色建筑贡献奖



4

4. Nansha International Financial Island, Guangzhou, China (under Construction)

To create a world landmark city complex with international communication, financial innovation, ecological protection, humanistic inheritance, business and leisure, high-end sports, entertainment and vacation

4. 中国·广州南沙国际金融岛（建设中）

打造国际交往、金融创新、生态保护、人文传承、商务休闲、高尚运动、娱乐度假为一体的世界地标性城市综合体

# New urbanization projects

## 新型城镇化

Energy China is dedicated to integrating sci-tech, green and humanity elements into the tourism-related, retirement, and commercial real estate industry in order to bolster integrated city development, new urbanization and people's living environment.

致力将科技、绿色、人文理念融入旅游地产、养老地产、商业地产，深度布局城市综合开发和新型城镇化建设，推动人居生活品质提升。



### 1.Sino-Singapore Guangzhou Knowledge City Project, China

The combination of smart energy and the development of a town with characteristics helps build an energy internet system for a modern city with synergy and ability of mutual assistance

### 1.中国·广州中新知识城能源电力项目

智慧能源电力和特色城镇发展相结合，形成了协同互济的现代新型城市能源互联网系统

### 2.Panda Ancient Town-Ideal New City project, Chongzhou, Chengdu, Sichuan province, China (Investment & EPC)

A signature project of third-generation ancient town-themed tourism, based in the Chengdu-Chongqing Economic Zone and characterized by unique culture, a livable urban environment, and advanced industries, while reflecting panda as a unique IP asset

### 2.中国·四川成都崇州“熊猫古镇·理想新城” (投资建设)

位于成渝地区双城经济圈，按照“人-城-产”模式建设的、体现熊猫 IP 特色的中国第三代古镇旅游标杆项目



# Building materials

## 建材

Energy China owns two special cement production lines with an annual capacity of 2.6 million tonnes, ranking first in China in terms of capacity and number of varieties of special cement in a single plant and in the world in terms of production capacity. We advocate green environmental protection, realize the integrated operation of the whole category and industry chain, accelerate the co-processing of solid waste, hazardous waste and sludge in cement kiln and explore the development of high-tech products of building materials.

拥有两条特种水泥生产线，年产能260万吨，单厂特种水泥产能和品种数量位居全国第一位，生产能力世界排名前列。崇尚绿色环保，实现全品类、全产业链一体化运营，加快发展水泥窑协同处置垃圾、危废和污泥业务，不断探索开发高新建材产品。

Annual cement yield of approximately  
**30** million tonnes  
水泥年产能约 **3000** 万吨



**1. Shimen Special Cement Production and Research Base, China (Investment & Operation)**  
Largest special cement production base in China

**2. Shieli Cement Project, Kazakhstan (Investment & EPC)**  
A project of China-Kazakhstan Cooperation on Production Capacity and Investment, with a total investment amount of US\$178 million and a planned annual cement production amount of 1 million tonnes

**3. Zhulinkeng Sand and Gravel Aggregate Process Plant, Yichang, Hubei province, China**  
With a projected production capacity of 3 million tonnes per year and an ecological, information-based and modern processing system for aggregates

**1. 中国·石门特种水泥生产研发基地（投资运营）**  
中国最大的特种水泥生产基地

**2. 哈萨克斯坦·西里水泥项目（投资运营）**  
总投资约1.78亿美元，年水泥设计产能100万吨，中哈产能和投资合作清单项目

**3. 中国·湖北宜昌竹林坑砂石骨料加工厂**  
设计生产能力300万吨/年，是生态化、信息化现代砂石加工系统



# Civil explosive projects

## 民爆

Energy China owns China's largest demolition company, China Gezhouba Group Explosive Co., Ltd., encompassing the complete industrial chain of scientific research, production, sales, and blasting demolition services, whose licensed explosive production capacity ranks among the top three in China. Equipped with advanced on-site explosive dosing & charging trucks, it can provide customers with systematic, customized, and high-quality solutions in terms of explosive product provision, blasting demolition planning and implementation, and transportation.

拥有中国最大的爆破公司——葛洲坝易普力公司，集科研、生产、销售、爆破服务完整产业链于一体，炸药生产许可能力位居中国前三，拥有世界先进的现场混装炸药车技术，为客户提供炸药产品、爆破设计与实施、钻挖装运一体的系统化、个性化、高品质解决方案。

The licensed production capacity of industrial explosives is **386,500** tonnes  
工业炸药生产许可能力 **38.65** 万吨



### 1. Blasting demolition project of RCC Cofferdam of the Three Gorges Dam, China

Blasting scale, total charge and blasting difficulty among the highest in the world at that time, a technology-intensive and the most challenging blasting project

### 2. Rock blasting

### 3. Bridge blasting

1. 中国·三峡大坝RCC围堰爆破拆除爆破规模、总装药量、爆破难度均为当时世界之最，是极具科技含量、高难度的爆破工程

### 2. 矿山爆破

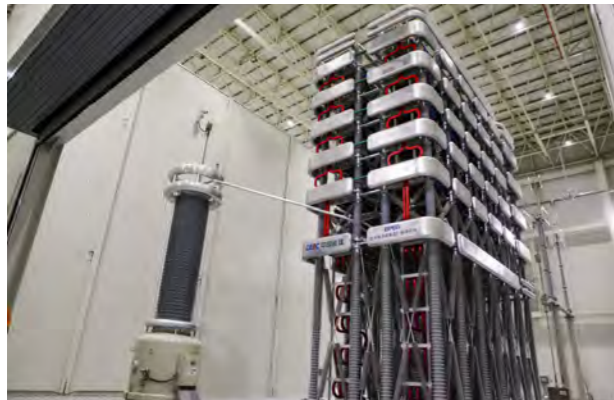
### 3. 桥梁爆破

# Equipment solutions projects

## 装备制造

Energy China boasts comprehensive strength in R&D, design, manufacturing, integration, service in the fields of energy storage, smart energy, distributed energy, energy saving and environmental protection, power plant auxiliary equipment, power grid, electrical and other equipment. Our products serve in the fields of electric power, metallurgy, building materials, coal, chemical industry and transportation, etc, with sales and services in more than 80 countries and regions.

在储能、智慧能源、分布式能源、节能环保、电站辅机、电网、电气等装备领域具有集研发、设计、制造、集成、服务于一体的综合实力，各类产品服务于电力、冶金、建材、煤炭、化工、交通等领域，产品销售和服务范围遍及80多个国家和地区。



**535kV Coupled Negative Voltage DC Circuit Breaker**  
Highest voltage level and largest breaking current (25kA) in the world

**535kV耦合负压式直流断路器**  
目前世界上电压等级最高、开断电流最大（25kA）的直流断路器



**10MW Compressed Air Energy Storage System**  
10MW 压缩空气储能系统



**Container Type Heavy Fuel Oil Power Station**  
集装箱式重油电站



**CO<sub>2</sub> Carrier Refrigeration Equipment**  
CO<sub>2</sub>载冷制冷设备



**Transmission line towers**  
输变电塔架



**FAST project feeder support tower (Design)**  
FAST工程馈源支撑塔（设计）

# Capital finance

## 资本金融

By utilizing the global capital markets, Energy China has been proactively providing financial services. Energy China has invested in water, hydropower, renewable energy, integrated transportation, building materials, and civil explosives projects in Vietnam, Brazil, Uzbekistan, among others with annual investment exceeding RMB 50 billion (US\$7.46 billion). Energy China successfully issued US\$200 million carbon neutral perpetual medium-term notes, the first of its kind in China's building industry, and issued US\$200 million offshore subordinated perpetual bonds, which opened up direct overseas financing channels.

立足全球资本市场，强化投融资运作，积极开展融资租赁服务、基金服务、财务公司服务和保理服务等。在越南、巴西、乌兹别克斯坦等国别投资多个项目，业务涵盖水利水电、新能源、综合交通、建材、民爆等各个领域，年投资规模超500亿元。成功发行2亿美元中国建筑行业首单碳中和永续中期票据，以及境外2亿美元次级永续债券，打通境外直接融资渠道。



On December 10, 2015, Energy China successfully IPO on the main board of Hong Kong Stock Exchange (Stock code: 3996.HK). On September 28, 2021, Energy China was successfully listed on the main board of the Shanghai Stock Exchange (Stock code: 601868.SH).

2015年12月10日，首次公开发行H股并在香港联合交易所有限公司主板挂牌上市（股份代号：3996.HK）；2021年9月28日，在上海证券交易所主板挂牌上市（股票代码：601868.SH）。



### 3.San Lorenzo Water Supply Project, Brazil

Total investment of approximately US\$900 million, with a daily treatment capacity of 400,000 tonnes

### 3.巴西·圣诺伦索供水项目

总投资约9亿美元，日处理能力达40万吨



International investment

## 海外投资



### 1.Hai Duong 2x600MW Thermal Power Plant Project, Vietnam

Largest single investment by a Chinese company in Vietnam with a total investment of about US\$1.87 billion

### 2.Suki Kinari Hydropower Plant Project, Pakistan

One of the first batch of China-Pakistan Economic Corridor (CPEC) projects, with a total investment amount of US\$1.96 billion



### 1.越南·海阳2x600MW燃煤电厂工程

总投资约18.7亿美元，中国企业迄今在越南单笔投资额最大的项目

### 2.巴基斯坦·SK水电站项目

总投资19.6亿美元，“中巴经济走廊”首批清单项目



### 4.Azad Patan Hydropower Plant, Pakistan

One of CPEC projects, with a total investment amount of US\$1.54 billion

### 5.Samarkand 7500TPD Cement Production Line Project, Uzbekistan

Largest single cement project in Uzbekistan with a total project investment amount of US\$351 million



### 4.巴基斯坦·阿扎德帕坦水电站

总投资约15.4亿美元，为中巴经济走廊能源清单项目

### 5.乌兹别克斯坦·撒马尔罕7500TPD水泥生产线

乌兹别克斯坦单体规模最大的水泥项目，项目总投资3.51亿美元

# Technological strength

## 科技实力

Energy China possess nearly 1500 qualifications covering the whole industry chain of survey, engineering, construction and equipment manufacturing, including 20 Grade A qualifications for surveying, 8 Grade A qualifications for engineering, 22 Grade A qualifications for consulting, 12 special-level qualifications for general construction contracting, 110 special equipment manufacturing licenses, and 10,082 patents.

拥有涵盖勘察、设计、施工、装备制造等全产业链近1500项资质权益，包括20个工程勘察综合甲级资质、8个工程设计综合甲级资质、22个工程咨询甲级资格、12个工程施工总承包特级资质、110个特种设备制造许可证，拥有有效专利10082项。



### Technology cooperation 科技合作

Established a Fuel Cell Power Generation Technology Innovation Collaboration Platform

成立“燃料电池发电技术创新协作平台”

Push forward the deep integration of capital and technology, promote research on fuel cell power generation technology, policies and standards, and facilitate the development of the hydrogen energy industry.

促进资本与技术深度融合，推动燃料电池发电技术、政策和标准研究，促进氢能产业发展。

Established a Cooperation Platform for Enhancing Thermal Power Flexibility in China

成立“提升中国火电灵活性合作平台”

Carry out research on technical routes and policy mechanisms, organize the introduction of advanced technologies from overseas, facilitate the implementation of pilot demonstration projects, and promote the improvement of the regulation capacity of the power system and the consumption of new energy.

开展技术路线和政策机制研究，组织国外先进技术引进，推进试点示范项目实施，促进电力系统调节能力提升和新能源消纳。

Established a 30-60 Research Institute

成立“30·60”研究院

Build a national top think tank and scientific and technological innovation center in the dual carbon field, build a clean, low-carbon, safe and efficient energy system and a new power system featured with new energy, and to realize low-carbon energy supply, electrification of energy consumption, industrialization of new energy technology, low-carbon development mechanism and carbon neutral responsibility synergy.

打造“双碳领域国家顶级智库和科技创新中心”，构筑清洁低碳安全高效的能源体系、以新能源为主体的新型电力系统，实现能源供给低碳化、能源消费电气化、新型能源技术产业化、低碳发展机制化、碳中和责任协同化。

Established a world-class Carbon Capture Testing platform

成立世界级的碳捕集测试平台 (GCCT)

One of the top three test sites of carbon capture technology in the world, along with the National Carbon Capture Technology Testing Center in the U.S. and the Technical Center Mongstad in Norway.

与美国国家碳捕集技术测试中心 (NCCC)、挪威蒙斯塔技术中心 (TCM) 并列为世界三大碳捕集技术试验基地





Cutting-edge technology  
前沿技术

World-leading dam construction technology  
全球领先的筑坝技术



Energy China possesses world-class technologies in various types of dams, such as gravity dams, arch dams, earth and rockfill dams, etc. We have industry-leading technologies, such as rapid construction technology of high concrete dams, intelligent temperature control and anti-cracking technology for large volume concrete, construction technology of super high rockfill dam and construction technology for large underground cavern groups under complex geological conditions.

在重力坝、拱坝、土石坝等各类型坝体中具有世界一流的技术水平，具有高混凝土坝快速施工和大体积混凝土温度智能控制及防裂技术、超高堆石坝施工技术、复杂地质条件下大型地下洞室群施工技术等行业领先的技术水平。

案例 Case

■ Xiluodu Hydropower Plant Project, China  
中国·溪洛渡水电站

World's fourth largest hydropower plant, with a total installed capacity of 13,860MW, FIDIC Engineering Project Excellence Award  
世界第四大水电站，总装机容量 13860MW，菲迪克工程项目杰出奖



Clean and efficient coal-fired technologies  
清洁高效燃煤技术



Includes ultra-supercritical secondary reheat technology, near-zero emission technology and smart construction technology, which can realize zero discharge of wastewater, 100% comprehensive utilization of ash and slag, and cooperative and integrated management of multiple pollutants in flue gas to achieve near-zero emission.

包括超超临界二次再热技术、近零排放技术和智慧建造技术等，可实现电厂污水零排放、灰渣100%综合利用、烟气多污染物协同集成治理，实现“近零排放”。

案例 Case

■ Pingshan Thermal Power Plant Phase II, Anhui province, China (Engineering & Construction)  
中国·安徽平山电厂二期（设计建设）

World's largest single-capacity new high-efficiency, clean and low-carbon ultra-supercritical coal-fired generating units with an installed capacity of 1350MW, a world's green coal power benchmark

总装机 1350MW，世界单机容量最大的新型高效、洁净、低碳超超临界燃煤发电机组，世界绿色煤电标杆



AC/DC UHV power transmission and transformation technology  
交直流特高压输电技术



Under extreme cold and icing condition, Energy China possesses the following technologies - AC and DC UHV power transmission and transformation technology, municipal tunnel for GIL works and large-span power transmission technology; substation (converter station) seismic isolation and underground substation technology. We were deeply involved with and completed the following projects - UHV ±800kv DC Transmission Project (won Grand Prize of National Science and Technology Progress Award), Qinghai-Tibet Networking Project (won Second Prize of National Science and Technology Progress Award), and UHV AC transmission related key technologies, equipment and engineering applications project (won Grand Prize of National Science and Technology Progress Award).

具有重冰极寒条件下特高压输电交直流技术，以及GIL综合管廊、大跨越输电技术，变电站（换流站）隔震抗震、地下变电站技术等。深度参与完成的“特高压±800kv直流输电工程”获中国国家科学技术进步特等奖，“青藏联网工程”获中国国家科学技术进步二等奖，“特高压交流输电关键技术、成套设备及工程应用”项目获中国国家科学技术进步特等奖。

案例 Case

■ Sutong GIL Municipal Tunnel Project, China  
中国·苏通 GIL 综合管廊工程

It is the pipeline corridor project with the deepest buried depth (the bottom elevation of the tunnel structure is -74.83 meters) and the highest water pressure in China (0.8 MPa). It has the highest GIL voltage level, the longest single-phase total length and the world's highest reliability requirements, spanning a distance of 1790 meters  
目前中国埋深最深（隧道结构底面标高 -74.83 米）、水压力最高的管廊工程（0.8 兆帕），其 GIL 管线电压等级最高、单相总长最长以及可靠性要求均是世界第一、跨越档距 1790 米

Renewable energy generation technology  
新能源发电技术



Energy China has accumulated rich experience in the fields of solar-thermal power generation, photovoltaic power generation, offshore and onshore wind power generation, hydropower generation, Waste-to-Energy, biomass power generation, geothermal power generation and distributed energy technology.

在光热发电、光伏发电、海上风电、陆上风电、水力发电、垃圾发电、生物质发电、地热发电和分布式能源技术等领域积累了丰富业绩。

案例 Case

■ Tibet Yangbajing Geothermal Power Plant, Dangxiong county, China  
中国·西藏当雄羊八井地热电站

China's first and largest geothermal power plant, won National Excellent Engineering Survey and Design Gold Award  
中国最大的地热电站、中国首座地热发电站、国家优秀勘测设计金奖



Electrochemical, physical, hydrogen, thermal, and electromagnetic energy storage technologies  
电化学、物理、氢、热、电磁储能技术



案例 Case

■ Dongguan Nanshe Station Grid-side Electrochemical Energy Storage Power Project, Guangdong, China  
中国·广东东莞南社站电网侧电化学储能电站

Guangdong's first megawatt-level electrochemical power plant of energy storage, with a capacity of 10 MW/30 MWh, can effectively meet the demand for excessive growth of surrounding electricity loads, reduce the diurnal peak-to-valley difference, and enhance the stability and flexibility of grid operation  
广东首个兆瓦级电化学储能电站，建设规模为10兆瓦/30兆瓦时，可有效满足周边用电负荷增速过快需求，降低昼夜峰谷差，提升电网运行的稳定性和灵活性



Digital technology and information technology  
数字化、信息化技术



率先使用世界先进的全数字化摄影测量系统（DPS）和全球卫星定位系统（GPS）技术，形成了贯穿设计、采购、施工和运行的全生命周期数字化服务能力。

Energy China has been leading the industry in adopting Digital Photographic System (DPS) and Global Positioning System (GPS) and expanding in innovative survey areas. We have launched a design platform by adopting the advanced three-dimensional design technology that provides digital solutions and full-chain services in fields of engineering, procurement, construction and operation.

案例 Case

■ Guangan Ecological Health Industrial Park & 5G Big Data Center, Yunnan province, China  
中国·云南广南绿水青山生态健康产业园5G大数据中心

The first phase of the core area of the industrial park will be developing a comprehensive business office area with the support of 5G big data server room and application display, which will promote the transformation and development of traditional industries in terms of informatization, intelligence, automation and skills, accelerate the development of industrial internet, actively promoting smart manufacturing, and create new advantages in the digital economy  
产业园核心区首期开发建设以5G大数据机房为载体、5G大数据应用展示为导向的综合性商务办公区，推进传统产业信息化、智能化、自动化和技能化转型发展，加快发展工业互联网，积极推进智能制造，打造数字经济新优势

# Cultural philosophy

## 文化理念

Build an industry-leading, first-class and competitive multinational company offering life cycle of projects development including investment, EPC and O&M.

Strategic vision  
战略愿景

具有全球竞争力的行业领先、世界一流投建营一体化跨国公司

A leader in driving the high quality development of Energy China's international business  
国际业务优先优质协同发展的引领统筹者

A promoter of environmentally-friendly, low-carbon, safe, and efficient international energy upgrading and transformation

绿色、低碳、安全、高效国际能源升级转型的推动实施者

Strategic positioning  
战略定位

高标准、可持续、惠民生、高质量“一带一路”的建设贡献者

人类命运共同体持续推进的主要参与者

A contributor to high-standard, sustainable and high-quality development of the Belt and Road Initiative for the public interest

A major participant with continuous efforts to build a community with a shared future for human beings

Accountability  
Strenuousness  
Inclusiveness  
Innovation

Core values  
核心价值观

担当 拼搏  
包容 创新

# Social responsibility

## 社会责任

Taking *improving people's livelihood and promoting social development* as our own responsibility, Energy China has extensively participated and contributed in the development of society worldwide, won the titles of *Outstanding Contribution Award for the Construction of the Belt and Road Initiative*, *International Forerunner of China's New Energy*, and *Social Responsibility Leading Enterprise*, etc, was awarded with *Top 10 Chinese Enterprises Moved Africa* and *Top Ten Successful Chinese Enterprises Entering into ASEAN*, and won several *China Construction Engineering Luban Award (Overseas Project)*, *National Quality Engineering Awards* and *Sustainable Development Award*.



我们以“改善民生 促进社会发展”为己任，广泛参与东道国社会民生发展，荣获“一带一路”杰出贡献企业、中国新能源国际领跑者、社会责任领先型企业等称号，评为“感动非洲十大中国企业”“走进东盟十大成功企业”，获得多个中国境外工程鲁班奖、国家优质工程奖和境外可持续发展奖。

