



MINGYANG NEW ENERGY  
INVESTMENT HOLDING GROUP CO., LTD

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# MINGYANG GROUP

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Innovate clean energy,  
benefits human society

RANKING IN  
2022



CHINA'S TOP 500  
COMPANIES

385<sup>th</sup>

GLOBAL TOP 500 CLEAN  
ENERGY COMPANIES

15<sup>th</sup>

GLOBAL OFFSHORE  
WIND INNOVATION

1<sup>st</sup>



# LEADING INNOVATION

Mingyang remains dedicated to independent R&D in cutting-edge renewable energy equipment manufacturing and core technologies.

We continually drive innovation across various sectors, including:

- Integrated onshore wind and smart energy solutions
- Integrated offshore wind power and ocean energy solutions
- Integrated wind and hydrogen solutions
- Solar energy
- Intelligent electrical solutions
- High-end chip technology



## TOP PRODUCTS

01  
**MySE 6.25-200**  
 Best Onshore Wind Turbine  
 by Windpower Monthly

02  
**OceanX 16.6MW**  
 World's largest and lightest  
 double-rotor floating wind system

03  
**MySE 16.X-260**  
 World's largest floating wind  
 turbine

04  
**MySE 22MW**  
 World's largest offshore wind  
 turbine

05  
**MySE 260**  
 World's longest anti-typhoon  
 offshore wind blade

06  
**MySE 11-233**  
 World's largest onshore WTG  
 rolled off the production line

## INTELLECTUAL PROPERTY

**2000+**  
 TECHNOLOGY PATENTS

**200+**  
 INTERNATIONAL AND DOMESTIC  
 STANDARDS

**600+**  
 INVENTION PATENTS

**50+**  
 WIND TURBINE GENERATOR  
 DESIGN



Mingyang stands at the industry forefront with a robust track record of innovation. The company has established a post-doctoral research workstation, a state-level enterprise technology center, and a collaborative national and local engineering laboratory.

As a state-level high-tech enterprise and a national intellectual property leader, Mingyang has successfully managed various significant national and provincial science and technology research initiatives, showcasing its enduring commitment to innovation and maintaining a formidable competitive edge.

# OUR JOURNEY

Mingyang remains dedicated to its mission of serving the nation through innovation-driven industrial advancement.

## Founded

### » 1993

Mingyang was established in Banfu Town, Zhongshan City, where it began its journey in a 500m<sup>2</sup> tin workshop. The primary focus of production was on panel boxes.

## Wind business began

### » 2006

On June 1, Guangdong Mingyang Wind Power Technology Co., Ltd. was established, marking Mingyang's shift from auxiliary equipment production to wind turbine manufacturing

### » 2007

1<sup>st</sup> Turbine (MY)

MY 1.5-77 anti-typhoon onshore WTG installed

### » 2010

1<sup>st</sup> Offshore WTG

SCD 3.0-110 installed in Rudong, Jiangsu as the world's then largest offshore WTG

### » 2014

Two-Bladed (SCD)

SCD 6.5MW installed in Rudong, Jiangsu and awarded silver of the World's Best Offshore Turbine

### » 2018

Anti-Typhoon (MySE)

MySE 5.5MW, world's then largest anti-typhoon WTG, installed at Xinghua Bay, Fujian with 99% availability ratio – the best among peers located at the same wind farm

### » 2021

China's 1<sup>st</sup> FOWT

MySE 5.5MW installed in Yangjiang, initiating new era for China's floating wind development

### » 2022

Double-Rotor FOWT

Innovative OceanX 16.6MW double-rotor floating wind system launched, setting the trend for exploring deepwater wind resources

### » 2023.01

18MW Offshore & Solar

MySE 18.X-28X, the world's largest offshore WTG released

Production began for 5GW of heterojunction (HJT) solar cells in Yancheng and 2GW of HJT panels in Shaoguan

MySE 16.X-260, the world's largest floating OWT released

### » 2023.03

Components Innovation

160m steel concrete tower and 75.7-m recyclable blades were produced

### » 2023.04

China's 2<sup>nd</sup> FOWT

MySE 7.25-158 installed on China's first deepwater floating wind power platform in Wenchang, Hainan

### » 2023.05

10MW Onshore

MySE 10.X-23X onshore WTG released with world's largest rotor

### » 2023.10

22MW Offshore

MySE 22MW, the world's largest offshore WTG released

MySE 11-233, the world's largest onshore WTG rolled off the production line

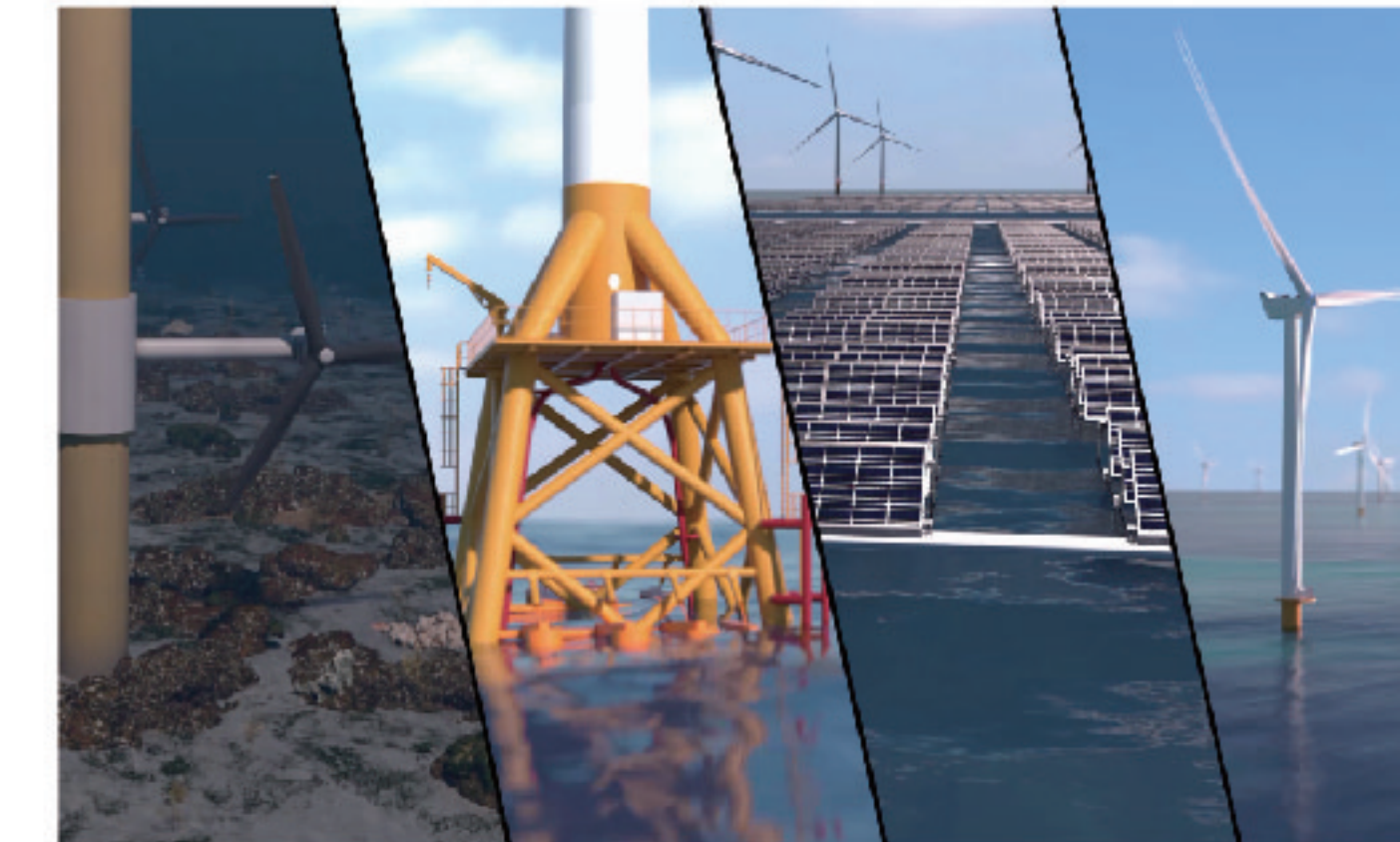
## OUR JOURNEY

On June 1, 2023, Mingyang celebrated its 30th anniversary in Zhongshan, Guangdong. During the event, the company unveiled a strategic plan with nine implementation strategies aimed at reaching the top 500 global companies.



## Five-Year Plan Towards Fortune 500

Mingyang's resolute commitment to providing clean energy to benefit the world will guide its path. Over the next five years, the company will establish seven business clusters, such as ocean services, solar and hydrogen, international business and high-end equipment, develop world-class dual-carbon technology, enhance R&D and equipment capabilities, and foster a global team to achieve its goal of entering the world's top 500.



## INDUSTRY LANDSCAPE



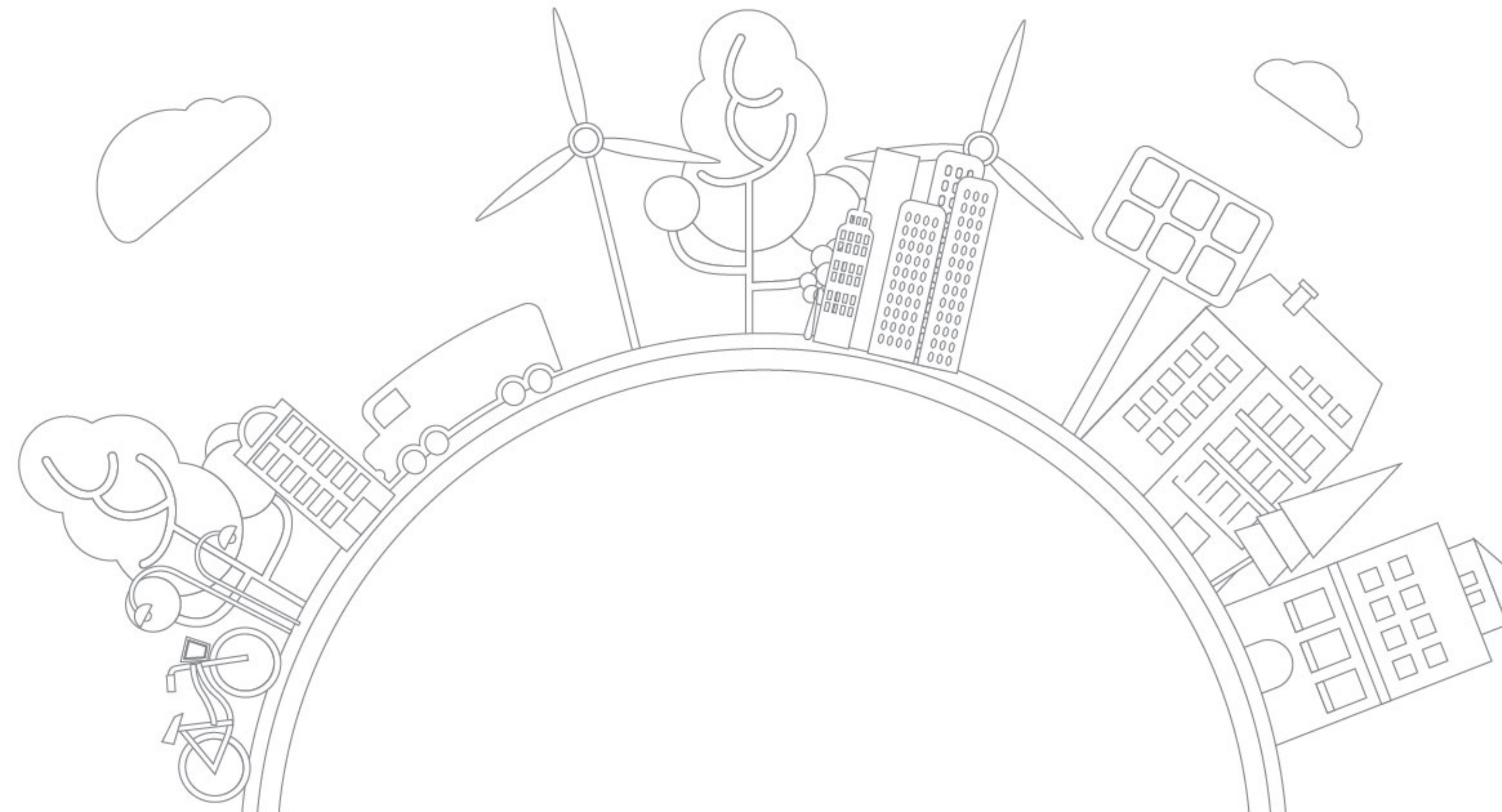
Mingyang is actively shaping an industry landscape encompassing wind, solar, hydrogen, and energy storage. Leveraging smart energy applications to drive demand, it advances high-end clean energy technology and industrial scenarios.

By exploring clean power system applications, it aims to create comprehensive solutions centered around clean energy. The company is dedicated to achieving "low carbon, low cost, low energy consumption," aiding in the early realization of national dual-carbon strategic objectives.

## WIND POWER



For the past 30 years, Mingyang has continued to develop and innovate large capacity, low wind speed onshore and offshore wind turbines, overcoming key technical industry challenges and greatly improving the utilization rate of wind resources in various regions. Mingyang drives the development hybrid drive technology and large-scale wind power deployment.



# INDUSTRY LANDSCAPE



Mingyang prioritizes high power generation, availability, and low electricity costs. With a focus on whole life cycle management and aerospace-inspired lean production, it introduced customized 1.5-11 MW MySE wind turbine series featuring unique designs for low wind speed, typhoon resistance, and plateau environments. Notably, the MySE 4.0-166 and MySE 6.25-200 models secured top honors for "Best Onshore Wind Turbine" in Windpower Monthly's 2021 and 2022 rankings.

## MySE ONSHORE WIND TURBINES

- MySE 3.6/4.0/5.0/5.2-166
- MySE 3.6/4.0-173
- MySE 6.25-172/182
- MySE 5.X/6.X/7.X-193
- MySE 5.X/6.X/7.X-200
- MySE 5.4/6.25-216
- MySE 7.15/8.5-216
- MySE 11-233



Mingyang's independent innovation conquered global offshore wind challenges in high typhoon zones. Embracing full life cycle management, it introduced the world's largest 5-22 MW hybrid drive typhoon-resistant offshore wind turbines. Mingyang also developed a deep-water-friendly floating foundation and innovative floating turbine island. This comprehensive product line suits diverse global wind conditions, aligning with "double 100" offshore wind resource development goals.



## MySE OFFSHORE WIND TURBINES

- MySE 5.5-155
- MySE 7.0/7.25-158
- MySE 6.45/8.3-180
- MySE 8.5/9.0/11-230
- MySE 12-242
- MySE 14/16-260/18.X-28X
- MySE 22MW
- MySE 16.6(T)

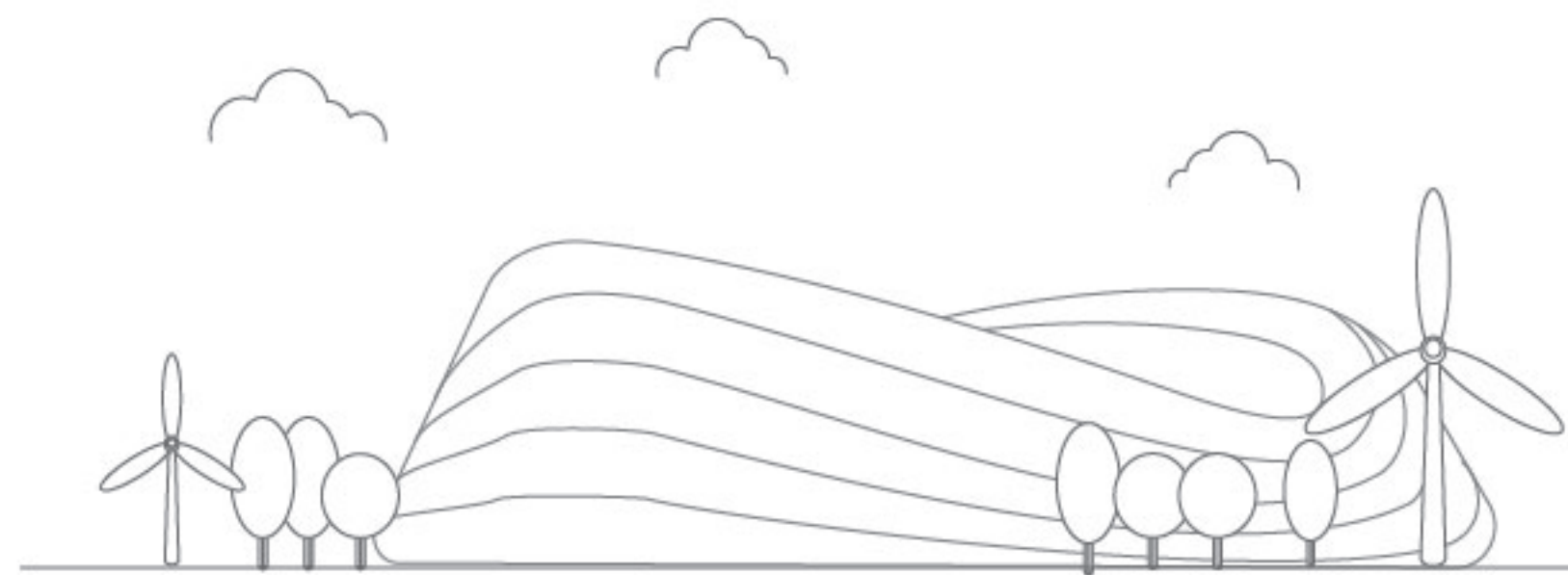


PHOTO-VOLTAICS



BIPV (CdTe)

Mingyang leads in next-gen CdTe thin film photovoltaics. It established China's largest independent IP-owned CdTe thin film battery production line. Its versatile products redefine photovoltaic applications, with BIPV used in significant national projects like the Beijing Winter Olympic Games speed skating hall and Shanghai National Science Center. Mingyang is at the forefront of China's green building energy and solar tech movement.



Beijing Winter Olympic Games speed skating hall - the "Ice Ribbon"

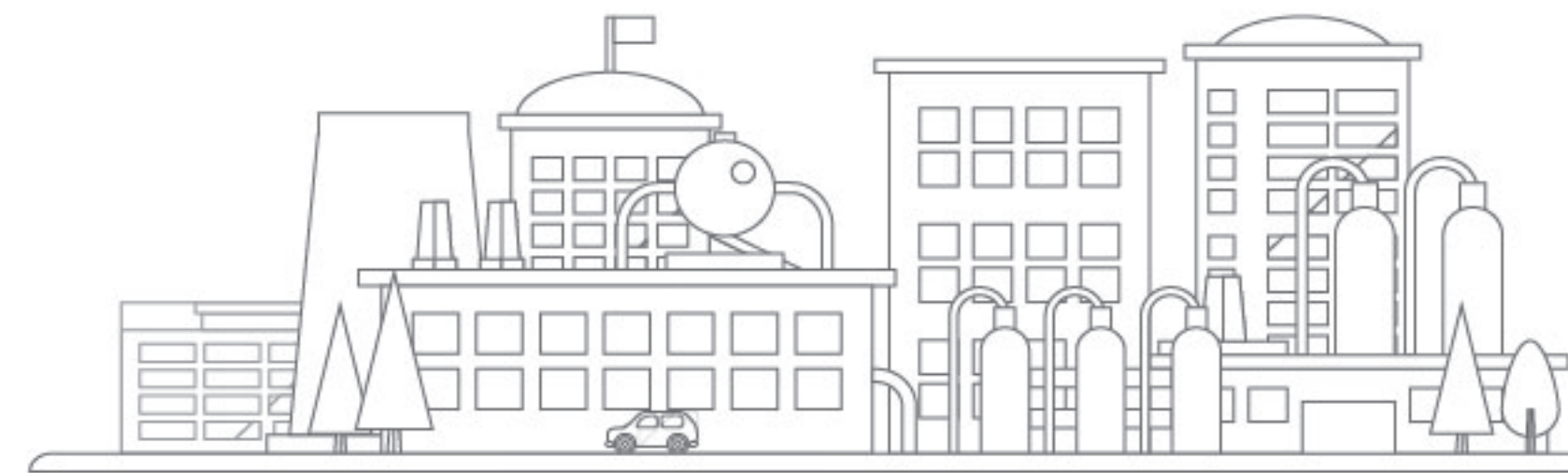


HJT

Mingyang excels in advanced HJT and perovskite photovoltaics. In February 2023, it launched 5GW HJT cell phase I and 2GW HJT module lines in Yancheng and Shaoguan. Mingyang is the inaugural clean energy firm with the largest high-efficiency HJT photovoltaic capacity. With a planned 5 GW line and an anticipated 10 GW capacity, its growth continues to surge.

|                  |                 |
|------------------|-----------------|
| Investment       | <b>3BILLION</b> |
| Capacity         | <b>10GW</b>     |
| Conversion Ratio | <b>25%+</b>     |

## HYDROGEN (H<sub>2</sub>)



Mingyang leads in green hydrogen tech with integrated equipment for water, alkali, seawater, and mobile hydrogen production. The mega alkaline electrolyzer, producing 1500-2500 Nm<sup>3</sup>/h of hydrogen, drives offshore wind + seawater hydrogen production, methanol, and ammonia projects, advancing carbon reduction and green energy.

At the 8th China Energy Development and Innovation Forum on April 12, 2023, Mingyang received the "2022 Innovative Enterprise Award for Implementing the Double Carbon Goal" and the "2022 Most Influential Enterprise Award for China's Hydrogen Energy Industry".




## ENERGY STORAGE




Mingyang possesses independent R&D and manufacturing for core products (BMS, PCS, EMS, PACK) and integrated systems. Its advanced energy storage system features grid oscillation suppression, transient overvoltage suppression, virtual synchronous machine, virtual power plant, lifecycle traceability, and system safety management.

With full energy storage product testing capabilities, it's successfully utilized in a 320MW / 960MWh integrated energy pilot project in Tongliao, accumulating over 3GWh application performance.



 Energy management system (EMS)

 Battery management system (BMS)

 Inverters

# GLOBAL FOOTPRINT

## DOMESTIC

Mingyang has nationwide manufacturing and service network close to markets and clients

 **20+**  
Production bases

 **400+**  
Spare parts warehouses

 **6**  
Regional O&M service centers

An agile service platform integrating production, operation and maintenance, and project support. This ensures efficient service and spare parts response for customers.



**140m** **31 floors**


**20 acres** **179km<sup>2</sup>**  
Land areas Floor areas

Mingyang's new Zhongshan Headquarters park will feature a consolidated group and R&D headquarters, encompassing R&D labs, a modern energy exhibition center, offices, conferences, academic exchanges, and employee education and training.

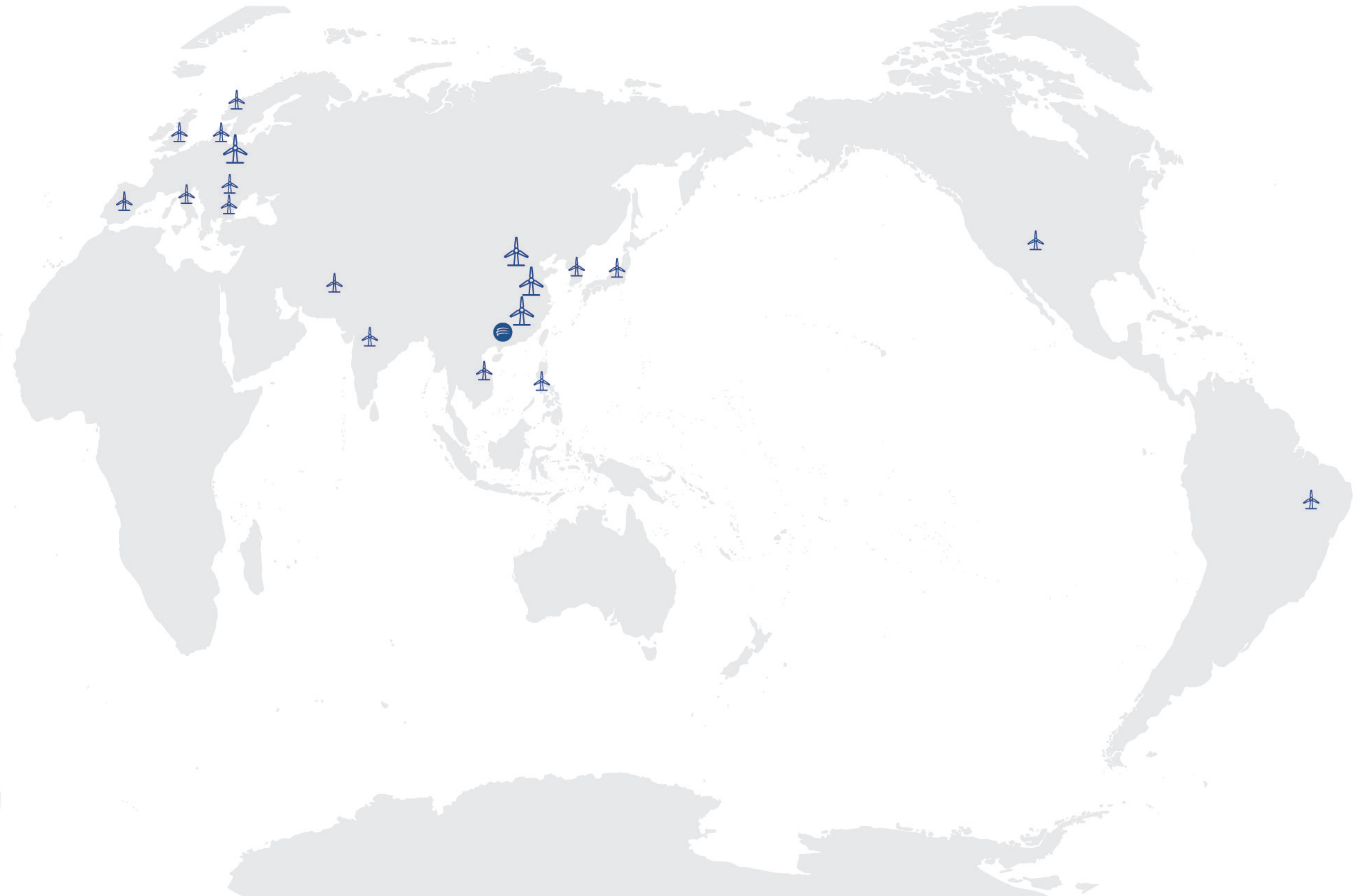


## GLOBAL FOOTPRINT

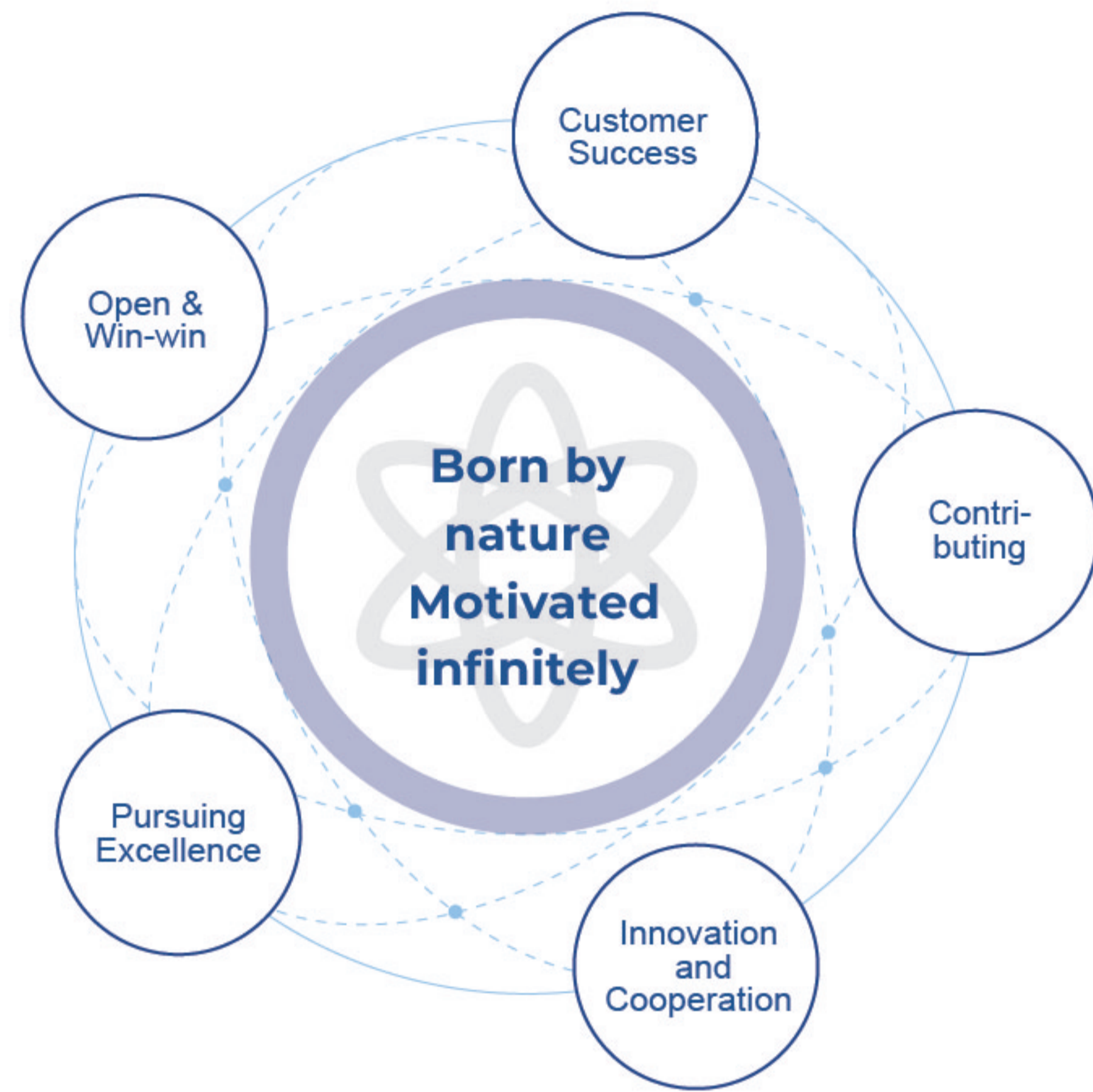
Mingyang's "one headquarters and five centers" innovation platform includes a Zhongshan HQ for resource integration, technology incubation, breakthroughs in industrialization, parts R&D, and testing. Its R&D centers in Silicon Valley, Hamburg, Beijing, Shanghai, and Shenzhen drive advancements in energy storage, solar tech, offshore wind, space chips, satellite energy, and smart systems. Embracing "global cooperation and sharing," Mingyang collaborates in over 30 countries while partnering with esteemed institutions in Denmark, Germany, Norway, and the UK.

 **First Chinese OEM to export to Europe, Japan and Philippines**

 **Supplying WTGs for Southeast Asia's largest offshore wind farm of 375MW in Ca Mau, Vietnam**



# MINGYANG CULTURE



  
Mission

Innovate clean energy,  
benefits human society

  
Vision

Global leader in making  
clean energy more  
intelligent and affordable



 Global installations  
**50GW**

 Wind farms supplied  
**800+**

 Operating wind turbines  
**16000+**

 Equivalent to annual  
CO2 reduction  
**120 million tons**

= Reforestation of  
**780 thousand acres**

## ❖ SOCIAL RESPONSIBILITY ■

Since its inception, Mingyang has championed green development and ecological priority. Leveraging its new energy prowess, the company has actively engaged in targeted poverty alleviation initiatives.

Mingyang's approach encompasses industry, employment creation, and resource development, effectively achieving clean energy-driven poverty reduction. Through these efforts, Mingyang contributes to environmental conservation, resource integration, and the holistic development of rural economies, bolstering the nationwide rural revitalization strategy.



Presently, Mingyang invests in industrial bases and clean energy projects in less developed regions like Gansu, Qinghai, Ningxia, Inner Mongolia, Jilin, Yunnan, Guangxi, Guizhou, Henan, etc. Through chain effects, it enhances local employment opportunities, preserving the environment while boosting industry.

Concurrently, the company focuses on employment, education, targeted donations, and collaborations with charitable organizations to support impoverished village development.



In 2022, Mingyang contributed over 12 million yuan to education, poverty alleviation, and epidemic relief in less developed areas. Through initiatives between enterprises and local communities, Mingyang actively pursued social welfare and fulfilled its corporate social responsibility.

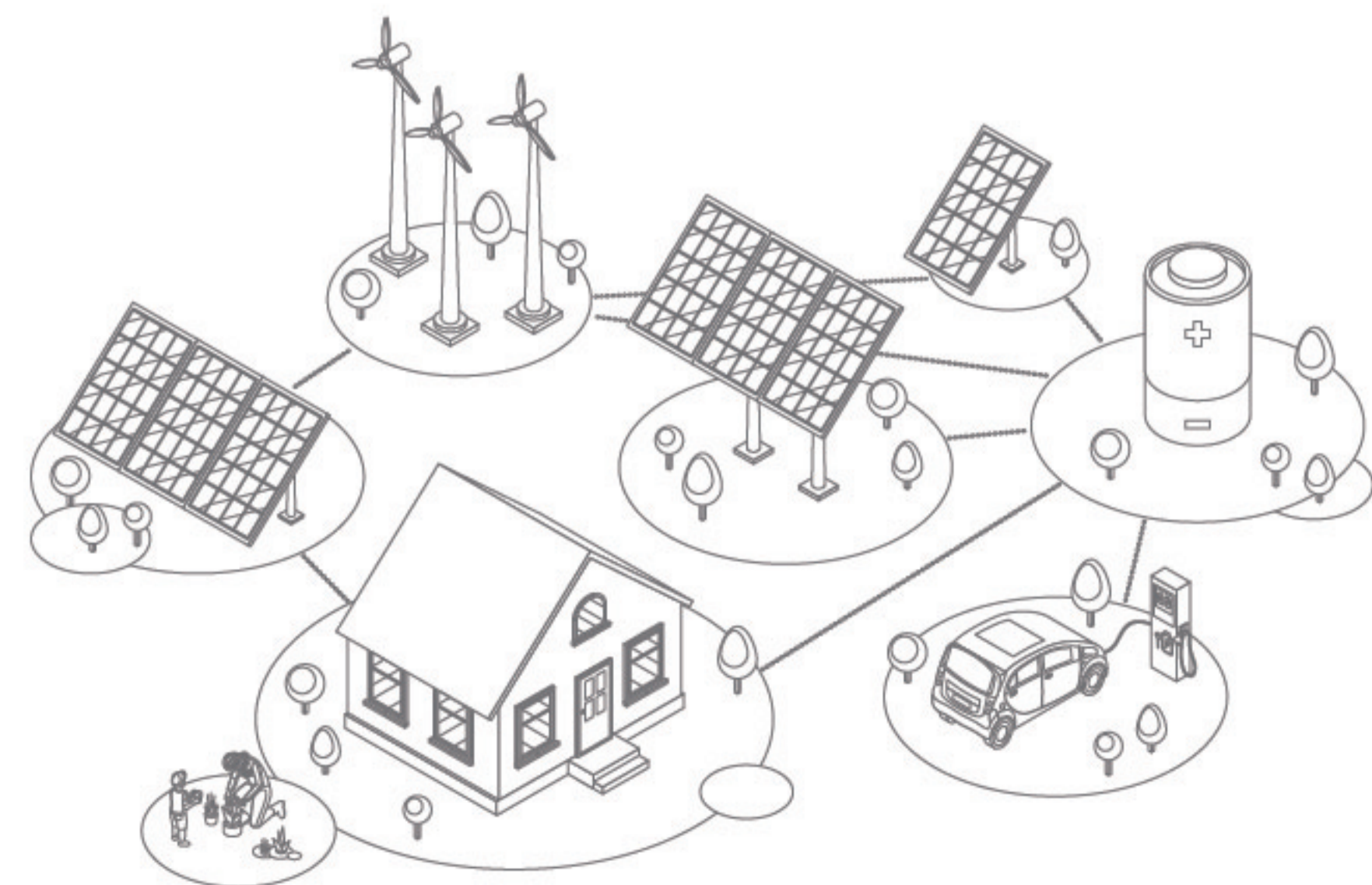


On Sept 29, 2022, Mingyang initiated the "thousands of towns and villages to explore the wind" pilot project in Huaibin County, Xinyang City, Henan Province. This marks the first round of rural revitalization pilot projects, with Mingyang taking the lead in both devising implementation plans and beginning construction.



## GREEN DEVELOPMENT GLOBAL BENEFITS

Mingyang will infuse green principles across product design, manufacturing, sales, and operation. Utilizing innovative big data and blockchain energy services, it will enable efficient green energy use, instill a green value ethos, and foster a green ecological supply chain with suppliers. This fulfills the company's role in environmental protection while promoting low-carbon energy transformation. Simultaneously, Mingyang's model innovation paves the way for affordable new energy, benefiting people with lower costs and contributing to a cleaner environment.





■ Zhang Chuanwei  
Founder, Chairman and CEO

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Mingyang excels in independent R&D innovation, assuming the role of a responsible clean energy equipment manufacturer and a vital national instrument. Anchored in its founding mission of "innovate clean energy, benefit human society," Mingyang utilizes clean energy and low-carbon power to cultivate green spaces for our planet, guaranteeing clear water and blue skies.

张传卫

