



**Solar:  
The power  
to change  
the world**

# more than At the forefront of business for half a century

At Hanwha, the philosophy of giving—and earning—"Trust and Loyalty" has long been the foundation of our success. It is at the center of everything we do, constantly driving us to build better solutions that will improve the future for our communities and the people who live in them across the world.

Driven by this corporate philosophy, for more than 60 years Hanwha has been meeting the energy needs of people and institutions in such diverse fields as manufacturing, construction, finance, services, and leisure. Our full-scale entry into the photovoltaic business in 2010 was a natural outgrowth of this mission, allowing us to offer a world-class array of sustainable, efficient solar products and services.

Consequently, today our clients can take advantage of a full menu of totally integrated energy solutions, ranging from polysilicon production, to the manufacturing of solar cells and modules, to the development and construction of power generation facilities.

No matter what solution we build, Hanwha is committed to delivering the kind of positive energy that helps ensure a sustainable future for both mankind and the planet.

Hanwha Group

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A world-class organization bent on

building a better world

It is easy to claim to be a global leader and innovator, but the proof is in the details. Hanwha's experience, broad expertise, and financial strength uniquely position us to address our clients' energy needs today—and tomorrow.

**62** **Years**

Experience can't be achieved overnight; it takes time—in our case, more than six decades of hard work and dedication. From our beginnings in the manufacturing industry, we've grown to become a diverse worldwide organization as a FORTUNE Global 500 company through both organic expansion and acquisitions.

**52** **Domestic Affiliates**

Our family of companies specializes in everything from energy to chemicals to life insurance, making us one of Korea's 10 largest enterprises.

**126** **Global Network**

Being a global leader requires a local presence. Our network of offices spans Europe, Asia, Australia, and Americas—which allows us to maintain a team of experts on the ground to address customers' needs in real time.

**117** **Billion USD in Assets**

A strong balance sheet is key to being able to implement and manage long-term solar energy solutions. It is also a fundamental strength that enables us to foster long-lasting relationships with customers.

A person with long hair, wearing a white t-shirt and dark shorts, is captured in mid-air, jumping joyfully in a field. The background is a warm, golden sunset over rolling hills, with the sun low on the horizon, creating a lens flare effect. The overall mood is one of freedom and optimism.

**Creating a more**

sustainable future  
for everyone

As the world faces mounting challenges, including an increasing population and a volatile economy, along with climate change and the depletion of energy resources, there's a growing urgency driving us to find effective renewable energy solutions.

Hanwha is dedicated to addressing the complex challenges our planet faces today. We envision a future where clean, sustainable energy from the Sun is a viable alternative source of power for commercial, civil, and consumer applications.

Through Hanwha's investment in tomorrow's technologies today, we've positioned ourselves at the forefront of the global photovoltaic industry. And we remain committed to staying there—not just imagining a brighter future, but working with our customers, our partners, and our communities to create it.

Our Solar Business  
in Focus

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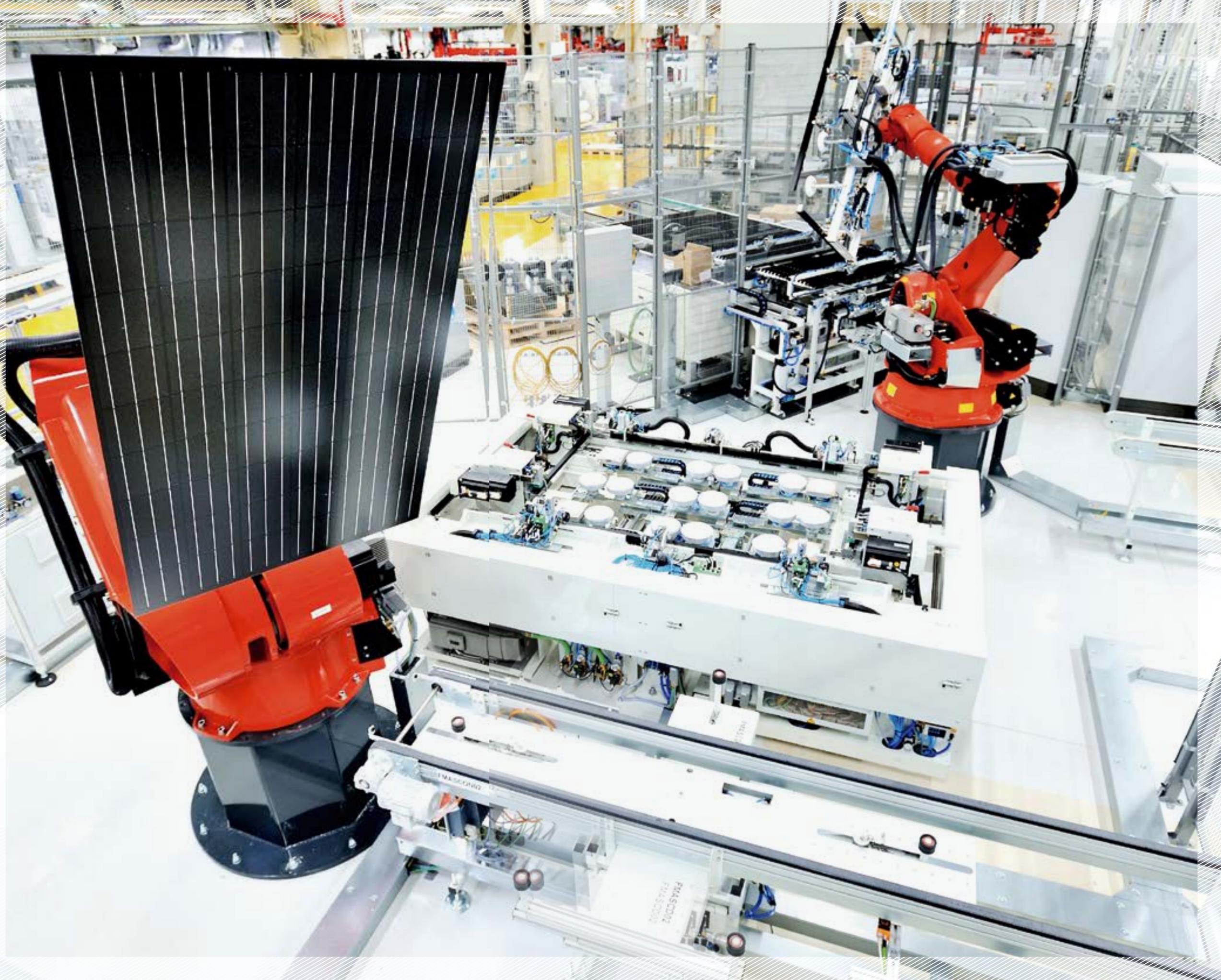
# CAPACITY

**The Largest Production  
Capacity in the World**

**3.28GW Total Annual Cell Production  
Capacity**

# NO.1

Hanwha Q CELLS is the world's largest producer of photovoltaics, boasting annual cell production of 3.28GW. Hanwha Q CELLS operates a strategically diversified manufacturing footprint that provides significant competitive advantage.





Our Solar Business  
in Focus

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## QUALITY

### World-Class Quality

Hanwha Q CELLS is one of the most trusted names in the global solar industry, with top-quality solar products and services. Hanwha Q CELLS features cutting edge solar cell technologies and maintains state-of-the-art research and development capabilities. Its products have been independently tested and verified by the rigorous and independent quality assurance program of the German certification institute, VDE. Hanwha Q CELLS operates its own VDE-certified testing laboratory to test products under extreme conditions such as hail showers and desert heat.

The outstanding quality of its products has been proven by the 2013 PHOTON yield measurement: the Q.PRO solar module was named the best polycrystalline solar module of the year among over 150 modules.



**Our Solar Business  
in Focus**

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**R&D**

**A Global  
R&D Network**

**4** countries

To remain a leading global solar company, we constantly explore new methods and technologies. Our outstanding R&D lets us improve both our products and the methods we use to manufacture them—allowing us to stay two steps ahead of the rest of the industry.

In fact, many of our production lines feature innovations developed by our own dedicated technologists, scientists, and engineers, working hand-in-hand with equipment manufacturers. At our four state-of-the-art R&D centers—located in Germany, Korea, China, and Malaysia—we continue to set the standard in technology, economies of scale, and quality control.

Current R&D projects include research into increasing efficiency and lowering costs. We are studying solar cells using cost-efficient silicon, ultra high-performance cells, Hot-Spot Protect, Anti-PID(Potential Induced Degradation) technology, along with many other innovative ideas. New breakthroughs are introduced to production as soon as possible, resulting in innovative new products from Hanwha Q CELLS and its partners around the globe.



### Hanwha Chemical

As a leading Korean chemical maker, Hanwha Chemical is pioneering next-generation solutions in solar energy through significant investments in the production of polysilicon and EVA resin, a raw material used in the creation of EVA sheets.

### Hanwha Q CELLS

Hanwha Q CELLS is one of the world's leading photovoltaic companies and offers a wide range of photovoltaic solutions. As a global leader, Hanwha Q CELLS is committed to maintaining our excellence in quality combined with industry-leading technological innovations.

### Hanwha Advanced Materials

With plants in the USA, Canada, China, and the Czech Republic—and an ever-expanding production capability—Hanwha Advanced Materials produces high-tech materials such as EVA sheets for photovoltaic module encapsulation.

EVA SHEET + BACK SHEET

POLYSILICON

INGOTS + WAFERS

CELLS

MODULES

DEVELOPMENT,  
EPC, FINANCING,  
O&M

EQUIPMENT

### Hanwha Corporation/Machinery

Using advanced technologies, Hanwha Corporation/Machinery develops automated industrial equipment used to manufacture everything from solar modules to automobiles.

**Experience the power of  
a global company operating  
as one**



## Our reliability is proven by our results

Our accomplishments have taken us from the Pacific Rim to the European continent. That growth stems from a marriage of innovative technology and the fact that we deliver integrated, efficient solutions across the entire value chain.

BRIEST, GERMANY

### INSTALLATION HIGHLIGHTS

**BRIEST, GERMANY**

91MW

**ZERBST, GERMANY**

46MW

**MONTEMOR O NOVO, PORTUGAL**

17.8MW

**ROVIGO, ITALY**

30MW (of 70MW)

**BASILICATA, ITALY**

12MW

**ARNEDO, SPAIN**

33.6MW

**ELDUAYEN, SPAIN**

11.5MW

**LE CASTELLET, FRANCE**

4.5MW

**CAMBRIDGE, UK**

24MW

**OAHU, USA**

5MW

**INDIANAPOLIS, USA**

10.8MW

**ONTARIO, CANADA**

42.4MW

**XUZHOU XIENXIN, CHINA**

10.2MW (of 20MW)

**GUANGDONG, CHINA**

31MW

**OITA, JAPAN**

24MW

**YEONGAM, KOREA**

6MW



OAHU, USA

# The results speak for themselves

Reinforcing our leadership position with an expanding network and industry-leading achievements.

# 25

**YEAR WARRANTY**

Hanwha Q CELLS produces top-quality solutions and guarantee corresponding performance with a 25-year linear performance warranty. Hanwha Q CELLS also offers a 12-year workmanship warranty.

**SINCE**

# 1999

**HARD-EARNED EXPERTISE**

Since being founded in 1999, Hanwha Q CELLS (formerly Q.CELLS) has crafted a long history of innovative technologies, high-quality manufacturing capabilities, and an extensive portfolio of industry-leading products.

**BEST PERFORMING**

# No.1

**MODULE YIELD MEASUREMENT**

Hanwha Q CELLS' Q.PRO solar modules outperform the competition, and were named the No. 1 polycrystalline module by the 2013 PHOTON module yield measurement test.

# 9,337

**GLOBAL EMPLOYEES**

Hanwha Q CELLS employs a total of 9,337 employees worldwide, to serve our customers wherever they might be.

**UNBEATEN RECORD**

# 19.5

**PERCENT EFFICIENCY**

High performance meets mass production: In 2011, Hanwha Q CELLS' Q.ANTUM technology achieved a crystalline solar cell efficiency rating of 19.5%. To date, the record remains unbroken.

# 36+

**COUNTRIES**

The global footprint of our sales network spans more than 36 countries across Europe, Asia-Pacific, Americas and Africa.

# Not just architects of a better world, but also inhabitants

## Solar power for Greener Davos

The World Economic Forum is best known for its annual summit held in Davos, Switzerland, where global leaders and thinkers address pressing global issues. One such issue is environmental sustainability. To help, Hānwahā Q CELLS donated solar modules so that the City of Davos could build a solar power system on the rooftop of the Davos Congress Center and at the adjacent swimming pool—generating enough solar energy to offset more than 20 tons of CO<sub>2</sub> emissions each year.



## Joining the fight against desertification

As a responsible global corporate citizen, Hānwahā Q CELLS has joined the fight against desertification. Working with the UN Convention to Combat Desertification, Hānwahā Q CELLS and the government of Ningxia, China, built a solar power plant in the Mu Us region in Lingwu City.

A unique public-private partnership that offers a framework for sustainable, long-term solutions to fighting desertification, the plant can generate up to 80KW per hour. That's enough to power the environmentally friendly 3,200 meter<sup>2</sup> tree nursery in Baijitan Nature Reserve that is helping to reforest an 855-hectare area of the Mu Us desert. In 2012, the first Hānwahā Solar Forest was created in Mongolia with 230,000 trees. And in 2013, we built a second Hānwahā Solar Forest in the Mu Us desert, China with an additional 200,000 trees grown from the nursery. Hānwahā introduced its third Hānwahā Solar Forest in 2014 in Seoul, Korea, letting children experience nature free from dust and yellow sand. Hānwahā Q CELLS's anti-desertification efforts contribute to water purification and pest control.

## Happy Sunshine

Hānwahā Q CELLS is also an innovator when it comes to the community. Our Happy Sunshine campaign donates solar power systems to service facilities throughout Korea. The first was installed in March 2012, followed by 118 more—with five hundred additional systems to follow within 10 years.

Our contributions extend beyond Korea. We worked with Chinese organizations to create a solar system to provide power to the Yuyanguan Town School in Hubei province and Xiegou Town Center Primary School in Qinghai province, China. Not only will this improve conditions for students, the system will help teach students the value of renewable energy and sustainable development.

## Spreading the energy of solar through sports

Sports, like solar energy, is full of positive energy. So we leverage them both to create a better future. We work with Major League Baseball's San Francisco Giants, winners of the Green Glove award for the most environmentally conscious team in the MLB for the past five years, to generate enough clean energy to offset the power consumption of the Hānwahā sign in the team's home stadium. The sign displays the distance of home runs hit by Giants players at AT&T Park. Hānwahā also supports the Boys and Girls Club of San Francisco, donating one dollar for every foot that a Giants home run ball travels during home games. These funds have been used to provide solar-powered energy to the children's clubhouse.

In 2012, we also ran the Green Team program, a campaign to collect recyclable garbage after the seventh inning.

In addition, Hānwahā was an official sponsor of Germany's Hamburg SV Football Club, working with the club to provide the Osterbek school with a clean, sustainable source of energy and to develop educational materials that help students understand the importance of renewable energy.



# Welcome to our global network



 R&D

 Manufacturing

 Solar Solutions / EPC Systems and Sales / Marketing

We don't just imagine **a brighter future,**

We're working together

to make it a reality

[www.hanwha.com](http://www.hanwha.com)

[www.hanwha-qcells.com](http://www.hanwha-qcells.com)

[www.hanwha-solar.com](http://www.hanwha-solar.com)