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The Hanwha Challenge

Hanwha is a diverse group of individuals with many different background and specialties. But every member of Hanwha believes in our core values – **Challenge, Dedication, and Integrity**. These allow us to share in each other's strengths, come closer together, and focus on common goals. Here's how we do it.



Break away from complacency and pursue excellence through change and innovation

Our goal is to become **the best in the industry**. We focus on the importance of improving our capabilities and challenging ourselves professionally.

We must challenge ourselves based on **change and innovation**. This can only be done by people who continuously strive for self-development. Hanwha welcomes and supports these efforts.

We must be **open-minded**, bring our skills together, and visualize how our skills can contribute to achieving our shared goals. We must undertake challenges by finding new ways to solve problems by looking at things from all angles.

We must pursue challenges **proactively**. To passively follow and repeat the processes of the past and avoiding risk go counter to the Hanwha spirit.

Stepping Up to Face the Challenge

“We must find opportunities in the midst of change and in spite of challenges.”

Throughout our history, Hanwha has experienced monumental transformations as we grew and diversified to meet the ever-changing needs of our markets and customers.

What's remained the one constant, through the decades, is our unhesitating embrace of the endless challenges we faced.

No matter how big or small, Hanwha always confidently steps forward to develop and innovate in order to take a leading role as we move towards the future. - Cable length can be customized to fit perfectly to any installation.



Hanwha Group Chairman
Seung Youn Kim

www.hanwha.com/en/chairmanmessage2019 →

Hanwha's Spirit of Challenge in Action

Regardless of industry and location, we aim high and give everything our all. From rebuilding war-torn countries to sending rockets to the stars, Hanwha is always ready to show the world that we will always boldly step forward to take on every challenge that crosses our path.



Hanwha E&C Bismayah New City Project

Hanwha Engineering & Construction is revitalizing Iraq with the country's most ambitious civil infrastructure project to date. At 1,830 hectares, the new city consists of 8 towns, 59 city blocks and 834 apartment complexes.

www.hanwha.com/en/bismayahcity →



Korea Space Launch Vehicle (KSLV) Projects

Hanwha is working with the Korea Aerospace Research Institute to test the engines that will take KSLV-II, Korea's most advanced rocket, to low orbit. Designed to take payloads weighing up to 1,500 kg into orbit, the rocket is planned to launch in 2021.

www.hanwha.com/en/kslvproject →

How to Be a **Challenger**

“We believe in challenging the status quo in the pursuit of excellence through change and innovation.”

Instead of settling for existing standards, people with the spirit of a challenger strive to become the best by pursuing change and innovation.

Our action principles :

- Actively pursue self-development opportunities
- Maintain an open mind to find new opportunities and creative new ways of work
- Set challenging personal goals and work towards achieving them with a can-do spirit

See how your Hanwha colleagues represent the Hanwha spirit of challenge: www.hanwha.com/en/lifeathanwha



“I enjoy the challenge of bringing the product into a well-established industry and bringing it to the forefront.”

David Folz
Hanwha Machinery America, U.S.A



“I embrace the spirit of challenge to pioneer the future.”

Lin Jiaji
Hanwha Q CELLS China



At Hanwha, we are committed to working by our action principles and never shying away from a challenge. We will never stop challenging ourselves to do better! ■

Hanwha Pursues Limitless Possibilities for the Future at World Economic Forum Annual Meeting 2019

- Hanwha executives held meetings with global leaders on a range of topics including sustainable energy, technological innovation in the financial services sector, and the future of the aerospace business
- This is the tenth consecutive year Hanwha has participated in this conference



Hanwha booked the entire Hotel Concordia, near the Davos Congress Centre, as its base of operations during the World Economic Forum Annual Meeting 2019

Hanwha's leadership participated in the World Economic Forum Annual Meeting 2019 (WEF) in Davos, Switzerland from January 22 through January 25, 2019. With the Fourth Industrial Revolution as the backdrop, participants at this year's WEF discussed how tectonic shifts in business and technology will shape the future global economy.

This is the tenth year in a row that Hanwha has participated in the WEF since it first attended conference back in 2010. For Hanwha, the WEF is an opportunity to meet with business and political leaders from around the world and a chance to promote its capabilities as a global corporation with unlimited potential for growth and innovation.

Hanwha's delegation to this year's WEF included Hyun-woo Shin, CEO of Hanwha Aerospace, Yong-Hyun Kim, CEO of Hanwha Asset Management, Dong Kwan Kim, CCO of Hanwha Q CELLS, and Dong Won Kim, Chief Digital Officer and Head of Global Business of Hanwha Life. Altogether, they held more than 50 meetings at the WEF, speaking in depth about a broad range of issues affecting both Hanwha and the world.

As in previous years, Hanwha set up its base of operations at the Hotel Concordia, near the Davos Congress Centre.

In addition to promoting its position on major issues affecting the world today,

Hanwha leveraged the WEF as an opportunity to promote the Korean culture. Visitors who came to the Hotel Concordia for meetings with Hanwha were presented with gift boxes wrapped in bojagi, traditional Korean cloth. They also dined on an array of Korea dishes prepared by chefs from THE PLAZA, Hanwha's flagship hotel in Seoul, Korea.

To increase global awareness of its brand, Hanwha rented out a digital billboard prominently located on the road into Davos. Hanwha also placed an ad in the Financial Times on January 22 to publicize its commitment to environmental sustainability.

Hanwha Q CELLS: Adopting sustainable energy is of global interest

To address the negative impact of traditional power generating technologies on the environment, Hanwha Q CELLS CCO Dong Kwan Kim met with world leaders and advocated for the necessity of adopting and developing sustainable energy technologies, including photovoltaics.

During the meeting with King Philippe of Belgium, CCO Kim discussed the prospect of renewable energy in Europe and efforts needed to adequately address the pressing issue of climate change. CCO Kim and King Philippe also talked about Belgium's plan to shut down its nuclear power stations by 2025 and



Hanwha Q CELLS CCO Dong Kwan Kim (right) met with King Philippe of Belgium (left) and discussed how important it was for Europe to adopt solar energy

achieve 20% of its power generation through renewable energy by 2030.

In separate meetings with Darell Leiking, Malaysia's Minister of International Trade and Industry and Tran Tuan Ahn, Vietnam's Minister of Industry and Trade, CCO Kim spoke at length on how international cooperation was vital to the expansion of photovoltaic power generation in South East Asia.

CCO Kim also sat down with Ana Trobovich, COO of Grid Singularity, a German tech company that is creating a decentralized data exchange platform built on blockchain technology. The two exchanged ideas on the type of technologies needed to anticipate future changes in the energy and electricity markets and how blockchain might play a role in them. They talked about the possible contributions Hanwha Q CELLS, as a leading renewable energy company, could make towards the future of power generation.

Hanwha Life: Innovation is key to global growth



Hanwha Life CDO Dong Won Kim (second from left) speaks with B Capital co-founder Raj Ganguly (second from right) on South East Asian start-ups

Hanwha Life Chief Digital Officer and Head of Global Business Dong Won Kim has always been passionate about digital innovation's transformative effect on global business. He shared this interest through his talks on the new technologies of today and the world's expanding digital capabilities of tomorrow with other business leaders from around the world.

One of CDO Kim's first meetings at this year's WEF was with Laurence D. Fink, CEO of BlackRock – one of the world's largest asset management companies. During the meeting, the two exchanged thoughts on the future of the global economy and how governmental economic policies would affect asset management globally.

His next meeting was with Raj Ganguly, co-founder of B Capital, a venture capital

group that invests in pioneering start-ups around the world. The two leaders discussed the South East Asian start-up landscape.

CDO Kim also met with Dr. Swan Gin Beh, Chairman of the Singapore Economic Development Board. Joined by CCO Dong Kwan Kim of Hanwha Q CELLS, they found that they shared a common goal to stimulate and sustain economic growth in Asia and around the world. They agreed that there were opportunities to invest in Singaporean companies that have the potential to create great innovations with the proper funding and mentorship.

Hanwha Aerospace and Hanwha Asset Management: Reading global market trends

With Hanwha seeking to expand its presence in the global aerospace industry, Hanwha Aerospace CEO Hyun-woo Shin's time at WEF was dedicated towards identifying market trends and strengthening relations with leading aircraft manufacturers. In pursuit of this goal, CEO Shin attended a session with leadership representatives from Boeing, Airbus, and Lockheed Martin.

To gauge the strategies and the future of the global financial industry, Hanwha Asset Management CEO Yong-Hyun Kim held a series of meetings with global asset managers from major companies such as Bearing Asset Management and BlackRock. CEO Kim also attended a session where a panel of executives from the world's leading financial service providers, such as the Blackstone Group and Zurich Insurance Group, discussed the role the financial industry will play in the new era of globalization.

Hanwha at Davos: Taking the stage as a leading player



Hanwha Life CDO Dong Won Kim (right) and Hanwha Q CELLS CCO Dong Kwan Kim (left) spoke with Singapore Economic Development Chairman Dr. Swan Gin Beh (center) on the topic of stimulating and sustaining Asian economic growth

For Hanwha Q CELLS CCO Dong Kwan Kim, this was his tenth consecutive year attending Davos. His first attendance was in 2010 with Hanwha Group Chairman Seung Youn Kim for Hanwha's first participation in the World Economic Forum. From the beginning, CCO Kim has taken an active interest in promoting Hanwha and environmental sustainability at the WEF. He was instrumental in expanding Hanwha's presence at the WEF and using the event to lay the groundwork to present Hanwha Q CELLS as a leader in the global solar energy industry.

It was at CCO Kim's urging that Hanwha Q CELLS donated Q.PEAK 275 Wp solar modules to the Davos Congress Centre in December of 2013. It drew awareness among WEF participants to the importance of environmental sustainability and solar power's potential to combat global warming.

In 2013, the WEF recognized CCO Kim's work by naming him a member of the Forum of Young Global Leaders, an elite peer network of leaders and influencers under the age of 40 from the worlds of business, politics, and academia.

Hanwha Q CELLS CCO Kim has been a regular panelist for energy-related sessions at the WEF since 2014 when he shared Hanwha's vision of renewable energy to world leaders. Since 2017, he's hosted meetings at Davos with the Global Green Growth Institute and discussed global energy policies.

Hanwha Life CDO Dong Won Kim has also been a panelist. In 2016, having been recognized for his work in driving innovations in the financial services industry, CDO Kim was chosen as a panelist to be on the Young Leaders Roundtable at the Boao Forum for Asia, the Chinese equivalent to the WEF.

This year was Hanwha Life CDO Kim's third time attending the WEF. He first came to Davos in 2017 and focused on the potential impact of FinTech on the financial services industry and its shifting landscape. During meetings with young entrepreneurs at Davos, CDO Kim spoke about future Asian growth engines and supporting Korean start-up expansions into overseas markets. ■

Solar Energy, Leading the Way

Hanwha Energy Extends Its Reach Across the Pacific with Hawaii Energy Project

- Hanwha Energy is awarded a major solar energy contract by Hawaiian Electric Company (HECO) as part of the state's efforts to achieve 100% renewable energy generation
- Contract with HECO secures Hanwha Energy's foothold in the North American solar energy market, the largest in the world
- The HECO contract is the largest single project ever for a Korean energy solutions provider



Hanwha Energy was selected for a major solar energy project on the Hawaiian island of Oahu

In January of 2019, Hanwha Energy was awarded the contract for the Hoohana project, a major solar energy development on the island of Oahu, by Hawaiian Electric Company (HECO). Hanwha Energy will develop, construct, and operate a USD 140 million (KRW 157 billion) solar farm by 2021. Under the terms of the Power

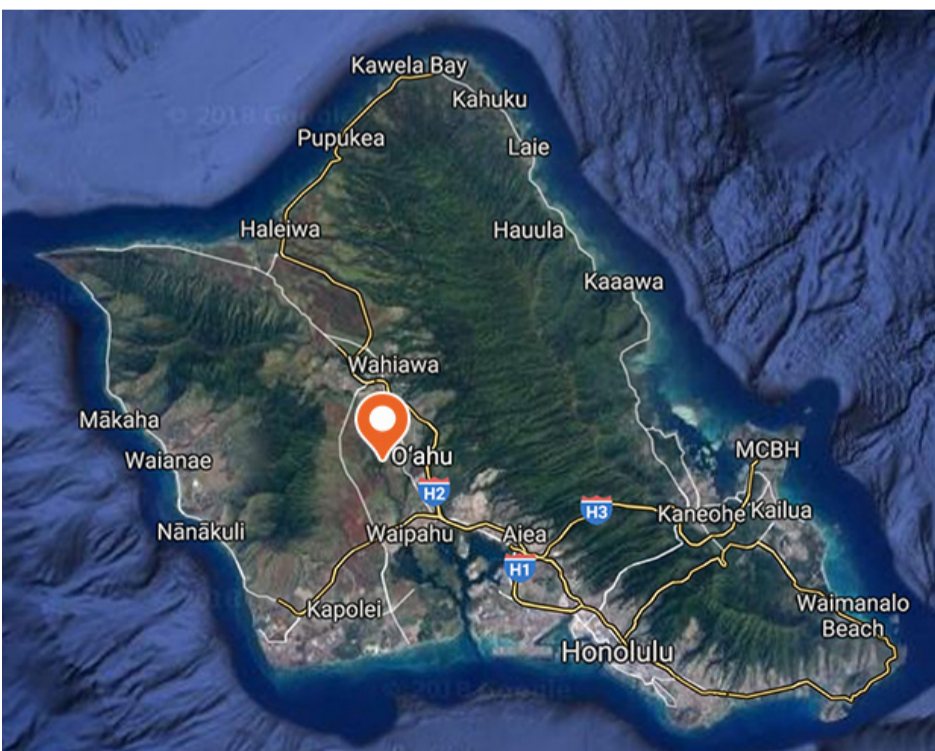
Purchase Agreement, Hanwha Energy will operate this 52MW photovoltaic power plant and a 208MWh Energy Storage System (ESS) for 20 years.

The Hoohana project is a part of Hawaii's initiative to achieve 100% reliance on renewable energy. Six other companies were also selected to work on solar energy projects across Hawaii, including AES, the world's largest ESS company. Hanwha Energy's inclusion in this group signals its expanding reach across North America and solidifies its position as a major player in global energy market.

"The convergence of solar power and ESS technology is an innovation that will drive the future of the energy industry," says Duhyung Ryoo, CEO of Hanwha Energy. "Hanwha Energy will continue to develop and deploy new technologies to become an energy leader not just in Korea, but around the world."

Through its subsidiary 174 Power Global Corporation, Hanwha Energy is involved in all aspects of the North American solar energy market – from project financing to power plant operations. 174 Power Global provides clean solar energy to thousands of households by generating 1GW through various Power Purchase Agreements, including the Techren Solar project in Nevada, the Midway Solar project in Texas, and Laguna Solar project in Mexico. 174 Power Global also has 9GW worth of projects currently in development.

Hanwha Energy has an additional 10GW of solar energy projects in the pipeline putting it on a solid trajectory to be the world's leading solar energy generator by 2020. Concurrently, the company is working to become a comprehensive energy solutions provider by developing and investing in other solar energy-related services including plant Operations & Management and Energy Storage Systems.



Hanwha Energy's solar farm will be centrally located on Oahu

Hanwha Q CELLS Awarded 'Top Brand PV' Seal by EuPD Research for Sixth Year Running

- Award marks sixth year in a row that Hanwha Q CELLS has been recognized as a top PV brand in Europe, and fourth year in a row in Australia
- Seal is awarded based on the recommendations of participating installers, and reasserts the Company's exceptional product quality, service, and reputation
- Hanwha Q CELLS Co., Ltd. CEO Mr. Hee Cheul (Charles) Kim said: "It is encouraging to once again receive this distinguished accolade, especially at a time when European and Australian solar installers are demanding even greater quality and service. We are pleased to be able to consistently meet and surpass their expectations"



Hanwha Q CELLS GmbH ("Hanwha Q CELLS" or "The Company"), the German subsidiary of one of the largest solar cell and module manufacturers in the world, Hanwha Q CELLS Co., Ltd. has been awarded the "Top Brand PV" seal by internationally recognized research institute EuPD Research. The award marks the sixth year in a row that Hanwha Q CELLS has been recognized as one of the leading solar brands in Europe, and the fourth year in a row in Australia.

EuPD Research awards the Top Brand PV seals based on its Global PV InstallerMonitor survey, which compiles the opinions of participating solar installers from leading solar markets. Hanwha Q CELLS received the Top Brand PV 2019 status in the European countries of Germany, Switzerland, Austria, Italy, France, the Netherlands, the UK, and Belgium. Therefore, Hanwha Q CELLS was rated as a brand that delivers exceptional products and service quality throughout the major dynamic solar markets of Europe. Beyond Europe, Australian installers continue to be recognized as the Company's brand strength and enduring appeal.

Six-in-a-row achievement serves as a reminder of Hanwha Q CELLS' commitment to quality

In securing its sixth EuPD Research Top Brand PV seal, Hanwha Q CELLS further cements its reputation as one of the most trusted and respected solar companies in Europe. The EuPD Research Global PV InstallerMonitor surveys more than 100 installers in each nation (75 in Belgium) and is widely renowned to be an accurate and independent method of gauging which solar companies consistently earn the

trust of installers operating in these competitive markets.

Such feedback – derived from the very companies at the heart of the solar industry – is vital for end-users because it places emphasis not only on brand strength, but also on brand reputation and products' quality. By receiving the Top Brand PV seal for six consecutive years, Hanwha Q CELLS has demonstrated a level of consistency in quality and service that is largely unmatched in the industry.

The accolade follows on the heels of EuPD Research data confirming that Hanwha Q CELLS was the leading solar module supplier in Germany in 2018, which remains to be the Europe's largest solar market.

Mark A. W. Hoehner, CEO at EuPD Research, said: "There are only a few companies that have been able to consistently reach 'Top Brand PV' status over the last few years. For almost ten years we have identified those top brands to enable installers and end customers to differentiate the most sustainable and reliable partners from others, and criteria like this are key purchasing decision drivers in Europe."

Mr. Hee Cheul (Charles) Kim, CEO of Hanwha Q CELLS Co., Ltd., added: "It is encouraging to once again receive this distinguished accolade, especially at a time when European and Australian solar installers are demanding even greater quality and service. We are pleased to be able to consistently meet and surpass their expectations. We are already a market leader in many important European markets, and this further recognition from EuPD Research will no doubt spur Hanwha Q CELLS to continue its drive to increase its market share across the

continent.”

Latest award adds to Hanwha Q CELLS’ growing roll-call of accolades

The Top Brand PV 2019 seal joins a growing list of accolades and awards bestowed upon Hanwha Q CELLS in the past 12 months. This roll-call of achievement serves to yet again underline the Company’s commitment to producing high quality products, cutting-edge technology, and exceptional service.

- Hanwha Q CELLS Co., Ltd. ranked as “**Top Performer 2018**” in the latest **DNV GL PV Module Reliability** scorecard published in May 2018.
- Hanwha Q CELLS’ Q.PEAK DUO-G5 half-cut cell module won the Intersolar Award 2018 in the category of Photovoltaics in Munich in June 2018.
- The innovative Q.FLAT-G5 roof mounting system won the Solar+Power Award for best BOS Innovation in September 2018. ■

Explore this month's news of Hanwha and its affiliates, taking the initiative in all corners of the world.



China



Hanwha Chemical (Ningbo) Co., Ltd.

Hanwha Chemical (Ningbo) Celebrates the New Year

Members of Hanwha Chemical (Ningbo) gathered at the Daxie International Hotel on January 25 to celebrate the start of 2019 and to enjoy a special performance together.

During the event, eight members received awards for their exceptional performance in 2018.



Hanwha Advanced Materials (Beijing) Co., Ltd.

Hanwha Advanced Materials Beijing Sticking with New Year's Resolution

Members of Hanwha Advanced Materials Beijing stuck to the group resolution they made in 2018 and began taking part in radio calisthenics in January of 2019. For ten minutes every day, either in the morning or in the afternoon, members gather outside the office to do simple exercises both to improve their health and to clear their heads.

Radio calisthenics are warm-up exercises performed to instructions and music

playing over the radio. They are done daily by Chinese schoolchildren either on school playgrounds or in gymnasiums.

For members of Hanwha Advanced Materials Beijing, radio calisthenics is a way to refresh themselves and avoid becoming fatigued by hours spent working in front of computers. And by exercising as a group, everyone feels a greater sense of camaraderie going into 2019.



Korea



Hanwha Techwin Delivers a Message at Intersec 2019

In January of 2019, Hanwha Techwin pulled out all the stops to tell visitors to Dubai's Intersec 2019 trade show that it is the best choice for the world's security solutions. Presenting a wide array of products to attendees and offering hands-on demonstrations, Hanwha Techwin demonstrated that it has the versatility to meet the ever-changing needs of the global security landscape.

Intersec is one of the world's largest security trade shows, with more than 1,300 exhibitors coming to demonstrate their capabilities to visitors from all over the world.



Front and center at Hanwha Techwin's booth were the company's range of AI security solutions, which can automatically recognize and track people and objects to a high degree of accuracy in high-traffic areas. With customers around the world looking to increase both automation and efficiency, Hanwha Techwin's innovations perfectly meet their needs.

Also, of interest to many visitors were the myriad features Hanwha Techwin developed to address the Middle East's unique requirements, including anti-

dust housing, automated dust wipers, and remote monitoring technology that can operate across long distances in areas with poor network connectivity.

"Intersec is an important event in the security industry," says a Hanwha Techwin spokesperson. "It's an opportunity for us to showcase the very best we have to offer and to show our customers that we continue to strive to develop new security solutions that they can trust."

Mexico

Hanwha Advanced Materials

Hanwha Advanced Materials Mexico S. De R.L. De C.V

Mexican Students Learn about Hanwha's Story

Cesar Jang, quality manager at Hanwha Advanced Material Mexico, was invited by Universidad del Valle de Tlaxcala to speak to students at the Business and Foreign Trade Congress held on its campus in Tlaxcala, Mexico on November 16, 2018.

Speaking to an audience of around 100 students, Cesar Jang gave a seminar entitled: "Korean Culture as a Success Story". He spoke at length of how Hanwha's stratospheric rise from a small industrial firm to a multinational conglomerate mirrors that of Korea's development from a war-torn country to one of the world's largest economies.



"I'm so proud to have been able to speak to these students about Korea's history and the role Hanwha played in its growth," Cesar Jang said after his talk. "It was a great opportunity to teach the people of Mexico a little about our group and Korea."

Vietnam

Hanwha Techwin

Hanwha Techwin Vietnam

Assembly Line Starts Rolling at Hanwha Techwin's New Plant

Hanwha Techwin announced that its brand-new manufacturing plant in Vietnam's Que Vo Industrial Park is now fully operational. The plant significantly increases Hanwha Techwin's global manufacturing capabilities, reduces costs, and improves regional logistics so that Hanwha Techwin can better respond to the needs of customers and partners in South East Asia.

The decision to begin construction on the USD 100 million manufacturing plant was made in April of 2017, when the Vietnamese government began easing rules and regulations to encourage major global corporations, like Hanwha, to invest in Vietnam and stimulate its economy.

"This is a very exciting time for Hanwha Techwin's security business," says Bob H.Y. Hwang, Ph.D., managing director of Hanwha Techwin Europe. "Our new



manufacturing facility and all our new colleagues who work there will contribute significantly to our ongoing success and our ability to be competitive in a growing market."

[Watch Video \(https://youtu.be/bTLbNLNomJQ\) >](https://youtu.be/bTLbNLNomJQ)

