

# Solar: The Power to Change the World

Hanwha Q CELLS Co., Ltd. 2017 Sustainability Report

# About this report

## Overview

This Report is the first Sustainability Report of Hanwha Q CELLS Co., Ltd. (HQCL), published for the purpose of reporting its yearly key performances and achievements to investors and stakeholders. This Report covers both the financial and non-financial performances of HQCL and its activities for creating value.

## **Reporting Guidelines**

This Report has been prepared in accordance with the "Core" option of the Global Reporting Initiative (GRI) Standards. **HQCL** manages its business activities in compliance with the Ten Principles of the United Nations Global Compact (UNGC), and this Report meets the requirements of UNGC Communication on Progress (COP).

#### **Reporting Scope**

The financial and non-financial data presented in this Report correspond with those provided in HQCL's Form 20-F submitted to the U.S. Securities and Exchange Commission (SEC). This Report covers the following geographical areas: the headquarters office in South Korea, Cyberjaya in Malaysia, Qidong and Lianyungang in China, and the Technology & Innovation Headquarters in Germany. Additional data have been included and marked separately where the business impact and effect of HQCL may significantly affect stakeholders' decision-making. The Report covers the time period from January 1, 2016 to December 31, 2016 and may cover up to July 2017 for certain business operations.

## **Third Party Assurance**

This Report is assured by Det Norske Veritas and Germanischer Lloyd (DNV GL), an internationally accredited registrar, in accordance with the three principles (materiality, completeness, and responsiveness) of ISAE3000, and includes the results of its assessment. Notwithstanding the third party assurance, however, this Report may contain discrepancies between the expected and actual performance of the company due to political, economic, and environmental uncertainties surrounding HQCL's business operations.

#### Reported by

Hanwha Q CELLS Co., Ltd., Hanwha Building, 86, Cheonggyecheon-ro, Jung-gu, Seoul, Korea Global Marketing Team

# Contents

	CEO Message	04
	Company Profile	06
	Business Model	08
	Our Products	10
Corporate	Governance	14
	Stakeholder Engagement	17
Governance	Ethics and Compliance	18
	Risk Management	19
Caring for	HR Management	23
_	HR Development	24
Our People	Human Rights and Welfare	26
	Health & Safety	28
	Information Security	29
Caring for	Environmental Management System	33
Caring for	Climate Change	34
the Planet	Operational Eco-Efficiency	35
	Life Cycle Assessment	36
Growing with	Supply Chain Management	43
Growing with	Conflict-Free Minerals	46
Our Partners	Customer Satisfaction	47
	Research and Development	48
Making	CSR Activities	53
a Brighter		
Tomorrow		
Appendix	Materiality Analysis	58
المناه ما ما	Third Party Assurance Report	60
	GRI Index	62
	UNGC	65
	Awards	66

# **CEO** Message

Hanwha Q CELLS
Co., Ltd. leads the global solar energy industry through our corporate philosophy of creating a better world for the generations to come.

Dear Stakeholders,

I would like to express my sincere gratitude for your interest in **Hanwha Q CELLS** Co., Ltd. and support for our endeavors.

As a manufacturer of solar cells and modules that provide the foundation for eco-friendly, new and renewable energy, we have expanded our presence in the global solar energy industry and strengthened our position as a reliable partner for all stakeholders through continuous innovation. Through robust product stewardship and quality assurance, we are making a conscientious effort to fulfill our social and environmental responsibilities as a global corporate citizen that grows hand in hand with society. This Sustainability Report serves as a communication channel for sharing our sustainability practices and progress with our stakeholders, and will be published on an annual basis to convey our financial, social, and environmental innovations and growth.

#### Pursuing Sustainable Growth through Product Stewardship and R&D

As one of the most trusted companies in the industry and a provider of top quality solar products and services, <code>HanwhaQCELLS</code> Co., Ltd. is firmly committed to continuous innovation and creativity while placing the utmost importance on product stewardship to ensure customer satisfaction and safety. To this end, we continue to invest in new product development and technological innovation to maintain the highest level of expertise in the field of solar energy. As a result, we have made remarkable achievements, such as successfully mass producing polycrystalline Passivated Emitter and Rear Cell (PERC) at the world's largest scale and securing the technology needed for launching monocrystalline products. We will continue to take the lead in technological progress and build the foundation for our sustainable growth.

#### Implementing Environmentally Friendly Management for Future Generations

Hanwha Q CELLS Co., Ltd. is firmly committed to reducing environmental impact at our operation sites while developing eco-friendly products. In order to accomplish these goals, we will work together with our supply chain to incorporate environmental management across the entire production process, starting from the procurement of raw materials and parts, thereby reducing our environmental impact from the manufacturing stage. We will also take the initiative to successfully promote the use of solar cells and modules in response to climate change.

# Reinforcing Our Identity as a Global Corporate Citizen through Effective Communication with Our Stakeholders

By communicating with our stakeholders such as employees, partner companies, customers, local communities, and the media, we will build relationships through which we can grow and thrive together. Furthermore, we will spare no effort to carry out our role as a global corporate citizen by strengthening our corporate social responsibility for local communities.

This Report, the first publication of its kind, is our first step towards systemizing our corporate social responsibility efforts as well as an opportunity to assess the progress we have made so far. Moreover, this opportunity will provide us with insights to lead our business in a way that aligns with our stakeholders' hopes and vision for Hanwha Q CELLS Co., Ltd.

With the trust and respect of our stakeholders, Hanwha Q CELLS Co., Ltd. will become a global company that leads the solar energy industry through innovation. As always, we would deeply appreciate your continuous interest and support.

August 2017

Seong Woo Nam

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Hanwha Q CELLS SUSTAINABILITY REPORT 2017 Our Business 04 • 05

# **Company Profile**

Hanwha Q CELLS Co., Ltd. (NASDAQ:HQCL) is one of the world's largest and most recognized photovoltaic manufacturers for its high-performance, high-quality solar cells and modules. It is headquartered in Seoul, South Korea (Global Executive HQ) and Thalheim, Germany (Technology & Innovation HQ). HQCL operates with its diverse international manufacturing facilities in Malaysia, South Korea and China and has the world's largest cell production capacity of 6.8 GW. Based on its outstanding

production capacity, HQCL can promptly and flexibly meets the demands of its customers and markets. Through its growing global business network spanning Europe, North America, Asia, South America, Africa and the Middle East, the company provides excellent services and long-term partnership to its customers in the Engineering Procurement Construction (EPC), commercial, government and residential markets.



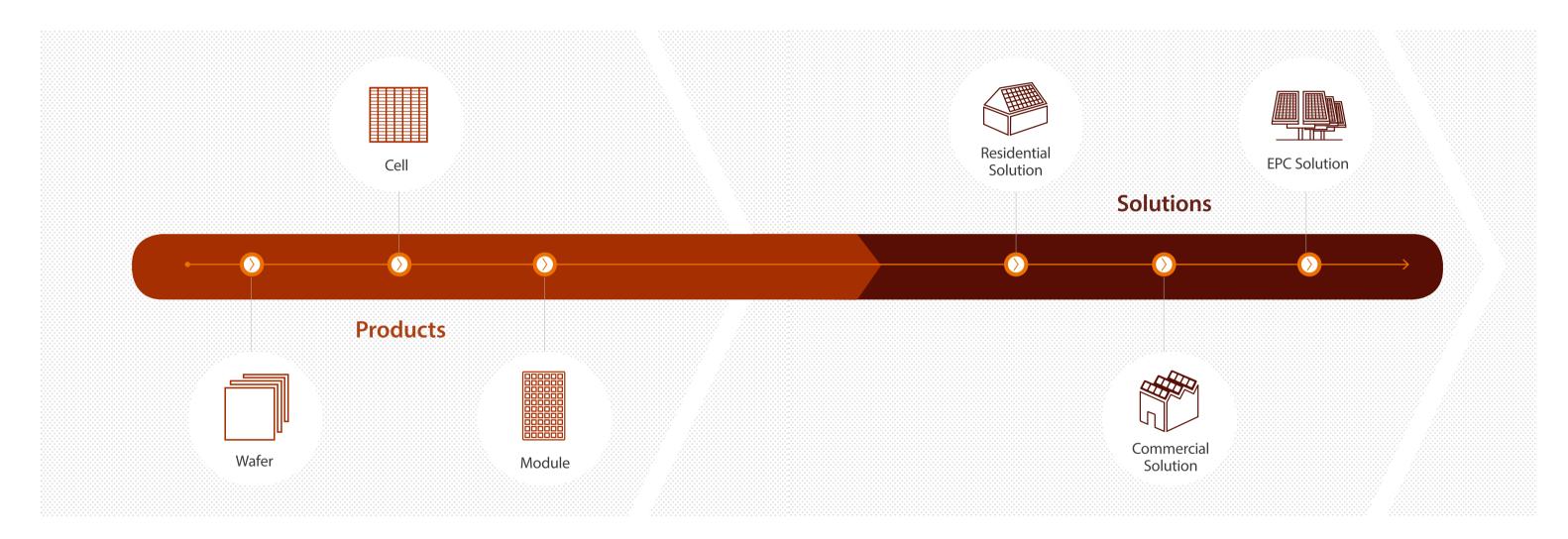






# **Business Model**

HQCL offers total solar energy solutions, ranging from modules to residential and commercial systems and large-scale photovoltaic products and services.



**8,003** persons

Employee

1,959

**Energy Consumption** 

TJ **4,851** thousand tons

**Water Consumption** 

2,425.9 USD 192.1

**Net Revenues** 

6.8

GW

Operating Income PV Cell Capacity<sup>1)</sup>

> 1) As of the second half of 2017, including the production capacity of Hanwha Q CELLS Korea

# **Our Products**

**HQCL**'s product brand, known as "Q CELLS," offers a full range of solar modules including Q.PEAK, Q.PLUS, Q.PRIME, and Q.POWER. Its line of excellent quality products with superior energy generation capacity, the Q CELLS modules, meet the quality standards and industrial requirements for public service and government projects, as well as commercial and residential markets.



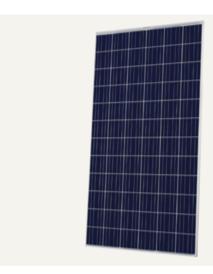
# **Q.PEAK** Series

Developed based on application of Q.ANTUM monocrystalline technology, the high performance Q.PEAK module is an ideal solution for residential buildings. It provides superior output in harsh environments with low-lighting intensity and high temperatures.



# **Q.PRIME** Series

Q.PRIME, developed as a result of **HQCL**'s continuous innovation in the monocrystalline solar technology, is widely used for power generation, and guarantees high profitability for developers and investors based on its low production cost.



# **Q.PLUS** Series

Developed based on application of Q.ANTUM polycrystalline technology, the Q.PLUS module features outstanding design and exceptional cost efficiency with a high energy yield, making it the optimal solution for residential and commercial markets.



# **Q.POWER** Series

Developed based on the 6 Bus Bar technology for the first time in the industry, Q.POWER is a polycrystalline solar module with superior output per unit surface and low cost of solar peripheral systems (BOS, Balance of System).



# Q.HOME kit Series

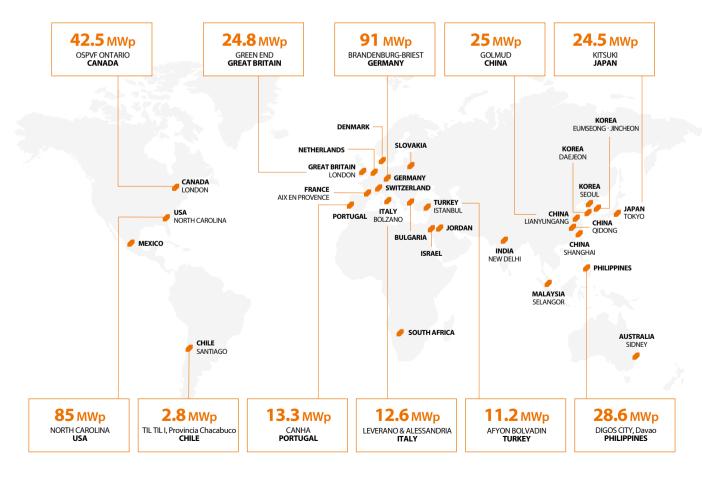
Ranging from various sizes of solar modules to the ESS system, **HQCL** offers integrated residential energy solutions that satisfy the energy needs of daily life and maximize energy independence.



# **EPC Project**

Based on extensive experiences and expertise in the field, HQCL provides solutions in all areas of business including land acquisition, environmental analysis, authorization and qualification, grid connection, financial modeling and insurance.

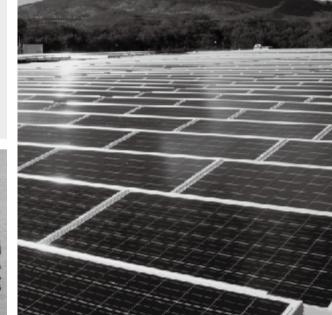
# **EPC Project** Major Performance



Hanwha Q CELLS SUSTAINABILITY REPORT 2017 Our Business 10 • 11









# **Corporate Governance**

Incorporated through the merger of Hanwha SolarOne and Hanwha Q CELLS, two of the world's leading solar energy companies, Hanwha Q CELLS Co., Ltd. is a NASDAQ-listed company that has emerged as a global leader in the solar industry.

- 14 Governance
- 17 Stakeholder Engagement
- 18 Ethics and Compliance
- 19 Risk Management

# Governance

## Roles and Status of the Board of Directors (BOD)

HQCL has established a transparent and sound corporate governance structure in order to facilitate the company's sustainable growth, with the goal of protecting the interests of its major stakeholders, including shareholders. The BOD has full decision-making authority in regards to the major business affairs of the company as well as the supervision of the directors' execution of duties. The BOD also resolves important business matters and those required by law and the General Meeting of Shareholders. Furthermore, HQCL strives to promote transparent and reliable business conduct through continuous efforts to improve its corporate governance. The BOD consists of 7 directors (4 executive directors and 3 independent directors).

# Transparency and Independence of the BOD

HQCL fully complies with the NASDAQ Stock Market Rules regarding the independence of its independent directors, who are appointed in accordance with all applicable laws and regulations. To prevent any conflicts of interest, independent directors are not permitted to engage in any business dealings or serve as employees or directors with unlimited liability in another company within the same industry without prior approval from the BOD.

#### **Audit Committee**

HQCL operates its Audit Committee in accordance with the regulations of the U.S. Securities and Exchange Commission to ensure compliance in business practices. The Audit Committee's composition, operation, authorities and responsibilities are set forth in the Audit Committee regulations. It consists only of independent directors, who are required to be accounting and/ or finance professionals. The main responsibility of the Committee is to audit the accounting and business affairs of the company by reviewing its financial statements, any attached specifications. the results and process of audits conducted by an independent audit firm, material business matters, and the internal accounting management system status reported by internal accounting managers and outside auditors. The members of the Committee serve their duties self-reliantly to ensure their independence and accordance with fair practices. Resolutions passed by the Committee are not subject to any objection by the BOD.

## **Conflicts of Interest**

Directors of a corporation must not take for themselves any business opportunity that could benefit the corporation. In any event the director takes a corporate opportunity that benefits or could benefit the corporation, prior approval is required, and conflicts of interest is regulated and audited in accordance with applicable laws.

#### Composition of the BOD

Name	Job Title	Experience	Appointment	Term
Seong Woo Nam	Chief Executive Officer	<ul> <li>CEO of Hanwha Q CELLS Co., Ltd.</li> <li>(Former) Executive Vice President of IT Solutions Business, Samsung Electronics Co., Ltd.</li> </ul>	DEC. 2014	DEC. 2018
Jung Pyo Seo	Chief Financial Officer	- CFO of Hanwha Q CELLS Co., Ltd (Former) CFO of Hanwha SolarOne	DEC. 2014	DEC. 2018
Moon Seong Choi	Senior Vice President of Corporate Planning	<ul> <li>Senior Vice President of Corporate Planning, Hanwha Q CELLS Co., Ltd.</li> <li>(Former) Head of Hanwha Q CELLS' Southeast Asia sales</li> </ul>	NOV. 2017	DEC. 2019
Joo Yoon	Head of Sales Planning / Global Product Management&Marketing	<ul> <li>Head of Sales Planning / Global Product Management&amp;Marketing,</li> <li>Hanwha Q CELLS Co., Ltd.</li> <li>(Former) Head of Sales, Hanwha Q CELLS Japan Co., Ltd.</li> </ul>	NOV. 2017	DEC. 2019
Seung Heon Kim	Independent Director	(Former) Cost Accounting Head, Defense Acquisition Program Institute     (Former) Samil PwC/ CPA (Korea, U.S.)	DEC. 2017	DEC. 2019
Hyun Chul Chun	Independent Director	<ul> <li>President of Saesidae Accounting Corporation</li> <li>(Former) Anjin Accounting Corp. / CPA (Korea, U.S.)</li> </ul>	DEC. 2017	DEC. 2019
Young S. Kim	Independent Director	<ul> <li>(Former) Director of Manufacturing, YNCC</li> <li>(Former) Executive Officer at Hanwha Chemical R&amp;D Center / Technology Officer</li> </ul>	DEC. 2016	DEC. 2018

# Independence and Diversity of the BOD

To ensure sound corporate governance, HQCL upholds the principle of independence and expertise of its independent directors, who are appointed based on the following qualifications.

# In appointing the independent directors, HQCL fully complies with the appointment process and principles to ensure their independence from the company.

- An individual with extensive practical experiences or expertise in the finance, economy, business management, accounting, legal, and/or other relevant fields necessary for performing the duties as an independent director or Audit Committee member
- An individual who is not in a conflict of interest and able to serve his or her duties in a fair manner for the interest of all shareholders and financial consumers
- ③ An individual with a strong sense of ethics and responsibility requisite for the proper performance of his or her role as independent director or Audit Committee member

# HQCL ensures efficient business management by reviewing and selecting nominees through a strategic decision-making process.

- The company establishes a flexible corporate governance structure by electing persons who, although not directly related to the photovoltaic industry, can contribute to HQCL's business in general with their experience in business management, law, administration and other fields.
- ② Independent directors hold regular and non-regular meetings to facilitate integration and mutual discussion regarding each other's expertise.

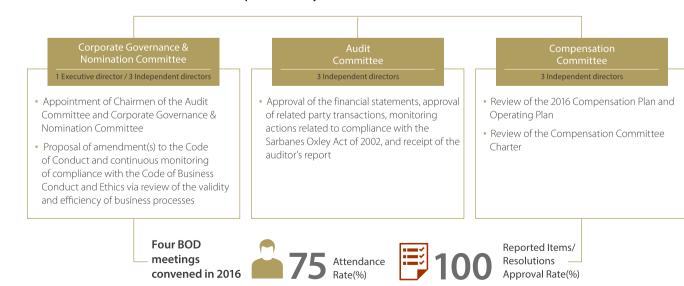
# **Efficient Operation of the BOD**

The BOD reviews and resolves important business affairs via three internal committees established in accordance with related acts<sup>1)</sup> and the Articles of Incorporation - *i.e.*, the Corporate Governance & Nomination Committee, the Audit Committee, and the Compensation Committee - which undertake the internal review of important business decisions to ensure their propriety and legitimacy as well as to promote transparency and fairness of the decision-making process. In doing so, HQCL seeks to ensure sound corporate governance and responsible business practices.

In 2016, four BOD meetings were held and the attendance rate stood at 75%. HQCL has made sure that the board members are fully informed of the agenda in advance and the persons in charge are present to explain the matter, if necessary. By doing so, the company was able to facilitate lively discussions among the directors, who each hail from diverse professional backgrounds. As a result, all 2016 resolutions and reported items were approved without being deferred or changed. Each director, using his own expertise, faithfully served his duties as advisor in order to protect the interests of stakeholders on the basis of full understanding of his ethical and social responsibilities, ensuring they were fully considered in the decision-making process.

1) Securities Act, Securities Exchange Act, Sarbanes-Oxley Act, US Securities laws, Nasdaq Regulations and Commercial Act

#### **Composition & Key Activities of the BOD Committees**



Hanwha Q CELLS SUSTAINABILITY REPORT 2017 Corporate Governance

# **Evaluation and Compensation of the BOD**

HQCL examines the composition and operational status of the BOD and its committees on an annual basis prior to the general meeting of shareholders. The company makes a comprehensive assessment of the BOD's contribution to the interests of internal and external stakeholders, which is one of their major roles, and assesses the BOD's level of expertise, depth of understanding of business operations, commitment to ethics and social responsibility, and impartiality regarding any conflicts of interest.

The BOD plays a central role in making all such assessments, except for certain specific matters which are independently handled by supporting departments. **HQCL** also operates the Compensation Committee under the BOD to ensure that a fair remuneration system is properly designed and operated in line with the risk structure for executives and specific positions, while monitoring the system, financial situations, and risk control coordination.

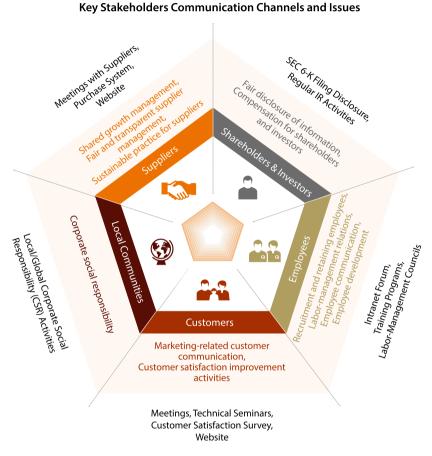
Director Compen	sations <sub>Nui</sub>	mber of people, USD thousand
Total		
20 No. of Directors <sup>1)</sup>	<b>6,037</b> Total Amount <sup>2)</sup>	302 Amount per Person
Executive Directo	rs	
No. of Directors	<b>2,793</b> Total Amount	698 Amount per Person
Executive Officers		
No. of Directors	3,090 Total Amount	237 Amount per Person
Independent Dire	ctors	
No. of Directors	154 Total Amount	51 Amount per Person

<sup>1)</sup> Then number of directors registered as of the end of December 2016 when the company was incorporated after merging

Hanwha Q CELLS SUSTAINABILITY REPORT 2017 Corporate Governance

# **Stakeholder Engagement**

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## **Definition of Stakeholders**

HQCL defines stakeholders as entities or individuals that affect or are affected by the company's business activities, including local communities, academia, and related organizations that are indirectly responsible for HQCL's business activities. Stakeholders are categorized into those with legal, financial, and operational responsibilities and those having an influence on HQCL's business activities and performance, based on their roles, level of contribution and relationship with the company. Specifically, stakeholders are classified as shareholders and investors, employees, customers, local communities, and suppliers.

## **Stakeholder Engagement**

based on its stakeholders' interests. Communication channels for customers, a major stakeholder group, include the customer satisfaction survey through which HQCL reflects their input in product development and business practice in general. The Labor-Management Council and HQCL's Intranet forum serve as major communication channels for company employees. Suppliers are HQCL's important business partners, with whom the company maintains close relationships and whose needs are promptly incorporated into its business activities through active communication by, for instance, holding meetings on a regular basis to collect feedback. Furthermore, HQCL communicates with local residents through community volunteer activities and meetings, while reflecting on feedback from the government and experts in its business endeavors. By taking this approach to communication, **HQCL** will continue to strengthen its foundation for sustainable growth.

16 • **17** 

**HQCL** supports a wide range of communication channels

<sup>2)</sup> Total compensation paid to re-appointed directors in 2016, based on the exchange rate at the end of 2016 (1 USD = 1,205 KRW)

# **Ethics and Compliance**

## **Compliance System**

As a NASDAQ-listed company, HQCL fully complies with all regulations required by the U.S. Securities and Exchange Commission (SEC). Being subject to the laws and regulations in South Korea and the United States, HQCL must maintain a higher level of transparency and compliance compared to other companies. In 2016, HQCL established the Code of Business Conduct and Ethics to set forth proper ethical standards and foster a sound value system among its employees in their business conduct.

# **Company-wide Compliance Activities**

HQCL ensures that all of its business suppliers comply with the laws by stipulating compliance clauses or requiring the submission of a pledge of compliance when executing contracts. It complies not only with all applicable laws in South Korea and the U.S. but also with business customs and laws of other countries when conducting business through its overseas branch offices and affiliates. The company also applies strong internal ethical standards so that employees do not respond to any inappropriate demand for entertainment, thereby aligning its compliance management with profit generation. Furthermore, HQCL adopted advanced compliance programs through its overseas affiliates in Germany and other countries to help ensure the highest level of ethical standards and compliance management. There were no reported cases of corruption or violation of regulations in 2016.

## **Compliance Activities**

## FCPA<sup>1)</sup> Training

As a NASDAQ-listed company, HQCL's headquarters and overseas affiliates are subject to the U.S. Foreign Corrupt Practices Act (FCPA). Accordingly, HQCL conducts FCPA training on a regular basis for all employees of its headquarters and overseas affiliates, who are required to submit a pledge of compliance upon completion of the training. In addition, the company continues to monitor any economic sanctions imposed on foreign countries by the U.S. government to ensure full compliance with the laws and regulations applied to overseas sales practices.

1) Foreign Corrupt Practices Act

#### **Anti-Graft Law Training**

HQCL conducted training for all its employees regarding the "Improper Solicitation and Graft Act (the equivalent of the Anti-Corruption and Bribery Prohibition Act)" effective since September 2016. The training covered the purpose of legislation, application scope and acts of improper solicitation, and encouraged employees to voluntarily comply with the Act. Specifically, training sessions were held on four occasions for team directors or higher-level executives and team members. In addition, the company takes proactive measures to prevent any violations of the Improper Solicitation and Graft Act by handling individual issues through question-and-answer.

## Whistleblowing Policy

The whistleblowing as required by the U.S. Securities and Exchange Commission (SEC) has been implemented as part of HQCL's internal regulations. To protect the identities of whistleblowers, the company ensures anonymity when receiving the information. HQCL encourages employees to report any unfair or non-compliant activities to voluntarily build a healthy organization.

# **Risk Management**

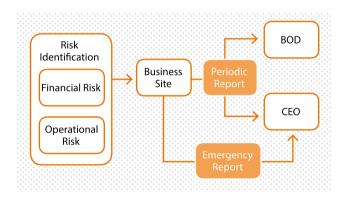
## **Risk Management System**

In a rapidly-changing business environment, risks within and outside the company are becoming increasingly diverse and interconnected. In this regard, it is now more important than ever to identify and prevent risks at a corporate level. **HQCL** has established a risk prevention system to minimize risks and their impact on its business practice, while identifying risks that hinder the company from accomplishing its goals. Identified risks are classified as financial and non-financial risks, and each type of risk is defined to enable a more strategic response.

# **Risk Management Governance**

The BOD has the final responsibility for overall decision-making related to risk management. In addition, the company identifies emerging risks in its decision-making process for major management issues. Monitoring of and response to corporate level risks are carried out at individual business sites.

#### **Risk Management Governance Process**



# **Financial Risks**

#### Risks Related to Foreign Exchange

HQCL operates its business across the world including Korea and the U.S. As such, fluctuations in foreign exchange rates may cause negative impact on HQCL's business and result in foreign currency loss. The company's financial results such as sales are managed in U.S. Dollars, and are both directly and indirectly influenced by major currencies including the Chinese Yuan (CNY), Euro (EUR), Japanese Yen (JPY), Korean Won (KRW), and Malaysian Ringgit (MYR). Recent fluctuations in foreign exchange rates may result in net foreign currency losses. To mitigate the effects of short-term foreign currency fluctuations, HQCL engages in hedging transactions and proactively manages relevant risk factors.

#### Risks Related to Growing Debt

HQCL maintains a considerable amount of debt, and any additional debt may compromise its financing ability. An increase in debt ratio may decrease the liquidity of cash flow and cause additional financial costs such as interest expenses. In dealing with such risks, HQCL is taking measures to decrease its debt ratio by reducing costs as well as selling and administrative expenses.

## **Operational Risks**

#### Risks Related to Environmental Compliance

In response to changing environmental regulations, it is essential to take appropriate measures and ensure strict compliance. Violations of regulatory requirements may disrupt the company's business operations and cause significant damage to its financial stability. Since **HQCL** uses toxic, volatile, and otherwise hazardous chemicals and generates waste and wastewater, a strict control process and management system has been implemented to prevent industrial disasters and personal injuries in accordance with the laws and regulations. In addition, the company responds to potential environmental regulatory changes through timely investments in its facilities. Especially in Europe, one of our major export markets, **HQCL** is subject to various laws and regulations including the EU Directive 2002/96/EC (WEEE<sup>1)</sup> Directive) and EU Directive 2002/95/EC (RoHS<sup>2)</sup> Directive). Failure to comply with these regulations may result in a suspension of the company's business activities in the local market, penalties, and other disadvantages.

1) Waste Electrical and Electronic Equipment 2) Restriction of Hazardous Substances

#### Risks Related to Supplier Management

Given the absolute necessity of silicon materials for manufacturing solar cells, HQCL's business is highly dependent upon a few suppliers that can supply these materials in large quantities. If suppliers fail to provide raw materials promptly, companies may face a series of problems including cancellation of orders, increased costs, as well as reduced sales and market share. In this regard, HQCL makes various efforts to maintain and develop strong relationships with its key suppliers, while providing financial support, office supplies, and equipment to local small- and medium-sized suppliers.









# **Caring for Our People**

In order to respond more flexibly and proactively to the changing global business environment and market needs, Hanwha Q CELLS Co., Ltd. has implemented various systems to support its employees' growth into global talents with outstanding individual competencies.

- 23 HR Management
- 24 HR Development
- 26 Human Rights and Welfare
- 28 Health & Safety
- 29 Information Security



# **HR Management**

**HR Management Strategy** 

HR Management Strategy Securing and retaining top talent

Enhancing job performance through training

Improving work efficiency through job matching and increasing opportunities

Evaluating and rewarding performance in a fair, consistent manner

# **Sound Corporate Culture**

HQCL is committed to creating a sound and flexible workplace based on its unique corporate culture. In particular, HQCL takes various measures to build a corporate culture in which employees can find a healthy work-life balance – for instance, designating Wednesdays as a "Family Day" so that employees can spend quality time with their family and enhancing work efficiency by encouraging team managers to leave work on time. "Casual Friday" was also introduced, encouraging employees to dress casually to boost creativity and efficiency in the workplace. In addition, HQCL participates in the WITH Conference, annually hosted by Hanwha Group to build a future-oriented organizational culture that promotes open lines of communication and collaboration among employees and the development of female talent. By doing so, the company shares its best practices with the group affiliates and benchmarks those of other affiliates to improve HQCL's organizational culture.

#### Internal Communication

HQCL organizes an event known as the CEO Luncheon Meeting to stay abreast of industrial trends and share the management's commitment to overcoming crises with the employees. Through such efforts, the company seeks to build trust and bond between the employees and the management, while forming a consensus on its business strategy.

HQCL also promotes communication to help internalize the corporate philosophy and core values of the <code>Hanwha Group</code> by participating in the value program offered by the Group every year to executives, team managers, and staff. In 2016, the program focused on "Understanding the Strengths of the <code>Hanwha Group</code> based on its Corporate Philosophy and its Commitment to becoming a Top Global Company by Carrying through the CEO's Management Vision."

# **HR Development**

#### Recruitment

HQCL recruits talented individuals with great potential and capacity to expand the company's global presence and gain competitive advantages. HQCL has an annual recruitment plan in addition to occasional recruitment based on the needs of each division. Furthermore, at its overseas business sites, the company concentrates on hiring local talent in the interest of benefiting the local communities as well as for the stability of its workforce.

#### Background

- Consistent demand for talented and experienced individuals in the field of technology due to R&D projects and overseas investment
- Importance of staffing, retaining, and developing human resources for sustainable growth

## Strategy and Plan

#### Promotion

• Online/offline job announcements

#### Recruitment

- More efficient and diverse recruitment tools
- Bolster two-track recruitment by target (enhancing the strategic recruitment of R&D personnel and annual recruitment)
- Internship programs in collaboration with major universities

#### **Key Recruitment Activities**

HQCL uses a variety of channels to secure a pool of talented individuals. Most notably, the company has signed partnership agreements with six universities in South Korea, providing academic-industry internship programs and offering outstanding students opportunities for full-time employment, thereby securing talent in the field of science and engineering ahead of others and promoting its recruitment. At its business site in Lianyungang, China, HQCL secures outside talent to meet the demands in areas with limited internal capacity such as diamond wire sawn and mono-like-multi, by acquiring new search firms, accepting internal recommendations and carrying out academic-industry cooperation activities. As a result, the company was able to recruit experienced engineers in diamond wire sawn and talent for ingot R&D. HQCL will continue to develop and secure the industry's top talent with experience and technological expertise in the field.

# **Global Talent Development**

With a view becoming a top global company through its exceptionally talented people, **HQCL** operates a HR development system and offers various training programs.

# Talent with Core Values (Challenge, Dedication, Integrity)



## Challenge

Pursuing excellence through change and innovation by breaking away from complacency

- Engaging in active self-development towards being the best in one's field.
- Finding opportunities and new ways of doing things through open-mindedness and creativity.
- Setting challenging goals and working towards achieving them with a can-do spirit.

#### Dedication

Treasuring the relationships with colleagues, company and customers, and commit to achieving a greater goal

- Putting "us" before "me" and "our goal" before "my goal."
- Treasuring the promise with customers and continuing to create customer value.
- Trusting in each other's abilities and collaborating based on strong sense of unity.

#### Integrity

Adhering to principles, being impartial, and taking pride in doing so

- Being honest and adhering to principles for long-term benefits.
- Separating business and personal affairs. Be impartial and treat others based on their performance and achievements.

#### Job Market System

**HQCL** has newly created the "Job Market" forum to optimize its job matching system. When there are staffing needs, the company posts job announcements to expedite the staffing process and provides opportunities for employees to identify their individual aptitudes.

#### Annual Training Programs<sup>1)</sup>

#### HQ

- Understanding the corporate vision and alignment with individual goals
- Introduction of the roles of each division and coordination process

#### New Employee Training Program

- Identification of the areas of expertise required from new employees through interviews with senior staff
- Building team work and loyalty through group activities
- Improving the level of understanding of the entire production process and gaining experience through training sessions on the production line

#### Individual Job Competency Program

Development of expertise and application into practice

#### Internal Program for Language Skills

- Global competency
- Business communication skills

#### Legally Mandated Training (Sexual Harassment and

- Prevention of sexual harassment and security breaches
- Harassment and Data Security)

   Creating a healthy work environment

# Competency Development Program after Involuntary Resignation

**HQCL** offers various re-employment and start-up support programs for those employees who have involuntarily resigned

from their positions. The company provides counseling services and re-employment and business start-up support programs with a 3-month follow-up process so that they can maintain a stable standard of living after involuntary retirement.

# **Performance Evaluation and Compensation**

**HQCL** is committed to enhancing its employees' level of job satisfaction and improving their performance through a fair and reasonable performance evaluation and compensation system.

#### Fair Performance Evaluation System

HQCL sets its performance goal based on Key Performance Indicators (KPI) for the company, executives, team managers and staff at the beginning of each year. Evaluation is conducted in terms of achievement and level of competence on executives, team managers and staff based on upper level organization and individuals.

In addition, the company provides opportunities for early promotion based on competence and performance so that employees can reach their full potential through a challenging spirit.

HQCL Qidong has established an evaluation and compensation system based on the company's strategic goals, according to which employees in managerial positions must fill out goal management cards (individual KPIs) and those in production positions are evaluated on a monthly basis by business units in connection with WS KPIs. In doing so, HQCL has improved the objectivity and fairness of its evaluation process and seeks to align its corporate goals with individual performance evaluations.

#### Fair Compensation

HQCL's compensation system comprehensively considers an individual's performance evaluation and the company's sustainability issues. Wages include the base pay, regular bonuses and welfare allowances, while performance bonus is offered in different amounts according to three categories: executives, team managers and staff.







Hanwha Q CELLS SUSTAINABILITY REPORT 2017 Caring for Our People 24 • 25

The group-wide training also includes regular executive breakfast, value program, programs for new executives and team managers, promotion candidate programs, core-talent program, entry programs for new and experienced employees and HPMP.

# **Human Rights and Welfare**

# **Respect for Human Rights**

HQCL fully endorses international standards and guidelines including the UN Universal Declaration on Human Rights, the Convention on the Protection of Human Rights and Fundamental Freedoms, and the UNGC Ten Principles. HQCL also strictly prohibits child and forced labor and any discrimination based on gender, religion, political opinion, social status, nationality, or race in its recruitment, job assignments, promotions, wages and training, in accordance with the International Labour Organization's Conventions and labor related laws and regulations.

## Prevention of Sexual Harassment

HQCL provides sexual harassment prevention training for all employees at least once a year to create a healthy work environment and improve job satisfaction.

## **Labor-Management Relations**

**HQCL** is committed to protecting the rights and interests of its employees. In 2016, the company held a meeting with employee representatives to review the clause on the "Group Negotiation of Wages" at business sites in Lianyungang and Qidong, and successfully reached an agreement. Going forward, HQCL will continue to improve its collective bargaining process to protect employees' wage increase rights and ensure that their salaries are in line with corporate labor productivity.

## **Employee Welfare**

HQCL provides quality welfare programs for employees and creates a healthy work environment to increase their loyalty and performance.

## Employee Welfare Programs<sup>1)</sup>

- Shuttle bus for commuting, cafeteria
- Group accident insurance for employees, medical check-ups for employees and their spouses
- Intensive English instructional programs, foreign language instructional programs
- Rewards for long-term employment (10, 20, and 30 years)
- Financial support for children (congratulatory gifts upon school admission, tuition), leaves and payment for special family occasions
- Pregnancy support system (leaves, financial support), reduction of working hours during pregnancy
- Daycare center, rescheduling working hours for parents
- Gifts to commemorate Labor Day and Anniversary of the Company's Founding
- 5-day work week, refresh leave (up to 10 days)

1) Programs may vary depending on the workplace.

## **CASE** Improving Support for Work-Life Balance

times for the purpose of undergoing infertility the mental health of pregnant employees and handles their grievances, supporting their worklife balance after childbirth by providing daycare center and maternity service facilities.

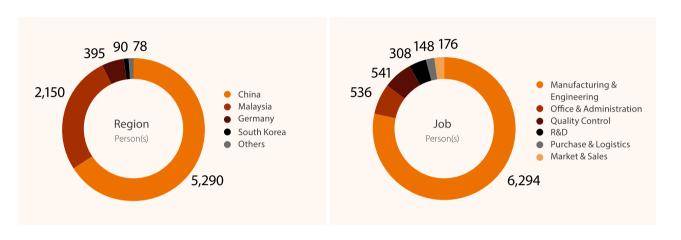
HQCL implements a work-life balance system

At its business site in Germany, HQCL provides to enhance the competitiveness of its female a flexible working environment through workforce and improve workplace culture. flexible work hours, as well as part-time and The company encourages and supports telecommuting systems based on employees' motherhood by, for example, allowing female job positions. In addition, employees can extend employees to take a 30-day leave up to 3 their parental leave up to one year, and HQCL provides support so that up to 20 children can treatment, with the first 30-day leave being a attend the kindergarten located in Zandersdorfpaid one. The "Moms Package" helps safeguard Brena near the company to create a more familyfriendly working environment for employees.



# **Human Resources (HR) Performance**

Category	Unit	2014	2015	2016
No. of Employees	Person(s)	1,396	9,905	8,003



	Category	Unit	2016
Canadan	Male	D(-)	4,809
Gender	Female	Person(s)	3,194
New Employees	Male		2,103
	Female	Person(s)	1,033
Retired	Male	D ()	2,424
	Female	Female Person(s)	
	Training Hours (per person)	Hour/Person	38
Training <sup>1)</sup>	Training Cost (per person)	USD/Person	434
D. C	Male		58(68%)
Performance Evaluation	Female	Person (%)	27(32%)
Parental Leave & Return to Work <sup>2)</sup>	Employees on Parental Leave		88
	Returned to Work	Person (%)	85(96%)
	Worked for 1 Year after Returning from Parental Leave		65(76%)

1) Based on the headquarters in South Korea and the exchange rate as of the end of 2016 (1 USD = 1,205 KRW)

2) Based on the business sites in South Korea, China (Qidong, Lianyungang) and Malaysia.

Hanwha Q CELLS SUSTAINABILITY REPORT 2017 Caring for Our People 26 • 27

# **Health & Safety**

# Occupational Safety and Health Principles

HQCL endeavors to address health and safety risk factors in each of its business sites and actively implements accident prevention activities. By building a safety and health management system, the company effectively manages and improves safety and health activities at its business sites. HQCL will continue its efforts to prevent accidents so that all employees can work in a safer environment.

# Activities to Promote Employee Health

In an effort to promote employee health, HQCL conducts monthly hygiene inspections, health consultations, safety and health campaigns, and chemical certification training for chemicals operators.

# Occupational Safety and Health System

**HQCL** has established an occupational safety and health system to prevent severe and industrial accidents within business sites and proactively respond to external demands for occupational safety and health. HQCL Malaysia prioritizes the safety of its employees. Having acquired the OHSAS 18001, an international standard for safety and health management systems, the company takes active measures to prevent employee accidents and manage their health. Safety and health activities within business sites are implemented by the EHS and IMS departments, and major issues are discussed at Head of Department (HOD) meetings and the EHS Committee. Furthermore, the company conducts risk assessments associated with the Hazard Identification, Risk Assessment, and Determining Control (HIRADC) document system, weekly and monthly site inspections, and chemical risk assessment and monitoring.

# Occupational Safety and Health Management Performance<sup>1)</sup>

Ca	ategory	Unit	2014	2015	2016
	LTIFR <sup>3)</sup>	-	0.00	1.16	2.55
Employee <sup>2)</sup>	Industrial Accident Rate <sup>4)</sup>	%	0.00	0.10	0.29
	Fatalities	Cases	0	0	0
Cumpliana	LTIFR	-	-	-	1.18
Suppliers	Fatalities	Cases	0	0	0

- 1) Based on the business sites in China (Lianyungang) and Malaysia
- 2) Based on the business site in Malaysia
- 3) Lost Time Injury Frequency Rates: (Cases of lost time injury x 1,000,000) / (Total annual working hours)
- 4) (Number of industrial accident victims / Number of workers) x 100

# **Information Security**

## **Emergency Response System**

Failure of an early response to a minor accident may lead to large accidents and greater damage. Each of HQCL's business sites is equipped with an Emergency Response Team (ERT) in charge of prompt early response and prevention of further damage in the event of an accident. In addition, regular training is conducted to ensure proper operation of the emergency response system. HQCL Malaysia conducts fire evacuation drills and responsive training for the leakage of visible and chemical substances in association with the fire authorities in Malaysia.

**HQCL** Qidong conducts annual emergency training against fires, leakage of chemicals, and food poisoning. A total of 17 training sessions have been conducted in 2016.

# Occupational Safety and Health Management Activities for Business Partners

With the aim of achieving mutual sustainable growth with its business partners, HQCL strives to support its partners reinforce their competitiveness in occupational safety and health. In this regard, the company has established the Operational Guidelines for Operators and manages EHS-related matters in accordance with contracts executed with suppliers that may influence its EHS performance. When handling hazardous materials, all operators, including those of the suppliers, are required to obtain a permit in advance in accordance with its licensing system for dangerous operations.



**Emergency Response Training** 

## **Information Security Policy and Activities**

**HQCL** implements an information security system pursuant to the information security policy of the Hanwha Group. The company has an organizational structure capable of handling information security incidents, which includes the Information Protection Committee consisting of the head of HR and relevant team managers in the event of a security breach or data leakage. In addition, **HQCL** has designated Information Security Managers at its production facilities and sales companies to distribute a set of information security rules and guidelines to all employees throughout the company. To date, there has not been any loss caused by security violations of customers' personal data and technical information. HQCL will make further efforts to prevent information leakage by introducing a security solution that screens for any personal information contained in outgoing documents from information devices, while providing information security training programs to inform its employees of security breach cases and prevention measures.









# **Caring for the Planet**

Hanwha Q CELLS Co., Ltd. will enhance resource efficiency and lead environmental protection by using energy and raw materials the right way.

- 33 Environmental Management System
- 34 Climate Change
- 35 Operational Eco-Efficiency
- 36 Life Cycle Assessment

• Hanwha Q CELLS Technology & Innovation Headquarters Germany

# Management Approach

# Background

The growth of the solar industry has brought more attention to the potential environmental costs from the use of solar photovoltaic modules, as they contain certain materials that cause electronic waste upon disposal and are manufactured through microfabrication that generates environmental pollution. Solar modules made with new technologies, in particular, may contain certain unknown materials with severe toxicity, despite the fact that they may have higher efficiency and lower cost. For these reasons, the potential environmental impact of the solar industry is monitored more strictly by the government and society, in addition to much greater demands being placed on companies to voluntarily carry out activities to prevent environmental pollution.

# **Approach**

**HQCL** seeks to protect the environment by using raw materials more efficiently. To this end, HQCL identifies environment and energy-related issues and impact in accordance with the standards of the environmental management system (ISO 14001) and energy management system (ISO 50001).

# **Key Performance**

**Energy Consumption** 

Water Consumption

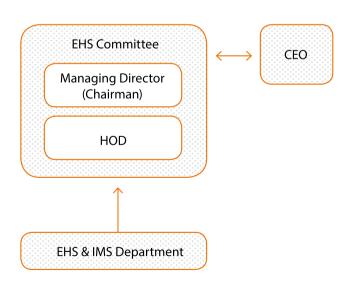
# **Environmental Management System**

# **Environmental Management Policy**

HQCL implements environmental management with a view to providing products and services that will improve the quality of life for the mankind.

# **Environmental Management Implementation System**

HQCL complies with the environmental safety and health policy (ECO-YHES) built on the Hanwha core values regarding the environment, safety and health. To enhance its environmental safety management to meet global standards, the company has established annual KPI goals and a master plan for performance indicators regarding greenhouse gas (GHG), energy productivity, and occupational accident rates, according to which targets will be managed from a mid- to long-term perspective until 2020. To minimize the environmental impact caused by products and services as well as production, each business site has established and effectively implemented its own environmental management system. Business sites in Malaysia and Qidong, China, have acquired the ISO 14001 environmental certification and practice environmental management. In addition, groups of personnel have been assigned to each business site for preventive activities.



# **Climate Change**

# **Climate Change Response Policy**

Amid growing awareness on climate change around the world, more concrete efforts are being made to reduce GHG emissions, such as the Paris Climate Agreement. **HQCL** is actively engaged in responding to the global issue of climate change based on its own environmental management system.

# **Energy Consumption and GHG Emissions Control**

HQCL makes various efforts to minimize GHG emissions from manufacturing products at business sites and product usage. The company considers direct emissions (Scope 1) and indirect emissions (Scope 2) as well as other indirect emissions (Scope 3) in calculating GHG emissions. To manage direct emissions, each business site has installed exhaust treatment systems within its production facilities, in addition to conducting voluntary monitoring by building GHG inventory. To manage indirect emissions, each business site reviews the emissions of electric power companies.

## **Energy Saving Activities at Business Sites**

**HQCL** Qidong has replaced 5,200 lighting fixtures in its business site with LED lights, reducing USD 61,049 in annual power costs. It is also expected that an additional 3,000 lighting fixtures will be replaced to improve energy efficiency.









61,049

Annual Electricity Saving

1) Based on the foreign exchange rate as of the end of 2016 (1 USD = 6.945 CNY)

# CASE Utilizing Photovoltaic Modules at the Hanwha Group Headquarters

The exterior of the Hanwha Group headquarters in Seoul is currently being renovated by applying solar photovoltaic technology. The building's exterior is composed of solar photovoltaic modules that feature state-of-the-art design, while the use of curtain walls (aluminum outer walls) creates an aesthetically pleasing effect and improves thermal efficiency at the same time. Furthermore, plans are underway to install 132.6 kWh photovoltaic modules at the Hanwha Building.



# **Operational Eco-Efficiency**

#### **Use of Raw Materials**

HQCL guarantees the responsible use of resources. To this end, the company constantly improves its production processes, facilities, and raw materials. The core purpose of these efforts is to reduce the use of raw materials, additives and consumables. HQCL Malaysia has reduced chemical usage by 50% by using alternative chemicals in wastewater treatment. HQCL Qidong has employed the eco-design process in product planning and designing stages to reduce the use of ingredients.

## **Waste Management**

HQCL places priority on the prevention of waste generation and recycling when handling waste that has already been generated. In other words, the company minimizes the generation of waste, in addition to recycling any inevitably generated waste through eco-friendly processes. Disposal of waste is handled in accordance with the legal requirements and regulations in each country, and regular audits are conducted on actual work facilities to guarantee legal compliance.

# **Hazardous Material Management**

Whenever a new hazardous material is used in production, the company's hazardous material management team verifies the availability of alternative materials. The team also identifies and evaluates the potential risks of all materials in the waste treatment stage. In addition, HQCL conducts employee training on chemicals and emergency drills to prepare for the possibility of hazardous chemical leakage.

# **Water Management**

At HQCL, water is used in most production processes. Wastewater generated from production is purified through a water treatment system, and the purified water is then resupplied to production. Through this system, its headquarters for Technology & Innovation in Germany and HQCL Malaysia was able to reduce more than 30% of its wastewater generation. In May 2017, HQCL Qidong established a system for recycling Electrodeionization (EDI) concentrate as industrial water to reduce the use of water resources, thereby reducing the annual use of water resources by 35,000 tons.

## **Air Pollutant Management**

HQCL strictly manages air pollutants generated in the course of production process by requiring air pollutant management at each business site to meet its own standards that are stricter than the legal standards of the local governments. HQCL Malaysia thoroughly controls the discharge of air pollutants through approved stacks, and has installed pretreatment systems such as scrubbers and dust collectors to prevent the discharge of toxic substances.

# **Biodiversity**

In recognition of the importance of preserving biodiversity, HQCL manages its impact on biodiversity in the neighboring areas of business sites at home and abroad in cooperation with the local governments and communities. HQCL's business sites are located within industrial development zones where no ecosystem protection zones or habitats of endangered species have been found in the vicinity. In addition, there has been no case of leakage of hazardous materials affecting biodiversity.

## CASE Environmental Award by the Governor of Indiana, USA

In 2015, HQCL USA was awarded the Indiana Governor's Award for Environmental Excellence in recognition of its contribution to constructing a photovoltaic power plant with 10.9 MW capacity in Indianapolis, Indiana, on a land previously designated as an environmentally contaminated site by the United States Environmental Protection Agency (US EPA) subject to monitoring after the completion of environmental improvement. HQCL USA built and still operates its photovoltaic power plant on this reclaimed site.

The award is an acknowledgement of the company's contribution to transforming a contaminated and deteriorated land into a photovoltaic power plant that can generate eco-friendly energy. Annual CO2 savings from this facility amounts to 13,235 tons, equivalent to the annual carbon emissions from 1,800 households.

13,235 tco<sub>2</sub>e

Reduction of CO<sub>2</sub> emissions



Hanwha Q CELLS SUSTAINABILITY REPORT 2017 Caring for the Planet 34 • 35

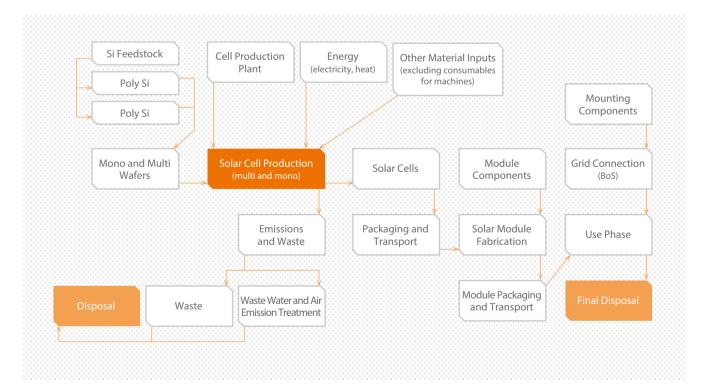
# **Life Cycle Assessment**

## **Product Life Cycle Assessment (LCA)**

**HQCL** conducts product life cycle assessments (LCA) to identify the potential environmental impact of the purchasing, development, production, distribution, usage, and disposal stages. LCA refers to a systematic analysis of the environmental impact throughout the entire life cycle of a product. This includes an overall assessment of both upstream processes such as production of raw materials, additives and consumables as well as downstream processes such as product usage, shipping and disposal. To manage the environmental impact of the actual production process, HQCL comprehensively considers business site information and environmental effect from the supply chain. In particular, HQCL conducts LCA in all stages of photovoltaic module production, including the extraction of silicon, manufacture of wafers, production of cells, manufacture of modules, and the installation of products and systems.

LCA considers the production and packaging materials, energy consumption, shipping distance, and wastes pertaining to each product's life cycle. The validity of the research outcome is guaranteed through the use of an assessment software application and scientifically verified database. By gaining a thorough understanding of the environmental impact of its products, HQCL seeks to actively engage in overcoming its vulnerabilities. LCA results consist of comprehensive CO<sub>2</sub> emissions which confirmed that power generation from HQCL's photovoltaic modules coproduced more eco-friendly power compared to other fossil fuel energy generators.





# **Recovery & Recycling System**

HQCL strives to promote the recovery and recycling of waste products by introducing the Extended Producer Responsibility (EPR) program. Notably, HQCL participates in the PV Recycling Program in some major European countries.

## **Carbon Footprint Certificate in France**

HQCL received the Carbon Footprint<sup>1)</sup> certificate for its PV module by the French institute Solstyce. This certification confirmed that HQCL's products discharge carbon dioxide (CO<sub>2</sub>) below 400 kg/kWp. According to the carbon footprint standard, its level was as low as CRE3 and CRE4. This puts HQCL in the position to bid in public tender calls for PV projects in France and solidifies its position in the European market for eco-friendly products.

1) Carbon footprint refers to the total amount of GHG emissions directly or indirectly discharged from human activity and production and consumption of products, converted into CO<sub>2</sub>





Hanwha Q CELLS SUSTAINABILITY REPORT 2017 Caring for the Planet 36 • 37

# **Environmental Performance**

# **Energy and Greenhouse Gas**

	Category	Unit	2014	2015	2016
Energy	Energy consumption		1,224	1,705	1,959
	Electricity		1,183	1,652	1,905
	Steam	— ТЛ —	32	41	37
	LPG		9	12	17
	GHG emissions		1,108,637	1,543,994	1,971,232
GHG <sup>1)</sup>	Scope 1	tCO₂eq	557,001	773,612	1,083,057
	Scope 2	_	551,637	770,382	888,175

1) GHG emissions are based on energy consumption

## **Water and Wastewater**

Category		Unit	2014	2015	2016	
Water	Wate	er consumption	Ton	3,543,230	4,546,960	4,851,628
Wastew		ewater discharge	Ton	1,489,207	1,579,429	2,373,727
Wastewater <sup>2)</sup> BOD <sup>4</sup> Suspend		Malaysia		105	774	1,083
	COD <sup>3)</sup>	Qidong		146	76	89
		Lianyungang		450	450	450
	BOD <sup>4)</sup>	Malaysia	mg/L	-	0.94	1.10
	<u> </u>	Malaysia		99	67	100
	Suspended solids	Qidong		38	8	5
	Solius	Lianyungang		400	200	200

2) No heavy metal emissions

3) Chemical Oxygen Demand
4) Biochemical Oxygen Demand

## Waste

Category		Unit	2014	2015	2016
Waste generation			6,234	7,486	12,31
	Landfill		3,436	5,435	10,10
Waste Ha	Recycling	Ton	2,770	2,010	2,12
	Others		27	41	8
	Hazardous waste generation	_	5,610	8,526	10,07

# **Air Pollution**

	Category		Unit	2014	2015	2016
		Malaysia		0.10	0.04	0.03
	VOC <sup>1)</sup>	Qidong		0.00	0.00	0.00
		Lianyungang		0.00	0.00	0.00
		Malaysia		0.03	0.00	0.00
	NOx	Qidong		20.00	25.20	20.20
		Lianyungang	mg/m³	1.27	1.27	1.27
Air Pollution	SOx	Malaysia		0.00	0.00	0.00
		Qidong		0.02	0.20	0.19
		Lianyungang		0.00	0.00	0.00
	Particle matter	Malaysia		0.17	0.01	0.01
	raiticle matter	Qidong		1.90	0.23	0.02
	Ozone depleting substance	Qidong	kg	1,907	1,589	5,562

1) Volatile Organic Compounds

# **Environmental Investment**

	Category	Unit	2014	2015	2016
Environmental	Environmental investment	LICD	71,344	144,100	451,250
Investment	Environmental facilities operation	USD	1,500,224	3,500,290	3,200,246

# **Compliance Reporting**

HQCL closely monitors and complies with environmental laws and regulations, avoiding any environmental violations that would cause fines or legal sanctions. No violation of environmental law was made in 2016.

Hanwha Q CELLS SUSTAINABILITY REPORT 2017 Caring for the Planet 38 • 39









# **Growing with Our Partners**

As a globally operating company, Hanwha Q CELLS Co., Ltd. maintains partnerships with suppliers around the world. With a strong commitment to mutual growth with its suppliers, HQCL strives to create unique values for its customers.

- 43 Supply Chain Management
- 46 Conflict-Free Minerals
- **47** Customer Satisfaction
- 48 Research and Development



# Management Approach

# Background

As competition among companies extends to competition among suppliers, supply chain management (SCM) is considered an integral part of business operation. Referring to the management of the economic, social and environmental impact of suppliers, SCM is emerging as a key part of fulfilling corporate social responsibility. Recently, global companies have been applying their sustainability activities to their second and third-tier suppliers to promote sustainability activities and improve their risk management.

# Approach

As a global company, **HQCL** maintains business relationships with suppliers around the world which requires the company to maintain stringent management of purchase and procurement. Its suppliers include manufacturers of photovoltaic (PV) cells and modules as well as various manufacturing and equipment companies.

# Key Performance

Supplier assessment

Customer satisfaction survey results1)

1) On a scale of 1 to 6, with 1 being the highest level of satisfaction

Growing with Our Partners

# **Supply Chain** Management

# **Sustainable Purchase System Purchase Strategy**

As a global company, HQCL maintains business relationships with suppliers around the world in line with its mid-term and long-term strategy to become "Globally Ranking No. 1 in Quality, Productivity and Cost Competitiveness." Furthermore, HQCL selects and assesses its suppliers based on an integrated vendor management system, and ensures that the suppliers follow a specific set of principles.

# **Purchase Management Organization**

**HQCL** operates a purchasing team in charge of supplier management and related activities. The company's quality management team conducts assessments on a regular basis to proactively manage potential risks regarding its suppliers.

Category	Responsibility and Authority
Purchase Team Director	Reviews purchase orders, signs purchase agreements, and manages delivery and performance.
Request Team Director	Places orders and inspects products (e.g., equipment, facilities, works, consumables).
Quality Team Director	Secures the quality of materials.

# **Purchase Management Process**

Through its Purchase Management Process, HQCL secures stable delivery and quality of products while complying with environmental safety and health requirements in its purchase of raw materials and equipment. The process is applied throughout the overall purchase activities covering raw materials, materials for production facilities, testing and measuring equipment, services, and construction work. In addition, the company encourages its suppliers to comply with HQCL's Code of Conduct while promoting their voluntary compliance.

# **Supplier Risk Management**

**HQCL** selects Critical Suppliers, then identifies and manages their



#### Risk Identification

HQCL has designated a group of Critical Suppliers based on the company's dependence on them and their impact on its business operation. HQCL's major suppliers are raw material companies, whose economic and social risks are identified and managed.

#### Risk Management

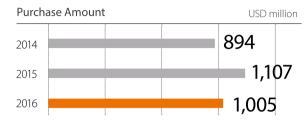
**HQCL** reviews the financial statements, manpower status and ISO certification status of its suppliers, and operates a pool of vendors to classify them based on risk as part of its risk management process.

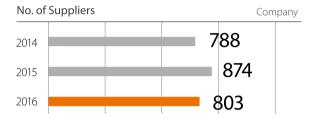
## Risk Monitoring and Feedback

**HQCL** undertakes ongoing and regular monitoring of its areas for improvement and reports important issues to the Purchase Team and Quality Management Team to share them at a corporate-wide level.

# **Status of Suppliers**

As of the end of 2016, **HQCL** has business relations with 803 suppliers for the procurement of materials and parts needed for production.





# **Supplier Evaluation Process**

**HQCL** evaluates suppliers based on the Audit Guidelines established in 2015. The Guidelines define the standardized procedures for approval, planning, implementation and reporting for each type of audit. The Global Quality Team is responsible for coordinating and adjusting the audit of suppliers, categorized according to the purpose and scope of audit as follows:

#### Types of Evaluation

Category	Description		
Qualification audit	Suppliers are required to pass the quality inspection of each item to be approved as a vendor.		
Surveillance audit	Vendors undergo an audit process on a regular basis.		
Process audit	Causes of critical claims and quality issues are identified and resolved.		

Auditors must be reliable and fair with the knowledge of standards and experience in the field and are required to complete training programs including ISO and OHSAS. Audits are conducted in November every year, and the importance of each material is classified and used for planning the audit for the following year.

#### Areas of Evaluation

Item	Description
Management System	Certification of ISO 19001, ISO 14001, OHSAS 18001, qualification of QA engineers and administrators
Environment & Safety	Availability of REACH and RoHS, emergency procedures, safety training, risk identification and evaluation process
Import Inspection	Compliance with the inspection process for raw materials and imported items inspection, material management

# **Supplier Evaluation**

Audits are prepared, executed and followed up based on the "FRM-15-06-0104-EN" document, which includes surveys and checklists. To check the quality management system and the competence level of products and services, auditors audit production facilities, and the results are shared with the management and relevant teams through the company newsletters.

#### Audit Process



# **Evaluation Results in 2016**

After an audit is completed, the findings are classified into Critical, Major, Minor and Opportunity for Improvement. Any critical non-compliance found is reported immediately to the heads of the Local and Global Quality Divisions, to whom the non-compliant division must also submit a report. The critical non-compliance status is then lifted by the head of the Global Quality Division upon validation of the efficiency of improvement measures. In 2016, HQCL audited 58 companies.

## **Improvement Measures in 2016**

**HQCL** identifies potential risk factors through supplier audits and requires measures for improvement when necessary.

Audit Case	<b>76</b> 2014	<b>54</b> 2015	2016
Accepted	26	2015	2016
To be Development	2014	2015	2016
Not Accepted	2014	2015	2016
Not Applicable	<u>5</u>	2015	2016

## **Future Plans**

In 2017, HQCL will further strengthen its audit process by raw material type and audit 153 companies. The audit list is updated on a quarterly basis to ensure that new suppliers are not excluded from the list.

Hanwha Q CELLS SUSTAINABILITY REPORT 2017

Growing with Our Partners

44 • 45

# **Conflict-Free Minerals**

# **Conflict Mineral Policy**

Recently, there have been increasing demands for social responsibility regarding the procurement of minerals. In particular, there are concerns over environmental pollution and human rights violations such as child labor that may arise in the process of mining minerals such as tantalum, tin, tungsten and gold found in the Democratic Republic of the Congo and surrounding countries. HQCL fully supports the social significance of restricting the use of conflict minerals and strictly adheres to the principle of using no conflict minerals in the process of manufacturing its products in an effort to strengthen a corporate culture that values human rights and environmental issues.

## **Status Survey and Results**

**HQCL** makes every effort to eliminate the use of conflict minerals across the entire value chain including suppliers' smelters, and closely monitors the status of conflict minerals.

#### Status Survey Process

- Checking for any conflict minerals in the list of materials used in production processes
- Confirming no conflict minerals are used in suppliers' products and requesting the place of origin from suppliers that may be at risk of using conflict minerals
- Reviewing the use of conflict minerals in all HQCL products

Tin is the only conflict mineral required to produce HQCL's products. HQCL has confirmed that the tin used in its products did not originate from the conflict zones by requesting its suppliers to provide the place of origin. HQCL will eliminate the use of conflict minerals by maintaining a high level of transparency and continuous monitoring of its suppliers' procurement process.

#### **Future Plans**

HQCL will request proof of the place of origin from all its suppliers that are at risk of using conflict minerals. In addition, suppliers will be evaluated to ensure that no conflict minerals are used.

#### **What Are Conflict Minerals?**

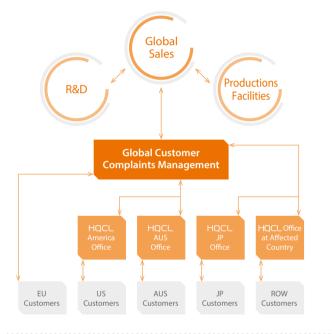
Conflict minerals refer to the four minerals – respectively, tin, tantalum, tungsten and gold – that are mined in the Democratic Republic of Congo and surrounding countries restricted by the United States Securities and Exchange Commission (SEC). In the process of mining these minerals, human rights and social issues arise when government forces or rebel groups profit from mining by committing human rights violations and exploitation of labor. In July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act was enacted to require electronics companies to join their efforts in this cause.



# **Customer Satisfaction**

# **Customer Satisfaction System**

**HQCL** recognizes that customer satisfaction management is an essential part of its business operation and makes every effort to minimize customer complaints. To this end, the company has established the Global Customer Complaints Management System and applies it to its global sales organizations, research centers, and productions facilities to resolve complaints from customers.



# CASE Solar Energy Exhibition for Customer Communication

HQCL participates in solar energy expos in various parts of the world including China, Japan, the United States and Europe. In 2017, the company joined 13 exhibitions as part of its customer communication strategy, including "2017 Intersolar Europe," one of the four major exhibitions participated by major companies not only in Europe but also in China and Japan. At the event, HQCL introduced its Q.HOME System, a total residential energy solution and the commercial Q.FLAT System, in addition to its solar energy modules.



#### **Communication with Customers**

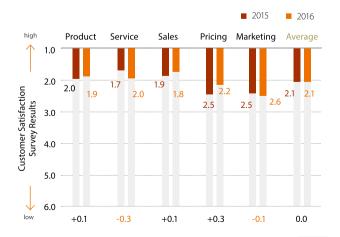
**HQCL** uses various communication channels to reflect customer feedback in its business operation.

#### • HQCL listens to the voices of customers through Website the use of its website. • HQCL responds to customer claims through its direct Sales and indirect sales network in 40 countries worldwide Network and operates dedicated organizations in key regions (Europe, Japan and South Korea). • HQCL conducts customer satisfaction surveys in the Customer Satisfaction categories of product, service, sales, distribution, and marketing support every fourth quarter. Survey • HQCL provides partner programs in major markets including Europe, Japan and South Korea, maintaining close coordination and communication through product training, promotional support, newsletters Partner and co-marketing. Program HQCL provides services through exclusive channels for partners (website, phone calls, and dedicated organizations).

## **Customer Satisfaction Survey**

**HQCL** conducts customer satisfaction surveys of its major customers in the areas of Product, Service, Sales & Distribution, Pricing and Marketing. In 2016, surveys were conducted in 14 countries including Germany, France, Italy, the United Kingdom and the United States with a total of 339 respondents. The results identified product quality as **HQCL**'s strength and price as its weakness. The average satisfaction score<sup>1)</sup> was 2.1, which is the same as the score in 2015.

1) On a scale of 1 to 6, with 1 being the highest level of satisfaction



Hanwha Q CELLS SUSTAINABILITY REPORT 2017 Growing with Our Partners 46 • 47

# **Research and Development**

# Research and Development (R&D) Policy

**HQCL** undertakes R&D projects in consideration of market conditions and competitors' activities, as well as performance, cost and timeline to develop products with the highest level of technological innovation.

## **R&D System**

HQCL operates its Technology & Innovation Headquarters in Thalheim, Germany to expedite the application of new technologies to mass production and respond to rapid technological change and innovation in the solar energy industry. The Technology & Innovation Headquarters develops products with superior technology and innovative manufacturing processes, thanks to its exclusive R&D capability, pilot production and testing process, on which HQCL bases its industry standards such as 6-inch solar cells, square monocrystalline solar cells, Q.ANTUM cell technology, hot spot protection and PID (Potential Induced Degradation) prevention technology.

#### Test Lab

**HQCL** operates an in-house test lab certified by Verband Deutscher Elektrotechniker (VDE) for testing its products in extreme conditions such as hail and desert heat.

#### Global R&D Network

**HQCL**'s R&D Centers are operated in Germany, South Korea, China and Malaysia. At these facilities, the company creates innovative technologies, sets quality management standards and improves production processes.

## Open Innovation

Currently, joint R&D projects are carried out with part material and equipment companies in over 15 countries, more than five colleges in Germany, and 15 public and private research labs and institutes. **HQCL** is working on various R&D projects on reliability assessments and standardization as well as cells, modules, part materials and equipment.

# **Key R&D Activities**

## High Efficiency Cells Based on Kerfless<sup>1)</sup> Wafer

HQCL is able to produce eco-friendly products with less carbon emissions by reducing the wafering process and using Kerfless technology. In addition, HQCL invests in and carries out joint R&D projects with companies with Kerfless technology. As a result, its cell efficiency has increased to the level of commercialization, reaching higher than 19% in polycrystalline solar cells and 20% in monocrystalline solar cells. HQCL will to continue its R&D projects with the aim of commercialization by 2018.

1) Technology for manufacturing wafers without the cutting process





#### **R&D Performance**

**HQCL** has secured technological superiority by two or more power classes compared to the average industrial module output through ongoing R&D investment. The company has also succeeded in the commercialization of Multi PERC, the next generation solar cell technology, for the first time in the industry, strengthening its position as a global technology leader by expanding its production line.





1) A certain portion of cost including production operation was transferred to R&D after closing down the production unit in Germany in 2015.

2) Based on the exchange rate as of the end of 2016 (1 USD = 0.9506 EUR)

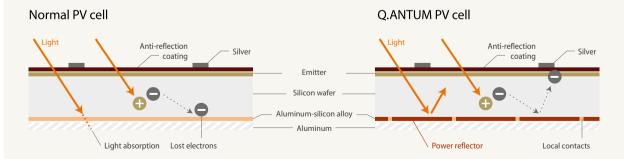
3) A patent management unit was newly established in 2015

# **Q.ANTUM**Technology



**HQCL** owns proprietary solar cell technology known as Q.ANTUM. The technology combines PERC<sup>1)</sup>, which increases solar cell efficiency by inserting a power reflector on the back of the cell, as well as new technologies including Anti-PID<sup>2)</sup>, Anti-LID<sup>3)</sup>, Anti-LeTID<sup>4)</sup> and Hot Spot protection. The company is capable of producing 4.2 GW of PERC-based cells per year (as of the second quarter of 2017 and including production by

Hanwha Q CELLS Korea), and has attained production of one billion units in June 2017, equivalent to power consumption by six million people in their households in a year. Q.ANTUM technology achieved the highest level of efficiency in polycrystalline solar cells in the world in 2011 and the highest efficiency in a polycrystalline module with quantum cell technology in 2015. The superiority of Q.ANTUM technology was further recognized by the 2015 Solar Award, 2017 Inter Solar Award and PV Magazine Innovation Award. Based on its high-quality and high-efficiency products, HQCL captured the highest market share in major markets including the U.S., South Korea, Australia and Turkey in 2016.



- 1) Passivated Emitter Rear Cell
- 2) Anti-PID (Potential Induced Degradation): Prevents induced performance degradation due to leakage current.
- 3) Anti-LID (Light Induced Degradation): Prevents induced performance degradation caused by the boron-oxygen complex due to light.
- Anti-LeTID (Light and elevated Temperature Induced Degradation): Prevents induced performance degradation caused by the boron-oxygen complex due to light and heat.

Hanwha Q CELLS SUSTAINABILITY REPORT 2017 Growing with Our Partners 48 • 49









# Making a Brighter **Tomorrow**

Hanwha Q CELLS Co., Ltd. fulfills its social responsibility in the areas of social welfare, arts, culture, public service and overseas financial aid.

53 CSR Activities



# **CSR Activities**

CSR Philosophy

# "Together, We Go Further"

HQCL has built trust and relationships with the local community based on its founding principle, "Business for Our Country" and corporate value, "Trust and Loyalty." HQCL is committed to fulfilling its social responsibility as a corporate citizen based on its CSR philosophy, "Together, We Go Further."

"Together, We Go Further"

Sharing, Consideration and Cooperation for Shared Growth



# **Eco-friendly Social Contribution Activities**

## **Energy Experience Program with Children from Multicultural Families**

**HQCL** hosted an Energy Experience Program for children from multicultural families with Hanwha Chemical, another affiliate of the Hanwha Group. Through this program, HQCL provided an energy education program to 20 elementary school students from multicultural families at a local children's center. Employees joined the program and taught the children about solar energy and raised their awareness on environmental protection. The program provided



an opportunity for students to experience a blackout, understand solar energy and build solar energy vehicles to learn about renewable energy.



- Experiencing Solar Energy
- • Building Solar Energy Vehicles

#### Walking For Earth – Making Donations by Walking

Waking for Earth is a charity program joined by the manufacturing and construction sectors of the Hanwha Group, where participants donate bicycles to children from low income families with funds raised by walking. Using smartphone applications, HQCL employees and general participants can raise KRW 1 for every 10m they walk. More than 1,800 employees joined this cause and walked the target distance of 100,000km. The funds raised were handed to the Kids & Future Foundation through which bicycles will be donated to children in low income families.





- 2016 Hanwha Walking For Earth Slogan •• 2016 Hanwha Walking For Earth Offli
- Event (Namsan, Seoul)

# **Happy Sunshine**

Hanwha

Campaign

## Hanwha Solar Forest

Hanwha is building the "Hanwha Solar Forest" through "Tree Planet," the official application of the United Nations Convention to Combat Desertification (UNCCD), through which the company plants trees in proportion to the number of virtual trees planted by application users. As a result of this campaign, Hanwha has planted 490,000 trees in six forests in South Korea, China and Mongolia between 2011 and 2016. The 260,000 trees planted in Ningxia, China, were grown at the tree nursery to which Hanwha had donated solar energy facilities. Through this campaign, Hanwha shares the value of solar energy, helps to prevent desertification and soil leakage, improves the quality of water and air, and controls pests.



- Before forestation of Hanwha Solar Forest No. 2 in 2013
- • After forestation of Hanwha Solar Forest No. 2 in 2015
- • Hanwha Solar Forest No. 6 in 2016

# Solar Energy Start-up School

In cooperation with the Seoul Metropolitan Government, HQCL has established the "Solar Energy Start-up School," a program based on the "Solar Energy Class" HQCL has been organizing with the Korean Federation for Environmental Movement since 2013 but this time targeting the general public. The purpose of this program is to raise awareness of the solar energy industry and build a social consensus, thereby supporting the growth of the industry itself. At the Solar Energy



• 2016 Happy Sunshine Solar Energy Start-up School Foundation Ceremony

Start-up School held in 2016, HQCL focused on the industrial trends, forecast, selection of location and viability, permit process, support policy, power trading procedure, design, construction, maintenance and financing. For a program designed for 100 participants, 200 people applied, confirming a great public interest in eco-friendly energy and enabling HQCL to promote itself as a solar energy solution provider.

# **Donation of Solar Power Facilities**

As a key part of **HQCL**'s CSR activities, the company installed solar power facilities at social welfare centers based on its extensive technological expertise. In 2016, it donated solar power generation facilities to two veteran's residences in Jincheon, Chungcheongbuk-do and the "Kotaemal Study Room" in Taebaek, Gangwon-do. The donation is expected to improve the quality of living and reduce electricity costs. In addition, the company provided support for the veterans and improved the welfare service for children in the local area.



• 2016 Happy Sunshine Solar Power Facilities Donation Ceremony

Hanwha Q CELLS SUSTAINABILITY REPORT 2017 54 • 55 Making a Brighter Tomorrow

# **Global CSR Activities**

## HQCL China

# Local Community-based CSR Activities

Employees in **HQCL** Qidong, China, volunteer to join its community-based CSR programs. They have donated their blood at the Qidong Blood Donation Center since 2012 and visited nursing homes to help clean and cut hair for senior citizens since 2013. In 2016, they organized a road safety campaign to maintain the safety of the roads.





#### Blood Donation

• • Volunteering at Nursing Home

## HQCL Malaysia

## Helping Local Children

HQCL Malaysia actively engages in donation activities for local children and teenagers. In 2016, HQCL donated used air conditioners to four local schools. In 2017, employees volunteered to help at three orphanages in addition to donating USD 1,337.



 Volunteering at the Rumah Shalom Foster Home

## **HQCL** Germany

## Donation to Stiftung Solar Energy Ethiopia

**HQCL** Technology & Innovation Headquarters in Germany helped install solar power systems in Ethiopia in 2013 and 2014 by donating systems to Stiftung Solarenergie Ethiopia. **HQCL** donated 8.4 kWp PV modules worth USD 3,955 and installed a solar power system for operating water pumps. The employees also donated directly to the foundation, and the company matched their donation 2-to-1. The donations over two years have reached USD 24,048.





- Solar Power System in Ethiopia
- • Using Water through the Solar Power System

# **Appendix**

- Materiality Analysis
- Third Party Assurance Report
- 62 GRI Index
- 65 UNGC
- 66 Awards

# **Materiality Analysis**

Hanwha Q CELLS Co., Ltd. conducts a materiality analysis to select topics for the Sustainability Report in accordance with the principles presented in the GRI and discloses details based on the material issues selected.

# **Materiality Analysis Process**

HQCL has identified 35 issues that have an impact on its sustainability based on an analysis of international standards, the media and internal management status. The company conducted a quantitative analysis of the 35 issues from the perspective of "Impact on HQCL (X-axis)" and "Impact on Stakeholders (Y-axis)," resulting in nine material issues finally being selected.

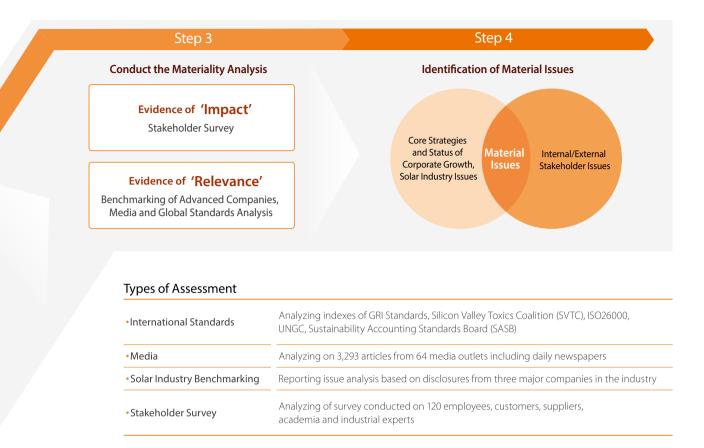


## **Result of the Materiality Analysis**

Hanwha Q CELLS SUSTAINABILITY REPORT 2017

The materiality analysis showed that global market development and business expansion had the most impact on stakeholders, demonstrating their high level of interest in the company's efforts and progress in becoming a global leader. The analysis also revealed that the issue of sustainable supply chain management had a high level of impact on the company, suggesting the increasing importance of sustainability issues in the industry, such as the environment of the value chain and human rights.





## Composition of the Report

Based on the material issues identified through the materiality analysis, **HQCL** reports its sustainability system, activities, progress and plans in line with the topics of the GRI Standards. The company also discloses its approach to management and performance through the "GRI Index" with regard to sustainability issues and aspects.

Issues	Stakeholders	GRI Standards Topic	Page	
① Quality & Service Improvement	Employees, Suppliers, Customers	Customer Health and Safety, Marketing and Labeling	36~37, 46~49	
2 Sustainable Supply Chain Management	Suppliers	Supplier Environmental Assessment, Supplier Social Assessment	43~46	
3 Saving Energy & Improvement of Efficiency	Employees, Government	Energy	34~35	
4 Customer Satisfaction Activities	Customers	Marketing and Labeling	47	
5 Shared Growth with Suppliers	Suppliers	Procurement Practices	43~46	
6 Eco-friendly Product & Service Development	Employees, Customers	Materials	36~37	
7 Pollution Management	Employees, Suppliers, Local Community	Emissions, Effluents and Waste	32~37	
8 Education and Training for Capacity Building	Employees	Training and Education	24~25	
Community Investment	Employees, Local Community	Local Communities	53~56	

Appendix 58 • 59

# **Third Party Assurance Report**

#### Introduction

Hanwha Q CELLS Co., Ltd. ("HQCL") commissioned DNV GL Business Assurance Korea Ltd. ("DNV GL"), part of DNV GL Group, to undertake independent assurance of the Sustainability Report 2017 (the "Report"). HQCL have responsibility for the preparation of the Report. The responsibility of DNV GL in performing the assurance work is to the management of HQCL in accordance with the terms of reference. DNV GL's assurance engagements are based on the assumption that the data and information provided by the client to us as part of our review have been provided in good faith.

#### Scope of assurance

The scope of assurance included a review of sustainability activities and performance data over the reporting period 1st January to 31st December 2016. This included:

- Evaluation of the Report on the adherence to the principles for defining the sustainability report content in the Global Reporting Initiative (GRI) Standards.
- Evaluation of the process for determining material aspects for reporting and the management approach to material issues and the process for generating, gathering and managing the quantitative and qualitative data in the Report.

#### Basis of our opinion

We performed our work using DNV GL's assurance methodology VeriSustain<sup>TM1)</sup>, which is based on our professional experience, international assurance best practice including International Standard on Assurance Engagements 3000 (ISAE 3000). We applied the limited level of assurance. The audit was carried out in July and August 2017. The site visits were made to HQCL headquarters in Seoul. We undertook the following activities as part of the assurance process:

- challenged the sustainability-related statements and claims made in the Report and assessed the robustness of the underlying data management system, information flow and controls;
- interviewed representatives from the various departments;
- conducted document reviews, data sampling and interrogation of supporting databases and associated reporting system and associated reporting systems as they relate to selected content and performance data;
- reviewed the materiality assessment report.

## Limitations

The engagement excludes the sustainability management, performance and reporting practices of HQCL' associated companies, subsidiaries, suppliers, contractors and any third-parties mentioned in the Report. DNV GL did not interview external stakeholders as part of this Assurance Engagement. Economic performance based on the financial data is cross-checked with internal documents, the audited consolidated financial statements and the announcement disclosed at the website of NASDAQ(National Association of Securities Dealers Automated Quotations) and HQCL's website (www.hanwha-qcells.com). These documents, financial statements and the announcements are not included in this Assurance Engagement. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. The baseline data for Environmental and Social performance are not verified, while the aggregated data at the corporate level are used for the verification. DNV GL expressly disclaims any liability and responsibility for any stakeholders.

## Conclusion

On the basis of the work undertaken, nothing comes to our attention to suggest that the Report does not properly describe the adherence to the Principles for defining report content in GRI Standards. The verification team has observed that there is general awareness of sustainability context across all different levels of the organization. Further opinions with regards to the adherence to the following Principles are made below;

# 1) The VeriSustain protocol is available upon request at DNV GL website. (www.dnvgl.com)

#### Stakeholder Inclusiveness

HQCL has identified internal and external stakeholder groups such as Shareholders/Investors, Employees, Customers, Local communities, Suppliers. HQCL engages with the stakeholders at the company and business unit levels through various channels. The examples of approaches to engagement with selected stakeholders are described in the Report. In the future, HQCL could present more aggressively the reasonable expectations and interests of stakeholders and report corresponding actions taken in the Report.

#### Sustainability Context

HQCL presents stakeholders the sustainability performances through their business model. HQCL addresses how material issues grouped into material issues are managed and what was achieved in 2016, which would help the stakeholder understand the management approaches toward the material aspects. In the future, HQCL could develop and manage the goal and long-term strategies with management performances.

#### Materiality

HQCL has conducted the materiality assessment to prepare the Report. Internal and external stakeholders were surveyed and 9 material issues are prioritized accordingly. HQCL considers the consistent way of selecting material issues so that the decision made by the management and daily operation are fully aligned with strategic sustainability management. The verification team has reviewed the materiality assessment process and nothing comes to our attention that would cause us to believe that material issues identified from the assessment are not reported.

#### Completeness

The Report has covered the sustainability performances of HQCL and management approach to material issues for the reporting period. The reporting boundary has been set to include domestic operations such as headquarters. Some performance information from overseas activities (Environment & Safety) are included. Nothing comes to our attention to believe that the Report does not cover material issues derived from materiality assessment.

#### Accuracy and Reliability

We found a limited number of non-material errors and these were corrected prior to inclusion in the Report. The data presented in the report were gathered from the teams responsible for data control in HQCL. The verification team interviewed the Person-in-charge, reviewed the process of gathering and processing data and information, and the supporting documents and records. The depth of data verification is limited to the aggregated data. Based on sampling verification and other reported information and available evidence, nothing comes to our attention that would cause us to believe that the data and information presented in the Report have any intentional error or material misstatement. In the future, HQCL could develop the process of gathering and processing data and information for the safety & Environment sector of overseas production corporations (China & Malaysia) in detail.

#### **Competence and Independence**

DNV GL Business Assurance is part of DNV GL Group and a global provider of certification, verification, assessment and training services, helping customers to build sustainable business performance. Our environmental and social assurance specialists are present in over 100 countries. The assurance work was performed by independent team which meets DNV GL's competence requirements. DNV GL was not involved in the preparation of any statements or data included in the Report except for this Assurance Statement. The verification team has complied with DNV GL's Code of Conduct.

August 2017 Seoul, Korea

In Kyoon Ahi

Country Representative DNV GL Business Assurance Korea Ltd.

# **GRI Index**

# General Standards

	al Stand		
Topic	Index	Contents	Page
Organiza	ational profile		
	102-1	Name of the organization	
	102-2	Activities, brands, products, and services	8~11
	102-3	Location of headquarters	6~7
	102-4	Location of operations	6~7
	102-5	Ownership and legal form	6~7
	102-6	Markets served	6~7
	102-7	Scale of the organization	6~7
	102-8	Information on employees and other workers	27
	102-9	Supply chain	
	102-10	Significant changes to the organization and its supply chain	
	102-11	Precautionary Principle or approach	
	102-12	External initiatives	65
	102-13	Membership of associations	65
Strategy			
	102-14	Statement from senior decision-maker	4~5
	102-15	Key impacts, risks, and opportunities	4~5, 19
Ethics an	d integrity		
	102-16	Values, principles, standards, and norms of behavior	18
	102-17	Mechanisms for advice and concerns about ethics	18
Governa	nce		
	102-18	Governance structure	14~15
	102-22	Composition of the highest governance body and its committees	14~15
	102-23	Chair of the highest governance body	14~15
	102-24	Nominating and selecting the highest governance body	14~15
	102-25	Conflicts of interest	14~15
	102-35	Remuneration policies	16
	102-36	Process for determining remuneration	16
Stakehol	der engagen	nent	
	102-40	List of stakeholder groups	
	102-41	Collective bargaining agreements	91.7%
	102-42	Identifying and selecting stakeholders	
	102-43	Approach to stakeholder engagement	
	102-44	Key topics and concerns raised	17
Reportin	g practice		
	102-45	Entities included in the consolidated financial statements	Annual Report (Form 20-F)
	102-46	Defining report content and topic boundaries	58~59
	102-47	List of material topics	58~59
	102-48	Restatements of information	2
	102-49	Changes in reporting	2
	102-50	Reporting period	2
	102-51	Date of most recent report	2
	102-52	Reporting cycle	2
	102-53	Contact point for questions regarding the report	2
	102-54	Claims of reporting in accordance with the GRI Standards	
	102-55	GRI content index	62~64
	102-56	External assurance	60~61

Hanwha Q CELLS SUSTAINABILITY REPORT 2017

# Topic-Specific Standards

Topic	Index	Contents	Page	References and Stated Omissions
GRI 204 Procui	rement Pract	ices		
	Manager	nent Approach	42	
	204-1	Proportion of spending on local suppliers	44	Raw Materials Supply Management of Form 20-F
GRI 301 Materi	als			
	Manager	nent Approach	32	
	301-3	Reclaimed products and their packaging materials	37	
GRI 302 Energy	у			
	Manager	nent Approach	32	
	302-1	Energy consumption within the organization	38~39	-
	302-2	Energy consumption outside of the organization	38~39	
	302-5	Reductions in energy requirements of products and services	Homepage	Carbon Footprint reporting
GRI 305 Emissi	ons	<del>,</del>		
	Manager	nent Approach	32	
	305-1	Direct (Scope 1) GHG emissions	38~39	
	305-2	Energy indirect (Scope 2) GHG emissions	38~39	
	305-5	Reduction of GHG emissions	34	
	305-6	Emissions of ozone-depleting substances (ODS)	38~39	
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	38~39	
GRI 306 Effluer	nts and Wast			
	Manager	nent Approach	32	
	306-1	Water discharge by quality and destination	38~39	
	306-2	Waste by type and disposal method	38~39	
	306-3	Significant spills	38~39	
	306-5	Water bodies affected by water discharges and/or runoff	35	
GRI 308 Suppli	ier Environm	ental Assessment		
		nent Approach	42	
	308-1	New suppliers that were screened using environmental criteria	44~45	
	308-2	Negative environmental impacts in the supply chain and actions taken	45	
GRI 404 Trainir	ng and Educa			
	Manager	nent Approach	22	
	404-1	Average hours of training per year per employee	27	-
	404-2	Programs for upgrading employee skills and transition assistance programs	25	
	404-3	Percentage of employees receiving regular performance and career development reviews	27	· <del></del>
GRI 414 Suppli	er Social Ass	essment		
	Manager	nent Approach	42	
	414-1	New suppliers that were screened using social criteria	44~45	
	414-2	Negative social impacts in the supply chain and actions taken	45	
GRI 416 Custor	mer Health a			
	Manager	nent Approach	32	
	416-1	Assessment of the health and safety impacts of product and service categories	36~37	-
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	-	No case
GRI 417 Marke	ting and Lab	eling		
	Manager	nent Approach	42	
	417-1	Requirements for product and service information and labeling	47	
	417-2	Incidents of non-compliance concerning product and service information and labeling	-	No case
	417-3	Incidents of non-compliance concerning marketing communications	-	No case
GRI 413 Local (				
		nent Approach	52	
	413-1	Operations with local community engagement, impact assessments, and development programs	53~56	
	413-2	Operations with significant actual and potential negative impacts on local communities	-	No such operting site
		,		

Appendix 62 • 63

# Other Standards

Topic	Index	Contents	Page	References and Stated Omissions
	curement Pract	ices		
	201-2	Financial implications and other risks and opportunities due to climate change	34	
GRI 203 Indi	irect Economic	Impacts		
	203-1	Infrastructure investments and services supported	53~56	
	203-2	Significant indirect economic impacts	54~56	
GRI 205 Ant	i-corruption			
	205-1	Operations assessed for risks related to corruption	-	100%, No significant risk identified
	205-2	Communication and training about anti-corruption policies and procedures	18	
	205-3	Confirmed incidents of corruption and actions taken	-	No case
GRI 206 Ant	i-competitive B	ehavior		
	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	-	No case
GRI 303 Wat	ter			
	303-1	Water withdrawal by source	38	
GRI 304 Bio	diversity			
	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	35	
	304-2	Significant impacts of activities, products, and services on biodiversity	35	
	304-3	Habitats protected or restored	35	
GRI 307 Env	rironmental Con	npliance		
	307-1	Non-compliance with environmental laws and regulations	39	
GRI 401 Emp	ployment			
	401-1	New employee hires and employee turnover	27	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	26	
	401-3	Parental leave	27	
GRI 402 Lab	or/Managemer	nt Relations		
	402-1	Minimum notice periods regarding operational changes	26	
GRI 403 Occ	cupational Healt	th and Safety		
	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	28	
	403-3	Workers with high incidence or high risk of diseases related to their occupation	28	
	403-4	Health and safety topics covered in formal agreements with trade unions	28	
GRI 405 Div	ersity and Equa			
	405-1	Diversity of governance bodies and employees	27	
GRI 406 Nor	n-discrimination			
	406-1	Incidents of discrimination and corrective actions taken	26	No case
GRI 407 Free	edom of Associa	ation and Collective Bargaining		
	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	26	No case
GRI 408 Chi				
	408-1	Operations and suppliers at significant risk for incidents of child labor	26	No case
GRI 409 For	ced or Compuls	•		
CDI 440 III	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	26	No case
GRI 412 Hur	nan Rights Asse	ssment		1000/ Council barrage and
	412-2	Employee training on human rights policies or procedures	-	100%, Sexual harassment prevention training
	412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	-	Review based on the supplier's code of conduct
GRI 418 Cus	tomer Privacy			
	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	-	No case
GRI 419 Soc	ioeconomic Coi			
	419-1	Non-compliance with laws and regulations in the social and economic area	-	No case

Hanwha Q CELLS SUSTAINABILITY REPORT 2017

# **UNGC**

HQCL supports the Ten Principles of the UN Global Compact (UNGC) regarding Human Rights, Labor Standards, Environment and Anti-Corruption. The company is committed to fulfilling its social responsibility by undertaking various activities and reflecting international standards in sustainability.

Classification	Principles	Key Activities
Human Rights	Businesses should support and respect the protection of internationally proclaimed human rights.	Compliance with the Ten Principles of the UNGC     Compliance with International Labor Organization (ILO) Standards
	Businesses should make sure they are not complicit in human rights abuses.	Sexual harassment prevention training     Inclusion of a human rights provision in agreements
Labor Standards	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	Compliance with the Labor Standard Act     Operation of a labor union
	<ul><li>4. Businesses should uphold the elimination of all forms of forced and compulsory labor</li><li>5. Businesses should uphold the effective abolition of child labor.</li></ul>	Compliance with laws regarding forced labor and child labor
	Businesses should uphold the elimination of discrimination in respect of employment and occupation.	Fair recruitment process     Performance-oriented employee evaluation
Environment	7. Businesses should support a precautionary approach to environmental challenges.	<ul> <li>Certification of the Environmental Management System (ISO14000)</li> <li>Compliance with national environmental laws and regulations</li> <li>Operation of waste product collection programs</li> </ul>
	Businesses should undertake initiatives to promote greater environmental responsibility.	<ul><li>Pollutant discharge control</li><li>Reuse and recycling of waste</li><li>Energy efficiency</li></ul>
	Businesses should encourage the development and diffusion of environmentally friendly technologies.	Eco-friendly product (carbon footprint) certification     Life-cycle assessment
Anti-Corruption	10. Businesses should work against corruption in all its forms, including extortion and bribery.	FCPA compliance training     Employee compliance training

Appendix 64 • 65

# **Awards**



## **Intersolar Award 2017**

HQCL was honored with the Intersolar Award 2017 in recognition of the high output, competitive installation cost, and energy efficiency of its reinforced steel-frame module based on the Q.ANTUM cells.



# **PV Magazine - Top Innovation Award 2017**

HQCL won the Top Innovation Award 2017 for the technological innovation and practicality of its reinforced steel-frame module designed based on the Q.ANTUM cells.



# **PV Magazine - Array Changing Technology Award 2017**

HQCL was recognized for the technological innovation and product performance with superior practicality and viability.



#### **Terawatt Diamond Award at SNEC 2017**

HQCL became the first foreign company to win the Terawatt Diamond Award at SNEC 2017 for three consecutive years. The award is given to the top ten companies with superior technological expertise and expo operation among more than 1,500 participants at the SNEC, the largest solar expo in China.



## **EuPD Research Top Brand PV 2017**

HQCL was selected as the "Top Brand PV 2017", a recognition presented to the best module brand by EuPD Research, for four consecutive years in Europe and two consecutive years in Australia.



# The Thirteenth Korea New Growth Management Award - Minister of Trade, Industry, and Energy

HQCL was recognized by the Minister of Trade, Industry, and Energy for its contribution to new growth management activities based on next generation growth engines in 2016.



# **Solar Industry Award 2015**

Q.PLUS module designed based on Q.ANTUM technology won the SOLAR INDUSTRY AWARD 2015 (Germany).



## **Photon Yield Measurement 2013/2014**

Q.PRO-G2 was selected as the top-performing polycrystalline module in the Photon Yield Measurement.

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Hanwha Q CELLS Co., Ltd. 2017 Sustainability Report



Through superior product quality and continuous technological innovation, HQCL paves the way for the global solar energy industry.



## CONTACT

Hanwha Q CELLS Co., Ltd. 5th Floor, 86, Cheonggyecheon-ro, Jung-gu, Seoul, Korea

TEL +82.2.729.2336 FAX +82.2.729.2086 WEB www.hanwha-qcells.com www.q-cells.com