22-I-0029
July 15, 2022

Japan Credit Rating Agency, Ltd. (JCR) announces the following credit rating.

Hanwha Q CELLS Japan CO., LTD. (security code: -)

<Assignment>

Long-term Issuer Rating:	A-
Outlook:	Stable

Rationale

(1) Hanwha Q CELLS Japan CO., LTD. (the Company) is a consolidated subsidiary wholly owned by Hanwha Corporation, a holding company. Established in 1984 as a Japanese subsidiary, it has been developing its business with a focus on trading between Japan and Korea as well as chemical and solar energy-related business. The rating on the Company is one notch below the Hanwha's Group creditworthiness, supported by the core role it plays in Hanwha Corporation's Japan business, its close relationships with the parent company in terms of personnel resources, capital and credit enhancement. JCR sees that the Group's creditworthiness is equivalent to A, reflecting its profitability based on strong business foundation in Korea and diversified business portfolio. However, the group's financial structure has room for improvement as its equity capital ratio is relatively low due to the parent-subsidiary listing and other factors.

(2) The Hanwha Group is the seventh-largest conglomerate in Korea, consisting of Hanwha Life Insurance, Hanwha E&C, Hanwha Aerospace, Hanwha Solutions and Hanwha Hotels & Resorts under Hanwha Corporation. The group has built a strong business foundation in Korea focused on finance, explosives, chemicals and solar energy. In finance, Hanwha Life Insurance and Hanwha General Insurance are in leading positions, ranking second and seventh, respectively, in the industry and contributing to the group's stable revenues. In explosives, business is focused on aerospace and defense, and it boasts the biggest market share in the defense sector. The Company spun off its cluster bomb business and sold off all of its shares to a third party in December 2020, completely withdrawing this business. In chemicals, Hanwha Solution, a vertically integrated petrochemical company that produces a wide range of upstream to downstream products through its affiliates, has a high market share and strong competitiveness in polyethylene (PE) and polyvinyl chloride (PVC) resin products. Its solar business is driven by Hanwha Solution's Hanwha Q CELLS division, which is expanding globally and has world-class capabilities to deliver high-quality solar products and services. Besides being No.1 residential and commercial solar power provider in the United States, Hanwha Q Cells is recognized as a top brand in Europe and Australia, and has an extremely strong competitive advantage, establishing a solid global business foundation.

(3) The Hanwha Group's performance has been growing over a long term, supported by the entry into the insurance business in 2002, the acquisition of Q Cells in 2012 and the acquisition of integrated chemical and defense businesses from the Samsung group in 2015. Its annualized average growth rate from 2001 to 2021 was 10% for revenues and 11% for operating profit. Its 2021 revenues (excluding consolidated adjustments) broke down into 49% for finance, 14% for explosives, 11% for solar energy and 10% for chemicals, showing that its business portfolio is well diversified. Geographically, Korea accounted for 82%, the Americas for 4%, Asia for 7% and others for 6%. The share of domestic revenues is still high, but the percentage of overseas revenues is gradually increasing thanks to the expansion of global business. Its revenues in 2021 totaled KRW 52.8 trillion (up 4% from 2020), with its final profit amounting to KRW 2.1 trillion (up 192%). The better results mainly came from the recovery of product demand in the Chemicals division, which had fallen due to the impact of the COVID-19 pandemic in the previous year, higher market prices of petrochemical products and an improvement of Hanwha Life Insurance's investment income brought by the depreciation of the won. The group's interest-bearing debt totaled KRW 21.5 trillion at the end of December 2021 (up 8% from the end of 2020), with the shareholder's equity standing at KRW 4.8 trillion (up 7%). Its net debt-equity ratio was 3.34 times and equity capital ratio was 2.4%, indicating that its financial structure has room for improvement. There are several listed subsidiaries, they also account for a high percentage of the group's total assets, leading to a lower equity capital ratio. Barring financial business, the group's net debt-equity ratio and equity capital ratio stand below 2 times and at the 8% range.

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(4) The Company plays a central role in Hanwha Corporation's business in Japan. In business aspects, it is the group’s sole operation in Japan that is indispensable as a trading base for high value-added Japanese products and as a sales network for the solar energy business. Its strategic importance is high. In personnel aspects, it has strong relations with Hanwha Corporation as its president, auditors and other senior managers are seconded from the parent company. In terms of capital, the Company is a wholly-owned subsidiary of Hanwha Corporation which guarantees its most of interest-bearing debt. JCR believes that the Company can expect to have support from its parent when necessary, given its track records of capital injection in the past. The Company’s revenues in 2021 broke down into 50% for chemicals, 44% for solar energy, 4% for product solution and 2% for security. By region, Japan accounted for 62%, Korea for 14%, China for 20%, Singapore and others for 2% each. In its chemicals business, the Company sells petrochemical raw materials, petrochemical subsidiary materials, synthetic resins and other products in cooperation with its affiliated companies. In the solar energy business, the Company entered the solar module sales business in 2011 and has a reputation for high-quality products and a competitive domestic market share of over 10% for residential and industrial solar power generation. From 2019, it has been expanding its business in electric power services for single-family home. Product solution division has been focusing on trading between Japan and Korea since its establishment in 1984. Its security division sells surveillance cameras and other products independently developed and manufactured with its world-class optical designs. The Company's performance suffered a bottom-line loss in 2020 due to valuation losses on its subsidiaries. However, it increased both its revenues and profit in 2021, as the group did, on a strong performance of its chemical business. The Company's financial structure remained solid at the end of 2021, with its equity capital ratio standing at 44% and net debt-to-equity ratio at 0.2 times. Although the Company is considering investments and M&As that exceed its cash flow in order to make the electric power business its core business, JCR holds that the possibility of the Company’s good financial structure being impaired will be low.

Atsushi Masuda, Michihisa Ueno

Rating

Issuer: Hanwha Q CELLS Japan CO., LTD.

<Assignment>

Long-term Issuer Rating: A- Outlook: Stable

Rating Assignment Date: July 12, 2022

The assumptions for the credit ratings and the definitions of the rating symbols are published as "Types of Credit Ratings and Definitions of Rating Symbols" (January 6, 2014) in Information about JCR Ratings on JCR's website (https://www.jcr.co.jp/en/).

Outline of the rating methodology is shown as "JCR's Rating Methodology" (November 17, 2014), "Chemicals" (June 15, 2022) and "Rating Perspectives for subsidiary companies" (December 14, 2007) in Information about JCR Ratings on JCR's website (https://www.jcr.co.jp/en/).

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Disclosure Required by Paragraph (a)(1)(ii) of Rule 17g-7

Issuer:	Hanwha Q CELLS Japan CO.,LTD.
Rating Publication Date:	July 15, 2022

1 The Symbol, Number, or Score in the Rating Scale used to Denote Credit Rating Categories and Notches and, the Identity of the Obligor or the Identity and a Description of the Security or Money Market Instrument as Required by Paragraph (a)(1)(ii)(A) of Rule 17g-7

- Please see the news release. If the credit rating is a private rating, please see the report for private rating.

2 The version of the procedure or methodology used to determine the credit rating; as Required by Paragraph (a)(1)(ii)(B) of Rule 17g-7

- Please see the news release. If the credit rating is a private rating, please see the report for private rating.

3 The Main Assumptions and Principles used in Constructing the Procedures and Methodologies used to Determine the Credit Rating as Required by Paragraph (a)(1)(ii)(C) of Rule 17g-7

- The credit rating methodology assumes, in principle, to be applied to assess the likelihood of a given debt payment in light of its issuer’s condition and business environment, etc. in the relevant future. There is certain limitation, however, in the time horizon that the rating foresees.
- The credit rating methodology assumes, in principle, that the factors posted in the below are particularly important for such likelihood to be determined, and that the rating determination is made by evaluating each of them not only quantitatively but also employing qualitative analyses.

A) Business Bases

The likelihood of a given debt payment is highly conditional to its issuer’s business bases - how they can be maintained/ expanded into the future and thereby secure earnings and cash flows in adequacy and in a sustainable way.

B) Financial Grounds and Asset Quality

The likelihood of debt payment is highly dependent on the degree of the issuer’s indebtedness and loss absorption capacity in terms of equity capital. Also notable is that a financial institution might see a significant loss of financial grounds as a result of changes in value of the assets under its possession.

C) Liquidity Positions

The likelihood of debt payment is highly dependent on the adequacy of the issuer’s cash and other sources of repayment (liquidity positions).

D) Related Parties' Status and Stance of Support/ Assistance for the Issuer

The likelihood of debt payment is affected one way or the other by the issuer's related parties such as parent company, subsidiary, guarantor, and the government of the issuer's business domicile, etc. - by their own conditions and/ or position of support/ assistance for the issuer.

E) Order of Seniority in Debt Payment

The likelihood of debt payment can be different between given debts of the same issuer. The likelihood of debt payment for an individual debt is dependent on the issuer's discretion, and/ or its rank relative to other debts of the same issuer in the order of seniority in principal/ interest payment which is determined by design as financial product or by laws, etc.

4 The Potential Limitations of the Credit Rating as Required by Paragraph (a)(1)(ii)(D) of Rule 17g-7

- The credit rating herewith presented by JCR is its summary opinion with regard to the likelihood of given debt payment and hence not necessarily a perfect representation of such likelihood. The credit rating is not intended to estimate the probability of default or the loss on given default, either.
- The objective of the credit rating herewith presented does not include any concerns other than the likelihood of debt payment, such as risks of price changes, market liquidity, etc.
- The credit rating herewith presented is necessary to be reviewed along with possible changes of the issuer of rated objects in its business performance and/ or circumstances which include regulatory environment, and hence subject to possible alteration.

5 Information on the Uncertainty of the Credit Rating as Required by Paragraph (a)(1)(ii)(E) of Rule 17g-7

- The information used for the determination of credit rating as herewith presented is obtained by JCR from the issuer of rated objects and other sources that JCR trusts in terms of accuracy and reliability but possibly contains errors due to human, non-human or other causes. Consequently, the credit rating determined on the grounds of such information does not constitute, explicitly or implicitly, any representation or warrant of JCR on the information itself or any consequences of its use in terms of accuracy, relevance, timeliness, wholeness, market value, or usefulness for any specific purposes.

6 Use of Due Diligence Services of a Third Party in Taking the Rating Action as Required by Paragraph (a)(1)(ii)(F) of Rule 17g-7

- There is no use of any third-party due diligence service in the determination of the credit rating herewith presented.

7 Use of Servicer or Remittance Reports to Conduct Surveillance of the Credit Rating Required by Paragraph (a)(1)(ii)(G) of Rule 17g-7

- There is no use of any servicer or remittance report to conduct surveillance of the credit rating herewith presented.

8 The Types of Data Relied Upon for the Purpose of Determining the Credit Rating as Required by Paragraph (a)(1)(ii)(H) of Rule17g-7

・ The information posted in the below, which includes data, is used for the determination of the credit rating herewith presented.

A) Audited financial statements presented by the rating stakeholders

B) Explanations of business performance, management plans, etc. presented by the rating stakeholders

9 Overall assessment of the Quality of Information Available and Considered in Determining the Credit Rating as Required by Paragraph (a)(1)(ii)(I) of Rule 17g-7

・ JCR holds its basic policies for securing the quality of information as a base of due diligence for the determination of credit ratings. The information used as a base for the determination of credit rating herewith presented satisfies such policies, which include the audit by an independent auditor, the warranty made by the issuer, the publication by the issuer, some independent media or, otherwise, JCR analyst's scrutiny, etc.

・ JCR sees no particular weakness in the quality of information used for the determination of the credit rating herewith presented as compared to the information used in other cases of the credit rating for comparable issuers or ratable objects.

・ If the credit rating is an Indication, please see the report for Indication.

10 Information Relating to Conflicts of Interest as Required by Paragraph (a)(1)(ii)(J) of Rule 17g-7

・ JCR receives payment of compensation for the determination of the credit rating herewith presented from either one of those parties who are issuer, underwriter, depositor or sponsor.

・ JCR did not receive in the last fiscal year in the past payment of compensation from the same party for any kind of JCR's service other than the determination of public or private credit rating, such as one in the ancillary business.

11 Explanation or Measure of the Potential Volatility of the Credit Rating as Required by Paragraph (a)(1)(ii)(K) of Rule 17g-7

A) Business Bases

The credit rating is subject to alteration if there is improvement or deterioration of the issuer's business bases, since its revenue, etc. may improve or deteriorate by the change in its business management policies, clients' preferences, competitive situation, or a technological innovation. The resultant alteration of the credit rating is usually by a notch, with possibility of a few notches if and when the change in the business bases is large.

B) Financial Grounds and Asset Quality

The credit rating is subject to alteration if the issuer increases/ decreases its debt/ capital or vice versa and thereby makes its individual debt payment liability less or more bearable and its loss absorption capacity into the future decreased or increased. Also, the changes in the quality of asset under the issuer's holding may affect the credit rating, since such changes could raise or lower the likelihood of future loss of the issuer's financial grounds. The resultant alteration of the credit rating is usually by a notch, with possibility of a few notches if and when the change in the financial grounds and/ or asset quality is large.

C) Liquidity Positions

The credit rating is subject to alteration if there is a change in the issuer's financial management policy or in the relations with fund procurement sources and the change thereby makes its liquidity positions improve or deteriorate. The resultant alteration of the credit rating is usually by a notch, with possibility of a few notches if and when the change is large.

D) Related Parties' Status and Stance of Support/ Assistance for the Issuer

The credit rating is subject to alteration if there is a change in the issuer's parent company or subsidiary, guarantor or other provider of credit enhancement, or the government of the issuer's business domicile, or other related parties' own conditions and/ or position of support/ assistance for the issuer, and the change thereby makes its business bases, financial grounds and/ or liquidity positions improve or deteriorate, and/ or making the effectiveness of guarantee and other credit enhancement improve or deteriorate. The resultant alteration of the credit rating is usually a notch, with possibility of a few notches if and when the change is large.

E) Order of Seniority in Debt Payment and Non-Payment Forgiven by Contract

The credit rating is subject to alteration if there is a change in the rated debt's status in the order of seniority relative to other debts caused by the improvement/ deterioration of the issuer's financial condition. The resultant alteration of the credit rating is usually a notch, with possibility of a few notches if and when the change is large. Also, in case of the financial products for which non-payment of interest/ principal is contractually permissible, the credit rating is subject to alteration if and when the likelihood of such non-payment is projected to increase or decrease. The resultant alteration of the credit rating could be by a notch but often as much as a few notches.

F) Rise and Fall in General Economy and Markets

The credit rating is subject to alteration if there is a rise/ fall in the general economy and/ or the markets inducing the issuer's revenues/ expenses to increase/ decrease and vice versa, etc. The resultant alteration of the credit rating is usually by a notch, with possibility of a few notches if and when the change is exceptionally large.

G) Various Events

The credit rating is subject to alteration on occurrence of various events, such as change in the issuer's major shareholders, M&A and other organizational change, accident, violation of the law, litigation, legal/ regulatory change, natural disaster, etc., which are unforeseeable at the time when the credit rating is determined, causing a significant change on the issuer's business bases, financial grounds, etc. The resultant alteration of the credit rating could be by a notch but more often than not as much as a few notches.

12 Information on the Content of the Credit Rating, Including the Historical Performance of the Credit Rating and the Expected Probability of Default and the Expected Loss in the Event of Default as Required by Paragraph (a)(1)(ii)(L) of Rule 17g-7

- The credit rating herewith presented by JCR is its summary opinion with regard to the likelihood of given debt payment and hence not necessarily a perfect representation of such likelihood. The credit rating is not intended to estimate the probability of default or the loss on given default, either.
- Facts of the probability of default are posted as Form NRSRO Exhibit 1 on the JCR website under the URL:

https://www.jcr.co.jp/en/service/company/regu/nrsro/

13 Information on the Sensitivity of the Credit Rating to Assumptions Made as Required by Paragraph (a)(1)(ii)(M) of Rule 17g-7

A) Business Bases

The credit rating herewith presented could be changed if and when the assumptions made at the time of its determination turn out to be inaccurate with regard to the issuer's business bases and powers of earning or cash flow generation, etc. The resultant change of the credit rating is most likely by a notch, as JCR speculates, but possibly as much as a few notches if the development is rapid in improvement or deterioration of the issuer's business bases on some drastic change in the operational environments, etc.

B) Financial Grounds and Asset Quality

The credit rating herewith presented could be changed if and when the assumptions made at the time of its determination turn out to be inaccurate with regard to the issuer's financial grounds and asset quality. The resultant change of the credit rating is most likely by a notch, as JCR speculates, but possibly as much as a few notches if the development is rapid in improvement or deterioration of the issuer's financial grounds and/ or asset quality on some drastic change in its business bases.

C) Liquidity Risks

The credit rating herewith presented could be changed if and when the assumptions made at the time of its determination turn out to be inaccurate with regard to the issuer's liquidity positions. The resultant change of the credit rating is most likely by a notch, as JCR speculates, but possibly as much as a few notches if the development is rapid in improvement or deterioration of the issuer's liquidity positions on some drastic change in its financial management policy or relations with fund procurement sources, etc.

D) Related Parties' Status and Stance of Support/ Assistance for the Issuer

The credit rating herewith presented could be changed if and when the assumptions made at the time of its determination turn out to be inaccurate with regard to the issuer's parent company or subsidiaries, guarantor or other providers of credit enhancement, the government of the issuer's business domicile or other related parties' status and stance of support/ assistance for the issuer. The resultant change of the credit rating is most likely by a notch, as JCR speculates, but possibly as much as a few notches if there is a major change on the part of related parties, such as replacement, disappearance, some drastic improvement/ deterioration of financial grounds/ balances, etc.

E) Rise and Fall in General Economy and Markets

The credit rating herewith presented could be changed if and when the assumptions made at the time of its determination turn out to be inaccurate with regard to the prospects of general economy and markets. JCR expects the change should be most likely by a notch but could be as much as a few notches, should the economy or the markets change so greatly.

14 Information on the Representations, Warranties, and Enforcement Mechanisms of an Asset-backed Security as Required by Paragraph (a)(1)(ii)(N) of rule 17g-7

・ The credit rating herewith presented is not for an ABS product, and hence no relevant issue.

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Attachment

Attestation Required by Paragraph (a)(1)(iii) of Rule 17g-7

I, Toshihiko Naito, have responsibility to this Rating Action and to the best of my knowledge:

A) No part of the credit rating was influenced by any other business activities.

B) The credit rating was based solely upon the merits of the obligor, security, or money market instrument being rated.

C) The credit rating was an independent evaluation of the credit risk of the obligor, security, or money market instrument.

Toshihiko Naito
General Manager of International Rating Department

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