

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

## **JA Solar Green Project Bond Trust (Fukushima) Beneficial Interest**

<Assignment>

Beneficial Interest:           BBB-

### *Rationale*

#### 1. Outline of Project

This is a case of project finance for financing a solar power generation project that is scheduled to be conducted by a Chinese module manufacturer, JA Solar Group, in Fukushima City, Fukushima Prefecture.

Fukushimanakamori Solar Power LLC (“Project GK”), which will conduct the mega solar project, will raise funds by an investment in anonymous partnership and a loan from Hitachi Capital Trust Corporation to pay for costs related to the Project. Hitachi Capital Trust Corporation will make a loan to the Project GK, using proceeds from the money trust. A part of the loan funds are to be withdrawn during the construction period in light of the construction status. The rating is assigned to the beneficial interest backed by the loan to the Project GK.

#### 2. Inherent Risks of Mega Solar Project and Cash Flow Analysis

JCR applies its announced rating methodology for project finance to the evaluation of creditworthiness of a given mega solar project. Major risks inherent to mega solar projects include, among others, creditworthiness of sponsor, that of panel maker, risks associated with EPC, O&M, etc., site location and variability of solar radiation quantity, etc. JCR considers these expected risks are to be duly addressed in the Project as follows: (i) Appropriate measures to secure bankruptcy remoteness of the Project GK are in place; (ii) Panels of a major manufacturer, which has sufficient track records in delivery and a decent financial base, are to be used; (iii) Operators having an enough track record in construction and maintenance of solar power plants and also a relatively sound financial profile will assume EPC and O&M operations; (iv) A company, which has an enough experience, is undertaking a role of project manager and a role of backup asset manager.

Sales revenue of mega solar projects tends to have large volatility in a short term, depending on monthly and seasonally varying solar radiation quantity. The volatility, however, is expected to be reduced in the medium term. While initial costs are large, their annual expenses except those required for maintenance are relatively small and less volatile. Concerning feed-in tariff system, the power to be generated by the Project is subject to an unlimited power output control. With these characteristics noted in the analysis of cash flow, JCR checked adequacy of plan for reserve in preparation for expected expenses through lifetime against the expected power generation revenues with certain volatility based on the power curtailment and whether a scheme for acceleration of repayment schedule can function, if needed. JCR considered it is necessary to check, among other things, a decline of power to be sold, depending on changes in solar radiation quantity, a deterioration of panels due to aging, an impact from snowfall, an increase of management cost, and control of power output amount. Setting variables centering on these factors, JCR conducted stress tests. As a result of these tests, JCR judges that the expected cash flows have a required tolerance for redemption of the given beneficial interest as those in BBB rating category through schemes such as reserve for debt service, trigger of suspension of dividend payment, mandatory repayment before maturity, accelerated redemption, etc.

#### 3. Rating

The Project can enjoy economy of scale and application of 36 yen (before tax) as the fixed price for the power purchase under the feed-in tariff system. Although there is a construction completion risk, JCR sees that a possibility that this risk comes to the surface is not large thanks to factors including an EPC operator who has an enough track record and a relatively sound financial profile and participation

of the EPC operator and a project manager. There are also minus factors such as unlimited power curtailment amount and the area having relatively heavy snowfall. JCR simulated with very strong stresses for these risks in combination with variability of solar radiation quantity, acceleration of panel deterioration rate, and increase of costs. JCR then affirmed that the Project's debt service capacity can be maintained up to a great strong stress through schemes of liquidity facility, mandatory repayment before maturity, accelerated redemption, etc., although there will be cases in which only cash flows to be generated during the term cannot be enough to pay principal and interest, if an extreme stress occurs. Rational insurance will cover various kinds of hazard risks. Taking the above into consideration, JCR assessed the rating for the beneficial interest at BBB-

\* JCR assigned a Green Bond Evaluation "Green 1" to the beneficial interest. For the details, please refer to JCR's press release 18-D-1013. JCR's green bond evaluation is different from its credit rating and does not promise to provide or make publicly available a predetermined credit rating.

Kiichi Sugiura, Tomohiko Iwasaki and Kosuke Kajiwara

## Rating

### <Assignment>

Instrument Name	Issue Amount	Trust Termination Date	Coupon Type	Rating
Beneficial Interest	JPY 5,300,000,000	April 2, 2040	Fixed	BBB-

### <Information on Outline of Issue>

Trust Establishment Date:	February 13, 2019
Beneficial Interest Assignment Date:	February 13, 2019
Redemption Method:	Scheduled Redemption
Credit Enhancement & Liquidity Facility:	NA
Cash Reserve and Senior-subordinated Structure as Credit Enhancement & Liquidity Facility with respect to loan claims, which are the underlying assets	

### <Information on Structure and Stakeholders>

Entrustor:	Goldman Sachs Japan Co., Ltd.
Trustee:	Hitachi Capital Trust Corporation
Mega Solar Project Company:	Fukushimaakamori Solar Power LLC
Asset Manager:	JA Solar Japan Asset Management LLC
Arranger:	Goldman Sachs Japan Co., Ltd.

### <Information on Underlying Assets>

Outline of Underlying Assets:	Loan claims against the mega solar project company
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Rating Assignment Date: February 7, 2019

The criteria used for identifying matters which serve as assumptions for the assessment of the credit status, and the criteria used for setting of grades indicating the results of the assessments of the credit status 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 methodology for determination of the credit rating is shown as "Project Finance" (August 28, 2012) in Information about JCR Ratings on JCR's website (<https://www.jcr.co.jp/en/>). Rating methodologies for other ancillary points such as eligible deposit accounts and bankruptcy remoteness are also shown within the same page.

## Japan Credit Rating Agency, Ltd.

Jiji Press Building, 5-15-8 Ginza, Chuo-ku, Tokyo 104-0061, Japan  
Tel. +81 3 3544 7013, Fax. +81 3 3544 7026

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