SOLARCITY CORP
Form ABS-15G
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM ABS-15G

ASSET-BACKED SECURITIZER

REPORT PURSUANT TO SECTION 15G OF

THE SECURITIES EXCHANGE ACT OF 1934

Check the appropriate box to indicate the filing obligation to which this form is intended to satisfy:

Rule 15Ga-1 under the Exchange Act (17 CFR 240.15Ga-1) for the reporting period _____ to _____

Date of Report (Date of earliest event reported) _____

Commission File Number of securitizer: _____

Central Index Key Number of securitizer: _____

Name and telephone number, including area code, of the person

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Indicate by check mark whether the securitizer has no activity to report for the initial period pursuant to Rule 15Ga-1(c)(1)

Indicate by check mark whether the securitizer has no activity to report for the quarterly period pursuant to Rule 15Ga-1(c)(2)(i)

Indicate by check mark whether the securitizer has no activity to report for the annual period pursuant to Rule 15Ga-1(c)(2)(ii)

Rule 15Ga-2 under the Exchange Act (17 CFR 240.15Ga-2)

Central Index Key Number of depositor: 0001408356

SolarCity FTE Series 2, LLC

(Exact name of issuing entity as specified in its charter)

Central Index Key Number of issuing entity (if applicable): Not applicable

Central Index Key Number of underwriter (if applicable): Not applicable

Lyndon Rive, (650) 638-1028

Name and telephone number, including area code, of the person to

contact in connection with this filing

Explanatory Note: For the purpose of furnishing this Form ABS-15G, the depositor signing below is the originator, SolarCity Finance Company, LLC, as there is no intermediate transfer of assets from the originator to the issuing entity. The originator does not have a Central Index Key Number. The Central Index Key Number of the depositor listed above is the Central Index Key Number of the originator s parent, SolarCity Corporation, which is the sponsor.

INFORMATION TO BE INCLUDED IN THE REPORT

FINDINGS AND CONCLUSIONS OF THIRD-PARTY DUE DILIGENCE REPORTS

Item 2.01 Findings and Conclusions of a Third-Party Due Diligence Report Obtained by the Issuer
Introduction

The FTE2 Portfolio is composed of approximately 9,700 residential rooftop PV installations which are sold to homeowners under loan agreements.

The PV systems are expected to be geographically dispersed throughout the United States, with California, Colorado, and Arizona forecast to have about 86.7% of the installed systems. Massachusetts, New Mexico, Nevada, New York, and Rhode Island are the other states representing at least 1% of the expected FTE2 Portfolio.

All of the PV systems in the FTE2 Portfolio are residential installations which have obtained Permission to Operate (PTO) between September 10, 2014 and June 30, 2016.

Procedures for Sales, Design and Construction

DNV GL has reviewed SolarCity s sales, engineering, design, and installation procedures. Overall, SolarCity s sales, design, installation and training procedures are in line with industry good practices. SolarCity s vertically integrated structure allows for more direct control of training and quality than that of some competing firms which utilize third party EPC contractors.

A summary of the primary findings and/or risks identified is provided in the following table.

Primary Findings

Sales Process: For sales employees, LaunchPad provides access to referral network mapping, a curated sales pipeline, commissions tracking, and detailed customer status information. Initial system design occurs in conjunction with this interactive contract generation process, and is enabled by SolarCity s custom software tools.

Site Audit: SolarCity has site surveyors based at each of its regional operating centers that visit each site to verify assumptions made by the salesperson when generating the proposal.

Engineering Design: Design and engineering is completed in-house for residential systems. Residential designers will utilize both the Energy Design (ED) and Z+ tools.

Installation: From mid-2013 to January 2016, SolarCity significantly reduced the median time from sales to installation (from ~130 days to 68 days) via volume-based pay incentives, the use of box trucks, and wider use of (and greater experience with) Zep racking solutions.

Installation: SolarCity s installation quality is at the higher end of the range observed in the industry. As of December 2015, SolarCity is inspecting 10% of installed jobs nationwide on a six month average. The number of service calls as a percentage of installations has decreased from 6% in February 2015 to less than 1% in December 2015.

Inspection and Quality Control: DNV GL has reviewed SolarCity s Digital Job Checkout (dJCO) process. Viewed as one element of SolarCity s quality control process, the dJCO process appears to have been effective in reducing installation defects since the program was implemented.

Process Documentation Samples: Based on DNV GL s audits of process documentation, system photos, and design drawings, completed in 2013, 2014, and 2015, there is sufficient evidence to conclude that SolarCity s stated procedures for sales, design and installation are generally being followed.

Equipment Selection

SolarCity has provided a list of module, inverter and racking suppliers to the Portfolio. The modules used in the Portfolio will largely be manufactured by Kyocera, REC, Yingli, Trina, and Canadian Solar, while major inverter suppliers include ABB, SolarEdge and Fronius. Zep racking will make up the majority of the Portfolio. SolarCity uses the factory production meters within their inverters to measure energy production for purposes of invoicing.

DNV GL has reviewed individual vendors and has not identified any specific concerns surrounding the qualification of equipment vendors for the Portfolio.

A summary of the primary findings and/or risks identified is provided in the following table.

Primary Findings

Modules: Kyocera, REC, Yingli, Trina, and Canadian Solar comprise the majority of the Portfolio, with smaller (less than 2%) contributions from other manufacturers. DNV GL considers these module manufacturers suitable for use in the Portfolio.

Testing: As a result of this commitment to testing, SolarCity has demonstrated superior average module performance relative to comparable module testing at DNV GL PVEL. DNV GL notes that even at the reduced volume of testing compared to SolarCity s stated policy, SolarCity s overall testing scope executed still compares favorably to the rest of the industry.

Inverters: ABB, SolarEdge and Fronius comprise the majority of the Portfolio. DNV GL considers these inverter manufacturers suitable for use in the Portfolio.

Racking: Zep Solar racking will be utilized for systems in the Portfolio.

Monitoring: 1.4% of total systems have shown communication issues. SolarCity has indicated that even persistent communication issues have not materially affected its operations, as homeowner billing (for PPAs) is continued based on estimated production and the performance guarantees are voided.

Procedure for Forecasting Facility Electric Output

DNV GL has reviewed the procedures by which SolarCity generates energy production forecasts for residential systems with the purpose of evaluating the long-term accuracy of these forecasts and their usefulness for predicting the Portfolio s revenue from energy sales.

SolarCity s SolarBid and Energy Designer software tools both incorporate a modified version of the PVWatts Version 2 (PVWatts) simulation engine to generate the energy production estimates. DNV GL was able to independently verify SolarCity s production estimates to within ±1% for 8 of 10 systems.

A summary of the primary findings and/or risks identified is provided in the following table.

Primary Findings

SolarBid acts as the proposal and system reporting portal for all systems. SolarCity s energy estimate methodology has changed over time with different de-rate values used for the various iterations of the model. Major energy estimation methodologies include SolarBid/Solmetric (referred to as SolarBid), SolarBid/SPRITE2 (SPRITE2), and SolarBid/SPRITE3 (SPRITE3).

SPRITE3, which has been in effect since July 2015, includes the inverter efficiency loss factor and the elimination of the SolarEdge shading boost , as compared to SPRITE2.

DNV GL considers the use of PVWatts to be reasonable for portfolios of several thousand PV systems. The uncertainty of an estimate for any single home using this meteorological data / methodology is high, but the combined uncertainty for a geographically diverse portfolio of thousands of rooftops is much lower.

DNV GL considers the Typical Meteorological Year 2 (TMY2) data sets to be suitable for use in the PVWatts simulations assuming the proper diligence is taken prior to selecting the weather file. DNV GL recommends that SolarCity considers not only the proximity of the weather station but also its representativeness of the site. DNV GL generally finds the de-rate factors applied by SolarCity to be reasonable for use within PVWatts.

Analysis of SolarCity s Operational PV systems

Due to lack of operating data available for the Portfolio, and for purposes of analyzing SolarCity s production data specific to the Portfolio, DNV GL has utilized the operating history of SolarCity s Residential Fleet as analyzed in the Residential Fleet IE Report (Fleet Report) to provide forecasts for the Portfolio. The production analysis for the Portfolio is based on the results presented in the Fleet Report, adjusted for the distributions of region and energy estimate methodology specific to the Portfolio.

DNV GL has developed regional correction factors which represent the ratio of actual production to expected production for the Portfolio. It is anticipated that the regional correction factors will be applied to SolarCity s Year 1 as-built energy estimates for the Portfolio systems.

A summary of the primary findings and/or risks identified is provided in the following table.

Primary Findings

Based on the module and inverter breakdown, DNV GL finds the Residential Production Sample within SolarCity s Residential Fleet to be generally representative of the Portfolio in regards to forecasting production analysis. With few exceptions, the breakdown of modules and inverters is generally consistent between the Fleet and the Portfolio.

Correction factors for the Fleet were produced by region and energy estimate methodology. DNV GL expects that the availability of the Portfolio will be at or above the level observed in the Fleet, due to the introduction of new quality programs that have indicated to improve availability for the systems in the Portfolio.

Combined correction factors that account for the Portfolio s distribution of systems using different energy estimate methodologies were produced for each region. The Portfolio-level correction factor is 0.991 with 1-year and 10-year uncertainties of 4.1% and 3.6%, respectively.

Customer Agreement Review

SolarCity offers PV systems to homeowners via the MyPower Solar Home Improvement Agreement.

A summary of the primary findings and/or risks identified is provided in the following table.

Primary Findings

The Loan Agreement describes the terms of the SolarCity sale and installation of a residential solar PV system, as well as payments required by Customer for energy generated by the system. The Loan Agreement appears to be an acceptable contractual structure for the Portfolio.

The principal technical challenges related to these contracts are the need for: (1) production guarantees to be appropriately sized; and (2) homeowner-related underperformance issues (including gradual shading increases) to be detected and communicated such that amounts invoiced are in line with the Portfolio s revenue expectations.

Management and Services Agreement Review

DNV GL requested a copy of the Management Agreement and Servicing Agreement for the FTE2 Portfolio, but did not receive a copy for review.

SolarCity has previously provided DNV GL with drafts of a Management Agreement and a Servicing Agreement for the FTE1 Portfolio. The review contained herein references these two draft Agreements.

The Portfolio will contract directly with SolarCity for operation and maintenance services as well as administrative services. DNV GL has received and reviewed drafts of a Management Agreement and a Servicing Agreement, each dated November 16, 2015, between SolarCity FTE Series 1, LLC (the Issuer) and SolarCity (referred to as Manager where referring to SolarCity s specific operations and maintenance functions, or Servicer when referencing the contractual administrative arrangements in the Servicing Agreement).

A summary of the primary findings and/or risks identified is provided in the following table.

Primary Findings

Under the Management Agreement and Servicing Agreement the Manager and Servicer will perform maintenance, monitoring, reporting, and administrative functions in support of the commercial operations of the Portfolio s PV systems. DNV GL considers the scope of services to be comprehensive and acceptable.

The Manager receives a Manager Fee of $20 per kWdc of capacity for its services each year, escalating at 2% per year annually; together with a Sevicing Fee of $5/kWdc which also escalates at 2% per year, the all-in fees are $25/kWdc/year. DNV GL considers such fees to be within the range observed in the industry.

The Manager and Servicer s performance standards are generally defined and the Management Agreement and Servicing Agreement do not have explicit performance requirements.

Operating System Review

DNV GL has performed electrical and structural design checks on SolarCity s residential systems. Ten systems were selected from the Portfolio. Despite some missing documentation, SolarCity s design and review process appears to be more rigorous than that of other industry participants.

DNV GL also presents review of SolarCity s Installation Quality Program Results and a summary of 2016 DNV GL site inspections.

A summary of the primary findings and/or risks identified is provided in the following table.

Primary Findings

Electrical Design Checks: The design checking and documentation management appears to be generally more rigorous than that of other industry participants that DNV GL has reviewed. DNV GL did not identify any design issues that would be expected to have an immediate impact on project safety or performance.

Structural Design Check: DNV GL concludes that SolarCity s structural design and review process appears to be more rigorous than other industry participants. For systems where post-installation photos were provided, installations appear to be consistent with the design plans.

Installation Quality Program Results: SolarCity reports that installation-related failures represented 9.1% of all jobs before the start of the Installation Quality Program (March May 2015) and fell to 4.2% after the start of the Program (Nov 2015 Jan 2016). SolarCity notes that the count of installation-related failures decreased by 33% while the installation volume (kW) increased by 30% over the reported time period.

DNV GL 2016 Inspections: The site visits conducted by DNV GL confirmed that SolarCity has achieved system construction quality at the higher end of the range observed in the industry. In isolated cases, deviations from SolarCity s established procedures and best practices may result in unscheduled maintenance expenses (e.g. electrical faults or roof repairs), which should be considered in the financial model review. Still, on the whole, the residential site inspections provide evidence that SolarCity s sales and EPC process is being satisfactorily followed in various regions throughout the country.

Financial Model Review

A financial model for the Portfolio has not been provided for review. DNV GL has provided a review of the O&M fee cited in the Management and Servicing Agreement review, as well as analysis pertaining to inverter reserve sizing.

A summary of the primary findings and/or risks identified is provided in the following table.

Primary Findings

O&M Fee: DNV GL observes O&M services costs for residential projects to be typically in the range of $15/kWp to $25/kWp. As such, DNV GL considers the cost structure presented in the Management and Servicing Agreement of $25/kWp to be within the commercially reasonable range of the spectrum.

Inverter pricing: Based on historical and projected price declines for string inverters, DNV GL currently estimates that string inverter replacement prices upon warranty expiration will be approximately $0.07-$0.11/Wac, or $0.06-$0.10/Wdc, assuming an average dc to ac ratio of 1.12 as observed from the energy validations performed.

Inverter failure curve: A general string inverter failure curve would likely show initial failures in Year 1, dropping down to a flat, low baseline failure rate in the initial years. The failure curve would then turn up, likely in Year 8 or 9. DNV GL expects the failure rates to peak in Year 12 and then taper down, falling to a low baseline rate in Year 15 and 16 as the majority of inverters will have been replaced by Years 15 and 16.

Inverter warranty coverage: SolarCity has modeled assumptions regarding inverter warranty viability over a 20-year period assuming full warranty coverage in Year 1 and decreasing to 50% coverage in Year 10. SolarCity has also modeled warranty coverage pertaining to secondary replacements. DNV GL notes that ABB, Fronius and SolarEdge represent industry leading manufacturers with a strong track record within the industry, and DNV GL views these warranty coverage rates as conservative.

SolarCity model inputs: SolarCity has provided a detailed inverter reserve model to DNV GL for review. The model presents inverter cost projections, truck roll costs, inverter failure curve and inverter warranty coverage assumptions that are reasonable and broadly conservative for the purposes of structuring an inverter reserve.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the reporting entities have duly caused this report to be signed on their behalf by the undersigned hereunto duly authorized.

SOLARCITY FINANCE COMPANY, LLC,
as Originator

By: /s/ Lyndon Rive
Name: Lyndon Rive
Title: President
Date: January 12, 2017