Filed by Vivint Solar, Inc. pursuant to Rule 425 under the Securities Act of 1933 and deemed filed pursuant to Rule 14a-12 under the Securities Exchange Act of 1934

Subject Company: Vivint Solar, Inc. (SEC File No.: 001-36642) Date: July 9, 2020

The following communication was made by Vivint Solar, Inc. beginning on July 7, 2020.

Vivint Solar Dealer Partner Communications

Tuesday, July 7, 2020

Dear Dealer Partner,

As you are likely aware, Sunrun announced its intention to acquire Vivint Solar earlier today. As a key Dealer Partner, I am sure you have some questions that, where possible, I would be happy to answer via a quick call today. Please let me know some times that work for you and we will set something up.

Paul Dickson

Chief Revenue Officer, Vivint Solar

Forward-Looking Statements

This communication contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 including, but not limited to, statements based upon or relating to Sunrun Inc.'s, a Delaware corporation ("Sunrun") and Vivint Solar, Inc.'s, a Delaware corporation ("Vivint Solar") expectations or predictions of future financial or business performance or conditions. Forward-looking statements generally relate to future events or future financial or operating performance. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "would," "expects," "plans," "anticipates," "could," "intends," "target," "projects," "contemplates," "believes," "estimates," "predicts," "potential," "will be," "will likely result" or "continue" or the negative of these words or other similar terms or expressions that concern our expectations, strategy, plans or intentions. Forward-looking statements may include, but are not limited to, statements concerning the expected benefits of the transaction; cost synergies and opportunities resulting from the transaction; Sunrun's leadership position in the industry; the availability of rebates, tax credits and other financial incentives including solar renewable energy certificates, or SRECs, and federal and state incentives; regulations and policies related to net metering and interconnection limits or caps and decreases to federal solar tax credits; determinations by the Internal Revenue Service of the fair market value of Sunrun's and Vivint Solar's solar energy systems; changes in regulations, tariffs and other trade barriers and tax policy; the retail price of utility-generated electricity or electricity from other energy sources; federal, state and local regulations and policies governing the electric utility industry and developments or changes with respect to such regulations and policies; the ability of Sunrun and Vivint Solar to manage their supply chains (including the availability and price of solar panels and other system components and raw materials) and distribution channels and the impact of natural disasters and other events beyond their control; the ability of Sunrun and Vivint Solar and their industry to manage recent and future growth, product offering mix, and costs (including, but not limited to, equipment costs) effectively, including attracting, training and retaining sales personnel and solar energy system installers; Sunrun's and Vivint Solar's strategic partnerships and expected benefits of such partnerships; the sufficiency of Sunrun's and Vivint Solar's cash, investment fund commitments and available borrowings to meet anticipated cash needs; the need and ability of Sunrun and Vivint Solar to raise capital, refinance existing debt and finance their respective obligations and solar energy systems from new and existing investors; the potential impact of interest rates on Sunrun's and Vivint Solar's interest expense; the course and outcome of litigation and investigations and the ability of Sunrun and Vivint Solar to consummate the

transactions contemplated by the definitive transaction agreement in a timely manner or at all. These statements are not guarantees of future performance; they reflect Sunrun's and Vivint Solar's current views with respect to future events and are based on assumptions and estimates and subject to known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements to be materially different from expectations or results projected or implied by forward-looking statements. These risks include, but are not limited to: the occurrence of any event, change or other circumstances that could give rise to the termination of the definitive transaction agreement or the failure to satisfy the closing conditions; the possibility that the consummation of the proposed transactions is delayed or does not occur, including the failure of the parties' stockholders to approve the proposed transactions; uncertainty regarding the timing of the receipt of required regulatory approvals for the merger and the possibility that the parties may be required to accept conditions that could reduce or eliminate the anticipated benefits of the merger as a condition to obtaining regulatory approvals or that the required regulatory approvals might not be obtained at all; the outcome of any legal proceedings that have been or may be instituted against the parties or others following announcement of the transactions contemplated by the definitive transaction agreement; challenges, disruptions and costs of closing, integrating and achieving anticipated synergies, or that such synergies will take longer to realize than expected; risks that the merger and other transactions contemplated by the definitive transaction agreement disrupt current plans and operations that may harm the parties' businesses; the amount of any costs, fees, expenses, impairments and charges related to the merger; uncertainty as to the effects of the announcement or pendency of the merger on the market price of the parties' respective common stock and/or on their respective financial performance; uncertainty as to the long-term value of Sunrun's and Vivint Solar's common stock; the ability of Sunrun and Vivint Solar to raise capital from third parties to grow their business; any rise in interest rates which would increase the cost of capital; the ability to meet covenants in investment funds and debt facilities; the potential inaccuracy of the assumptions employed in calculating operating metrics; the failure of the energy industry to develop to the size or at the rate Sunrun and Vivint Solar expect; and the inability of Sunrun and Vivint Solar to finance their solar service offerings to customers on an economically viable basis. These risks and uncertainties may be amplified by the ongoing COVID-19 pandemic, which has caused significant economic uncertainty and negative impacts on capital and credit markets. The extent to which the COVID-19 pandemic impacts Sunrun's and Vivint Solar's businesses, operations, and financial results, including the duration and magnitude of such effects, will depend on numerous factors, many of which are unpredictable, including, but not limited to, the duration and spread of the pandemic, its severity, the actions to contain the pandemic or treat its impact, and how quickly and to what extent normal economic and operating conditions can resume.

Any financial projections in this filing are forward-looking statements that are based on assumptions that are inherently subject to significant uncertainties and contingencies, many of which are beyond Sunrun's and Vivint Solar's control. While all projections are necessarily speculative, Sunrun and Vivint Solar believe that the preparation of prospective financial information involves increasingly higher levels of uncertainty the further out the projection extends from the date of preparation. The assumptions and estimates underlying the projected results are inherently uncertain and are subject to a wide variety of significant business, economic and competitive risks and uncertainties that could cause actual results to differ materially from those contained in the projections. The inclusion of projections in this filing should not be regarded as an indication that Sunrun and Vivint Solar, or their representatives, considered or consider the projections to be a reliable prediction of future events.

Annualized, pro forma, projected and estimated numbers are used for illustrative purpose only, are not forecasts and may not reflect actual results.

The foregoing review of important factors should not be construed as exhaustive and should be read in conjunction with the other cautionary statements that are included herein and elsewhere, including the risk factors included in Sunrun's and Vivint Solar's most recent reports on Form 10-K, Form 10-Q, Form 8-K and other documents on file with the United States Securities and Exchange Commission ("SEC"). These forward-looking statements represent estimates and assumptions only as of the date made. Unless required by federal securities laws, Sunrun and Vivint Solar assume no obligation to update any of these forward-looking statements, or to update the reasons actual results could differ materially from those anticipated, to reflect circumstances or events that occur after the statements are made. Given these uncertainties, investors should not place undue reliance on these forward-looking statements. Investors should read this document with the understanding that Sunrun's and Vivint Solar's actual future results may be materially different from what Sunrun and Vivint Solar expect. Sunrun and Vivint Solar qualify all of their forward-looking statements by these cautionary statements.

Additional Information and Where to Find It

In connection with the proposed merger, Sunrun intends to file with the SEC a registration statement on Form S-4, which will include a document that serves as a prospectus of Sunrun and a joint proxy statement of Sunrun and Vivint Solar (the "joint proxy statement/prospectus"). After the registration statement has been declared effective by the SEC, the joint proxy statement/prospectus will be delivered to stockholders of Sunrun and Vivint Solar. BEFORE MAKING ANY VOTING OR INVESTMENT DECISION, SECURITY HOLDERS OF SUNRUN AND VIVINT SOLAR ARE URGED TO READ THE JOINT PROXY STATEMENT/PROSPECTUS (INCLUDING ALL AMENDMENTS AND SUPPLEMENTS THERETO) AND OTHER DOCUMENTS RELATING TO THE MERGER THAT WILL BE FILED WITH THE SEC WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT THE PROPOSED MERGER. Investors and security holders will be able to obtain copies of the joint proxy statement/prospectus (when available) and other documents filed by Sunrun and Vivint Solar with the SEC, without charge, through the website maintained by the SEC at http://www.sec.gov. Copies of documents filed with the SEC by Sunrun will be made available free of charge on Sunrun's website at http://investors.sunrun.com/ under the heading "Filings & Financials" and then under the subheading "SEC Filings." Copies of documents filed with the SEC by Vivint Solar will be made available free of charge on Vivint Solar's website at http://investors.vivintsolar.com/ under the link "Financial Information" and then under the heading "SEC Filings."

Participants in the Solicitation

Sunrun and Vivint Solar and their respective directors and executive officers may be deemed to be participants in the solicitation of proxies from the holders of Sunrun common stock and Vivint Solar common stock in respect of the proposed transaction. Information about Sunrun's directors and executive officers is set forth in Sunrun's Form 10-K for the year ended December 31, 2019 and the proxy statement for Sunrun's 2020 Annual Meeting of Stockholders, which were filed with the SEC on February 27, 2020 and April 17, 2020, respectively. Information about Vivint Solar's directors and executive officers is set forth in Vivint Solar's Form 10-K for the year ended December 31, 2019 and the proxy statement for Vivint Solar's 2020 Annual Meeting of Stockholders, which were filed with the SEC on March 10, 2020 and April 24, 2020, respectively. Stockholders may obtain additional information regarding the interests of such participants by reading the registration statement and the joint proxy statement/prospectus and other relevant materials to be filed with the SEC regarding the proposed merger when they become available. Investors should read the joint proxy statement/prospectus carefully when it becomes available before making any voting or investment decisions.

No Offer or Solicitation

This communication shall not constitute an offer to sell or the solicitation of an offer to buy any securities or a solicitation of any vote or approval, nor shall there be any sale of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. No offering of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act of 1933, as amended.