

Solar securitizations poised for growth—but when will the ABS market begin to accept C&I deals?

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Explosive growth in the solar market, re-energized by the December 2015 Congressional extension of the ITC (Investment Tax Credit), is generating a significant appetite for capital in the industry. And given the recent troubles of the yieldco model for both the funds and their parent companies (see Stratton Report coverage [here](#) and [here](#)), attention is shifting back to the securitization of solar assets—PPAs (Power Purchase Agreements), leases and loans. This much needed liquidity provides corporate balance sheets breathing room, and the ability to continue grow at rapid double-digit rates, as solar projects now contribute enough clean electricity to power more than 5.4 million homes .

“I think there’s little doubt that in the coming years, securitization will turn out to be a very effective source of capital for solar developers,”

remarks Nathan Gabig, Director of KPMG’s Renewable Advisory practice and a banking consultant in the asset-backed securities market.



Nathan Gabig



According to Mr. Gabig, one of the chief reasons the solar securitization market hasn't seen more explosive growth was the relative shortage of stand-alone developers that could aggregate the 35-50 MWs of solar assets and cashflows often seen as necessary to do a deal. As renewable-friendly regulation evolves, project costs continue to drop, the industry matures, and developer balance sheets grow, there is little doubt number of potential asset-backed securities players and ABS issuers will increase as well.

"Now you've got new investors putting capital into the solar market," Mr. Gabig points out.

That is significant because such large investments, like those recently announced in Sungevity and Sunrun, would likely eliminate balance sheet constraints that may have prevented those firms from putting together deal portfolios of the necessary size.

In addition, several other significant industry names including Vivint and SunPower have publicly discussed their interest in securitizations, and bankers have mentioned yet other firms like Sunnova and Spruce Finance that are potential candidates for such deals. The universe of issuers seems likely to expand, possibly dramatically.

The advantages of securitization for developers and the IPPs that own many operating solar assets—at least compared with the recent painful experience of the yieldco market (which is an equity-take out method) —include the relative predictability of a debt offering and the stability of fixed-rate, long-term obligations, which some observers note may match the needs of an industry focused on creating long-lived assets better than equity. In Addition the ABS market potentially also allows solar development firms to better diversify their funding base to include targeted institutional investors that are realizing the simplicity and consistency of solar-backed bonds.

"Pension funds, insurance companies, and money managers should find that stable photovoltaic cash flows can actually align very well with their ALM (Asset & Liability Management) requirements," notes Gabig. "It's not just yield-hungry investors out there, but also those that have growing pension obligations that have to be paid out for the next 20-30-40 years. Cash flows from top-rated tranches in solar securitizations may very well answer a part their needs for stable, regular, and enduring revenues."

Of course, any viewer of “The Big Short” is aware that the ABS markets are prone to risk if underwriting standards slip, credit tightens and asset quality deteriorates. But in the case of solar-backed bonds, servicing data from a number of different developers indicates that underlying contracts appear to be holding up quite well—at least for their relatively short history (the oldest issued projects are now roughly five years old).

“I’m hired to look with a very skeptical eye at these deals,” insists Gabig. “That’s my job, and I have to be neutral. But to date, they have been surprisingly strong. In reviewing the public and privately available data there simply have been significantly fewer losses compared to initial structuring and rating-agency assumptions. Utilizing cashflow modeling tools like the KPMG SunCurve, and working with the inverter and ISV (Independent Software Vendor) monitoring companies, developers are reporting that cashflow interruptions and payment delinquency rates for solar securitizations have been quite small, often less than 50 or 60 basis points.”

It’s important to note that the credit risk spectrum for most of the issued securitizations is strong, with residential customers having between 730 and 760 FICO scores. According to Gabig: “It’s a beautiful story for any asset-backed security when there are limited losses and customers aren’t defaulting on their obligations as they have an economic incentive, e.g. saving money compared to paying their local utility a higher kWh rate for their electron usage.”

Securitization—largely confined to residential and some utility solar assets up until now—may be getting prepared to help the C&I sector. Solar penetration in the commercial and industrial (“C&I”) world has been a challenge; C&I solar power’s contribution to total C&I sector load is than a third of residential solar power’s contribution to total residential load. This would seem counter-intuitive, since power use and bills are both much larger for C&I customers. Moreover, economies of scale often make it possible to install solar much more efficiently for larger C&I customers than for residential customers.

However, despite those advantages, the first attempt to securitize a portfolio mainly consisting of commercial solar projects by AES in the fall of 2015 was not an immediate success, and will likely be re-marketed later this year as bankers close to the deal mentioned that the offered bond spreads were not in the underwriters expected range.

“One thing that potentially made such a securitization difficult is, frankly, the lack of a FICO score, or an analogous easy-to-understand credit risk measurement, for C&I customers,” commented Gabig, who noted that the AES deal potentially included international assets which may have also made its reception difficult.

“Without such a credit risk scoring mechanism,” he explains. “investors have to perform all sorts of sensitivity analysis to understand what happens to their bond cash flows if this corporation or offtaker goes

bankrupt, and how fast it would be possible to get non-paying tenants out of a commercial space and another tenant in to replace them, etc., etc. Such an asset-backed security involves an awful lot of what ifs, a lot of analysis for investors.” In the case where an off-taker does vacate the building, in most US states, the electricity created during the day by the panels can be sold into the utility by utilizing net energy metering at varying kWh rates depending on local regulations.

One firm working hard to overcome this problem in order to reap the many benefits of commercial solar is Distributed Sun. Jeff Weiss, co-chairman & managing director of solar developer, acknowledges that the complexity of individually negotiated commercial deals is a problem for the sector. As the joke goes, the advantage for solar developers of having residential instead of commercial customers is that homeowners don't have a general counsel.

“Securitization only works when there is a large number of very similar deals,” notes Weiss. “The C&I solar market has not grown up in an environment with common documents, common data, common risk assessment methods, common credit analysis—there is simply not a ‘common language’ for C&I solar. As a consequence, transaction costs are too high in the C&I market, and there are not enough similar units to be diligence-ready for securitization and sale on the secondary market at this time.”

As a solution to the complexity of many individually negotiated commercial solar deals, Weiss sees the solution to be consistent risk scoring, credit assessment, and use of industry-standard contracts.

“The industry now has standard contracts for commercial solar projects. We use them and encourage others to do so,” Weiss says. “But this is a young industry. In areas like commercial leasing and commercial loans, in any aspect of commercial buildings, there are libraries of standard documents. Commercial solar just needs to build and use its own library of standard agreements.”



Jeff Weiss



He views such standardization as a pre-requisite for any kind of large scale financing of commercial solar deals, including securitization: “The advantage of standardization is that it makes the diligence process on the portfolio manageable and cost-effective. If every one of the transactions in the portfolio has fifty pages of contract language that has to be gone over and vetted, one by one, that’s a non-starter. That’s much too costly to undertake the diligence on.”

In response to the separate problem of a lack of common risk and credit analysis, Distributed Sun has created an online risk-scoring and diligence platform called BeEdison. “Its whole purpose is to help developers and investors quickly score projects for risk and attractiveness,” Weiss explains. “It uses the industry-standard truSolar assessment method to rate the risks of PV projects. As a front door to that, our business partnered with Standard & Poors to create a credit assessment for non-publicly rated companies. That enables solar developers and investors to make a fast credit assessment on C&I projects where the customer is not a rated credit. Which, by the way, is the case for 96% of American real estate.”

Many developers and investors apparently share Distributed Sun’s concerns—at least judging from the reception of the Be Edison online platform. “Our credit product is doing quite well,” Weiss answers when questioned about the platform’s activity. “Everybody wants to know more about credit. For \$500 you can get a fast, high-level credit assessment of a potential customer. That’s inexpensive enough and fast enough to get a lot of attention. The project risk assessment product has about a 1 GW of projects in the system.”

The upshot of this and other industry attempts to tackle these problems is likely to be a future for C&I solar securitizations, although not necessarily this year. Mr. Weiss sees a somewhat longer time horizon:

“I think it will take another couple of years,” he opines. “The extension of the ITC, which makes it easier for utility-scale and residential solar to move forward, has perversely reduced the incentive for the industry to ‘get it right’ on commercial and industrial solar. Also, the industry is focused right now on solving the problem of too little tax equity, which has been exacerbated by the extension of the ITC—there are too many deals are chasing too little money in the solar market. All this has distracted and will continue to distract the industry from really tackling the C&I solar problem for a while—but not forever. The opportunities in commercial solar are just too good.”