TRANSACTION TAKEAWAY

New York State Community Solar Projects

Community solar allows New York State (NYS) residents, who may be unable to install on-site solar, access to clean, low-cost energy regardless of their home or business location. NY Green Bank (NYGB) has recently invested in the community solar market with three project developers by financing their utility interconnection payments. These three projects are a part of the statewide New York-Sun (NY-Sun) initiative, which has a solar deployment target of 3 GW by 2023 and a goal of building a self-sustaining solar market. Since a new regulatory framework for community solar was approved in July 2015, only 15 community solar projects have been completed. The three community solar investments discussed here represent an effort from NYGB to accelerate the deployment of 312 community solar projects currently in the pipeline of NY-Sun, and help catalyze the community solar market across the state.

Bridging the gap

The potential for community solar deployment in NYS is significant. However, the community solar market is still relatively new in the state, and comes with project dynamics and market rules that are unique, and lack extensive precedents.

All community solar projects in NYS require developers to put up 25% of interconnection deposits (and eventually interconnection payments) to utilities well before project construction commences. Moving from early-stage interconnection deposit to full project construction can take time, and the exact timing can be uncertain. This means there is a critical timeframe when projects need financing, but are not operational or generating revenue. The nature of financing at this early interconnection phase makes assessing the value of community solar projects–and any

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Year

2017-2018

Investment Terms

- Senior secured bridge loans; asset-backed, cross-collateralized, sponsor-guaranteed
- Two-year maturity; no amortization
- Interest payment over first two years; principal payment upon maturity date

Technologies

Solar Photovoltaic Systems

Reasons for GB Involvement

- Provide commercial and residential project subscribers access to reliable, clean, low-cost energy
- Reduce greenhouse gas emissions
- Demonstrate bankability and encourage an efficient use of project sponsor equity capital

Investment Area

- Finance up to 90% of interconnection costs for fully permitted projects
- Finance up to 25% for yet-to-be-permitted projects that have site control and completed interconnection review (CESIR)

Lessons for the Market

- Demonstrate the value of pre-construction community solar projects, and the bankability of community solar projects more broadly.

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associated risks–difficult for traditional private investors that may be less familiar with community solar, and more comfortable with traditional project finance.

In response, since early 2017 NYGB has addressed this financing gap by providing bridge loans for three solar developers – Cypress Creek Renewables, Distributed Sun-SUNEIGHT, and Delaware River Solar – to cover their capital needs prior to interconnection, including utility interconnection payments. NYGB is able to underwrite up to 90% of the underlying value of development-stage projects based on future cash flows and using indicators such as: position in the interconnection queue, site control, permits secured, forecasted payments based on geographic location, and the ability, in a distressed scenario, for an alternate developer to take over a project prior to construction while maintaining its place in the interconnection queue. The bridge loans are based on an assessment of underlying project value, and are also senior secured and backed by a pledge from the developer company. These are two-year loans, interest only, with mandatory prepayments as projects are removed from the portfolio for debt or equity financing, or project cancelation.

As more community solar projects move to fruition, these transactions will also generate project and customer performance data which helps investors and developers in the private sector establish a more accurate risk-return profile for community solar. NYGB's bridge loans allow project sponsors to reduce reliance on scarce or expensive equity for financing interconnection payments, which supports developers' deployment of equity in the development of other projects, or for use during the construction phase.

Valuing Distributed Energy Resources

NYGB is also focusing longer term on financing structures that make community solar projects more bankable. Traditionally in solar project finance, project lenders look for long-term fixed rate power purchase agreements (PPAs) with creditworthy counterparties, to ensure a financeable cashflow over the life of the projects. For community solar, cash flows come from the sale of credits for electricity production. Those credits were traditionally valued through a simple volumetric approach called net energy metering (NEM). In support of NYS's "Reforming the Energy Vision," the NYS Public Service Commission is transitioning to a new way to compensate distributed solar projects: Value of Distributed Energy Resources (VDER). VDER allows distributed solar to be compensated based on factors such as location, grid congestion, timing of generation, avoided carbon emissions and market transition.

VDER revenue streams share some similarities with traditional PPAs in that a large component of VDER is fixed, notably for attributes such as environmental value and market transition. However, VDER also carries variable components, in particular the locational-based marginal price of power and the capacity payments a project receives. The variable component adds a layer of uncertainty from the perspective of private lenders, in terms of the future revenue streams a community solar project will receive.

In response, in December 2017 NYGB released an RFP (applications accepted on a rolling basis) for community solar projects that are in advanced stages of development. NYGB is offering innovative underwriting approaches in this market, notably borrowing from successful financing models used in Europe, to establish a "borrowing base methodology" for projects. NYGB has contracted with a third party consultant with expertise in energy modeling to forecast these VDER credit values based on historical data and energy scenario modeling. NYGB can then use this forecasting to determine a "baseline" component for its credit analysis. Specifically, if the VDER credit value of

a community solar project increases over time against the baseline, the additional credits will accrue to the equity owner as additional return. Alternatively, if the VDER credit value decreases against the projected baseline, this requires a cash sweep to the lender in order to bring the borrowing base into compliance (i.e. downside risk to the equity sponsor). This structure protects private capital providers from the price risks of the VDER credits and ensures a stable and known project cashflow that can be financed against.

A focus on customers

Community solar projects provide New York residents who are not otherwise able to install solar energy generation systems on their property (e.g., homeowners whose rooftops cannot support solar, renters and those who cannot afford solar systems, etc.), with voluntary access to clean, low-cost energy, regardless of their home or business location.

A key component of any community solar project is a strong customer-centric strategy that responds to customer needs around price, flexibility and environmental benefits. A number of business models have emerged, from subscription models with short and long term contracts, fixed vs floating rates, and other variations. A way to help assure the bankability of a projects is having a strong customer acquisition and management strategy and providing a strong value proposition to new and existing customers, thereby assuring on-going access to paying subscribers to make the business model work.

NYGB takes an innovative and flexible approaches to financing community solar. Interconnection bridge loans are one example, but NYGB is eager to work with developers to identify other solutions (including at the post-interconnection phase) that support various community solar product offerings and business models. For more information on NYGB's approach and to contact their team, please visit greenbank.ny.gov.

Project Name (Developer)	Investment Size	Project Size	Electric Utilities
Cypress Creek Renewables, LLC	Up to $25.0 million	Up to 168MW	New York State Electric & Gas Corp. National Grid Orange and Rockland Utilities Rochester Gas & Electric Central Hudson Gas & Electric
Distribute Sun & SUNEIGHT	$3.0 million	Up to 22.5MW	NYSEG, a subsidiary of Avangrid, Inc
Delaware River Solar	Up to $7.0 million	Up to 65 MW	TBC ASAP

GREEN BANK NETWORK

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The Green Bank Network's Transaction Takeaways series highlights notable features of Green Bank deals.

The Green Bank Network (GBN) is a membership organization managed by the Coalition for Green Capital and NRDC that was founded in December 2015 to foster collaboration and knowledge exchange among existing Green Banks, enabling them to share best practices and lessons learned. The GBN also aims to serve as a source of knowledge and a network for jurisdictions that seek to establish a Green Bank. The GBN founding members are the Clean Energy Finance Corporation (Australia), Connecticut Green Bank (U.S.), Green Finance Organisation (Japan), GreenTech Malaysia, NY Green Bank (U.S.), and Green Investment Group (UK). Visit us at greenbanknetwork.org/about-gbn.

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