



Bridge Loan to Support the Deployment of Community Solar Projects

Distributed Sun – SUNEIGHT

In January 2017, NY Green Bank (“NYGB”) provided a 12-month senior secured \$1.0 million bridge loan facility (the “Bridge Loan”) to Distributed Sun, LLC. (“DSUN”), a national energy services provider, and its affiliate SUNEIGHT LLC. Upon DSUN’s request, NYGB increased the Bridge Loan size by \$2.0 million in March 2017. Bridge Loan proceeds will finance project interconnection advanced payments to New York State Electric & Gas Corporation (“NYSEG”) for community distributed generation (“Community DG”) solar projects. This transaction is expected to provide New York State (“NYS”) residents and businesses with a greater variety of energy choices and, ultimately, lower-cost clean energy opportunities.

Transaction Description

DSUN is developing a portfolio of Community DG solar projects in NYS and requested NYGB provide a \$3.0 million Bridge Loan to finance interconnection advance payments² to NYSEG for such projects, due under the New York State Public Service Commission (the “Commission”) Standardized Interconnection Requirements and Application Process.

This first-of-its-kind transaction is expected to serve as a template for capital providers to assess and replicate in the future, as there has been a strong demand for Community DG solar throughout NYS, and capital providers are expected to recognize the value in providing financing to enable the deployment of these projects.

This Transaction Profile is provided pursuant to the “NY Green Bank – Metrics, Reporting & Evaluation Plan, Version 3.0” (the “Metrics Plan”) developed in collaboration with the NYS Department of Public Service and filed with the Commission on June 20, 2016.³ This Transaction Profile contains specific information in connection with the DSUN transactions entered into on January 9 and March 22, 2017, as required by the Metrics Plan.⁴

Form of NYGB Investment

NYGB Product	Product Sub-Type	Committed Capital
Asset Loan & Investment	Bridge Loan	\$3.0 million

Location(s) of Underlying Project(s)

Southern Tier Region. The first projects in the Bridge Loan will be located in Dryden, Middlesex, and Spencer, NY.

¹ Refer to the Summary of Changes document for details of updates, available at www.greenbank.ny.gov/Investments/Transaction-Profiles.

² Under the revised NYS Standardized Interconnection Requirements, within 60 business days of receiving the Coordinated Electric System Interconnection Review (“CESIR”) results, interconnection applicants must pay the applicable utility 25.0% of the interconnection upgrade estimates.

³ Case 13-M-0412.

⁴ See Section 4.0, page 8 and Schedule 3.

Types of Client & Counterparty Organizations that are Transaction Participants

	Name	Participant Type
Client	DSUN and SUNEIGHT	Energy Project Developer
Counterparties (current)	NYSEG, a subsidiary of Avangrid, Inc.	Electric Utility

Summary of Financing Market Objectives & Barriers Addressed

Beneficiary	Market Barrier	Financing Solution
Solar Project Developers	Project sponsors are often expected to pay for interconnection upgrade expenses with equity funds as they finalize construction financing arrangements. This results in a relatively inefficient use of sponsor equity, which limits project deployment efforts and effectively restricts the amount of Community DG being deployed in NYS, slowing the rate of deployment.	This transaction encourages a more efficient use of sponsor equity and supports project development efforts in NYS by bridging the period in which project sponsors need to finalize project financing arrangements for projects for which the CESIR process has been completed. NYGB's role will create an easier pathway forward for developers and will enable greater deployment of community and other distributed generation assets throughout the State.
Capital Market Participants	As a relatively new form of clean energy project, Community DG lacks financing precedents and has limited performance history in NYS. As such, it can be more difficult for private sector capital providers to assess and price the underlying risk exposures associated with Community DG project investments.	Projects supported as a result of this transaction will generate project and customer performance data to draw new investors and financial institutions into the marketplace by demonstrating that competitive risk-return profiles can be achieved by Community DG-enabled business models.
Community DG Subscribers	Due to project siting, property ownership and consumer preference issues, on-site solar project installations may not be viable for a number of NYS homeowners, renters, and businesses. This limits the number of solar projects getting done to those with suitably sited homes or businesses.	This transaction supports the deployment of Community DG solar projects, which provide those who are not otherwise able to install solar energy generation systems on their property (e.g., homeowners whose rooftops cannot support solar systems, renters and those who cannot afford solar stand-alone systems), with voluntary access to clean, low-cost energy, regardless of where their home or business is located.

Technologies Involved

Technology	Measures
Renewable Energy	Solar photovoltaic systems

Metrics & Evaluation Plan

Planned Energy & Environmental Metrics

NYGB’s minimum investment criteria specifically require that “transactions will have the potential for energy savings and/or clean energy generation that will contribute to greenhouse [‘GHG’] reductions in support of New York’s energy policies”.⁵ In addition, the Metrics Plan requires that the following energy and environmental measures, applicable to this transaction, be reported on⁶:

- Estimated gross lifetime and first-year clean energy generated (MWh);
- Estimated gross clean energy generation installed capacity (MW); and
- Estimated gross lifetime and first-year GHG emission reductions (metric tons).

The estimated gross lifetime and first-year energy and environmental impacts of the Bridge Loan are as follows:

Energy/Environmental Impact	Lifetime Low Estimate	Lifetime High Estimate	First-Year Low Estimate	First-Year High Estimate
Estimated clean energy generated (MWh)	245,000	613,000	10,400	26,100
Estimated clean energy generation installed capacity (MW) ⁷	9.0	22.5	Not Applicable	
Estimated GHG emission reductions (metric tons) ⁸	129,000	323,000	5,490	13,700

Planned Market Characterization Baseline & Market Transformation Potential

The Metrics Plan requires that market evaluation will occur when a critical mass of NYGB financing and investment arrangements are put in place. This market evaluation will be conducted on sectors that NYGB has supported and will occur approximately three to five years following initial NYGB capital deployments.⁹ Baseline data will be collected in 2017 for most indicators as a comparison point against which to assess market progress in the later studies. Progress indicators are defined below for the short, mid and long-terms.

Short-term progress indicators will identify early activity levels and will be regularly tracked for the duration of the transaction. These include, but are not limited to:

- Size (i.e., generation capacity and expected dollar value) and location of projects financed by the Bridge Loan;
- Aggregate expected energy generation for projects financed by the Bridge Loan; and
- The number of projects that finalize construction financing arrangements.

Mid and long-term indicators will be expected to show progress through program tracking or market evaluation over time. These include, but are not limited to:

- Market volume of DSUN and SUNEIGHT projects increases;
- General understanding of renewable energy benefits by financial community increases;
- Increased awareness and use of Community DG subscriber performance data by financing entities;
- Increased awareness and use of project/technology performance data by financing entities;
- Demonstration of competitive risk-return profiles for Community DG solar investment;
- Decreased project costs;

⁵ Case 13-M-0412, “Order Establishing New York Green Bank and Providing Initial Capitalization” issued and effective December 19, 2013 of the Commission, Ordering Clause 6 at pages 24 – 25.

⁶ See Metrics Plan, Section 2.0, pages 2 - 6.

⁷ Installed clean energy generation capacity at full deployment of funds is the same for first-year and lifetime duration.

⁸ As of January 1, 2016, the New York State Energy Research and Development Authority (“NYSERDA”) utilizes a 1,160 lbs./MWh conversion factor to estimate GHG emissions reductions for electric generation and energy efficiency savings across all components of the Clean Energy Fund. NYSERDA previously utilized a 625 lbs./MWh conversion factor.

⁹ See Metrics Plan, Section 3.3 at page 7.

- Volume of secondary market financing of Community DG solar assets; and
- Number of new lending participants.

Proposed Method of Outcome/Impact Evaluation (by NYSERDA) & Timeframe

NYSERDA will evaluate the impact this transaction has had on the clean energy finance markets and the energy/environmental benefits which it delivers.

Market evaluation will address the short, mid and long-term indicators identified above. Methods will include analysis of program data along with interviews and surveys of market participants (project subscribers, financial community) to track information including but not limited to: participation rates, project scale information, interest in solar financing (generally and with regard to residential specifically), and influence of NYGB's participation on financial markets. As noted, baseline data will be collected on most key indicators in 2017 and later follow-up studies will assess progress against baseline levels. The specific timing of these efforts may be revised based on experience or other factors as the investment evolves.

Impact evaluation will assess which of the projects funded under the Bridge Loan raised construction financing, and were completed, commissioned and placed in service.

As with all NYGB investments, DSUN projects that receive an incentive or funding from other entities (e.g., utility, other NYSERDA program) will, in accordance with the Metrics Plan, be tracked in order to minimize any double-counting activity on a consolidated basis. As set out in the Metrics Plan, evaluation sampling approaches will also be used as a mechanism to estimate overlap and minimize double counting. Attempts will be made to coordinate market and impact evaluation activities for these projects that receive support from multiple sources in order to maximize the efficiency of data collection and avoid participant survey fatigue.