

Supporting the Construction of New York's Community Solar Projects

Delaware River Solar

In April 2018, NY Green Bank ("NYGB") entered into an agreement with Delaware River Solar, LLC ("DRS") to provide a \$7.0 million bridge loan to finance the interconnection expenses of their community distributed generation ("Community DG") projects in New York State ("NYS"). In July 2018, NYGB committed an additional \$55.0 million to participate in a term loan to finance the capital costs of DRS's Community DG portfolio of projects. In December 2018, NYGB committed a further \$25.0 million to provide a construction facility for Community DG projects in NYS. Collectively, these transactions are initially expected to support the deployment of up to 70.0 megawatts ("MW") of solar photovoltaic ("PV") in NYS, providing residents and businesses with a greater variety of energy choices and, ultimately, lower-cost clean energy opportunities.

Transaction Description

DRS is a NY-based solar development company based in Callicoon, NY, that finances, builds, and operates Community DG projects. DRS has contracted with NYGB to provide financing for the development of the DRS Community DG portfolio in NYS, through various facilities.

Interconnection Bridge Loan Facility

Under the New York State Public Service Commission Standardized Interconnection Requirements and Application Process, developers seeking interconnections for their projects are required to make a deposit of 25.0% of the interconnection upgrade estimates followed by full payment 120 business days later. In April 2018, NYGB and DRS closed a Bridge Loan for up to \$7.0 million to finance up to 90.0% of those interconnection payments to NYS utilities, which will be used to finance interconnection expenses for up to 70.0 MW of Community DG projects in NYS.²

Term Loan Facility

In July 2018, NYGB and DRS closed a second transaction that will provide \$55.0 million in term financing of the capital costs associated with the deployment of up to 70.0 MW of CDG projects in NYS. This transaction is a first-of-its-kind financing for Community DG projects with short term contracts and floating rates. It establishes performance history for the nascent Community DG asset class. NYGB's involvement helps the market to grow, lower the cost of capital, and attract other market participants to finance Community DG projects.

Construction Facility

In December 2018, NYGB and DRS closed a third transaction that will provide \$25.0 million in construction financing of the project costs associated with building up to 70.0 MW of CDG projects in NYS. This transaction directly responds to the market demands for construction financing to further accelerate the build-out of

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 results ("CESIR"), interconnection applicants must pay the respective utility 25.0% of the interconnection upgrade estimates.

Community DG projects in NYS. It complements NYGB's existing term loan facility with DRS and reduces transaction soft costs through utilizing a consistent set of lawyers, engineers and other consultants on a negotiated programmatic basis.

Overall Context

NYGB has committed a combined \$87.0 million to DRS through three loan facilities. These complementary transactions are collectively expected to: (i) provide residential subscribers access to reliable, clean, low-cost energy; and (ii) reduce up to 43,360 metric tons of greenhouse gas (“**GHG**”) emissions annually or up to 1,083,900 metric tons of GHG emissions over a 25-year project life. These transactions will help to demonstrate the viability of the Community DG model in the State, draw new investors and financial institutions into the marketplace, lowering the cost of capital. Consumers are expected to be ultimate beneficiaries in the form of broader access to lower-cost clean energy generation, with corresponding resiliency, affordability, choice and environmental benefits.

This Transaction Profile is provided pursuant to the updated “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 NYS Public Service Commission (the “**Commission**”) on June 20, 2016.³ This Transaction Profile contains specific information in connection with the DRS transactions (which were entered into on April 19 and July 9, 2018, respectively), as required by the Metrics Plan.⁴

Form of NYGB Investment

NYGB Product	Product Sub-Type	Committed Capital
Asset Loan & Investment	Bridge Loan	\$7.0 million
Asset Loan & Investment	Term Loan	\$55.0 million
Asset Loan & Investment	Construction Facility	\$25.0 million

Location(s) of Underlying Project(s)

Statewide.⁵ DRS's Community DG solar projects are in regions across NYS.

Types of Client & Counterparty Organizations that are Transaction Participants

	Name	Participant Type
Counterparty	Delaware River Solar, LLC	Energy Project Developer
Counterparty (current)	New York State Electric & Gas Corporation Rochester Gas & Electric Central Hudson Gas & Electric	Electric Utility
Financier(s)	Tax equity provider(s)	Major U.S. Financial Institution(s)

³ Case 13-M-0412.

⁴ See Section 4.0, page 8 and Schedule 3.

⁵ Defined as projects located in four or more regions of the State.

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, limiting project deployment efforts and effectively restricting the amount of Community DG being deployed in NYS.	The bridge loan encourages an efficient use of sponsor equity and supports project development efforts in NYS by bridging the time period project sponsors need in order to finalize financing arrangements for projects that have completed the CESIR process. NYGB's participation creates an easier pathway forward for developers and enables greater deployment of Community DG along with other distributed generation assets throughout the State.
	Construction financing arrangements remain difficult to secure with many lenders being less willing to take on construction risks in the nascent Community DG asset class. A developer's ability to deliver completed projects requires the availability of sufficient construction funding with pricing that reflects expected risks.	The construction facility supports the delivery of completed projects at scale. By participating in a number of financing facilities for DRS in relation to the same sizable portfolio of projects, NYGB allows greater deployment of Community DG assets throughout the State in the nearer term – materially helping in the establishment of this important asset class and in meeting the State's clean energy goals with corresponding benefits to consumers.
Capital Market Participants	As a relatively new form of clean energy distribution and therefore lesser known business model, Community DG lacks a large volume of financing precedents and has a limited performance history in NYS. As such, it is difficult for private sector capital providers to assess and price the underlying risk exposures associated with Community DG project investments.	These transactions are expected to generate project and customer performance data, which should help 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 NYS homeowners, renters, and businesses. This currently limits the number of solar projects getting done to those with perfectly sited homes or businesses.	These transactions support 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 systems, etc.), with voluntary access to clean, low-cost energy, regardless of their home or business location.

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 gas reductions in support of New York's energy

policies".⁶ In addition, the Metrics Plan requires that the following energy and environmental measures, applicable to this transaction, be reported on:⁷

- 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 credit facilities 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)	1,648,300	2,060,400	65,930	82,410
Estimated clean energy generation installed capacity (MW) ⁸	56.0	70.0	Not Applicable	
Estimated GHG emission reductions (metric tons)	867,100	1,083,900	34,680	43,360

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 2018 – 19 for certain key 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 (generation capacity and dollar value) of projects;
- Average and aggregate dollar value of projects;
- Renewable energy generation and GHG emissions reductions;
- Number and type of projects in development and completed; and
- Number and location of projects (by zip code).

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:

- Favorable financial performance data;
- Favorable technology performance data;
- Increased awareness in clean energy benefits amongst financing entities as a result of favorable technology performance data/experience;
- Investment risk/default rates become increasingly attractive to investors, as a result of positive financial performance data/experience;
- Increased financial market volume for renewable energy projects;
- Decreased project technology costs;
- Scale of clean energy investment increases, due to increased end-use market demand;
- Reduced time to execute clean energy financings; and
- Increased number of financial participants providing similar capital structures.

⁶ 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.

⁷ See Metrics Plan, Section 2.0, pages 2 - 6.

⁸ Built clean energy generation capacity at full deployment of funds is the same for first-year and lifetime duration.

⁹ See Metrics Plan, Section 3.3 on page 7.

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

NYSERDA will evaluate the impact these transactions have had on the clean energy finance markets and the energy/environmental benefits delivered by this transaction.

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 Community DG specifically), and influence of NYGB's participation on financial markets. As noted, baseline data will be collected for certain key indicators in 2018 – 19 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 use actual system performance data to understand energy and environmental outcomes. Impact evaluation is expected to include quarterly review and analysis of actual PV portfolio production data collected by DRS. Actual PV portfolio performance will be monitored and documented against expected performance. Impact evaluation will help provide verification of performance, in turn aiding the clean energy finance community in understanding risk in this technology area.

As with all NYGB investments, DRS's 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.