

Supporting the Deployment of New York’s Community Solar Projects

NRG Renew

NY Green Bank (“**NYGB**”) is committing \$18.0 million to participate in a term loan for NRG Renew (“**Renew**”) to finance community distributed generation (“**Community DG**”) solar projects. As a participant with other private sector banks in the term loan, NYGB’s capital will finance up to five new Community DG solar projects in New York State (“**NYS**”). This transaction is expected to support the deployment of up to 15.0 megawatts (“**MW**”) of solar photovoltaic (“**PV**”) in NYS, providing ratepayers with a greater variety of energy choices and, ultimately, lower-cost clean energy opportunities.

Transaction Description

Renew, a leading integrated power company in the United States, is developing a national portfolio of Community DG solar projects with 19.0% of the portfolio located in NYS. Renew engaged an investment bank (the “**Lead Arranger**”) to structure, arrange, and syndicate a term loan to finance the projects when they are placed in service, and NYGB is committing \$18.0 million as part of that term loan.

This transaction is among the first large-scale financings for a portfolio of Community DG solar assets and is estimated to support the deployment of up to 15.0 MW of Community DG solar assets in NYS. This deployment is expected to: (i) provide residential subscribers access to reliable, clean, low-cost energy; and (ii) reduce up to 9,280 metric tons of greenhouse gas (“**GHG**”) emissions annually or up to 232,000 metric tons of GHG emissions over a 25-year project life. The transaction will help to demonstrate viability of the Community DG model, drawing new investors and financial institutions into the marketplace and ultimately lowering the cost of capital. This, in turn, is expected to benefit consumers in the form of broader access to lower-cost clean energy generation.

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, 2016.¹ This Transaction Profile contains specific information in connection with the Renew transaction entered into on June 29, 2018, as required by the Metrics Plan.²

Form of NYGB Investment

NYGB Product	Product Sub-Type	Committed Capital
Asset Loan & Investment	Term Loan	\$18.0 million

Location(s) of Underlying Project(s)

Hudson Valley. The projects will be located in Orange & Rockland and Central Hudson utility territories.

¹ Case 13-M-0412.

² See Section 4.0, page 8 and Schedule 3.

Types of Client & Counterparty Organizations that are Transaction Participants

	Name	Participant Type
Client	Lead Arranger	Global Corporate & Investment Bank
Counterparties (current)	Renew	Energy Project Developer
Financiers	Tax equity providers and other commercial banks	Global Corporate & Investment Banks

Summary of Financing Market Objectives & Barriers Addressed

Beneficiary	Market Barrier	Financing Solution
Capital Market Participants	As a relatively new form of clean energy distribution, and therefore lesser known business model, Community DG lacks extensive financing precedents and has a limited performance history in NYS. As such, it is difficult for private sector capital providers to assess and properly price the underlying risk exposures associated with Community DG project investments.	The transaction will generate project and customer performance data, which will 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 installations may not be viable for a number of NYS homeowners, renters, and businesses. This limits the number of solar customers to those with optimally sited homes or businesses.	The 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 otherwise 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	PV 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 [('GHG')] reductions in support of New York's energy policies".³ In addition, the Metrics Plan requires that the following energy and environmental measures, applicable to this transaction, be reported on:⁴

- 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).

³ 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.

⁴ See Metrics Plan, Section 2.0, pages 2 - 6.

The estimated gross lifetime and first-year energy and environmental impacts of the term 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)	156,000	441,000	6,240	17,640
Estimated clean energy generation installed capacity (MW) ⁵	5.3	15.0	Not Applicable	
Estimated GHG emission reductions (metric tons)	82,000	232,000	3,280	9,280

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.⁶ Baseline data will be collected in 2018 - 19 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 dollar value) and location of projects financed by the term loan;
- Performance of the underlying customer agreements for projects financed by the term loan; and
- Aggregate energy generation for projects financed by the term loan.

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

⁵ Built clean energy generation capacity at full deployment of funds is the same for first-year and lifetime duration.

⁶ See Metrics Plan, Section 3.3 at page 7.

by Renew. 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, Renew 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.