

Driving Standardization in the New York Solar Plus Storage Market

BQ Energy – Mt. Kisco

BQ Energy (“BQ”) is a renewable energy project developer specializing in landfill and brownfield site redevelopment. As the sixth installation of a larger portfolio of projects to be financed in collaboration with NY Green Bank (“NYGB”), BQ received a \$2.27 million construction-to-term loan to complete an community distributed generation (“CDG”) 550 kilowatt (“kW”) solar array paired with a 522kW/2088kWh battery to be located on a brownfield site in the Town of Mt. Kisco, NY. This transaction provides Mt. Kisco residents and businesses a greater variety of energy choices and ultimately, lower cost clean energy opportunities.

Transaction Description

BQ is a Wappingers Falls, New York-based renewable energy project developer specializing in landfill and brownfield site redevelopment. NYGB’s \$2.27 million construction-to-term loan enables BQ to complete the 550 kW solar array paired with a 522kW battery (the “**Project**”) to be constructed and operated on a brownfield site in the Town of Mt. Kisco, NY. The Project will generate revenue by selling clean power (or, more specifically, selling the value of clean power evidenced by VDER credits) to the subscribers in the community of Mt. Kisco.

The Project is the sixth of a number of similar developments in BQ’s pipeline that NYGB anticipates financing as part of a larger portfolio. This investment represents NYGB’s first transaction with BQ that includes battery storage. BQ expects to develop, construct, and operate additional community solar and storage projects in the future.

NYGB’s participation in the Project – and in similar past and future developments included in the proposed portfolio arrangement – will help expand financing opportunities for CDG (less than 5.0 MW) solar plus storage systems by fostering standardization in underwriting (which is the process a lender uses to assess the creditworthiness or risk of a potential borrower) including a streamlined, uniform approach to integrating contractors, structuring contracts, and utilizing standardized equipment.

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 NYS Public Service Commission (the “**Commission**”) on June 20, 2016.¹ This Transaction Profile contains specific information in connection with the BQ transaction (which was entered into on October 19, 2018, as required by the Metrics Plan).²

Form of NYGB Investment

NYGB Product	Product Sub-Type	Committed Capital
Asset Loan & Investment	Construction-to-Term Loan	\$2.27 million

¹ Case 13-M-0412.

² See Section 4.0, page 8 and Schedule 3.

Location(s) of Underlying Project(s)

Westchester County. The Project is located in Mt. Kisco, New York, with past and future portfolio projects located in various counties throughout New York State.

Types of Client & Counterparty Organizations that are Transaction Participants

	Name	Participant Type
Client	BQ Energy	Energy Project Developer

Summary of Financing Market Objectives & Barriers Addressed

Beneficiary	Market Barrier	Financing Solution
Smaller-Scale Solar plus Storage Developers	Many smaller-scale solar developers face challenges in securing adequate construction and long-term financing, particularly for smaller to mid-sized solar projects incorporating battery storage, as these developers are restricted in their access to capital by their size and comparatively limited track records.	This transaction aims to drive growth in the CDG solar plus storage sector by encouraging the standardization of contractors, contracts, and equipment to increasing underwriting efficiency and reducing overall transaction costs. Developing standardized projects within a portfolio makes the overall financing opportunity more attractive to a larger potential investor group, ultimately providing more funding options and influencing financing costs.
Capital Market Participants	Limited private capital interest to date in supporting the construction of distributed energy projects in New York’s clean energy marketplace, due to limited history and track record of such financings.	Institutional investors and other private sector capital providers have shown less interest in financing CDG solar project developers that may have more limited operating histories. NYGB’s participation in this transaction will help this NYS-based developer further consolidate its track record and achieve the scale needed to appeal more broadly to traditional capital providers. In turn, this can be expected to enable more refinancing options which will provide the market with greater levels of familiarity with this asset class – a prerequisite to increasing liquidity.
New Yorkers	While interest and activity in solar projects are increasing rapidly in NYS, only a relatively small number of companies and financial models are being used, particularly with the addition of storage. Fewer options in the marketplace generally translate into higher prices for end-users and more limited consumer choice.	By bridging certain financing gaps in the marketplace, NYGB is enabling a larger group of solar developers to participate in New York’s clean energy marketplace. This gives end-users more choice in terms of how they pay for their systems and who they select as their installers. Greater choice and competition in the market will lead to reduced costs, allowing a greater number of New Yorkers and New York businesses to go solar.

Technologies Involved

Technology	Measures
Renewable Energy	Solar photovoltaic (“PV”) systems and battery storage 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 NYGB report on the following energy and environmental measures that are, applicable to this transaction., be reported on⁴:

- 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 lifetime and first-year energy and environmental impacts of the Project, facilitated by NYGB’s financial participation in this transaction, 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)	15,947.58	20,035.96	637.90	801.44
Estimated clean energy generation installed capacity (MW) ⁵	0.55	0.55		
Estimated GHG emission reductions (metric tons)	7,977.41	10,022.52	319.10	400.90

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. Market evaluation activities commenced in 2018 on sectors, including solar, that NYGB has supported since inception, consistent with the requirement for such assessments approximately three to five years following initial NYGB capital deployments.⁶ Baseline data was collected in 2018 and will be updated going forward to include indicators specific to this transaction. Baseline data on indicators will be used as a comparison point against which to assess market progress in later studies. Progress indicators are defined below for the expected short, mid and long-terms outcomes.

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

- Number and type of projects in development and completed;
- Average and aggregate dollar value of projects;
- Size (generation capacity and dollar value) of projects;
- Performance of installed systems; and
- Renewable energy generation and GHG emissions reductions.

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

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.

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

⁶ See Metrics Plan, Section 3.3, page 7.

- Increased awareness of clean energy benefits among financing entities as a result of favorable technology performance data;
- Favorable financial performance data;
- Favorable technology performance data;
- Increases in market volume of projects;
- Increased attractiveness of investments to investors, based on positive financial performance data and acceptable risk/default rates;
- Decreased project technology cost;
- Increased number of financial participants providing similar capital structures; and
- Reduced time to execute clean energy financings.

The above listed indicators listed above will remain in development until market characterization and baseline activity commences. Additional aspects may be tracked to further support baseline and market measurements.

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

Market evaluation will address the outcome indicators identified above. Methods will include analysis of program data along with interviews and surveys of market participants to track information including but not limited to: project scale information, interest in solar financing, and influence of NYGB's participation on financial markets. As noted, baseline data will be collected on most key indicators starting in 2018 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 relevant factors as the investment evolves

Impact evaluation will assess how the Project is performing within the estimated clean energy benefits ranges set out in this Transaction Profile.

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