NEW YORK STATE OF OPPORTUNITY. | NY Green Bank A Division of NYSERDA

NY Green Bank

Metrics, Reporting & Evaluation

Quarterly Report No. 16

(Through June 30, 2018)

Case 13-M-0412

August 14, 2018

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1 Performance at a Glance – As of June 30, 2018

Stimulating New Clean Energy Proposals in the State	NY Green Bank ("**NYGB**") has received over **$2.7 billion** in investment proposals since inception.
Strong Active Pipeline	The Active Pipeline of potential investments proceeding to close is **$542.2 million**.[1]
Driving Material Clean Energy Investments Across NYS	NYGB's investments support clean energy projects with a total project cost of **between $1.46 and $1.70 billion**[2] in aggregate, based on Overall Investments to Date of **$522.3 million**.
Mobilizing Capital	NYGB's investment portfolio as a whole represents an expected mobilization ratio of Total Project Costs to NYGB funds in line with the target level of **3:1**,[3] which will be realized as planned clean energy projects are successfully implemented by NYGB's clients and counterparties. Over 10 years, assuming periodic reinvestment in comparable transactions, the expected mobilization ratio remains on track to meet or exceed **8:1**.
Revenue Growth - Maintaining Self-Sufficiency	Continued revenue growth – **$38.9 million** in revenues has been generated since NYGB's inception. NYGB continues to maintain self-sufficiency through the generation of annual net income.
Contributing to CEF, REV, CES and Other State Targets	NYGB's investments to date drive estimated gross lifetime GHG reductions of **between 7.3 and 9.3 million metric tons**[2], equivalent to removing **between 70,000 and 89,000 cars** from the road for a period of **24 years**.

[1] Note that at any time, the value of the Active Pipeline is separate from the value of the investment portfolio. So, for example, as of June 30, 2018, the $542.2 million in Active Pipeline does not include the $522.3 million in closed transactions that comprises NYGB's Overall Investments to Date.

[2] NYGB monitors its counterparties' clean energy project installations throughout the duration of each investment through the receipt and review of periodic reports. Based on information received, NYGB continually manages the actual and expected energy and environmental benefits across its portfolio. As new information becomes available informing NYGB of NYS market uptake of clean energy projects, NYGB may correspondingly adjust (up or down) the overall portfolio's high and low estimated Total Project Costs and energy and environmental metrics (identified at closing of each investment, working with the relevant clients and counterparties and reflected in Transaction Profiles). This constant monitoring and refinement of expected outcomes improves the accuracy of NYGB's portfolio-level estimation of impact benefits as it works towards meeting the CEF objectives to support NYS CES, SEP and other clean energy goals. Given such periodic adjustments, the aggregate estimated benefits reported in Quarterly Reports are the most up-to-date estimates (and so no longer will reflect the sum of the low and high estimated benefits specified in the Transaction Profiles at the time of each transaction close).

[3] Given the range of Total Project Costs that NYGB investments mobilize, the Mobilization Ratio also represents a range; currently of 2.8:1 to 3.3:1.

2 Introduction

This Quarterly Report ("**Report**") is filed by NYGB with the New York State Public Service Commission (the "**Commission**") pursuant to the Metrics, Reporting & Evaluation Plan developed in consultation with the New York State Department of Public Service ("**DPS**") and filed with the Commission[4] (the "**Metrics Plan**").

Defined terms used in the text of this Report but not separately described have the meanings respectively given to them in the Metrics Plan.

3 Business Update

3.1 Overview

NYGB's investment activities fall into two broad categories, respectively relating to:

(a) Transactions that have closed, which collectively comprise NYGB's investments; and

(b) Transactions that are in process but not yet closed, which collectively comprise NYGB's pipeline.

Each proposed NYGB investment is categorized by the stage it has reached in NYGB's internal credit underwriting and transaction execution processes.

NYGB closed **six new investments** during the quarter ending June 30, 2018, adding **$64.9 million** to NYGB's investment portfolio. These transactions are discussed in Section 3.2.

NYGB's overall transaction status and Active Pipeline are summarized in Figure 1,[5] showing that since inception through June 30, 2018:

(a) Over **$2.7 billion** of proposals have been received and evaluated by NYGB's Scoring Committee;

(b) **$2.5 billion** of proposals have passed Scoring Committee evaluation – representing potential investments that meet NYGB's mandate and proposal evaluation criteria;

(c) **$1.2 billion** of proposals have received Greenlight Committee recommendation for advancement;

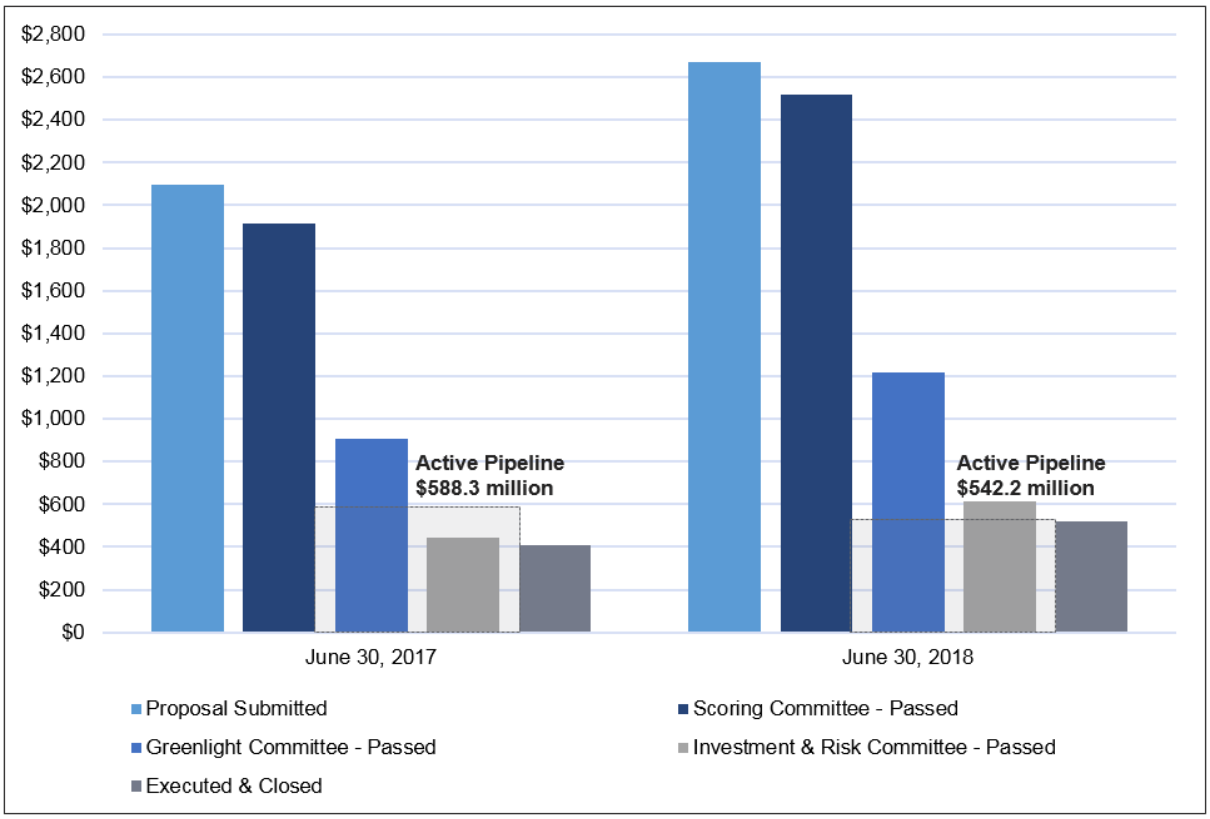
(d) **$614.6 million** of proposals have been vetted by the Investment & Risk Committee ("**IRC**") and approved by NYSERDA's President & CEO; and

(e) **$522.3 million** of transactions have been closed - comprising NYGB's Overall Investments to Date - mobilizing public and private investments to support in the range of **$1.46 to $1.70 billion** in Total Project Costs for new clean energy deployment in the State.

Also, as shown in Figure 1, NYGB currently has an Active Pipeline of **$542.2 million**.

[4] Case 13-M-0412, "NY Green Bank – Metrics, Reporting & Evaluation Plan", Version 3.0, dated June 20, 2016.
[5] Note that all these amounts change over time as proposals and transactions evolve.

Figure 1. Transaction Status & Active Pipeline ($ Millions): Year-on-Year Review



3.2 Investment Portfolio

3.2.1 Highlights

In the quarter ended June 30, 2018, NYGB closed six transactions, respectively sponsored by Sunrun Inc., Motivate International Inc, Delaware River Solar, NRG Renew, BQ Energy, and Vivint Solar. Each transaction, combined into NYGB's portfolio, contributes to the primary CEF outcomes of GHG emissions reductions, customer bill savings, energy efficiency, clean energy generation and mobilization of private sector capital.[6] In turn, the CEF objectives support the NYS Clean Energy Standard ("**CES**") goal of 50.0% energy generation from renewable sources, and the energy efficiency target to reduce energy consumption by 185 trillion BTUs below forecasted energy use in 2025[7], which together further the State Energy Plan ("**SEP**") goal of 40.0% reduction in GHG emissions from 1990 levels by 2030.

3.2.2 New Investments

Sunrun Inc. – Increasing Opportunities for NY Residents to Go Solar, Expanding Market Liquidity (Updated)

- *Reduces GHG emissions by up to 1,256,000 metric tons over the 25-year life of the underlying assets*
- *Generates at least 2,148,000 MWh of renewable energy over the life of the underlying projects*
- *Increases renewable energy installed generation capacity by at least 73.0 MW*

[6] As set out in the CEF Order (Cases 14-M-0094 et al.) issued and effective on January 21, 2016, page 40.
[7] Announced by Governor Andrew M. Cuomo on Earth Day 2018. See www.nyserda.ny.gov/About/Newsroom/2018-Announcements/2018-04-20-Governor-Cuomo-Announces-New-Energy-Efficiency-Target-to-Cut-Greenhouse-Gas-Emmisons.

Post-Construction Aggregation Facilities

On May 13, 2016, NYGB closed a $25.0 million commitment to participate in a transaction consisting of two credit facilities – a loan aggregation revolving facility and a term loan (together the "**NYGB Loan Products**"), which are expected to accelerate the deployment of over 5,000 solar projects at homes across NYS. The transaction was part of a broader $340.0 million financing (the "**Post-Construction Aggregation Facilities**") arranged by Investec Bank PLC that provides Sunrun with a larger financing to expand its business in NYS and elsewhere. The $340.0 million Post-Construction Aggregation Facilities (which include the NYGB Loan Products) represent one of the largest aggregation financings for a residential solar developer at the time of closing. On March 27, 2018, NYGB and the lender group consented to extend the deployment period and the maturity of the Post-Construction Aggregation Facilities by over two years based on Sunrun's demonstrated ability to continually deploy solar PV projects in NYS and nationally. On April 20, 2018, NYGB and the lender group consented to expand the Post-Construction Aggregation Facilities up to $595.0 million to further support Sunrun's continued growth. NYGB's share of this increase is $10.0 million, bringing NYGB's overall commitment to the Post-Construction Aggregation Facilities to $35.0 million.

In total, NYGB has three ongoing transactions with Sunrun, a national solar provider that markets and develops residential solar energy systems. The three complementary transactions (one construction financing and two post-construction financings) aggregate bundled pools of residential solar systems that will ultimately be refinanced through one or more longer-term take-out financings. Given that the bank market for such credit facilities remains limited, NYGB's participation enables larger aggregation facilities than would otherwise be available, resulting in longer-term takeout refinancings at a scale greater than what might otherwise be achieved. Through increased scale, the aggregation-to-term transactions are expected (post-aggregation) to draw new investors and financial institutions into the marketplace, decreasing the cost of capital for solar developers and installers, and in turn, the cost of solar power equipment sold or leased to homeowners.

Motivate International Inc. – Expanding Urban Bike Sharing Program in New York City (Updated)

- *Reduces GHG emissions by up to 32,500 metric tons over the 7-year life of the underlying assets*

In May 2017, NYGB provided a $43.3 million term loan and a $5.0 million seasonal variable funding note (collectively with the term loan, the "**Credit Facilities**") to NYC Bike Share, LLC ("**NYCBS**"). NYCBS is the exclusive operator of the NYC bike share system ("**Citi Bike**") which is comprised of 12,000 bikes and 750 stations and is the largest bike share system in North America. Proceeds from the original Credit Facilities supported the addition of 2,000 bikes primarily in low-to-moderate income neighborhoods in Harlem, Queens, and Brooklyn and enabled NYCBS to address the seasonal nature of its business when there is lower ridership in winter months. In May 2018, due to favorable transaction performance within this new asset class, NYGB increased the term loan facility by $6.0 million.

Delaware River Solar – Supporting the Deployment of New York's Community Solar Projects

- *Reduces GHG emissions by up to 1,083,900 metric tons over the 25-year life of the underlying assets*
- *Generates at least 1,648,300 MWh of renewable energy over the life of the underlying projects*
- *Increases renewable energy installed generation capacity by at least 56.0 MW*

Delaware River Solar ("**DRS**") is a solar development company based out of Callicoon, NYS, that finances, builds, and operates community distributed generation ("**Community DG**") projects. DRS engaged NYGB to provide financing support for the development of the DRS Community DG portfolio in NYS.

Under the Commission's 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 progress up to 70.0 MW of Community DG solar projects.

NRG Renew – Supporting the Deployment of New York's Community Solar Projects

- *Reduces GHG emissions by up to 232,000 metric tons over the 25-year life of the underlying assets*
- *Generates at least 156,000 MWh of renewable energy over the life of the underlying projects*
- *Increases renewable energy installed generation capacity by at least 5.3 MW*

NRG Renew ("**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 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 facility.

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. 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.

BQ Energy Homeridae – Driving Standardization in the New York Solar Market

- *Reduces GHG emissions by up to 72,900 metric tons over the 25-year life of the underlying assets*
- *Generates at least 102,400 MWh of renewable energy over the life of the underlying projects*
- *Increases renewable energy installed generation capacity by at least 4.1 MW*

BQ Energy ("**BQ**") is a Wappingers Falls, New York-based renewable energy project developer specializing in landfill and brownfield site redevelopment. NYGB's $4.9 million construction loan enables BQ to complete the 4.1 MW ground-mounted solar farm (the "**Project**") to be constructed on a remediated former ExxonMobil refinery site in Olean, NY. CIR Electric Construction Corporation will construct the Project under a standardized balance of plant contract utilizing top-tier panels, inverters, and racking systems. The Project will generate revenue by selling clean power (or, more specifically, selling the value of clean power evidenced by net metering credits) to the City of Olean, NY.

The Project is the fourth of several similar developments in BQ's pipeline that NYGB anticipates financing as part of a larger portfolio. BQ expects the majority of projects in the portfolio to be located on landfill and brownfield sites in Western NY, Central NY, Hudson Valley, and Long Island with the power generated providing clean power to municipalities, universities, schools, and hospitals, and utilities.

Vivint Solar Inc. Expanding the New York State Residential Solar Market (Updated)

- *Reduces GHG emissions by at least 893,300 metric tons over the 25-year life of the underlying assets, with an incremental 93,300 metric tons attributed to the most recent transaction (closed on June 29, 2018)*
- *Generates at least 1,698,000 MWh of renewable energy over the life of the underlying projects, with an incremental 178,000 MWh attributed to the most recent transaction*
- *Increases renewable energy installed generation capacity by at least 58.0 MW, with an incremental 6.0 MW attributed to the most recent transaction*

On June 29, 2018, NYGB committed $19.0 million to participate in Vivint Solar's $150.0 million corporate revolving credit facility (the **"Construction Loan Facility" or "CLF"**) alongside seven other lenders. The CLF will be used by Vivint Solar to fund customer acquisition and construction of systems. Once installed, these systems will be refinanced through other debt facilities (described below) and tax equity commitments arranged by Vivint Solar. NYGB's participation in the CLF broadens the availability of construction financing for residential distributed energy projects across NYS.

This $19.0 million transaction is the third transaction NYGB has entered into with Vivint Solar. The first two being a $20.0 million post-construction aggregation facility and a $37.5 million term loan to refinance operating PV systems in NYS. Vivint Solar sought NYGB's participation in the CLF, aggregation facility, and term loan

facility in order to further develop its project pipeline and finance operating assets in its national portfolio. With both construction and longer-term financing in place, Vivint Solar is positioned to meet the demand from homeowners and expand its ability to finance the installation of solar projects throughout NYS.

These complementary transactions will result in the aggregation of bundled pools of residential solar systems that will ultimately be refinanced through one or more longer-term take-out financings. One type of take-out financing is a securitization, or the sale of underlying cash flows resulting from residential leases or power purchase agreements to third-party investors. Solar developers can raise large amounts of capital through a securitization, allowing for further development of the emerging residential solar asset class. On June 11, 2018, Vivint Solar completed its first securitization, raising $466.0 million through the sale of the cash flows of a portfolio of residential solar systems. The greater size of this securitization (when compared to the size of Vivint Solar's debt facilities) will likely augment investor interest in solar assets, resulting in more attractive debt pricing. This, in turn, could benefit New Yorkers by allowing Vivint Solar to provide customers lower priced contracts to purchase power.

Further details on all NYGB's investments are contained in the Transaction Profiles publicly available on NYGB's website at www.greenbank.ny.gov/Investments/Portfolio, and the Transaction Profiles for the investments described above are also included in the Schedule to this Report.

3.3 Active Pipeline

Demand for NYGB investment is evidenced by the total value of proposals that have been submitted to NYGB in response to its open solicitations for investment proposals (the "**Investment RFPs**").[8] Through June 30, 2018, proposals requesting over $2.7 billion of NYGB capital have been received. NYGB's Active Pipeline at June 30, 2018 is $542.2 million. Figures 2, 3 and 4 below show the distribution of proposed investments in NYGB's Active Pipeline by technology, end-use customer segment and geography.

[8] Clean Energy Financing Arrangements – Request for Proposals (RFP) No. 1, Construction & Back-Leveraged Financing for Ground-Mounted Solar Generation Systems Targeting Corporate & Industrial End-Users - RFP No. 7, Efficiency & Renewables Financing Arrangements: Building & Property Owners – RFP No. 8, and Construction and Aggregation-to-Term Financing for CDG Solar Projects – RFP No. 10, all available at www.greenbank.ny.gov/Work-with-Us/Open-Solicitations.

Figure 2. Active Pipeline by Technology

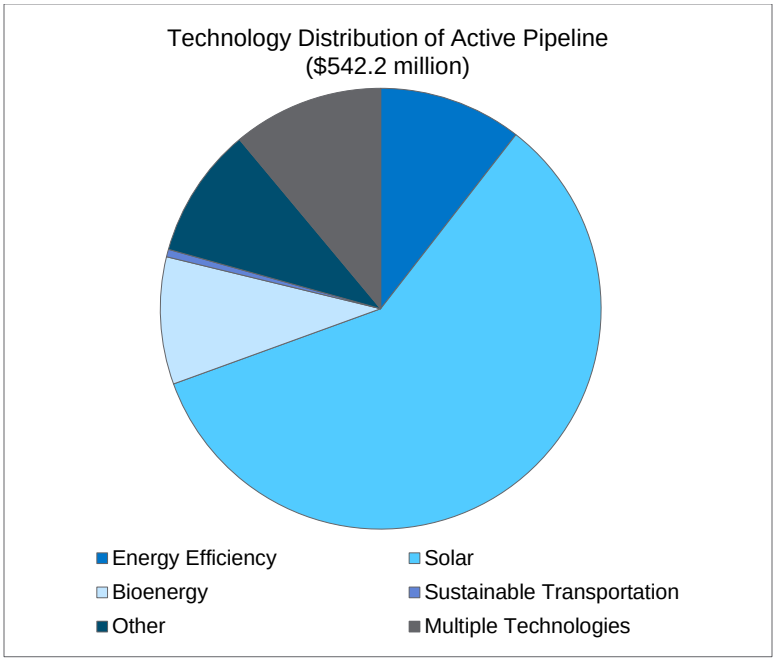


Figure 3. Active Pipeline by End-Use Customer Segment

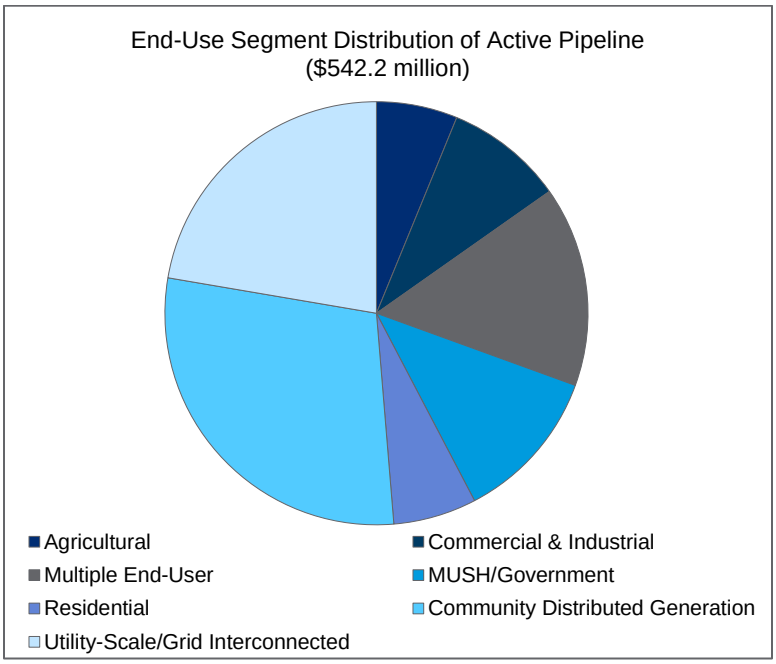
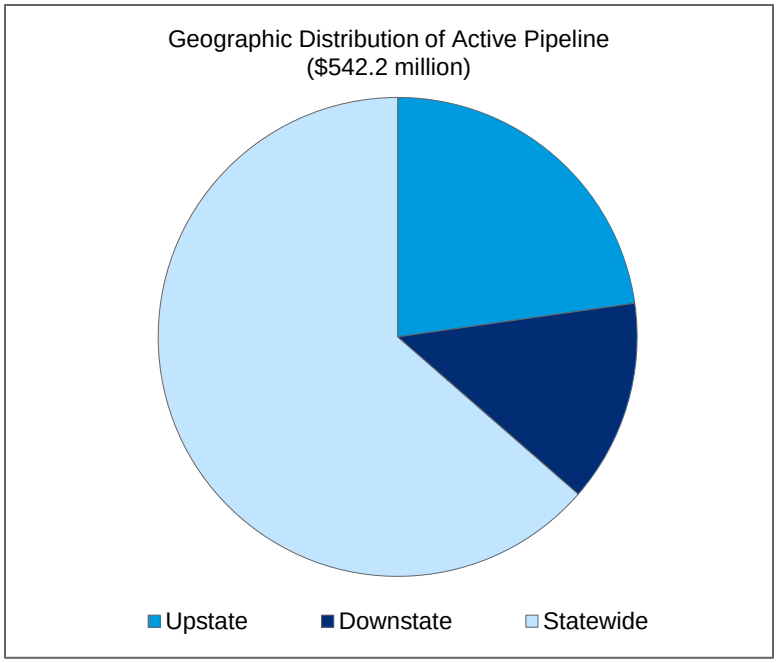


Figure 4. Active Pipeline by Geographic Distribution



3.4 Strategic, Operational & Risk Matters

In the quarter ended June 30, 2018, in addition to those matters referenced elsewhere in this Report and ongoing "business as usual" activities (e.g., origination, execution and routine outreach), NYGB's achievements include:

(a) Annual Business Plan: NYGB completed its Business Plan for the 2018 – 2019 plan year (the "**Plan**"). The Plan, filed with the Commission on June 29, 2018, details NYGB's achievements in the prior plan year, while outlining goals and deliverables (tying directly to NYGB's mission and investment criteria), together with corresponding key performance indicators, all for the current plan year. Plan deliverables also tie specifically to the Metrics Plan and are addressed in Section 5 of this Report.

(b) NYGB Expansion Efforts: As described in NYGB's previous Quarterly Report, filed May 15, 2018, Governor Cuomo announced in Fall 2017 that NYGB would seek at least an additional $1.0 billion from the private sector and expand its investment activities nationally. NYGB continues to work with its advisors to evaluate alternative opportunities around potential geographic expansion. Throughout this process, NYGB focus remains on developing innovative capital solutions to deploy more sustainable infrastructure in and for the benefit of NYS and delivering on Governor Cuomo's ambitious climate goals.

(c) New Investment Solicitation Launched: To complement NYGB's ongoing investment solicitations, in June 2018, NYGB launched a new Request for Information: Financing Arrangements for Energy Storage Projects in New York State ("**RFI 4**"). RFI 4 targets energy storage market participants to increase dialogue regarding specific ways in which NYGB can be helpful in financing energy storage projects in NYS by addressing existing market barriers and financing gaps that could impede project development. The focus of these conversations is to: (i) inform NYGB of current or future business models, objectives, and resulting investment opportunities; and (ii) discuss ways in which NYGB may support such objectives, resulting in new products and investments in furtherance of Governor Cuomo's 1,500 MW energy storage target for NYS by 2025.

(d) Continuing Stakeholder Outreach & Communications: Highlights of specific outreach initiatives in the period to which this Report relates include:

i. Participation in 20 events including a "Community Solar in New York State" webinar hosted by the Green Bank Network, where representatives from NYGB and NY Sun presented on the opportunities emerging in the NYS community solar market; the Baker McKenzie Annual Global Renewable Energy Conference where NYGB President, Alfred Griffin discussed the increased activity in New York State's energy storage market and the financing mechanisms needed to support this opportunity; the C40 Financing Sustainable Cities Forum 2018 where NYGB Chief Operating Officer, Caroline Angoorly, participated on the "Investing Long-Term, Acting Now" panel and discussed NYGB's unique business model; and the REFF Wall Street Summit where Alfred Griffin and other industry experts addressed the financing challenges and opportunities in energy storage market on the "Grid Modernization: Opportunities for Growth and Investment" panel.

ii. Upon the issuance of RFI 4, NYGB distributed an email to stakeholders from the development community, financing community, and contractors/service providers who expect to deploy energy storage with the intention of stimulating and supporting new market activity. The purpose of RFI 4 is to increase dialogue with energy storage market participants. To further such dialogue, NYGB will give a presentation as part of each of the DPS/NYSERDA Technical Conferences on the Energy Storage Roadmap taking place on three separate dates: July 31, 2018 in New York City, August 7, 2018 in Farmingdale, and August 21, 2018 in Albany. During each presentation, a member of NYGB's Investment & Portfolio Management team will speak to the specific ways in which NYGB can be helpful in financing energy storage projects in NYS by addressing existing market barriers and financing gaps that could impede project development. As a result of all outreach efforts, NYGB is continuously advancing its investment strategy in developing standardized and creditworthy financing approaches for energy storage projects or portfolios of projects. NYGB anticipates continued activity in the energy storage market and stands ready to offer creative financing solutions to support that growth.

iii. NYGB was highlighted in the University of Virginia Darden's Batten Institute for Entrepreneurship and Innovation Policy Playbook, which was developed during the 2018 Jefferson Innovation Summit at the Carnegie institution for Science in Washington, DC, held in February 2018. The summit was attended by corporate leaders, entrepreneurs, nonprofit leaders, government officials, academics and policy experts for an in-depth dialogue and workshop, all of which informed the 2018 Summit Policy Playbook. This playbook presents six innovative ideas to more rapidly scale solutions to address climate change – including the establishment of a "National Cleantech Bank" – and NYGB's efforts to raise third-party capital for national expansion.

(e) Public Reporting & Metrics: Filed the Quarterly Report for the period ending March 31, 2018 (on May 15, 2018), and the Annual Financial Metrics Report No. 4 for the fiscal year April 1, 2017 – March 31, 2018, including the annual audited financial statements (on June 29, 2018), as required by the Metrics Plan, both of which are available at www.greenbank.ny.gov/Resources/Public-Filings. NYGB will host its regular Quarterly Review Webinar in September 2018 to discuss NYGB's latest developments and activities from its most recent fiscal quarter, including newly closed transactions.

(f) Advisory Committee: An Advisory Committee meeting was held on June 11, 2018. Information regarding NYGB's Advisory Committee – including its membership and charter – is accessible on NYGB's website at www.greenbank.ny.gov/About/Advisory-Committee. Advisory Committee meetings occur at least semi-annually.

4 Quarterly Metrics

Required metrics for the period April 1, through June 30, 2018 are set out in Table 1.[9]

Table 1. Quarterly Metrics

Quarterly Metric	Prior Quarter	Current Quarter
Capital Position		
▪ **Authorized Capital ($)**	$1.0 billion	$1.0 billion
▪ **Authorized Administrative Expenses ($)**	$17.6 million	$17.6 million
▪ **Authorized Evaluation Expenses ($)**	$4.0 million	$4.0 million
Operational Matters		
▪ **Cumulative Revenues ($)**[10]	$32.6 million	$38.9 million
▪ **Cumulative Operating Expenses ($)**[11]	$25.1 million	$27.4 million
▪ **Direct Operating Expenses ($)**	$15.0 million	$16.3 million
▪ **Allocated Expenses ($)**	$10.1 million	$11.1 million
▪ **Credit Facility (if in place)**		
▪ **Credit Facility Amount ($)**	Not Applicable	Not Applicable
▪ **Credit Facility Drawn Amount ($)**	Not Applicable	Not Applicable
▪ **Credit Facility Fees & Interest (Cumulative) ($)**	Not Applicable	Not Applicable
Investment Portfolio		
▪ **Committed Funds ($)**	$78.2 million	$91.6 million
▪ **Deployed Funds ($)**[12]	$296.2 million	$242.3 million
▪ **Current Portfolio ($)**[13]	$374.3 million	$333.9 million
▪ **Overall Investments to Date ($)**	$457.5 million	$522.3 million
▪ **Total Project Costs (Cumulative) ($)**[14]	In the range of $1.39 - $1.63 billion	In the range of $1.46 - $1.70 billion
▪ **Mobilization Ratio**	Tracking at least 3:1 on average across portfolio	Tracking at least 3:1 on average across portfolio[15]

[9] NYGB monitors its counterparties' clean energy project installations throughout the duration of each investment through the receipt and review of periodic reports. Based on information received, NYGB continually manages the actual and expected energy and environmental benefits across its portfolio. As new information becomes available informing NYGB of NYS market uptake of clean energy projects, NYGB may correspondingly adjust (up or down) the overall portfolio's high and low estimated Total Project Costs and energy and environmental metrics (identified at closing of each investment, working with the relevant clients and counterparties and reflected in Transaction Profiles). This constant monitoring and refinement of expected outcomes improves the accuracy of NYGB's portfolio-level estimation of impact benefits as it works towards meeting the CEF objectives to support NYS CES, SEP and other clean energy goals. Given such periodic adjustments, the aggregate estimated benefits reported in Quarterly Reports are the most up-to-date estimates (and so no longer will reflect the sum of the low and high estimated benefits specified in the Transaction Profiles at the time of each transaction close).

[10] Cumulative Revenues reflect quarterly fair market value adjustments related to NYGB capital held in U.S. Treasury securities, consistent with GAAP. In addition, Cumulative Revenues are always stated net of impairments.

[11] Currently includes $76,993 in Evaluation Expenses.

[12] Deployed Funds as presented in Table 1 is net of all capital repaid to the reporting date.

[13] The dollar value of the Current Portfolio is expected to fluctuate from quarter to quarter, including to reflect any decreases in Committed Funds and/or Deployed Funds. Decreases in Committed Funds could occur, for example, in connection with the release of undrawn funds at the end of an availability period or otherwise consistent with the terms of an investment, while decreases in Deployed Funds occur primarily when NYGB investments are repaid from time to time, allowing those monies to be recycled into new clean energy investments in the State, generating further benefits for ratepayers.

[14] Further to the definition of "Total Project Costs (Cumulative)" in the Metrics Plan (see page 15), Total Project Costs (Cumulative) may include fair market value ("**FMV**") data for a subset of NYGB's investments. FMV is an estimated market valuation of fully installed energy projects provided by NYGB's counterparties and is often required for federal income tax purposes, by institutional investors and for certain grant program purposes unconnected with NYGB. As projects progress and the cost of installed equipment and labor are known and reported to NYGB by its counterparties, NYGB will seek to adjust reported values and replace FMV in its aggregated data sets and periodic reporting with reported actual costs.

[15] Given the range of Total Project Costs that NYGB investments mobilize, the Mobilization Ratio also represents a range; currently of 2.8:1 to 3.3:1.

Quarterly Metric	Prior Quarter	Current Quarter
▪ **Portfolio Concentrations (%)[16]**	65.9% Renewable Energy	69.0% Renewable Energy
	11.0% Energy Efficiency	9.7% Energy Efficiency
	23.0% Other	21.3% Other[17]
▪ **Number & Type of NYGB Investments**	22 – Renewable Energy[18]	27 – Renewable Energy
	6 – Energy Efficiency	6 – Energy Efficiency
	4 – Other	5 – Other
▪ **Number & General Type of NYGB Counterparties[19]**	49 – Local Development Corporation; Global, Corporate and/or Investment Bank; Regional Bank; Specialty Finance Company; Energy Project Developer; Municipal, University, Schools & Hospitals; Energy Technology Provider & Vendors; Government Authority; Insurance Company; Transportation	53 – Local Development Corporation; Global, Corporate and/or Investment Bank; Regional Bank; Specialty Finance Company; Energy Project Developer; Municipal, University, Schools & Hospitals; Energy Technology Provider & Vendors; Government Authority; Insurance Company; Transportation
▪ **Estimated Gross Lifetime Energy Saved by Fuel Type from Energy Efficiency Projects (MWh/MMBtu) and/or Estimated Gross Lifetime Clean Energy Generated (MWh) for Committed Funds & Deployed Funds**	Estimated Gross Lifetime Energy Saved by Fuel Type (Energy Efficiency): 737,000 – 815,000 MWh; and 3.97 – 4.37 million MMBtu	Estimated Gross Lifetime Energy Saved by Fuel Type (Energy Efficiency): 737,000 – 815,000 MWh; and 3.97 – 4.37 million MMBtu
	Estimated Gross Lifetime Clean Energy Generated: 10.7 – 14.1 million MWh	Estimated Gross Lifetime Clean Energy Generated: 12.6 – 16.4 million MWh
▪ **Estimated Gross First Year[20] Energy Saved by Fuel Type from Energy Efficiency Projects (MWh/MMBtu) and/or Estimated Gross First Year Clean Energy Generated (MWh) for Committed Funds & Deployed Funds**	Estimated Gross First Year Energy Saved by Fuel Type (Energy Efficiency): 50,500 – 56,100 MWh; and 252,000 – 276,000 MMBtu	Estimated Gross First Year Energy Saved by Fuel Type (Energy Efficiency): 50,500 – 56,100 MWh; and 252,000 – 276,000 MMBtu
	Estimated Gross First Year Clean Energy Generated: 452,000 – 591,000 MWh	Estimated Gross First Year Clean Energy Generated: 526,000 – 682,000 MWh
▪ **Estimated Gross Lifetime Energy Saved from CHP (MWh) for Committed Funds & Deployed Funds**	Estimated Gross Lifetime Energy Saved from CHP: 7,070 – 8,640 MWh	Estimated Gross Lifetime Energy Saved from CHP: 7,070 – 8,640 MWh

[16] Based on executed transactions and reflecting dollar values invested by NYGB in renewable energy and energy efficiency transactions, each as a proportion of the Current Portfolio.

[17] "Other" technology classification includes: CHP, sustainable transportation, fuel cells, energy storage, microgrids and other types of projects that, while falling within "clean energy", are not readily classified as either renewable energy or energy efficiency.

[18] Adjusted to reflect extension of the durations of two existing transactions in NYGB's portfolio that occurred in the first quarter of 2018.

[19] In reporting the number and type of NYGB counterparties, NYGB seeks to reflect counterparties that are discrete (i.e., where NYGB is involved in different transactions with the same counterparty, that party is counted only once for the purposes of this metric); and directly in the transaction with NYGB (i.e., vendors or other counterparties to NYGB's clients or expected future transaction participants are not counted).

[20] All "estimated gross first year" metrics refer to the first year of estimated gross benefits (e.g., energy saved, installed capacity, GHGs etc.) that are expected to occur when each underlying project is fully installed. This means that estimated gross first year benefits across NYGB's Portfolio do not (and are not intended to) correspond to installed benefits in any given year, and instead represent cumulative estimated benefits across NYGB's Portfolio based on transactions executed through the CEF term. Note that underlying projects will usually be installed over one or more years following execution of investment agreements (reflecting project development/implementation and funding deployment cycles). The sum of all estimated gross first year measures will approximate the total annual CEF benefits goals for NYGB investments at the end of the CEF term (i.e., in 2025). As set out in Section 2.2.2 of the Metrics Plan, NYGB reports on installed energy and environmental benefits associated with NYGB's Portfolio in the prescribed form annually, with such reporting included in the Quarterly Metrics Report for each quarter ending December 31.

Quarterly Metric	Prior Quarter	Current Quarter
▪ **Estimated Gross First Year Energy Saved from CHP (MWh) for Committed Funds & Deployed Funds**	Estimated Gross First Year Energy Saved from CHP: 293 – 358 MWh	Estimated Gross First Year Energy Saved from CHP: 293 – 358 MWh
▪ **Estimated Gross Lifetime Energy Savings from CHP (MMBtu)[21] for Committed Funds & Deployed Funds**	Estimated Gross Lifetime Energy Savings from CHP: -(41,000 – 50,100) MMBtu	Estimated Gross Lifetime Energy Savings from CHP: -(41,000 – 50,100) MMBtu
▪ **Estimated Gross First Year Energy Savings from CHP (MMBtu) for Committed Funds & Deployed Funds**	Estimated Gross First Year Energy Savings from CHP: -(1,700 – 2,070) MMBtu	Estimated Gross First Year Energy Savings from CHP: -(1,700 – 2,070) MMBtu
▪ **Estimated Gross Clean Energy Generation Installed Capacity from CHP (MW), if applicable, for Committed Funds & Deployed Funds**	1.6 MW	1.6 MW
▪ **Estimated Gross Clean Energy Generation Installed Capacity (MW), if applicable, for Committed Funds & Deployed Funds**	378.7 – 490.7 MW	442.7 – 567.0 MW
▪ **Estimated Gross Lifetime GHG Emission Reductions (metric tons) for Committed Funds & Deployed Funds**	6.29 – 8.13 million metric tons	7.27 – 9.33 million metric tons
Investment Pipeline		
▪ **Active Pipeline (In the Quarter) ($)**	$704.2 million	$542.2 million
Investment Process		
▪ **Proposals Received – Value (Cumulative) ($)**	$2.6 billion	$2.7 billion
▪ **Approvals - Scoring Committee (Cumulative) ($)**	$2.4 billion	$2.5 billion
▪ **Approvals - Greenlight Committee (Cumulative) ($)**	$974.0 million	$1.2 billion
▪ **Approvals - IRC (Cumulative) ($)**	$521.9 million	$614.6 million

5 Progress Against Plan Deliverables

In its annual Business Plan, filed on June 29, 2018, NYGB identified specific deliverables (the "**Plan Deliverables**") that collectively mark its progress in implementing key initiatives in the period April 1, 2018 through March 31, 2019 (the "**Plan Year**").

Progress against the Plan Deliverables is required to be addressed in NYGB's Quarterly Reports, together with a brief narrative (as appropriate) of status and an explanation of any material variances relative to expectations.

NYGB's performance against the Plan Deliverables for the quarter ending June 30, 2018 is summarized in Table 2.

[21] For CHP systems, energy savings in thermal unit form is computed as the difference between the natural gas displaced by the recovered thermal energy and natural gas consumption by the generator. See www.nyserda.ny.gov/-/media/Files/Publications/PPSER/Program-Evaluation/2015ContractorReports/2015-Distributed-Generation-CHP-Impact-Evaluation-Final.pdf for information on CHP Impact evaluation methods in NYS.

Table 2. Status of Plan Deliverables (2018 – 2019)

Category	Deliverable	Status in Quarter Ending June 30, 2018
Strong Active Pipeline		
▪ **Active Pipeline**	▪ Maintain an Active Pipeline of at least $450.0 million per quarter on average throughout the Plan Year.	☑ **Achieved for this Quarter:** Active Pipeline of **$542.2 million**.
▪ **Targeted Solicitation: Energy Storage**	▪ Publicly issue RFI/RFP.	☑ **Achieved for this Quarter:** NYGB issued RFI 4 in June 2018 targeting energy storage developers and other market participants, in conjunction with the release of the NYS Energy Storage Roadmap.
	▪ Convene energy storage market participants to identify specific market needs and advance product development.	☑ **Ongoing & On Track:** NYGB to participate in all three of the NYSDPS/NYSERDA Technical Conferences on the Energy Storage Roadmap, presenting on NYGB financing opportunities within the storage sector.
▪ **Targeted Solicitation: Solar-Plus-Storage**	▪ Publicly issue RFI/RFP.	☑ **Ongoing & On Track:** NYGB is working closely with NYSERDA colleagues to determine and coordinate optimal market engagement strategy as relates to Solar-Plus-Storage.
	▪ Convene solar-plus-storage market participants to identify specific market needs and advance product development.	▪ **Not Started:** The date for this convening is yet to be determined and requires coordination with NYSERDA programs and initiatives.
▪ **Targeted Solicitation: Pay-for-Performance**	▪ Publicly issue RFI/RFP.	☑ **Ongoing & On Track:** NYGB is working closely with NYSERDA colleagues to determine and coordinate optimal market engagement strategy as relates to Pay-for-Performance.
	▪ Convene energy efficiency market participants to identify specific market needs and advance product development.	▪ **Not Started:** The date for this convening is yet to be determined and requires coordination with NYSERDA programs and initiatives.
▪ **Targeted Solicitation: Tenant Improvement Financing**	▪ Publicly issue RFI/RFP.	☑ **Ongoing & On Track:** NYGB is working closely with NYSERDA colleagues to determine and coordinate optimal market engagement strategy as relates to Tenant Improvement Financing.
	▪ Convene large property owners and related stakeholders to identify specific market needs and advance product development.	▪ **Not Started:** The date for this convening is yet to be determined and requires coordination with NYSERDA programs and initiatives.
▪ **Targeted Solicitation: Clean Energy for Low-to-Moderate Income ("LMI") End-Users**	▪ Publicly issue RFI/RFP.	☑ **Ongoing & On Track:** NYGB is working closely with NYSERDA colleagues to determine and coordinate optimal market engagement strategy as relates to financing opportunities for LMI customers.
	▪ Convene LMI stakeholders to identify specific market needs and advance	▪ **Not Started:** The date for this convening is yet to be determined and

Category	Deliverable	Status in Quarter Ending June 30, 2018
	product development.	requires coordination with NYSERDA programs and initiatives.
Portfolio Driving Material Clean Energy Investments Across NYS		
▪ **Committed Funds**	▪ Achieve an average of $56.25 million in closed transactions per quarter.	☑ **Achieved for this Quarter: $64.9 million** of closed transactions in the quarter.
	▪ Commit $685.0 million (cumulative) to NYGB investments as of March 31, 2019.	☑ **Ongoing & On Track: $522.3 million** Overall Investments to Date.
▪ **Evaluation**	▪ Select independent consultant(s) and finalize scope(s) of work.	☑ **Ongoing & On Track:** Selection expected to be finalized in July 2018.
	▪ Work with NYSERDA and the independent consultant(s) to advance the baseline study of financial market transformation in accordance with the evaluation Work Plan.	☑ **Ongoing & On Track:** Project Kick-Off planned for July 2018.
	▪ Work with NYSERDA and the independent consultant(s) to advance the impact evaluation.	☑ **Ongoing & On Track:** NYGB solar PV assets were included in the NY-Sun Solar PV Evaluation study conducted in early 2018. NYSERDA is expected to publish the final evaluation report by the end of 2018.
Mobilizing Private Capital		
▪ **Mobilization Ratio**	▪ Achieve an average, portfolio-wide Mobilization Ratio of at least 3:1, driving towards a ratio of 8:1 across all NYGB investments by the end of the CEF term in 2025.	☑ **Achieved for this Quarter:** Current quarter Mobilization Ratio on track at least **3:1** on average across NYGB's portfolio.[22]
	▪ Evaluate strategies to provide for third-party capital investment at the portfolio level while continuing to deliver more per ratepayer dollar for the benefit of all New Yorkers.	☑ **Ongoing & On Track:** NYGB continues to work with its advisors and other relevant stakeholders to evaluate third-party capital opportunities as announced by Governor Cuomo in Fall 2017.

[22] Given the range of Total Project Costs that NYGB investments mobilize, the Mobilization Ratio also represents a range; currently of 2.8:1 to 3.3:1.

Schedule – Transaction Profiles

As required by the Metrics Plan, Transaction Profiles for each of the transactions closed during the quarter to which this Report relates are attached.

TRANSACTION PROFILE

Revised May 2018[1]

Increasing Opportunities for NY Residents to Go Solar, Expanding Market Liquidity

Sunrun Inc.

*NY Green Bank ("**NYGB**") has entered into three transactions to accelerate the deployment of more than 11,000 solar projects at homes across New York State ("**NYS**") by Sunrun, Inc. ("**Sunrun**"). Sunrun is a national solar provider that markets and develops residential solar energy systems. The three transactions complement each other – as one provides financing to fund the purchase of materials and installation of the solar projects, and the other two provide post-construction financing. One of the post-construction financings was arranged by Investec Bank PLC ("**Investec**"), an international specialty bank and asset manager, and the second post-construction financing was arranged by SunTrust Robinson Humphrey Inc. ("**SunTrust**") and ING Capital LLC ("**ING**").*

Transaction Descriptions

Construction Loan Facility

On June 16, 2016, NYGB committed $25.0 million to a revolving credit facility (the "**Construction Loan Facility**" or "**CLF**") which, along with financing from other lenders, allows Sunrun to increase its existing revolving facility from $205.0 million to $250.0 million. The CLF will be used by Sunrun to fund customer acquisition, purchase of materials, and construction and installation of the systems, and will ultimately be refinanced through Post-Construction Aggregation Facilities (described below) and tax equity commitments arranged by Sunrun. On February 23, 2018, NYGB and the lender group consented to extend the maturity of the CLF by two years in support of Sunrun's consistent and growing deployment rate in NYS and nationally. NYGB's continued participation in this consortium of capital providers broadens the availability of construction financing for distributed energy projects for homeowners across NYS.

Post-Construction Aggregation Facilities

On May 13, 2016, NYGB closed a $25.0 million commitment to participate in a transaction consisting of two credit facilities – a loan aggregation revolving facility and a term loan (together the "**NYGB Loan Products**"), which are expected to accelerate the deployment of over 5,000 solar projects at homes across NYS. The transaction was part of a broader $340.0 million financing (the "**Post-Construction Aggregation Facilities**") arranged by Investec that provides Sunrun with a larger financing to expand its business in NYS and elsewhere. The $340.0 million Post-Construction Aggregation Facilities (which include the NYGB Loan Products) represent one of the largest aggregation financings for a residential solar developer at the time of closing. On March 27, 2018, NYGB and the lender group consented to extend the deployment period and the maturity of the Post-Construction Aggregation Facilities by over two years based on Sunrun's demonstrated ability to continually deploy solar PV projects in NYS and nationally. On April 20, 2018, NYGB and the lender group consented to expand the Post-Construction Aggregation Facilities up to $595.0 million to further support Sunrun's continued growth. NYGB's share of this increase is $10.0 million, bringing NYGB's overall commitment to the Post-Construction Aggregation Facilities to $35.0 million.

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

Aggregation to Term Facilities

On May 9, 2017, NYGB closed a $15.0 million commitment to participate in an aggregation-to-term loan facility. The transaction was part of a $202.0 million financing (the "**Aggregation to Term Facilities**") arranged by SunTrust and ING that provides Sunrun with a larger financing to expand its business in NYS and elsewhere. The $202.0 million Aggregation to Term Facilities support a $100.0 million equity partnership with National Grid plc, an international utility with a sizeable NYS presence. Through increased scale, the aggregation-to-term transactions are expected post-aggregation to draw new investors and financial institutions into the marketplace, decreasing the cost of capital for solar developers and installers, and in turn, the cost of solar power equipment sold or leased to homeowners.

Overall Context

Sunrun sought NYGB's participation in the CLF, Post-Construction Aggregation Facilities and Aggregation to Term Credit Facilities to provide further liquidity to support Sunrun's capital needs in growing its business. With both construction and longer-term financing in place, Sunrun is positioned to meet the growing demand from homeowners and expand its ability to finance the installation of solar projects throughout NYS.

These complementary transactions will result in the aggregation of bundled pools of residential solar systems that will ultimately be refinanced through one or more longer-term take-out financings. Such refinancings may include a securitization – the sale of underlying cash flows resulting from residential leases or power purchase agreements ("**PPAs**") to third party investors – providing additional avenues to develop and scale the emerging residential solar asset class, both for Sunrun and other market participants. Given that the bank market for such credit facilities remains limited, NYGB's participation enables larger aggregation facilities than would otherwise be available, resulting in longer term takeout refinancings at a scale greater than might otherwise be achieved. Greater scale means greater investor interest, which will ultimately result in more attractive debt pricing that will benefit New Yorkers via more attractively priced contracts under which power is purchased.

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.[2] This Transaction Profile contains specific information in connection with the CLF (entered into on June 16, 2016), the Post-Construction Aggregation Facilities (entered into on May 13, 2016), and the Aggregation to Term Facilities (entered into on May 9, 2017) as required by the Metrics Plan.[3]

Form of NYGB Investment

NYGB Product	Product Sub-Type	Committed Capital
Warehousing/Aggregation	Senior Secured Revolver and Subordinated Term Loan	$35.0 million
Warehousing/Aggregation	Senior Secured Aggregation-to-Term Loan	$15.0 million
Asset Loan & Investment	Construction Financing Revolver	$25.0 million

Location(s) of Underlying Project(s)

Statewide.[4] Sunrun's solar power generation systems will be offered to homeowners through PPA structures in regions across NYS.

[2] Cases 13-M-0412 and 14-M-0094.
[3] See Section 4.0, page 8 and Schedule 3.
[4] Defined as projects located in four or more regions of the State.

Types of Client & Counterparty Organizations that are Transaction Participants

	Name	Participant Type
Clients	Investec	Global Corporate & Investment Bank
	SunTrust	Global Corporate & Investment Bank
	ING	Global Corporate & Investment Bank
Key Counterparties	Sunrun	Solar Energy Project Developer
	National Grid	International Utility & Equity Co-Sponsor
Financiers (current)	Various tax equity providers and commercial banks	Global Corporate & Investment Banks, Commercial/Regional Banks
Financiers (future)	To be identified	Institutional Investors(s)

Summary of Financing Market Objectives & Barriers Addressed

Beneficiary	Market Barrier	Financing Solution
Capital Market Participants	In clean energy markets, there is only a small (but growing) number of lenders actively financing residential solar projects.	NYGB participation in all three transactions facilitates the ability to achieve substantial transaction scale. This will enable much larger post-aggregation term financings, which may include securitizations, resulting in broader market penetration and enhanced liquidity, both key NYGB goals.
Solar Project Developers	Many solar developers face the challenge of securing sufficient financing to meet customer demand – hampering their ability to grow and achieve economies of scale.	NYGB's participation in the CLF, the Post-Construction Aggregation Facilities and the Aggregation to Term Facilities will enable Sunrun to better meet residential demand in NYS. This type of financing can also be replicated with other developers seeking to secure similar capital access.
Homeowners	"Going solar" is not perceived by some homeowners as being practical or affordable, and some questions as to benefits to be realized remain.	NYGB participation in all three transactions will produce benefits for eligible homeowners seeking to utilize solar power, as homeowners will have greater ability to contract for solar, while simultaneously realizing immediate reductions on their energy bill. Greater scale and deeper and broader financing markets will lead to even more compelling offerings being made available to homeowners and more information available on benefits.

Technologies Involved

Technology	Measures
Renewable Energy	Solar photovoltaic ("**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".[5] In addition, the Metrics Plan requires that the following energy and environmental measures, applicable to this transaction, be reported on[6]:

[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.

- Estimated gross lifetime and first-year clean energy generated (MWh);[7]
- 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 Sunrun's development in NYS, facilitated by NYGB's participation in the Investec Credit Facilities, the CLF and the Aggregation to Term Facilities, are as follows:

Energy/Environmental Impact	Lifetime Low Estimate	Lifetime High Estimate	First-Year Low Estimate	First-Year High Estimate
Estimated gross clean energy generated (MWh)	2,148,000	2,390,000	85,900	95,600
Estimated gross clean energy generation installed capacity (MW)[8]	73.0	81.0	Not Applicable	
Estimated gross GHG emission reductions (metric tons)[9]	1,130,000	1,256,000	45,200	50,200

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 in which NYGB has participated and will occur approximately three to five years following initial NYGB capital deployments. Baseline data will be collected in 2018 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.[10]

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:

- Number and location of projects (by zip code);
- Size (generation capacity and dollar value) of projects;
- Increasing market volume of projects; and
- Favorable financial and technology performance data.

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:

- Increased awareness of clean energy benefits amongst financing entities as a result of favorable technology performance data;
- Investment risk/default rates become increasingly attractive to investors, as a result of positive financial performance data;
- Increased number of financial participants providing similar capital structures;
- Replication of finance model by other developers;
- Decreased project technology costs;
- Increased number of clean energy financings;
- Emergence of secondary markets for clean energy asset classes; and
- Reduced time to execute clean energy financings.

[7] First year gross energy generation refers to the first year of estimated gross energy generation once a measure is installed and as such generation will not necessarily correspond to the first year of the investment term. The majority of NYGB's investments have a two to three-year development cycle in which projects are originated, installed and placed into commercial operation.

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

[9] 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.

[10] See Metrics Plan, Section 3.3 at page 7.

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

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 (homeowners, 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 2018 and later follow-up studies will assess progress against baseline level. The specific timing of these efforts may be revised based on experience or other factors as the investment evolves.

Impact evaluation will be based on the size of the systems installed and the projected clean energy generation.

As with all NYGB investments, Sunrun projects that receive an incentive or funding from other entities (e.g., utility, other NYSERDA program) will, in accordance with the Metrics Plan, ideally 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 also 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.

TRANSACTION PROFILE

Revised May 2018[1]

Expanding Urban Bike Sharing Program in New York City

Motivate International Inc.

*In May 2017, NY Green Bank ("**NYGB**") provided a $43.3 million term loan (the **"Term Loan"**) and a $5.0 million seasonal variable funding note (the **"SVFN"**, collectively with the Term Loan, the **"Credit Facilities"**) to NYC Bike Share, LLC ("**NYCBS**"). NYCBS is the exclusive operator of the NYC bike share system (**"Citi Bike"**) which is comprised of 12,000 bikes and 750 stations and is the largest bike share system in North America. Proceeds from the original Credit Facilities primarily supported the addition of 2,000 bikes primarily in low-to-moderate income (**"LMI"**) neighborhoods in Harlem, Queens, and Brooklyn and enabled NYCBS to address the seasonal nature of its business when there is lower ridership in winter months. In May 2018, due to favorable transaction performance within this new asset class, NYGB increased the Term Loan amount outstanding by $6.0 million.*

Transaction Description

Motivate International Inc. ("**Motivate**"), NYCBS's parent company, is the leading bike share operator in North America and operates eight bike share systems in the US through its subsidiaries. NYCBS operates the Citi Bike system under an exclusive license from the NYC Department of Transportation (**"NYCDOT"**). The Citi Bike system is comprised of 12,000 bikes and over 750 stations in NYC. Citi Bike is partially integrated with the Jersey City bike share system (**"Jersey City Bike Share, LLC"**), which is comprised of 500 bikes and 50 stations located in Jersey City. Citibank, N.A. (**"Citi"**) is the title sponsor of both programs. NYGB's participation helped fund the completion of NYCBS's Phase II expansion, which increased the Citi Bike system by 2,000 bikes primarily located in LMI neighborhoods in Harlem, Queens, and Brooklyn.

NYCBS generates revenue through the sale of annual, three-day, or daily memberships and through the sale of corporate sponsorships. As the title sponsor, Citi's support has also helped expand and maintain the program. Despite robust cash flows and growing membership, NYCBS has encountered challenges accessing private capital that is structured and priced to reflect the strength of its business model largely due to the nascent nature of the bike share asset class and limited comparable transactions.

Proceeds from the Credit Facilities expanded the Citi Bike system to LMI neighborhoods and restructured NYCBS's financing to better position the company for future growth. This innovative securitization structure for the sustainable and clean energy asset class will provide a template for other asset-centric companies with predictable cash flows in similar sectors.

These transactions have the potential to offset the equivalent of approximately 29,700 - 32,500 metric tons of greenhouse gas ("**GHG**") emissions over the seven-year term of the transaction, by converting up to 200 million miles of public commuting from emissions-based transport to the bike-share system. NYGB's participation will finance the expansion of the Citi Bike system into LMI neighborhoods in Harlem, Queens, and Brooklyn – communities that are ideally suited to benefit from bike sharing due to long commute times, high levels of pollution, and strong community interest. NYGB's increased commitment to NYCBS will further support the program as it grows its ridership community in NYC, which in turn is expected to result in the GHG emissions reductions stated above.

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.[2] This Transaction Profile contains specific

[1] Refer to the Summary of Changes document for details of updates, available at www.greenbank.ny.gov/Investments/Portfolio.
[2] Case 13-M-0412.

information in connection with the Credit Facilities (entered into on May 18, 2017) and the increase to the Term Loan amount (entered into on May 8, 2018), as required by the Metrics Plan.[3]

Form of NYGB Investment

NYGB Product	Product Sub-Type	Committed Capital
Asset Loan & Investment	Term Loan	$49.3 million
Asset Loan & Investment	Seasonal Variable Funding Note	$5.0 million

Location(s) of Underlying Project(s)

New York City: Project to be primarily located in Harlem, Queens, and Brooklyn.

Types of Client & Counterparty Organizations that are Transaction Participants

	Name	Participant Type
Clients	NYC Bike Share, LLC	Project Developer, Sponsor
	Jersey City Bike Share, LLC	Project Developer, Sponsor

Summary of Financing Market Objectives & Barriers Addressed

Beneficiary	Market Barrier	Financing Solution
Sustainable Infrastructure Owner/Operators	Owners and operators of sustainable infrastructure assets have encountered financing challenges due to limited comparable transactions and the nascent nature of the asset class.	NYGB's participation will help NYCBS grow and develop the operating track record needed to attract further private capital in the future. The Credit Facilities are structured to position NYCBS to raise capital in the future from private sector capital providers as efficiently as possible, including pricing to better reflect the strength of the borrower's business model and results.
Capital Market Participants	Private capital providers are relatively unfamiliar with the bike share asset class due to a limited performance history.	With these transactions, NYGB will demonstrate that sustainable infrastructure provides a reliable return on investment, familiarizing lenders with the underlying asset type and increasing confidence for financing in this market.
	Commercial banks have rigid underwriting guidelines for small businesses with limited operating histories, resulting in higher cost of funds, and restricting the access of private capital into the market.	The whole business securitization structure creates a template for other financial institutions to replicate with other sustainable infrastructure assets. Capital providers can benefit from the familiar, standardized structure of asset-backed transactions like this.

Technologies Involved

Technology	Measures
Sustainable Transportation	Bicycles and bicycle stations

[3] See Section 4.0, page 8 and Schedule 3.

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 GHG reductions in support of New York's energy policies".[4] In addition, the Metrics Plan requires that the following energy and environmental measures, applicable to this transaction, be reported on:[5]

- Estimated gross lifetime and first-year GHG emission reductions (metric tons).

The estimated gross lifetime and first-year GHG emissions reductions 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 GHG emission reductions (metric tons)[6]	29,700	32,500	4,250	4,650

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 of a similar type are 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.[7] 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 for this transaction 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:

- Phase II completion;
- Ridership uptake (e.g., subscription rates, retention rates);
- Technology updates completed; and
- Increased LMI participation.

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:

- Increased and sustained demand for technology;
- Additional one-off or small portfolios receive long-term financing;
- General understanding of asset class by financial community increases;
- Increased awareness and use of project/technology performance data by financing entities;
- Demonstration of competitive risk-return profiles for nascent and esoteric asset classes;
- Decreased project costs; and
- Number of secondary capital market participants.

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

NYSERDA will evaluate the impact these transactions have on the finance markets and the environmental benefits delivered.

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[4] 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.

[5] See Metrics Plan, Section 2.0, pages 2 - 6.

[6] The methodology to calculate GHG Emissions Reductions used takes into account the proportion of subscribers that switch from both personal transport and public transport. It assumes a carbon footprint per passenger mile travelled using those modes of transport, and how a passenger offset their contribution by switching. This methodology does not assume those modes of transport will cease to operate as a result of these transactions and the GHG Emissions Reductions calculation does not take into account continued emissions from public modes of transport. For more information on the applicable methodologies, see February 2017 Monthly Report page 4, and http://web.mta.info/sustainability/pdf/2012Report.pdf.

[7] See Metrics Plan, Section 3.3 at page 7.

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 (developers, subscribers, financial community) to track information including but not limited to: ridership rates, project scale information, interest in financing 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 environmental outcomes. Impact evaluation is expected to include quarterly review and analysis of actual system data collected by NYCBS. Actual system performance will be monitored and documented against expected performance. Impact evaluation will help provide verification of performance, in turn aiding the finance community in better understanding risk in this technology area and asset class.

As with all NYGB investments, NYCBS projects that receive an incentive or funding from other entities (e.g., government, utility, other NYSERDA program) will, in accordance with the Metrics Plan, be tracked in order 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 minimize double counting. Attempts will also be made to coordinate market and impact evaluation activities for NYCBS projects that receive support from multiple sources in order to maximize the efficiency of data collection and avoid participant survey fatigue.

TRANSACTION PROFILE

July 2018

Supporting the Deployment 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. 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 out of Callicoon, NYS, that finances, builds, and operates Community DG projects. DRS engaged NYGB to provide financing support for the development of the DRS Community DG portfolio in NYS.

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 CDG projects in NYS.[1]

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.

NYGB is committing a combined $62.0 million to DRS through the term loan and bridge loan facilities. These commitments 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, 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.[2] This Transaction Profile contains specific information in connection with the DRS transactions (which were entered into on April

[1] 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.

[2] Case 13-M-0412.

19 and July 9, 2018, respectively), as required by the Metrics Plan.[3]

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

Location(s) of Underlying Project(s)

Statewide.[4] 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)

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.
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 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.

[3] See Section 4.0, page 8 and Schedule 3.
[4] Defined as projects located in four or more regions of the State.

Beneficiary	Market Barrier	Financing Solution
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 [('**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 on:[6]

- 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)[7]	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.[8] Baseline

[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] Built clean energy generation capacity at full deployment of funds is the same for first-year and lifetime duration.
[8] See Metrics Plan, Section 3.3 on page 7.

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 (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;
- Investment risk/default rates become increasingly attractive to investors, as a result of positive financial performance data;
- 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.

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 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 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.

TRANSACTION PROFILE

June 2018

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.

TRANSACTION PROFILE

June 2018

Driving Standardization in the New York Solar Market

BQ Energy – Homeridae

*BQ Energy ("**BQ**") is a renewable energy project developer specializing in landfill and brownfield site redevelopment. As the fourth installation of a larger portfolio of projects to be financed in partnership with NY Green Bank ("**NYGB**"), BQ will receive a $4.9 million construction loan to complete a 4.1 megawatt ("**MW**") solar project to be constructed on a remediated former ExxonMobil refinery site in the City of Olean, NY (the "**City**"). Solar power from this project will be sold to the City, generating a significant percentage of its total power needs.*

Transaction Description

BQ is a Wappingers Falls, New York-based renewable energy project developer specializing in landfill and brownfield site redevelopment. NYGB's $4.9 million construction loan enables BQ to complete the 4.1 MW ground-mounted solar farm (the "**Project**") to be constructed on a remediated former ExxonMobil refinery site in Olean, NY. CIR Electric Construction Corporation ("**CIR**") will construct the Project under a standardized balance of plant ("**BOP**") contract utilizing top-tier panels, inverters, and racking systems. The Project will generate revenue by selling clean power (or, more specifically, selling the value of clean power evidenced by net metering credits) to the City.

The Project is the fourth of several similar developments in BQ's pipeline that NYGB anticipates financing as part of a larger portfolio. BQ expects the majority of projects in the portfolio to be located on landfill and brownfield sites in Western NY, Central NY, Hudson Valley, and Long Island with the power generated providing clean power to municipalities, universities, schools, and hospitals ("**MUSH**"), and utilities.

NYGB's participation in the Project – and in similar future developments included in the proposed portfolio arrangement – will help expand financing opportunities for smaller (less than 10 MW) solar 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 June 29, 2018, as required by the Metrics Plan).[2]

[1] Case 13-M-0412.
[2] See Section 4.0, page 8 and Schedule 3.

Form of NYGB Investment

NYGB Product	Product Sub-Type	Committed Capital
Asset Loan & Investment	Construction Loan	$4.9 million

Location(s) of Underlying Project(s)

Cattaraugus County. The Project is located in the City of Olean, New York, with future portfolio projects expected to be 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
Counterparties	CIR	Industry Vendor
	City of Olean	Commercial End-User

Summary of Financing Market Objectives & Barriers Addressed

Beneficiary	Market Barrier	Financing Solution
Smaller-Scale Solar Developers	Many smaller-scale solar developers face challenges in securing adequate construction and long-term financing, particularly for smaller to mid-sized solar projects, as these developers are restricted in their access to capital by their size and comparatively limited track record.	This transaction aims to drive growth in the small to mid-size solar sector by encouraging the standardization of contractors, contracts, and equipment thereby 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 small to mid-size solar project developers which 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. 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 installer. 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

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).

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)	102,400	138,500	4,100	5,540
Estimated clean energy generation installed capacity (MW)[5]	4.1	4.1	Not Applicable	
Estimated GHG emission reductions (metric tons)	53,900	72,900	2,150	2,920

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 2019 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 (generation capacity and dollar value) of the Project if different from proposed plans; and
- Performance of installed system.

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:

[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.

- Access to, and accessibility of, solar project performance data produced by the Project and similar developments comprising a single portfolio, particularly in any refinancing of a BQ project;
- Greater availability of construction loan options for smaller PV projects;
- Decreased project cost for BQ and other developers (e.g., procurement, permitting, fees), due to increased experience and scale; and
- Demonstration of competitive risk-return profiles for solar investment in NYS.

The above listed indicators 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 short, mid and long-term 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 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 relevant 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 periodic review and analysis of actual PV portfolio installation data collected by BQ. Actual project 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 better understanding and pricing risk in this technology area.

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.

TRANSACTION PROFILE

Revised June 2018[1]

Expanding the New York State Residential Solar Market

Vivint Solar, Inc.

*NY Green Bank ("**NYGB**") has entered into three transactions to accelerate the deployment of up to 64.0 megawatts ("**MW**") of solar power at homes across New York State ("**NYS**") by Vivint Solar, Inc. ("**Vivint Solar**"). Vivint Solar is a national solar provider that markets and develops residential solar energy systems. These three transactions complement each other – one provides financing to fund the purchase of materials and installation of solar projects, and the other two provide post-construction financing. The first post-construction financing was arranged by Investec Bank PLC ("**Investec**"), an international specialty bank and asset manager; the second financing was arranged by Bank of America Merrill Lynch ("**BAML**"), an investment bank; and the third financing was jointly arranged by five separate investment banks.*

Transaction Descriptions

Vivint Solar Construction Loan Facility

On June 29, 2018, NYGB committed $19.0 million to participate in Vivint Solar's $150.0 million corporate revolving credit facility (the **"Construction Loan Facility" or "CLF"**) alongside seven other lenders. The CLF will be used by Vivint Solar to fund customer acquisition and construction of systems. Once installed, these systems will be refinanced through other debt facilities (described below) and tax equity commitments arranged by Vivint Solar. NYGB's participation in the CLF broadens the availability of construction financing for residential distributed energy projects across NYS.

Vivint Solar Aggregation Facility

On March 31, 2017, NYGB closed a $20.0 million commitment to participate in a $375.0 million senior secured revolving back leverage aggregation facility (the **"Aggregation Facility"**) for Vivint Solar. The transaction was arranged by BAML and provides Vivint Solar with financing to expand its business in NYS and elsewhere. Through increased scale, this aggregation transaction is expected to draw new investors and financial institutions into the marketplace, decreasing the cost of capital for solar developers and installers, and, as a result, lowering the cost of solar power equipment sold or leased to homeowners.

Vivint Solar Term Loan Facility

On August 4, 2016, NYGB closed a $37.5 million commitment to participate in a $300.0 million senior secured term loan (the **"Term Loan Facility"**) arranged by Investec. The proceeds from the Term Loan provide refinancing for Vivint Solar projects. The transaction is expected to accelerate the deployment of over 5,000 solar projects at homes across NYS.

Overall Context

Vivint Solar sought NYGB's participation in the CLF, Aggregation Facility, and Term Loan Facility in order to further develop its project pipeline and finance operating assets in its national portfolio. With both construction and longer-term financing in place, Vivint Solar is positioned to meet the demand from homeowners and expand its ability to finance the installation of solar projects throughout NYS.

These complementary transactions will result in the aggregation of bundled pools of residential solar systems that will ultimately be refinanced through one or more longer-term take-out financings. One type of take-out financing is a securitization, or the sale of underlying cash flows resulting from residential leases or power purchase

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

agreements ("**PPAs**") to third party investors. Solar developers can raise large amounts of capital through a securitization, allowing for further development of the emerging residential solar asset class. On June 11, 2018, Vivint Solar completed its first securitization, raising $466.0 million through the sale of the cash flows of a portfolio of residential solar systems. The greater size of this securitization (when compared to the size of Vivint Solar's debt facilities) will likely augment investor interest in solar assets, resulting in more attractive debt pricing. This, in turn, could benefit New Yorkers by allowing Vivint Solar to provide customers lower priced contracts to purchase power.

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.[2]

This Transaction Profile contains specific information in connection with the CLF (entered into on June 29, 2018), the Aggregation Facility (entered into on March 31, 2017), and the Term Loan Facility (entered into on August 4, 2016) as required by the Metrics Plan.[3]

Form of NYGB Investment

NYGB Product	Product Sub-Type	Committed Capital
Warehousing/Aggregation	Senior Secured Term Loan	$37.5 million
Warehousing/Aggregation	Senior Secured Aggregation Facility	$20.0 million
Asset Loan & Investment	Construction Financing Revolver	$19.0 million

Location(s) of Underlying Project(s)

Statewide.[4] Vivint Solar's solar power generation systems will be offered to homeowners through PPA structures in regions across NYS.

Types of Organizations that are Transaction Participants

	Name	Participant Type
Clients	Goldman Sachs	Global Corporate & Investment Bank
	Investec	Global Corporate & Investment Bank
	BAML	Global Corporate & Investment Bank
Key Counterparties	Vivint Solar	Solar Energy Project Developer
Financiers (current)	Various tax equity providers and commercial banks	Global Corporate & Investment Banks, Commercial/Regional Banks
Financiers (future)	To be identified	Institutional Investors(s)

[2] Case 13-M-0412 and 14-M-0094.
[3] See Section 4.0, page 8 and Schedule 3.
[4] Defined as projects located in four or more regions of the State.

Summary of Financing Market Objectives & Barriers Addressed

Beneficiary	Market Barrier	Financing Solution
Capital Market Participants	In clean energy markets, there is a small (but growing) number of lenders actively financing residential solar projects.	NYGB's participation in all three transactions facilitates the ability to achieve substantial transaction scale. This will enable increased tax equity investment and larger post-aggregation term financings - which may include securitizations - resulting in broader market penetration and enhanced liquidity, which are both key NYGB goals.
Solar Project Developers	Many solar developers face the challenge of securing sufficient financing to meet customer demand – hampering their ability to grow and achieve economies of scale.	NYGB's participation in the Construction Loan Facility, Term Loan Facility, and Aggregation Facility will enable Vivint Solar to better meet residential demand in NYS. This type of financing can also be replicated with other developers seeking to secure similar capital access.
Homeowners	"Going solar" is not perceived by some homeowners as being practical or affordable, and some questions regarding benefits remain.	NYGB's participation in all three transactions will produce benefits for eligible homeowners seeking to utilize solar power. Homeowners will have greater ability to contract for solar, while simultaneously realizing immediate reductions on their energy bill. Greater scale, and deeper, broader financing markets will lead to even more compelling offers available to homeowners and more information available on benefits.

Technologies Involved

Technology	Measures
Renewable Energy	Solar photovoltaic ("**PV**") systems

Metrics & Evaluation Plan

Planned Energy & Environmental Metrics

NYGB's minimum investment criteria specifically requires 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".[5] In addition, the Metrics Plan requires that the following energy and environmental measures applicable to this transaction, be reported on:

- 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).[6]

[5] Case 13-M-041, "Order Establishing Ney York Green Bank and Providing Initial Capitalization" issued and effective December 18,2013 of the Commission, Ordering Clause 6 at pages 24 - 25.
[6] See Metrics Plan, Section 2.0, page 2 - 6.

The estimated gross lifetime and first-year energy and environmental impacts of the financed PV systems 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)	1,698,000	1,896,000	67,920	75,800
Estimated clean energy generation installed capacity (MW)[7]	58.0	64.0	Not Applicable	
Estimated GHG emission reductions (metric tons)	893,300	998,000	35,700	39,900

Planned Market Characterization Baseline & Market Transformation Potential

The Metrics Plan requires that market evaluation occurs when a critical mass of NYGB financing and investment arrangements are put in place. This market evaluation will be conducted on sectors in which NYGB has participated and will occur approximately three to five years following initial NYGB capital deployments. Baseline data will be collected in 2018 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.[8]

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;
- Number and location of projects (by zip code);
- Size (generation capacity and dollar value) of projects; and
- Principal balance of each investment.

Outcome 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 renewable energy/energy efficiency ("**RE/EE**") benefits amongst financing entities as a result of favorable technology performance data;
- Investment risk/default rates become increasingly attractive to investors, as a result of positive financial performance data;
- Increasingly positive view of banks and institutional investors on investment value of RE/EE investment receivables;
- Scale of RE/EE investment increases, due to increased end-use market demand;
- Replication of finance model by other developers;
- Decreased project technology costs;
- Decreased financing costs;
- Increased number of RE/EE financings;
- Increased number of financial participants providing similar capital structures;
- Increased financial market volume for RE/EE projects;
- Reduced time to execute RE/EE financings;
- Emergence of secondary markets for RE/EE asset classes; and
- Positive multi-year track record for projects.

The above listed indicators will remain in development until market characterization and baseline activity commences.

[7] Installed clean energy generation capacity at full deployment of funds is the same for first-year and lifetime durations.
[8] See Metrics Plan, Section 3.3 at page 7.

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 near-, mid- and long-term indicators identified above. Methods will include analysis of program data along with interviews and surveys of market participants (homeowners, 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 2018 and later follow-up studies will assess progress against baseline level. The specific timing of these efforts may be revised based on experience or other factors as the investment evolves.

Impact evaluation will be based on the size of the systems installed and the projected clean energy generation.

As with all NYGB investments, Vivint Solar projects that receipt of an incentive or funding from other entities (e.g., utility, other NYSERDA program) will, in accordance with the Metrics Plan, ideally 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 also 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.