



NY Green Bank
A Division of NYSERDA

NY Green Bank

Metrics, Reporting & Evaluation

Quarterly Report No. 13

(Through September 30, 2017)

Case 13-M-0412

November 14, 2017

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- *Cypress Creek Renewables LLC. (Community Solar)*
- *Plug Power Inc. (Fuel Cells)*

1 Performance at a Glance – As of September 30, 2017

Stimulating New Clean Energy Proposals in the State

NY Green Bank (“NYGB”) has received over **\$2.1 billion** in investment proposals since inception.

Strong Active Pipeline

The Active Pipeline of potential investments proceeding to close is **\$519.0 million**.¹

Driving Material Clean Energy Investments Across NYS

NYGB’s investments support clean energy projects with a total project cost of **between \$1.31 and \$1.59 billion**² in aggregate, based on Overall Investments to Date of **\$440.9 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 – **\$23.0 million** in revenues has been generated since NYGB’s inception. Maintaining Self-Sufficiency with cumulative revenues in excess of cumulative operating expenses.

Contributing to CEF Objectives, REV & the CES

NYGB’s investments to date drive estimated gross lifetime GHG reductions of **between 5.5 and 7.4 million metric tons**², equivalent to removing **between 54,800 and 72,500 cars** from the road for a period of **22 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 September 30, 2017, the \$519.0 million in Active Pipeline does not include the \$440.9 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 overall 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 overall portfolio level estimations of impact benefits as it works towards meeting the CEF objectives to support the NYS CES and SEP goals. Given such periodic adjustments, the aggregate estimated benefits reported in Quarterly Reports will be the most up-to-date and accurate estimate, 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 3:0 to 3.6:1.

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 Commission⁴ (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 **two new investments** during the quarter ending September 30, 2017, adding **\$31.5 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 September 30, 2017:

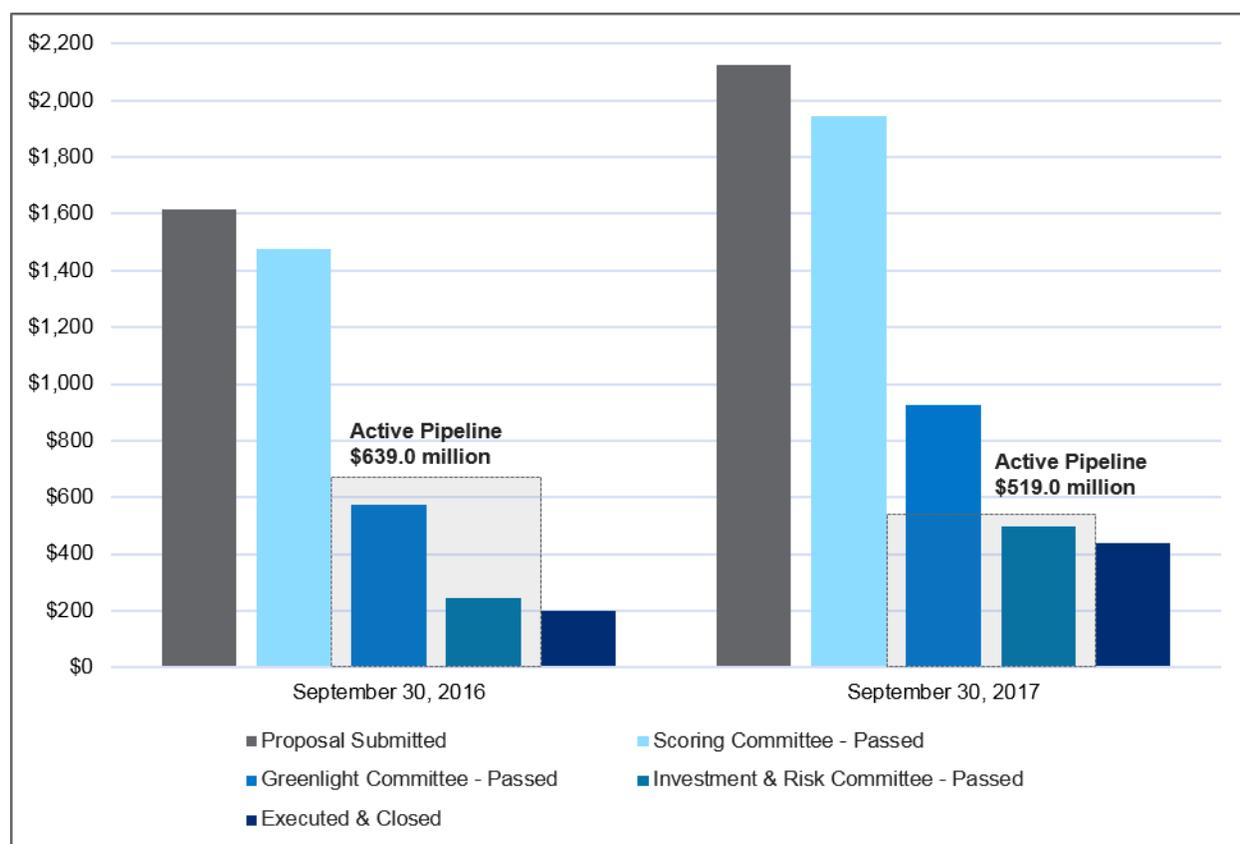
- (a) Over **\$2.1 billion** of proposals have been received and evaluated by NYGB’s Scoring Committee;
- (b) **\$1.9 billion** of proposals have passed Scoring Committee evaluation – representing potential investments that meet NYGB’s mandate and proposal evaluation criteria;
- (c) **\$924.0 million** of proposals have received Greenlight Committee recommendation for advancement;
- (d) **\$497.3 million** of proposals have been vetted by the Investment & Risk Committee (“**IRC**”) and approved by NYSERDA’s President & CEO; and
- (e) **\$440.9 million** of transactions have been closed - comprising NYGB’s Overall Investments to Date - mobilizing public and private investments to support in the range of **\$1.31 to \$1.59 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 **\$519.0 million**. Note that the Transaction Status and Active Pipeline graphic that is included as Figure 1 in this Report has been modified from the format included in prior filings to show both relevant data for the period to which the Report relates, as well as comparative data from the same period one year ago. This enhancement in reporting has been made to provide better information as to NYGB’s activity over time.

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 New Initiatives

NYGB’s robust track record is driving between \$1.3 - \$1.6 billion in clean energy investment in New York State, and is generating strong interest from third-party entities seeking to utilize NYGB as a vehicle for sustainable infrastructure. In response, NYS Governor Andrew M. Cuomo recently announced that NYGB would explore viable options for raising at least an additional \$1.0 billion in private sector funds to invest at a portfolio level.⁶ In addition, Governor Cuomo announced that the third-party funds will allow NYGB to consider investable projects that extend beyond the boundaries of New York State.⁷

NYGB’s investments will remain consistent with its current mandate as well as within the eligible technical scope of the Clean Energy Fund. Accordingly, NYGB’s expansion will enable it to deliver greater environmental and cost benefits to New Yorkers by accelerating greater scale, diversification, and standardization, resulting in increased market liquidity and improved pricing for ratepayers. Greater liquidity in the marketplace will increase activity in this sector, and as NYGB invests in projects across the United States it will bring costs down across the market, including NY, resulting in the downstream benefit of enabling more sustainable infrastructure for every dollar invested.

⁶ See www.greenbank.ny.gov/News-and-Media/In-The-News/2017-09-20-Governor-Cuomo-and-US-Climate-Alliance-Announce-States-are-on-Track.

⁷ See www.greenbank.ny.gov/News-and-Media/In-The-News/2017-10-27-Governor-Cuomo-Announces-NY-Green-Bank-to-Raise-At-Least-1-Billion.

As the next step in raising third-party capital for portfolio-level investment, NYGB is issuing an RFP for Strategic Advisory and Placement Agent Services to engage an advisor(s) to evaluate options for structuring and facilitating such an effort and, once the organization has received required New York State-related approvals, to assist in securing third-party capital.

Any path that NYGB seriously considers will be one that will benefit New Yorkers and will better leverage the existing commitment of public dollars to reach New York State's ambitious clean energy goals. NYGB will continue to provide periodic updates on these activities as they occur.

3.2.2 *New Investments*

In the quarter ended September 30, 2017, NYGB closed two transactions, respectively sponsored by Cypress Creek Renewables LLC. and Plug Power Inc. Each transaction contributes to the primary CEF outcomes of GHG emissions reductions, customer bill savings, energy efficiency, clean energy generation and mobilization of private sector capital.⁸ In turn, the CEF objectives support the NYS Clean Energy Standard ("**CES**") goal of 50.0% energy generation from renewable sources, and the State Energy Plan ("**SEP**") goal of 23.0% reduction in energy consumption by buildings from 2012 levels, which together further the SEP goal of 40.0% reduction in GHG emissions from 1990 levels by 2030.

Cypress Creek Renewables LLC – Bridge Loan to Support the Deployment of Community Solar Projects

- *Reduces GHG emissions by at least 1,740,000 metric tons over the 25-year life of the underlying assets*
- *Generates at least 3,306,000 MWh of renewable energy over the life of the underlying projects*
- *Increases renewable energy installed generation capacity by at least 112.0 MW*

On August 2, 2017, NYGB provided a 12-month senior secured bridge loan facility of up to \$11.5 million to Cypress Creek Renewables LLC ("**CCR**"). Bridge loan proceeds will finance project interconnection advance payments to utilities across New York State for up to 72 community distributed generation ("**Community DG**") solar projects. This transaction is expected to support the deployment of at least 112.0 MW of photovoltaic solar in NYS, providing residents and businesses with a greater variety of energy choices and, ultimately, lower-cost clean energy options.

This financing demonstrates a successful replication of an earlier bridge loan structure which NYGB entered into with Distributed Sun, LLC in the first quarter of 2017. As there is an increasingly strong demand for Community DG throughout NYS, capital providers are, and will continue to be, expected to provide financing to enable the deployment of these projects, including through covering the up-front interconnection payments, and products like NYGB's bridge loan are expected to ultimately be offered by private capital providers in future.

Plug Power Inc. – Enabling Growth & Expanding Financing Opportunities for Hydrogen Fuel Cell Projects

- *Reduces GHG emissions by at least 72,600 metric tons over the 10-year life of the underlying projects, with an incremental 32,600 metric tons attributed to the most recent transaction (closed on July 21, 2017)*
- *Generates at least 131,000 MWh of renewable energy over the life of the underlying projects, with an incremental 58,000 MWh attributed to the most recent transaction (closed on July 21, 2017)*
- *Increases renewable energy installed generation capacity by at least 4.21 MW, with an incremental 1.31 MW attributed to the most recent transaction (closed on July 21, 2017)*

⁸ As set out in the CEF Order (Cases 14-M-0094 et al.) issued and effective on January 21, 2016, page 40.

On December 23, 2016, NYGB and Plug Power Inc. (“PP”) closed a \$25.0 million term loan facility to finance the deployment of fuel cell systems powering forklifts in distribution centers across NYS (the “**Project**”). On July 21, 2017, that facility was upsized by an additional \$20.0 million to finance PP’s continued deployment growth, which surpassed initial expectations. The overall \$45.0 million financing facility (the “**Facility**”) allows PP immediate access to capital that is currently held as cash collateral in restricted accounts, rather than waiting for it to be released over time as payments are made through sale-leaseback arrangements with tax equity providers. NYGB’s participation in the upsized Facility is significant because it enables PP to deploy more systems and convert more forklift fleets in a shorter amount of time than would otherwise be possible.

PP is a designer and manufacturer of fuel cell systems and fueling infrastructure that specializes in deploying its fuel cell propulsion systems across entire fleets of forklifts and transportation vehicles within distribution centers throughout the U.S. PP deploys these systems and then provides a suite of services to operate them – such as procuring the hydrogen fuel the systems run on, and providing ongoing operations and maintenance to keep the systems running at a guaranteed uptime level – all as a single turnkey offering to the owner of the manufacturing site or distribution center. Many of PP’s current customers are major corporations in the automotive manufacturing, retail distribution and consumer goods industry.

These transactions constitute NYGB’s first investments in the fuel cell industry, which is still relatively small nationally but growing. As a result of the relatively limited track record for this particular technology, many firms in the industry experience high borrowing costs. NYGB participation in the transaction aims to address those high costs for PP and other similar companies in the sector by making otherwise restricted capital available to PP, so they can continue scaling their business, including to the levels where capital costs are expected to be significantly reduced.

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/Transaction-Profiles, and the Transaction Profiles for the investments described above are also included in the Schedule to this Report.

3.2.3 *Level Solar Update*

On September 30, 2015, NYGB entered into a \$25.0 million back-leveraged credit facility transaction with residential solar PV installer Level Solar. Since then Level Solar deployed an incremental 14.8 MW of clean solar energy systems to over 2,000 NYS homeowners.

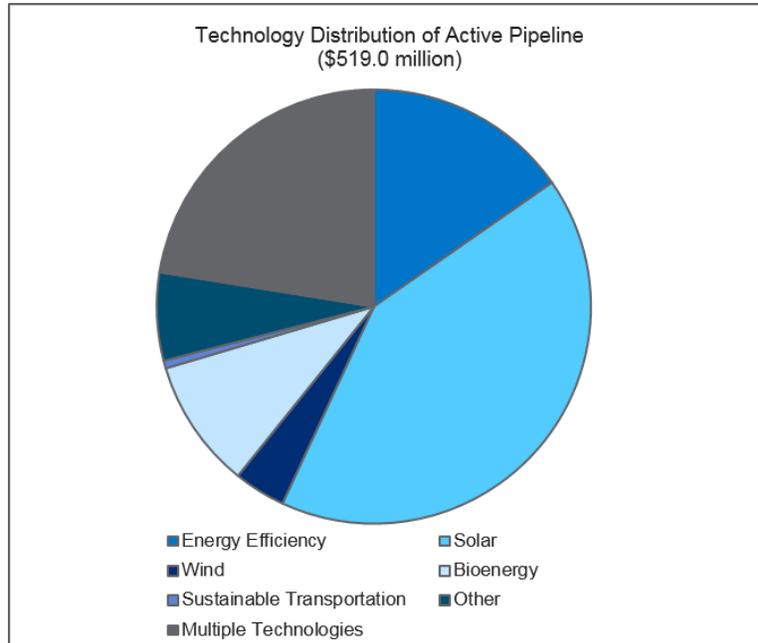
Level Solar closed its doors in September 2017, and NYGB worked closely with Level Solar’s shareholders to identify a third-party servicer to step in to service the residential solar PV systems in operation in order to ensure that the NYGB investment and Level Solar’s customers would be protected as much as possible in the wake of the company’s closure. On October 16, 2017 SUNation Solar Systems announced that it will provide complete services for all Level Solar customers. Under this arrangement, SUNation adopted responsibility for monitoring and servicing existing systems, managing billing without any changes to the current process, and providing support of any questions or service issues. SUNation representatives also reached out to all Level Solar Customers to ensure that this transition was carried out smoothly. More details can be found on the SUNation website.⁹

⁹ See <https://www.SUNationsolarsystems.com/SUNation-level-solar-press-release>.

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**”).¹⁰ Through September 30, 2017, proposals requesting over \$2.1 billion of NYGB capital have been received. NYGB’s Active Pipeline at the end of the quarter ended September 30, 2017 is \$519.0 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.

Figure 2. Active Pipeline by Technology



¹⁰ 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 and Efficiency & Renewables Financing Arrangements: Building & Property Owners – RFP No. 8, all available at www.greenbank.ny.gov/Partnering-With-Us/Propose-an-Investment.

Figure 3. Active Pipeline by End-Use Customer Segment

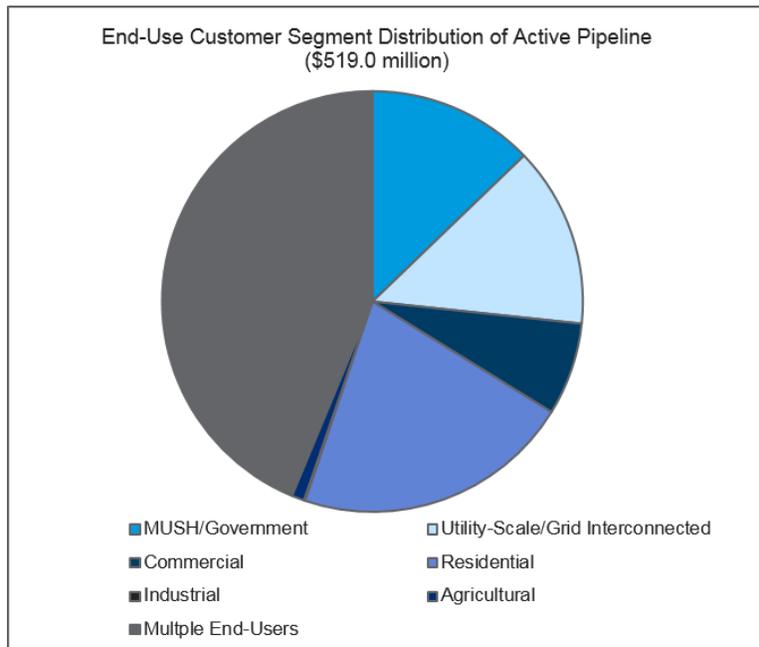
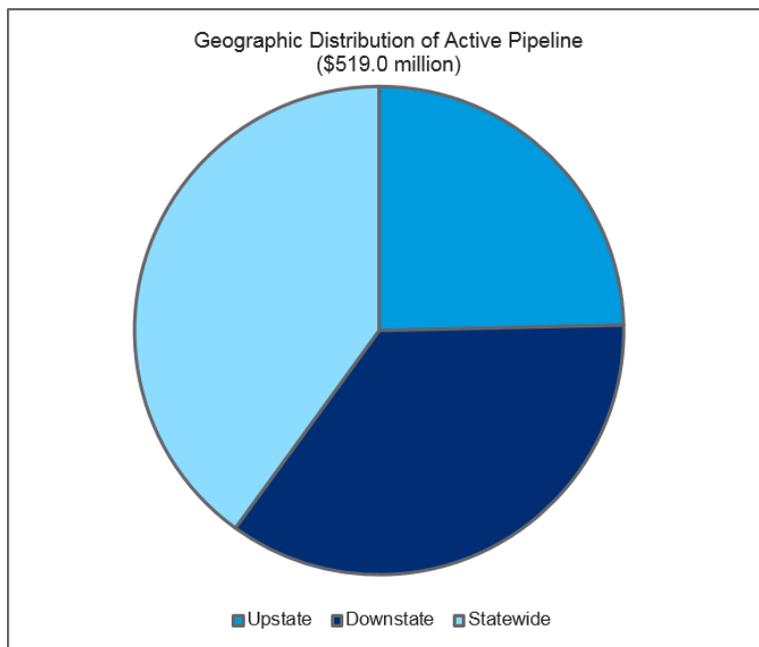


Figure 4. Active Pipeline by Geographic Distribution



3.4 Operational & Risk Matters

In the quarter ended September 30, 2017, 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) Public Reporting & Metrics: Filed the Quarterly Report for the period ending June 30, 2017 (on August 14, 2017), as required by the Metrics Plan and available at www.greenbank.ny.gov/Resources/Public-Filings;
- (b) Continuing Stakeholder Outreach & Communications: Highlights of specific outreach initiatives in the quarter ended September 30, 2017 include:
 - i. Co-hosted the Fifth Annual Green Bank Congress, along with Connecticut Green Bank, in New York City as a leading event during Climate Week. Brought together approximately 160 sustainability, financial and project developer professionals from across the State and the globe to discuss green bank progress to date and new near-frontier areas of interest, where green banks are expected to play a large role in the coming years to advance clean energy capital solutions;
 - ii. Initiated the 2017 Statewide Meeting Series, where Alfred Griffin and other senior staff members visit each respective region of the State to learn more about specific financing issues in those areas and to share NYGB’s progress to date. Regions visited as of the end of this quarter included Central New York, Finger Lakes, Southern Tier, Long Island and the Mohawk Valley;
 - iii. Alfred Griffin provided input as an expert reviewer along with a welcome letter, for a report – “Unlocking Private Capital to Finance Sustainable Infrastructure” – released by Environmental Defense Fund as a new framework that will help State and local governments mobilize private investment to repair existing and build new infrastructure that can help mitigate the effects of extreme weather events. A case study highlighting NYGB’s role in providing innovative solutions for sustainable infrastructure financing was also highlighted in this report; and
 - iv. Participated in 17 events, including the Innovative Green Finance Tools panel during the Sustainable Investment Forum 2017 as part of Climate Week; a Green Bank Academy two-day working session focused on wide scale deployment of green bank structures in the United States and globally with an emphasis on developing standardized, replicable opportunities; and NYGB’s regular Quarterly Report Review Webinar, held on August 29, 2017.
- (c) Advisory Committee: An Advisory Committee meeting was held on September 12, 2017. 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 July 1, through September 30, 2017 are set out in [Table 1](#).¹¹

Table 1. Quarterly Metrics

Quarterly Metric	Prior Quarter	Current Quarter
Capital Position		
▪ Authorized Capital (\$)	\$1.0 billion	\$1.0 billion
▪ Authorized Administrative Expenses (\$)	\$17.5 million	\$17.6 million ¹²
▪ Authorized Evaluation Expenses (\$)	\$4.0 million	\$4.0 million
Operational Matters		
▪ Cumulative Revenues (\$) ¹³	\$17.8 million	\$23.0 million
▪ Cumulative Operating Expenses (\$) ¹⁴	\$19.0 million	\$20.8 million
▪ Direct Operating Expenses (\$)	\$10.8 million	\$12.0 million
▪ Allocated Expenses (\$)	\$8.1 million	\$8.8 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 (Cumulative) (\$)	\$76.7 million	\$71.4 million
▪ Deployed Funds (Cumulative) (\$) ¹⁵	\$320.0 million	\$329.4 million
▪ Current Portfolio (\$)	\$396.6 million	\$400.8 million
▪ Overall Investments to Date (\$)	\$409.4 million	\$440.9 million
▪ Total Project Costs (Cumulative) (\$) ¹⁶	In the range of \$1.2 - \$1.4 billion	In the range of \$1.31 - \$1.59 billion
▪ Mobilization Ratio	Tracking at least 3:1 on average across portfolio	Tracking at least 3:1 on average across portfolio ¹⁷

¹¹ 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 overall 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 overall portfolio level estimations of impact benefits as it works towards meeting the CEF objectives to support the NYS CES and SEP goals. Given such periodic adjustments, the aggregate estimated benefits reported in Quarterly Reports will be the most up-to-date and accurate estimate, 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.

¹² Updated to reflect initial capitalization in the CEF Order provision to include cost recovery fee in expense allocation.

¹³ Cumulative Revenue reflects quarterly fair market value adjustments related to NYGB capital held in U.S. Treasury securities, consistent with GAAP. In addition, at the point in time that there is any portfolio impairment, such impairment would be recorded as an adjustment to Cumulative Revenues.

¹⁴ Currently includes \$42,300 in Evaluation Expenses.

¹⁵ Deployed Funds (Cumulative) as presented in [Table 1](#) is net of all capital repaid to the reporting date.

¹⁶ 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.

¹⁷ Given the range of Total Project Costs that NYGB investments mobilize, the Mobilization Ratio also represents a range; currently of 3.0:1 to 3.6:1.

Quarterly Metric	Prior Quarter	Current Quarter
▪ Portfolio Concentrations (%) ¹⁸	66.8% Renewable Energy	64.7% Renewable Energy
	12.3% Energy Efficiency	11.4% Energy Efficiency
	20.9% Other	24.0% Other ¹⁹
▪ Number & Type of NYGB Investments	17 – Renewable Energy	18 – Renewable Energy
	6 – Energy Efficiency	6 – Energy Efficiency
	3 – Other	4 – Other
▪ Number & General Type of NYGB Counterparties ²⁰	46 – 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	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
▪ 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): 1.12 – 1.23 million MWh; and 9.43 – 10.3 million MMBtu	Estimated Gross Lifetime Energy Saved by Fuel Type (Energy Efficiency): 737,000 – 815,000 MWh; and 3.97 – 4.37 million MMBtu ¹¹
	Estimated Gross Lifetime Clean Energy Generated: 5.96 – 8.52 million MWh	Estimated Gross Lifetime Clean Energy Generated: 9.28 – 12.8 million MWh
▪ Estimated Gross First Year ²¹ 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): 89,400 – 97,500 MWh; and 801,000 – 873,000 MMBtu	Estimated Gross First Year Energy Saved by Fuel Type (Energy Efficiency): 50,500 – 56,100 MWh; and 252,000 – 276,000 MMBtu ¹¹
	Estimated Gross First Year Clean Energy Generated: 258,000 – 366,000 MWh	Estimated Gross First Year Clean Energy Generated: 394,000 – 538,000 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

¹⁸ 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.

¹⁹ “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.

²⁰ 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).

²¹ All “estimated gross first year” metrics refer to the first year of estimated gross benefits (e.g., energy saved, installed capacity, GHGs etc.) which 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)²² 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	220.0 – 300.0 MW	330.0 – 446.0 MW
▪ Estimated Gross Lifetime GHG Emission Reductions (metric tons) for Committed Funds & Deployed Funds	4.32 – 5.77 million metric tons	5.53 – 7.44 million metric tons
Investment Pipeline		
▪ Active Pipeline (In the Quarter) (\$)	\$588.3 million	\$519.0 million
Investment Process		
▪ Proposals Received – Value (Cumulative) (\$)	\$2.1 billion	\$2.1 billion ²³
▪ Approvals - Scoring Committee (Cumulative) (\$)	\$1.9 billion	\$1.9 billion ²⁴
▪ Approvals - Greenlight Committee (Cumulative) (\$)	\$904.5 million	\$924.0 million
▪ Approvals - IRC (Cumulative) (\$)	\$445.8 million	\$497.3 million

²² 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.nyscrda.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.

²³ Proposals Received – Value (Cumulative) (\$) increased to \$2,122 million in Q3 2017, from \$2,094 million in Q2 2017.

²⁴ Approvals - Scoring Committee (Cumulative) (\$) increased to \$1,946 million in Q3 2017, from \$1,917 million in Q2 2017.

5 Progress Against Plan Deliverables

In its annual Business Plan, filed on June 19, 2017, NYGB identified specific deliverables (the “**Plan Deliverables**”) that collectively mark its progress in implementing key initiatives in the period April 1, 2017 through March 31, 2018 (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 September 30, 2017 is summarized in Table 2.

Table 2. Status of Plan Deliverables (2017 – 2018)

Category	Deliverable	Status in Quarter Ending September 30, 2017
Strong Active Pipeline		
<ul style="list-style-type: none"> ▪ Active Pipeline 	<ul style="list-style-type: none"> ▪ Maintain an Active Pipeline of at least \$300.0 million on average throughout the year. 	<ul style="list-style-type: none"> ☑ Achieved for this Quarter: Active Pipeline of \$519.0 million.
<ul style="list-style-type: none"> ▪ Streamline Investment Proposal Submission Process & Data Collection 	<ul style="list-style-type: none"> ▪ Create an online portal for submission of Investment RFPs to NYGB with straight-through processing and data collection in NYGB’s CRM system to make management and reporting tools more efficient and effective. 	<ul style="list-style-type: none"> ☑ Achieved for the Plan Year: In May 2017 NYGB launched the online portal for submission of investment proposals to NYGB pursuant to all current Investment RFPs.²⁵
Portfolio Driving Material Clean Energy Investments Across NYS		
<ul style="list-style-type: none"> ▪ Committed Funds 	<ul style="list-style-type: none"> ▪ Commit \$550.0 million (cumulative) to NYGB investments, equating to an average of \$50.0 million in closed transactions per quarter. 	<ul style="list-style-type: none"> ☒ Not Achieved for this Quarter: \$31.5 million of closed transactions in the quarter, such that current Plan Year 2017 - 18 commitment averaging \$47.4 million per quarter. (See additional commentary below).
<ul style="list-style-type: none"> ▪ Issue CDG RFP/RFI 	<ul style="list-style-type: none"> ▪ Publicly Issue RFP/RFI. 	<ul style="list-style-type: none"> ☑ Ongoing & On Track: Preparation of RFP/RFI has commenced.
<ul style="list-style-type: none"> ▪ Issue Interconnection Bridge Loan RFP/RFI 	<ul style="list-style-type: none"> ▪ Publicly issue RFP/RFI. 	

²⁵ The new online portal for submission of Investment RFPs to NYGB can be accessed by clicking the “Submit Proposal Online” button available at: [www.https://greenbank.ny.gov/Working-with-Us/Propose-an-Investment](https://greenbank.ny.gov/Working-with-Us/Propose-an-Investment).

Category	Deliverable	Status in Quarter Ending September 30, 2017
<ul style="list-style-type: none"> ▪ Perform Initial Evaluation Activities 	<ul style="list-style-type: none"> ▪ Engage with independent evaluators to conduct baseline assessments for both financial market transformation and energy and environmental impact of NYGB's Investment Portfolio. 	<input checked="" type="checkbox"/> Ongoing & On Track: Baseline Evaluation Plan reviewed and accepted by DPS. Selection of third-party evaluators in Q1 2018. Evaluation activities expected to commence in early 2018.
Mobilizing Private Capital		
<ul style="list-style-type: none"> ▪ Mobilization Ratio 	<ul style="list-style-type: none"> ▪ 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. 	<input checked="" type="checkbox"/> Achieved for this Quarter: Current quarter Mobilization Ratio on track at least 3:1 on average across NYGB's portfolio. ²⁶

One of NYGB's key deliverables for the 2017 – 2018 fiscal year is to commit \$550.0 million (cumulative) to NYGB investments, equating to an average of \$50.0 million in new investments per quarter in the current fiscal year.²⁷ As set out in this Report, NYGB closed two transactions in the third calendar quarter totaling \$31.5 million. During the previous quarter NYGB closed investments of \$63.3 million, bringing the total for the previous two quarters to \$94.8 million – just slightly below the average expected rate of \$50.0 million per quarter.

As a market-focused and market-responsive organization, the momentum of individual transactions towards closing fluctuates due to various factors, including many not under NYGB's control. The \$50.0 million target for average new commitments per quarter serves as an average indicator of progress towards achieving targets for the year. Given natural cycles that occur in the marketplace, it is to be expected that at any point in time the aggregate value of new investments in any quarter will not equal \$50.0 million, but over a year will average that amount. NYGB continues to grow and manage a healthy and robust active pipeline and the organization expects to remain on track towards meeting its FY 2017 – 2018 deliverables.

²⁶ Given the range of Total Project Costs that NYGB investments mobilize, the Mobilization Ratio also represents a range; currently of 3.0:1 to 3.6:1.

²⁷ See NY Green Bank, Annual Business Plan 2017 dated June 19, 2017 and filed with the Commission (Cases 14-M-0094 et al), page 29.

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.

Bridge Loan to Support the Deployment of Community Solar Projects

Cypress Creek Renewables

NY Green Bank (“**NYGB**”) is providing a 12-month senior secured bridge loan facility of up to \$12.0 million (the “**Bridge Loan**”) to Cypress Creek Renewables, LLC (“**CCR**”), a California-based integrated utility-scale solar provider. Bridge Loan proceeds will finance project interconnection advance payments to utilities across New York State (“**NYS**”) for up to 72 community distributed generation (“**Community DG**”) solar projects. This transaction is expected to support the deployment of up to 168 megawatts (“**MW**”) of photovoltaic (“**PV**”) solar in NYS, providing residents and businesses with a greater variety of energy choices and, ultimately, lower-cost clean energy options.

Transaction Description

CCR is developing a portfolio of Community DG solar projects 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 pay a certain portion of the interconnection upgrade estimates up front. CCR requested NYGB to provide a Bridge Loan for up to \$12.0 million to finance those interconnection advance payments to NYS utilities, which will be used for as many as 72 Community DG solar projects.¹

This financing demonstrates a successful replication of an earlier bridge loan structure which NYGB entered into with Distributed Sun, LLC. This transaction is estimated to support the deployment of as much as 168 MW of solar assets in the State which will: (i) provide commercial and residential project subscribers access to reliable, clean, low-cost energy; and (ii) reduce up to 104,400 metric tons of greenhouse gas (“**GHG**”) emissions annually or up to 2,610,000 metric tons of GHG emissions over a 25-year project life. As there is an increasingly strong demand for Community DG throughout NYS, capital providers are, and will continue to be, expected to provide financing to enable the deployment of these projects, including through covering the up-front interconnection payments, and products like NYGB’s Bridge Loan are expected to ultimately be offered by private capital providers in future.

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 CCR transaction entered into on August 2, 2017, as required by the Metrics Plan.³

Form of NYGB Investment

NYGB Product	Product Sub-Type	Committed Capital
Asset Loan & Investment	Bridge Loan	Up to \$12.0 million

Location(s) of Underlying Project(s)

Statewide.⁴ Community DG solar projects are in regions across NYS.

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% of the interconnection upgrade estimates.

² Case 13-M-0412.

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
Client	CCR	Energy Project Developer
Counterparties (current)	New York State Electric & Gas Corporation National Grid Orange and Rockland Utilities Rochester Gas & Electric Central Hudson Gas & Electric	Electric Utility

Summary of Financing Market Objectives & Barriers Addressed

Beneficiary	Market Barrier	Financing Solution
Solar Project Developers	Project sponsors are often expected to pay for interconnection upgrade expenses with equity funds as they finalize construction financing arrangements. This results in a relatively inefficient use of sponsor equity, limiting project deployment efforts and effectively restricting the amount of Community DG being deployed in NYS.	This transaction 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 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.	This 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 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 few with perfectly sited homes or businesses.	This transaction supports the deployment of Community DG solar projects, which provide those who are not otherwise able to install solar energy generation systems on their property (e.g., homeowners whose rooftops cannot support solar systems, renters and those who cannot afford solar 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 GHG 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 Bridge Loan are as follows:

Energy/Environmental Impact	Lifetime Low Estimate	Lifetime High Estimate	First-Year Low Estimate	First-Year High Estimate
Estimated clean energy generated (MWh)	3,306,000	4,960,000	132,200	198,400
Estimated clean energy generation installed capacity (MW) ⁷	112	168	Not Applicable	
Estimated GHG emission reductions (metric tons)	1,740,000	2,610,000	69,600	104,400

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 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.

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

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

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

- Market volume of CCR projects increases;
- General understanding of renewable energy benefits by financial community increases;
- Increased awareness and use of Community DG subscriber performance data by financing entities;
- Increased awareness and use of project/technology performance data by financing entities;
- Demonstration of competitive risk-return profiles for Community DG solar investment;
- Decreased project costs;
- Volume of secondary market financing of Community DG solar assets; and
- Number of new lending participants.

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 at page 7.

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

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

As with all NYGB investments, CCR 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.

Enabling Growth & Expanding Financing Opportunities for Hydrogen Fuel Cell Projects

Plug Power, Inc.

NY Green Bank (“NYGB”) has closed two transactions with Latham, NY-based hydrogen and fuel cell systems manufacturer Plug Power, Inc. (“PP”) to support deployment and growth of its New York State (“NYS”) operations. These transactions – including an original \$25.0 million term loan facility (the “Facility”) and an upsize of that facility with another \$20.0 million from NYGB – will enable PP to expand deployments of its GenDrive units, adding up to 2,340 new systems for commercial customers, replacing current infrastructure with cleaner, more efficient alternatives, while growing its NYS labor force by up to 156 new employees.

Transaction Description

On December 23, 2016, NYGB and PP closed on a \$25.0 million term loan facility to PP to finance the deployment of fuel cell systems powering forklifts in distribution centers across NYS (the “**Project**”). On July 21, 2017, that facility was upsized by an additional \$20.0 million to finance Plug’s continued deployment growth, which surpassed initial expectations. The overall \$45.0 million financing facility (the “**Facility**”) allows PP immediate access to capital that is currently held as cash collateral in restricted accounts, rather than waiting for it to be released over time as payments are made through sale-leasebacks arrangements with tax equity providers. NYGB’s participation in the Facility is significant because it enables PP to deploy more systems and convert more forklift fleets in a shorter amount of time than would otherwise be possible.

PP is a designer and manufacturer of fuel cell systems and fueling infrastructure that specializes in deploying its fuel cell propulsion systems across entire fleets of forklifts and transportation vehicles within distribution centers throughout the U.S. PP deploys these systems and then provides a suite of services to operate them – such as procuring the hydrogen fuel the systems run on, and providing ongoing operations and maintenance to keep the systems running at a guaranteed uptime level – all as a single turnkey offering to the owner of the manufacturing site or distribution center. Many of PP’s current customers are major corporations in the automotive manufacturing, retail distribution and consumer goods industry.

These transactions constitute NYGB’s first investments in the fuel cell industry, which is still relatively small nationally but growing at an above-market average rate. As a result of the relatively limited track record for this particular technology, many firms in the industry experience high borrowing costs. NYGB participation in the transaction aims to address those high costs for PP and other similar companies in the sector by making otherwise restricted capital available to PP, so they can continue scaling their business, including to the levels where capital costs are expected to be significantly reduced.

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 information in connection with the Facility (which was entered into on December 23, 2016, and increased on July 21, 2017), as required by the Metrics Plan.³

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

² Case 13-M-0412.

³ See Section 4.0, page 8 and Schedule 3.

Form of NYGB Investment

NYGB Product	Product Sub-Type	Committed Capital
Term Loan	Senior Secured Debt	\$45.0 million

Location(s) of Underlying Project(s)

Statewide.⁴ Projects will be located in distribution centers across NYS.

Types of Client & Partner Organizations that are Transaction Participants

	Name	Participant Type
Clients & Counterparties (current)	Plug Power, Inc.	Energy Technology Provider & Vendor
	Lessor Banks	Boutique Investment Banks/Advisory, Specialty Finance Company
Counterparties (future)	To be determined	Property Owner/Developer

Summary of Financing Market Objectives & Barriers Addressed

Beneficiary	Market Barrier	Financing Solution
Fuel Cell Industry	Because fuel cell technology at commercial scale is relatively new, private capital providers are often hesitant to lend to the industry. As a result, fuel cell manufacturers and providers face high costs of capital which impede further business development. Many capital providers also don't assume project risk, and consequently require large cash collateral accounts if they are funding new projects. These collateral accounts, in addition to high borrowing costs, decrease the already thin margin under which fuel cell providers currently operate.	NYGB participation in the Facility will lessen the burden of the cash collateral accounts for PP, and allow PP to expand its business in NYS. This signals to private capital providers that fuel cells are a viable and profitable technology, which should further drive down future costs of capital, reduce or remove the need for cash collateralization, and encourage more capital providers to enter the market.
	To date, limited availability and high costs of capital have kept the fuel cell industry from a more rapid expansion. Many logistics and distribution center customers, who could greatly benefit from the reduced cost and increased efficiency of fuel cell systems, are unable to access these opportunities due to a lack of financing.	NYGB's participation in these transactions will facilitate the more widespread deployment of fuel cell systems at a reduced cost. This should expand the number of interested parties that can benefit from this advanced technology while increasing demand for fuel cells and ultimately driving down costs as economies of scale are achieved.

⁴ Defined as projects located in four or more regions across the State.

Beneficiary	Market Barrier	Financing Solution
Capital Market Participants	Many private capital providers are hesitant to enter the fuel cell market due to the limited track record of the technology and its implementation at scale. Many of those who are interested in entering into this segment of the market are charging higher capital costs to address the perceived risk associated with this lesser known technology type.	The transaction structure NYGB is using can ultimately encourage other fuel cell companies to monetize their cash collateral accounts via the capital markets by demonstrating a transaction structure through which this can be done and replicated. In addition, NYGB capital will allow the fuel cell propulsion model to further build its track record, making it more attractive to, and financeable by, private capital providers.

Technologies Involved

Technology	Measures
Fuel Cells	Hydrogen-based fuel cell propulsion systems capable of powering forklifts and industrial and commercial vehicles.

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 these transactions, be reported on⁶:

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

The estimated lifetime and first-year energy and environmental impacts of the Project, facilitated by NYGB's financial participation in the Facility, are as follows:

Energy/Environmental Impact	Lifetime Low Estimate	Lifetime High Estimate	First-Year Low Estimate	First-Year High Estimate
Estimated clean, renewable energy generated (MWh)	131,000	161,000	13,100	16,100
Estimated clean energy generation installed capacity (MW) ⁷	4.21	5.15	Not Applicable	
Estimated GHG emission reductions (metric tons) ⁸	72,600	95,700	7,260	9,570

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

Planned Market Characterization Baseline & Market Transformation Potential

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

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

- Increased system deployment;
- GHG emission reductions;
- Job growth within PP; and
- Favorable 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 volume of projects in core and secondary markets;
- Lower cost of capital and increased operating margin for PP;
- Financial entities emerge showing interest in NYGB's transaction position;
- Relationships with financial partners established; and
- Continued energy savings, emissions reductions.

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 corresponding energy/environmental benefits delivered.

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 fuel cell financing, and influence of NYGB's participation on financial markets. As noted, baseline data will be collected on most key indicators in 2017 and later follow-up studies will assess progress against baseline levels. The specific timing of these efforts may be revised based on experience or other factors as the project evolves.

Impact evaluation is expected to draw upon and include data collected to support Project-specific measurement and verification activities. Impact evaluation activities will likely include use of reporting data provided by PP on a Quarterly/Monthly basis. Annualized first-year GHG emission reductions and cost savings will be based on fuel cell deployment statistics and equipment replacement data (Lead Acid/Propane). Analysis will be conducted beginning in 2018 with follow-up studies as appropriate. On-site performance verification of deployed equipment may be conducted.

As with all NYGB investments, PP 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 contemplated 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 to maximize data collection and avoid participant survey fatigue.

⁹ See Metrics Plan, Section 3.3 at page 7.