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

NY Green Bank

Metrics, Reporting & Evaluation

Quarterly Report No. 21

(Through September 30, 2019)

Case 13-M-0412

November 14, 2019

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1 Performance at a Glance – As of September 30, 2019

Stimulating New Clean Energy Proposals in the State	NY Green Bank ("**NYGB**") has received over **$3.8 billion** in investment proposals since inception.
Strong Active Pipeline	The Active Pipeline of potential investments proceeding to close is **$828.4 million**.[1]
Driving Material Clean Energy Investments Across NYS	NYGB's investments support clean energy projects with a total project cost of **between $1.85 and $2.17 billion** in aggregate,[2] based on Overall Investments to Date of **$791.7 million**.
Mobilizing Capital	NYGB's investment portfolio represents continuing progress toward an expected mobilization ratio of Total Project Costs to NYGB funds of **8:1,** manifesting in $8.0 billion of clean energy and sustainable infrastructure projects mobilized in New York State ("**NYS**" or the "**State**") by NYGB activity by December 2025 (including the effect of capital recycling). Currently at up to **$2.17 billion**.
Revenue Growth - Maintaining Self-Sufficiency	Continued revenue growth – **$71.5 million** in revenue 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 greenhouse gas ("**GHG**") emissions reductions of **between 9.55 and 16.40 million metric tons**,[2] equivalent to removing **between 139,716 and 164,487 cars** from the road for a period of **23 years**.[3]

[1] The value of the Active Pipeline is separate from the value of the investment portfolio. As of September 30, 2019, the $828.4 million in Active Pipeline does not include the $791.7 million in closed transactions comprising 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 as well as updated impact benefit calculation factors advised by the New York State Department of Public Service ("**DPS**"). Based on information received, NYGB continually manages the actual and expected energy and environmental impact 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). Consistently monitoring and refining expected outcomes improves the accuracy of NYGB's portfolio-level estimate of impact benefits as it works towards meeting the CEF objectives to support the State's clean energy goals. Given such periodic adjustments, the aggregate estimated benefits reported in Quarterly Reports are the most up-to-date estimates (and no longer reflect the sum of the low and high estimated benefits specified in the Transaction Profiles at the time of each transaction close).

[3] NYGB's GHG emissions reductions values reflect the estimated effect of both direct and indirect impact benefits – see Section 4.2.

2 Introduction

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

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, 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 **one new investment** during the quarter ending September 30, 2019, adding **$5.0 million** to NYGB's investment portfolio. This transaction is 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, 2019:

(a) Over **$3.8 billion** of proposals have been received and evaluated by NYGB's Scoring Committee;

(b) **$3.6 billion** of proposals have passed Scoring Committee evaluation – representing potential investments that meet NYGB's mandate and proposal evaluation criteria;

(c) **$1.5 billion** of proposals have received Greenlight Committee recommendation for advancement;

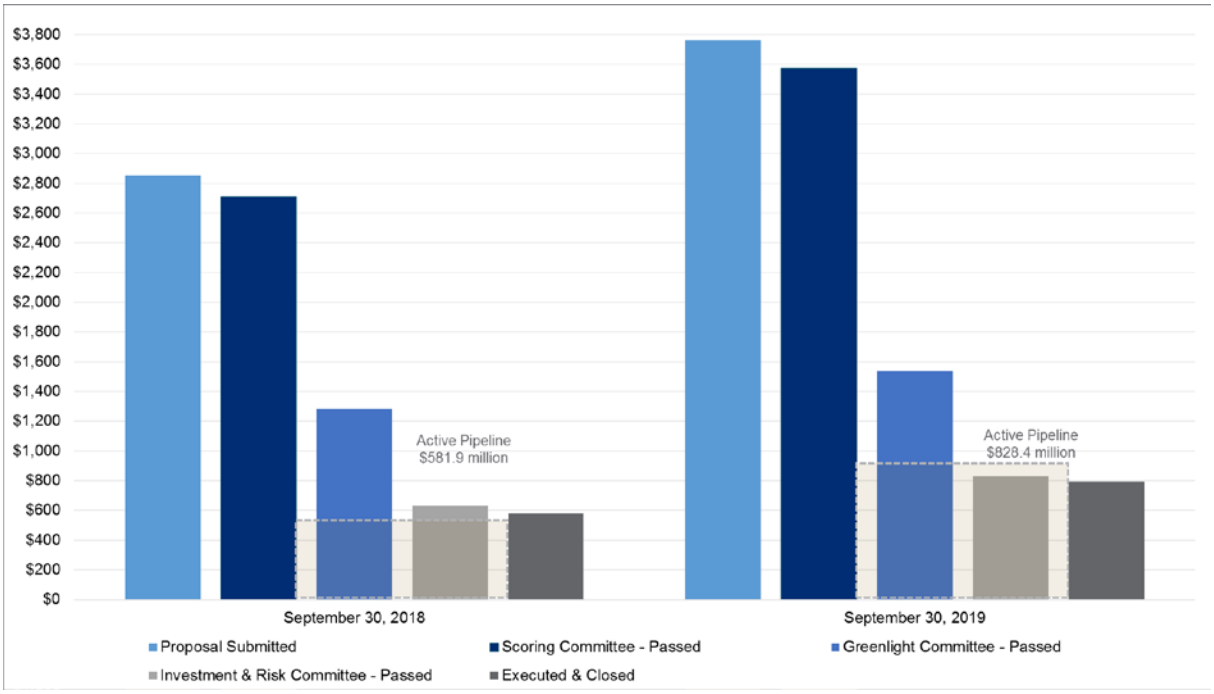
(d) **$828.1 million** of proposals have been vetted by the Investment & Risk Committee ("**IRC**") and approved by NYSERDA's President & CEO; and

(e) **$791.7 million** of transactions have been closed – comprising NYGB's Overall Investments to Date – mobilizing public and private investments to support in the range of **$1.85 to $2.17 billion** in Total Project Costs for clean energy deployment in the State.

Also, as shown in Figure 1, NYGB currently has an Active Pipeline of **$828.4 million**.

[4] Case 13-M-0412, "NY Green Bank – Metrics, Reporting & Evaluation Plan", Version 3.0, dated June 20, 2016.
[5] Note that 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 September 30, 2019, NYGB closed the Saranac Lake Resort transaction. This was the first Preferred Equity investment closed by NYGB.[6] Additionally, this was the first New Construction project supported by NYGB.[7]

This transaction, as part of NYGB's portfolio, contributes to the primary Clean Energy Fund ("**CEF**") objectives 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 State's aggressive clean energy targets, including under New York's Green New Deal which mandates a significant increase in the State's Clean Energy Standard ("**CES**") with a goal of 70.0% energy generation from renewable sources by 2030 and 100.0% carbon-free electricity by 2040.[9] The CEF objectives also support the Climate Leadership and Community Protection Act (the "**CLCPA**"),[10] which puts New York on a road to economy-wide carbon neutrality, through a target of reducing GHG emissions from all anthropogenic sources 85.0% over 1990 levels by the year 2050, a plan to offset remaining emissions, and an interim mandate of 40.0% GHG emission reductions by 2030.[11]

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[6] Preferred Equity – as a general matter, preferred equity is a type of equity investment in a company that grants holders certain preferences over the company's common equity holders. Such preferences may include (i) the right to receive a fixed portion of the distributions of the company's earnings before the common equity holders and (ii) the right to receive a fixed portion of the proceeds from a liquidation of the company's assets before the common equity holders. Even though preferred equity is a type of equity investment, the voting rights of preferred equity holders are customarily limited with respect to the company.

[7] New Construction – defined as a project involving a new building, or space within a new building, for which a registered architect or professional engineer has prepared and certified building plans.

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

[9] Announced by Governor Andrew M. Cuomo in the 2019 State of the State. See www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/2019StateoftheStateBook.pdf.

[10] Senate Bill S6599 was signed into law by Governor Cuomo on July 18, 2019. See legislation.nysenate.gov/pdf/bills/2019/a8429.

[11] The CLCPA codified and expanded New York's Green New Deal and other nation-leading clean energy and climate targets for the State, including: (a) quadrupling New York's offshore wind target to 9,000 MW by 2035 (up from 2,400 MW by 2030); (b) doubling distributed solar deployment to 6,000 MW by 2025 (up from 3,000 MW by 2023); (c) deploying 3,000 MW of energy storage by 2030 (up from 1,500

3.2.2 New Investments

Saranac Lake Resort - Supporting Energy Efficient New Building Construction in New York State

- *NYGB's first Preferred Equity investment*
- *Reduces GHG emissions by up to 744 metric tons from the underlying energy efficiency measures installed*
- *Reduces electricity use by at least 777 MWh from the underlying energy efficiency measures installed*
- *Achieves energy savings from fuel of up to 5,754 MMBtu over the average life of the underlying energy efficiency measures*

Saranac Waterfront Lodge will be the first LEED Certified hotel in the Adirondack Park, located on the shores of Lake Flower and partially located on a former Superfund site, remediated in 2018 under the guidance of the New York State Department of Environmental Conservation ("**NYSDEC**"). The Project will incorporate energy efficiency measures including efficient HVAC equipment and insulation, advanced lighting, and improved building controls, in addition to stormwater management improvements and electric vehicle charging stations.

NYGB's $5.0 million preferred equity investment diversifies NYGB's portfolio and presents an opportunity to increase market awareness of energy efficiency in the New Construction space. NYGB's investment signals to the market that NYGB capital is available to finance New Construction projects pursuing energy efficiency upgrades, increasing primary building efficiency deployment in NYS. This investment also supports economic development and job creation in the downtown Saranac Lake region and demonstrates the viability of financing a sustainable new build in a tertiary market like the North Country. In addition to seasonal and part-time positions, the Project is expected to create approximately 71 full-time jobs upon opening, and 116 jobs from construction.

Further details on all NYGB's investments are contained in the Transaction Profiles, which are publicly available on NYGB's website at www.greenbank.ny.gov/Investments/Portfolio. Transaction Profiles for the investments described in this Section 3.2 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 (collectively, the "**Investment RFPs**").[12] Through September 30, 2019, NYGB has received proposals requesting over $3.8 billion of NYGB capital. NYGB's Active Pipeline at September 30, 2019 is $828.4 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.

MW by 2025); (d) more than doubling new large-scale land-based wind and solar resources through the CES; (e) maximizing the contributions and potential of New York's existing renewable resources; (f) expanding and enhancing the Solar For All Program to increase access to affordable and clean energy for low-income, environmental justice and other underserved communities; and (g) initiatives to achieve carbon neutral building stock Statewide, including through the energy efficiency target to reduce energy consumption by 185 trillion Btus below forecasted energy use in 2025.

[12] At the time of this Report, NYGB has four open investment solicitations ("**RFPs**"), all of which are continuous, with proposals evaluated as they are received: RFP 1: Clean Energy Financing Arrangements; RFP 7: Construction & Back-Leveraged Financing for Ground-Mounted Solar Generation Systems Targeting Corporate & Industrial End-Users; RFP 8: Financing Arrangements for Renewable & Energy Efficiency Projects: Office, Commercial & Industrial, and Multi-Family Real Estate Properties; and RFP 10: Financing for CDG Solar Projects Including Projects Paired with Energy Storage. All Investment RFPs and access to the portal for the online submission of investment proposals are available at www.greenbank.ny.gov/Work-with-Us/Open-Solicitations.

Figure 2. Active Pipeline by Technology

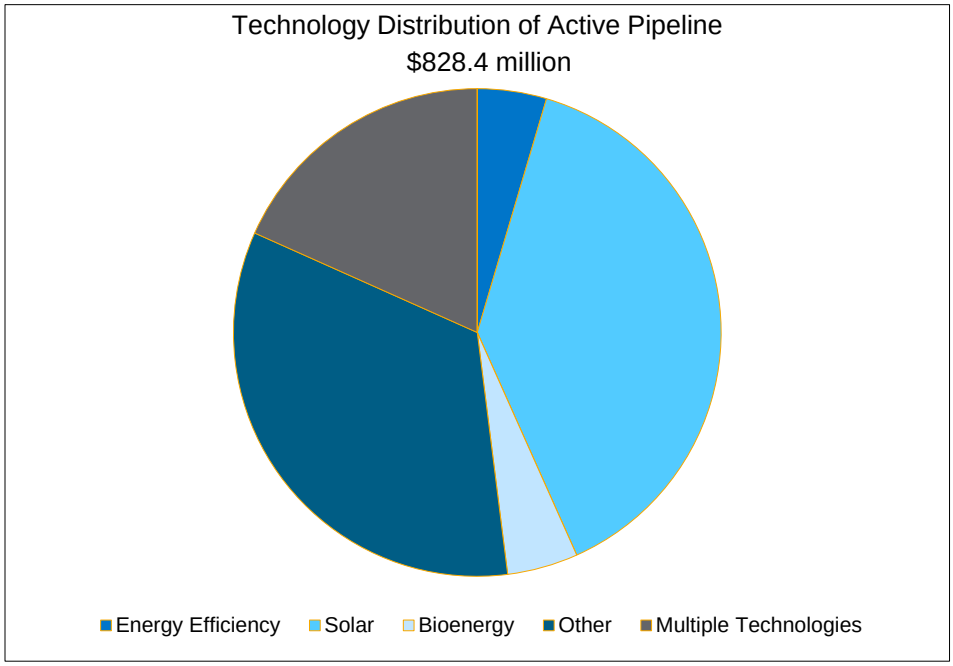


Figure 3. Active Pipeline by End-Use Customer Segment

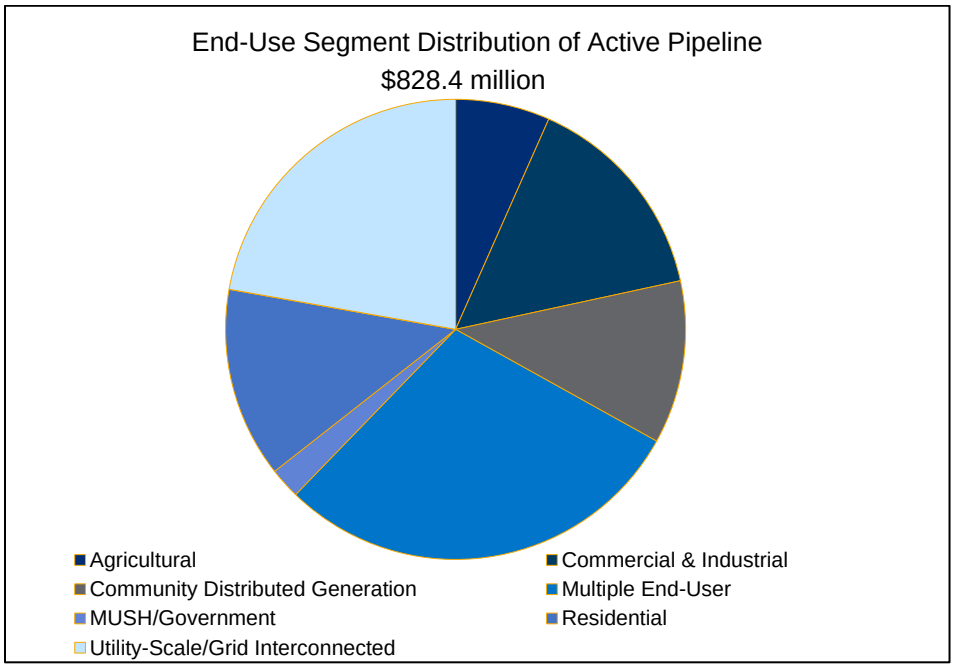
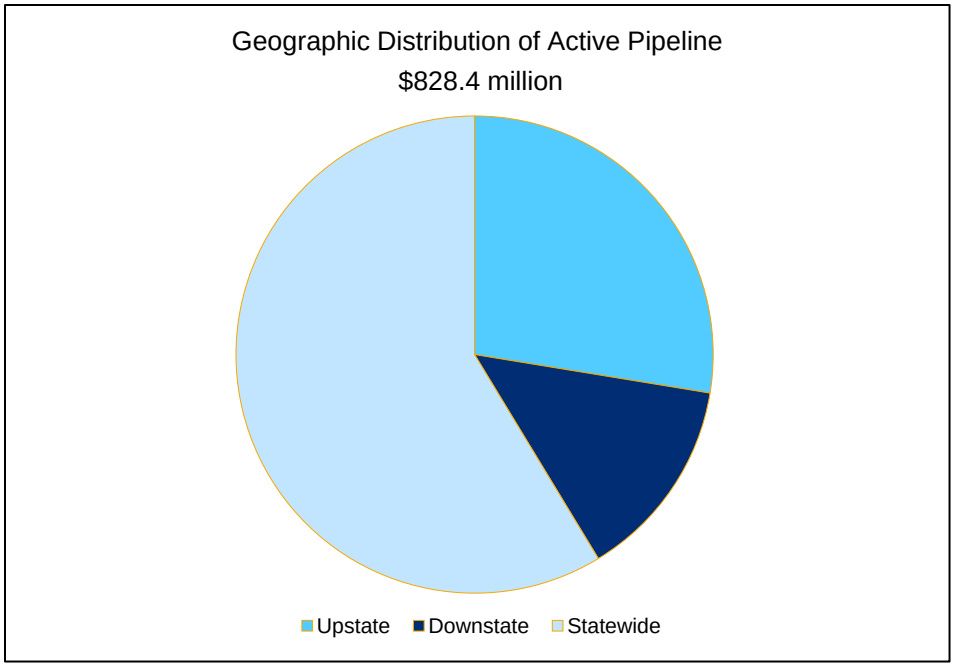


Figure 4. Active Pipeline by Geographic Distribution



3.4 Strategic, Operational & Risk Matters

In the quarter ended September 30, 2019, 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) Continuing Stakeholder Outreach & Communications: NYGB participated in 24 events during the quarter including keynoting the Environmental Finance Green Bonds America 2019 Conference; presenting NYGB's approach to financing NYSERDA performance-based incentives at the Pay for Performance & National Grid Stakeholder Meeting; speaking to how NYGB has been an early-mover to encourage private capital investment in sustainable infrastructure at the Horizon19 Summit; presenting on NYGB's on-lease commercial tenant energy efficiency financing structure at the NYC Landlord-Tenant Workshop hosted by Institute for Market Transformation, NYSERDA and NYC Mayor's office; and discussing how countries can become a magnet for private green investments in an Executive Fireside Chat featuring NYGB's President, and the Danish Minister for Environment at the New York Climate Week 2019 Corporate & Governance Climate Commitments – The Clean Economy in Denmark and New York.

(b) New Additions to the Green Bank Network: The Green Bank Network ("**GBN**") announced that its members have collectively closed transactions that are expected to mobilize $50.0 billion in public and private capital for sustainable infrastructure projects across the globe, surpassing its previously stated goal of catalyzing $40.0 billion by 2019. These investments are expected to reduce 25.0 million metric tons of CO_{2eq} internationally. GBN also welcomed the addition of two new members: Tata Cleantech Capital Limited of India and Energy Efficiency and Renewable Sources Fund of Bulgaria. As a founding member of GBN, NYGB looks forward to the continued progress of the network and to contributing NYGB's leadership and expertise to benefit new and existing members.

(c) NYGB Medium Post During Climate Week NYC 2019: During Climate Week NYC, NYGB published a post titled "Annual Climate Week in New York City Brings Renewed Attention to New York's Global and National

Leadership on Clean Energy Financing."[13] The post underscored NYGB's role in serving as a cornerstone in achieving the State's ambitious climate goals including those set forth in the CLCPA signed by Governor Cuomo into law in July 2019. Additionally, it was highlighted that GBN – comprising ten Green Bank-like entities from around the world – surpassed its commitment goal and will collectively mobilize $50.0 billion into global clean energy markets by the end of 2019. GBN's ability to catalyze such significant amounts of capital in such varied national markets, demonstrates how public financing institutions can harness the power of private markets to transform infrastructure financing globally and collectively advance solutions to our increasingly dire climate issues. It was also noted that NYGB continues to lead nationally through its participation in the U.S. Climate Alliance, which Governor Cuomo co-founded in June 2017 as a bipartisan coalition of states and territories that are committed to upholding the objectives of the 2015 Paris Agreement on climate change within their borders.

(d) Progress on Review of RFP 11: Last quarter, NYGB released RFP 11: Technical & Engineering Support & Market Fundamentals & Analysis Services ("**RFP 11**"). Through this solicitation, NYGB sought proposals from technical, engineering and service firms experienced in a broad variety of renewable energy technologies and other sectors of sustainable infrastructure. NYGB is in the process of reviewing full proposal submissions and anticipates executing final agreement(s) with one or more service providers by the end of 2019.

(e) Legal Service Provider Solicitation Launched: On August 30, 2019 NYGB released RFP 12: Outside Legal Counsel Services ("**RFP 12**"). Through this solicitation, NYGB sought proposals from law firms interested in serving as outside legal counsel to NYGB in connection with the operations and investment activity of NYGB relative to its financing of clean energy and sustainable infrastructure projects and businesses. NYGB is in the process of reviewing full proposal submissions and anticipates executing final agreements(s) with service providers by the end of 2019.

(f) Public Reporting & Metrics:

i. On August 15, 2019, NYGB filed its Quarterly Report for the period ending June 30, 2019, as required by the Metrics Plan (available at www.greenbank.ny.gov/Resources/Public-Filings).

ii. NYGB will host its regular Quarterly Review Webinar for this Report in early December 2019, including discussion of activities from NYGB's fiscal quarter ending September 30, 2019.

4 Metrics

4.1 Quarterly Metrics

Required metrics for the period July 1, through September 30, 2019 are set out in Table 1.[14]

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		

[13] See: https://medium.com/@NYGovCuomo/guest-post-annual-climate-week-in-new-york-city-brings-renewed-attention-new-yorks-global-and-a2fc740416f3.

[14] NYGB monitors its counterparties' clean energy project installations throughout the duration of each investment through the receipt and review of periodic reports as well as updated impact benefit calculation factors advised by DPS. Based on information received, NYGB continually manages the actual and expected energy and environmental impact benefits across its portfolio. As new information becomes

Quarterly Metric	Prior Quarter	Current Quarter
▪ **Cumulative Revenues ($)**[15]	$65.4 million	$71.5 million
▪ **Cumulative Operating Expenses ($)**[16]	$38.6 million	$41.2 million
▪ **Direct Operating Expenses ($)**[17]	$23.7 million	$25.3 million
▪ **Allocated Expenses ($)**	$14.9 million	$15.9 million
▪ **Credit Facility (if in place)**		
▪ **Credit Facility Amount ($)**	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 ($)**	$154.8 million	$121.7 million
▪ **Deployed Funds ($)**[18]	$349.7 million	$352.9 million
▪ **Current Portfolio ($)**[19]	$504.6 million	$474.6 million
▪ **Overall Investments to Date ($)**	$786.7 million	$791.7 million
▪ **Total Project Costs (Cumulative) ($)**[20]	In the range of $1.82 to $2.14 billion	In the range of $1.85 to $2.17 billion
▪ **Mobilization Ratio**	Tracking at least 2.6:1 on average across portfolio	Tracking at least 2.6:1 on average across portfolio[21]
▪ **Portfolio Concentrations (%)**[22]	76.5% Renewable Energy	75.9% Renewable Energy
	7.4% Energy Efficiency	9.1% Energy Efficiency
	16.1% Other	15.0% Other[23]

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). Consistently monitoring and refining expected outcomes improves the accuracy of NYGB's portfolio-level estimate of impact benefits as it works towards meeting the CEF objectives to support the State's clean energy goals. Given such periodic adjustments, the aggregate estimated benefits reported in Quarterly Reports are the most up-to-date estimates (and no longer reflect the sum of the low and high estimated benefits specified in the Transaction Profiles at the time of each transaction close).

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

[16] Cumulative Operating Expenses currently includes $430,704 in evaluation expenses.

[17] Direct Operating Expenses (since NYGB inception, as reported in Table 1) includes approximately $1.5 million in non-recurring costs associated with NYGB's capital expansion initiative. Costs of this nature are not normally included in operating expenses or the calculation of operating net income. Proper accounting treatment of these amounts will always be reflected in NYGB's annual audited financial statements, including a more detailed breakdown of NYGB's revenue and expenses.

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

[19] The dollar value of the Current Portfolio is expected to fluctuate from quarter to quarter, including to reflect any increases or decreases in Committed Funds and/or Deployed Funds. Committed Funds increase when new transactions are executed with commitments that have not yet been funded, and/or in connection with existing transactions, where repaid amounts may be available to be redrawn pursuant to the terms of investment agreements. Deployed Funds increase where the total dollars funded into investments exceed amounts repaid in the same period. Decreases in Committed Funds 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. Note that due to rounding for the purposes of presentation in this Report, the sum of Committed Funds and Deployed Funds may not be identical to Current Portfolio. In addition, Current Portfolio is always stated net of any portfolio losses.

[20] 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 seeks to adjust reported values and replace FMV in its aggregated data sets and periodic reporting with reported actual costs.

[21] Given the range of Total Project Costs that NYGB investments mobilize, the Mobilization Ratio also represents a range: currently of 2.3:1 to 2.7:1.

[22] 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.

[23] "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.

Quarterly Metric	Prior Quarter	Current Quarter
▪ **Number & Type of NYGB Investments**	37 – Renewable Energy	37 – Renewable Energy
	8 – Energy Efficiency	9 – Energy Efficiency
	6 – Other	6 – Other
▪ **Number & General Type of NYGB Counterparties[24]**	58 – 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	59 – 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
Direct Impact Benefits		
▪ **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): 369,000 – 450,000 MWh; and 1.43 – 2.05 million MMBtu	Estimated Gross Lifetime Energy Saved by Fuel Type (Energy Efficiency): 369,000 – 451,000 MWh; and 1.44 – 2.05 million MMBtu
	Estimated Gross Lifetime Clean Energy Generated: 17.5 – 22.0 million MWh	Estimated Gross Lifetime Clean Energy Generated: 17.5 – 22.0 million MWh
▪ **Estimated Gross First Year[25] 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): 25,800 – 31,600 MWh; and 83,000 – 115,000 MMBtu	Estimated Gross First Year Energy Saved by Fuel Type (Energy Efficiency) 25,800 – 31,600 MWh; and 83,000 – 116,000 MMBtu
	Estimated Gross First Year Clean Energy Generated: 1,176,000 – 1,382,000 MWh	Estimated Gross First Year Clean Energy Generated: 1,176,000 – 1,382,000 MWh
▪ **Estimated Gross Lifetime Energy Saved from CHP (MWh) for Committed Funds & Deployed Funds**	Estimated Gross Lifetime Energy Saved from CHP: 60,700 – 74,200 MWh	Estimated Gross Lifetime Energy Saved from CHP: 60,700 - 74,200 MWh
▪ **Estimated Gross First Year Energy Saved from CHP (MWh) for Committed Funds & Deployed Funds**	Estimated Gross First Year Energy Saved from CHP: 2,973 – 3,634 MWh	Estimated Gross First Year Energy Saved from CHP: 2,973 – 3,634 MWh
▪ **Estimated Gross Lifetime Energy Savings**	Estimated Gross Lifetime Energy Savings from CHP: 190,900 – 233,300 MMBtu	Estimated Gross Lifetime Energy Savings from CHP: 190,900 – 233,300 MMBtu

[24] 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).

[25] 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
from CHP (MMBtu)[26] for Committed Funds & Deployed Funds		
▪ **Estimated Gross First Year Energy Savings from CHP (MMBtu) for Committed Funds & Deployed Funds**	Estimated Gross First Year Energy Savings from CHP: 9,890 – 12,100 MMBtu	Estimated Gross First Year Energy Savings from CHP: 9,890 – 12,100 MMBtu
▪ **Estimated Gross Clean Energy Generation Installed Capacity from CHP (MW), if applicable, for Committed Funds & Deployed Funds**	1.9 MW	1.9 MW
▪ **Estimated Gross Clean Energy Generation Installed Capacity (MW), if applicable, for Committed Funds & Deployed Funds**	500.5 – 641.3 MW	500.5 – 641.3 MW
▪ **Estimated Gross Lifetime GHG Emission Reductions (metric tons)[27] for Committed Funds & Deployed Funds**	9.55 – 12.01 million metric tons	9.55 – 12.01 million metric tons
Indirect Impact Benefits[28]		
▪ **Estimated Lifetime Energy Saved (MWh)**	-	-
▪ **Estimated Lifetime Energy Saved (MMBtu)**	-	-
▪ **Estimated Lifetime Clean Energy Generation (MWh)**	4.1 – 8.4 million MWh	4.1 – 8.4 million MWh
▪ **Estimated Installed Capacity CHP (MW)**	-	-
▪ **Estimated Installed Capacity (MW)**	61.2 – 125.2 MW	61.2 – 125.2 MW
▪ **Estimated Lifetime GHG Emissions Reductions (Metric Tons)**	2.18 – 4.39 million metric tons	2.18 – 4.39 million metric tons
Investment Pipeline		
▪ **Active Pipeline (In the Quarter) ($)**	$546.7 million	$828.4 million
Investment Process		
▪ **Proposals Received – Value (Cumulative) ($)**	$3.4 billion	$3.8 billion
▪ **Approvals - Scoring Committee (Cumulative) ($)**	$3.2 billion	$3.6 billion
▪ **Approvals - Greenlight Committee (Cumulative) ($)**	$1.5 billion	$1.5 billion
▪ **Approvals - IRC (Cumulative) ($)**	$823.3 million	$828.1 million

4.2 Direct & Indirect Impact Benefits

As NYGB has developed and grown since inception, with increasing diversity in the nature and type of transactions in which it participates, its activities have the potential to generate both direct and indirect impact benefits for NYS residents. NYGB differentiates and tracks both direct and indirect impact metrics, to more comprehensively quantify the estimated impact of each NYGB investment on the NYS clean energy and sustainable infrastructure market. This is consistent with the CEF Order, which specifically recognizes the

[26] 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-Genertation-CHP-Impact-Evaluation-Final.pdf for information on CHP Impact evaluation methods in NYS.

[27] NYSERDA utilizes a 1,103 lbs/MWh conversion factor to estimate GHG emissions reductions for electric generation and energy efficiency savings across all components of the CEF.

[28] NYGB reports and tracks Indirect Impact Benefits to reflect the contribution to NYS clean energy goals made by NYGB activities and related incremental value for all NYS consumers.

importance of catalyzing markets and generating indirect benefits as part of CEF initiatives, including over longer time horizons.[29]

The quantification of indirect impact benefits is intended to capture the market transformational effects of NYGB investment activity. Many other CEF initiatives also anticipate accruing indirect benefits related to longer-term effects from follow-on market activity. These indirect impacts are grounded in a theory of change developed for each initiative, and NYSERDA will use market evaluation approaches, consistent with the rest of the CEF, to verify the indirect impacts as they accrue over time. Estimated indirect benefits are reflected in NYGB progress reporting, in general and towards meeting NYGB CEF goals. The realization and evaluation of NYGB indirect benefits over time will also be reflected in periodic reporting as appropriate. Both direct and indirect metrics contribute to the reductions of GHGs in the State from NYGB activity.

For NYGB, direct and indirect impact metrics are further defined as follows:

(a) *Direct Impact Metrics:* Direct impact metrics quantify the estimated impact of the counterparty's project development or business-building activity. The types of direct impact metrics that NYGB tracks are those outlined in the Metrics Plan (and publicly reported quarterly), in aggregate on a path to achieving the impact benefit objectives by the end of the CEF in December 2025. Benefits are tracked on an estimated and actual basis (with actuals reported annually for NYGB's Investment Portfolio in each calendar year). NYGB investments typically involve terms that limit or incentivize the use of NYGB investment proceeds to new or incremental project development in NYS.

(b) *Indirect Impact Metrics:* Indirect Impact Metrics seek to measure the effect of NYGB investment on projects, pipelines, or other counterparty structures that wholly or in part catalyze other developments in the clean energy and sustainable infrastructure market beyond that in which NYGB directly invests (e.g., providing liquidity in the secondary markets and in relation to large-scale renewables with merchant exposure). While some particular NYGB investments might not fund new project development, material indirect benefits are nevertheless expected to accrue to the State over time as a result of this type of NYGB activity. NYGB tracks such estimated benefits (which can be in MWs, MWh, MMBtus, or metric tons of GHG reduced/avoided) on a lifetime basis. The realization of indirect impact benefits is expected over time. To confirm the nature and extent of indirect impact benefits that are in fact realized by the State, periodic market assessments will occur as needed to confirm that new development activity has in fact occurred, validating NYGB's estimated indirect impact benefits.

5 Progress Against Plan Deliverables

In its Business Plan ("**Plan**"), filed on June 19, 2019, NYGB identified deliverables (the "**Plan Deliverables**") that collectively mark its progress to implement key initiatives in the period April 1, 2019 through March 31, 2020 (the "**Plan Year**").

NYGB's Quarterly Reports are required to address progress against the Plan Deliverables and provide 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, 2019 is summarized in Table 2.

[29] See CEF Order (Cases 14-M-0094 et al.) pages 68 – 69: "The approved [CEF eligibility criteria] provide NYSERDA with the needed flexibility to choose initiatives that will create the greatest benefits for the least cost and to support innovative new technologies and approaches. [The PSC] recognize[s] that initiatives oriented towards market development, while they have the potential to create the greatest benefits for ratepayers in the long run, will have more indirect and less easily calculated clean energy benefits as compared to resource acquisition programs. [The PSC] require[s] NYSERDA to take a broad view of these indirect benefits when considering whether an initiative is eligible for CEF funding and to also take into account other benefits of the initiative, including its contribution to all of the CEF goals and its economic development benefits. Funding market-based projects with an indirect impact on clean energy is wholly consistent with the Commission's historic approach to clean energy programs. For example, the Commission approved workforce development programs, designed to achieve both indirect clean energy benefits and economic development benefits, as part of both [the energy efficiency performance standard] and [the renewable portfolio standard]. Holistic consideration of these benefits will best support the SEP, the goals described in the New York State Energy Law, and the interests of ratepayers."

Table 2. Status of Plan Deliverables (2019 – 20)

Category	Deliverable	Status in Quarter Ending September 30, 2019
Strong Active Pipeline		
Active Pipeline	▪ Maintain an Active Pipeline of at least $450.0 million per quarter on average throughout the 2019 – 20 Plan Year.	☑ **Achieved for this Quarter:** Active Pipeline of **$828.4 million**.
Clean Energy for LMI[30]	▪ Publicly issue Credit Enhancement/Loss Reserve for CDG[31] Tax Equity RFI[32]/RFP.	☑ **Ongoing & On Track:** Due to be issued by the end of the 2019 fiscal year.
	▪ Convene LMI stakeholders to present NYGB's CDG financing approach on LMI-friendly terms, such as to not require FICO®[33] scores or long-term contracts.	☑ **Achieved for the Plan Year:** On July 11, 2019, NYGB hosted the webinar "Financing Community Distributed Generation for Low-to-Moderate Income Communities." The webinar highlighted the ways NYGB continues to facilitate increased opportunities for LMI customers to participate in, and benefit directly from, NYS's growing distributed energy market.
	▪ Convene LMI stakeholders to present NYGB approaches to financing projects in LMI communities, and to communicate current developments and progress made during the 2019 – 20 Plan Year.	☑ **Ongoing & On Track:** Further convenings and communications to continue as approaches are develop.
Energy Storage	▪ Participate in NYSERDA webinar to inform market participants of how NYGB financings can leverage NYSERDA planned bulk and retail storage incentives.	☑ **Achieved for the Plan Year:** On May 2 and 3, 2019 NYGB presented on its financing approach to energy storage in NYSERDA's bulk & retail energy storage webinars.
	▪ Publicly issue new standalone Energy Storage RFP following announcement of planned NYSERDA storage incentives.	☑ **Ongoing & On Track:** Due to be issued by the end of the 2019 calendar year.
	▪ Convene energy storage market participants to present NYGB standalone Energy Storage RFP.	☑ **Ongoing & On Track:** Due to be convened by the end of the 2019 calendar year.
Energy Efficiency	▪ Provide guidance to market participants on key items to improve the probability of securing project financing from NYGB (to be included in NYSERDA pay-for-performance RFP for small commercial applications).	☑ **Achieved for the Plan Year:** NYGB provided feedback on the NYSERDA and Consolidated Edison pay-for-performance RFP, in connection with the financial capacity of proposers.
	▪ Participate in NYSERDA residential stakeholder pay-for-performance convening and others with commercial market players around tenant improvement financing models.	☑ **Achieved this Quarter:** NYGB's approach to financing NYSERDA performance-based incentives at the Pay for Performance & National Grid Stakeholder Meeting in Syracuse, NY.

[30] Low and Moderate Income.

[31] Community Distributed Generation.

[32] Request for Information.

[33] "FICO®" is an abbreviation for the Fair Isaac Corporation, the first company to offer a credit-risk model with a score.

Category	Deliverable	Status in Quarter Ending September 30, 2019
Large-Scale Renewables	▪ Contribute to NYSERDA Land-Based LSR[34] RFP and NYS port infrastructure RFI to communicate potential NYGB financing roles and structures to likely respondents and related parties.	☑ **Ongoing & On Track:** NYGB contributed to NYSERDA's Land-Based LSR RFP.
	▪ Participate in May 2019 webinar[35] for NYSERDA's LSR RFP[36] to provide information to potential respondents on NYGB financing options, so that these may be reflected in, and priced into, RFP responses.	☑ **Achieved for the Plan Year:** On May 2, 2019, NYGB participated in the Renewable Energy Standard Program RFP19-1 Webinar. In the webinar, NYGB highlighted its financing approach for LSR projects.
	▪ Participate in NYSERDA convening of LSR market participants to communicate NYGB financing opportunities to NYSERDA RFP respondents.	☑ **Achieved for the Plan Year:** As noted above, on May 2, 2019, NYGB participated in the Renewable Energy Standard Program RFP19-1 Webinar. In the webinar, NYGB highlighted its financing approach to LSR projects. Additionally, on May 15, 2019 NYGB hosted a Financing Large-Scale Renewables webinar to further detail how NYGB can be helpful in providing financing to the LSR market.
Community Distributed Generation	▪ Publicly issue Credit Enhancement/Loss Reserve for CDG Tax Equity RFI/RFP, as noted above under "Clean Energy for LMI."	☑ **Ongoing & On Track:** Due to be issued by the end of the 2019 fiscal year.
	▪ Convene LMI stakeholders to present NYGB's CDG financing approach that may not require FICO scores or long-term contracts, as noted above under "Clean Energy for LMI."	☑ **Achieved for the Plan Year:** As noted above, on July 11, 2019, NYGB hosted the webinar "Financing Community Distributed Generation for Low-to-Moderate Income Communities." The webinar highlighted the ways in which NYGB continues to facilitate increased opportunities for LMI customers to participate in, and benefit directly from, NYS's growing distributed energy market.
Clean Transportation	▪ Convene market participants and clean transportation innovators to identify specific market needs or gaps and advance NYGB financing product development and offerings.	☑ **Ongoing & On Track:** NYGB continues to work with NYSERDA and other market participants on clean transportation initiatives.
Bio Energy	▪ Convene market participants to identify specific market needs and advance product development and potential offerings.	☒ **Not Started:** The date for this convening is yet to be determined.
Portfolio Driving Material Clean Energy Investments Across NYS		
Committed Funds	▪ Commit $962.6 million (cumulative) to NYGB investments by March 31, 2020, including at least $225.0 million of	☒ **Not Achieved this Quarter:** NYGB Closed **$5.0 million** in transactions in

[34] Large Scale Renewable.

[35] See: www.nyserda.ny.gov/All%20Programs/Programs/Clean%20Energy%20Standard/Renewable%20Generators%20and%20Developers/RES%20Tier%20One%20Eligibility/Solicitations%20for%20Long%20term%20Contracts.

[36] Issued April 23, 2019. See: http://portal.nyserda.ny.gov/servlet/servlet.FileDownload?file=00Pt000000ED99VEAT.

Category	Deliverable	Status in Quarter Ending September 30, 2019
	incremental commitments in the 2019 – 20 Plan Year (at an average rate of $56.25 million in closed transactions per quarter).	the quarter. NYGB averaged **$27.1 million** in closed transactions per quarter in the fiscal year to date.
Mobilizing Capital		
▪ **Mobilization Ratio**	▪ Continue progress toward a ratio of 8:1 across all NYGB investments, manifesting in $8.0 billion of clean energy and sustainable infrastructure projects mobilized in the State by NYGB activity by the end of the CEF in 2025.	☑ **Ongoing & On Track:** Current NYGB investments are expected to mobilize up to **$2.14 billion** in estimated project costs.
	▪ Collaborate with NYSERDA and other relevant stakeholders to continue to explore the viability of a public private partnership to effectuate NYGB's third-party capital raise and national expansion, which will deliver the same or greater benefits to all New Yorkers using less ratepayer capital, as directed by Governor Cuomo in the 2019 State of the State/Executive Budget package.	☑ **Ongoing & On Track:** NYGB/NYSERDA continue to work with relevant parties.
Maintaining Self-Sufficiency by Strengthening Operations		
▪ **Legal & Technical Services**	▪ Issue new RFP for technical service providers to NYGB and select slate of approved providers by September 2019.	☑ **Ongoing & On Track:** Issued Technical RFP in June 2019. NYGB anticipates executing final agreements with service providers by the end of 2019.
	▪ Issue new RFP for legal service providers to NYGB and select slate of approved providers by December 2019.	☑ **Ongoing & On Track:** Issued Legal RFP in September 2019. NYGB anticipates executing final agreements with service providers by the end of 2019.

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

September 2019

Supporting Energy Efficient New Building Construction in New York State

Saranac Lake Resort

*NY Green Bank ("**NYGB**") has committed $5.0 million to finance the construction and operation of an energy efficient, LEED Certified lodging property located in the Village of Saranac Lake (the "**Project**") and developed by Saranac Lake Resort Owner, LLC ("**Saranac**"). The Project's energy efficiency measures are expected to reduce greenhouse gas ("**GHG**") emissions relative to design standards. This is NYGB's first investment in an energy efficient, new building ("**New Construction**") asset as part of its ongoing efforts to participate in sustainable infrastructure investments in support of Clean Energy Fund objectives. The Project is expected to create approximately 71 full time jobs in New York State ("**NYS**"), supporting economic development in the North Country.*

Transaction Description

Saranac Waterfront Lodge will be the first LEED Certified hotel in the Adirondack Park, located on the shores of Lake Flower and partially located on a former Superfund site, remediated in 2018 under the guidance of the New York State Department of Environmental Conservation ("**NYSDEC**"). The Project will incorporate energy efficiency measures including efficient HVAC equipment and insulation, advanced lighting, and improved building controls, in addition to stormwater management improvements and electric vehicle charging stations.

NYGB's $5.0 million preferred equity investment (the **"Investment"**) diversifies NYGB's portfolio and presents an opportunity to increase market awareness of energy efficiency in the New Construction space. NYGB's investment signals to the market that NYGB capital is available to finance New Construction projects pursuing energy efficiency upgrades, increasing primary building efficiency deployment in NYS. The investment also supports economic development and job creation in the downtown Saranac Lake region and demonstrates the viability of financing a sustainable new build in a tertiary market like the North Country. In addition to seasonal and part-time positions, the Project is expected to create approximately 71 full-time jobs upon opening, and 116 jobs from construction.

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 Saranac Lake Resort transaction entered into on September 25, 2019, as required by the Metrics Plan.[2]

Form of NYGB Investment

NYGB Product	Product Sub-Type	Committed Capital
Asset Investment	Preferred Equity Investment	$5.0 million

Location(s) of Underlying Project(s)

North Country. The Project is located in the North Country, New York.

[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	Saranac Lake Resort Owner, LLC	Company
Vendor	BBL Construction	Construction Manager
Vendor	Skyward Hospitality	Hotel Manager

Summary of Financing Market Objectives & Barriers Addressed

Beneficiary	Market Barrier	Financing Solution
Owners & Developers	When designing new buildings in NYS, owners and developers of New Construction projects are not always able to rely on energy modeling and cost-benefit analysis in order to secure appropriately priced capital, reducing their ability to realize the benefits of energy efficient technology.	NYGB's participation in this transaction signals to the market that capital is available to finance the construction of real estate developments pursuing energy efficiency upgrades. This should result in greater interest from private sector capital providers in committing capital for similar project types, which will ultimately expand liquidity in energy efficiency markets while reducing overall costs for all.
Capital Market Participants	On an individual basis, there is limited capital support for energy efficiency projects; however, capital providers are more likely to participate on an aggregated basis once a pipeline of projects has achieved meaningful scale.	NYGB's willingness to support the Project helps to demonstrate to the broader market that there is lender comfort with an appetite for investments in energy efficient, new building projects.
New Yorkers	While interest and activity in energy efficient New Construction projects are increasing rapidly in NYS, a relatively small number of financial models are being used, preventing New Yorkers from realizing the benefits of completed projects.	By providing financing, NYGB is encouraging primary building efficiency deployment for commercial and institutional projects in NYS. Ultimately, this is expected to provide New Yorkers with more efficient building stock at a lower cost. The investment also supports economic development and job creation in a tertiary market like the North Country.

Technologies Involved

Technology	Measures
Energy Efficiency	HVAC, Advanced Lighting, Improved Building Controls, higher-rated insulation

Metrics & Evaluation Plan

Planned Energy & Environmental Metrics

NYGB's minimum investment criteria specifically require that "transactions will have the potential for energy savings and/or clean energy generation that will contribute to greenhouse gas reductions in support of New York's energy policies".[3] In addition, the Metrics Plan requires that the following energy and environmental measures, applicable to this transaction, be reported on:[4]

[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.

- Estimated gross lifetime and first-year electricity savings (MWh);
- Estimated gross lifetime and first-year fuel savings (MMBtu); 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	Annualized Low Estimate	Annualized High Estimate
Electricity savings (MWh)	660.73	777.33	44.05	51.82
Fuel savings (MMBtu)	4,891.26	5,754.42	326.08	384.63
Estimated GHG emission reductions (metrics tons)[5]	632.53	744.15	42.17	49.61

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, approximately three to five years following initial NYGB capital deployments. Market evaluation activities commenced in 2018 to collect baseline data on key market indicators for the sectors that have been supported by NYGB since its inception, and the dataset will be updated to include indicators specific to this transaction. Baseline data will be used 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:

- Favorable financial performance data throughout Facility term; and
- Favorable technology performance data.

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

- Increased volume of projects in the New Construction sector, involving lengthening financing and investment durations (i.e., 10+ years);
- Average and aggregate dollar value of projects in development and completed increases;
- Demonstration of competitive risk/return profiles;
- Increased awareness and use of evolving financial performance data by financing entities;
- Financial entities emerge showing interest in NYGB's transaction position;
- Scale of investment in New Construction projects increases;
- Increased number of New Construction projects reliant upon integrated design and construction practices;
- Relationships with financial partners established; and
- Reduction in difference between realized and predicted energy savings (improvement in energy modeling).

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 and environmental benefits delivered by this transaction.

Market evaluation will address the short, mid and long-term indicators identified above. Methods will include analysis

[5] As of January 1, 2016, the New York State Energy Research and Development Authority ("**NYSERDA**") utilizes a 1,103 lbs/MWh conversion factor to estimate GHG emissions reductions for electric generation and energy efficiency savings across all components of the Clean Energy Fund ("**CEF**"). NYSERDA has previously utilized a 625 lbs/MWh conversion factor and 1,160 lbs/MWh. Factors have changed – and can be expected to continue to change – to reflect the improving efficiency/"greening" of the NYS grid (i.e., the New York Independent System Operator).

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 New Construction financing, and influence of NYGB's participation on financial markets. As noted, baseline data was collected on key indicators in the first phase evaluation during 2018 – 2019. Subsequent studies will assess progress against baseline levels for other market segments like New Construction. The specific timing of these efforts will be determined (and may be revised) on an ongoing basis as NYGB's investment portfolio continues to grow and evolve.

Impact evaluation is expected to draw upon and include data collected to support project-specific measurement and verification activities (e.g., those associated with PON 3609). Impact evaluation activities will likely rely upon energy consumption data collected through environmental reports. Project savings will be assessed by comparing actual energy consumption data against forecasted consumption, as set forth in the energy model completed for LEED certification.

As with all NYGB investments, projects that receive an incentives or funding from other entities (e.g., utility, other NYSERDA program) will be tracked, in accordance with the Metrics Plan, in order to minimize any double-counting activity on a consolidated basis. As set forth in the Metrics Plan, evaluation sampling approaches will 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 the Project to maximize the efficiency of data collection and avoid survey fatigue.