

State of New York Public Service Commission

Petition of the New York State Energy Research and
Development Authority to Provide Initial Capitalization
for the New York Green Bank

Case 13-M-0412

Proceeding on Motion of the Commission Case
to Consider a Clean Energy Fund

Case 14-M-0094

In the Matter of a Comprehensive Energy Efficiency Initiative

Case 18-M-0084

New York State Energy Research and Development Authority (NYSERDA)

Petition Regarding the Performance of NY Green Bank and
Authorization for Modifications

October 31, 2024

Contents

| | |
|---|-----------|
| I. OVERVIEW | 7 |
| 1. INTRODUCTION | 7 |
| 2. BACKGROUND | 7 |
| 3. SUMMARY OF PETITION REQUESTS AND PROPOSALS | 10 |
| 4. POLICY CONTEXT | 11 |
| 5. MARKET CONTEXT | 12 |
| 6. COORDINATION AND COLLABORATION | 13 |
| II. INVESTMENT PORTFOLIO PERFORMANCE | 15 |
| 1. PORTFOLIO GROWTH AND KEY MILESTONES | 15 |
| <i>a) Portfolio Composition</i> | <i>19</i> |
| <i>b) Goals and Metrics</i> | <i>20</i> |
| 2. CLEAN ENERGY GENERATION | 25 |
| <i>a) Solar</i> | <i>27</i> |
| <i>b) Wind</i> | <i>30</i> |
| 3. CLEAN ENERGY STORAGE | 32 |
| <i>a) Market Context</i> | <i>32</i> |
| <i>b) NYGB Interventions</i> | <i>33</i> |
| <i>c) Outcomes and Metrics</i> | <i>34</i> |
| 4. BUILDING DECARBONIZATION | 35 |
| <i>a) Market Context</i> | <i>35</i> |
| <i>b) NYGB Interventions</i> | <i>37</i> |
| <i>c) Outcomes and Metrics</i> | <i>40</i> |
| 5. CLEAN TRANSPORTATION | 41 |
| <i>a) Market Context</i> | <i>42</i> |
| <i>b) NYGB Interventions</i> | <i>42</i> |
| <i>c) Outcomes and Metrics</i> | <i>44</i> |
| 6. LOW-CARBON FUELS AND OTHER | 45 |
| <i>a) Bioenergy</i> | <i>45</i> |
| <i>b) Fuel Cells</i> | <i>46</i> |
| <i>c) Sustainable Agriculture</i> | <i>48</i> |
| <i>d) Outcomes and Metrics</i> | <i>49</i> |
| 7. CLIMATE EQUITY | 50 |
| <i>a) Market Context</i> | <i>50</i> |
| <i>b) NYGB Offerings</i> | <i>51</i> |
| <i>c) Outcomes and Metrics</i> | <i>55</i> |
| III. PETITION PREPARATION & STAKEHOLDER ENGAGEMENT | 56 |
| 1. OVERVIEW | 56 |
| 2. ROUNDTABLE & ENGAGEMENT SESSIONS | 57 |
| <i>a) Accessibility + Equity</i> | <i>57</i> |
| <i>b) Sector-Specific Roundtables</i> | <i>58</i> |
| <i>c) Engaged Stakeholder Roundtable (Webinar)</i> | <i>60</i> |
| <i>d) Financial Institution Roundtable</i> | <i>61</i> |
| <i>e) Additional Climate Equity Sessions</i> | <i>61</i> |

| | |
|---|-----------|
| 3. EVALUATION OF FEEDBACK | 62 |
| <i>a) Recommended Feedback Evaluation Methodology</i> | 63 |
| IV. PROPOSED MODIFICATIONS AND REAFFIRMATION REQUESTS | 63 |
| 1. PROPOSED MODIFICATION REQUESTS | 64 |
| <i>a) Disadvantaged Communities</i> | 64 |
| <i>b) Sector-specific Investment Targets</i> | 65 |
| <i>c) Evaluation, Measurement, and Verification</i> | 68 |
| 2. REAFFIRMATION REQUESTS | 70 |
| <i>a) Advisory Committee</i> | 70 |
| <i>b) Core Operational Elements</i> | 72 |
| V. FUTURE FUNDING: NYGB'S CONTINUED SELF-SUFFICIENCY | 73 |
| 1. EARNED INCOME | 73 |
| 2. LIQUIDITY MANAGEMENT | 74 |
| 3. GGRF / PLANNED USE OF FEDERAL FUNDS | 76 |
| VI. APPENDICES | 77 |
| 1. APPENDIX A: ADDITIONAL ITEMS RAISED DURING NYGB STAKEHOLDER EXERCISE, REFLECTED IN APPENDIX C OF THE 2021 AMENDED ANNUAL PLAN 77 | |
| 2. APPENDIX B: ROUNDTABLE RECOMMENDATIONS | 78 |

Acronyms & Abbreviations

| | |
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| AC | Advisory Committee |
| ACH | Automated Clearing House |
| Annual Plan | An Annual Review & Annual Business Plan That NYGB publicly files, which includes an overview of the activity that took place over the course of the previous fiscal year, along with the goals and deliverables for the upcoming fiscal year |
| AOE | American Organic Energy |
| B | Billion |
| BIPOC | Black, Indigenous, and People of Color |
| Booz | Booz & Company |
| C&I | Commercial and Industrial |
| CaaS | Containers-as-a-Service |
| CAISO | California Independent System Operator |
| CDF | Community Decarbonization Fund |
| CDFIs | Community Development Financial Institutions |
| CDG | Community Distributed Generation |
| CEA | Controlled Environment Agriculture |
| CEF | Clean Energy Fund |
| CEF Authorization Order | Order Authorizing the Clean Energy Fund Framework |
| CEF Modifications Order | Order Approving Clean Energy Fund Modifications |
| CEF Triennial Review Filing | NYSERDA's Petition Regarding Clean Energy Fund Triennial Review which included NYGB as a component of the CEF |
| CEFC | The Clean Energy Finance Corporation |
| CES | Clean Energy Standard |
| CGC | Coalition for Green Capital |
| CJWG | Climate Justice Working Group |
| CLCPA | Climate Leadership and Community Protection Act |
| Climate Act | Climate Leadership and Community Protection Act |
| Commission | Public Service Commission |
| CPACE | Commercial Property Assessed Clean Energy |
| CRA | Community Reinvestment Act |
| DACs | Disadvantaged Communities |
| DCAS | NYC Department of Citywide Administrative Services |
| DERs | Distributed Energy Resources |
| DPS | Department of Public Service |
| DSCR | Debt Service Coverage Ratio |
| Ecosave | Ecosave Inc. |
| EE | Energy Efficiency |
| BE | Building Electrification |
| EE:BE Order | Order Directing Energy Efficiency and Building Electrification Proposals |
| EEC | Energy Equity Collaborative |

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|------------------------------|---|
| EEPS | Energy Efficiency Portfolio Standard |
| EM&V | Evaluation, Measurement, and Verification |
| EPA | Environmental Protection Agency |
| ERCOT | Electric Reliability Council of Texas |
| ESCO | Energy Service Company |
| EV | Electric Vehicle |
| EVSE | Electric Vehicle Supply Equipment |
| FERC | Federal Energy Regulatory Commission |
| FY | Fiscal Year |
| GGRF | Greenhouse Gas Reduction Fund |
| GHG | Greenhouse Gas |
| GLASE | Greenhouse Lighting and Systems Engineering Consortium |
| GW | Gigawatt |
| HCR | New York State Homes and Community Renewal |
| HPD | New York City Department of Housing Preservation and Development |
| ICE | Internal Combustion Vehicles |
| Initial Capitalization Order | The Order Establishing New York Green Bank and Providing Initial Capitalization |
| IPMVP | International Performance Measurement & Verification Protocol |
| IRA | Inflation Reduction Act |
| IRC | Investment & Risk Committee |
| IX | Interconnection |
| KPI | Key Set of Performance Indicators |
| kW | Kilowatt |
| LCFS | Low Carbon Fuel Standard |
| LEDs | Light-Emitting Diodes |
| LFG | Landfill Gas |
| LIIF | Low Income Investment Fund |
| LL97 | Local Law 97 |
| LMI | Low-to-Moderate Income |
| LSR | Large-Scale Renewables |
| M | Million |
| MMBtu | One Million British Thermal Units |
| MW | Megawatt |
| MWBE | Minority-And-Women-Owned Business Enterprise |
| MWh | Megawatt Hours |
| NCIF | National Clean Investment Fund |
| NEVI | National Electric Vehicle Infrastructure |
| Nexamp | Nexamp, Inc. |
| NGO | Non-Governmental Organizations |
| NineDot | NineDot Energy, LLC |
| NYC | New York City |

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|-------------------------|---|
| NYCEEC | New York City Energy Efficiency Corp. |
| NYCHA | New York City Housing Authority |
| NYGB | New York Green Bank |
| NYPA | New York City Power Authority |
| NYS | New York State |
| NYSBIP | New York School Bus Incentive Program |
| NYSERDA | New York State Energy Research and Development Authority |
| NYTVIP | New York Truck Voucher Incentive Program |
| OEM | Original Equipment Manufacturer |
| Order Initiating Review | Order Initiating the New Efficiency: New York Interim Review and Clean Energy Fund Review |
| PACT | New York City Housing Authority's Permanent Affordable Commitment Together Program |
| Plan Year | The Specific Year Being Referenced, starting April 1 and ending March 31 |
| PPAs | Power Purchase Agreements |
| Pre-NTP | Pre-Notice to Proceed |
| PSC | Public Service Commission |
| RFI | Requests for Information |
| RFI No. 5 | Low and Moderate-Income Participation in CDG Projects in New York State |
| RFI No. 6 | On-Lease Commercial Tenant Energy Efficiency Financing Request for Information |
| RFP | Requests for Proposals |
| RGGI | Regional Greenhouse Gas Initiative |
| RNG | Renewable Natural Gas |
| RPS | Renewable Portfolio Standard |
| SBC | System Benefits Charge |
| SG&A | Selling, General, and Administrative Expenses |
| SPV | Special Purpose Vehicle |
| State | New York State |
| TaaS | Transportation-as-a-service |
| TRAC | Terminal Rental Adjustment Clause |
| UJO | United Jewish Organizations of Williamsburg |
| USDA | United States Department of Agriculture |
| V2G | Vehicle to Grid |
| V2X | Bidirectional Charging |
| VDER | Value of Distributed Energy Resources |
| VP | Vice President |
| WWTPs | Wastewater Treatment Plants |

I. Overview

1. Introduction

New York Green Bank (“NYGB”) is a state-sponsored investment fund that operates as a division of the New York State Research and Development Authority (“NYSERDA”), dedicated to alleviating financing gaps in New York State’s (“NYS” or the “State”) clean energy and sustainable infrastructure markets by mobilizing greater private investment activity in these sectors. NYGB is the largest and only self-sustaining green bank in the nation.¹ Since inception it has become a leading clean energy lending program across NYS, with a strong presence and reputation in the clean energy market.² The program has supported the development, construction, and operation of sustainable infrastructure throughout NYS by responding to market opportunities that create attractive precedents, standardize investment practices and create roadmaps that capital providers can readily replicate and scale. As funders “crowd into” an area within the sustainable infrastructure landscape, NYGB moves on to other areas where funding gaps remain.³

Since its formation, NYGB has worked to increase the size, volume and breadth of sustainable infrastructure investment activity throughout the State, expand the base of investors focused on NYS clean energy, and increase market participants’ access to capital on commercial terms. To achieve these objectives, NYGB collaborates with the private sector to develop transaction structures and methodologies that overcome clean energy investment barriers. These barriers might include limited precedent, small deal sizes, challenges in evaluating technology risk, lack of familiarity with business models or deal structuring, underwriting complexities, volatile market conditions, and general risk aversion among investors in broader capital markets.

2. Background

NYGB was first announced in New York’s 2013 State of the State address as a new \$1.0 billion (“B”) division of NYSERDA which would alleviate financial market barriers that were impeding the flow of private capital to clean energy and energy efficiency (“EE”) projects. NYSERDA conducted an assessment of the market opportunity,⁴ which indicated NYGB to be a “viable endeavor that will...add significant value to New York State’s clean energy portfolio,” and on September 9, 2013, NYSERDA filed a petition with the Commission to establish NYGB and provide initial capitalization. Within that petition, NYSERDA identified a number of barriers constraining the clean energy financing market and proposed that NYGB would tackle these barriers and work to fill the financing market gaps by partnering with private sector intermediaries through the use of various forms of financial support such as credit enhancement, warehousing, and securitization, thereby enabling a much larger supply of private capital to finance clean energy projects. The primary advantage of NYGB was presented as its ability to achieve greater leverage of ratepayer funds than the one-time-use subsidy/grant model by redeploying investments in new clean energy projects as initial financing vehicles mature and return capital to NYGB, becoming a self-sustaining financial institution.

On December 19, 2013, the New York Public Service Commission (“PSC” or “Commission”) issued its Order Establishing New York Green Bank and Providing Initial Capitalization (“Initial Capitalization Order”) reallocating \$165.6 million (“M”) in uncommitted NYSERDA Energy Efficiency Portfolio Standard (“EEPS”) I

¹ NYSERDA, NY Green Bank 2022 – 2023 Impact Report, September 2023, available at <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={102F908A-0000-C033-842D-9C8E40C2E2FD}>.

² Ibid.

³ For additional information regarding NYGB’s structure, operations, and core processes, see the NYGB Operational Supplement to Annual Plan and Impact Report, May 2, 2022, available at <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={678E584F-43D6-4D14-88FC-4F81F19C3199}>.

⁴ Booz & Co., “New York State Green Bank Business Development Plan,” September 3, 2013: <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={52B09652-1BA1-4B85-845C-B6F05185E692}>

and System Benefits Charge (“SBC”) III funds, uncommitted utility EEPS funds, and NYSERDA Renewable Portfolio Standard (“RPS”) funds to establish and fund the operations of a new clean energy financing entity.⁵ Additionally, NYSERDA allocated \$52.9M of Regional Greenhouse Gas Initiative (“RGGI”) auction proceeds for a total initial capitalization of \$218.5M.⁶

The Initial Capitalization Order directed NYSERDA to develop and file: an organization plan; operational processes and procedures; a business plan; a metrics, reporting and evaluation plan; and investment criteria by which it would evaluate all its potential financial transactions. The Initial Capitalization Order indicated minimum investment criteria by which all NYGB potential transactions must be evaluated, which include the following:

- (i) Transactions will have expected financial returns such that the revenues of the NYGB on a portfolio basis will be in excess of expected portfolio losses;
- (ii) Transactions will be expected to contribute to financial market transformation in terms of scale, improved private sector participation, level of awareness and confidence in clean energy investments, and/or other aspects of market transformation; and
- (iii) Transactions will have the potential for energy savings and/or clean energy generation that will contribute to greenhouse gas (“GHG”) reductions in support of the State’s clean energy policies.

The Commission issued its Order Approving Additional Capitalization with Modification for New York Green Bank on July 17, 2015, authorizing NYSERDA to reallocate additional uncommitted NYSERDA funds totaling \$150.0M from EEPS I, SBC III and IV, and RPS funds to support investments of the NYGB.⁷ Subsequently, on January 21, 2016, the Commission authorized an additional \$631.5M to the NYGB in the Order Authorizing the Clean Energy Fund Framework (the “CEF Authorization Order”) to fully capitalize NYGB to the \$1.0 B level and authorization to establish a NYGB Credit Facility to support its full capitalization.^{8,9} With that Order, the Commission also established NYGB as one of the four portfolios contributing to the CEF’s 10-year goals.

On December 29, 2020, NYSERDA submitted to the Commission its Petition Regarding Clean Energy Fund Triennial Review (“CEF Triennial Review filing”), in which NYGB committed to invest at least 35% of its capital after 2019 in projects that benefit disadvantaged communities (also referred to as “DAC”), to result in approximately \$400.0M from 2020-2025. As key components of meeting this objective, NYGB set goals to invest \$150.0M in affordable housing transactions and \$100.0M in EE and building electrification (“BE”) projects in disadvantaged communities. NYGB also committed to innovate and develop new solutions that address financing gaps and barriers that constrain EE, clean energy and sustainable infrastructure deployment in this segment. While also financing projects directly, NYGB sought to continue to work to provide financing to projects benefiting disadvantaged communities through Community Development Financing Institutions

⁵ Case 13-M-0412, “Order Establishing New York Green Bank and Providing Initial Capitalization,” issued December 19, 2013.

⁶ In Fiscal Year 2018 – 19, NYGB fulfilled a \$52.9 million capital redemption of initial capitalization funded from RGGI revenues that were repurposed by NYSERDA to support NYSERDA’s statewide energy storage initiative.
<https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={F43DD1E1-FD9F-4E4E-B207-315B01DC5958}>

⁷ Case 13-M-0412, “Order Approving Additional Capitalization with Modification for New York Green Bank,” issued July 17, 2015.

⁸ Case 14-M-0094, “Order Authorizing the Clean Energy Fund Framework,” issued January 21, 2016.

⁹ It should be noted that NYGB did not ever establish this credit facility as it was never deemed necessary due to the availability of existing ratepayer cashflows being sufficient to cover initial investments made by NYGB. NYGB is not asking for reauthorization of this specific type of credit facility in this Petition, as that was directly tied to the potential use of ratepayer collections at the time of its authorization, and instead NYGB will speak to its various available liquidity management strategies, including potential external credit facilities, in the Liquidity Management section of this Petition.

“CDFIs”), housing authorities, specialty finance institutions, non-profits and other aggregators with strong relationships and footprints in the segment.

On September 9, 2021, the Commission issued its Order Approving Clean Energy Fund Modifications (“CEF Modification Order”) which adopted NYSERDA’s proposed investment commitments (for NYGB) of (1) \$150.0M for clean energy improvements in affordable housing properties; (2) \$100.0M for clean transportation businesses to locate or expand in New York; and (3) \$200.0M in energy storage related investments. In addition, the Commission noted it had not specifically identified a minimum rate of return that must be achieved by NYGB in use of the ratepayer funds allocated to it by the Commission, noting NYGB had dutifully maintained a conservative level of risk in its investments to date. The Commission also noted that these investment criteria established in 2013 do not limit the NYGB’s ability to broaden its approach and proactively seek new market partners to further develop transformative financing opportunities, specifically in pursuit of its goal of investing at least 35% of its investments to benefit disadvantaged communities, such as by offering lower interest rates than it seeks from other sectors. The Order also authorized NYSERDA to use additional uncommitted funds of up to \$118.3M or to reallocate funding from NYGB to NY-Sun in the event uncommitted funds were not sufficient to satisfy the remaining NY-Sun funding authorization.¹⁰

On September 15, 2022, the Commission issued its Order Initiating the New Efficiency: New York Interim Review and Clean Energy Fund Review (“Order Initiating Review”), which initiated the review of the CEF to assess its performance and alignment with the Climate Leadership and Community Protection Act¹¹ (“CLPCA” or “Climate Act”), and consider post-2025 activities and funding.¹² The Order Initiating Review required NYSERDA to submit a portfolio review and petition regarding NYGB by July 1, 2024, containing: a quantitative and qualitative performance summary for the portfolio and its impact on the markets it has engaged in; data trends, lessons learned, evaluation findings; and modifications needed to align with the Climate Act, or improve effectiveness of the NYGB portfolio, as a component of CEF. On May 13, 2024, NYSERDA filed a request for extension of the Petition due date to August 30, 2024.¹³ The request was granted on June 12, 2024.¹⁴ NYSERDA submitted an additional request for extension on August 9, 2024, citing the need for additional time to determine appropriate target commitments to propose for the 2026-2030 timeframe in alignment with expanded metrics and future directions for NYGB.¹⁵ The request until October 31, 2024 was granted on August 20, 2024.¹⁶

¹⁰ Ultimately, NYSERDA did not need to take advantage of this reallocation authorization. On January 5, 2024, NYSERDA filed with the Commission in Case 21-E-0629: In the Matter of the Advancement of Distributed Solar a consolidated report detailing the impacts of the Inflation Reduction Act and the incremental distributed solar capacity that could be procured within the currently authorized NY-Sun Budget. Within that report, NYSERDA indicated that estimated surplus from the “Incremental 4 GW” authorized in the 10GW Order may now be available to address the shortfall and recommended that drawing upon the NYGB funds be avoided as it would allow continued availability of funding for NYGB activities, including those that are directly complementary to the development of community solar projects serving disadvantaged communities.

¹¹ “Climate Leadership and Community Protection Act,” Chapter 106 of the Laws of 2019, signed into law on July 18, 2019, and effective on January 1, 2020.

¹²Cases 14-M-0094 and 18-M-0084, “Order Initiating the New Efficiency: New York Interim Review and Clean Energy Fund Review,” issued September 15, 2022.

¹³ NYSERDA Request for Extension of Time, available at: <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={6003D08F-0000-CD14-A3F3-6F586E74DE2D}>.

¹⁴ Ruling on Extension Request, available at: <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={E02E0E90-0000-CB34-9D29-7869CCFD7DCD}>.

¹⁵ NYSERDA Request for Extension of Time, available at: <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={F0323891-0000-CB3A-BADA-C37C74C19B47}>.

¹⁶ Ruling on Extension Request, available at: <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={00857091-0000-CB1C-87F3-5CDE595FD542}>.

3. Summary of Petition Requests and Proposals

In response to the directives set forth in the Order Initiating Review, NYSERDA presents this Petition for consideration, with the following reaffirmation requests and proposed modifications which NYSERDA deems necessary to ensure NYGB can continue advancing the State's energy and climate goals while achieving its mission.

- Proposed Modifications:

- NYGB will increase its target of investing in projects that **benefit disadvantaged communities** from 35% to **40% of NYGB capital**, to be achieved by fiscal year end 2031 and maintained thereafter.¹⁷ This 40% minimum DAC target would be on a portfolio-wide, cumulative basis for all investments since January 1, 2020, and investment benefits accounting would be in alignment with the NYS Climate Act Disadvantaged Communities Investment Benefits and Reporting Guidance and DPS' CE-12 CLCPA-Disadvantaged Communities Investment and Benefits Reporting Guidance.^{18,19} NYGB's reporting will transparently reflect progress towards this updated financial commitment going forward.
- In addition to the updated minimum DAC target, NYGB will plan for at least the following **sector-specific investment commitment targets**, from January 1, 2026 to fiscal year end 2031:
 - \$250.0M committed, or a minimum of 25 transactions closed, for building decarbonization investments
 - 40% of this target (\$100.0M or a minimum of 10 transactions) would be dedicated to supporting building decarbonization measures in affordable housing
 - \$150.0M committed, or a minimum of 10 transactions closed, for clean transportation investments
 - \$250.0M committed, or a minimum of 10 transactions closed, for energy storage investments
 - \$350.0M committed, or a minimum of 20 transactions closed, for clean energy generation investments
- NYGB will **fund future evaluation, measurement, and verification ("EM&V") work from the proceeds of NYGB's earned income**. Within the Initial Capitalization Order, the Commission allocated \$4M of ratepayer capital for EM&V activities associated with the portfolio. NYGB will maintain and evolve its commitment to rigorous EM&V in accordance with previous Commission Order requirements and proposes to use earned income to fund this activity beyond the initial \$4M ratepayer funding allocation.

- Reaffirmation Requests:

- **Maintain the selection process and role of NYGB's Advisory Committee** as described in NYGB's Organizational Plan that was filed on February 18, 2014 in response to the PSC's directive in the Initial Capitalization Order.
- Authorize the **continued use of previously allocated ratepayer collections** to NYGB for the 2026-2030 period.
- **Maintain funding for the Administration and Cost Recovery Fee** and authorize use of NYGB revenue for these purposes.

¹⁷ NYGB's fiscal year is from April 1 to March 31, so "fiscal year end 2031" would be March 31, 2031.

¹⁸ Disadvantaged Communities Investment and Benefits Reporting Guidance, available at: <https://climate.ny.gov/Resources/Disadvantaged-Communities-Criteria/Investments-and-Benefits-Reporting-Guidance>

¹⁹ CE-12 CLCPA-Disadvantaged Communities Investment and Benefits Reporting Guidance, available at: <https://dps.ny.gov/ce-12-clcpa-disadvantaged-communities-investment-and-benefits-reporting-guidance>

- **Maintain NYGB’s three minimum investment criteria by which it will evaluate all potential financial transactions:**
 - (i) Transactions will have expected financial returns such that the revenues of NYGB on a portfolio basis will be in excess of operating expenses and expected portfolio losses;²⁰
 - (ii) Transactions will be expected to contribute to financial market transformation in terms of scale, improved private sector participation, level of awareness and confidence in clean energy investments, and/or other aspects of market transformation; and
 - (iii) 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 clean energy policies and laws.²¹
- **Maintain current reporting structure and cadence:**
 - **The Metrics, Reporting, and Evaluation Plan** will continue to be updated as needed, in collaboration with Department of Public Service (“DPS”) Staff and other NYSERDA programs, and be kept available on NYGB’s website.
 - **Quarterly Metrics Reports** will continue to be filed within 60 days after the end of each quarter.
 - **The Annual Plan** will continue to be filed by July 1 of the Plan Year.²² The Annual Plan will describe, in a reasonable level of detail, the activities that NYGB intends to undertake over the planning period and will summarize actions taken by NYGB in the prior Plan Year.
 - **Annual Audited Financial Statements and Annual Financial Metrics Reports** for the previous Plan Year will continue to be filed by July 1.
 - **An Organizational Plan** will continue to be publicly posted.
 - **Commission Briefings** on the status of NYGB will be held annually.

4. Policy Context

NYGB plays a critical role in supporting the State’s climate and energy policies, which call for a transition to a clean energy economy and represent an unprecedented opportunity to support modernizing buildings, infrastructure and transportation statewide to create more sustainable, comfortable, healthy, and affordable spaces where New Yorkers live, work and play.

NYGB contributes to the primary CEF objectives with a direct focus on mobilization of clean energy investment.²³ In turn, the CEF objectives support the State’s clean energy targets that were codified in the Climate Act.²⁴ The Climate Act mandates a significant increase in the State’s Clean Energy Standard (“CES”) with a goal of 70% energy generation from renewable sources by 2030 and 100% carbon-free electricity by 2040.²⁵ It requires the State to reduce economy-wide GHG emissions 40% by 2030 and no less than 85% by

²⁰ Please the note inclusion of the words “...operating expenses and...” to clarify that NYGB has historically taken (and will continue take) into consideration the need for NYGB to cover its *operating expenses* as well as its expected portfolio losses in order to maintain self-sufficiency.

²¹ For the avoidance of doubt, please note the inclusion of the words “...and laws.” to reflect that NYGB operates and will continue to operate in a manner compliant with State policies *and law*.

²² NYGB’s Plan Year is the same as its Fiscal Year, meaning it starts on April 1 and ends March 31 for any given Plan Year period.

²³ As set out in Appendix C: Goals & Metrics Framework of the CEF Modification Order.

²⁴ “Climate Leadership and Community Protection Act,” Chapter 106 of the Laws of 2019, signed into law on July 18, 2019, and effective on January 1, 2020.

²⁵ Announced in the 2019 State of the State. See www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/2019StateoftheStateBook.pdf.

2050 from 1990 levels. The Climate Act also requires that at least 35% (with a goal of 40%) of the benefits of clean energy and EE investments are directed to disadvantaged communities.²⁶

As recognized by the Commission, “the scale of the (energy efficiency and building electrification) efforts required to comply with the CLCPA objectives cannot be funded through ratepayer collections alone.”²⁷ In fact, the New York State Climate Action Council Scoping Plan estimated the cost of achieving the Climate Act at \$300.0B in incremental investment from 2020 to 2050. NYGB can play an important role in helping to pull increased private investment in these areas so less funding is needed from ratepayers and other publicly supported sources.

5. Market Context

Today, a significant amount of private capital remains on the sidelines, as lenders and investors are increasingly recognizing the opportunities to be realized in sustainable infrastructure but unable to participate fully, as these markets are less understood, and comparatively less developed than other opportunities. NYGB plays an essential role in unlocking private sector investment to enable adequate liquidity to support the transition to a just, sustainable energy system and infrastructure across the State. Many NYSEERDA programs primarily focus on overcoming the non-monetary barriers that impede the State’s progress in decarbonizing its economy. These efforts focus on consumer awareness and education, availability of high quality, high-performance products and services, demonstrating that hard-to-decarbonize sub-sectors have a viable path forward, and that qualified workforces are available for implementation. These programs are designed to help transform the market, accelerate investment, and bring down the cost of decarbonization, thereby reducing the need for long term direct subsidies to spur action.

Through NYGB, NYSEERDA engages with the financial sector to complement NYSEERDA’s overarching mission and goals and increasingly leverage complementary initiatives to achieve outcomes greater than if working independently. NYGB invests in climate change-mitigating technologies where there are limited precedents, preferences for smaller loan amounts, less familiar asset structures and/or deal structuring complexities that require specialized skillsets. NYGB’s investment portfolio includes a range of technology sectors, including solar and wind, with recent years seeing a prioritization of investments in clean transportation, energy storage, and building decarbonization technologies. In alignment with best practices and traditional private sector approaches, NYGB applies project and structured finance transaction approaches that isolate project assets, allocate and protect against downside risks to the greatest possible extent and monetize low-volatility project-generated cash flows to generate appropriate risk-adjusted returns. NYGB also uses other financing approaches as appropriate to meet the needs of various market segments.

With regards to technology-specific financing gaps, there are various barriers in the market that NYGB aims to alleviate with its financing. Refer to the sector-specific investment performance sections below for an overview of the market context across solar, wind, energy storage, building decarbonization, clean transportation, low-carbon fuels, and climate equity.

²⁶ Per the Climate Act, “disadvantaged communities” means communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high-concentrations of low- and moderate- income households. The Climate Act charged the CJWG with the development of criteria to identify DACs. The final DAC criteria was adopted in March 2023 and considers 45 indicators that represent the environmental burdens or climate change risks within a community, or population characteristics and health vulnerabilities that can contribute to more severe adverse effects of climate change. For the purposes of the accounting for clean energy and energy efficiency investments, households with annual income at or below 60% of State Medium Income (i.e., “low-income”) are included in the criteria.

²⁷ Cases 12-M-0094 and 18-M-0084, “Order Directing Energy Efficiency and Building Electrification Proposals,” issued July 20, 2023, page 87.

6. Coordination and Collaboration

The Commission has emphasized the importance of coordination amongst program administrators to ‘make the whole work’ as a systematic approach to achieving the State’s EE and BE goals, and NYSERDA sees NYGB as yet another complementary effort that is contributing to bettering the whole.²⁸ Aligning NYSERDA and utility program offerings as complementary efforts can leverage the strengths of each entity involved to make efficient use of ratepayer funds and minimize consumer confusion in the marketplace.

NYSERDA seeks administrative alignments among the programs it administers to ensure that its EE and BE program participants have the opportunity to seamlessly benefit from related clean energy or building decarbonization programs supported by NYGB. For example, as described in NYSERDA’s Non-Low- to Moderate-Income Energy Efficiency/Building Electrification Portfolio Proposal, as part of NYSERDA’s work with local governments to fill knowledge gaps and build capacity for municipalities to implement their own policies, zoning and laws that drive BE and decarbonization, it will provide subject matter experts that can assist in such things as maximizing federal tax credits and federal funding to standardize EE and BE in their existing municipal finance models.²⁹ These activities will also be coordinated with NYGB to replicate financing models that incorporate BE and decarbonization into community block/economic development funding and federal grants, leverage new tax credits, and aggregate projects to facilitate economies of scale.

NYGB is in frequent communication with fellow NYSERDA programs and teams to strengthen alignment and complement each other’s efforts. One recent example is working with NYSERDA’s Financing Solutions team to explore the development of a financial instrument, such as a residual value reserve, that could potentially support NYGB investments intended to advance the deployment of zero-emission school buses across NYS. Additionally, NYGB coordinates with the Financing Solutions team regarding potential transactions for which NYGB could serve as a State Energy Financing Institution (“SEFI”) to help expand a project’s eligibility for a potential loan guarantee from the U.S. Department of Energy’s Loan Programs Office (“LPO”). Lastly, NYGB and the Financing Solutions team are in constant coordination as it relates to managing NYGB’s liquidity, the strategies for which are highlighted in greater detail in the Liquidity Management section of this Petition. Beyond these collaborations with the Financing Solutions team, NYGB maintains similar coordinated efforts through regular engagement with other teams or programs at NYSERDA focusing on topics such as energy storage, clean transportation, new construction, community thermal energy networks, advanced energy efficiency, large-scale renewables, economic development, innovation, climate equity, and others.

NYGB also collaborates with the private sector as a primary way in which to overcome clean energy investment barriers. There may be additional opportunities for deeper collaboration with the utilities to further leverage the existing collaboration between NYSERDA and the utility program administrators on marketing efforts and the utilities’ ability for direct outreach to their customer base. Ultimately, this coordination and collaboration is essential to increase the impact of ratepayer funds, reduce the administrative burden associated with programs, and improve the customer experience overall.

Several examples of transactions highlight how NYGB collaborates with its clients and counterparties:

- **NYCEEC + Ecosave Inc. (“Ecosave”)** – New York City Energy Efficiency Corp. (“NYCEEC”), a non-profit local green bank, had been working with Ecosave, a leading energy services company, to take on debt to support Ecosave’s expanding list of decarbonization projects for medium-sized, unrated commercial and institutional customers (building owners). As NYCEEC began to reach its lending

²⁸ Cases 14-M-0094 and 18-M-0084, “Order Directing Energy Efficiency and Building Electrification Proposals,” issued July 20, 2023, page 70.

²⁹ See page 50 of NYSERDA’s Non-Low- to Moderate-Income Energy Efficiency/Building Electrification Portfolio Proposal, available at <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={306C8C8B-0000-C218-9F5D-F254A9D1158D}>.

capacity in 2018, NYCEEC and Ecosave turned to NYGB. NYGB provided loans to Ecosave, totaling \$30.0M, to enable Ecosave to grow its pipeline of clean energy projects and help them attract \$53.0M of private sector capital in 2023, further supporting Ecosave's ability to deliver building decarbonization projects.³⁰

- **NineDot Energy, LLC (“NineDot”)** – In 2023, NYGB provided NineDot with a \$25.0M revolving credit facility to finance interconnection deposits for the development of a portfolio of distributed energy storage projects in NYS. This facility was designed to fill this gap in the market by providing much-needed capital for the interconnection process for standalone energy storage assets, which was turn is expected to catalyze investment from other lenders in the market. This transaction will also contribute to the State's goal to deploy 6 Gigawatts (“GW”) of energy storage by 2030. One year later, in 2024, NineDot had experienced considerable growth and secured another \$25.0M revolving debt facility from NYGB, which brought NineDot's total funds secured by other investors to \$400.0M. That total funding amount included a \$1.2M grant from NYSEERDA for a project under its Retail Energy Storage Incentive program, established to incentivize investment in battery storage projects of up to 5 Megawatt (“MW”) that benefit the New York grid.
- **Nexamp, Inc. (“Nexamp”)** – When New York State established its community solar policy in 2015, the market was faced with an unfamiliar business model, nuanced policy framework, and complex revenue streams, and investors did not know how to evaluate risk or determine the market value of projects. NYGB's unique policy, regulatory and technical expertise allowed it to play a central role in establishing a knowledge base, best practices, and precedents for financing in the nascent community solar industry. NYGB helped flatten the learning curve for investors, such that in 2021 NYGB committed \$25.0M to a \$420.0M term loan facility with Nexamp, an experienced developer active in the New York market. With seven commercial investors playing leading roles in the transaction, this was a demonstration of increased private sector interest and capital deployment in the clean energy market. The facility supported 140+ MW of community solar and 50+ Megawatt hours (“MWh”) of battery storage capacity in NYS, including a solar-plus-storage project located in a disadvantaged community, and provides incremental leverage to Nexamp.

The examples listed above speak to NYGB's ability to collaborate directly with market participants as well as other public organizations through its investments. To complement NYGB's investment activity, NYGB has also shared insights with other lenders regarding its underwriting practices to further support financial market transformation. An example of this was when NYGB supported Inclusive Prosperity Capital (“IPC”) in executing its first interconnection bridge loan for a community solar project.³¹ Going forward, as outlined in NYGB's 2024-2025 Annual Plan,³² NYGB intends to increase its knowledge sharing activities to help equip other lenders with clean energy financing best practices on a more proactive and structured basis. These knowledge sharing activities, such as underwriting workshops or publications, are and will be informed by market demand gathered through individual conversations with other lenders, participation in roundtable discussions or industry events, and NYGB's own assessment of knowledge gaps in the market based on NYGB's transactional work.

NYGB's approach to serving in a collaborative, rather than competitive, capacity has been a core part of its approach since inception. In the years ahead, NYGB will continue to focus on encouraging other lenders and

³⁰ NYCEEC, “The Catalytic Role of Green Banks to Support the Energy Transition: Collaboration between Ecosave, NYCEEC, and NY Green Bank,” August 6, 2024: <https://nyceec.com/the-catalytic-role-of-green-banks-to-support-the-energy-transition-collaboration-between-ecosave-nyceec-and-ny-green-bank/>

³¹ See IPC's deal spotlight referencing NYGB's support of their transaction here: https://inclusiveprosperitycapital.org/wp-content/uploads/2024/05/DS_Hillside-Solar.pdf

³² See pages 16-17 of NYGB's 2024-2025 Annual Plan for current examples of NYGB's knowledge sharing activities: <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={20426F90-0000-C21E-9759-9164EC09EE9F}>

investors to become more active in New York’s clean energy marketplace, seeking to crowd in – rather than compete with – other capital providers.

II. Investment Portfolio Performance

NYGB’s portfolio has grown and evolved since inception, and throughout this growth NYGB has taken seriously its role as a prudent steward of ratepayer capital. As such, risk evaluation and mitigation has remained the core competency of NYGB. NYGB’s operating model, like any lending institution, assumes a certain risk of loss to support projects that will benefit New Yorkers in aggregate. NYGB’s focus has always been to help scale proven technologies and business models that advance the State’s climate goals, and its products are developed utilizing structured financing products which protect NYS assets by mitigating potential risks. Although NYGB frequently takes positions that reflect a certain level of risk exposure, its cumulative loss rate has historically been low compared to industry standards. NYGB will continue to play appropriately risk-mitigated roles where it believes there is an opportunity not yet fully realized by other private sector lenders and while accounting for some expected losses as its investment activity continues to meet evolving market needs.

Below is a history of NYGB’s portfolio performance over time. The first section details key growth milestones, while the second explores how the portfolio’s composition has adapted to meet the evolving needs of New York State’s clean energy and sustainable infrastructure markets.

1. Portfolio Growth and Key Milestones

When NYGB first “opened for business” in 2014, it anticipated primarily offering four categories of capital solutions: credit enhancements, warehousing/aggregation (short-term facilities), asset lending and investments (long-term facilities) and composite products.

By 2015, NYGB had implemented processes to manage all incoming investment proposals and built a robust pipeline. In 2015, NYGB had \$380.0M in its active pipeline, which it continued to build through 2016 when it reported an active pipeline worth \$496.3M.

During fiscal year (“FY”) 2015-2016, NYGB closed its first round of transactions, constructing its initial portfolio of \$120.5M in total commitments across nine transactions. Each transaction closed during that initial year of investment activity, and since then, has contributed to the CEF’s key benefit targets in energy efficiency, renewable energy, and mobilization of clean energy investment.³³

Table 1 shows the estimated energy & environmental benefits supported by NYGB’s investments which contribute to these CEF targets, as reported for the quarter ended June 30, 2024.

³³ See CEF Performance Reports at <https://www.nyscrda.ny.gov/About/Publications/Program-Planning-Status-Reports/Clean-Energy-Fund-Reports> and NYGB-specific Quarterly Metrics Reports at <https://greenbank.ny.gov/Public-Materials/Public-Filings>.

Table 1: Estimated Energy & Environmental Benefits

| Quarterly Metric | Quarter Ended June 30, 2024 |
|--|---|
| Energy Efficiency (EE) | |
| Direct Impact Benefits ³⁴ | |
| Lifetime | |
| Total Energy Savings (MMBtu equivalent) ³⁵ | Up to 48,708,000 MMBtu |
| Electricity Savings (MWh) | 610,000 - 1,110,000 MWh |
| Natural Gas Fuel Savings (MMBtu) | 42.6 - 65.1 million MMBtu |
| Other Fuel Savings (MMBtu) | 0 MMBtu |
| Annual | |
| Total Energy Savings (MMBtu equivalent) | Up to 1,907,000 MMBtu |
| Electricity Savings (MWh) | 41,000 - 68,000 MWh |
| Natural Gas Fuel Savings (MMBtu) | 2,458,000 - 3,686,000 MMBtu |
| Other Fuel Savings (MMBtu) | 0 MMBtu |
| Indirect Impact Benefits ³⁶ | |
| Lifetime | |
| Total Energy Savings (MMBtu equivalent) | 0 MMBtu |
| Electricity Savings (MWh) | 0 MWh |
| Natural Gas Fuel Savings (MMBtu) | 0 MMBtu |
| Other Fuel Savings (MMBtu) | 0 MMBtu |
| Annual | |
| Total Energy Savings (MMBtu equivalent) | 0 MMBtu |
| Electricity Savings (MWh) | 0 MWh |
| Natural Gas Fuel Savings (MMBtu) | 0 MMBtu |
| Other Fuel Savings (MMBtu) | 0 MMBtu |
| Renewable Energy (RE) | |
| Direct Impact Benefits (Lifetime) ³⁷ | |
| Distributed Solar Capacity (Renewable MW) | 1,405 - 1,797 MW |
| Indirect Impact Benefits (Lifetime) ³⁸ | |
| Distributed Solar Capacity (Renewable MW) | 9 - 26 MW |
| Lifetime Emission Reductions | |
| Direct (metric tons CO_{2e}) | 33.9 – 44.0 million metric tons |
| Indirect (metric tons CO_{2e}) | 2.2 - 4.5 million metric tons |
| Mobilize Clean Energy Investment | |
| Mobilization Ratio | Tracking at least 6.9:1 on average across portfolio |
| Equity for Disadvantaged Communities | |
| Portfolio % DAC | |
| Percentage of Commitments Benefitting Disadvantaged Communities (%) ³⁹ | 34% |

³⁴ For Committed and Deployed Funds.

³⁵ Total Energy Savings measures the combined electricity and fuel savings net of usage; therefore, may not sum to the total of individual electric and fuel savings values. Projects not dedicated to building energy efficiency, including fuel cell projects, are excluded from Total Energy Savings, Electricity Savings, and Natural Gas Fuel Savings.

³⁶ 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.

³⁷ For Committed and Deployed Funds.

³⁸ 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.

³⁹ NYGB's goal is to commit at least 35% of capital to projects benefitting disadvantaged communities from January 1, 2020 to the end of the CEF period.

During FY 2016-2017, NYGB reached an important milestone when it achieved a net income of \$2.7M, resulting in self-sufficiency one full year earlier than expected. By this point, the portfolio's size had also increased – in 2017 alone NYGB committed \$291.6M through 19 investments. The portfolio continued to grow, reaching \$737.6M in overall investments as of March 2019. During this period NYGB also maintained a strong active pipeline of around \$600.2M for the 2018-2019 Plan Year.

Entering into 2020 marked the beginning of the COVID-19 crisis which disrupted supply chains and affected operations and financial conditions across a range of industries, including the clean energy sector. NYGB found its typical counterparties – small to mid-sized project developers in the State – with reduced access to capital and increased liquidity needs during this time. NYGB responded by developing product offerings to support new market needs and opportunities.⁴⁰ NYGB's inherent ability to serve as a market-responsive, flexible and dynamic capital provider allowed it to be particularly responsive to the market on a relatively rapid basis, at a time when other lenders had become more rigid and inflexible in their sustainable infrastructure lending activity. In September 2020, NYGB securitized a group of portfolio loans, monetizing \$314.0M through a transaction with Bank of America. This transaction represented the largest portfolio monetization completed by a green bank in the United States to date, and accelerated NYGB's ability to continue to meet the unprecedented demand for its capital.

During the 2022–2023 Plan Year, NYGB committed \$252.0M to investments within the State's clean energy and sustainable infrastructure markets, exceeding its goal of \$225.0M. During this time NYGB earned more income than in any other fiscal year period since inception and maintained a record volume of deployed funds, with an average balance of \$563.0M. As of the end of FY 2023-2024, NYGB was managing a Portfolio of \$1.01B, which is slightly more than its initial \$1.0B capital allocation and representative of NYGB's overall growth and ability to extend the impact of ratepayer dollars. Due to an increase in the average capital deployed and higher interest rate environment, NYGB earned \$53.0M in net income during that fiscal year, to be utilized for reinvestment into new clean energy and sustainable infrastructure projects in NYS. Many of these milestones are reflected in Figure 1 below, which shows NYGB's cumulative investments and pipeline of proposals & approvals.

⁴⁰ After hearing from NYGB counterparties and other market participants, NYGB took action by:

- Allowing borrowers in good standing that demonstrated hardship related to COVID-19 to defer loan repayments and use the added liquidity for payroll purposes
- Financing interconnection ("IX") deposits to eligible large-scale renewables ("LSR") and community distributed generation ("CDG") developers with corporate guarantees and/or a pledge of assets as collateral
- Restructuring financing to enable borrowers to secure federal or state stimulus funding
- Becoming an approved lender under the U.S. Small Business Administration's Paycheck Protection Program and issuing three loans to small businesses that reduce greenhouse gas emissions in New York State

Figure 1: Cumulative investments, Current Portfolio, and Current Deployed Funds (\$M)

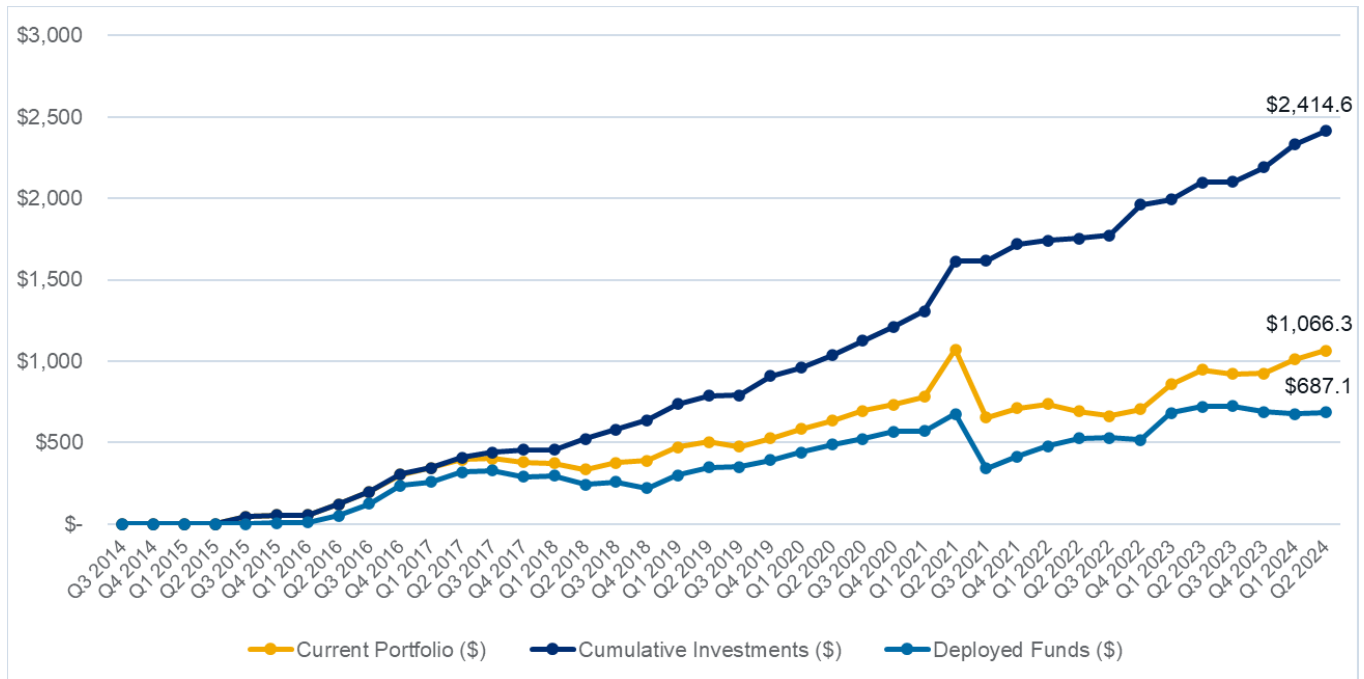
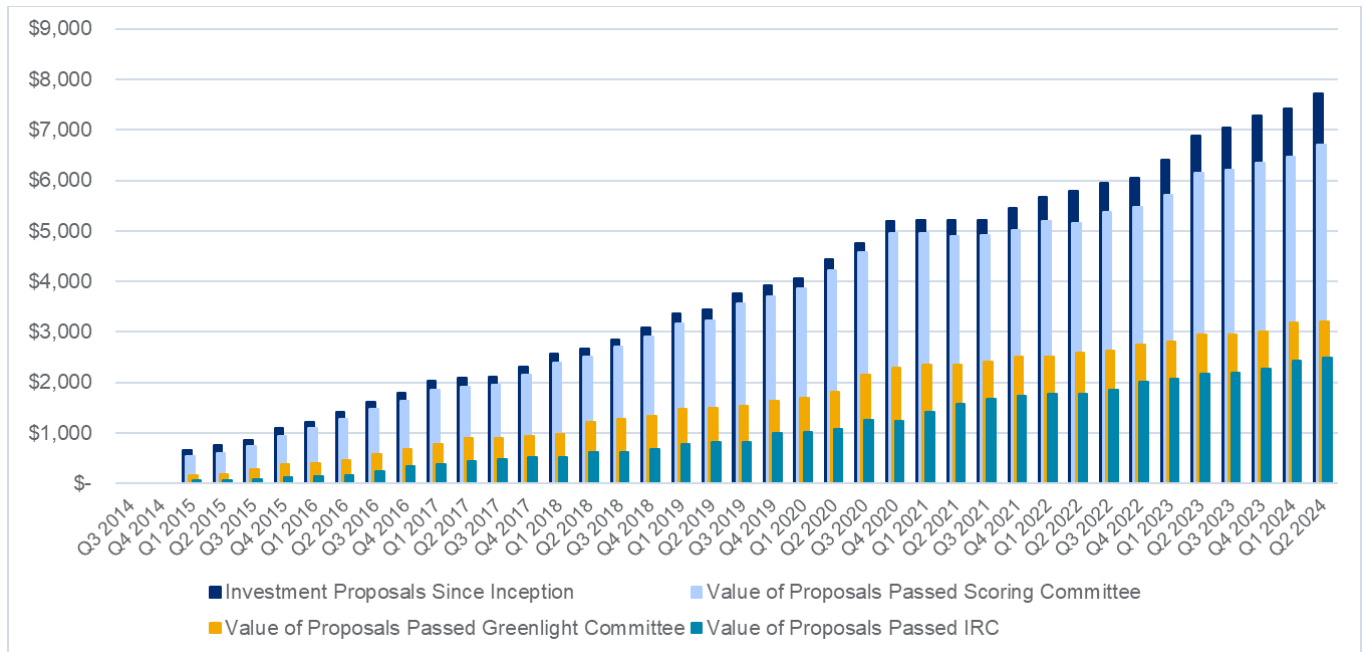


Figure 2. NYGB Pipeline of Proposals & Approvals



Each proposed NYGB investment is categorized by the stage it has reached in NYGB’s internal credit underwriting and transaction execution processes.⁴¹ As shown in Figure 2, as of June 30, 2024, NYGB had received and evaluated \$7.7B in investment proposals, of which \$6.7B were evaluated and passed Scoring Committee Review, \$3.2B were recommended for advancement by Greenlight Committee, and \$2.5B were vetted by NYGB’s Investment & Risk Committee (“IRC”) and approved by NYGB’s President.

a) Portfolio Composition

NYGB’s portfolio composition has changed alongside the evolving needs of New York State’s clean energy and sustainable infrastructure markets. Since inception through June 30, 2024, NYGB has committed over \$2.4B across 145 transactions in 9 technology segments, as shown in Table 2 below. This section aims to provide a high-level overview of how NYGB has added new focus areas to meet the market’s changing needs and how these initiatives have affected NYGB’s portfolio composition.

Table 2: Number and Type of NYGB Investments Since Inception⁴²

| Technology | Count | Percentage (%) |
|--------------------------|-------|----------------|
| Bioenergy | 6 | 5% |
| Clean Transportation | 4 | 3% |
| Building Decarbonization | 39 | 16% |
| Energy Efficiency | 2 | 2% |
| Solar | 68 | 49% |
| Solar; Energy Storage | 5 | 7% |
| Energy Storage | 2 | 2% |
| Wind | 5 | 5% |
| Other** | 14 | 12% |

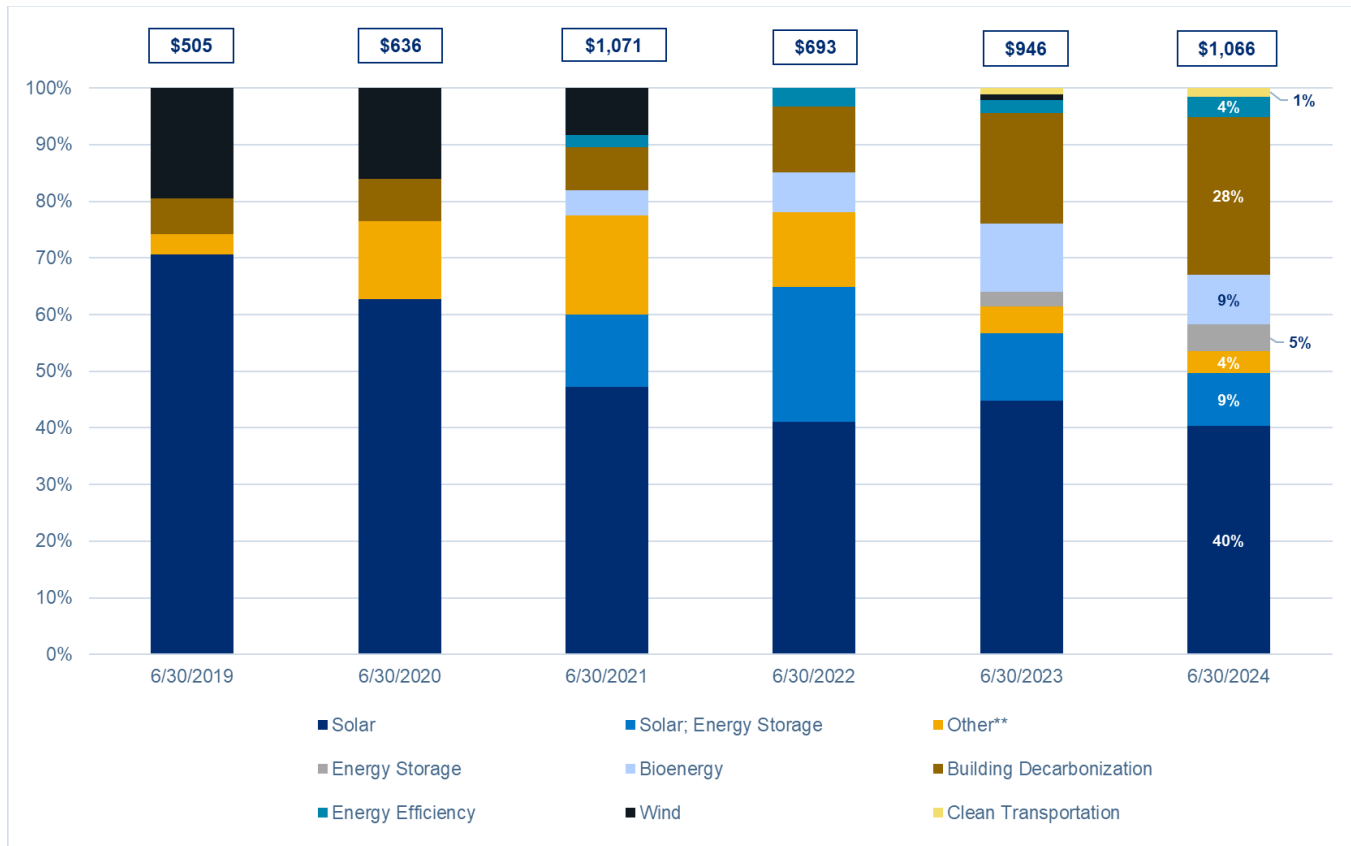
** Other includes Fuel Cells, Sustainable Agriculture.

NYGB has continued to support New York State's evolving clean energy policies by investing across a wide array of technology segments. As of June 30, 2024, NYGB was managing its most diverse portfolio to date, totaling \$1,066.3M. As shown in Figure 3 below, NYGB’s portfolio has become increasingly diverse as it has branched out to support different technology segments to address the evolving needs of the NYS clean energy market. Particularly, there has been an increase in investments in the building decarbonization segment (including affordable housing) alongside other strategic priority segments such as clean transportation and energy storage, as discussed further in the sector-specific investment performance sections below.

⁴¹ See “Section 3” of NYGB’s Operational Summary for a description of the different stages within NYGB’s internal investment processes, such as Scoring Committee, Greenlight Committee and IRC, available at <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={678E584F-43D6-4D14-88FC-4F81F19C3199}>. For a brief overview of the aforementioned processes, when a proposal is passed by Scoring Committee, NYGB conducts preliminary due diligence, credit analysis, and term sheet negotiation. After passing Greenlight Committee review, NYSERDA’s Chief Program Officer, on behalf of the NYSERDA President and CEO, authorizes NYGB to progress the transaction and establishes NYSERDA transaction approval parameters for transaction. NYGB conducts further due diligence, negotiates definitive documentation, and prepares Transaction Approval Memo for presentation to IRC. After IRC review, NYGB approves and closes the transaction. As it pertains to climate equity considerations throughout NYGB’s underwriting and transaction execution processes, NYGB begins assessing a proposal’s potential benefits to disadvantaged communities during the Scoring Committee stage and continues that assessment through each phase of the transaction execution process.

⁴² Due to rounding, the percentage column does not add up to 100%.

Figure 3: Current Portfolio at Year End: Year-over-Year (\$M Committed Funds)



b) Goals and Metrics

As per the Initial Capitalization Order,⁴³ NYGB publicly files an Annual Plan⁴⁴ to inform the Commission and other interested stakeholders of previous year activity and performance and to identify key annual goals and deliverables related to the activities NYGB intends to undertake in the upcoming year. This section describes the general structure of NYGB’s goals and metrics as well as specific examples and milestones related to how they have been met or are still underway.

Since inception, NYGB has been required to achieve certain goals and targets, initially including structural activities related to NYGB organization. Following its full establishment, NYGB has previously committed to both portfolio-wide goals, such as annual capital commitment targets, as well as multi-year sector-specific investment performance targets which are also tracked and reported on regularly. As described earlier, most of NYGB’s multi-year sector-specific investment commitment targets came from the CEF Modification Order,⁴⁵ which established the following targets for NYGB to achieve between January 1, 2020 and December 31, 2025:

⁴³ The directive requiring that NYGB publicly files an Annual Plan was initially established in the Initial Capitalization Order, and the submission date of the annual filing was modified in the Order Approving Clean Energy Fund Modifications to be by no later than July 1st of each year.

⁴⁴ See Annual Business Plans section at <https://greenbank.ny.gov/Resources/Public-Filings> for previous Annual Plan filings.

⁴⁵ As set out in the CEF Modifications Order, Cases 14-M-0094 and 18-M-0084, issued September 9, 2021, page 17.

- Invest at least 35% of its capital after 2019 into projects benefiting disadvantaged communities
- \$150.0M for clean energy improvements in affordable housing properties
- \$100.0M for clean transportation businesses to locate or expand in New York
- \$200.0M for energy storage related investments

NYGB's progress toward each of these targets is captured in detail in the sector-specific investment performance sections below.

The Commission has required a process for defining and developing NYGB's Metrics, Reporting & Evaluation Plan, as well as transaction profiles for each transaction in which NYGB invests. On an ongoing basis, NYGB has updated its Metrics, Reporting and Evaluation Plan as needed to reflect the evolving needs of New York's clean energy marketplace and NYGB's effort to provide a transparent account of how it has, and will, track its progress against its evolving goals and targets. More comprehensive information regarding NYGB's current metrics reporting can be found in NYGB's Metrics, Reporting & Evaluation Plan, Version 3.1.⁴⁶

NYGB has a successful track record of meeting the majority of deliverables it sets out to achieve annually, demonstrating NYGB's ability to successfully evaluate its capabilities in any given year and to execute on key targets and priorities. In instances where it has not achieved its deliverables, they are, generally, accomplished within months following the end of the applicable Plan Year.⁴⁷

A few examples of specific key milestones accomplished since inception are below:

Maintain Self-Sufficiency – In its 2016 Annual Plan, NYGB identified a set of key performance indicators (“KPIs”), that it would directly track and monitor to assess whether it was making progress toward achieving its goals at the anticipated pace and would note any variances (positive or negative).⁴⁸ NYGB's KPIs in 2016 were to tie directly to its metrics and periodic reporting pursuant to the Metrics, Reporting and Evaluation Plan (Version 3.1). One of the key objectives identified for NYGB in the 2016-2017 Plan Year was to drive toward self-sufficiency in 2018 by continuing to grow revenues and manage costs. The summary results presented in the 2017-2018 Annual Plan reflect NYGB's net income of \$2.7M in 2017, resulting in achievement of NYGB's self-sufficiency goal one full year earlier than expected.⁴⁹

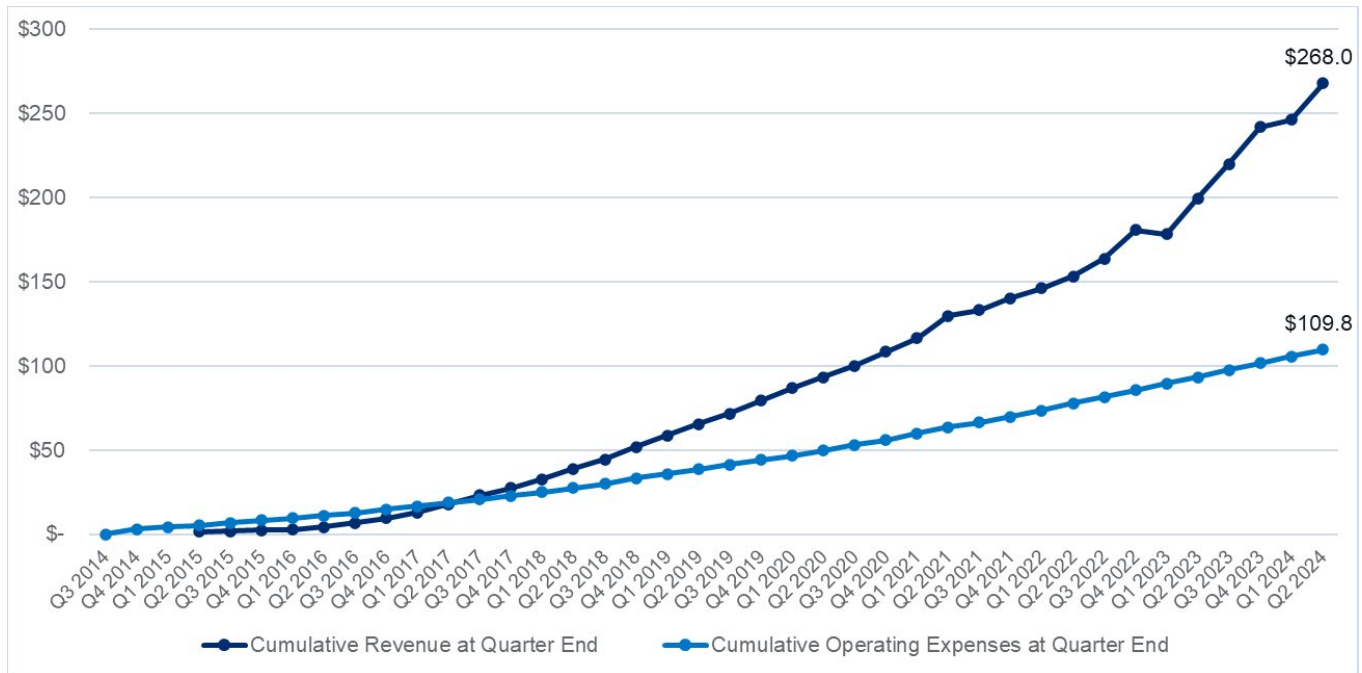
⁴⁶ Case 13-M-0412, “NYGB Metrics, Reporting & Evaluation Plan,” Version 3.1, filed May 2, 2022, <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={EEA4015C-9B6A-4160-9D55-ED49C3EC4ED9}>.

⁴⁷ Summary tables of NYGB's performance of Annual Plan deliverables can be found in the appendix sections of previous Annual Plans, which are available on NYGB's Public Materials webpage: <https://greenbank.ny.gov/Public-Materials/Public-Filings>.

⁴⁸ The 2016 Annual Plan is available at <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={B2B08129-B3DA-48AE-95CA-7C345287238F}>.

⁴⁹ The 2017-2018 Annual Plan is available at <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={43B63687-A216-45B3-8B16-CAD3ABF65BC1}>.

Figure 4: Cumulative Revenues vs. Expenses (\$M)



As shown in Figure 4 above, NYGB reached self-sufficiency in July 2017, with revenues exceeding operating expenses earlier than projected, and since inception has earned \$268.0M which can be used to make additional investments in clean energy markets.

CEF Commitment Goal, Committing \$1.9B – The 2015 CEF Information Supplement references NYGB’s investment goal of approximately \$1.9B over a ten-year period, which represents NYGB not only preserving the funds provided, but also recycling funds to ultimately deliver the benefits to New Yorkers that will come from clean energy investment of a much greater magnitude.⁵⁰ In December 2022, NYGB reached this \$1.9B commitment goal, three years ahead of schedule – see Figure 1 for additional data on NYGB’s cumulative investments over time. This demonstrates the power of NYGB’s ability to recycle its funds. As NYGB loans are repaid and fees are generated, NYGB is able to reinvest those funds into new opportunities. So, rather than being allocated through one-time grants or subsidies, NYGB’s initial funding was invested and paid back in full so it was able to be re-deployed in full, three years ahead of schedule.

Mobilization Ratio – While the Commission did not adopt an independent mobilization ratio target for NYGB in the CEF Framework Order, NYGB initially anticipated an 8:1 mobilization ratio by 2025, as documented in its 2014 Petition to Complete Capitalization.⁵¹ At first, this view was altered in subsequent years as NYGB began to deploy funds and learned from operational realities. In 2021, the CEF Modification Order documented that NYGB was below the pace necessary to achieve this target, citing NYGB’s estimated mobilization ratios between 2.6:1 and 3.3:1 reported since 2016.⁵² Additionally, this Order adopted an updated target for CEF-wide leveraged funds - including those from NYGB - reduced from \$29.4 billion to \$20.0 billion, due to reasons such as declining solar costs and increased understanding of how CEF program elements work together to

⁵⁰ 2015 CEF Supplement, page. 164, available at <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={FC3FBD53-FBAC-41FB-A40E-3DA0A5E0866A}>.

⁵¹ Case 13-M-0412, “Petition to Complete Capitalization,” issued October 30, 2014.

⁵² Cases 14-M-0094 and 18-M-0084, “Order Approving Clean Energy Fund Modifications,” issued September 9, 2021.

support market needs. Since then, NYGB has continued to monitor and report its mobilization ratio while seeking opportunities to use ratepayer funds as efficiently as possible to catalyze clean energy investments. Despite this early change in mobilization expectations, as of June 30, 2024, NYGB reached the anticipated 8:1 ratio, reporting an estimated mobilization ratio in the range of 6.9:1 to 8.8:1⁵³. An element contributing to this mobilization increase is NYGB's increased focus and activity in recent years in predevelopment and interconnection products that fill financing gaps in early stages of building decarbonization and Community Distributed Generation (“CDG”) projects, thus unlocking a higher amount of capital in project stages following NYGB’s financing.

Assessing Financial Market Transformation – NYGB’s investments are intended to demonstrate financial viability to the private sector investment community of funding New York’s diverse and evolving clean energy markets. NYGB’s investments are structured in a manner that can be replicated and adopted by the private sector, thereby supporting financial market transformation in target markets. Historically, and as an ongoing business practice, NYGB self-assesses the efficacy of its financial market transformation impact in three complementary ways. First, NYGB gains direct knowledge from potential borrowers about the funding gaps they are facing through a variety of questions proposed borrowers are required to answer as part of NYGB’s Requests for Proposals (“RFP”). All potential borrowers must submit a proposal to NYGB which is evaluated and scored for eligibility on a weekly basis. The responses from potential borrowers provide NYGB with direct feedback on the evolving nature of previously identified or potentially new and emerging funding gaps in New York’s clean energy markets, including i) whether the gap(s) appear to be narrowing or expanding and why, and ii) what efforts the potential borrower made to address its funding needs with private sector investors and why those efforts have failed. Second, NYGB observes and monitors the volume and frequency of funding requests as an important measure of the evolving nature of funding gaps. For example, declining requests for NYGB to fund a certain clean energy technology, use case or use of proceeds (especially when coupled with indications/public announcements that such activity is being funded by the private sector) can be a clear indication that a funding gap is closing. Lastly, by engaging with the market directly during transactions or through conversations with other lenders, NYGB tracks changes in pricing and other key terms as a way to monitor the evolving nature of funding gaps. For example, indications that the market is clearing at lower costs of capital, is a good indication that a funding gap is closing as more private sector capital competes for the same investment opportunities.

To complement its own internal assessment of financial market transformation, NYGB has reached two significant milestones with the support from NYSERDA in terms of assessing financial market transformation by undergoing two independent evaluations to assess the level of actual market transformation progress. The theory of change is documented to confirm market transformation indicators to be assessed through the evaluation, and data to assess these indicators is gathered through various methods including surveys and semi-structured interviews with clean energy financiers and developers, as well as data on clean energy trends and public reports.

The latest 2019-2022 evaluation conducted by Dunsky Energy + Climate Advisors⁵⁴ and published in October 2023 concluded that New York’s clean energy sector shows continued evidence of increasing maturity and transformation since the first NYGB evaluation conducted in 2019. Additionally, while NYGB is a relatively new entrant to the market, and its pool of capital represents a small fraction of New York’s annual energy spending, there is compelling evidence that NYGB has helped to accelerate and scale clean energy deployment in some

⁵³ Case 13-M-0412, “Metrics, Reporting & Evaluation Quarterly Report No. 40 (Through June 30, 2024),” issued August 29, 2024.

⁵⁴ Dunsky Energy + Climate Advisors, *NYSERDA New York Green Bank Financial Market Transformation Evaluation*, October 2023.

clean energy markets over its first ten years, namely in residential and community solar.^{55,56} Despite its relatively small size in the market, NYGB plays a strategic role in contributing to the advancement of New York's clean energy sector and Figure 5 below shows how NYGB has played a meaningful role in supporting the transformation of several key markets.⁵⁷ As of the time of this Petition filing, NYGB is undergoing its third independent evaluation, which is an update to the 2019-2022 evaluation which looks at transactions closed since April 2022, including those in priority sectors in which NYGB had not had much or any prior investment activity, such as energy storage and clean transportation. This evaluation will also focus further into how NYGB's investment activities have supported disadvantaged communities across the State. Finally, this evaluation will also introduce process evaluation elements that complement its central focus on market transformation findings. This new portion of the evaluation will delve into NYGB's investment approach, transaction processes, and counterparty experience throughout the pipeline and portfolio stages to better connect NYGB's internal processes to its market transformation outcomes, as well as propose potential operational and process-related improvements for NYGB to further accelerate its market transformation effects.

⁵⁵ DNV GL, NY Green Bank Financial Market Transformation Study, March 2019, p. 4-5.

⁵⁶ Dunskey Energy + Climate Advisors, *NYSEERDA New York Green Bank Financial Market Transformation Evaluation*, October 2023, p.48.

⁵⁷ This figure is for the 2019 – 2022 time period. NY Green Bank's influence is often marked as low where new indicator baselines are established, as there is little to no point of comparison; however, future studies may reveal evidence of NY Green Bank's continued impact in these areas.

Figure 5: Summary of NYGB Market Evaluation Findings

Summary of NYGB Market Evaluation Findings

Legend ● Strong ● Moderate ● Low

| Indicator | Description | Timeframe ²⁰ | Market Change | NYGB Influence | Data Robustness |
|-----------|--|-------------------------|---------------------------------|----------------|-----------------|
| 1 | Change in the perceived market opportunity for clean energy investments in New York | Short term | M | L | M |
| 2 | Change in clean energy investment risk-return profiles, as demonstrated through improved financing terms | Medium term | M | M | M |
| 3 | Change in the total volume of clean energy project financing | Medium to long term | S | L | M |
| 4 | Change in the volume of transactions in specific clean energy markets | Medium to long term | SOLAR PV | | |
| | | | S | M | S |
| | | | BUILDING DECARBONIZATION | | |
| | | | M | L | L |
| 4 | | | CLEAN TRANSPORTATION | | |
| | | | L | L | L |
| 5 | Change in the mix of financiers investing in clean energy projects | Medium to long term | L | L | L |
| 6 | Emergence of secondary markets for clean energy assets | Long term | M | M | M |
| 7 | Change in the number of transactions benefitting DACs | Long term | L | L | L |

²⁰ The timeframe describes the length of time expected for material changes to be observed for each indicator. A short timeframe is defined as 1 to 3 years, a medium timeframe is defined as 3 to 5 years, and a long timeframe is defined as 5 or more years.

In summary, NYGB’s investment portfolio has evolved since inception, becoming larger and more diverse in alignment with the shifting market gaps in New York’s clean energy marketplace and as certain market segments have become more seasoned. Key goals and metrics have been achieved – several ahead of schedule – as described above, while others are still being pursued. As NYGB continues to evolve, it will work alongside DPS and in collaboration with other NYSEERDA programs to ensure the portfolio continues to reflect the real needs of the market, and that evaluation processes and metrics tracking are aligned with appropriate goals and targets.

In the sections below, NYGB will provide an overview of specific market segments, as required by the Order Initiating Review. Each section provides market context for that specific segment as well as NYGB interventions to advance those areas of the market, along with an overview of outcomes and progress against metrics.

2. Clean Energy Generation

New York’s renewable energy portfolio is comprised of multiple policies and programs which are dynamic and constantly adjusting to changing market conditions. Advancing diverse resources such as distributed solar,

utility scale solar, onshore and offshore wind, and new grid solutions projects is central to NYSEERDA's overall strategy.

The actions the State has taken since the Climate Act was signed into law demonstrate New York's decisive commitment to maintain and grow the portfolio of projects contributing to the Climate Act goals. One example of this is NYSEERDA's advancement of competitive solicitations to reset both onshore and offshore portfolios which were affected by globally significant and unforeseeable factors such as inflation, interest rates and supply chain constraints.

The State's unwavering commitment is also reflected in its advancement of \$200.0M in offshore wind manufacturing and logistics investments. In addition, and with integration of significant market feedback, NYSEERDA launched the State's first solicitation focused exclusively on offshore wind supply chain development in April 2024 while simultaneously working to accelerate the permitting process for large-scale wind and solar projects through the State's Office of Renewable Energy Siting.⁵⁸ The Renewable Action Through Project Interconnection and Deployment ("RAPID") Act, which was included in the enacted 2024-2025 State Budget, will extend this acceleration to include transmission projects which are critical to scaling up the State's grid at the pace needed to ensure reliability as new renewables are integrated.⁵⁹

New York's focus on advancing clean energy generation has made the State the top community solar market in the nation, with more than 2 GW installed. South Fork Wind, the State's first offshore wind farm, is delivering clean power to New Yorkers today, and more than 1 GW of onshore renewables has been built in the last ten years, with over 2 GW of additional projects under development across New York.

The Empire Wind I and Sunrise Wind offshore wind projects have already completed most federal and state permitting milestones and are expected to ramp up construction activity this year. In addition, the construction of the Champlain Hudson Power Express is well underway and set to deliver clean power directly to New York City ("NYC") next year. Additionally, NYS is investing and actively planning a historic buildout of transmission infrastructure across the State, including \$4.4B in 62 local transmission projects approved last year to support clean energy integration in Upstate areas.

The achievement of the Climate Act targets for a zero-emission electricity sector by 2040, including 70% renewable energy generation by 2030 has, and will continue, to require a significant increase in the State's clean energy generation capacity. NYGB has, and will continue, to play a key role in supporting the advancement of these goals and targets, as described in the Solar and Wind subsections below as well as subsequent sections of this Petition.

NYGB has generally considered wind, solar, and bioenergy under the clean energy generation category. However, for the purposes of this Petition, NYGB will speak to its bioenergy work in the Low-Carbon Fuels and Other section below, and present its solar and wind work here, including an overview of each market and NYGB's offerings, interventions and impact to date in each area. All NYGB investments are made in alignment with the eligible technologies as laid out under the CLCPA.

⁵⁸ Learn more about the 2024 Offshore Wind Supportive Manufacturing and Logistics Request for Proposals here: <https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/Supply-Chain-Economic-Development/500M-Investment>.

⁵⁹ New York State, Chapter 58 of the Laws of 2024, Part O, available at <https://nyassembly.gov/2024budget/bills2024/executive/A8808.pdf>.

a) Solar

(1) Market Context

New York's solar market has expanded significantly over the past decade, growing over 3,000% since 2001, leveraging nearly \$7.3B in private investments and decreasing the cost of solar by 73%. The number of jobs in the solar industry increased from 11,858 in 2017 to a new peak of 14,292 jobs in 2022 – an addition of 2,434 jobs over five years.⁶⁰

Much of this growth can be attributed to multiple NYS efforts, including nearly \$1.2B in financing support for the solar industry from NYGB through June 30, 2024, as well as through NY-Sun – New York's \$3.3B initiative to advance the scale-up of solar while driving costs down and making solar energy more accessible to homes, businesses, and communities.

In April 2022, the PSC approved a new roadmap, submitted by NYSERDA and DPS, for the State to achieve at least 10 GW of distributed solar by 2030, enough to annually power over 1,700,000 average-sized homes. This included the expansion of NY-Sun to make it one of the largest solar programs of its kind in the nation, expected to spur about \$4.4B in private investment, the creation of 6,000 additional solar jobs – including with the State's first application of prevailing wage for solar projects between one and five megawatts and, in alignment with the Climate Act, to deliver at least 35% of the benefits with a goal of 40% from the investments to disadvantaged communities. In 2022, New York was recognized as the top distributed and community solar market in the nation, providing more than half of all community solar deployed in the United States at that time.

NYS has made significant progress in solar deployment, but the financial market still faces challenges that require continued support from NYGB and other State programs. Key challenges include securing construction and long-term financing, the relative nascency of the market, and the perceived risk associated with the low-to-moderate-income ("LMI") subscriber base. While confidence has improved, traditional lenders remain hesitant to commit capital for these reasons.

Securing construction and long-term financing can be difficult and means that project sponsors often need to cover development costs with equity funds while finalizing financing arrangements. This approach results in inefficient use of sponsor equity, limiting project scale and restricting the overall deployment of solar energy in New York. This is particularly challenging for small- to mid-sized solar projects, as these developers are restricted in their access to capital due to their size and comparatively limited track records. Traditional lenders have expressed that undertaking financial diligence and monitoring for a portfolio of small- to mid-sized distributed assets can be less attractive to their credit committees than doing similar work for a transaction of utility scale assets.

The relative nascency of certain aspects of the solar market, particularly community solar and solar-plus-storage business models, makes it difficult for these areas to secure appropriately priced capital. Storage paired with renewable generation lacks sufficient precedents and performance history, making it challenging for private capital providers to assess and price the associated risks. As a result, capital market participants struggle to determine competitive risk-return profiles for these distributed generation projects, reducing the availability of financing needed to meet deployment demands efficiently.

Finally, traditional lenders are often hesitant to finance solar projects with a large LMI subscriber base due to perceived credit risks and concerns about payment consistency and default rates. The lack of long-term performance data for LMI solar projects also complicates risk assessments. Additionally, these projects often

⁶⁰ NYSERDA, "NY Clean Energy Industry Report 2023," <https://www.nyserdera.ny.gov/-/media/Project/Nyserda/Files/Publications/Clean-energy-industry/2023-clean-energy-industry-report.pdf>.

involve complex financial structures, such as subsidies and billing challenges, further deterring traditional capital providers.

(2) NYGB Interventions

Residential solar was an early focus area for NYGB. Financing gaps in the residential solar market were highlighted in 2015, when a national consumer lender and early proposer to NYGB sought to structure financing for residential solar leases and power purchase agreements (“PPAs”) to be offered to a broad range of NYS residents. At the time of the investment submission to NYGB, the proposer found that market financing for the proposed structure was “irrationally scarce” and recognized that NYGB’s unique ability to address this financing gap would both accelerate the deployment of, and expand access to, clean energy in the State.

Since then, NYGB went on to make over \$400.0M of investments to support residential solar; for example, about 75% of NYGB’s transactions closed in 2016 were solar projects that benefited residential end users. Due in part to NYGB support across the residential solar market, this segment has become highly liquid with adequate interest from financiers and more appropriate pricing and terms reflected through lower overall transaction costs.⁶¹ Therefore, NYGB is no longer evaluating financing proposals in support of residential solar projects unless there is a strong climate equity component, which may still present challenges for other lenders. Finally, it should be noted that there are currently multiple opportunities across NYS resources to advance equitable residential solar solutions, including through Solar for All (resulting from the Greenhouse Gas Reduction Fund [“GGRF”], as part of the Inflation Reduction Act [“IRA”]) and the Green Jobs Green NY Program.

As the residential markets had been gaining traction among other financiers, in 2015 the PSC further bolstered the market via the issuance of a CDG order, creating a mechanism by which utility customers could subscribe to solar projects in their area and participate in the benefits of clean energy without the need for onsite solar generation⁶². In March 2017, the Commission introduced the Value of Distributed Energy Resources (“VDER”), a methodology or tariff used to compensate energy created by distributed energy resources (“DERs”) ⁶³. Compensation under the value stack model that comprises the VDER is based on the actual benefit a resource provides to New York’s electric grid and is in the form of bill credits. Most recently, in the Commission’s Order Approving Statewide Solar for All Program with Modifications, it combined the utility-managed Energy Affordability Program (“EAP”) and market-based community solar into a streamlined and cost-effective offering to provide clean energy savings to low-income households.⁶⁴ Mobilizing the private capital needed to support this market required a significant amount of resources and dedicated NYGB focus, as lenders became more comfortable with this novel business model and complex regulatory framework. By completing some of the earliest community solar transactions in NYS, NYGB created precedents and led the way for commercial lenders to follow. Given NYGB’s early mover role, it is likely that it played an important part in accelerating capital flows through helping lower perceived risk and build investor confidence in the community solar market, which has since become the fastest growing segment of the overall solar photovoltaic (PV) market.⁶⁵ From NYGB’s first investment in community solar, providing a product that was virtually unheard of among private lenders, to today when competitively priced private capital is readily available for many of these projects,

⁶¹ DNV GL, 2019 NY Green Bank Financial Market Transformation Evaluation, Mosaic, Inc. Case Study, March 2019, available at <https://greenbank.ny.gov/-/media/Project/Greenbank/Files/2019-03-evaluation-case-studies.pdf>.

⁶² Case 15-E-0082, “Order Establishing a Community Distributed Generation Program and Making Other Findings,” issued July 17, 2015.

⁶³ Case 15-E-0751, “Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters,” issued March 9, 2017.

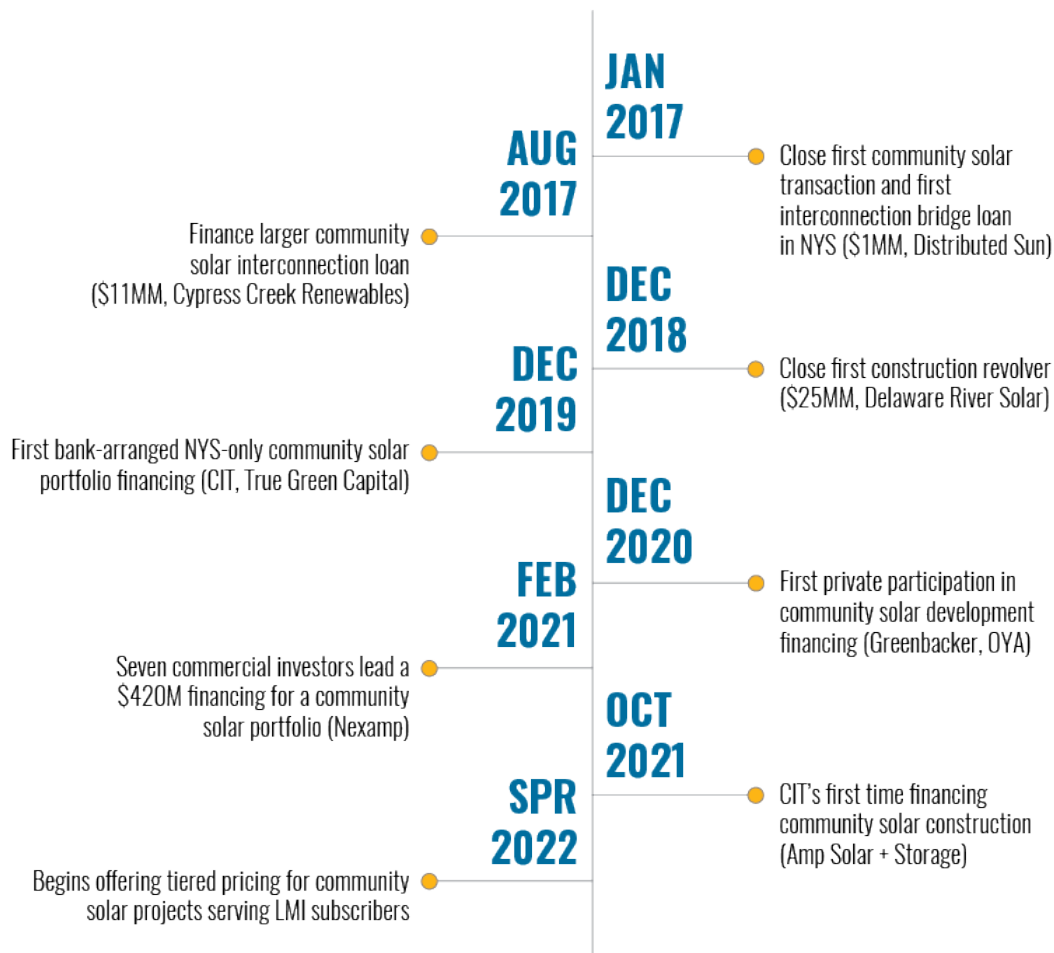
⁶⁴ Case 21-E-0629 et al., In the Matter of Advancement of Distributed Solar, “Order Approving Statewide Solar for All program with Modifications,” issued May 16, 2024.

⁶⁵ Dunskey Energy + Climate Advisors, *NYSEDA New York Green Bank Financial Market Transformation Evaluation*, October 2023.

NYGB has played a pivotal role in scaling New York’s community solar financing market. Since inception, NYGB has financed over \$830.0M of community solar transactions supporting an estimated capacity of over 1 GW total, helping drive down the cost of capital for project developers in this sector. Although NYGB’s catalytic capital advanced the community solar market in NYS, which is now the leading community solar market in the nation, some funding gaps persist in this market. For example, banks have perceived credit risk of LMI subscribers, and the small ticket size of CDG projects (under \$75.0M) can be unfavorable to large financing institutions. Additionally, as the energy storage market in NYS continues to grow, funding gaps with opportunities pairing storage and solar could increase as banks may be unfamiliar with this project type. NYGB aims to close these later-stage financing gaps in the community solar market, as NYGB is comfortable and committed to underwriting transactions serving LMI subscribers, specializes in smaller deal sizes, and has experience financing transactions that combine solar and storage.

See below for a timeline reflecting NYGB’s role and key interventions into this market:

Figure 6: NYGB’s Role in NYS CDG Market, 2017 - 2022



In 2018, NYGB added energy storage and, importantly, solar-plus-storage, as additional focus areas. For the purposes of this Petition, NYGB has included both energy storage and solar-plus-storage content in the Clean Energy Storage section of this Petition.

(3) Outcomes and Metrics

| Solar | Lifetime Low Estimate | Lifetime High Estimate | Annual Low Estimate | Annual High Estimate |
|---|-----------------------|------------------------|---------------------|----------------------|
| GHG Emission Reductions (metric tons) | 14,615,845 | 20,713,091 | 601,690 | 852,945 |
| Distributed Solar Capacity (Renewable MW) | 1,035 | 1,441 | N/A | N/A |

A full Transaction Profile covering each transaction NYGB has closed in support of solar generation can be found on the Portfolio page of its website,⁶⁶ as well as in its Quarterly Metrics Reports, Annual Plans and Impact Reports,⁶⁷ all linked on its Public Materials page.⁶⁸

Additional information on the current issues persistent in the clean energy market today, along with potential NYGB solutions, can be found in the Petition Preparation & Stakeholder Engagement section of this Petition below.

b) Wind

(1) Market Context

As part of the Climate Act goals and targets, NYS’s investments support the path towards procuring 9 GW of offshore wind by 2035. Both onshore and offshore wind markets have evolved significantly over the past decade, while facing unique challenges and tailwinds. In June 2024, NYSEERDA finalized contracts for Equinor’s Empire Wind 1 and Orsted’s Eversource’s Sunrise Wind offshore projects.

New York State’s wind market faces notable financial challenges, particularly when it comes to refinancing assets exposed to merchant revenue risk. Historically, most wind financings have been supported by long-term PPAs or hedges with creditworthy off-takers, typically extending over 10 years, alongside fixed-price NYSEERDA renewable energy certificate contracts with 20-year terms. However, such long-term contracts are scarce. Capital market participants remain hesitant to underwrite merchant revenue from renewable energy assets, resulting in difficulties securing financing. With many wind projects in New York expected to rely on a combination of merchant and renewable energy certificate revenue streams, securing appropriate financing remains a challenge. Additionally, offshore wind developers face higher costs driven by inflation and supply chain disruptions, further complicating the financial landscape of the State’s wind market.

(2) NYGB Interventions

Since inception, NYGB has sought opportunities to support New York’s wind market, including land-based components of offshore wind (including port infrastructure and supply chain components), as well as transmission. While NYGB has advanced some investment activity in support of wind, NYGB has not seen comparatively significant demand for this generation type as New York’s wind market is less robust than other geographic areas.

NYGB’s earliest investment in wind was made in support of a small onshore wind developer seeking to install over 160 distributed wind energy systems for residential, agricultural and commercial customers throughout

⁶⁶ NYGB’s Portfolio is available at <https://greenbank.ny.gov/Our-Impact/Portfolio>.

⁶⁷ NYGB’s Impact Report is an annual publication that highlights NYGB’s achievements and impact for a given fiscal year. It is not a required regulatory filing. You can find NYGB’s most recent Impact Report for FY 2023-2024 here: <https://greenbank.ny.gov/Our-Impact/Impact-Report-2024>

⁶⁸ NYGB’s Public Materials Page is available at <https://greenbank.ny.gov/Public-Materials/Public-Filings>.

Central and Western New York. In 2017 NYGB provided a \$4.0M revolving and construction loan from which was expected to help the company advance projects while building a track record for DER construction financings in the State.

In March 2019, NYGB supported another wind transaction, Valcour Wind Energy, through the commitment of \$68.8M to finance the acquisition of a 612 MW portfolio of operating large-scale wind projects in NYS in support of private sector funds managed by The Carlyle Group. In April 2020, NYGB increased its commitment by \$7.3M in response to favorable market conditions and the transaction’s improved credit profile. At the time, these assets accounted for approximately 30% of wind generation in NYS. As a Joint Lead Arranger in this transaction alongside other commercial banks, NYGB’s participation supported the long-term financing of large-scale renewable (“LSR”) projects in NYS with merchant exposure. The recapitalization and proposed operational improvements were expected to extend the useful life of the projects, resulting in additional GHG reductions in NYS and the retention of over 40 clean energy jobs in the North Country and Western New York.

Another investment NYGB made in support of the State’s wind market, Rock Wind, was also made in 2019 with \$31.3M committed to the recapitalization of a portfolio of wind farms, including a 55 MW project in NYS. NYGB’s participation in this transaction, alongside other commercial banks, supported the long-term financing of a LSR project in NYS with merchant exposure, as well as support for the secondary market for assets of that type.

Finally, NYGB has sought to play a role supporting sustainable port infrastructure to advance New York’s offshore wind market. NYS wind solicitations include a multi-port strategy and a requirement for offshore wind generators to partner with any of the prequalified New York ports to stage, construct, manufacture key components, or coordinate operations and maintenance activities. NYGB seeks to play a role in financing any component of that work, although has yet to make any specific investments in that market area to date and the timeline for doing so will likely depend on the financing needs of relevant parties responsible for developing and operating such ports.

(3) Outcomes and Metrics

| Wind | Lifetime Low Estimate | Lifetime High Estimate | Annual Low Estimate | Annual High Estimate |
|--|-----------------------|------------------------|---------------------|----------------------|
| GHG Emission Reductions (metric tons) | 460,817 | 4,568,950 | 89,983 | 257,834 |

A full Transaction Profile covering each transaction NYGB has closed in support of wind generation can be found on the Portfolio page of its website,⁶⁹ as well as in its Quarterly Metrics Reports, Annual Plans and Impact Reports, all linked on its Public Materials page.⁷⁰

Additional information on the current issues persistent in the clean energy market today, along with potential NYGB solutions, can be found in the Petition Preparation & Stakeholder Engagement section of this Petition below.

⁶⁹ NYGB’s Portfolio is available at <https://greenbank.ny.gov/Our-Impact/Portfolio>.

⁷⁰ NYGB’s Public Materials Page is available at <https://greenbank.ny.gov/Public-Materials/Public-Filings>.

3. Clean Energy Storage

Advancing the energy storage market is a key priority for the State, which has a goal of deploying 6,000 MW of energy storage by 2030. The integration of energy storage facilities into New York's energy infrastructure will play a key role in the State's efforts to transition to renewable energy, manage peak loads, reduce the emissions that contribute to climate change and help make progress towards the State's climate goals. The Commission's Grid of the Future proceeding may identify additional needs or opportunities related to energy storage over the next several years.⁷¹

a) Market Context

Since NYGB was established in 2013, lithium-ion battery prices have dropped significantly, research and development of alternative energy storage technologies advanced, and NYS set the most ambitious goals for energy storage deployment in the nation. New York's energy storage market has been evolving since NYGB was first established and is becoming a more attractive market with each passing year, although both the market and storage technologies have experienced headwinds and tailwinds as they have evolved. While advances have been made in terms of storage deployment across the State, fires occurring in 2023 at storage sites in several counties within NYS resulted in an essential pause on project deployment while an Inter-Agency Fire Safety Working Group was established to ensure the safety and security of systems across the State.⁷² By February 2024, initial recommendations had been developed and announced from this working group outlining enhanced safety standards for battery storage systems.⁷³

More recently, NYS Governor Hochul announced on June 20, 2024 that the PSC had approved NYSERDA's six-gigawatts energy storage roadmap, including programs that are expected to unlock the rapid growth of renewables and bolster grid reliability and customer resilience.⁷⁴ These storage deployments are expected to reduce projected future statewide electric system costs by nearly \$2.0B. NYSERDA's bulk and retail storage programs are expected to be finalized before year end.

While NYS is pursuing a pathway forward to ensure energy storage systems are being developed and deployed to the highest standard possible, NYGB has been working towards supporting NYS storage goals by aiming to invest at least \$200.0M in storage related projects by 2025. To achieve this goal, NYGB has been working directly with market participants to develop a deep understanding of the market and to identify and, where possible, alleviate some of the key financing barriers preventing private sector investors from participating more widely in this space.

Developing and deploying battery and energy storage infrastructure in NYS faces several financial market barriers. A key challenge is navigating the interconnection process and the sometimes significant deposits that must be made for these grid upgrades. Interconnection transactions are often administratively burdensome and, for distributed assets in particular, have small ticket sizes, making them unattractive to traditional lenders. As a result, the market for interconnection financing remains underdeveloped, with NYGB currently serving as the primary provider in the state. Although some private credit shops are willing to offer interconnection financing, their high costs can be prohibitive to borrowers. Additionally, construction-to-term loans — a critical repayment pathway under interconnection financing — are still in the early stages of adoption. NYGB has made efforts to standardize interconnection financing solutions and engage commercial banks and lenders, but

⁷¹ Case 24-E-0165, Proceeding on Motion of the Commission Regarding the Grid of the Future, Order instituting Proceeding (issued April 18, 2024), available at <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={202DF28E-0000-CF13-8DDF-8A223502E3B8}>.

⁷² For additional information on New York's Inter-Agency Fire Safety Working Group, see <https://www.nyserda.ny.gov/All-Programs/Energy-Storage-Program/New-York-Inter-Agency-Fire-Safety-Working-Group>.

⁷³ See https://www.nyserda.ny.gov/About/Newsroom/2024-Announcements/2024_02_06-Governor-Hochul-Releases-Initial-Recommendations-From-Inter-Agency-Fire-Safety.

⁷⁴ See <https://www.governor.ny.gov/news/governor-hochul-announces-approval-new-yorks-nation-leading-six-gigawatts-energy-storage>.

broad market acceptance has not yet been achieved. NYGB plans to continue promoting the viability of interconnection financing to encourage more widespread participation from the lending community.

b) NYGB Interventions

As the NYS energy storage market has continued to advance forward – with safety and best practices at the forefront of any activity – NYGB has been working collaboratively with clients and counterparties to develop a deep and comprehensive understanding of this market, its evolution and financing gaps that could be addressed with NYGB capital. NYGB proactively built relationships with the State’s early market entrants, gathered industry feedback, and hosted sector convenings to better understand what financing gaps existed in the energy storage landscape and how financing could be used to hasten deployment. Between 2018-2019, the number of storage-related investment proposals submitted to NYGB nearly doubled, and Table 3 below provides illustrative examples of NYGB storage loan products, provided to support various phases of the project development lifecycle.:

Table 3. Illustrative NYGB Storage Loan Products

| Project Stage | Product Type |
|---------------|--|
| Development | Equipment financing loans Interconnection loans General predevelopment loans |
| Construction | Construction loans Tax equity and other incentive bridge loans |
| Operation | Senior term loans Subordinate or mezzanine term loans |

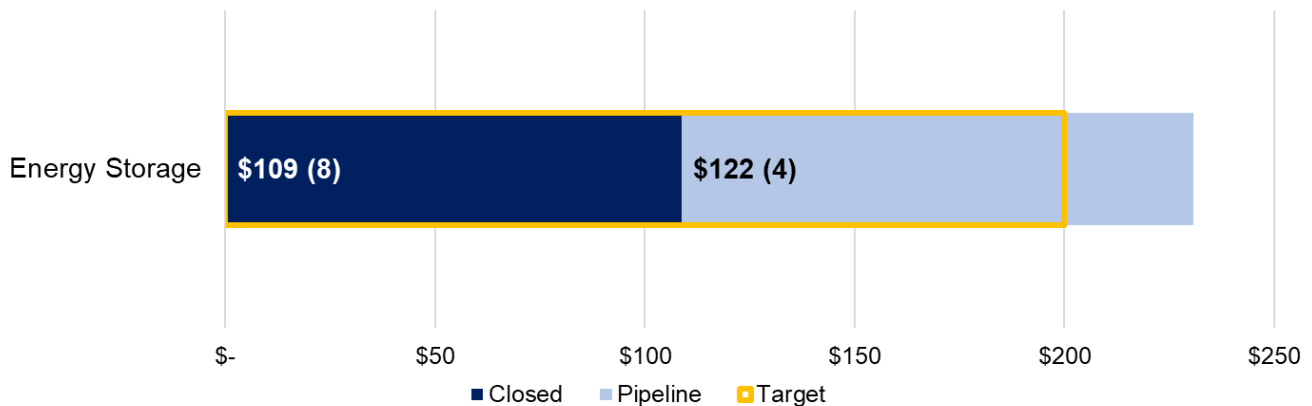
In 2020, NYGB closed its first energy storage transaction, supporting a solar-plus-storage project through the provision of a \$2.3M construction-to-term-loan, enabling BQ Energy, a renewable energy developer specializing in landfill and brownfield site redevelopment, to complete a 550 kilowatt (“kW”) solar array paired with a 522 kW battery on a brownfield site in Mt. Kisco, NY. As NYGB’s first solar-plus-storage transaction, the project aimed to address several market barriers persistent at that time. Many smaller-scale solar plus storage developers faced challenges in securing adequate construction and long-term financing, particularly for smaller to mid-sized solar projects incorporating battery storage, as these developers were restricted in their access to capital by their size and comparatively limited track records. This project was one of several in a broader portfolio financed by NYGB, which aimed to drive growth in the CDG solar-plus-storage sector by encouraging the standardization of contractors, contracts and equipment to increase underwriting efficiency and reducing overall transaction costs. Developing standardized projects within a portfolio would make the overall financing opportunity more attractive to a larger potential investor group, ultimately providing more funding options and influencing financing costs. This transaction also supported capital market participants, as a limited number had shown interest to date in supporting the construction of distributed energy projects in New York’s clean energy marketplace due to limited history and track record of such financings. NYGB’s participation in this transaction helped BQ, a NY-based developer, further consolidate its track record and achieve the scale needed to appeal more broadly to traditional capital providers. This in turn is expected to enable more refinancing options, which can provide the market with greater levels of familiarity with this asset class – a prerequisite to increasing liquidity.

In the several years following NYGB’s Mt. Kisco transaction, NYGB’s energy storage financing continued to largely be paired with investments in solar projects. NYGB has closed 4 additional solar-plus-storage transactions while continuing to work with market participants to identify and alleviate market gaps and financing barriers.

In June 2023, NYGB closed its first purely energy storage transaction with NineDot Energy, providing a \$25.0M senior-secured revolving credit facility to fund interconnection deposits for the development of a portfolio of distributed energy storage projects. NYGB’s involvement in this transaction served multiple roles in addressing NYS market gaps and barriers facing the storage market today. One issue NYGB had heard consistently, for example, was that the market for energy storage interconnection financing remained nascent among commercial lenders, with few options for financing at this stage of the development process. While a few private credit institutions may provide such financing, the perceived risks affiliated with this stage of development made pricing untenable to developers. NYGB’s facility sought to fill this gap in the market by providing much-needed capital for the interconnection process for standalone energy storage assets, which in turn was expected to spur investment from other lenders in the market. Developers and financiers have highlighted that financing gaps persist today in the pre-construction stage of development, and NYGB continues to develop solutions to address this and each stage of project development and deployment.

c) Outcomes and Metrics

Through June 30, 2024, NYGB had closed 8 transactions contributing to its storage goal (including six solar-plus-storage transactions and two standalone storage transactions) and had achieved 54% towards its goal of committing \$200.0M to energy storage by 2025.



*Data labels represent: dollar amount in \$MM (number of transactions).

| Energy Storage | Lifetime Low Estimate | Lifetime High Estimate | Annual Low Estimate | Annual High Estimate |
|-----------------------|-----------------------|------------------------|---------------------|----------------------|
| Storage Capacity (MW) | 113 | 180 | N/A | N/A |

| Solar; Energy Storage | Lifetime Low Estimate | Lifetime High Estimate | Annual Low Estimate | Annual High Estimate |
|---|-----------------------|------------------------|---------------------|----------------------|
| GHG Emission Reductions (metric tons) | 14,909,636 | 15,285,999 | 608,964 | 624,694 |
| Distributed Solar Capacity (Renewable MW) | 370 | 382 | N/A | N/A |

A full Transaction Profile covering each transaction NYGB has closed in support of energy storage can be found on the Portfolio page of its website,⁷⁵ as well as in its Quarterly Metrics Reports, Annual Plans and Impact Reports, all linked on its Public Materials page.⁷⁶

Additional information on the current issues persistent in the storage market today, along with potential NYGB solutions, can be found in the Petition Preparation & Stakeholder Engagement section of this Petition.

4. Building Decarbonization

Buildings are one of the most significant sources of GHG emissions in the State. Modernizing New York's building stock will be essential to meet the ambitious goals of the Climate Act, and NYGB's specific goal of investing \$100.0M in decarbonization of buildings located in and/or serving disadvantaged communities, as well as \$150.0M in climate-friendly affordable housing by 2025.

In the Order Initiating Review, the PSC stated that information presented in the NYGB petition should be presented in a manner to show performance by sector as well as technology type and provided the examples of clean energy generation, clean energy storage, EE, building decarbonization, clean transportation, and sustainable agriculture.⁷⁷ However, often building decarbonization measures include those focused on reducing carbon emissions associated with energy consumption, including EE, which reflects the optimization of energy use within a building. As such, EE has been assimilated into this broader Building Decarbonization section.

a) Market Context

While the building decarbonization sector has always been viewed as an enormous market with significant potential, persistent challenges have continued to cause a relatively slow uptake in financing products and initiatives. Many of these persistent barriers have been in existence prior to NYGB's establishment and remain despite progress made through the State's ambitious policies in this sector. For example, while design and performance of energy efficient equipment continue to improve, high upfront capital costs of integrating decarbonization measures into new and existing buildings can pose distinct challenges to owners and developers; this challenge is often further compounded by a lack of precedent and familiarity with this market.⁷⁸

Property owners in LMI communities and smaller-scale commercial buildings struggle to access traditional financing for decarbonization projects. Lenders frequently view these projects as high-risk due to long payback periods and uncertain cost and energy savings. Additionally, the fluctuating energy prices, changing regulations and evolving market incentives contribute to perceptions of uncertain returns on investment, making it difficult to attract private capital.

To help incentivize activity in advancing building retrofits and more sustainable green construction projects, Local Law 97 ("LL97") was passed by New York City Council in 2019 with an ambition to drive emissions cuts from buildings, placing carbon caps on most buildings larger than 25,000 square feet – covering nearly 50,000 properties across NYC. The compliance period began in January 2024 when qualifying buildings would be required to limit their annual emissions to their cap for each calendar year 2024-2029.

⁷⁵ NYGB's Portfolio is available at <https://greenbank.ny.gov/Our-Impact/Portfolio>.

⁷⁶ NYGB's Public Materials Page is available at <https://greenbank.ny.gov/Public-Materials/Public-Filings>.

⁷⁷ Order Initiating Review, page 17.

⁷⁸ Dunsky Energy + Climate Advisors, *NYSEERDA New York Green Bank Financial Market Transformation Evaluation*, October 2023, available at <https://greenbank.ny.gov/-/media/Project/Greenbank/Files/Oct-2023---Market-Transformation-Evaluation-Final-Report.pdf>.

In addition, NYSERDA published a Carbon Neutral Buildings Roadmap in 2023⁷⁹, and currently manages several key programs working to advance the building decarbonization market, including:

- Buildings of Excellence Competition – A competition to inspire the design, construction, and operation of carbon neutral-ready multifamily buildings, including affordable housing, by recognizing architects and developers for their carbon neutral projects. This program demonstrates repeatable approaches to electrifying heating loads in new and existing buildings while also reducing buildings’ peak demand through energy recovery, EE, and thermal storage.
- Clean Heat for All Challenge – A joint pilot administered by NYSERDA, New York City Housing Authority (“NYCHA”), and New York Power Authority (“NYPA”), with NYSERDA providing funds to purchase new packaged heat pump products for NYCHA housing and for post-installation measurement and verification.
- Empire Building Challenge – A funding opportunity for owners of high-rise building portfolios to test innovative approaches to low-carbon building retrofits. The Empire Building Challenge demonstrates the feasibility of new low-carbon retrofit products and design approaches by facilitating partnerships among high-rise building owners and leaders from the construction, design, and engineering communities.
- Clean Green Schools – A program helping to fund solutions for P-12 schools in under-resourced communities to reduce energy use, transition away from fossil fuels, and create healthier learning environments while educating students, teachers, and the community about clean energy.
- EmPower+ – A program offering no-cost and low-cost EE services, such as insulation, air sealing, and installation of energy efficient lighting and appliances, to LMI homeowners and renters.

Each of these activities have resulted in meaningful progress, although there is still a significant amount of work to do in the years ahead. A recent report issued by the NYC Department of Citywide Administrative Services (“DCAS”) highlighting progress made since the passage of LL97 notes that targeted investments and EE measures have resulted in a reduction of energy consumption by 8% in municipal buildings in NYC, and announced an overall reduction in GHG emissions from overall operations, including buildings emissions, wastewater treatment and solid waste, by over 25%.⁸⁰ These statistics demonstrate the steady progress underway, while recognizing the major opportunities ahead to achieve New York’s decarbonization goals.

Additionally, the federal government has approved funding to achieve climate and energy policies including but not limited to the IRA. Nearly 50% of the funding approved from the federal government for climate and energy policy was approved in the form of tax credits, which are already in market with guidance provided by the Internal Revenue Service and United States Department of the Treasury. In addition to the tax credits, funding is being made available through a combination of formula grants and competitive programs. NYSERDA continues to purposefully apply these funds with a particular focus on its current portfolio of LMI programs, in both single family and multifamily markets to expand customers served and services offered, as well as to build workforce capacity. As such, NYSERDA has been awarded \$159.M through the Department of Energy’s Home Electrification and Appliance Rebates Program to help homeowners and renters implement EE measures, including transitions to electric appliances, with additional funding awards still pending.⁸¹

⁷⁹ Available at <https://www.nyserd.ny.gov/-/media/Project/Nyserda/Files/Programs/Carbon-Neutral-Buildings/carbon-neutral-buildings-roadmap.pdf>.

⁸⁰ NYC DCAS, “DCAS Releases Major Climate Report Highlighting Significant Progress on Decarbonization Efforts,” published June 5, 2024, available at <https://www.nyc.gov/site/dcas/news/012-24/dcas-releases-major-climate-report-highlighting-significant-progress-decarbonization-efforts>.

⁸¹ See Governor Kathy Hochul’s announcement on May 30, 2024 regarding the initial \$39.6M in funding that NYSERDA received through the Department of Energy’s Home Electrification and Appliance Rebates Program (<https://www.governor.ny.gov/news/governor-hochul-announces-396-million-now-available-low-income-new-yorkers-home-energy>). Since that announcement occurred, NYSERDA has received the full award amount of \$159M.

b) NYGB Interventions

From NYGB's early EE transactions to its current work financing efficiency-first BE and broader decarbonization measures, the team has worked with developers, owners, and service providers to identify financing gaps in the building sector and develop innovative solutions. NYGB has worked to foster relationships across the commercial and industrial, multifamily, and public infrastructure building sectors in New York to understand the barriers preventing more sustainable construction and retrofit projects from getting across the finish line, and has developed multiple products to address market barriers in real estate.

One example was NYGB's forward-looking approach to lending against energy savings. One of the barriers NYGB identified early on was lenders' unwillingness to lend against projected energy savings. Today, "pay-as-you-save" and "as-a-service" models, in which an energy service company ("ESCO") completes an energy improvement project in a building at no upfront cost and is repaid over time as bill savings are realized, have become quite popular, but in the 2010s, there was not a precedent in the lending community for leveraging these contracts in order to make capital available to ESCOs in the residential EE market. To address this financing gap, NYGB worked with Sealed, a New York start-up pioneering "pay-as-you-save" products for about 150 homes in Long Island and the surrounding area, which was having difficulty accessing adequate capital to scale their business. In 2016, NYGB structured a revolving financing facility for Sealed, lending against customer contracts to provide the company with a flexible pool of capital to be used for implementing projects and covering upfront project costs. Today, Sealed has raised over \$50.0M of private capital, partnered with major utilities, and expanded operations to a total of five states with an eye toward national expansion. From the company's early days, when home energy improvements were typically limited to EE measures, to today, when BE is a top priority of the clean energy transition, Sealed is becoming a leader in deep decarbonization efforts, thanks in part to NYGB's early support for its expansion.

As previously mentioned, NYGB (along with NYCEEC) helped Ecosave in a similar intervention to scale its operations in the medium-sized, unrated commercial and institutional building sector, a market segment that has historically had difficulty accessing capital. Please refer to the Coordination and Collaboration sub-section of the Overview section of this Petition to read how NYGB's multiple loans, totaling to \$30.0M, helped Ecosave build its pipeline of clean energy projects and eventually secure \$53.0M of private sector capital to further its operations.

Affordable Housing

Since the passage of the Climate Act, NYGB has sharpened its focus on investment in affordable housing, a specific area of the real estate market with potential to advance sustainable solutions within New York's disadvantaged communities while also contributing to NYGB's decarbonization goals. NYGB has spent recent years engaging with hundreds of stakeholders and industry leaders, including developers and owners, housing authorities, housing finance agencies, and mortgage lenders, to understand and develop solutions for the unique challenges of financing affordable housing decarbonization in the State. Based on the needs identified and input received in this market sounding, NYGB released its first dedicated pathway for investment in affordable housing in 2021, "RFP 18: Financing for High Performance Affordable Housing". Since then, NYGB has increased its direct lending practice in the sector, putting capital to work in the construction of new all-electric housing and the electrification of existing buildings.

Predevelopment

Over the years, NYGB had repeatedly heard from the development community that predevelopment costs were a barrier to their ability to execute low-carbon projects, particularly in the affordable housing market. Affordable housing being built or retrofitted under regulated affordability programs, such as those administered by the State and city governments, typically has access to favorably priced construction and permanent debt from housing finance agencies and other subsidized sources. However, before a developer closes on this

financing, the project must be ready to build. This means that design, engineering, and permitting must be complete and any deferred maintenance must be addressed. This predevelopment work can be prohibitively expensive for some developers, and becomes even more so when the additional costs of planning a high-performance project are factored in. Developers typically fund these costs with their own equity. However, the motivation to minimize use of such expensive capital puts any “non-essential” costs, including decarbonization planning, at risk of being cut from the predevelopment scope. Furthermore, small and Minority- and Women-Owned Business Enterprise (“MWBE”) developers with limited access to equity may be excluded from these development opportunities entirely. NYGB sought to address these problems by providing a reasonable debt alternative to equity funding at the early stages of development.

NYGB started making predevelopment loans in 2021. One of the first predevelopment transactions was a \$2.0M loan to Riseboro Community Partnership and the United Jewish Organizations (“UJO”) of Williamsburg to help them advance their Throops Corner project – a new, all-electric, 140-unit affordable housing building in Brooklyn – to construction. Since then, predevelopment loans have become one of NYGB’s most in-demand products among affordable housing developers, with a total of five of these transactions closed to date and four more in the active pipeline, and have proven particularly valuable for complex rehabilitation projects, such as those that are part of the NYCHA Permanent Affordability Commitment Together (“PACT”) program.

Incentive Bridging

NYGB’s financing solutions for affordable housing extend beyond NYC and beyond the regulated sector. In many areas of Upstate and Western New York, it’s more common to find affordable housing that is “naturally occurring” rather than regulated, meaning these properties don’t receive subsidies through public housing programs and thus must secure diverse sources of funding in order to enable decarbonization while maintaining affordability. Utility and government incentives, which are available for many kinds of EE and BE measures, often play an important role in these capital stacks. However, most incentives are paid on a reimbursement basis, leaving the developer with high upfront costs of implementation.

To address this timing gap, NYGB developed an incentive bridge product. After review and diligence on a given project to verify that it is on track to receive a specified amount of incentive funding, NYGB can advance much of that amount upfront to provide the liquidity needed to get the work done. Once completed, NYGB is repaid with the incentive funds.

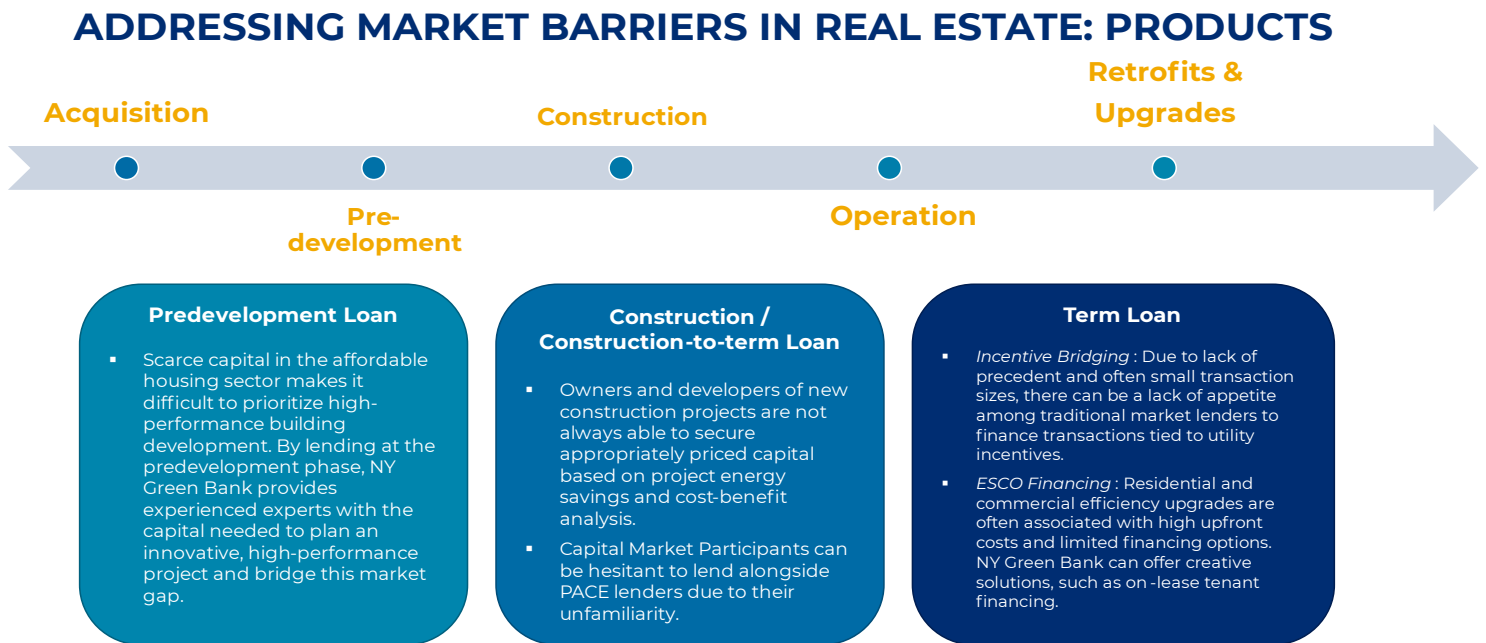
An example of NYGB’s incentive bridge product is reflected in an \$8.0M facility provided to New York-based developer e2i in March 2022, which was advanced against expected utility incentives. This loan provided e2i with near-term liquidity needed to progress its development of electrified naturally occurring affordable housing in Western New York. This transaction also demonstrated NYGB’s support for a smaller real estate developer, as they are generally challenged to meet federal regulations mandating that high velocity commercial real estate loans require an equity contribution of at least 15% of stabilized property value. By lending against incentives, NYGB created a replicable solution for real estate developers in NYS who need to secure financing for energy efficient buildings. This transaction also served to support residents of historically under-resourced communities, who face a shortage of high-performance energy efficient housing choices. This transaction better enables e2i to rent its energy efficient units at affordable rates, in turn reducing carbon emissions, improving health outcomes and broadening the housing market for these households and their communities.

Additionally, NYSERDA will continue to provide technical assistance and support access to financing for the affordable multifamily segment statewide, as directed by the Commission in the Order Directing Energy Efficiency and Building Electrification Proposals (“EE:BE Order”), while looking to further align technical assistance offerings with utility end-use incentives. As stated in NYSERDA’s LMI Energy Efficiency/Building

Electrification Portfolio Proposal⁸², NYSERDA is committed to coordinate and collectively serve the downstate affordable multifamily segment with the utilities. Pending Commission action on the proposal, specific coordination mechanisms will be explored to support and operationalize Commission objectives. Consideration will be given to how buildings that may need access to finance are made aware of finance offerings through NYGB.

Beyond affordable housing, NYGB has developed a series of products to address market barriers present across the building lifecycle. Those products are reflected in Figure 7, along with some specific examples in Figure 8.

Figure 7: Addressing Market Barriers in Real Estate: Products



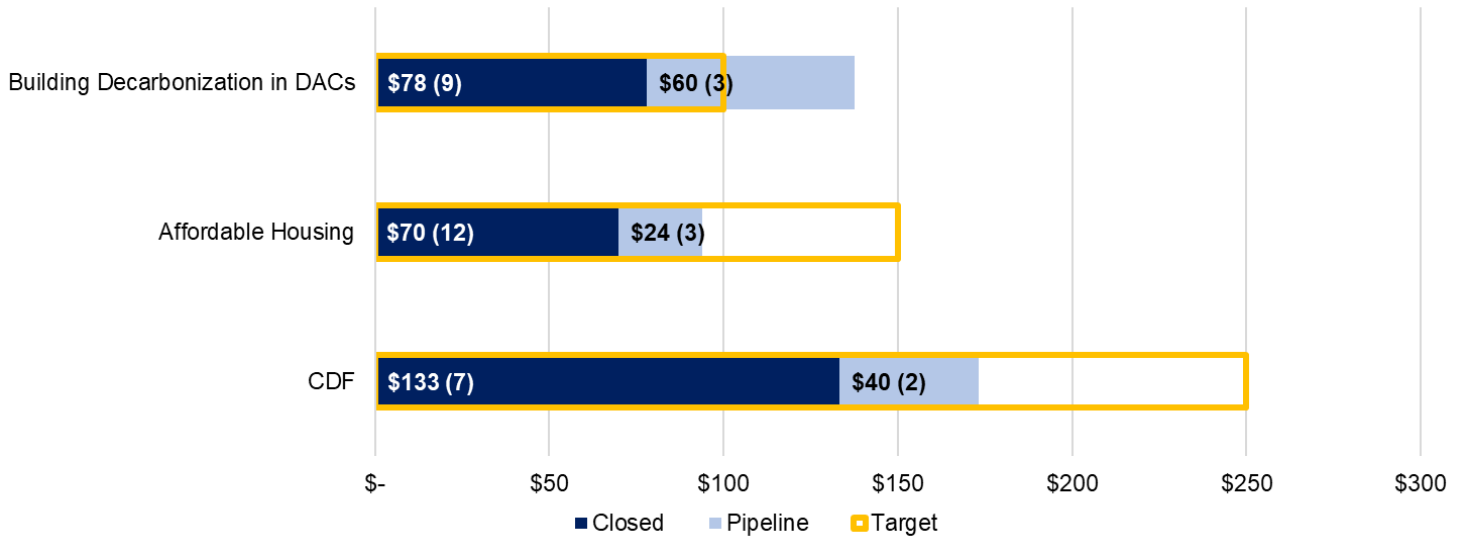
⁸² Cases 14-M-0094 and 18-M-0084, NYSERDA EE-BE Strategic Plan LMI, filed November 1, 2023.

Figure 8: Addressing Market Barriers in Real Estate: Examples



c) Outcomes and Metrics

From January 1, 2020 through June 30, 2024, NYGB closed nine transactions in support of building decarbonization in disadvantaged communities, achieving 78% towards its goal of committing \$100.0M, and twelve transactions in support of affordable housing, achieving over 46% towards its goal of committing \$150.0M by 2025. The Community Decarbonization Fund (“CDF”), as described in more detail under the Climate Equity section of this Petition, intends to support lenders to deploy capital into efficiency-first building decarbonization projects that consider energy affordability and benefit disadvantaged communities and affordable housing in NYS. Although the CDF is not a sector-specific target issued in a previous PSC order, it is typically shown together with the Building Decarbonization in disadvantaged communities and Affordable Housing targets because NYGB funding under the CDF supports similar projects.



| Building Decarbonization / Energy Efficiency | Lifetime Low Estimate | Lifetime High Estimate | Annual Low Estimate | Annual High Estimate |
|--|-----------------------|------------------------|---------------------|----------------------|
| GHG Emission Reductions (metric tons) | 1,490,020 | 3,724,688 | 143,088 | 298,634 |
| Total Energy Savings (MMBtu equivalent) | 19,188,201 | 29,885,095 | 1,166,670 | 1,684,130 |
| Electricity Savings (MWh) | 603,111 | 1,101,664 | 40,907 | 67,554 |
| Natural Gas Fuel Savings (MMBtu) | 17,130,386 | 26,126,217 | 1,027,095 | 1,453,636 |

A full Transaction Profile covering each transaction NYGB has closed in support of building decarbonization can be found on the Portfolio page of its website,⁸³ as well as in its Quarterly Metrics Reports, Annual Plans and Impact Reports, all linked on its Public Materials page.⁸⁴

Additional information on the current issues persistent in the building decarbonization market, along with potential NYGB solutions, can be found in the Petition Preparation & Stakeholder Engagement section of this Petition.

5. Clean Transportation

The transportation sector is responsible for generating roughly one-third of GHG emissions in the State. Under Governor Hochul’s leadership, New York is advancing measures to ensure all new passenger cars and trucks sold, as well as all school buses, be zero emissions by 2035. A range of initiatives grow access to electric vehicles and improve clean transit for all New Yorkers including EV Make Ready, EEvolve NY, Charge Ready 2.0, the Drive Clean Rebate, the New York Truck Voucher Incentive Program (“NYTVIP”), the New York School Bus Incentive Program (“NYSBIP”), the Direct Current Fast Charger program, and the National Electric Vehicle Infrastructure (“NEVI”) program. NYSEERDA is working with other State agencies and authorities as

⁸³ NYGB’s Portfolio is available at <https://greenbank.ny.gov/Our-Impact/Portfolio>.

⁸⁴ NYGB’s Public Materials Page is available at <https://greenbank.ny.gov/Public-Materials/Public-Filings>.

well as local and regional planning organizations, school districts, charging providers, the auto industry and vehicle manufacturers to implement the State's comprehensive investment in clean transportation.

a) Market Context

The past decade has been one of evolution for the clean transportation industry in NYS and beyond. As stronger policy has been implemented, consumer appetite has grown, and companies have matured, greater opportunities for NYGB to support this market have evolved in tandem.

The State is investing nearly \$3.0B in electrifying its transportation sector, which is vital to make progress towards the Climate Act goals. In January 2024, NYS was awarded \$15.0M in federal funding to build out electric vehicle ("EV") charging in small- to medium-sized cities, state parks and tourist destinations, and \$13.0M to repair or replace broken or non-operational EV charging ports. NYSERDA's efforts have contributed to increasing numbers of EVs active in NYS – with more than 220,000 on the road today supported by over 14,000 charging stations. Electric school buses offer another promising opportunity to reduce GHGs and pollution, which will improve the health of all New Yorkers and especially school children.

In order to help achieve New York's transportation goals, NYGB has set a specific target of investing \$100.0M towards clean transportation by December 31, 2025.

While the market for EVs is expanding, developers continue to experience barriers in accessing debt financing. Traditional lenders often lack familiarity with the EV sector and its newer business models, compounded by the relatively short track record of many EV companies. A significant financial market barrier is the residual value risk associated with EVs. Unlike traditional vehicles, which have more predictable depreciation patterns, the future value of EVs is less certain due to rapid technological advancements and battery degradation. Additionally, as newer models with improved technology emerge, older EVs can depreciate quickly, making it difficult to assess their resale value in secondary consumer markets. Concerns about battery longevity and replacement costs further contribute to the perceived risk, leading to hesitation from traditional lenders, and making it challenging for EV providers to secure appropriately priced capital.

b) NYGB Interventions

As the clean transportation market has continued to evolve, NYGB has worked closely alongside companies and individuals across the clean transportation industry – from EV companies to bikeshares and beyond – and has been a forward-leaning lender seeking to meet the needs of current and potential borrowers.

NYGB's first sustainable transportation investment was made in support of Citi Bike in 2017, a time when the bikeshare model was still relatively new to most American cities. Citi Bike was an early mover, leading the market with its fast-paced growth in NYC. In 2017 and 2018, NYGB provided Citi Bike with \$48.0M in term debt and a \$5.0M funding note to support the company and their exciting growth. With NYGB's capital Citi Bike was able to deploy 2,000 new bikes across NYC's historically marginalized communities in Harlem, Queens, and Brooklyn and advance the development of its e-bike fleet. In 2018, Citi Bike was acquired by Lyft, a testament to its growth as a credible market player.

Meanwhile, NYGB continued to engage with companies active in New York's EV market, including conducting targeted outreach to nearly 100 companies where NYGB sought to promote its financing capabilities, noting specifically it would be able to offer financing for electric or other low- or zero-carbon technologies across vehicle types (passenger, medium- to heavy-duty, buses, rail, etc.), associated infrastructure, EV batteries and alternative mobility. Through these early outreach efforts, NYGB also promoted the wide range of flexible solutions it could support, including lease financing, incentive bridging, and inclusion of electrical infrastructure upgrades in use of proceeds. During these sessions NYGB heard directly from market participants about their

financing needs and barriers present throughout the EV supply chain allowing NYGB to become deeply familiar with specific needs for innovative debt solutions to advance this sector and developed multiple gap-filling products in response.

Those products included the following:

| | |
|---|--|
| Financing Original Equipment Manufacturer (“OEM”) EV Production Costs | NYGB to finance the purchase of materials and labor for EV trucks or equipment based on the value of purchase order. Purchase order proceeds and OEM-eligible incentive payments would be utilized to service NYGB debt. |
| Financing OEM EV Fleet Lease Arrangements | NYGB to finance against the value of contracted lease payments. NYGB would assign a customized residual value to the vehicle after its contracted life. Advances would be based on the present value of contracted cash flows, OEM-eligible incentive payments and residual value with an advance rate applied for further collateral protection. |
| Financing Customer EV Fleet Purchases | NYGB to finance against customer loan payments and incentive payments or other reimbursements. NYGB would assign a customized residual value to the vehicle after its contracted life. Advances based on present value of contracted cash flows and residual value with an advance rate applied for further collateral protection. |
| Financing OEM Battery Lease Arrangements | NYGB to specifically finance the battery component of a customer’s EV fleet purchase, reducing the customer’s upfront capital outlay. NYGB finances against the value of contracted battery lease payments from a customer to a NYGB-affiliated special purpose vehicle (“SPV”). NYGB will assign a customized residual value to the battery after its contracted life. Advances based on present value of contracted cash flows, OEM-eligible incentive payments and residual value with an advance rate applied for further collateral protection. |
| Financing Charging Infrastructure | NYGB to finance capital expenses of EV charging infrastructure. Loan advances would be based on a) the value and term of the containers-as-a-service (“CaaS”) payments and b) incentive payments, multiplied by an advance rate. Customers would be a credit-worthy entities, and guarantee minimum “off-take” amount through long-term CaaS contract(s). |
| Financing lease or “as-a-service” models | NYGB advances would be capital based on the present value of expected customer payments and incentive payments. |
| Financing fleet or infrastructure purchases | NYGB to finance a fleet and/or charging infrastructure purchase; customer makes fixed periodic debt service payments to NYGB. |

NYGB’s early efforts to lead this market have begun to gain traction, as it has now closed multiple transactions in support of clean transportation, including products that focus on different components of the transportation ecosystem. NYGB closed its first EV transaction in 2022, – providing Tenet, an EV auto loan financing platform, a \$10.0M revolving credit facility to support consumer EV purchases. NYGB’s facility lent against EV auto loans originated by Tenet, providing Tenet with additional capital to provide financing to greater numbers of EV owners across NYS. The facility allowed Tenet to grow its EV loan portfolio and more efficiently monetize auto loans through private securitizations or loan sales. This transaction intended to help make EV models more cost competitive with traditional internal combustion engine (“ICE”) vehicles, expanding consumer affordability. In addition, NYGB’s facility set a precedent for capital market participants by providing first-of-its kind, scalable financing allowing for the development of an EV loan portfolio to be refinanced through a securitization or sale.

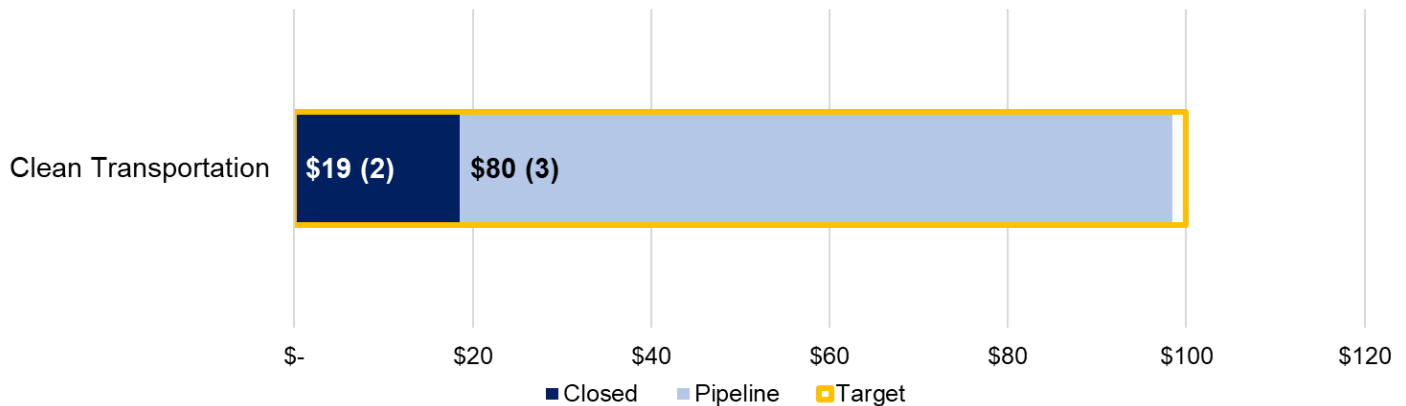
In 2023, NYGB closed another EV transaction with Inspiration Mobility Group, providing an \$8.5M facility to support the expansion of clean rideshare opportunities in NYC. NYGB’s commitment supported the rollout of approximately 400 EVs, providing Inspiration with capital to continue expanding its fleet of clean rideshare vehicles. These EVs are in operation with Revel, the NYC-based EV ridesharing and public fast-charging

provider. NYGB's facility allowed Inspiration to replace emissions-intensive ridesharing operators' ICE fleets with EVs. This transaction offered the opportunity to unlock private sector opportunities and engagement for increased EV penetration among ridesharing operators under leasing agreements by setting a precedent for lending against master lease agreements between rideshare operators and EV fleet owners. While the market for EVs continues to expand, many EV providers still face constraints accessing debt financing due to traditional lenders' lack of familiarity with the underlying EV class, the relatively short track record of many EV companies and lack of data on EVs' residual values, and newer business models. NYGB debt financing has helped create precedent and encourage other lenders to become more active in this market segment.

These transactions demonstrate how NYGB serves as a proactive, forward-leaning lender proactively working alongside market participants to advance capital solutions in support of New York's clean transportation goals. The clean transportation market in NYS is continuing to mature and NYGB will continue to remain at the forefront, well positioned to execute on transformational opportunities.

c) Outcomes and Metrics

From January 1, 2020 through June 30, 2024, NYGB has closed 2 transactions in support of clean transportation and has achieved 19% towards its goal of committing \$100.0M by 2025.



*Data labels represent: dollar amount in \$MM (number of transactions).

| Clean Transportation | Lifetime Low Estimate | Lifetime High Estimate | Annual Low Estimate | Annual High Estimate |
|---------------------------------------|-----------------------|------------------------|---------------------|----------------------|
| GHG Emission Reductions (metric tons) | 63,266 | 122,604 | 7,972 | 11,749 |

A full Transaction Profile covering each transaction NYGB has closed in support of Clean Transportation can be found on the Portfolio page of its website,⁸⁵ as well as in its Quarterly Metrics Reports, Annual Plans and Impact Reports, all linked on its Public Materials page.⁸⁶

⁸⁵ NYGB's Portfolio is available at <https://greenbank.ny.gov/Our-Impact/Portfolio>.

⁸⁶ NYGB's Public Materials Page is available at <https://greenbank.ny.gov/Public-Materials/Public-Filings>.

Additional information on the current issues persistent in the clean transportation market today, along with potential NYGB solutions, can be found in the Petition Preparation & Stakeholder Engagement section of this Petition.

6. Low-Carbon Fuels and Other

Under this Low-Carbon Fuels and Other category, NYGB includes i) low-carbon fuel technologies including bioenergy and fuel cells and ii) sustainable agriculture.⁸⁷ While NYGB welcomes opportunities to support sustainable agriculture, bioenergy and fuel cell activity in the State, these transaction types, for reasons discussed in below, have proven to be less scalable than others and remain quite nascent in NYS. Therefore, NYGB's primary focus remains on advancing key NYS goals and priorities, particularly those reflected through the CLCPA, while seeking ways to support these more nascent technology types.

a) Bioenergy

(1) Market Context

Project finance for new biomass and biogas upgrade facilities has proven somewhat unpredictable. Within NYS, there is recognition of the potential for biogas (specifically renewable natural gas, which is essentially processed biogas) on dairy farms, in wastewater treatment plants ("WWTPs") and for landfills and food waste:

- Dairy Farms – Among over 300 large candidate farms, there are 28 farms with digesters in place, several with gas upgrade facilities for renewable natural gas ("RNG"). There are several RNG upgrade projects underway that have plans to produce pipeline gas for vehicle fuel or utilize the various low carbon fuel standard ("LCFS") markets;
- WWTPs – Roughly a quarter of the 586 operational WWTPs in the State have operating digesters. In NYC alone, 14 WWTPs produce nearly 2 Million British Thermal Units ("MMBtu") of biogas, presenting a compelling case for the conversion of other plants; and
- Landfill/Food Waste – 25 large landfills already collect and use biogas. Freshkills, which services NYC, and Seneca Meadows, which is a disposal facility for the State, each have gas upgrade facilities producing RNG. 3.9M tons of commercial and residential food scraps are available for digestion.^{88,89}

Bioenergy projects, including anaerobic digesters, face significant financial market barriers. Developers often struggle to secure sufficient financing, which impedes project development and limits the production of renewable natural gas and efficient waste processing. Securing efficient construction-to-term financing is crucial for advancing these projects but can be challenging given the complexity of the development and permitting process and of the offtake financing model.

(2) NYGB Interventions

NYS recognizes the potential of bioenergy (i.e. biogas) production among dairy farms, WWTPs and landfills/food waste and investment in these areas was authorized by the Commission under specific circumstances, such as complying with the rules developed for biomass eligibility under the Clean Energy

⁸⁷ As noted previously, in the Order Initiating Review, the PSC stated that information presented in the NYGB petition should be presented in a manner to show performance by sector as well as technology type and provided the examples of clean energy generation, clean energy storage, energy efficiency, building decarbonization, clean transportation, and sustainable agriculture. However, NYGB currently classifies sustainable agriculture in an "other" category, typically along with fuel cells, and has not had as much exposure to these market segments as others. As mentioned in the "Clean Energy Generation" section for the purposes of this Petition we also include bioenergy in this section, as it aligns more directly with NYGB's fuel cell work under a low-carbon fuel category.

⁸⁸ Energy Vision, "Turning Organic Waste Into Clean & Low-Carbon Energy and Fuel: the Potential for Renewable Natural Gas (RNG) in New York, available at <https://energy-vision.org/pdf/EV-Power-of-Waste-NY-Fact-Sheet-2018.pdf>

⁸⁹ John A. Eliason & David B. Weisblat, "Production Tax Credit Extended for Renewable Projects Beginning Construction in 2020," *The National Law Review*, Apr. 27, 2020, available at <https://www.natlawreview.com/article/production-tax-credit-extended-renewable-projects-beginning-construction-2020>.

Standard.⁹⁰ After determining that CEF-compliant biomass projects (e.g., anaerobic digestion, biomass-to-energy, landfill-gas recovery, etc.) represent a sustainable infrastructure financing opportunity that is currently unsupported at scale by private capital, NYGB adopted an opportunistic approach to financing within the bioenergy segment to fill this gap and entice other market participants.⁹¹

To date, NYGB has closed several transactions in support of the bioenergy sector, specifically those that support the goals of the CLCPA, where end use of bioenergy investments displaces fossil fuel-based transportation fuels. The CLCPA does not allow for bioenergy projects that support electricity, and as such NYGB investments to date in this sector have focused on fossil fuel-based replacements.

In 2021, NYGB provided an up to \$17.4M construction-to-term loan and a \$1.0M letter of credit to Chautauqua Green Energy, LLC, to secure long term rights to landfill gas at the Chautauqua Landfill in Jamestown, NY and construct improvements at the landfill that will upgrade the gas for transportation and sale as RNG. NYGB's role demonstrated that debt capital (rather than scarce and expensive equity) could finance the development of landfill gas to RNG projects throughout NYS. This transaction provided capital to RNG developers and operators to enable landfills to use landfill gas more efficiently to support electricity generation and curtail flaring. It also allowed this landfill owner to comply with environmental regulations while maximizing energy potential. Because of NYGB financing, the developer was later able to refinance the loan through the private market utilizing one of the United States Department of Agriculture ("USDA") programs.

In 2023, NYGB provided a \$55.0M construction-to-term loan to American Organic Energy ("AOE") in support of the construction of a food waste to RNG and organic fertilizer facility on Long Island. This project would be one of the largest anaerobic digesters to process food waste sourced from the NYC metropolitan region, as well as potentially other states in the Northeast. This anaerobic digester is expected to process 180,000 tons of food waste and 30,000 tons of fats, oils and grease that will otherwise be transported to landfills more than 150 miles away. In addition to providing benefits to both anaerobic digester developers (providing support for project development through construction and term financing) as well as food waste haulers (developing a food waste facility in close proximity to food waste generators, allowing haulers to dispose of food waste at the AOE facility at competitive rates, while simultaneously allowing that waste to be converted into renewable natural gas to be injected into the local energy distribution system), it delivered significant benefits to the local area as the project was to produce RNG and organic fertilizer for commercial use, while reducing GHG produced by the current practice of transporting waste to distant landfills – indirectly reducing landfill emissions as well. It should be noted that because of NYGB involvement in this project additional capital was brought in from the private market: equity capital from a large private equity fund in NYC and debt capital from JP Morgan Chase & Co. and Pathward National Association as participants in the NYGB financing.

b) Fuel Cells

(1) Market Context

NYGB's previous fuel-cell offerings were impacted by Senate Bill S6599, a 2019 bill related to the Climate Act that revised the eligibility criteria for fuel-cell projects to be classified as "renewable energy systems." This legislation defines fuel-cells as renewable only if they do not utilize fossil fuel resources in the process of generating electricity.⁹²

⁹⁰ See page 67 of the CEF Authorization Order.

⁹¹ NYSERDA, "Biomass Power Guide Version 2.0", June 2018.

⁹² This effectively modified the fuel cell technologies that were eligible for support via the CEF as fuel cells were previously an eligible technology without regard to fuel source and the legislation limited eligibility to fuel cells that use biomass, biogas, hydrogen, or other non-fossil fuels.

Since Senate Bill S6599 passed⁹³, the renewable fuel cell market in NYS has been experiencing significant investment as a result of the State's climate goals and policies. To achieve these goals, the State recognizes that renewable fuel cells including hydrogen offer multiple benefits, including resilience solutions, opportunities to decarbonize hard-to-electrify sectors (such as medium and heavy-duty transportation, industrial processes and building heating and power generation), provide zero-carbon grid firm capacity and emergency responses, and reduce renewable curtailment as an energy storage method.

The NYS clean fuel cell market has received support from various initiatives and funding opportunities launched by the State. The latest approved compiled investment plan from NYSEERDA includes up to \$32.0M in funding for hydrogen innovation,⁹⁴ and in 2024 Governor Kathy Hochul announced up to \$16.5M of this funding across two solicitations from NYSEERDA's Hydrogen and Clean Fuels Program^{95,96} to advance innovative clean hydrogen research, development and demonstration projects that address the challenge of replacing fossil fuel usage in hard-to-electrify sectors. NYGB fuel cell offerings are outlined below.

Historically, fuel cell technology at a commercial scale has faced significant financial market barriers. The technology's relative newness and limited track record has caused reluctance from private capital providers to lend to the industry. This hesitation results in high borrowing costs and the requirement for large cash collateral accounts, which increase the financial burden on fuel cell manufacturers and providers. The high costs of capital, combined with the need for substantial collateral, further strain the profit margins of fuel cell businesses. As such, the limited availability of affordable financing has slowed the expansion of the fuel cell industry and restricted access for potential users, such as logistics and distribution centers, who could benefit from the efficiency and cost savings offered by fuel cell systems.

(2) NYGB Interventions

Before its fuel cell offerings were impacted by Senate Bill S6599, NYGB invested in projects utilizing fuel-cell technology across sectors of the clean energy economy.

One example is NYGB's loan to Plug Power, a fuel cell systems manufacturer that partners with major consumer goods corporations to deliver fuel cells for use in forklifts and other distribution facility vehicles. Despite growing market demand and Plug Power's track record of performance, private financiers viewed the fuel cell industry as nascent and risky, and thus placed extra restrictions on the company's access to capital. Ultimately, this limited Plug Power's liquidity and its ability to grow. In December 2016, NYGB closed a \$25.0M transaction with Plug Power to finance the deployment of fuel cell systems powering forklifts in distribution centers. By July 2017, Plug Power had unprecedented demand from corporate customers, and NYGB upsized that facility by an additional \$20.0M to finance Plug's further growth, which continued to surpass expectations.

Other NYGB investments in fuel cells include a bridge loan to Certain Solar (now known as NineDot Energy) in 2019, a term loan to Generate Capital Inc. in 2019, a construction-to-term loan to Daroga Power LLC in 2020, and a construction-to-term-loan to Edgewise Energy in 2020.

As a nascent industry, renewable fuel cell development – and the hydrogen economy development more broadly – will rely on policy support from both federal and state agencies. NYGB will continue to evaluate its investment strategy in this field as the policy landscape evolves.

⁹³ Chapter 106 of the Laws of 2019, signed into law on July 18, 2019 and became effective on January 1, 2020.

⁹⁴ NYSEERDA, Case 14-M-0094, "Clean Energy Fund Compiled Investment Plans," filed February 28, 2024..

⁹⁵ NYSEERDA, "Clean Hydrogen Innovation (PON 5500)," Round 1 filed October 10, 2023..

⁹⁶ NYSEERDA, "Clean Hydrogen Innovation (Cost Share for Federal Funding Opportunities [PON 5712])."

c) Sustainable Agriculture

(1) Market Context

Ever-growing global populations, complex food systems, competing demands for natural resources like water and arable land, and increasing pressure to reduce GHG emissions make sustainable agriculture – used interchangeably with controlled environment agriculture (“CEA”) for the purposes of this Petition, while recognizing these are not interchangeable generally in the marketplace – an increasingly attractive alternative to resource intensive conventional agriculture.

Promising CEA options include:

- *Hydroponics* -- Plants are grown in nutrient-enriched water rather than soil. Roots are either exposed continuously to flowing water or grown in an inert medium through an ebb-and-flow method;
- *Aeroponics* – Similar to hydroponics but plant roots are sprayed with nutrient-enriched water rather than submerged;
- *Aquaponics* – Combination of hydroponics and aquaculture that creates a symbiotic ecosystem. Closed aquaculture systems produce harmful ammonia, but naturally occurring bacteria convert the ammonia to nitrites and nitrates that feed the plants;⁹⁷ and,
- *Enclosed Farming* – In-ground farming in buildings (e.g., warehouses, repurposed structures and greenhouses).

In NYS, between 2017 and 2022, the number of farms growing greenhouse vegetables and fresh cut herbs under glass or other protection decreased by 7.5% to 556 farms while the number of square feet of production space grew by 26%. The value of greenhouse vegetables and fresh cut herbs grew from \$38.6M in 2017 to almost \$70.0M in 2022, an increase of greater than 70%. Landscape and floriculture grown under glass or other protection generated \$247.8M in sales in 2022 and were harvested from over 26.9M square feet.⁹⁸

Greenhouses are more electricity-intensive, but they are also substantially more productive and operate year-round. There are opportunities to reduce energy consumption through the use of energy efficiency light-emitting diodes (“LEDs”) instead of conventional lighting and through the use of advanced control systems to regulate ventilation, lighting and CO₂ supplementation. Energy savings of 70% to 86% (depending on the New York climate zone) can be achieved through the application of LEDs and advanced controls.⁹⁹

NYSERDA’s efforts through the Greenhouse Lighting and Systems Engineering Consortium (“GLASE”) are reducing the resistance to implement LED lighting and advanced controls through its research and education to understand plant physiology and the effects of LEDs and greenhouse systems.¹⁰⁰ In 2021, a study indicated that the LED market size in the U.S. is projected to increase such that by 2024, about half of the grow light sales will be LEDs.¹⁰¹

⁹⁷ Ariel Kagan and Jenna Riemenschneider, “Opportunities in Controlled Environment Agriculture,” Food Institute, The George Washington University, May 2018, page 2, <https://cpb-us-e1.wpmucdn.com/blogs.gwu.edu/dist/a/122/files/2018/05/CEA-Final-Documents-114su6u.pdf>

⁹⁸ United States Department of Agriculture, “2022 Census of Agriculture, New York, State and County Data,” Issued February 2024, page 43 https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1,_Chapter_1_State_Level/New_York/nyv1.pdf

⁹⁹ NYSERDA, “Clean Energy Fund Investment Plan: Agriculture,” April 19, 2019, page 3, <https://www.nyserdera.ny.gov/-/media/Files/About/Clean-Energy-Fund/CEF-Agriculture-Chapter.pdf>

¹⁰⁰ NYSERDA, “Clean Energy Fund Investment Plan: Agriculture,” April 19, 2019, page 3, <https://www.nyserdera.ny.gov/-/media/Files/About/Clean-Energy-Fund/CEF-Agriculture-Chapter.pdf>

¹⁰¹ Grand View Research, “Grow Light Market Size, Share & Trends Analysis Report By Application (Indoor Farming, Vertical Farming, Commercial Greenhouse), By Product, By System, By Technology, By Installation, By Spectrum, And Segment Forecasts, 2022 – 2030,” <https://www.grandviewresearch.com/industry-analysis/grow-light-market>

For the reasons listed above, NYGB has considered the most appropriate role to advance sustainable agriculture to be supporting decarbonization of the agricultural buildings in which produce is grown. While there has been meaningful progress in the sustainable agriculture market, barriers to financing persist. Based on market outreach, NYGB has observed several challenges associated with CEA financing specifically, including:

- *Limited access to debt financing solutions* – Early-stage companies have limited access to efficient debt financing solutions with which to scale up their businesses. The majority of existing financings are done at the corporate level, where companies receive venture capital and private equity investments;
- *Limited debt capital* – There is limited debt capital support for small- to mid-sized companies. Capital providers are more likely to participate on an aggregated basis once a pipeline of projects has achieved meaningful scale;
- *Few financial models* – While interest and activity in local organic produce are increasing rapidly, a relatively small number of financial models are being used.

These challenges are not necessarily unique to the CEA sector, which faces similar challenges to those faced in the building decarbonization space.

(2) *NYGB Interventions*

Recognizing these challenges, NYGB sought to support the deployment of CEA in NYS by committing \$6.0M to finance the construction and operation of a cluster of energy efficient robotic greenhouses developed by Agbotic, in 2019. This commitment amount was increased by \$1.0M in October, 2020. Located in Sackets Harbor, NY, these greenhouses grow certified organic produce for sale into local markets, while the project's EE measures and on-site generation are expected to reduce GHG emissions. NYGB's support for Agbotic represents its first and only investment in a CEA asset, and creates an important precedent in the CEA sector by signaling to the market that project financings are available to experienced CEA producers with high-quality assets. In addition, this transaction sought to benefit multiple parties, including:

- CEA sector market participants – NYGB's investment established a precedent of asset-based project finance in the CEA sector. NYGB's participation provided transaction history for an asset in an emerging clean infrastructure sector with appealing economics and limited market comparables.
- Capital market participants – NYGB's willingness to support CEA projects demonstrated to the broader financial market (where there had been limited debt capital support for small to mid-sized CEA companies, although capital providers were more likely to participate on an aggregated basis when the projects that companies plan had achieved meaningful scale), that there is lender comfort with CEA revenue models. Knowledge of market liquidity and ability to periodically validate asset value via the market was expected to provide further motivation for participation by interested investors going forward.
- New Yorkers – By bridging financing gaps in the marketplace, NYGB encouraged the development of more clean and efficient CEA assets in the State. Ultimately, this is expected to provide New Yorkers with greater choices and access to local organic produce, grown efficiently and at lower cost.

NYGB will continue to welcome opportunities to advance the sustainable agriculture space, as the GHG emissions reduction potential, along with other additional benefits, remain significant. NYGB will likely continue to explore these opportunities as advancing building decarbonization efforts and will look forward to continuing to advance this market in the years ahead.

d) *Outcomes and Metrics*

As mentioned in the initial overview of this section, NYGB categorizes bioenergy, fuel cells, and sustainable agriculture in the Low-Carbon Fuels and Other category. As such, all are combined below.

| Low-Carbon Fuels / Other | Lifetime Low Estimate | Lifetime High Estimate | Annual Low Estimate | Annual High Estimate |
|---------------------------------------|-----------------------|------------------------|---------------------|----------------------|
| GHG Emission Reductions (metric tons) | 2,302,072 | 4,033,738 | 130,591 | 253,578 |

A full Transaction Profile covering each transaction NYGB has closed in support of fuel cells, bioenergy, and sustainable agriculture can be found on the Portfolio page of its website,¹⁰² as well as in its Quarterly Metrics Reports, Annual Plans and Impact Reports, all linked on its Public Materials page.¹⁰³

Additional information on the current issues persistent in the clean energy market today, along with potential NYGB solutions, can be found in the Petition Preparation & Stakeholder Engagement section of this Petition.

7. Climate Equity

In 2019, the Climate Act was signed into law, including nation-leading targets to utilize equitable approaches to significantly reduce GHG emissions in NYS. The CLCPA committed New York to 100% zero-emission electricity by 2040, set legally binding emissions reduction standards to get NYS entirely off of fossil fuels by 2050 and mandated that 40% of State climate and energy funding be invested in disproportionately disadvantaged communities.

This legislation has had an enormous impact on sustainable infrastructure activity across the State.

a) Market Context

As outlined in the State’s Disadvantaged Communities Barriers and Opportunities Report,¹⁰⁴ published in 2021, some communities are disproportionately impacted by climate change and air pollution and have unequal access to clean energy. There are barriers to the ownership and access of goods and service necessary to 1) make homes energy efficient, weather-proofed, and powered by renewable energy; 2) obtain and utilize clean transportation such as electric vehicles; and 3) ensure health and safety in the face of more frequent and severe weather events driven by climate change. Some of these barriers include economic structures, financial and knowledge resources and capacity, information, as well as programmatic design and implementation. Thus, to help alleviate these barriers, there is a need for the State to act as a connector between programs and services across different clean energy market segments, as well as design mitigation and adaptation pathways through a lens of justice.

With respect to financial market barriers, it is difficult for developers to secure capital from traditional lenders for clean energy projects servicing LMI and DAC end-users. Traditional lenders hesitate to finance such projects due to perceived risks, unfamiliarity with underwriting practices, and lack of transaction history. This is particularly challenging for public housing authorities who experience difficulties obtaining short-term, unsecured financing for EE improvements. Consequently, the shortage of housing options for low-income New Yorkers complicates the prioritization of high-performance building developments. While similar challenges exist in technology sectors outside of building decarbonization and housing, these factors represent the persistent issues developers face when seeking capital for clean energy projects that serve low-income communities.

¹⁰² NYGB’s Portfolio is available at <https://greenbank.ny.gov/Our-Impact/Portfolio>.

¹⁰³ NYGB’s Public Materials Page is available at <https://greenbank.ny.gov/Public-Materials/Public-Filings>.

¹⁰⁴ NYSERDA, New York Power Authority, Department of Environmental Conservation, “New York State Disadvantaged Communities Barriers and Opportunities Report,” December 2021 <https://climate.ny.gov/-/media/Project/Climate/Files/21-35-NY-Disadvantaged-Communities-Barriers-and-Opportunities-Report.pdf>

b) NYGB Offerings

(1) Overview

Since its initial founding, NYGB has worked with clients, counterparties and other individuals and organizations active in New York’s clean energy marketplace to better understand, and directly support, financing gaps and potential solutions to advance climate equity as a key consideration in advancing a more sustainable energy future.

(2) Climate Equity Stakeholder Engagement

Over the course of NYGB’s first decade, it has conducted significant stakeholder outreach to ensure its products and financing solutions would encourage project developers, sponsors and other lenders and investors to integrate climate equity best practices into their project development considerations where possible. Its activities and financing products have been consistently informed and guided by such stakeholder input. This section will provide a history of NYGB’s stakeholder engagement activities, as well as detail the outcome of those efforts – including the establishment of its CDF and other financing products, as well as other broader activities it has engaged in to advance New York’s climate equity goals.

(a) Climate Equity Activity: Prior to CLCPA

Prior to the passage of the CLCPA, NYGB developed formal Requests for Information (“RFIs”) and Requests for Proposals (“RFPs”) to solicit feedback from parties developing clean energy and EE projects that would benefit LMI New Yorkers in an effort to better support and advance those projects. An example of this includes in 2018, when NYGB worked closely with its colleagues at NY-Sun to advance NY-Sun’s programmatic priority program “Solar for All”, which supports no-cost solar for 10,000 New Yorkers and addresses LMI energy efficiency opportunities. In addition, in November of 2018, NYGB issued an RFI to connect NYGB and other NYSERDA programs with CDG project developers, sponsors, financiers, community-based organizations, and other market participants that specifically focus on, or are interested in, providing increased opportunities for LMI customers to participate in and directly benefit from the State’s growing DER market. Findings from this engagement effort allowed NYGB to determine that a credit enhancement/loss reserve product for CDG tax equity could be impactful in further opening the CDG segment and accelerating its deployment within LMI communities. NYGB then set its intentions to issue an RFP for such a product in the following business year plan, which it carried out successfully.

One direct example of where NYGB sought proactive approaches to integrating climate equity considerations into its financing products occurred during the development of the CDG market in NYS, particularly during the development of the VDER tariff structure. During that time, FICO scores had been widely adopted by renewable lenders and tax equity investors as an appropriate factor in considering a potential borrower’s credit history. However, there were some clear limits of FICO scores – mainly that these did not provide a holistic view of an individual’s ability, or likelihood, to pay their utility bills. NYGB spent considerable time evaluating alternative forms of consumer credit reporting, including debt-to-income ratios, utility bill repayment history, and ability to authorize Automated Clearing House (“ACH”) payment. These approaches have become more widely adopted by other lenders and investors of alternative forms of credit history, which has increased the accessibility of utility bill savings across a broader spectrum of New Yorkers.

The use of RFIs, RFPs, and developing alternative approaches to traditional lending practices to encourage the more widescale adoption of clean energy solutions and benefits reflect some of the key actions NYGB utilized in its earliest days to equitably advance climate financing products.

(b) Climate Equity Activity: Following CLCPA

Following the passage of the CLCPA, NYGB determined it would benefit from having a single Managing Director fully focused on Climate Equity, while evaluating how best to utilize NYGB resources so as to have the most impact in supporting projects located in, and residents of, New York's communities at the frontline of the climate crisis.

To inform NYGB's decision making and at the direction of the Commission, NYGB conducted a significant outreach campaign seeking stakeholder feedback into current gaps and issues in the marketplace relating to projects in and supporting disadvantaged communities. This stakeholder engagement effort is captured in NYGB's Amended Annual Plan for 2021-22, specifically through *Appendix C: Stakeholder Input and Integration*, which was filed with PSC on May 2, 2022, and is included in Appendix A of this Petition.

Through that exercise, NYGB identified multiple themes within the stakeholder feedback, reflecting gaps in the market where NYGB was encouraged to explore opportunities for enhanced support.

(3) Community Decarbonization Fund

One key theme NYGB heard consistently from stakeholders was regarding the lack of capital and net operating income available for energy improvements in real estate. This resulted in NYGB's 2023 launch of the CDF,¹⁰⁵ a \$250.0M wholesale concessionary funding pathway available to CDFIs and other specialty lenders to expand their ability to finance building decarbonization and other sustainable infrastructure projects benefitting under-resourced and disadvantaged communities. This approach to advancing NYGB capital at an interest rate of 1.5% reflected an enhanced approach to expand green lending in New York's historically marginalized communities. By enabling CDFIs and other specialty lenders to offer an expanded or entirely new set of "green" lending products, NYGB's CDF ensures other lenders are able to provide appropriately priced capital for projects incorporating decarbonization measures within their respective borrowing communities – many of which would likely have been too small or otherwise not economically feasible for NYGB to take on individually. In turn, CDF borrowers' use of NYGB's capital incentivizes project developers in disadvantaged communities to prioritize decarbonization measures that may not otherwise be included if financed by other lenders.

Since launching CDF in April 2023 through the end of NYGB's most recently completed Fiscal Year (ending March 31, 2024), NYGB had closed four transactions totaling \$85.0M through this fund, including loans made to:

- Community Preservation Corporation - A \$25.0M loan to fund eligible efficiency-first decarbonization projects in historically under-resourced communities across NYS.
- Enterprise Community Loan Fund - A \$25.0M loan to finance projects such as BE and EV infrastructure, which will reduce GHG emissions, all in historically under-resourced communities in NYS.
- Low Income Investment Fund - A \$25.0M loan expected to fund building decarbonization projects in affordable housing and community facilities across NYS.
- TruFund - A \$10.0M loan to launch its Community Climate Finance practice that will serve the disadvantaged populations throughout NYS.

In the first quarter of the current FY (representing April 2024 – June 2024), NYGB closed an additional \$48.3M in CDF transactions with the following CDFIs, bringing the total committed to \$133.3M in less than a year and half since the CDF was launched:

¹⁰⁵ More information regarding NYGB's Community Decarbonization Fund can be found on NYGB's website: <https://greenbank.ny.gov/Our-Impact/Climate-Equity/Community-Decarbonization-Fund>.

- Leviticus Fund – An \$18.3M loan to fund multi-family, real estate development loans that support new construction and retrofits of energy-efficient affordable housing primarily in NYC and the Hudson Valley.
- Carver Bancorp – A \$25.0M loan to fund building decarbonization projects across the diverse middle-income communities that Carver serves throughout NYC.
- Community Development Long Island – A \$5.0M loan fund for multi-family real estate development loans supporting energy-efficient affordable housing.

As of the time of this Petition filing, \$59.0M (or 44%) of the \$133.3M commitments made to CDF borrowers have been deployed across 10 projects supporting decarbonization measures for varied uses such as rehabilitations of multiple affordable housing developments as well as new construction of affordable housing and schools serving residents of historically marginalized communities.

A full Transaction Profile covering each transaction NYGB has closed through the CDF can be found on the Portfolio page of its website [<https://greenbank.ny.gov/Our-Impact/Portfolio>], as well as in its Quarterly Metrics Reports, Annual Plans and Impact Reports, all linked on its Public Materials page [<https://greenbank.ny.gov/Public-Materials/Public-Filings>].

(4) Additional Climate Equity Products and Solutions

In this section, NYGB provides an overview of the additional products and solutions – beyond the CDF – that it has advanced to support NYGB's climate and equity goals.

While the CDF sought to address a few key issues introduced by stakeholders, this was not the only gap or issue identified during those sessions. In addition to the CDF launch, NYGB has acted on the feedback provided by stakeholders during those sessions to advance multiple solutions, as reflected in Table 4 below.

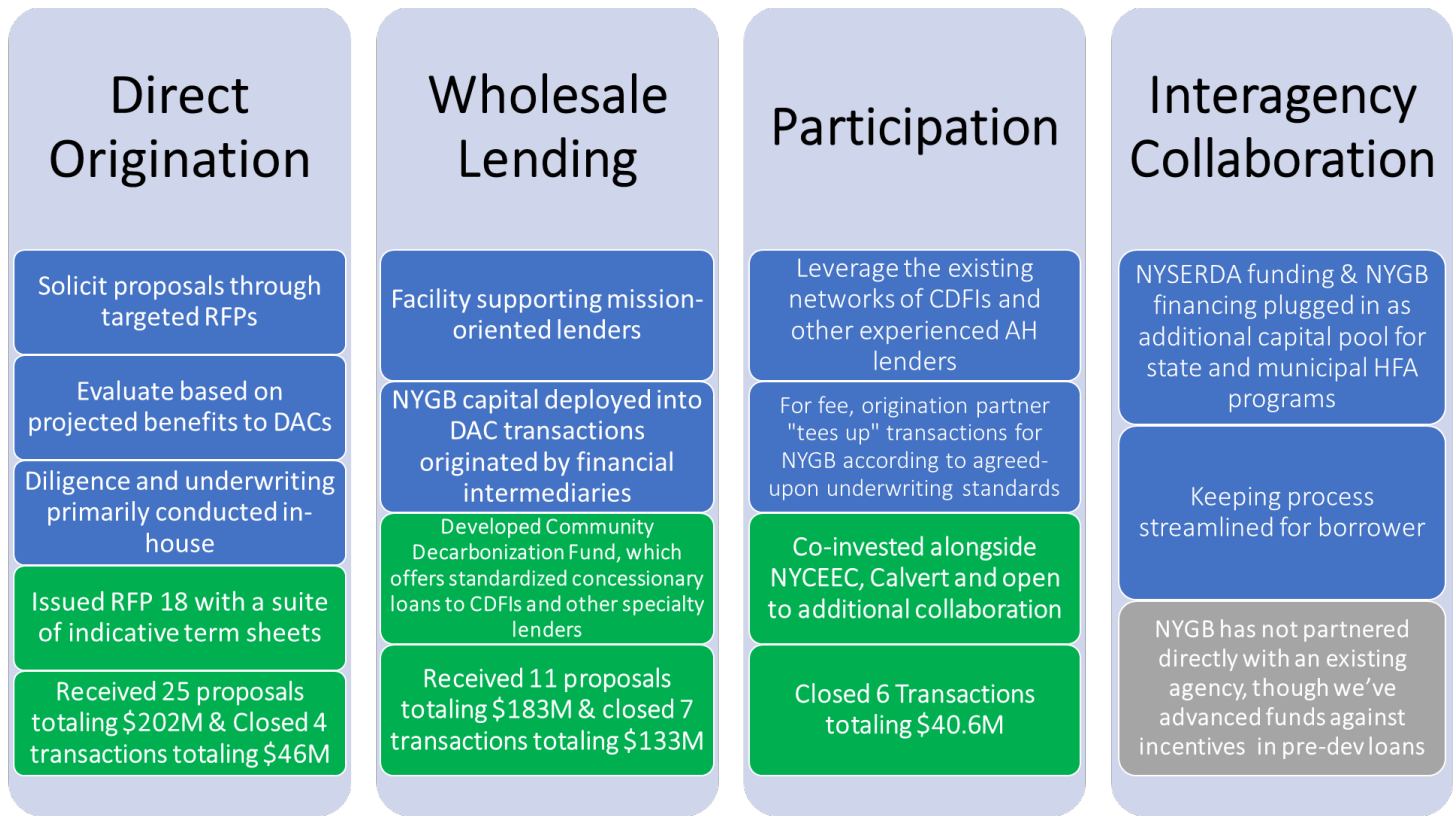
Table 4. DAC Stakeholder Issues and Solutions, beyond NYGB’s CDF

| Issue | Solution |
|--|---|
| NYGB staff lacks deep expertise in affordable housing or other DAC real estate | NYGB hired a Managing Director with DAC real estate experience and hired a VP to support that work. Both of these staff members have and will continue to play an instrumental role in NYGB’s CDF and bi-lateral real estate transaction work supporting affordable housing and broader building decarbonization. As NYGB’s staffing needs evolve, NYGB will continue to seek potential new-hires with skills and experiences that can strengthen NYGB’s ability to deliver benefits to the State’s disadvantaged or historically marginalized communities. |
| Shortage of capital for community ownership models for solar | <p>Early on, NYGB adjusted its terms and pricing to support more inclusive subscriber aggregation practices, allowing developers to offer short term contracts to individual subscribers and eliminating FICO score requirements. This practice was adopted by other lenders and tax equity investors, enabling developers to subscribe greater quantities of LMI New Yorkers and those living in disadvantaged communities,</p> <p>In addition, NYGB is incentivizing inclusive subscriber aggregation practices by offering tiered pricing, offering reduced interest rates to projects that can demonstrate certain levels of LMI subscribers in New York.</p> |
| Limited capital available for predevelopment activities | NYGB provides predevelopment lending for projects located in or supporting residents of disadvantaged communities, including predevelopment loans for NYCHA PACT projects. |
| Timing issues around receiving incentives (paid post, installation) | Developers are required to rely on cash flow and equity capital to bridge receipt of expective payments, so NYGB developed an incentive bridge financing product to free up capital while waiting for incentive payments |
| High legal expenses and other soft costs | When working on CDF transactions, NYGB uses a pre-screened pool of law firms who can offer standardized term sheets (reducing hours required and legal costs) and who have also set a cap for their transaction costs, allowing borrowers to have a clear sense as to expected legal expenses |
| Complexity of NYGB processes | NYGB published updated RFPs with simplified templates and guides in response to this feedback. Additionally, NYGB created a new Business Development position within its investment team. Part of this employee’s responsibilities is to answer all administrative questions potential borrowers have about NYGB’s application and investment process with the intent of facilitating a smoother and more efficient customer experience for potential borrowers. |

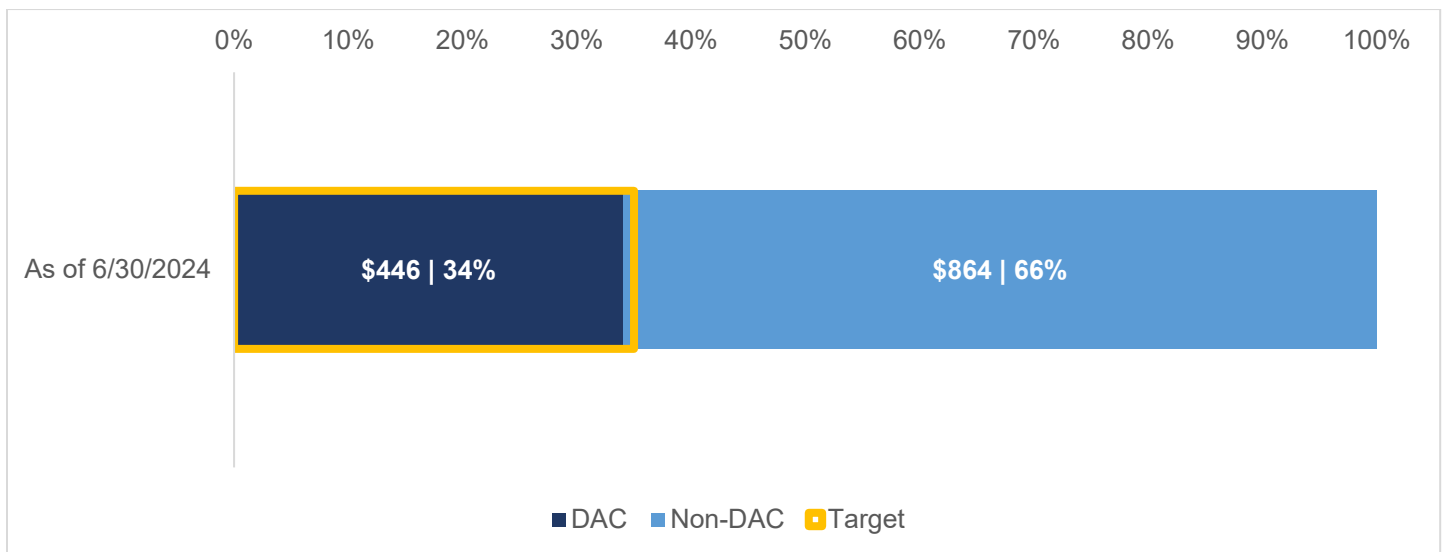
In addition to the issues raised and solutions provided as outlined in Table 4, several other gaps and areas of potential opportunities for NYGB to explore have been raised through various platforms over the past several years, which NYGB continues to work to address.

During the stakeholder engagement work completed for the CDF, interviewees noted that when entering a new programmatic space, CDFIs are often awarded grants paired with loans from philanthropies and banks. Certain stakeholders, particularly community lenders, expressed the need for borrower technical assistance as many smaller CDFIs and CDFIs without significant green lending programs are concerned about how they add extra capacity. This included marketing, project evaluation, underwriting, technical knowledge of incentives and utility policies, and risk management. To date, NYGB has yet to offer formal technical assistance through any kind of programmatic offering, however it has worked with CDF borrowers and other lenders to provide climate finance guidance, expertise, or support on an *ad-hoc* basis via one-on-one conversations. NYGB has made considerable progress towards its equity goals and recognizes the significant work to be done in the months and years ahead. It will continue to engage in ongoing discussions with market participants across the climate equity ecosystem to inform those efforts going forward, as it has done since inception. Figure 9 shows various strategies NYGB utilizes to source investment opportunities within New York’s disadvantaged or historically marginalized communities.

Figure 9: NYGB Strategies for Sourcing Climate Equity-focused Investments (Number are as of September 30, 2024)



c) Outcomes and Metrics



In alignment with the Climate Act, NYGB’s goal is to commit at least 35% of its capital by the end of 2025 towards projects benefiting members of disadvantaged communities. Over the past several years NYGB has steadily grown the proportion of investments benefiting such communities – through June 30, 2024, NYGB has committed \$445.5M in these projects across various sectors (see Table 5 below), equivalent to 34% of NYGB’s total capital commitments since 2020.^{106, 107, 108}

Table 5: DAC Progress (\$) by Sector¹⁰⁹

| Sector | DAC Progress (\$M) | % of Total DAC Progress |
|---|--------------------|-------------------------|
| Building Decarbonization / Energy Efficiency | \$197.6 | 44.3% |
| CDG Solar | \$142.7 | 32.0% |
| Other Place-Based¹¹⁰ | \$31.6 | 7.1% |
| CDG Storage | \$50.0 | 11.2% |
| Residential Solar | \$23.9 | 5.4% |
| Total | \$445.5 | 100.0% |

All NYGB Transaction Profiles covering each transaction NYGB has closed since inception can be found on the Portfolio page of its website,¹¹¹ as well as in its Quarterly Metrics Reports, Annual Plans and Impact Reports, all linked on its Public Materials page.¹¹² NYGB’s website notes specifically which transactions are supporting NYS DAC goals.

III. Petition Preparation & Stakeholder Engagement

1. Overview

To inform NYGB’s overall approach to this Petition and proposed strategy for the 2026 – 2030 period, NYGB has conducted internal evaluations and an extensive stakeholder engagement process in close collaboration with NYSEERDA Executive and Performance Management teams, as well as DPS.

NYGB sought input from a wide group of stakeholder types, which it primarily gathered through facilitated roundtable discussions. In addition to those roundtables, NYGB conducted complementary outreach to climate

¹⁰⁶ In tracking progress toward the 35% DAC target set in the Climate Act, NYGB has worked closely with NYSEERDA’s Performance Management team to align DAC progress calculations to the final DAC definition established by the Climate Justice Working Group (“CJWG”) in March 2023 as well as the latest Investment and Benefits Reporting Guidance, which can be found here: <https://climate.ny.gov/-/media/Project/Climate/Files/Disadvantaged-Communities-Criteria/Disadvantaged-Communities-Reporting-Guidance.pdf>

¹⁰⁷ This includes \$50.0M in retail energy storage transactions located in NYISO Zone J. Per the Storage Roadmap - Case 18-E-0130, “Order Establishing Updated Energy Storage Goal and Deployment Policy,” issued June 20, 2024 – these transactions fall within a category of storage projects that are most likely to benefit disadvantaged communities and reduce peaker plant emissions. As such, these transactions are being counted toward NYGB’s DAC progress as of June 30, 2024.

¹⁰⁸ To see which NYGB transactions benefit disadvantaged communities, please look for the “Benefits Disadvantaged Communities” tag on transaction profile icons on NYGB’s Portfolio page: <https://greenbank.ny.gov/Our-Impact/Portfolio>

¹⁰⁹ Columns may not sum to total exactly due to rounding.

¹¹⁰ Transactions counting towards the Other Place-Based category include those that support multiple technologies.

¹¹¹ NYGB’s Portfolio is available at <https://greenbank.ny.gov/Our-Impact/Portfolio>.

¹¹² NYGB’s Public Materials Page is available at <https://greenbank.ny.gov/Public-Materials/Public-Filings>.

equity focused stakeholders, both via a presentation to the Energy Equity Collaborative¹¹³ (“EEC”) on April 30, 2024, as well as through individual one-on-one meetings held over the course of several weeks with individuals and organizations that had been recommended as active participants in New York’s climate equity ecosystem.

2. Roundtable & Engagement Sessions

Regarding the roundtables, below is a list of six specific facilitated discussions hosted by NYGB as part of its stakeholder engagement process in preparation for this NYGB Petition filing.

- Accessibility and Equity
- Clean Transportation
- Energy Storage
- Building Decarbonization
- Engaged Stakeholder Webinar¹¹⁴
- Financial Institutions

Across each roundtable, NYGB sought feedback and input from a wide range of NYS clean energy ecosystem stakeholders such as project developers, other clean energy financing institutions, commercial lenders and investors, community development financial institutions, fellow state and municipal agencies, climate-focused nonprofits, other NYSERDA teams, and DPS. Each of the roundtables consisted of both in-person and virtual attendees, and the general outline of the discussions was as follows:

1. NYGB provided an overview of its activity and impact in the specific sector or space.¹¹⁵
2. NYGB used pre-solicited input from attendees to foster discussion around existing market barriers.
3. NYGB facilitated discussion around potential solutions to address identified barriers.
4. Stakeholders discussed what they would like to see from NYGB broadly going forward.

During each roundtable, attendees spoke candidly about the challenges they are currently facing in their respective sectors as well as potential solutions that NYGB could support or develop to address those challenges, as detailed in the following sections and in Appendix B of this Petition. NYGB collected stakeholder feedback from each session and evaluated the comments, concerns and recommendations provided by attendees. Some recommendations are being addressed through products and services NYGB has already developed, and other recommendations have been addressed in NYGB’s 2024-2025 Annual Plan. Some feedback will require further evaluation to determine appropriate next steps. More information on this evaluation process is included later in this Petition.

Key discussion points and takeaways from each roundtable are presented below.

a) Accessibility + Equity

NYGB’s Accessibility and Equity roundtable was held on March 12, 2024, and was intentionally held prior to any of the other roundtables to ensure relevant findings from this discussion could be integrated into other roundtable conversations.

¹¹³ The Energy Equity Collaborative is established to provide a forum for community-based organizations and stakeholders that are representative of or principally serve disadvantaged communities to work together with NYSERDA to address energy equity and climate justice issues and develop equitable programs. Learn more about the EEC here: <https://www.nyscrda.ny.gov/All-Programs/Energy-and-Climate-Equity-Strategy/Energy-Equity-Collaborative>

¹¹⁴ This event was a virtual-only event tailored to any individual or organization that has provided public comments on any of NYGB’s previous petition filings.

¹¹⁵ For the majority of the roundtables, NYGB also sent pre-read materials to planned attendees that included an overview of NYGB’s activities undertaken relevant to that sector or topic area to help inform fruitful live discussions.

During the roundtable, participants spoke about ongoing challenges in this market segment, along with some potential opportunities. The content shared reinforced many of the issues NYGB has been hearing for the past several years. One example is the continued need for long-term, low-cost capital, specifically 30-year term loans, to support decarbonization measures in the affordable housing sector. NYGB agrees that more of this type of financing is needed to accelerate sustainability measures in the affordable housing sector, however given its own capital constraints and its need to support financial market transformation across multiple technology types and sectors of the NYS clean energy economy, NYGB is not well-suited to provide this type of financing. Another challenge raised by participants is the need for workforce and contractor development, potentially through working capital loans, as well as the need for technical assistance and training for CDFIs. While these particular services aren't likely an appropriate role for NYGB, other NYS resources (particularly through potential federal funding) are and will increasingly be available to support this type of capacity building. Other more product-specific suggestions raised during the roundtable included a desire for incentive bridging (which NYGB offers currently), a CDF-like product that is non-recourse or off-balance sheet, and a credit enhancement product that could help buy down the risk of transactions that could be financed by a third-party lender.

Several suggestions were made during the roundtable which did seem like appropriate roles for NYGB, including several investment approaches that could support NYGB's affordable housing work in the current 2024-2025 Plan Year. One example is NYGB's intention to continue prioritizing shorter-duration investment opportunities (i.e., predevelopment and construction financing) which will allow NYGB to maintain liquidity necessary to support its work across all market segments. By continuing to focus on these products, NYGB seeks to continue supporting projects such as building decarbonization renovations through the NYCHA PACT program as well as new construction of independent green affordable housing developments that will benefit low-to-moderate income-earning New Yorkers. By filling these early financing gaps in the project development process, NYGB can bridge project developers' capital needs until they can secure long-term financing from lenders that are better equipped than NYGB to provide that type of capital.

b) Sector-Specific Roundtables

NYGB held three sector-specific roundtables, which were designed to help inform its activities relating to NYS key priority markets and to better understand where NYGB might play expanded roles in these markets going forward. Those markets include Clean Transportation, Clean Energy and Energy Storage, and Building Decarbonization.

(1) Clean Transportation

NYGB's Clean Transportation roundtable was held on April 8, 2024. During this session, several key challenges and opportunities were highlighted by both NYGB and roundtable participants.

In terms of challenges, installing sufficient EV charging infrastructure has proven to be relatively difficult. This infrastructure buildout trails behind vehicle deployment, while unpredictable demand – coupled with lack of performance data – reduces EV charging economics, and unfavorable tariffs hamper growth. In addition, numerous challenges exist to using incentives and tax credit monetization: the timing of incentive delivery lags behind financing need; project developers may not have tax liability; and direct pay and transferability for tax credits are limited. Meanwhile, numerous challenges face EV fleet financing as well: vehicle supply may be constrained and tightening; vehicle range continues to suppress adoption; battery supply chain issues, including recalls, are decreasing consumer confidence; residual value data is not as widely developed and available as for ICE vehicles; and first-generation vehicles typically command much higher upfront costs than do comparable ICE models.

However, there are also positive trends advancing this market. The U.S. is in the midst of unprecedented favorable federal and state policy programs which are expected to spur adoption, including clean fleet laws in

California and NYS; the 45W/30C tax credits;¹¹⁶ the Environmental Protection Agency (“EPA”) Clean School Bus program;¹¹⁷ Bond Act funding¹¹⁸ and Make-Ready funding;¹¹⁹ and NY’s Electric School Bus mandate. And new vehicle models (particularly medium- and heavy-duty vehicles) are ready to transform the market beyond consumer vehicles alone.

Meanwhile, multiple developments are unfolding which should have additional impacts on the market. New utility tariffs for electric vehicle supply equipment (“EVSE”) could reduce the impact of demand charges. Evolving business models in transportation-as-a-service (“TaaS”), vehicle to grid (“V2G”), and bidirectional charging (“V2X”) may identify new funding pathways for investors, along with new approaches to financing such as Terminal Rental Adjustment Clause (“TRAC”) leases for EVs or residual value insurance. Evolving guidance on tax credit monetization could expand monetization pathways through transferability and direct pay for entities and partnerships within the transportation landscape. Lastly, the outcomes of the Proceeding on Medium- and Heavy-Duty Electric Vehicle Charging Infrastructure could result in additional market impacts and the potential need for continued NYGB financing in the NYS clean transportation sector.¹²⁰

(2) Energy Storage

NYGB’s Energy Storage roundtable was held on April 11, 2024. During this session, several key takeaways were identified as potential areas for NYGB, or other levers of NYS, to focus on in order to address current issues in the market.

During the energy storage session, NYGB reaffirmed some general themes across the NYS storage market today, including some tailwinds, such as unprecedented favorable federal and state policy programs expected to incentivize buildout. With that, tax credit guidance and other outcomes under the IRA, as well as issues around interconnection costs and timing becoming of increasing focus (e.g., Federal Energy Regulatory Commission [“FERC”] 2023),¹²¹ are well poised to have some sort of overhaul in the future. In the meantime, NYGB has experience in creating interconnection products. While these factors could undoubtedly contribute to greater advancement in NY’s storage market, there are still some considerable headwinds which will require further attention and focus. For example, sponsors who need financing cannot always provide guarantees that lenders may seek, including in some cases even for sponsors with large backers. In addition, expensive debt or low leverage can lead sponsors to finance construction with equity, which can be an inefficient use of resources, and revenue models do not generally support significant leverage compared to more traditional renewables products (i.e., solar). Additional barriers to grid-scale storage deployment include interconnection timelines and costs. Particularly for bulk projects, the slow pace of evolution in wholesale market rules and products to compensate storage for values it is capable of providing (e.g., storage as transmission), and increasing community opposition to battery energy storage across the State, create notable headwinds. However, since the Energy Storage roundtable occurred, the Storage Roadmap approved by the PSC (on June 20, 2024) provided more certainty around the regulatory landscape and timing for incentives.¹²²

As these issues continue to evolve, NYGB and other storage market participants continue to watch several ongoing trends, including lessons learned from NYS and other markets such as California Independent System

¹¹⁶ See Internal Revenue Service, for more details on 45W tax credits: <https://www.irs.gov/credits-deductions/commercial-clean-vehicle-credit>, and for more details on 30C tax credits: <https://www.irs.gov/credits-deductions/alternative-fuel-vehicle-refueling-property-credit>

¹¹⁷ See Environmental Protection Agency, for more details: <https://www.epa.gov/cleanschoolbus>

¹¹⁸ See Environmental Bond Act for more details: <https://environmentalbondact.ny.gov/>

¹¹⁹ See EV Make-Ready Program for more details: <https://jointutilitiesofny.org/ev/make-ready>

¹²⁰ See Case 18-E-0138 for more details: <https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterSeq=56005>

¹²¹ See Federal Energy Regulatory Commission, Order 2023 for more details: <https://www.ferc.gov/media/e-1-order-2023-rm22-14-000>

¹²² Case 18-E-0130, “Order Establishing Updated Energy Storage Goal and Deployment Policy,” issued June 20, 2024.

Operator (“CAISO”) and Electric Reliability Council of Texas (“ERCOT”), which can inform NYS developers’ strategy. In addition, offshore wind may yield new opportunities for storage in the downstate region and tax equity may play a larger role in development under the new IRA guidelines. Finally, paired and hybrid projects combining solar, storage, and clean transportation charging may open additional revenue streams for developers.

(3) Building Decarbonization

NYGB’s Building Decarbonization roundtable was held on April 15, 2024. During this session, several key takeaways were identified as potential areas for NYGB, or other levers of NYS, to focus on in order to address current issues in the market.

This roundtable reinforced several themes NYGB had consistently heard from transaction proposers. Continued elevated interest rates create cost pressure, meaning property owners must pay more to access debt. Meanwhile, hard costs and soft costs remain high, including competition for electrification workforce. Knock-on effects include refinancing challenges, higher equity needs, and more. In addition, more stringent and continually evolving emissions standards, including topics such as “zero emissions” standards, the role of natural gas, and embodied carbon, create uncertainty for building owners on what level of building improvement to plan for. Finally, financing capital stack complexity creates barriers to access for all parties, especially affecting smaller developers/owners and communities at the frontline of the climate crisis, and affects incentive dollars and debt financing alike.

However, some positive forces are also driving activity in this market, including unprecedented favorable federal, state, and utility programs that have launched to support both EE measures and clean energy generation sources, e.g., tax credits under the IRA. In addition, NYS policy drivers such as the All-Electric Buildings Law are creating a backdrop of innovation and urgency for decarbonization in the State.¹²³

NYGB and its colleagues in the building sector will be closely tracking a few key areas in the coming months and years. As Local Law 97 fines begin to be tabulated in NYC, owners and developers may finally be contending with decarbonization measures, albeit in a now costly environment. In addition, decarbonization education and tools to streamline building management and influence decision-making continue to come online to support meeting LL97 and other standards. Finally, energy paired projects combining on-site solar, storage, clean transportation charging or energy-as-a-service businesses may open additional revenue streams for building developers.

c) Engaged Stakeholder Roundtable (Webinar)

To complement NYGB’s market-segment specific meetings, NYGB sought input from all stakeholders who had filed public comments on previous NYGB petitions. The purpose of engaging this group of stakeholders was to ensure NYGB was capturing feedback from market participants who might not be working with NYGB directly on transactions, but who are also active in New York’s clean energy ecosystem.

NYGB’s Engaged Stakeholder Webinar was held on May 6, 2024, and in spite of the outreach efforts conducted to promote participation in that discussion, it was significantly less well attended than the other NYGB CEF information discussions.

No significant recommendations were provided during this session, and as such we will not provide an overview of the recommendations assessment in the subsequent section of this Petition. NYGB reached out

¹²³ Chapter 56 of the Laws of 2023 Part RR, available at <https://dos.ny.gov/system/files/documents/2023/07/part-rr-of-chapter-56-of-laws-of-2023.pdf>.

both to invitees as well as meeting participants to offer individual follow up discussions seeking further input into NYGB's Petition process, although those efforts also did not result in any further recommendations.

d) Financial Institution Roundtable

NYGB also sought feedback directly from other financial institutions active in New York's clean energy marketplace, and NYGB's Financial Institution Roundtable was held on May 24, 2024.

NYGB's final roundtable highlighted challenges facing other investors active in New York's clean energy market, including both financing and deal-related characteristics. On the financing side, institutional or large commercial lenders are experiencing challenges financing projects under ~\$75.0M, transactions that include merchant or uncontracted revenue, and deals with a lack of a full sponsor guarantee. In terms of deal characteristics, lenders are finding challenges in underwriting transactions which include unproven technologies, those that are still exposed to permitting risk and/or at the predevelopment stage, those including facilities covering many small assets versus larger scale assets, and those portfolios which reflect NYS projects exclusively, without geographic diversity.

That said, the IRA, coupled with emerging opportunities in the sustainable infrastructure market broadly, have created new incentives for financiers to parse through these challenges. The discussion held with other investors very much complimented the discussions held previously with developers and offered a more complete, fulsome picture of the challenges facing all market participants.

e) Additional Climate Equity Sessions

In addition to NYGB's formal roundtables, the team conducted additional, complementary outreach to stakeholders active in New York's climate equity ecosystem. That outreach consisted of a presentation to the EEC, and one-on-one meetings with multiple stakeholders who are not members of the groups NYGB previously presented to and who had not participated in the Accessibility and Equity roundtable. Overviews from those discussions and key takeaways are provided below.

NYGB's presentation and Q&A session and additional materials were shared with EEC members following NYGB's remarks. Key takeaways from the EEC session include:

- CDF products are still not widely known among smaller CDFIs, underscoring the importance of continuing to seek new channels to ensure NYGB is reaching all potential applicants.
- Need for continued transparency and targeted products, underscoring of the importance of product flexibility, as well as community need for smaller transaction amounts and continued low rates.
- Interest in the impact of clean energy investments on the communities in which they are developed as well as the communities they benefit, specifically in regard to prospective employment opportunities and rising housing costs as neighborhoods evolve.

In addition, NYGB held a series of one-on-one meetings with organizations identified by NYSERDA staff and others as key participants in New York's clean energy ecosystem working on advancing climate equity goals and climate justice initiatives. NYGB held nine meetings in total from June 5, 2024 through July 3, 2024, and gathered responses by email from one additional stakeholder. An illustrative sample of the types of questions used to gather input include:

- What projects are you currently working on, or have recently completed? Do any focus on historically marginalized communities?
- What financial barriers do you or your clients face most frequently when securing funding for clean energy projects?

- What has been your experience working with NYGB? Have NYGB activities benefited/challenged your work on environmental equity and clean energy and do you have thoughts on how NYGB could better support your work in the future?
- Are there unmet needs that State government lending or financial products could address for your clean energy projects?

While NYGB did not hold a formal roundtable to solicit feedback from this group of stakeholders, the recommendations provided will undergo the same evaluation methodology as those raised during formal roundtables. Some key takeaways raised during the one-on-one discussions include:

- Enhancing the clarity and display of reporting requirements would aid the NYGB application process.
- NYSEERDA, NYS Homes and Community Renewal (“HCR”), and NYC Department of Housing Preservation and Development (“HPD”) should promote NYGB as a financing pathway in a similar manner as other competitive programs, such as Buildings of Excellence.
- For broader State agencies involved in climate equity work, it would be beneficial to offer programs that are designed from an affordability perspective, in addition to an energy perspective.
- Assemble and publicize best practices, in addition to financing options, that can serve as a pathway for building owners to meet LL97 requirements.
- Greater alignment and collaboration on matching NYGB’s product offerings with incentives and other financings offered by other NYSEERDA programs.
- Consider a centralized low-cost product that is simplified and streamlined, a retail mechanism for households to electrify.

This type of feedback will be evaluated utilizing a similar approach to NYGB’s roundtable feedback, as discussed in the following section.

3. Evaluation of Feedback

While stakeholder engagement has been a core component of NYGB since inception, the outreach and engagement facilitated in preparation for this Petition was particularly valuable and illuminating. NYGB intends to conduct similar outreach sessions annually going forward to regularly take the pulse of market participants and to determine where financing gaps continue to persist across market segments.¹²⁴ NYGB will also continue to refine an internal methodology to objectively evaluate recommendations received throughout this process. This methodology will ultimately allow NYGB to determine whether specific recommendations are expected to have a high or low degree of market impact, and whether the opportunity would be an appropriate role for NYGB or better suited for another agency, authority, or entity.

For the purposes of this Petition, NYGB has identified several broad themes which have informed the proposed modifications and reaffirmation requests in the following main section of this Petition and are expected to improve NYGB’s overall ability to drive market transformation. In addition, NYGB has identified more specific recommendations which it could act upon in this Plan Year. Those have been reflected in NYGB’s Annual Plan for 2024-2025, filed on July 1, 2024.¹²⁵

An illustrative sample of the recommendations received during each roundtable can be found in Appendix B: Roundtable Recommendations.

¹²⁴ At a minimum, NYGB has committed to establishing an annual Climate Equity-focused roundtable in its 2024 – 25 Annual Business Plan, pg. 15-16. <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={20426F90-0000-C21E-9759-9164EC09EE9F}>

¹²⁵ NYGB Annual Business Plan 2024 – 25: <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={20426F90-0000-C21E-9759-9164EC09EE9F}>.

a) Recommended Feedback Evaluation Methodology

As demonstrated in the highly specified, informative recommendations highlighted throughout this targeted stakeholder outreach effort, NYGB was satisfied by the outcomes of the various roundtables and complementary discussions, and will continue to engage relevant market participants and stakeholders in this manner going forward. NYGB intends to solicit this type of feedback on a regular, likely annual, basis so as to inform specific product offerings or other financing solutions to be developed, promoted and provided in a given Plan Year. Meanwhile, many recommendations have merit and are important considerations for NYS, although may not be an appropriate fit for NYGB. In those cases, NYGB will work with relevant parties, especially fellow NYSEERDA programs that will benefit from insights gathered by participating in these roundtables, to determine how best to navigate those recommendations to ensure such feedback is acted upon in a meaningful capacity.

In terms of evaluating the recommendations as they are solicited, NYGB will, in alignment with a potentially enhanced Advisory Committee (see Reaffirmation Requests section below), as well as NYSEERDA's Business Performance Management team, develop a framework to determine the benefits and risks of pursuing certain opportunities. The ultimate goal of the roundtables and pursual of specific recommendations will be to enable NYGB to drive greater degrees of market transformation, and to more readily and proactively address specific financing gaps in New York's clean energy marketplace. As such, the recommendation evaluation methodology will consider who would benefit most significantly from such recommendations (i.e., would a high-velocity turnover product be of greater benefit to the clean energy marketplace versus a longer-term product which might have significant benefit to a particular project and/or developer but likely inhibit NYGB's ability to recycle its capital into additional projects), along with multiple other factors.

This evaluation approach for stakeholder feedback will likely include several components:

- 1) Identification of specific factors to be considered within specific market segments (pricing, for example, could have a more significant role in some market segments than others);
- 2) Specific evaluation criteria against such factors – i.e., when evaluating the tradeoff of a longer vs short term duration product – consider risk, ability to recycle capital, # of expected beneficiaries, etc.;
- 3) Potential weighting of each category – i.e., in some market segments, evaluating whether one factor weighs more heavily than others.

Any recommendation evaluation methodology will be reflected in a future Metrics, Reporting, and Evaluation Plan, which is expected to be updated and re-filed in alignment with DPS guidance.

IV. Proposed Modifications and Reaffirmation Requests

As discussed, preparation of this Petition filing included analyzing where modifications to NYGB's mission, mandate or other programmatic parameters might enable NYGB to operate more effectively and/or in better alignment with the CLCPA. As a result of its analysis, NYGB has identified three key modifications regarding its investment targets and operations for which it seeks PSC approval, as well as several elements of its operations that NYGB requests that the PSC reaffirm. These modification and reaffirmation requests are proposed and explained in the subsequent subsections. Overall, NYGB believes the proposed modifications and reaffirmations will enable NYGB to better support NYS climate goals, measure and articulate its financial market transformation, and increase the impact of NYS ratepayer dollars.

1. Proposed Modification Requests

a) Disadvantaged Communities

Proposed modification: NYGB will increase its target of investing in projects that benefit disadvantaged communities from 35% to 40% of NYGB capital, to be achieved by fiscal year end 2031 and maintained thereafter. This 40% minimum DAC target would be on a portfolio-wide, cumulative basis for all investments since January 1, 2020, and investment benefits accounting would be in alignment with the NYS DAC Investment Benefits and Reporting Guidance and DPS' CE-12 CLCPA-Disadvantaged Communities Investment and Benefits Reporting Guidance.¹²⁶ NYGB's reporting will transparently reflect progress towards this updated financial commitment.

As of June 30, 2024, 34% of NYGB's committed investments since January 1, 2020 have supported projects benefiting disadvantaged communities, bringing NYGB close to achieving the minimum requirement set in the CEF Modification Order of investing 35% of its capital (after 2019 and by the end of 2025) in projects benefiting disadvantaged communities. For the purposes of setting a DAC-specific investment target through fiscal 2031, NYGB recommends the Commission increase the target to 40% of NYGB's capital benefitting disadvantaged communities to align with the goal currently set for the State in the CLCPA. Further, NYGB recommends that progress toward this target be measured on a portfolio-wide, cumulative basis from January 1, 2020 to align with the effective date and intent of the CLCPA and to account for the inherently long time horizons (loan availability periods typically last 18-24 months or longer) in infrastructure investing. Given that i) investments can cut across or extend beyond performance periods and ii) NYGB is now self-sufficient and recycling ratepayer funds, a long-term view of NYGB's investment activity provides the most holistic and accurate representation of its performance in benefitting disadvantaged communities.

To achieve this goal of 40%, NYGB will continue to evaluate the efficacy of developing additional concessionary lending strategies that are responsive to stakeholder feedback received throughout this Petition review process as well as future input from stakeholders. At this time NYGB does not recommend designating a certain portion of its funds to be allocated for concessionary lending versus market rate lending beyond the \$250.0M (or 25% of its initial capitalization) that has already been designated for the CDF.¹²⁷ NYGB believes it is best positioned to deliver on its broader goals of driving market transformation across all sectors of NYS clean energy and sustainable infrastructure markets while simultaneously delivering benefits to residents of disadvantaged communities when it has the flexibility to structure transactions to meet the market's wide-ranging needs. This is supported by the fact that to date, NYGB has achieved the bulk of its progress toward its DAC goals through market rate lending activities across various sectors outside of NYGB's concessionary CDF product, which given its recent launch in 2023 only accounts for a small portion of NYGB's DAC progress to date. By pursuing this goal of 40% of investments benefiting disadvantaged communities, NYGB will effectively have a guardrail to ensure a significant portion of its capital delivers benefits to residents of disadvantaged communities while maintaining the flexibility to design financial interventions that NYGB and its broader stakeholders believe can be most transformative to the NYS clean energy economy.

¹²⁶ Historically NYGB has reported its progress toward its DAC investment target based on committed investments as opposed to deployed funds; however, going forward NYGB will report its progress towards its DAC target based on deployed funds. Other than the inevitable time lag between the commitment and deployment of funds given the long-term nature of infrastructure investing, NYGB does not anticipate a significant difference in the percentage of its investments that benefit disadvantaged communities over time, given that NYGB is legally obligated to fulfil its investment commitments subject to its loan agreements.

¹²⁷ NYGB expects the \$250.0M of the CDF, which has a term length of up to 12 years, to be fully committed before the beginning of the 2026-2030 period, meaning 25% of NYGB's initial capitalization will be committed on a concessionary basis throughout the entire 2026-2030 period and beyond.

b) Sector-specific Investment Targets

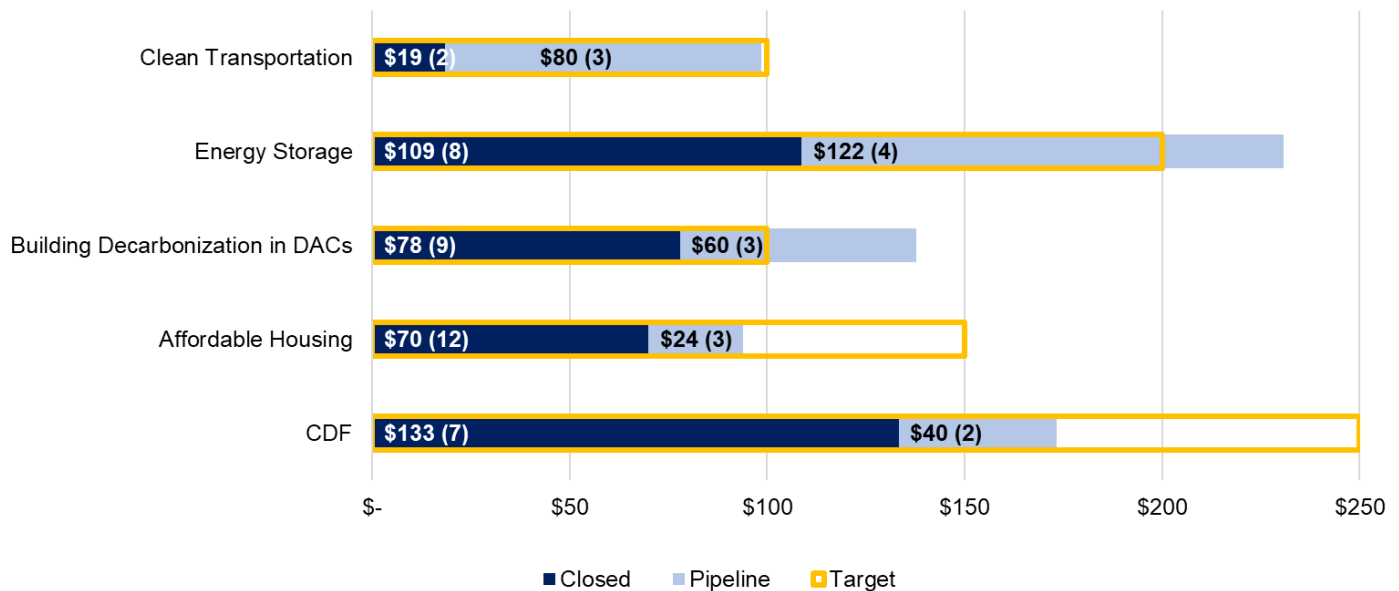
Proposed Modification: In addition to the updated minimum DAC target, NYGB will plan for at least the following sector-specific investment commitment targets, from January 1, 2026 to fiscal year end 2031:

- \$250.0M committed, or a minimum of 25 transactions closed, for building decarbonization investments
 - o 40% of this target (\$100.0M or a minimum of 10 transactions) would be dedicated to supporting building decarbonization measures in affordable housing
- \$150.0M committed, or a minimum of 10 transactions closed, for clean transportation investments
- \$250.0M committed, or a minimum of 10 transactions closed, for energy storage investments
- \$350.0M committed, or a minimum of 20 transactions closed, for clean energy generation investments

For the 2020 – 2025 time period, NYGB has been pursuing the following four sector-specific investment commitment targets, the first three of which were established in the 2021 CEF Modification Order and the fourth added by NYGB:

- \$150.0M for clean energy improvements in affordable housing properties
- \$100.0M for clean transportation businesses to locate or expand in New York
- \$200.0M for energy storage related investments
- \$100.0M for building decarbonization projects located in disadvantaged communities (established by NYGB)

NYGB’s progress toward each of these commitments can be seen below while additional context regarding its challenges and successes in each of these sectors is previously highlighted in the Investment Portfolio Performance section.



*Data labels represent: dollar amount in \$MM (number of transactions).

NYGB will continue to make progress toward each of these sector-specific investment commitment targets and seek to achieve them by December 31, 2025. After that point, NYGB recommends sunsetting the current 2020 - 2025 targets and replacing them with new, modified targets for the 2026 – 2030 period.¹²⁸ Overall, the new proposed 2026 – 2030 targets represent priority areas similar to those of the current targets, however there are four main differences for how the new investment commitment targets are structured:

- 1) NYGB is proposing to continue using capital commitment targets while adding an alternate target of a minimum number of transactions closed for each priority market segment. This is to help capture the value of smaller scale transactions that may be very impactful while also seeking to avoid the potential unintended consequences of prioritizing transactions with larger check sizes. In an ideal scenario, NYGB would meet both targets for each sector, but believes these modified targets better capture the nuances of NYGB's work.
 - a. Upon achieving either the target capital commitment or the minimum number of transactions in a specific sector, NYGB would continue to track further progress toward both targets while assessing where its capital is most needed.
- 2) NYGB is simplifying its previously overlapping “building decarbonization in disadvantaged communities” and affordable housing targets by having a general building decarbonization target that contains a sub-target dedicated to affordable housing.
- 3) NYGB proposes including transactions that support clean energy generation projects as a priority target to account for clean energy transactions experiencing financing gaps, such as smaller-scale transactions or projects that primarily serve low-income earning New Yorkers and/or disadvantaged communities.
- 4) There is not a CDF-specific investment commitment target proposed for 2026-2030. This is because the current timeframe for the CDF is 2023-2027, and NYGB expects the \$250.0M allocated to the CDF to be fully committed well before the end of that time period, meaning CDF borrowers will be using that capital through the 2026-2030 time period and likely beyond. As previously mentioned in the Climate Equity section above, NYGB will continue to evaluate the efficacy of developing additional concessionary lending strategies to support its 40% disadvantaged communities investment target.

The transaction count and dollar targets proposed for each sector for the 2026-2030 period were informed by several factors, including analyses of NYGB's activity in these sectors to date, NYGB's internal operations, stakeholder feedback regarding existing or expected financing gaps, and assumptions about future market conditions. For example, as detailed in the Market Context sections earlier in this document, clean transportation and energy storage (particularly, standalone storage) are both emerging sectors in NYS that are relatively new to NYGB's portfolio, with two transactions from each sector being reflected toward its respective investment target in the 2020-2025 period. Based on the evolving nature and growing market demand of these sectors, the proposed number of transactions (10 transactions for each sector) are much greater than what NYGB has closed thus far with dollar targets based on a range of expected transaction sizes.

Building decarbonization is a sector in which NYGB has had more investment experience, with 30 total transactions closed since 2020, of which 14 contribute to the affordable housing and/or building decarbonization in DAC targets. Building decarbonization, including affordable housing, remains a priority area for NYGB; and the new proposed targets reflect the financing gaps in the building sector that NYGB is best positioned to address, e.g., shorter-term pre-development and construction loans that enable NYGB to more quickly recycle its capital and effectively manage its liquidity.

¹²⁸ NYGB's 2020-2025 investment commitment targets are set to be achieved by the end of the calendar year 2025, however going forward NYGB recommends aligning the 2026-2030 targets with NYGB's fiscal years. Thus, investment commitments that occur between January 1, 2026 and March 31, 2031 would count toward NYGB's 2026-2030 targets to avoid any gaps following the end of the 2025 targets and align with the end of the 2030-2031 fiscal year.

Finally, although Clean Energy Generation (solar, wind, and hydro) is relatively more mature from a technology perspective, the proposed targets were set based on the size and quantity of financing gaps observed for particular use cases or uses of proceeds such as i) those focused on serving low-to-moderate income or disadvantaged communities, (ii) smaller sized transactions, (iii) tax or other incentive bridge loans or (iv) pre-construction loan such as those funding interconnection deposits. Given that these are examples of smaller or more specific financing gaps within the clean energy generation sector, the numbers presented below in Table 6 for this sector reflect how NYGB expects to remain active in this space going forward but not to the same levels as during the 2020-2025 period.

While the four sectors highlighted above—clean transportation, energy storage, building decarbonization (including affordable housing), and clean energy generation—are expected to capture approximately 70-75% of NYGB’s investment activity during the 2026-2030 period, these assumptions also account for NYGB investing in other or new sectors as financing gaps, technologies, and policies inevitably evolve. Sectors or technologies in which NYGB has yet to invest significant capital to date but could occur in 2026-2030 include, but are not limited to, clean energy supply chain (e.g., port infrastructure supporting off-shore wind, non-battery equipment financing), thermal energy networks or other geothermal use cases, green hydrogen, low-carbon fuels, and/or grid-enhancing technologies.

Below is a table summarizing the 2020-2025 and 2026-2030 investment targets for ease of comparison.

Table 6: 2020-2025 Investments vs. Proposed 2026-2030 Investment Targets

| 2020 – 2025 Investment Targets | | | | Proposed 2026 – 2030 Investment Targets | | |
|--|-------------------------------|--|--------------------------------|--|-------------------------------|----------------------------------|
| <u>Sector/focus area</u> | <u>% or \$ commitment (s)</u> | <u># of transactions to date¹²⁹</u> | <u>\$ transactions to date</u> | <u>Sector/focus area</u> | <u>% or \$ commitment (s)</u> | <u>Minimum # of transactions</u> |
| Portfolio-wide DAC | 35% | N/A | \$445.5M | Portfolio-wide DAC | 40% | N/A |
| Clean Transportation | \$100.0M | 2 | \$18.5M | Clean Transportation | \$150.0M | 10 |
| Energy Storage¹³⁰ | \$200.0M | 8 | \$108.7M | Energy Storage | \$250.0M | 10 |
| Affordable Housing | \$150.0M | 12 | \$70.0M | Building Decarbonization (Sub-target: Affordable Housing) | \$250.0M | 25 |
| Building Decarbonization in DACs | \$100.0M | 9 | \$77.9M | | (\$100.0M) | (10) |
| Clean Energy Generation¹³¹ | - | 34 | \$605.5M | Clean Energy Generation | \$350.0M | 20 |

¹²⁹ The number and amount of transactions to date are as of June 30, 2024.

¹³⁰ Of the 8 transactions totaling \$109M, 2 (\$50M) are associated with standalone storage transactions, and the remaining are associated with solar plus storage transactions.

¹³¹ Although there is no existing investment target for Clean Energy Generation, it is included in the 2020-2025 portion of the table for the ease of referencing as comparison to the proposed 2026-2030 target for Clean Energy Generation. Solar and wind transactions are included in the 2020-2025 figures.

c) Evaluation, Measurement, and Verification

Proposed Modification: NYGB will fund future evaluation, measurement, and verification (“EM&V”) work from the proceeds of NYGB’s earned income. Within the Initial Capitalization Order, the Commission allocated \$4M of ratepayer capital for EM&V activities associated with the portfolio. NYGB will maintain and evolve its commitment to rigorous EM&V in accordance with previous Commission Order requirements and proposes to use earned income to fund this activity beyond the initial \$4M ratepayer funding allocation.

(1) Overview of EM&V work to-date

In the Initial Capitalization Order, the Commission recognized the need to establish appropriate metrics for evaluating NYGB’s performance, as had been done historically for other clean energy programs. The Commission looked to NYSERDA to design metrics to help the Commission and the public to evaluate how well NYGB is achieving its goals, including market transformation goals. Robust EM&V activities have been established in accordance with the Initial Capitalization Order, and will continue in the next phase of NYGB investment. The scope of existing EM&V activities is as defined in the NY Green Bank Metrics, Reporting and Evaluation Plan and includes the following:

- **Market Evaluation:** Assessment of financial market transformation begins with the development of a logic model indicating the expected market outcomes for NYGB transactions, and is conducted through periodic longitudinal studies to assess progress of market transformation indicators. The portfolio-level longitudinal market transformation studies also include more focused assessments of these indicators of change within major markets addressed by NYGB, such as building decarbonization, solar PV and clean transportation. Market evaluation has also included market/investment specific case studies to further highlight NYGB’s role in changing markets.
- **Process Evaluation:** Examining the efficiency and effectiveness of NYGB operations is accomplished through periodic process evaluation efforts that are designed to focus where they can be most informative to NYGB operations and strategies. Process evaluation questions may be coordinated with other inquiries, such as interviews conducted for market evaluations, where possible.
- **Impact Evaluation:** Validation of the overall energy and environmental impacts resulting from NYGB investments has been executed in conjunction with other NYSERDA programs and processes where project-level data is sufficient to support the analysis. Impact evaluation follows industry standard methods defined by the International Performance Measurement & Verification Protocol (IPMVP), which may include retrofit isolation metering and monitoring, whole building consumption analysis and other approaches.

EM&V has been funded at a level of \$4.0 million since NYGB inception, with these funds supporting work by external contractors and NYSERDA staff managing the overall evaluation effort.

All of the existing above-described major evaluation activities will continue in the next phase of NYGB. Key modifications will enhance the overall EM&V effort and provide greater insight to NYGB’s approach and accomplishments, particularly in terms of financial market transformation.

(2) Evolution of EM&V activities

The main evolution to NYGB EM&V activities will involve expanding and enhancing the evaluation of financial market transformation. Market transformation is traditionally difficult to measure, perhaps even more so for dynamic financial markets that span various end use sectors. Evidence has been established regarding NYGB’s impact and influence on financing markets through recent longitudinal market evaluations and case studies, and these activities will be maintained going forward. Experience to date has identified certain areas of expansion and enhancement to the data and methods used that will help further define NYGB’s transformative

effects. Working with NYSERDA's Business Performance Management unit and independent evaluation contractors, NYGB will evolve its approach accordingly, as defined below. Some of these enhancements are well into development and can be implemented in the current round of funding.

For purposes of transparency, NYSERDA is sharing the types of new or enhanced metrics it will be incorporating into analysis and reporting processes to more effectively measure and quantify NYGB's impact on financial market transformation in NYS. These new or enhanced metrics will be further detailed in NYGB's next iteration of the Metrics, Reporting & Evaluation Plan Version 3.1 in accordance with the changes described in this section. Existing metrics included in longitudinal market evaluation studies, i.e., those shown in Figure 5, are expected to be maintained with the recommended metrics enhancements below representing beneficial additions that will further understanding of NYGB market transformation progress. Existing process and impact evaluation will also be maintained.

- *Align EM&V with new NYGB activities to drive greater degrees of market transformation; identify and add needed metrics to understand these effects.* EM&V will be in alignment with a potentially enhanced Advisory Committee and other input to enhance and focus NYGB market transformation efforts, develop additional metrics, as needed, to characterize the benefits of pursuing certain opportunities. EM&V expertise will be engaged early in the process of identifying and deciding on any new investment parameters to promote market transformation so that any adjustment to metrics can be readily identified and availability of the needed data to assess the metric can be confirmed. Any additional metrics identified will be integrated into NYGB's future evaluation and reporting processes where appropriate.
- *Enhance understanding of financial market transformation by adding a new, quantitative analysis of clean energy capital inflows to New York State.* It is well-known that evaluation of market transformation involves triangulation of data from multiple sources to understand overall market change and possible relationship to the interventions that have occurred. There is generally no single source that provides the answer, but rather multiple sources that can point to the directionality and magnitude of change and help establish the degree of influence an intervention has had. In the spirit of using all available data to expand understanding of NYGB market impact, NYGB proposes that one indication of its impact on financial market transformation is an observable increase in capital inflow (investment) in NYS within "comparable" companies in the various end use sectors served by NYGB financing. Using public and commercially available data on companies and investments, any capital inflow to the sector and comparable companies will be quantified before and after NYGB transactions to understand the nature and magnitude of change. This capital inflow analysis may be conducted on an annual basis with results further vetted and reported through periodic market transformation evaluation studies.
- *Enhance understanding of financial market transformation by adding a new analysis of NYGB proposals and transactions.* NYGB proposes to more deeply analyze its existing data to better understand the state of market transformation. While the final set of indicators is still being determined, possible indicators could include the number of bilateral *versus* syndicated transactions and whether NYGB is the first-in or follower lender filling a gap in each (which provides an indication of the level of risk). Another potential indicator could be developed around whether price compression has occurred in certain transaction types as a result of NYGB's CDF lending activity. Across the many proposals and funded transactions, a data set will be established and quantitatively analyzed to add to the understanding of market situation and level of transformation. This proposal/transaction data analysis

may be conducted on an annual basis with results further vetted and reported through periodic market transformation evaluation studies.

All of these enhancements to market transformation evaluation will aid in understanding NYGB's contribution to additional benefits, beyond what would have occurred in markets naturally. NYGB anticipates that the cadence of market evaluations will generally be maintained as in the past, and that the enhanced metrics outlined above would be incorporated into those periodic studies.

Based on both experience to date and analysis of future needs, NYGB will allocate additional, incremental EM&V budget beyond the \$4.0M authorized from ratepayer capitalization. The additional, incremental EM&V funding will come out of NYGB proceeds. The EM&V budget will support ongoing and enhanced evaluation efforts, which will last through 2033 to capture final outcomes during the funding period. The EM&V budget will continue to cover EM&V contractor/consultant study costs, any cost to procure data/resources needed to conduct the EM&V activities outlined herein, as well as NYSEERDA staff costs to serve an independent role managing the EM&V effort. The EM&V budget will be re-assessed periodically, based on need, however is expected to be sized similar to historic levels. NYGB recommends that the new EM&V budget be defined and adjusted as needed in future iterations of the Metrics, Reporting & Evaluation Plan.

2. Reaffirmation Requests

This section highlights elements of NYGB for which it is seeking the PSC to reaffirm that have been established in previous orders. By maintaining the following structures or components previously authorized by the PSC, NYGB believes it has the appropriate amount of direction and flexibility necessary to ensure NYGB is able to continue identifying and alleviating funding gaps to accelerate clean energy investments, combat climate change, and equitably deliver benefits to all New Yorkers.

a) Advisory Committee

Reaffirmation Request: Maintain the selection process and role of NYGB's Advisory Committee as described in NYGB's Organizational Plan that was filed on February 18, 2014 in response to the PSC's directive in the Initial Capitalization Order.

(1) Overview

In the Initial Capitalization Order, the PSC required the establishment of an Advisory Committee to advise NYGB and NYSEERDA and provide non-binding guidance. NYGB was directed to utilize the expertise and skills of its staff, as well as those of professionals outside of the organization, during its initial setup phase, and the Advisory Committee was to be comprised of a diverse group of senior professionals, prominent in their fields, which would deliver guidance on an ongoing basis to the NYGB President and management team regarding matters pertinent to NYGB's business. Such matters included "business planning, strategy, business development, market intelligence and product development."¹³² The Advisory Committee members were to be selected by the NYGB President, who would seek input and recommendations from industry professionals when considering and reviewing candidates, and selected members would be reviewed and confirmed by NYSEERDA's President and CEO. In this section, NYGB provides an overview of the specific roles the Advisory Committee has played to date, along with the desired intention for the updated focus of this group.

(2) History of Advisory Committee

NYGB's Advisory Committee played a key role as the team was developing initial business plans, market engagement strategies, products and structures, promotional activities and overall organizational structures.

¹³² New York Green Bank Organizational Plan, filed February 18, 2014, pgs. 6-7:
<https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B643D622C-6E1F-4BD1-A489-DD146F26E8A4%7D>.

The Advisory Committee's feedback and input into early founding materials and concepts are still reflected in NYGB's focus and model today, and their respective networks and validation within the sustainable infrastructure marketplace supported NYGB's establishment as a credible market participant, capable of delivering high quality loan products via processes and structures that were similar to those in the private market.

NYGB's Advisory Committee has played several roles over the years, including support developing various liquidity strategies, acting as the including comprising NYGB's scoring committee for RFP 9: Strategic Advisory and Capital Arranger Services, and advising on specific matters related to NYGB's portfolio monetization facilitated with Bank of America in 2021. In NYGB's 2021-2022 Plan Year, it expanded its Advisory Committee from its initial founding group to include two new members with specific expertise in affordable housing and developing projects that benefit disadvantaged communities and access to environmental justice communities.

Over the years NYGB has evolved from a concept, as a newly capitalized division of NYSEERDA, to a credible, well-established lending entity with a strong track record and more clearly defined processes and procedures. In tandem, the needs and expectations of its Advisory Committee have also evolved. Where this group initially provided insight into foundational materials and concepts, today, they serve as more of an informal review body. Regular meetings are comprised of updates from NYGB across all functions of the organization, with limited opportunities for specific work streams or engagement opportunities given the evolved nature of the fund. As such, for the purposes of transparency, NYGB is sharing the intended shift in focus of this group so as to best support NYGB in achieving its mission.

(3) Advisory Committee Evolution

While NYGB's Advisory Committee was imperative in NYGB's earliest days and helped NYGB navigate some of its earliest challenges and achieve key milestones, as a now-decade-plus-old institution this group and its general review function no longer serves either party to an optimal degree. Today, semi-annual meetings between NYGB and its Advisory Committee are comprised of programmatic and organizational updates across the function of the fund, with limited opportunities for deep engagement from the Advisory Committee. Therefore, while staying within the original guidelines set forth in NYGB's Organizational Plan previously filed with the Commission,¹³³ NYGB will update the focus of the Advisory Committee to helping NYGB advance financial market transformation.

NYGB intends for the evolved Advisory Committee to support NYGB on a regular, annual basis as part of its annual Roundtable series in identifying and validating specific funding gaps for NYGB to address, along with evaluating recommendations provided by industry stakeholders to help inform NYGB's annual strategic priorities. Advisory Committee meetings will continue to occur with a cadence of two per year, but the content will shift from broad organizational updates to more targeted purposes. This might include a meeting in the spring to review NYGB's recommended approach to prioritizing and addressing key market barriers which have been identified through the annual roundtable series, and a meeting in the fall which would focus on preparing for future roundtables and to receive a mid-year update on NYGB's progress in addressing previously identified funding gaps for that year. This group will also provide a sounding board in regard to NYGB's proposed market transformation evaluation metrics and methods to assess recommendations raised during roundtable sessions, in collaboration with NYSEERDA's Business Performance Management team.

In terms of composition, NYGB seeks to expand the Advisory Committee from its current six members to include up to ten. Members will continue to be representatives with complementary expertise and insight, including but not limited to energy and environmental issues (preferably focused on the clean energy sector),

¹³³ New York Green Bank Organization Plan, filed February 18, 2014:
<https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={20426F90-0000-C21E-9759-9164EC09EE9F}>.

project development and finance, banking, capital and financial markets, portfolio management, new venture management and business development, utility and related infrastructure, engineering and technology, real estate (including affordable housing), and environmental justice and advocacy.¹³⁴

NYGB continues to benefit from having access to its current Advisory Committee members, a group of seasoned professionals with extensive knowledge of NYGB, its history and ambitions. As this group is potentially redesigned so as to more directly focus on current market needs and financing gaps, it is firmly desired that all, or at a minimum most, of the current Advisory Committee members will take on new roles in this re-focused advisory group.

b) Core Operational Elements

Below are reaffirmation requests of core operational or administrative elements that NYGB is seeking to maintain without any adjustments as they all are integral to NYGB’s ability to execute and report on its activities in their current format or function.

Reaffirmation Requests:

- Authorize the **continued use of previously allocated ratepayer collections** to NYGB for the 2026-2030 period.
- **Maintain funding for the Administration and Cost Recovery Fee** and authorize use of NYGB revenue for these purposes.
- **Maintain NYGB’s three minimum investment criteria by which it will evaluate all potential financial transactions:**
 - (i) Transactions will have expected financial returns such that the revenues of NYGB on a portfolio basis will be in excess of operating expenses and expected portfolio losses;¹³⁵
 - (ii) Transactions will be expected to contribute to financial market transformation in terms of scale, improved private sector participation, level of awareness and confidence in clean energy investments, and/or other aspects of market transformation; and
 - (iii) 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 clean energy policies and laws.¹³⁶
- **Maintain current reporting structure and cadence:**
 - **The Metrics, Reporting, and Evaluation Plan** will continue to be updated as needed, in collaboration with Department of Public Service (“DPS”) Staff and other NYSERDA programs, and be kept available on NYGB’s website.
 - **Quarterly Metrics Reports** will continue to be filed within 60 days after the end of each quarter.
 - **The Annual Plan** will continue to be filed by July 1 of the Plan Year.¹³⁷ The Annual Plan will describe, in a reasonable level of detail, the activities that NYGB intends to undertake over the planning period and will summarize actions taken by NYGB in the prior Plan Year.
 - **Annual Audited Financial Statements and Annual Financial Metrics Reports** for the previous Plan Year will continue to be filed by July 1.

¹³⁴ Description of representative fields of Advisory Committee from NYGB’s Operational Summary document <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={678E584F-43D6-4D14-88FC-4F81F19C3199}>.

¹³⁵ Please the note inclusion of the words “...operating expenses and...” to clarify that NYGB has historically taken (and will continue take) into consideration the need for NYGB to cover its *operating expenses* as well as its expected portfolio losses in order to maintain self-sufficiency.

¹³⁶ For the avoidance of doubt, please note the inclusion of the words “...and laws.” to reflect that NYGB operates and will continue to operate in a manner compliant with State policies *and law*.

¹³⁷ NYGB’s Plan Year is the same as its Fiscal Year, meaning it starts on April 1 and ends March 31 for any given Plan Year period.

- **An Organizational Plan** will continue to be publicly posted.
- **Commission Briefings** on the status of NYGB will be held annually.

V. Future Funding: NYGB’s Continued Self-Sufficiency

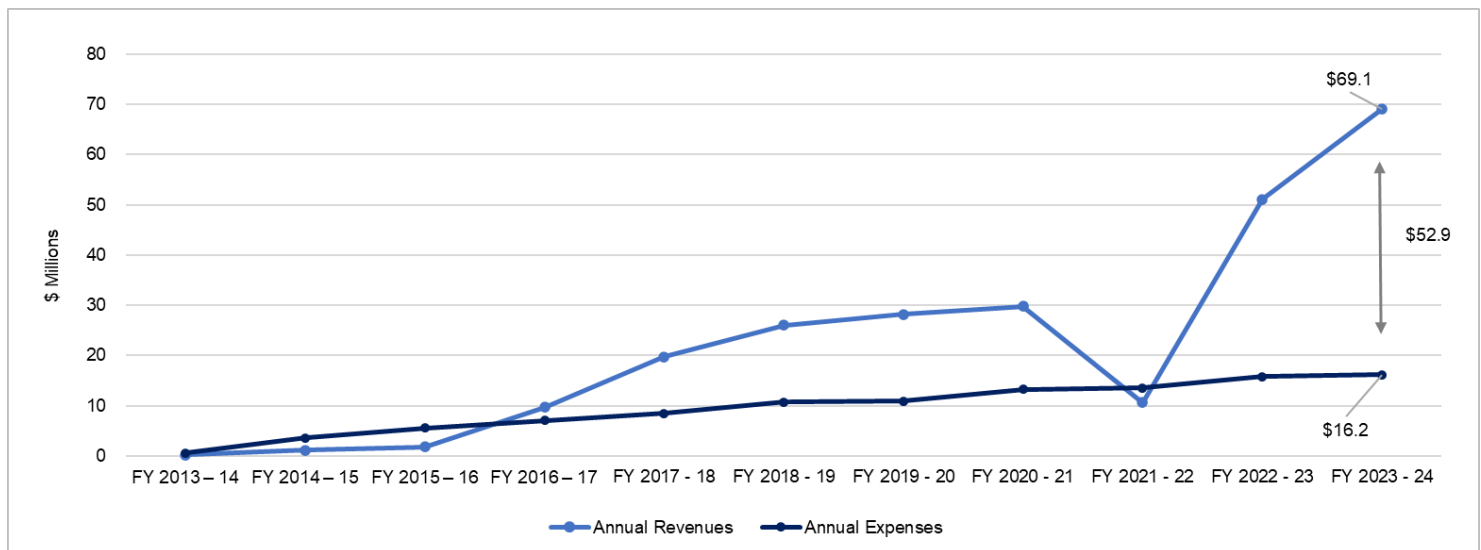
NYGB has experienced continued revenue growth, earning \$246.3M in cumulative revenue since inception, which has supported NYGB’s operating expenses and allowed it to continue recycling its capital without additional administrative cost to ratepayers. Consistent with this approach, NYGB is not requesting any additional ratepayer funds for administrative or evaluation costs to support its activities in 2026-2030. As such, NYSERDA is not including proposed expenditure budget tables by year, as is often the situation when requesting additional ratepayer funds.

In terms of its expenses, NYGB proposes to continue its existing administrative support model, wherein it utilizes NYSERDA shared services for most administrative functions and in turn leverages economies of scale to hold down operating costs. With this arrangement, indirect costs will continue to be allocated based on NYGB division staffing as a relative share of the NYSERDA total. A description of the EM&V activities that NYSERDA intends to engage in was described in the previous section of the Petition.

1. Earned Income

NYGB’s cumulative net profit since inception through the end of FY 2023-24 is \$142.0M. All NYGB’s earned income is recycled and deployed into new sustainable infrastructure investments in furtherance of its mission. To complement *Figure 4: Cumulative Revenues vs Cumulative Expenses* previously shared this Petition, Figure 10 below shows NYGB’s yearly revenues and expenses since inception.

Figure 10: Yearly Revenues vs. Expenses Since Inception (\$M)¹³⁸



NYGB’s net profits have enabled it to offer small as well as large concessionary financing products such as its \$250.0M CDF initiative while maintaining its self-sufficiency status (i.e., covering NYGB’s operating costs and anticipated losses). As previously described Section IV.1.b (Proposed Modification Requests: Disadvantaged

¹³⁸ Sale of loans and receivables to a third party resulted in a decrease in revenues for FY 2021-2022, while providing NYGB with additional liquidity to continue to deliver on its mandate. Additionally, the larger increases in revenue in FY 2022-2023 and FY 2023-2024 are primarily due to an increase in the average capital deployed and a higher interest rate environment compared to previous fiscal years.

Communities), NYGB will continue to explore new opportunities to advance NYS equity and climate goals through a variety of strategies. NYGB's ability to maintain self-sufficiency and expand its capital base helps ensure it is well positioned to offer a wide range of financial products that support those goals over the long term.

2. Liquidity Management

Like any investment fund, liquidity management is an essential component of NYGB's strategy to achieve its mission, and NYGB considers its liquidity needs and outlook in structuring and monitoring individual transactions and managing its portfolio as a whole. NYGB closely monitors its liquidity position and access to capital to ensure it will not have an obligation to fund or a financial or operating expenditure that it cannot meet. Therefore, NYGB applies a prudent monitoring and estimation approach as it relates to expected cash inflows and outflows such as estimated costs of operations, draws, repayments, losses and liquidity events. In this regard, NYGB continually reviews its overall capital and liquidity position by performing routine forward-looking analysis of sources and uses of its funds and continues to evaluate alternatives to enhance liquidity such as external credit facilities, internal bridging solutions, and loan sales or securitizations.

In addition to the active monitoring of near-term liquidity needs (typically a weekly analysis of capital demands projected on a two-week forward-looking basis), NYGB maintains a comprehensive longer-term (seven-year) financial model with the ability to sensitize critical variables, including but not limited to underlying base rate assumptions, timing of drawdowns, unscheduled paydowns, etc. The longer-term financial projections incorporate the draw and repayment terms of all investments in NYGB's portfolio, all pipeline transactions with reasonable visibility on draw and repayment terms and projected estimates of future investment activities. The longer-term nature of the projections is designed to provide NYGB with advance awareness of any potential liquidity constraints with sufficient time to identify, evaluate, negotiate and execute a liquidity solution or combination of solutions while avoiding any interruption in NYGB's core activities. When evaluating available solutions, NYGB considers several factors, including but not limited to, timing, flexibility, cost, certainty of execution and overall implications for addressing NYGB's mission and other prioritized objectives. Although several of these factors, such as cost, may not be known with precision in advance of an actual negotiation and execution phase, NYGB actively monitors market conditions and transaction activity to inform its liquidity analyses. Key elements of NYGB's liquidity management process are represented in Figure 11 below.

Figure 11: Elements of NYGB’s Liquidity Management Process

| Elements of NYGB's Liquidity Management Process | |
|---|----------------------------------|
| Routine Liquidity Analysis Frequency: | |
| Detailed inflow / outflow liquidity analysis (2-week projection period) | Weekly |
| Comprehensive NYGB financial model update | Quarterly |
| Comprehensive NYGB financial model assumption review | Quarterly |
| Events triggering more frequent / ad hoc model update | |
| Projected cash balance below target minimum in next 12~18 months | Ad hoc / as needed |
| Material transaction development (e.g., unexpected payoff) | Upon occurrence / as needed |
| Evaluation and/or execution of liquidity solution | Ad hoc / as needed |
| Material market development (e.g., change in reference rates) | Upon occurrence / as needed |
| Key thresholds | |
| Target minimum cash balance (if no liquidity support in place) | \$100M |
| Target minimum cash balance (if liquidity support in place) | \$100M less the support capacity |
| Commitments greater than net asset value (NAV) | Allowed subject to min. cash |
| Expected execution timing for liquidity solutions | |
| Internal bridging solutions | ~3 months |
| External credit support | 3~6 months |
| Investment sale / securitization / similar | ~6 months |
| Other (e.g. grants or alternative capital) | subject to nature |

In 2021, NYGB demonstrated its ability to effectively source, evaluate and execute a liquidity solution as well as the market receptivity to the types of assets NYGB originates and manages by conducting an extensive market sounding to source interest in NYGB assets. This effort resulted in a \$314.0M portfolio monetization with Bank of America. In 2022, to further enhance liquidity management flexibility, NYGB proactively released an RFP to create a pool of pre-qualified institutional investors that would be eligible to competitively bid for and purchase NYGB-originated loans and investments. Within a year, NYGB had approved more than a dozen qualifying parties into the pool, with several of these parties continuing to express interest in purchasing NYGB assets.

With each pursued liquidity strategy, NYGB has had an opportunity to refine and improve its methodologies going forward. As a fund, NYGB will always pursue the liquidity option that optimizes costs and flexibility and has already begun to proactively pursue various options to ensure that forecasted liquidity needs can be addressed in a timely manner to avoid interruption of key investment goals or processes. NYGB and NYSERDA will continue to explore various paths to manage evolving cashflow needs using sources that do not rely on additional ratepayer funds.

3. GGRF / Planned use of Federal Funds

On April 4, 2024, the U.S. Environmental Protection Agency (“EPA”) announced awards for the National Clean Investment Fund (“NCIF”) under the Greenhouse Gas Reduction Fund. Among the awardees the Coalition for Green Capital (“CGC”) was awarded \$5.0B. NYGB is one of eighteen named subgrantees under the CGC award. However, due to an ongoing dispute between an unsuccessful NCIF applicant and the EPA, it is uncertain what amount NYGB may receive as a subgrantee and when it would receive it.

Furthermore, terms of NYGB’s subgrant have not been finalized as of the date of this report although it is known that many federal conditions will apply that may limit the use and/or application of the funds. Nevertheless, NYGB anticipates deploying any funds it may receive in a manner consistent with its mission, NYS climate goals, and fully compliant with EPA, CGC and any other applicable requirements. NYGB will be prepared to provide more detail through an appropriate platform regarding its use of NCIF funds as awards are finalized.

VI. Appendices

1. Appendix A: Additional Items raised during NYGB Stakeholder Exercise, Reflected in Appendix C of the 2021 Amended Annual Plan

Items below were raised during NYGB's Stakeholder Engagement exercise reflected in Appendix C of the 2021 Amended Annual Plan.

- **NYGB Products and Terms** – during the Stakeholder Engagement exercise, participants were asked to identify specific gaps in clean energy and sustainable infrastructure financing in general, as well as specific financing terms that could enable additional investment in projects benefitting disadvantaged communities. Feedback from stakeholders generally fell into the following categories:
 - o *Financing Gaps and Barriers* – some of the issues identified by stakeholders were addressed and reflected in Indicative Term Sheets published within RFP 18.
 - o *Alignment of NYGB Products and Terms with DAC Market Needs* – many of these issues, including loan size, fees and expenses, tenor, etc. were addressed through NYGB's CDF.
 - o *NYGB Investment Criteria* – Multiple stakeholders indicated an interest in NYGB revising its theory of market transformation, and/or prioritizing benefits delivered to disadvantaged communities, over its current investment criteria. NYGB introduced the Community Decarbonization Fund, which introduced concessionary lending for a segment of the clean energy market, which will likely remain underserved by traditional private investors.
- **Operational Considerations** – this category reflects feedback related to NYGB's operations and procedures and how NYGB might streamline and simplify certain processes. Feedback from stakeholders generally fell into the following categories:
 - o *Coordination with Complex and Confusing Local and State Funding Programs* – Stakeholders described challenges related to applying for and complying with multiple local/city and state-backed programs and funding sources managed by different agencies operating under different rules and procedures. Stakeholders provided a few specific examples of how these complexities can make DAC support even more challenging to provide. NYGB is seeking input from the Equity Roundtable on ways it can help address these identified challenges (either directly or through intra-agency collaboration).
 - o *Market Approach* – Stakeholders noted that RFPs were not necessarily the most effective way to generate interest in DAC investment opportunities, that there was a need for non-housing financing support (small businesses, community facilities, etc.), and that workforce and wealth building considerations for disadvantaged communities should be incorporated, along with prioritizing working with organizations led by and aiming to deliver benefits to Black, Indigenous, and People of Color (“BIPOC”) stakeholders. NYGB is seeking input from the Equity Roundtable on ways it can help address these considerations.
- **Public Disclosure** – Stakeholders proposed that NYGB enhance its reporting, communications, and overall transparency, especially regarding energy efficiency and electrification, including adopting specific metrics related to measuring and reporting the impact of its DAC-related projects. NYGB has moved forward with some of these suggestions and through, dialogue with NYSERDA colleagues responsible for impact reporting, is continuing to seek ways to enhance the value and transparency of its impact and metrics reporting.

2. Appendix B: Roundtable Recommendations

During the roundtable, several recommendations were provided to inform potential roles for NYGB or other State mechanisms which could help alleviate the issues referenced in the section above, and/or accelerate the positive market trends.

An illustrative sample of such recommendations are listed below, with more detail regarding NYGB's evaluation of these issues and relevant next steps included in the Evaluation of Feedback section.

| Topic | Issue | Recommendation |
|--|---|---|
| <i>Accessibility and Equity</i> | | |
| Long-term, low-cost capital | There is a large need for more low-cost, long-term financing to support building decarbonization measures in the affordable housing sector | Can NYGB pair what it currently offers with long-term capital (e.g. 30-year loans)? |
| Workforce and contractor development | CDF borrowers are offering contractor loans which are limited by CDF eligible project types | Can other resources be made available to support contractor loans for projects beyond CDF eligible projects? |
| Overly complex application process | NYGB's RFP, while improved, continues to be structured in a way that is overly burdensome for potential applicants. | Can NYGB somehow make it easier to apply for its capital – potentially transitioning the formal RFP to more of a back-office contract, while enabling a more straightforward initial application process? |
| Equipment financing opportunities | Clean energy and energy efficiency equipment for DAC/LMI constituents can prove even more costly if purchased in smaller orders | Can NYGB consider a bulk purchasing program for clean energy and efficiency equipment for DAC/LMI constituents? |
| <i>Clean Transportation</i> | | |
| Evaluating and determining residual value | There is a clear need for real-time data monitoring or other creative approaches regarding the performance, condition, and degradation of EVs / batteries. | Is there a financial product that NYGB can offer to help address this? |
| Merchant Risk | Lack of long-term agreements in place for public charging units. Could NYGB get comfortable with merchant revenue projections? | Is there a way for NYGB to get comfortable with merchant revenue projections? |
| Incentives and project costs, timing issue | Timing mismatch with available incentives, and upfront make-ready project costs – issue of initial costs (purchasing land, digging up infrastructure) with uncertainty of how much charging sites will be needed/used | Could NYGB offer an accessible pre-dev product to support site upgrades, potentially interconnection costs to the grid, in a way that's tailored to the knowledge level and needs of fleet owners? |
| Tax credit utilization | How to maximize tax credits – can NYGB do a full assessment of tax credits and think of potential | Can NYGB own vehicles so that we can claim the tax credits and then lease out the vehicles |

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| | products that would be a fit for NYGB. | alongside private capital – would use sale leaseback structure |
| Energy Storage | | |
| High cost and delays re non-battery equipment | Non battery equipment is expensive and timelines for equipment procurement can be excessively long | Develop a bulk equipment program and explore equipment financing for developers |
| Merchant risk issues | Challenges of demand uncertainty related to merchant risk on storage revenue streams | Can NYGB consider structures in order to maximize leverage for projects with merchant revenue streams |
| Predevelopment timing | Issue of generally painstakingly long pre-development process, which ties up developer capital | Can NYGB continue to innovate on financial products to help support developers during this time, and/or gain interconnection financing adoption? |
| Building Decarbonization | | |
| Cost of debt and projects | Higher costs are providing challenges throughout the entire project development projects | Is there a solution NYGB can develop to help address this? Debt, workforce and materials/equipment costs remain elevated, preventing some projects from penciling without grant or concessionary capital support |
| Projects not eligible for CDF remain capital constrained | CDF is attractive/concessionary but those funds have significant requirements. | Is there “Something in between” CDF and market rate lending NYGB can do (ex. Near market, comparable to Community Reinvestment Act [“CRA”] 3.5%). Is there a middle ground for projects that don’t check all the CDF boxes and aren’t ready for market rate lending |
| Senior lender / mortgage holder challenges | Obtaining senior lender/mortgage holder consent on any issue, particularly Commercial Property Assessed Clean Energy (“CPACE”), is challenging in current market | Is there a role for NYGB to play to help expand/encourage senior lender consent? |
| Financial Institutions | | |
| Pre development costs | Most difficult lending stage, requiring significant working capital needs and relatively higher risk positions (so capital is scarce and expensive) | Potential bridge-to-perm solution (currently offered by private equity investors, rather than banks). Potential bridge-to-tax equity product Product to help cover selling, general, and administrative expenses (“SG&A”) (request from smaller teams with no balance sheet) |
| Small investment size | Smaller developers lack access to capital, lenders unwilling to write smaller checks. In addition, regulatory hurdles present challenges for smaller regional banks in the post Signature bank/Silicon Valley Bank environment | Can NYGB offer a programmatic approach to finance pre-notice to proceed (“pre-NTP”) projects? |

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| <p>Limited familiarity with NYS programs and incentives</p> | <p>NYS incentive programs not fully understood, nor fully perceived to address all risk. Limited comfort with entire NYS portfolios due to VDER cash flow and broader political uncertainties</p> | <p>Develop solutions to provide credit committees with greater transparency into NYS incentives and programs (Storage Roadmap, Solar for All, VDER, etc.)</p> |
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