



# NY Green Bank

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Business Plan

Case 13-M-0412

June 2015

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## 1.0 Objective, Introduction & Background

### 1.1 Objective of this Business Plan

NY Green Bank (“NYGB”) has been established as a public-private partnership. It is a state-sponsored specialty finance entity designed to address barriers and gaps in clean energy financing markets - and to transform those markets as part of the integrated strategic statewide energy plan. NYGB’s operations are informed by extensive market interactions and outreach with public and private stakeholders, producing a view on current clean energy markets within New York State that continues to evolve alongside the changing drivers and needs of those markets.

NYGB prepared its initial business plan in June 2014 (the “Initial Business Plan”)<sup>1</sup>. As part of its annual analysis and review process, and in accordance with the Commission order issued on December 19, 2013 (the “Initial Capitalization Order”)<sup>2</sup>, NYGB updates its plan document yearly. The objective of this annual business plan (the “Plan”) is to capture NYGB’s experience and performance over the prior year as well as to identify and discuss key issues expected to arise for NYGB going forward.

This Plan provides the road map for NYGB’s operations through June 2016 and addresses key components of the business including a review of progress and operations, mission, market-size and benefits, external drivers, product strategy and offerings, positioning and origination, capital, risk management and oversight, metrics and evaluation, organization and resource requirements, and Plan implementation. This Plan is dynamic in nature and will continuously develop over time, remaining coordinated with, and relevant to, the markets in which NYGB operates. In particular, consistent with NYGB’s mission to address clean energy market barriers and financing gaps, the Plan will evolve as certain such barriers and gaps are addressed while others remain or emerge over time.

In partnering closely with the private sector and leveraging substantial amounts of private capital, NYGB represents an innovative business model as an instrument of government policy, but aligned with broader energy market initiatives within the State and at the forefront of comparable institutions nationally and internationally. The balance of this Section 1.0 describes the rationale for, and background to, NYGB’s establishment, as well as its role as part of the State’s integrated energy strategy.

### 1.2 NYGB Rationale

NYGB was announced by Governor Cuomo in the State of the State address in January 2013 as a key energy priority for New York State: a large-scale specialty finance entity capable of using limited public dollars to mobilize multiples of private capital investment in New York’s attractive and growing clean energy markets.

The overall energy strategy in New York State is aimed at taking the clean energy financing markets to the next level in achieving significant scale and momentum. Using a portion of the State’s annual clean energy funding to capitalize NYGB over a defined period, NYGB deploys these monies in collaboration with private sector clients and partners in areas where market barriers and financing gaps exist, stimulating growth. As NYGB works where clean energy deployment demand is constrained by the lack of available financing, NYGB has the ability to charge for its capital and so generate assets that earn market rates of return. Since NYGB provides financial products with defined repayment periods, NYGB also has the ability to recycle its capital - all as part of an integrated plan to provide better returns to ratepayers in the transformation of New York State’s energy assets.

NYGB uses existing and widely accepted financing structures to accelerate deployment of eligible and approved technologies<sup>3</sup>, leverage private capital, and promote self-sustaining markets by alleviating market

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<sup>1</sup> New York Green Bank Business Plan, Case 13-M-0412, June 2014.

<sup>2</sup> “Order Establishing New York Green Bank and Providing Initial Capitalization”, issued and effective December 19, 2013, see Ordering Clause 5.

<sup>3</sup> Commercially proven technologies are preferred, although NYGB may consider demonstrably commercial-ready technologies on a case-by-case basis.

barriers and financing gaps, and harnessing capital markets. NYGB enables private sector financing to reach markets currently on the frontier of commercial clean energy opportunities at scale, increasing the penetration of eligible and approved clean energy technologies in New York State.

### 1.3 NYGB Establishment

As part of the initial implementation of NYGB, the New York State Energy Research and Development Authority (“NYSERDA”) retained consulting firm Booz & Co. (“Booz”) to perform a market assessment of existing impediments to clean energy financing, identify financial products to address those issues, analyze the potential impacts of NYGB financing, and to make recommendations on the organizational structure of NYGB. NYSERDA staff worked with Booz to complete the research and analysis, contributing information and expertise with respect to New York State energy policies, programs, and markets. This resulted in the publicly released Final Report dated September 3, 2013 (the “Market Study”).

The Market Study identified and analyzed market barriers and financing gaps that NYGB is uniquely positioned to address in accelerating the development of clean energy capital markets. The Market Study highlighted key advantages provided by the NYGB financing model, including improved leverage of private investments, and the ability to redeploy capital as NYGB’s finance offerings generate fees and interest and as principal is repaid. The Market Study concluded that “[a]fter conducting market interviews, concept testing workshops, industry research, and financial modeling, Booz has found that the New York Green Bank is a viable endeavor that will ... add significant value to New York State’s clean energy portfolio”<sup>4</sup>.

Supported by the conclusions of the market assessment, NYSERDA filed a petition with the New York State Public Service Commission (the “Commission”) on September 9, 2013 (the “NYGB Initial Petition”)<sup>5</sup>. During fall 2013, NYSERDA engaged stakeholders about the proposed creation of NYGB. NYSERDA and the Commission received numerous public comments from New York’s business community, financial institutions, environmental advocates, public sector institutions and other parties in support of NYGB.

The Commission approved the initial capitalization of NYGB in the Initial Capitalization Order. NYGB released a broad market solicitation for investment proposals on February 5, 2014 (the “Investment RFP”)<sup>6</sup>. The solicitation is ongoing and is a primary intake mechanism for NYGB to source transactions. It encourages private sector capital providers and other clean energy industry participants to propose clean energy investments that, with the participation of NYGB, are expected to facilitate greater deployment of qualifying technologies in projects across New York State than might otherwise be feasible in current commercial markets. Following the release of the Investment RFP, NYGB began putting in place key staff and in summer 2014 completed the Initial Business Plan and established key risk metrics.

### 1.4 NYGB as a Key Component of the State’s Integrated Energy Strategy

#### 1.4.1 *Reforming the Energy Vision*

A comprehensive set of initiatives is being deployed in New York State as part of the signature energy policy: Reforming the Energy Vision (“REV”). As one of its key initiatives, REV calls for NYGB to unlock and mobilize private sector capital for greater investment into New York’s clean energy economy. REV recognizes the importance of attracting the substantial quantity of private capital that will be needed to fund the transition to a clean energy future. Market response to date (discussed in [Section 2.0](#)) confirms that NYGB represents a powerful and necessary policy lever to mobilize this required private capital investment.

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<sup>4</sup> Market Study, page 2.

<sup>5</sup> “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.

<sup>6</sup> “Clean Energy Financing Arrangements - Request for Proposals (RFP) No. 1” available at <http://greenbank.ny.gov/Partnering-With-Us/Propose-an-Investment>.

#### 1.4.2 Reforming the Energy Vision - Regulatory Proceeding

A fundamental underpinning for the evolution of New York's energy system is the REV regulatory proceeding (the "REV Proceeding")<sup>7</sup>. The Commission initiated the REV Proceeding "to consider a substantial transformation of electric utility practices to improve system efficiency, empower customer choice, and encourage greater penetration of clean generation and efficiency technologies"<sup>8</sup>. The REV Proceeding seeks to promote more efficient use of energy, deeper penetration of renewable energy resources, and wider deployment of other distributed energy resources ("DERs"; e.g., microgrids, on-site power supplies and storage).

In commencing the REV Proceeding, the Commission identified six key policy outcomes<sup>9</sup>:

- (a) Enhanced customer knowledge and tools that will support effective management of their total energy bill;
- (b) Market animation and leverage of ratepayer contributions;
- (c) System-wide efficiency;
- (d) Fuel and resource diversity;
- (e) System reliability and resiliency; and
- (f) Reduction of carbon emissions.

In both policy and execution there is high congruence between the REV Proceeding and NYGB objectives and targeted outcomes. While the REV Proceeding forms the foundation of New York's transforming energy system and markets, NYGB has been designed as a specific lever to apply to the clean energy financing markets, working in partnership with the private sector. Throughout the REV Proceeding documentation, it is acknowledged that financing the full spectrum of clean energy opportunities in New York that will be needed to achieve the overarching REV objectives remains challenging due to existing market barriers and financing gaps. If those barriers and gaps remain unaddressed, the ability of the market to respond to the REV opportunities will be limited by the availability, complexity and cost of financing. The creation and operation of NYGB, consistent with its mission, is an integral tool to address these issues now, rather than waiting until the inability to finance becomes a major constraint<sup>10</sup>.

#### 1.4.3 Clean Energy Fund

The Clean Energy Fund ("CEF") proceeding<sup>11</sup> is a key pillar of the REV strategy designed to support and effectuate the guiding principles of the REV Proceeding and enable greater scale and penetration of clean energy over the long term. CEF seeks to "ensure continuity of the State's clean energy programs, and to enhance program efficiency and leverage, while also managing their transition from an almost-exclusive reliance on ratepayer surcharges to tariff and sustainable market-based clean energy activities, such as those envisioned under the REV framework"<sup>12</sup>.

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<sup>7</sup> "Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, pursuant to an Order Instituting Proceeding" issued and effective April 25, 2014, Case 14-M-0101.

<sup>8</sup> *Ibid*, page 5.

<sup>9</sup> *Ibid*, page 2.

<sup>10</sup> "Financing barriers can be addressed, in the first instance, by improving markets to make product offerings and payback periods more predictable. Utilities and/or third party aggregators can also be better positioned to take risk than individual customers are. Even with best efforts by regulators and utilities, the novelty of the products and markets will result in disparities between what deserves to be financed and what is available in the financial markets. [NYGB] is expected to play a crucial role in bridging these gaps and enabling customers to realize the values inherent in new markets", "Reforming the Energy Vision - NYS Department of Public Service Staff Report and Proposal", dated April 24, 2014, Case 14-M-0101, page 37.

<sup>11</sup> "Proceeding on Motion of the Commission to Consider a Clean Energy Fund" issued and effective May 8, 2014; Clean Energy Fund Proposal, Case 14-M-0094.

<sup>12</sup> *Ibid*, page 2.

NYGB's key objectives and methods of operation align closely with REV and CEF goals, including:

- (a) The priority of clean energy outcomes (including greenhouse gas ("GHG") reductions) and market transformation;
- (b) The focus on upstream action (i.e., NYGB operates in wholesale markets to facilitate investment at scale in the clean energy sector by NYGB's clients and partners);
- (c) The leveraging of public-private partnership resources and approaches to mobilize private capital and recycle public capital through successive clean energy investments in the State, and a continual emphasis on pushing outward the frontiers of commercial market participation;
- (d) Being self-sustaining beyond its State-derived capitalization; and
- (e) Entering into investments and transactions upon commercial terms, thereby facilitating development of commercial financing mechanisms to support increased deployment of clean energy resources throughout the State.

As a division of NYSERDA, NYGB represents a seamless complement to NYSERDA's anticipated activities under the CEF. NYGB's focus is accelerating clean energy deployment in the State through action in the wholesale financing and capital markets, while NYSERDA's other programs are active in different segments through the market development, innovation and research and NY-Sun initiatives, among others.

#### *1.4.4 Summary*

A fully operational NYGB is both consistent with, and necessary to achieve, the REV objectives. NYGB aims to:

- (a) Deliver consistency and synergies with REV and REV's core themes. NYGB investment activity helps build the clean energy asset base in the State allowing investments to be the product of market forces while effectively leveraging private sector participation;
- (b) Be complementary to the REV and CEF fundamental philosophy because NYGB is wholly directed towards animating the clean energy financing markets;
- (c) Advance economic development as an integral component of New York State's long-term commitment and holistic approach to strengthening the clean energy economy. This will directly support private sector clients' and partners' confidence that New York is a strong market in which to actively participate over a reasonable investment horizon; and
- (d) Make its contribution to all current initiatives fitting together to animate and buttress the marketplace and so facilitate an increase in the opportunities and benefits for all stakeholders, where the result can be expected to be greater than the sum of the parts.

NYGB will also strive to coordinate and work opportunistically with key entities relevant to pursuing REV objectives and policy goals including NYSERDA, the New York Power Authority ("NYPA"), the New York State Economic Development Corporation ("NYSEDC"), other State and local agencies as well as utilities and other similar market actors to maximize clean energy outcomes in New York. Through agency coordination and inherent synergies with these key players, NYGB's ability to play a role in crafting far-reaching and multi-party solutions to address clean energy market barriers and gaps may be heightened in certain circumstances. The ideal outcome is for dollars put to work by the State through its various energy and financing initiatives to be coordinated in pursuit of the optimal result: breaking down all barriers as necessary to achieve a synergistic outcome with more expansive impact.



## 2.0 Review of Progress & Operations

Over the past year, NYGB has executed on all the necessary aspects of starting up an investment business from scratch and created all the fundamental underpinnings to the organization. In the Initial Capitalization Order the Commission outlined certain requirements as part of NYGB's establishment, all of which have been accomplished. In addition, since NYGB opened for business, key organizational elements have been created and put in place on schedule to ensure that, as NYGB's investment activities increase, the proper risk and operational frameworks exist and are fully functional. The NYGB team has been, and remains, intently focused on the critical activities and necessary controls for an investment management organization of this type.

### 2.1 Major Milestones

NYGB's achievements during the past year include:

- (a) Strategy & Business Planning Process & Filings Complete: Undertook an in-depth strategy and business planning process addressing the period February 2014 through June 2015 as reflected in the Initial Business Plan that was completed and submitted to the Commission on June 19, 2014, pursuant to the Initial Capitalization Order.
- (b) Metrics Plan Developed & Finalized: Developed, in consultation with the New York State Department of Public Service ("DPS"), the specific and detailed Metrics, Reporting & Evaluation Plan (the "Metrics Plan") including public review and input. This process was completed with a filing with the Commission on June 19, 2014<sup>13</sup>.
- (c) Public Reports Filed: Filed quarterly reports under the Metrics Plan with the Commission as required on November 14, 2014, February 17, 2015 and May 15, 2015.
- (d) Pre-Transaction Requirements Met & Certifications Made: Provided certifications to the Commission<sup>14</sup> confirming the development, formation and implementation of the following pre-transaction requirements (as required by the Initial Capitalization Order<sup>15</sup>):
  - i. Investment proposal evaluation, selection criteria and procedures;
  - ii. Investment criteria, including the minimum investment criteria prescribed by the Commission in the Initial Capitalization Order;
  - iii. Investment analysis and approval methodologies and procedures;
  - iv. Risk management protocols; and
  - v. Establishment of the Investment & Risk Committee (the "IRC").
- (e) Staffing: Hired senior leadership with deep experience in banking, energy finance and project development and put in place a supporting team, in aggregate providing critical transaction, operations, finance, legal, risk, compliance and administration skills and expertise to NYGB.
- (f) Advisory Committee Established & Operational: Identified and appointed a well-qualified external Advisory Committee to provide insights, guidance and advice to NYGB as it executes upon its mission. Advisory Committee meetings are held at least twice a year. The identities and biographies of the Advisory Committee members appear on the NYGB website, together with a link to the Advisory Committee Charter, Conflicts & Confidentiality Policies<sup>16</sup>.

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<sup>13</sup> Case 13-M-0412.

<sup>14</sup> Letter from Alfred Griffin, President of NYGB, to the Hon. Kathleen H. Burgess, Secretary to the Commission, filed on July 24, 2014 and available at <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=13-m-0412&submit=Search+by+Case+Number>.

<sup>15</sup> Ordering Clause 4, page 24.

<sup>16</sup> See <http://greenbank.ny.gov/About/Advisory-Committee>.

- (g) Created and Updated NYGB Information Resources: Revised and continuously improved all external affairs materials (including the NYGB website) to ensure coherence and clarity in communicating NYGB's mission, activities and terms of engagement to actual and potential clients and partners, colleagues, collaborators and all other stakeholders, so that all understand the nature of the opportunity, what NYGB is designed to achieve and how to engage with NYGB.
- (h) Professional Advisors: Engaged qualified legal and technical advisors based on competitive procurement processes. These advisors are being actively utilized to leverage and assist NYGB's investment structuring, diligence, negotiation and execution activities in a timely and efficient manner.
- (i) Implemented Processes to Manage all Incoming Investment Proposals & Built a Robust Pipeline: Continually received, reviewed, evaluated and responded to investment proposals pursuant to standardized procedures to ensure that all interested parties have the opportunity to present their proposals to NYGB. NYGB continues to originate a significant volume of transactions and progress towards closings, including as discussed in Section 2.2.
- (j) Process to Complete Capitalization: Filed the "Petition to Complete Capitalization"<sup>17</sup> in fall 2014 (the "Petition to Complete Capitalization"). Initial public comments were submitted by January 12, 2015 and NYGB and NYSEERDA filed the "Reply Comments - Petition to Complete Capitalization" with the Commission on February 2, 2015<sup>18</sup> (the "Reply Comments"). Strong support for NYGB's complete capitalization has been demonstrated by a wide variety of private sector stakeholders.
- (k) International Green Bank Network: Organized, hosted and ran the Second Annual International Green Bank Summit in New York City on November 17 - 18, 2014 attended by ~40 participants from green financing organizations from across the U.S. and the globe, together with ~40 representatives of private sector clients and partners. The summit focused on the ways in which green financing organizations are catalyzing greater deployment of clean energy technologies and mobilization of private capital, while identifying and leveraging best practices.

NYGB continues to collaborate with its international colleagues in an effort to advance a formal green bank network. The UK Green Investment Bank, on behalf of an international network of national and state green financing entities, is leading the development of web-based databases and other resources to act as a hub and information source for staff from the various institutions and, potentially, a wider range of stakeholders (i.e., investors, developers, policymakers, etc.). This platform will promote efficiency by facilitating the leveraging and replication of transaction models that have proven effective, as well as sharing best practices among global colleagues - all helping NYGB to learn directly from the experience of others. The official launch of this effort occurred in April 2015 and New York State's participation, through NYGB, is one aspect of its leadership in the global "green financing" markets.

- (l) Critical Infrastructure & Processes: Released "RFP No. 3: Fund Administrator, Loan/Investment Servicing and Custodial Services" on March 16, 2015 (the "Fund Administration RFP") to retain independent and comprehensive services to help meet and manage NYGB's middle and back-office needs consistent with industry best practices for comparable funds (in both the private and public sectors). At the date of this Plan, NYGB is reviewing and evaluating proposals received and expects to make a decision on the preferred service provider during the summer. In addition, NYGB has continued to refine its risk and compliance tools and frameworks with the development of transaction documentation guidelines, a proposal database and internal audit principles.
- (m) Contribution to Standardization & Best Practices: As part of its investment process and in response to market needs, NYGB continues to develop model business-level and legal term sheets and legal documentation that it expects in time will provide increased transaction efficiencies, demonstrate best practices and contribute to the standardization of the newer types of transactions and asset classes on which NYGB's activities are focused.

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<sup>17</sup> Dated October 30, 2014, Case 13-M-0412.

<sup>18</sup> "Reply Comments - Petition to Complete Capitalization", dated February 2, 2015, Case 13-M-0412.

- (n) Continued Business Development Efforts: Ongoing origination meetings with existing and potential clients and partners in connection with projects consistent with NYGB's mission and investment requirements (including as set out in the Investment RFP). These interactions are key to the flow of market feedback that informs NYGB's allocation of resources and commitment and deployment of funds in the most effective ways.

Since inception, NYGB team members have presented at over 120 conferences across the State and elsewhere (including many keynote addresses, panel presentations, roundtables and webinars). This conference participation represents NYGB raising awareness of over 8,300 individuals attending 46 of those events and an unknown number of attendees at the remaining 75 events - suggesting a consolidated audience reached of more than 10,000 people. During the same period, around 130 articles focused on NYGB have been published nationally and internationally.

In addition to its extensive outreach activities, NYGB has also established various channels for "inbound" communications from interested parties, including through its website and [info@greenbank.ny.gov](mailto:info@greenbank.ny.gov) inbox. Since inception, NYGB has received over 300 email inquiries to which it has responded.

On a daily basis, NYGB team members are engaged with existing participants in the clean energy markets, including parties that do not yet have broadly established businesses in New York but are motivated to consider new investments by the State's integrated energy strategy and its emphasis on clean technology market development. These meetings are full information exchanges about existing and planned initiatives within the context of NYGB's mission and investment processes, aimed at expanding both understanding of NYGB's investment roles and interest in collaboration with NYGB.

In aggregate, NYGB's business development activities have generated a significant pipeline of transaction opportunities, including as discussed in Section 2.2.

- (o) Series of Statewide Meetings: In the first half of 2015, NYGB developed and hosted a series of meetings in seven locations around the State (Huntington, Long Island; Syracuse; Rochester; Buffalo; Tupper Lake; Albany; and Binghamton) that have resulted in the creation of new and growing stakeholder groups for NYGB. These roundtable meetings served as an opportunity to provide an overview of NYGB while learning first-hand the types of projects that are of interest in specific regions, along with the market barriers and financing gaps that are preventing those types of projects from reaching completion. The highly targeted meeting participants - totaling over 100 - included representatives from community and economic development agencies, industry representatives (e.g., installers, agriculture, real estate, engineers, marketing, university) as well as private sector capital providers. NYGB continues to work with coordinators in each of the seven locations and to perpetuate such outreach efforts across the State.
- (p) Other Stakeholder Outreach: Ongoing informational and other meetings and interactions with stakeholders, including industry groups, regulators, environmental, economic justice and consumer advocates, the Regional Greenhouse Gas Initiative ("RGGI") and others have been held so that all parties remain updated on NYGB activities, opportunities and outcomes. NYGB will continue to engage with stakeholder groups both proactively and upon request.

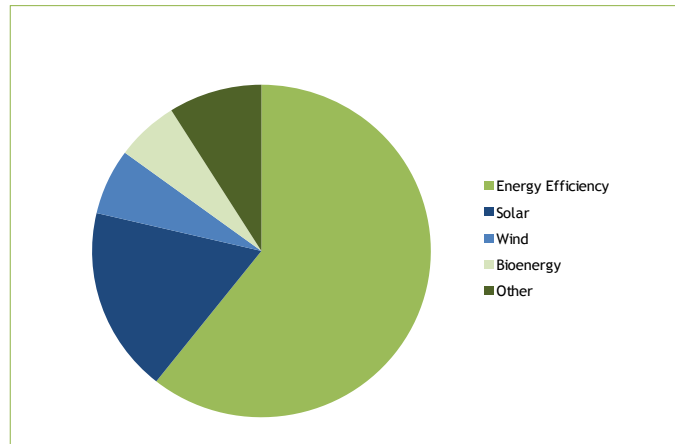
NYGB approaches its outreach and stakeholder engagement on a dual track. First, it focuses on engaging private sector capital providers in NYGB's work strategies, since this group played a critical role in both NYGB's establishment (issuing constructive public comments and working closely with leadership to determine how this type of entity could most effectively mobilize available capital), and in developing NYGB's early product types and pricing. Secondly, NYGB focuses on outreach to the general public and engaging a wider group of stakeholders. This involves collaborating with outreach partners at NYSERDA (including through its well-established network of Regional Outreach Coordinators), utilities, and Empire State Development.

## 2.2 Market Response & Investment Experience

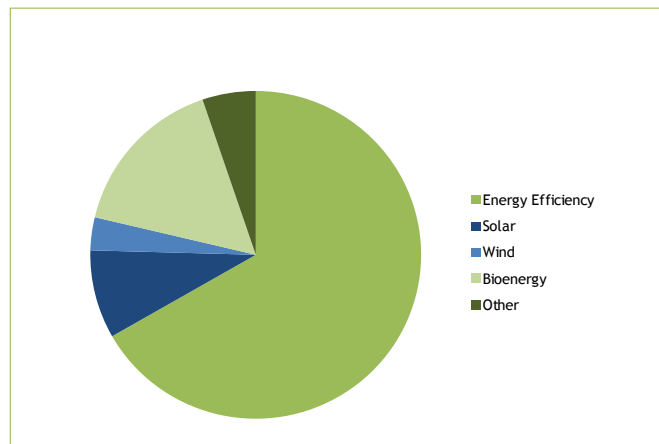
### 2.2.1 Market Response

Demand for NYGB investments and participation in transactions, in dollar terms and by technology, is evidenced by proposals that have been submitted to NYGB in response to its Investment RFP. To date<sup>19</sup>, proposals requesting over \$734.0 million of NYGB capital have been received, in connection with total proposed clean energy investments in New York State of an estimated \$3.0 billion<sup>20</sup> (including private sector capital; see [Exhibit 1](#) and [Exhibit 2](#)).

*Exhibit 1. \$734.0 Million Requested NYGB Investment to Date (By Technology)*



*Exhibit 2. ~\$3.0 Billion Proposed Total Investments to Date (By Technology)<sup>21</sup>*



The investment proposals received to date are diverse by end-use customer segmentation, location throughout the State and technology as shown in [Exhibit 3](#)<sup>22</sup>.

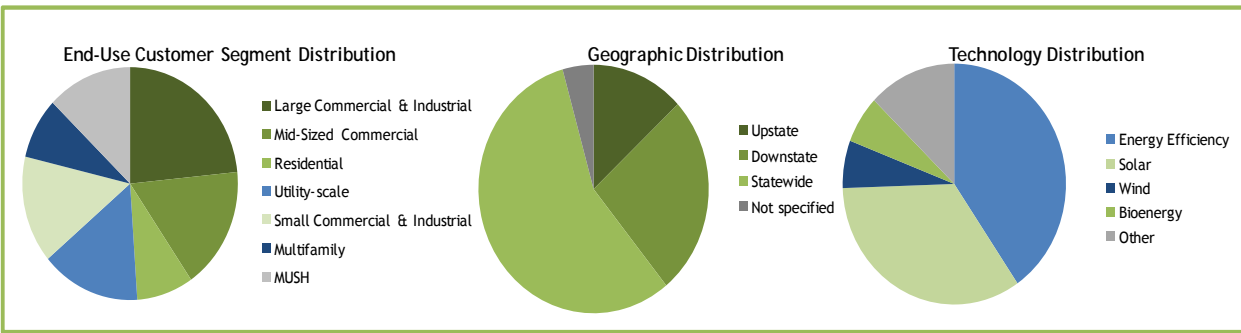
<sup>19</sup> From NYGB inception through and including June 12, 2015.

<sup>20</sup> 67% of the proposals received by NYGB identify the total project value of the investments proposed at \$2.3 billion. While 33% of the proposals received do not specify the total project value of investments, these have been estimated at just under \$1.0 billion.

<sup>21</sup> Represents total proposed investment amount, including private capital.

<sup>22</sup> Based on the number of proposals received.

Exhibit 3. Diversity of Investment Proposals Received



2.2.2 Investment Experience

NYGB actively and consistently works on a large volume of potential transactions within a clear investment framework. As a steward of significant public funds, NYGB has established and adheres to certain investment and business standards - consistent with prudent practice in comparable industries and institutions. These practices include extensive risk management principles and are reflected in all aspects of NYGB's business - as described in NYGB's prior filings with the Commission, including the Initial Business Plan and the Petition to Complete Capitalization (together with the corresponding Reply Comments). Over the past year, NYGB established processes to originate, review, evaluate, perform due diligence with respect to, underwrite, assess risk and mitigants, structure, negotiate, document and close investments. These processes are consistently applied to the many transactions that are being advanced at any one time. Each transaction and step of the process represents substantial work by NYGB's clients, partners and team members.

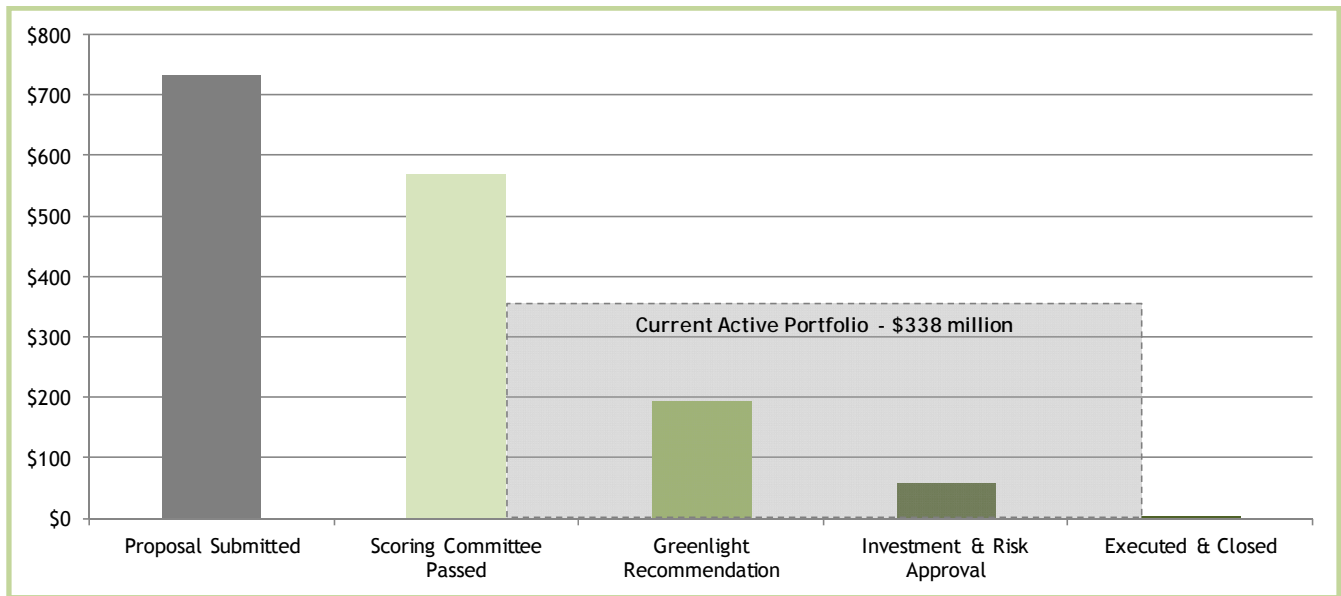
Control frameworks and guidelines are critical in the advancement of NYGB's activities. NYGB employs various organizational layers and bodies in the origination, evaluation and response to investment opportunities. In addition to NYGB bringing to bear the experience of its staff and management, input, review and approvals are required at prescribed points in the investment cycle from internal committees that evaluate and "greenlight" proposals, as well as from the IRC in transaction approvals. These oversight and governance structures are discussed in [Section 8.4](#).

Each proposed investment is categorized by the stage it has reached in NYGB's internal processes. NYGB currently has an active portfolio of \$338.0 million<sup>23</sup>. A summary of transaction status is included in [Exhibit 4](#), showing:

- (a) \$734.0 million of proposals have been received and evaluated by NYGB's Scoring Committee;
- (b) \$569.0 million of proposals have passed Scoring Committee evaluation;
- (c) \$193.4 million of transactions have received Greenlight Committee recommendation for advancement;
- (d) \$56.9 million of transactions have been vetted by the IRC and approved by NYSERDA's President & CEO; and
- (e) \$0.50 million of transactions have been fully executed and closed.

<sup>23</sup> All numbers are on a cumulative basis as at June 12, 2015. Unlike other references which are cumulative since NYGB inception, "Active Portfolio" is a point-in-time reference including transactions where: there is agreement in principle between the parties; there is momentum in moving the transaction forward; conditions are expected to be met; and NYGB is dynamically proceeding towards greenlight recommendation, investment and risk approval and execution and closing. As momentum behind individual transactions fluctuates while advancing towards execution and closing due to various factors, including many not under NYGB's control, these transactions may move in and out of the Active Portfolio at any given time.

Exhibit 4. Transaction Status



While the differentials in the dollar amounts between each of the stages referenced above represent some attrition (e.g., between the proposals that NYGB receives and those that pass its Scoring Committee evaluation), they mostly reflect status at a particular moment in time. What is *not* captured is the fact that over time, groups of projects continue to move through the procedural steps and transaction milestones. This means that transactions in the Active Portfolio can be expected to move through Greenlight Committee, IRC and execution and closing milestones, with material increases in the aggregate dollar amounts of proposed investments in those categories going forward.

While NYGB currently has a total of \$338.0 million in transactions being actively negotiated and progressing toward execution and closing, this Active Portfolio does not include: \$47.0 million of proposals submitted but not yet scored; \$142.0 million of proposals from credible counterparties expected to be submitted over the next few months; and \$62.0 million of inactive proposals (those which have been scored positively but lack current momentum) which may move into the Active Portfolio in the future.

The metrics required to be reported quarterly and annually to the Commission pursuant to the Metrics Plan (the “Metrics”) focus largely on transactions that are executed and closed as the trigger for the provision of information in the context of NYGB’s growing portfolio of investments. Therefore, what is reflected in Metrics reports for signed and closed transactions only assumes, but without specifically highlighting, all the multi-faceted and long lead-time activities essential to the advancement of any clean energy technology investment by NYGB, as represented in [Exhibit 4](#) above and [Exhibit 15](#) (in [Section 6.4](#)). In addition, since NYGB is focused on mobilizing private capital into investments that are not addressed in the current commercial market, it is by definition operating in new areas, seeking to create precedent where little to none has so far existed - all involving considerable time and effort.

### 2.2.3 Early Successes

Over the past year, NYGB participation in several transactions has allowed its clients and partners to secure funding from private sector capital providers, some representative examples of which are below. These experiences demonstrate NYGB’s ability to achieve its mission and materially drive market transformation at all project stages.

#### Long-Term Biomass Generation

ReEnergy’s Black River project is a biomass-to-energy project located at the U.S. Army’s Fort Drum military installation in Jefferson County. This 60 MW project generates ~390,000 MWh per year of clean renewable

energy and provides 100% of Fort Drum's energy needs through a 20-year contract, all while supporting ~175 jobs in the North Country. After submitting a proposal to NYGB and reaching an agreement on principal terms for the transaction in mid-2014, NYGB issued a Letter of Interest to purchase up to \$10.0 million of tax-exempt subordinated debt in support of the \$65.0 million repowering project, scheduled to fund simultaneously with senior debt to be sold in the public market. While a \$20.0 million debt transaction ultimately was closed in late 2014 with funding only from the private markets, NYGB's early participation provided comfort that the particular risks were financeable.

#### *Solar Vineyards in the Finger Lakes Region*

Working in partnership with an on-the-ground aggregator, HuntGreen LLC, NYGB helped to catalyze financing opportunities for several vineyards in the Finger Lakes region that are working on incorporating solar generation into their existing facilities. Since local lenders were less experienced in structuring secured loans to support solar projects, discussions with NYGB - including a briefing for a consortium of local lenders, industry participants and developers such as District Sun - helped provide assurance that these are feasible transactions and that renewables are a growth area for their lending businesses. As a result, local Upstate banks are now positioned to more readily finance the longer term needs of solar assets and, in many cases, to develop entire new lending categories as interest in renewables continues to increase.

#### *Greater Access to Residential Solar*

A national consumer lender and early proposer to NYGB sought to structure financing for residential solar leases and PPAs to be offered to a broad range of New York State 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. After NYGB formally expressed interest in moving forward with structuring the transaction, the proposer was able to secure private capital to advance similar project types through a debt facility with national reach, demonstrating there is now private capital available to support not just power purchase agreements ("PPAs") and leases, but consumer-owned systems via loans, giving consumers more options and flexibility to "go solar" in the State and across the nation.

The foregoing examples show that through its work with clients and partners in creatively structuring transactions and interacting with counterparties, NYGB is able to deliver real value to New Yorkers in expanding clean energy deployment within the State, well before transactions are executed and closed.

## 3.0 Mission, Market Size & Benefits

### 3.1 NYGB Mission

To accelerate clean energy deployment in New York State by working in partnership with the private sector to transform financing markets.

The key elements of NYGB's mission are partnering with private sector participants, implementing structures that overcome market barriers and address financing gaps in current clean energy financing markets, and transforming those markets by enabling greater scale, new and expanded asset classes and increased liquidity. These factors combine to motivate faster and more extensive implementation of clean energy investments within New York State, fostering greater energy choices, reduced environmental impacts and more green energy benefits per public dollar spent for all New Yorkers.

### 3.2 Market Barriers & Financing Gaps

A number of barriers constrain clean energy financing markets, including deficient scale and volume, lack of precedent transaction structure, lack of transaction standardization, less understood or familiar project sponsors and counterparty credits, policy uncertainty, insufficient data on underlying loan and technology performance, and underdeveloped or nonexistent publicly-traded capital markets for clean energy. Key capital barriers to more efficiently functioning clean energy markets are identified in [Exhibit 5](#), classified by degree of severity and reflecting the perspectives of private sector participants.



Exhibit 5. Barriers to Clean Energy Finance

	Barrier	Description
Higher Severity Barriers	Undeveloped secondary market	<ul style="list-style-type: none"> <li>Non-conformity of existing energy financial products and limited track record for rating agencies</li> <li>Low volume of transactions makes it challenging to securitize loans</li> </ul>
	Large upfront costs	<ul style="list-style-type: none"> <li>End users not willing to incur large pre-development costs in order to determine whether energy benefits are net positive</li> <li>Energy projects require large initial capital outlay</li> </ul>
	Prioritization of energy projects	<ul style="list-style-type: none"> <li>Energy projects compete for funding with other capital-intensive projects</li> </ul>
	Unsecured energy efficiency loans	<ul style="list-style-type: none"> <li>Energy efficiency loans typically lack a collateral asset</li> </ul>
	Insufficient understanding of value proposition	<ul style="list-style-type: none"> <li>Clean energy project savings are not well understood except by large, sophisticated commercial and industrial customers</li> </ul>
	Split incentives	<ul style="list-style-type: none"> <li>Split incentives arise from the situation where landlords pay for energy upgrades while tenants reap savings on energy bills</li> </ul>
Medium Severity Barriers	Inability to scale underwriting process	<ul style="list-style-type: none"> <li>Energy projects frequently necessitate custom loan structures</li> <li>High upfront transaction costs resulting from limited availability of information with respect to energy savings and vendor quality, together with lack of standardized documentation burdens underwriters</li> </ul>
	Limited track record of performance and payments history	<ul style="list-style-type: none"> <li>Direct energy savings are site-specific and can be difficult to cost-effectively quantify and measure at most sites</li> <li>Performance and payments data are decentralized, oftentimes proprietary and of limited duration vis-à-vis tenor of lease/loan transactions</li> </ul>
	Uncertainty regarding tax credits and other incentives	<ul style="list-style-type: none"> <li>Federal Production Tax Credit expired at the end of 2013 and 2014; Investment Tax Credit falls from 30% to 10% at end of 2016</li> </ul>
	Existing debt burden of potential energy customer	<ul style="list-style-type: none"> <li>Restrictive debt covenants/mortgage lender limitations on external financing</li> <li>High loan-to-value leaves little/no room for additional debt</li> <li>Inability/unwillingness of end-users to add additional debt to balance sheet</li> </ul>
Lower Severity Barriers	Fragmented vendor landscape	<ul style="list-style-type: none"> <li>Uncertainty of vendor quality/reputation results in lower demand for energy efficiency</li> </ul>
	Risk aversion of lenders in the current regulatory environment	<ul style="list-style-type: none"> <li>Existing regulations curtail ability of banks to lend on balance sheet</li> </ul>

Source: Market Study

Financing gaps describe circumstances where otherwise attractive clean energy investment opportunities are unable to secure financing from the private sector. NYGB works to bridge financing gaps by offering various financial products that as part of an overall transaction structure facilitate private capital investment in clean energy projects. NYGB works with the private markets to aid the flow of capital through risk mitigation strategies, aggregation and other tools.

By way of illustration, [Exhibit 6](#) represents a sampling of known market inefficiencies where NYGB expects continuing significant opportunities to act as a bridge to more effective private sector capital markets in clean energy.

Exhibit 6. Illustrative Financing Gaps

Financing Gap	Description
Medium Credit Quality Financing	<ul style="list-style-type: none"> <li>Financing for customers with sub-optimal FICO scores or Class 3 businesses</li> </ul>
Small Scale Financing	<ul style="list-style-type: none"> <li>Financing for projects \$2.0 million or less in size as part of a structured larger, aggregated pipeline of similar projects</li> </ul>
Financing for Commercially Viable Technologies yet to Achieve Scale	<ul style="list-style-type: none"> <li>Financing for technologies with limited deployment to date (e.g., biomass, microgrids, anaerobic digesters, fuel cells, battery storage and electric vehicle charging stations)</li> </ul>
Tax Equity Funding	<ul style="list-style-type: none"> <li>Financing for projects eligible for tax credits</li> </ul>
Long Tenor Financing	<ul style="list-style-type: none"> <li>Financing for projects with a tenor longer than 5 - 7 years</li> </ul>

Source: Market Study

### 3.3 Market Size & NYGB Opportunity

Clean energy investments can provide attractive risk/return profiles. The clean energy markets are substantial with significant future growth expectations. The Market Study projected that the total market value of unrealized opportunities for New York-based projects is approximately \$85.0 billion over the next decade. This analysis excludes potential for utility scale generation, fuel cells, charging stations, energy storage, solar hot water systems, ground and air source heat pumps, and other emerging clean energy technologies, and it fails to account for further technology improvements and so \$85.0 billion may be a conservative estimate. The estimate of total market size, allocated across selected technologies, is set out in [Exhibit 7](#).

Exhibit 7. An Estimate of New York’s Clean Energy Market Size

Selected Technologies	Estimated Market Size (\$ Billions) 10-Year Horizon <sup>24</sup>
Energy Efficiency	\$55.0
Solar PV	\$13.0
Combined Heat & Power (“CHP”)	\$8.0
Biomass	\$4.0
Onshore Wind	\$4.0
Anaerobic Digesters	<\$1.0
Total	\$85.0

Source: Market Study

NYGB focuses on scalable mature renewable energy and energy efficiency technologies, and may also offer direct funding or facilitate access to capital for technologies that have yet to achieve broad acceptance in finance markets<sup>25</sup>.

Reflecting initial private sector leverage and taking into account the recycling of NYGB’s capital, the Market Study projects that NYGB’s \$1.0 billion capitalization could produce as much as \$8.0 billion of additional private sector investment in clean energy projects over ten years<sup>26</sup>. Unlike incentive payments, when ratepayer funds are used in NYGB financing products and investments, NYGB funds are not permanently expended. By expanding the market, facilitating precedent transactions and scale, and developing a track record of project and loan performance, NYGB aims to further mobilize clean energy activity in New York

<sup>24</sup> Commencing in 2014.

<sup>25</sup> Commercially proven technologies are preferred, although NYGB may consider demonstrably commercial-ready technologies on a case-by-case basis.

<sup>26</sup> See Market Study, page 7.

State that will thrive and prove increasingly attractive to private sector entities without ratepayer funding support. This transition to a stand-alone, dependable private sector financial market produces the ultimate leverage of ratepayer dollars, at which point NYGB’s capital base will be available for investment as NYGB moves to the next clean energy frontier.

### 3.4 Benefits

The benefits of NYGB’s participation in the marketplace will be seen in the evolution and scale of clean energy markets<sup>27</sup>, greater private sector participation, the creation of new asset classes and enhanced liquidity in such asset classes, and efficient use of public dollars, as set out in Exhibit 8.

*Exhibit 8. Effects of a Fully Capitalized & Operational NYGB*

	Before NYGB	After NYGB
Clean Energy Markets	Many Projects Not Readily Financeable. Economically and technically feasible clean energy projects are not completed because of lack of access to needed capital.	Increasing Availability of Capital. NYGB works with private sector to address real-time market needs to alleviate existing barriers and gaps with an emphasis on scale and ability to replicate. As such, deployment opportunities are maximized.
Private Sector Participation	Certain Classes of Feasible Projects Shut-Out of Commercial Market Participation. Commercial markets focused on utility-scale, grid-connected generation projects, with limited focus on distributed resources or efficiency projects just outside of current lending scope (e.g., those of smaller size, involving less familiar structures, lesser deployed scale, credits and counterparties etc.).	Successful Partnerships Lead to Expanded Market for Financing Opportunities. Mobilizing and leveraging private sector investments alongside NYGB funds produces greater capital availability to be deployed across larger numbers, types and locations of projects than would otherwise be the case, as NYGB acts to “crowd in” the private sector.
Asset Classes & Liquidity	Existing Slate of Investment Opportunities Precludes Participation by Some Private Capital Sources and End Users. Asset classes reflect commercial market focus on utility-scale and/or high FICO residential roofing or other investment grade clean energy projects, limiting new investor types interested in exposure to distributed generation and efficiency assets. Concentration on highest credits hampers access to clean energy solutions for large proportion of NYS end users.	New Types of Investments and New Investors Materially Increase Private Investment in NYS Clean Energy Sector. NYGB and its clients and partners effectively drive the creation of new opportunities to invest and attract new sources of capital. This supports material expansion of clean energy financing markets in NYS through structured transactions involving less understood counterparty credits, bringing new players into transactions, creating structures allowing for aggregation of creditworthy projects into portfolios supporting resale and/or securitization (including standardization).
Efficient Use of Public Dollars to Address Financing Gaps	Focus on Government-Driven Grants & Subsidies. Public monies may be deployed as one-time grants or subsidies through pre-determined programs, without addressing specific market barriers and financing gaps through a holistic, systematic approach.	Transition to Market-Based Investments and Multiple Deployments for Each Dollar. NYGB seeks to achieve greater impact for each NYGB dollar invested by leveraging funds and institutional capabilities of its clients and partners. Generating fees at commercial rates and obtaining repayment of investments allows NYGB to be self-sustaining and recycle capital through successive investments.

<sup>27</sup> As required by the Metrics Plan (in Section 5.2 (Market Evaluation), page 8), “[m]arket [e]valuation will help identify the effect of [NYGB] on transforming the clean energy finance market... Market [E]valuation will be conducted on sectors that [NYGB] has supported and will occur approximately three to five years following initial [NYGB] capital deployments”, i.e., expected to begin in the period 2017 - 2019.

NYGB's project focus runs the spectrum of clean energy finance in the State: from large utility-scale, grid-connected projects, to smaller, distributed and behind-the-meter installations. NYGB is positioned as the public sector partner to private capital participants looking to invest in and develop clean energy assets in New York State and seeks to remain at the forefront for potential clients and partners facing financing constraints. NYGB's strategy of working on a wholesale basis<sup>28</sup> in partnership with private sector intermediaries encourages scale as NYGB is able to mobilize both the capital and institutional capabilities of private market players, building upon existing and extensive private lending platforms.

NYGB offers the ability to recycle funds and earnings, to leverage additional private capital, to facilitate clean energy markets on the frontier and to reduce market inefficiencies impacting the cost of capital for clean energy projects. Upon full deployment of NYGB capital, the long-term impact to the financial markets is expected to include reduced project costs, expansion of the clean energy financing markets through increased investment and liquidity, and improved transparency and market confidence. The ability to generate fees is evidence that NYGB is providing product offerings that are needed and that can ultimately be funded by private participants. While financing does not itself create demand for renewable energy and energy efficiency projects, NYGB's goal is for the market to view clean energy financing as a "utility". It should be as easy as possible for project developers and service providers of all types to tap into standardized, simple and open architecture financing structures. Clean energy is the only source of energy that effectively gets cheaper the more of it that is generated<sup>29</sup> - so scale matters. However, clean energy markets cannot get to scale without readily available financing, which NYGB actively promotes. Taken together, all these benefits offer attractive outcomes to New York State and result in an expansion of the total funding available for clean energy.

Across NYGB's pipeline of transactions, certain early indicators of specific benefits to be realized from NYGB activities can be identified:

- (a) NYGB's publicly announced transactions are good illustrations of how greater value can be derived from each dollar collected from ratepayers. Specifically, averaged across all these deals, an initial \$1.00 of ratepayer investment through NYGB will mobilize a further \$3.00 of investment by the private sector<sup>30</sup>, representing leverage of funds on a deal-by-deal basis (before taking into account the additional benefits of NYGB's ability to recycle capital through successive investments). The Market Study estimates that this initial NYGB 3:1 leverage of private sector capital ratio could be 8:1 after 10 years (factoring in reinvestments), and even higher for a 20-year time horizon<sup>31</sup>, with capital preserved for further reinvestment;
- (b) NYGB's business model represents a prudent use of ratepayer collections in that NYGB investments create value streams consistent with the REV objectives (i.e., build a clean, resilient, and affordable energy system that achieves GHG emissions reductions) across the State, including in rural communities;
- (c) Many renewable energy projects complement utility and community energy programs in opening up commercial avenues for smaller but replicable projects. NYGB facilitates the entry of private sector parties into this market earlier than they might otherwise. This yields a number of benefits, including demonstrating the attractiveness of investments of this type, as well as furthering achievement of the goals of New York's energy policy, through private action and capital rather than government intervention; and

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<sup>28</sup> Wholesale financial markets are where there is the greatest opportunity for implementing clean energy projects within the State at scale and more rapidly. This may involve NYGB's participation in individual projects that are scalable and replicable (rather than "one-offs") or with its clients and partners in investments which aggregate a number of underlying projects (e.g., energy efficiency and distributed renewables). In any case, there is no restriction on the profile of the ultimate end-user - who could be part of residential, commercial or industrial sectors.

<sup>29</sup> For example, there are no variable fuel costs for certain renewable energy projects (e.g., wind and solar). Sunk capital costs and fixed operating costs for such projects are spread across increasing output (MWh) as more energy is produced, with the cost of each subsequent MWh effectively decreasing.

<sup>30</sup> Around \$200.0 million of NYGB investment is expected to mobilize \$600.0 million of private capital, producing this 3:1 ratio.

<sup>31</sup> See Market Study, page 7.

- (d) Renewable energy transactions create jobs in the places where those projects happen. The May 2015 *Renewable Energy Finance, Market Policy & Overview* undertaken by the U.S. Partnership for Renewable Energy Finance (“US PREF”), a program of the American Council on Renewable Energy (“ACORE”) notes that the solar industry experienced a nearly 20% growth in employment from 2012 - 2014, 20 times the national average. The industry forecasts jobs growth at 20.9% in 2015. Given the increasing solar investment activity within New York (as with other sources of clean energy), including opportunities in which NYGB is involved, similar increases can be expected in related employment within the State. While job-creation may be considered a second or third order benefit of NYGB’s activities, it is reasonable to recognize that NYGB is a material, if indirect, lever to job creation - across all clean energy investments, not just solar - within the State.

While NYGB’s initial focus is deploying capital received from public sources in parallel with private capital, in the future, NYGB may manage assets and make investments on behalf of third parties, including private and public pension funds, other fund types and corporate entities, in a manner consistent with NYGB’s mission. For example, NYGB anticipates that certain market participants may have interest in putting funds to work in clean energy finance markets in New York State, but may be constrained in originating such assets themselves. NYGB can play an asset management and origination role on behalf of capital partners.

## 4.0 External Drivers

In this [Section 4.0](#), NYGB identifies the aspects of the external environment that are critical to NYGB's success, as well as the areas from which challenges to realizing its mission and objectives may come. These external influences generally fall into three groups: market engagement, economic and business cycle, and regulatory and legal landscape.

### 4.1 Market Engagement

NYGB's success ultimately rests on realizing substantial and sustained market receptivity and engagement from its target private sector clients and partners. Whenever market participants are considering investments into, and development of, clean energy resources within the State of a type that are not currently being financed in the commercial markets due to barriers and gaps discussed in [Section 3.0](#), they should ideally think of NYGB and the potential roles that it might play to facilitate transactions. NYGB's mission is broadly applicable across project types, technologies and sizes - NYGB should not be categorized as a niche financier or investor: it will consider investments in projects sponsored by its clients and partners that vary from distributed efficiency and behind-the-meter renewables, to large-scale, grid-connected generation. Equally, NYGB projects and investments are varied by segment, such that they may ultimately involve (through NYGB's wholesale support of its clients) residential end-users, commercial and industrial customers or grid offtake<sup>32</sup>.

NYGB offers a new State-sponsored model to address market failures and advance the scale of adoption and implementation of clean energy across a broad spectrum of potential transactions in a number of ways. NYGB neither distributes traditional incentives, grants or subsidized capital nor stands in the marketplace solely with a preset roster of products and programs engaging only with those whose proposed projects fall within pre-determined program parameters. Instead, NYGB adopts a flexible, market-responsive approach: private sector market participants work with NYGB to identify market barriers and financing gaps for otherwise economically feasible projects, and then NYGB and its partners structure arrangements to make viable transactions that would not otherwise be possible in current commercial markets.

A necessary prerequisite for NYGB success is attracting and maintaining the attention of the target private sector clients and partners - many of whom may have limited experience in meaningful public/private partnerships and may harbor some skepticism as to the long-term sustainability and commerciality of such arrangements. NYGB's market strategy and outreach activities, both in scope and content, are designed to address this. NYGB's ultimate capitalization of at least \$1.0 billion is of critical importance in attracting the attention of even the largest private sector participants and signaling that NYGB is a serious and concerted initiative to meaningfully participate in and influence the market at scale, not just impact the periphery. Generating interest and engagement must be followed through in a manner that retains interest and grows NYGB's reputation and track record. A key element of achieving this is for NYGB to be structured and operated like a comparable private sector fund. Potential partners and clients will have little commitment to interactions with NYGB if it is perceived as non-commercial, slow-moving or an otherwise overly burdensome counterparty. Among other things, this means that dealing with NYGB must:

- (a) Be no more bureaucratic than dealing with a comparable specialty finance company or investment fund;
- (b) Occur on time frames that are comparable to doing business with private sector participants accustomed to fast turnarounds and decisions;
- (c) Indicate a depth of experience and familiarity with energy project development and financing, as well as a breadth of financial products and structuring, all infused with commercial considerations and approaches;
- (d) Utilize professional advisors (e.g., technical and legal) for specialized services; and

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<sup>32</sup> The types of investments in which NYGB may participate are described throughout [Section 6.0](#), including in [Exhibit 14](#).

- (e) Require only disclosures, reporting and other conditions that are usual, customary and commercial in the normal course of similar private market transactions and which don't compromise proprietary or confidential information, while still balancing the desires of the parties and the State to appropriately publicize and provide information about their innovations, projects and corresponding benefits.

## 4.2 Economic & Business Cycle

At various times over the past decade, clean energy has been hailed as “the next big thing”. As a result, many market participants made clean energy investments in the mid-2000s. Amid all the exuberance and upward pressure on valuations, technology and project risks were not always recognized and properly priced, and the full extent of the capital-intensiveness of energy projects not necessarily fully appreciated. When the financial crisis hit in 2008 - 2009, many clean energy investors found the value of their investments impaired. Not only had the financial crisis itself diminished capital availability, but reforms requiring banks to divest proprietary investments also had a negative effect on liquidity available for clean energy. The long economic recovery, coupled with policy uncertainties and gaps relating to ongoing federal clean energy incentives, combined to divert material private capital, attention and priority from the sector. It has only been in recent years that a return to greater economic health generally, maturation of clean energy opportunities, certain regulatory advancements (e.g., the emphasis on clean energy development in New York across a number of material initiatives, including REV and CEF), technology advances (e.g., solar and battery storage), and concerns about global warming and energy resiliency have all combined to spur greater interest in, and focus on, clean energy as a substantial business opportunity.

In parallel with the effects of the economic cycle, the past five years have also seen a coalescing of major change in the energy generation sector. Historically, electricity needs have been served in a “hub and spoke” model with large power plants (e.g., 500 MW and greater) being built and connected to end-users via extensive transmission and distribution systems. Such projects cost hundreds of millions of dollars and take years to develop, construct and put in service. Critically aging power generation and transmission infrastructure in the U.S. that needs to be replaced has run headlong into increasingly more complex and difficult siting and permitting processes that have the potential to delay or deny large project developments. This, in addition to new technologies and generation models, and rapid cost reductions in various clean energy technologies, has driven a growing trend towards distributed generation - many smaller, local projects. Renewable energy and energy efficiency projects are uniquely suited to fulfilling this distributed energy need - as clearly propounded in the REV Proceeding where DERs are a central part of updating energy infrastructure in New York. As private funding sources continue to recognize this shift in the country's energy infrastructure and look to capitalize upon it, the role of NYGB in facilitating installations within New York becomes even more important.

Positive motivating factors for clean energy development are constrained by limited financing availability, and time is of the essence. Traditional financiers to the energy sector benefit from large numbers and large capacity projects, justifying their participation and cost structures. A challenge with distributed clean energy developments is that individual projects are often too small to get the attention of the traditional capital participants. Consequently, a key objective for NYGB is to devise ways to aggregate distributed energy projects to larger and more scalable portfolios of the size needed to be of interest to commercial financiers. Large projects too have their challenges, despite the attractive size and scale for developers and investors. Depending upon energy market dynamics, even financing large projects can be difficult when the revenue certainty needed to underpin and service required debt and equity funding is lacking. This often means that such projects don't get built as planned or that developer capital is tied up in particular projects for longer periods, in all cases, leading to less efficient deployment of capital and potentially fewer projects being implemented on slower timeframes than might otherwise occur. NYGB sees one of its primary objectives as facilitating the more efficient deployment of capital into, and implementation of, all clean energy projects within the State - both large and small.

### 4.3 Regulatory & Legal Landscape

NYGB is a product of policy and regulation, so its ongoing existence and capitalization depend directly upon continuing political and regulatory support of its mission and operations. To remain relevant and continue to be taken seriously by its potential counterparties, such counterparties must have confidence that NYGB will be fully capitalized and remain in place for many years. Additional challenges to NYGB's success in achieving its mission are any legal or regulatory changes that adversely impact the demand for NYGB capital or its market-responsive strategy. Finally, there is always a risk that political or public events adversely impact the perception or outcome of NYGB's objectives, resulting in overall challenges to the effectiveness of NYGB. If the mission of NYGB is to be adequately supported over time, it is imperative for the political, regulatory and legal landscape to remain as consistent and predictable as possible.



## 5.0 Product Strategy & Offerings

### 5.1 Product Strategy

NYGB approaches clean energy finance with a market-focused and market-responsive perspective to identify and address market barriers and financing gaps. As such, retaining flexibility in NYGB strategy and operations is critical. This point is underscored in the Market Study, the NYGB Initial Petition and the Initial Capitalization Order. Instead of creating NYGB solely with specific and tailored product offerings and then using NYGB's internal business development team to sell those offerings into the marketplace, NYGB primarily undertakes in-depth and multi-faceted interactions with participants in its target segments (as outlined in [Section 6.1.1](#)). This ongoing process is designed to elicit, directly from the marketplace, details of the particular products and transaction structures that would unleash more private capital in, and scale deployment of, clean energy within New York State. This inherently dynamic approach requires NYGB to remain responsive and nimble in accommodating the needs of specific transactions under consideration by NYGB's potential private sector clients and partners.

Although NYGB intends to respond to private sector demand, it is also possible that over time certain identified market barriers and financing gaps may be of sufficient scale and scope to warrant a more targeted and programmatic solution. Where such an approach is called for, NYGB retains the flexibility to devise and implement specific standardized offerings to further realize its objectives. Equally, as clean energy markets in New York State continue to evolve, opportunities may arise for NYGB to play other roles that are not contemplated today. Positioning NYGB to achieve its mission and goals requires the retention of sufficient strategic flexibility to pivot in the marketplace as and when needed and to adopt new roles and develop additional offerings - all in response to the demand expressed by commercial markets.

### 5.2 Product Offerings

NYGB currently offers three categories of capital solutions, available individually or in combination, depending upon the needs of the particular project: credit enhancements, warehousing/aggregation (shorter-term facilities) and asset lending and investments (longer-term facilities). These products are described below.

#### *5.2.1 Credit Enhancements*

NYGB credit enhancement techniques include guarantees, loan loss reserves, or letters of credit provided directly or indirectly to private sector capital providers. These products assist private sector capital providers by assuming some of the risk associated with clean energy loans, leases, PPAs or energy service agreements ("ESAs") in return for a risk-appropriate fee. Credit enhancements can expand the market where there is demand for financing but supply is lacking due to market inefficiencies reflecting unfamiliarity with project and loan performance.

One potential credit enhancement solution, for example, would be to accelerate expansion of the residential market for clean energy by providing support to a financial institution client in connection with a pool of clean energy loans or leases. This enables the pool to include consumers who collectively represent a diversified mix of FICO scores that meet credit underwriting standards. A similar credit enhancement strategy could work in the commercial sector by expanding market access for economic clean energy projects to the next-most creditworthy tier of commercial end-users. Other forms of credit enhancements include construction loan and lease guarantees that can be employed to enable the rollout of commercial solar (for example) by supporting project performance in a manner facilitating commercial lenders and/or tax equity participation in the transaction.

#### *5.2.2 Warehousing/Aggregation (Shorter-Term)*

NYGB warehousing is shorter-term lending with the intention of aggregating loans for placement/sale in the secondary markets. Under a warehousing strategy, NYGB works through private sector origination partners to provide funds to originators for periods of generally four years or less to acquire or build a portfolio of

qualifying clean energy projects. Warehouse facility amounts are drawn down by the originator for projects that fit the specific and agreed investment criteria. These facilities will be advanced in circumstances where the originator and NYGB have a high degree of confidence that a private sector capital provider will step forward to purchase or refinance the entire portfolio of projects once aggregation reaches the stipulated threshold. At that point, NYGB will be refinanced with such proceeds redeployed in new projects. For example, NYGB, potentially in partnership with one or more private financial institutions, may provide small commercial and industrial energy efficiency loans to aggregator/project developers and warehouse those loans until the pool reaches a size that is of interest to the secondary markets. When any such portfolio is sold or refinanced, the replenished funds would then be available for further NYGB capital commitments.

### *5.2.3 Asset Loans & Investments (Longer-Term)*

Asset loans and investments involve the longer-term provision of capital to NYGB clients, which may be in the form of direct investments into projects or portfolios of projects through senior, mezzanine, subordinated debt and/or equity. NYGB asset loans and investments will be undertaken together with private sector capital providers. An example of an asset loan strategy is providing subordinated debt to a solar loan fund. In this case, NYGB could provide a subordinated debt tranche into a solar fund, alongside senior debt holders (i.e., as a co-lender), and assume the position of first loss (or second loss after any required sponsor equity) upon default. This offering would attract senior debt investors into new markets and/or enable the rating of senior tranches, both of which currently do not occur when the long-term payment performance records that investors and rating agencies typically require are lacking. Eventually, when a track record has been established, rating agencies can be expected to rate debt without requesting NYGB credit support. A similar asset lending strategy could involve NYGB loans (together with private sector co-lender(s)) to fund CHP projects, fuel cells, biomass, anaerobic digesters, or similar project types that presently have difficulty attracting financing due to competition with what may be considered more mainstream clean energy projects, generating predictable, widely understood returns.

As part of its portfolio management and with respect to longer loan tenors on NYGB's books, NYGB may periodically execute debt securitizations or other forms of placements through which term investors (e.g., pension funds) could invest in longer-term securities while banks and other capital providers preferring shorter-term exposures would be able to exit their investments earlier. NYGB would recycle proceeds from any such placements into its business, including redeployment in additional projects.

## 6.0 Positioning & Origination

### 6.1 Objective & Approach

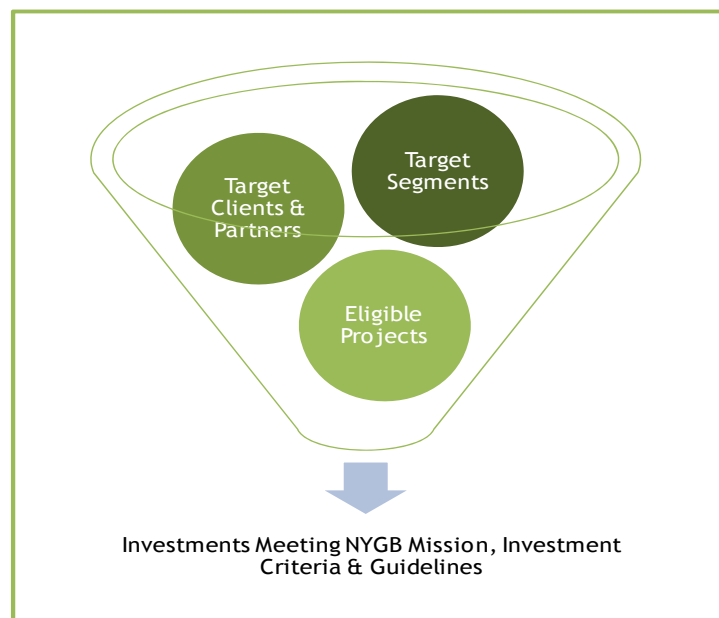
NYGB’s positioning and origination strategy defines how NYGB places itself and its products in the marketplace and how it identifies, prioritizes and faces counterparties and stakeholders. Successful positioning underpins a robust and effective origination plan that involves periodically evaluating and defining the market in which NYGB operates. NYGB has segmented the clean energy universe (as to industries, clients, partners and project types) with as much specificity as possible so that:

- (a) The attributes of potential clients, partners or transactions that fit within NYGB’s mission and area of operations are clear and these parties and opportunities can be efficiently identified; and
- (b) NYGB personnel are able to succinctly, effectively and consistently communicate investment criteria and client and transaction parameters to the marketplace.

As noted in the Market Study, NYGB “will introduce a new business model into the marketplace and in order to maximize its effectiveness needs to carefully position itself...”<sup>33</sup>. To this end, NYGB has formulated its positioning and origination strategy through a “funnel” approach (represented in Exhibit 9) that sequentially:

- (a) Analyzes and categorizes market industry and participant types and identifies the ideal segments in terms of sourcing clients and counterparties within NYGB’s mission;
- (b) Identifies specific target organization names and prioritizes them, based on expected likelihood, timing and ease of being able to transact;
- (c) Defines the universe of NYGB eligible projects in reasonable detail; and
- (d) Uses the outcomes of the three preceding steps to prioritize specific potential client and partner names for tactical outreach.

*Exhibit 9. Key Components of NYGB Positioning & Origination*



<sup>33</sup> Market Study, page 2.

6.1.1 Target Market Segments

NYGB has divided clean energy participants into two main groups: potential proposers of a transaction to NYGB (“Proposers”) and potential sources of transaction leads and other market information (“Collaborators”). Proposers are further bifurcated based on nature of capital - including sources of financing and investors (collectively, the “Financials”) and non-financial industry partners (“Industry”). Exhibit 10 below outlines NYGB’s broad identification and categorization of its target market segments.

Exhibit 10. NYGB’s Target Segments

Proposers		Collaborators
Financials	Industry	
Global Corporate & Investment Banks Regional Banks, including: <ul style="list-style-type: none"> <li>• Community Development Financial Institutions (“CDFIs”)</li> <li>• Community Banks</li> <li>• Credit Unions</li> </ul> Funds <ul style="list-style-type: none"> <li>• Infrastructure</li> <li>• Hedge</li> <li>• Private Equity</li> <li>• Pension</li> <li>• Foundations/Endowments</li> <li>• Family Offices</li> <li>• Sovereign Wealth</li> </ul> Insurance Companies Specialty Finance Companies Boutique Investment Banks/Advisory	Energy Project Developers Energy Service Companies (“ESCOs”)/Equipment Providers/ Equipment Manufacturers, including: <ul style="list-style-type: none"> <li>• Installers</li> <li>• Aggregators</li> <li>• System Integrators</li> </ul> Real Property Owners/Developers <ul style="list-style-type: none"> <li>• Commercial</li> <li>• Residential</li> </ul> Independent Power Producers Utilities Other Energy Technology Providers & Vendors	Consulting Firms (i.e., strategy, technical, financial etc.) Legal Firms Rating Agencies Government (including Federal Government Programs <sup>34</sup> and Intergovernmental Organizations (“IGOs”)) Think Tanks, Non-Governmental Organizations (“NGOs”) & Non-Profits Other Green Financing Organizations (national and international) Other

6.1.2 Target Clients & Partners

Having identified the target segments, NYGB then prioritizes specific companies within each of the target segments that meet the criteria set out in Section 6.2 (the “Market Targeting Criteria”). This prioritization informs NYGB business development activities and evolves over time taking into account Market Targeting Criteria, as well as expected likelihood of transaction(s), timing and ease of closing.

6.1.3 Target Project Types

In pursuit of NYGB’s mission and as outlined in the Investment RFP, NYGB has identified and published illustrative guidelines for eligible investment types set out below in Exhibit 11 for renewable energy and Exhibit 12 for energy efficiency. These include a non-prescriptive and non-exhaustive list of technologies included in proposed project(s) - other examples of the types of projects NYGB may invest in are included in Section 6.2.1. NYGB may consider supporting financing arrangements for projects using technologies beyond the scope of the guidelines and other examples given so long as Proposers demonstrate a potential for GHG reductions in New York State<sup>35</sup>.

Irrespective of type of client, underlying project or financial product being considered, credit quality is paramount in NYGB’s evaluation, structuring and negotiation of its potential investments.

<sup>34</sup> In connection with existing, proposed and potential complementary program opportunities within New York State.

<sup>35</sup> Subject to laws, regulations and administrative actions (e.g., Commission orders) describing and/or related to the parameters for deployment of NYGB funds.

*Exhibit 11. Illustrative Guidelines for Renewable Energy Investments*

**Renewable Energy Resources\***

- Solar photovoltaics (no minimum/maximum capacity)
- Solar thermal (no minimum/maximum capacity)
- On/offshore wind (no minimum/maximum capacity)
- Fuel cells (continuous duty) - natural gas fuel or hydrogen
- Geothermal
- Hydroelectric
  - Upgrades and/or repowering
  - New low-impact run-of-river (30 MW or less with no new storage impoundment)
- Biomass (from eligible biomass feedstock\*)
  - Unadulterated biomass direct combustion
  - Combined heat and power
- Biothermal energy
- Biogas
  - Landfill gas (methane)
  - Sewage gas (methane)
  - Manure digestion
  - Anaerobic digestion
  - Biomass thermo-chemical gasification (syngas from the eligible biomass portion of municipal solid waste)
  - Biogas (from eligible biomass feedstock) combined heat and power
- Liquid biofuels - ethanol, biodiesel, methanol, bio-oil, and eligible biomass feedstock
- Tidal/ocean power

\* This list specifically excludes nuclear and municipal solid waste direct combustion.

\* Eligibility of biomass is subject to RPS SEQRA guidelines - see the Biomass Power Guide published by NYSERDA on July 22, 2014 (see <http://www.nyscrda.ny.gov/All-Programs/Programs/Main-Tier/Documents>). Note that adulterated biomass is eligible only if used in connection with a conversion technology.

*Exhibit 12. Illustrative Guidelines for Energy Efficiency Investments*

**Energy Efficiency Resources\***

- Commercial & industrial - Efficiency improvements to new and existing facilities that save energy, including:
  - Industrial process efficiency improvements, including without limitation: data center, information technology, communications, water/wastewater, pipeline, mining/extraction, and similar end-use processes, facilities, buildings, and infrastructure
  - Lighting and control systems
  - Heating, ventilation and air conditioning systems
  - Building envelope
  - Energy management and/or control systems, including continuous commissioning
  - Occupant plug load management systems
- Load Reduction
  - Thermal and electric energy storage
  - Demand response programs
- Residential - Energy efficiency improvement projects in existing residential buildings, including:
  - Primary heating and cooling systems: Furnaces, boilers, duct sealing, pipe insulation, central air conditioners, heat pumps (including air-source and geothermal), water heaters, programmable thermostats
  - Building envelope: Insulation, air sealing, windows and doors
  - Appliance replacements/upgrades
- Multifamily housing - Improvement projects to multifamily housing facilities, including systems that affect the entire building, the common area, and/or the resident spaces and the following potential measures:
  - Lighting and control systems, including exterior, security, and safety lighting systems
  - Heating, ventilation and air conditioning systems, including boilers (hydronic and steam), furnaces, chillers, room air conditioners, supporting pumps, fans, motors and other auxiliary systems
  - Building envelope, including air sealing, weather-stripping, and insulation
  - Energy management and/or control systems, including continuous commissioning
  - Resident plug load management systems, including home energy monitors and smart strips
  - Appliances, including common area laundry, refrigerators, and dishwashers, both commercial and residential sizes
  - Advanced metering systems to support conversion of master-metered buildings to sub-metering
  - Domestic hot water systems, including generation and distribution
  - Fuel conversion projects that include upgrades to system energy efficiency
  - Water conservation improvements

\* Energy Efficiency measures should be "Energy Star" where applicable.

## 6.2 Market Targeting Criteria & Additionality

NYGB's market targeting criteria stem directly from its authorized purposes as set out in the Initial Capitalization Order. Based on the stipulated criteria, NYGB has identified eligible investments and financing arrangements and acceptable terms, all as outlined in the following Sections. In addition, NYGB has established other guiding principles for its business development efforts that are also included below, together with the consideration of additionality in the context of NYGB action.

### 6.2.1 Eligible Investments & Financing Arrangements

NYGB participation in financing arrangements supports clean energy projects using eligible and approved technologies<sup>36</sup>. NYGB generally targets projects using the same technologies that drive carbon reduction and other public benefits contemplated under existing New York State clean energy policies. In constructing its portfolio, NYGB also gives consideration to scalable, mature renewable energy and energy efficiency technologies that are yet to be broadly deployed in commercial markets (e.g., storage, electric vehicle infrastructure (including charging stations), biomass, anaerobic digester gas systems (farm and non-farm), offshore wind, and fuel cells). In regard to potential energy efficiency measures, NYGB seeks to finance projects that result in as wide-scale and comprehensive improvement to a facility's overall energy consumption as possible, but also considers compelling single-measure efficiency projects. NYGB also contemplates investments in CHP projects, including those fueled with natural gas. In all cases, NYGB looks to participate in projects that are scalable, replicable and will deliver environmental benefits most expeditiously and with the greatest efficiency per dollar invested.

NYGB's minimum investment criteria, by which it evaluates all its potential transactions, are set out in the Initial Capitalization Order<sup>37</sup> and are reproduced in [Exhibit 13](#). These criteria are supplemented by the principles set out in this [Section 6.0](#).

#### *Exhibit 13. Initial Capitalization Order - NYGB Investment Criteria*

- Transactions will have expected financial returns such that the revenues of NYGB on a portfolio basis will be in excess of expected portfolio losses;
- 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
- Transactions will have the potential for energy savings and/or clean energy generation that will contribute to GHG reductions in support of New York's clean energy policies.

As a prerequisite to NYGB involvement, transactions must include private sector financial parties and capital or a clear and specific path to such private sector participation in the case of warehousing/aggregation facilities. Participation by a financial entity (or entities) can be structured in various ways, including as debt and/or equity financing or as the expected takeout of a NYGB-sponsored warehouse facility at the agreed aggregation level. NYGB requires that all investment submissions provide clarity as to proposed capitalization amounts and be specific as to the respective roles for, and relationship among, NYGB and the other capital providers involved. NYGB does not expect to provide capital directly to companies to fund their general business operations or to meet project development capital expenditure prior to construction.

Given the specific mission of NYGB, eligible financing arrangements must also address considerations relating to financial market transformation, expected clean energy outcomes and, indirectly, other portfolio construction tenets (e.g., concentration risks).

<sup>36</sup> Commercially proven technologies are preferred, although NYGB may consider demonstrably commercial-ready technologies on a case-by-case basis.

<sup>37</sup> Ordering Clause 6, pages 24 - 25.

NYGB considers various transaction sizes and participation levels, but largely expects its participation in any individual transaction to fall within the range of \$5.0 - \$50.0 million.

### *6.2.2 Additionality*

Additionality is part of NYGB's positioning and origination strategy in the consideration of proposed investments. The simplest additionality criterion connotes that a NYGB investment will only be undertaken if the underlying project or transaction would likely not otherwise happen in an efficient or scalable manner in commercial markets. Such a strict additionality requirement would put NYGB further away from the market frontier in areas where, as a consequence, NYGB will be less able to attract (and get leverage from) private sector capital. As a result, NYGB adopts a broader view in evaluating the additionality of qualifying investment opportunities by considering:

- (a) The unique benefit NYGB brings to the proposed financing arrangement; and
- (b) If any proposed project:
  - i. Would likely not occur given the current state of the private markets; or
  - ii. Might occur in the private markets but:
    - Would likely involve less favorable terms as to tenor, cost, fees and other key transaction attributes;
    - Would likely not happen at the market breadth needed to scale the sector; or
    - Would not happen as quickly.

This broader view of additionality is inherent in the justification for, and strategy of, NYGB. The existence of clean energy market barriers and financing gaps underpins NYGB's work with private sector entities on "near frontier" opportunities (i.e., those opportunities which are effectively one standard deviation away from where financing markets are today) in order to accelerate the deployment of clean energy in New York.

### *6.2.3 Defining Ideal Investments*

NYGB has adopted certain guidelines to aid both internally and externally in maintaining the right focus for the business, as well as enhancing market participants' understanding of the type of projects on which to engage with NYGB. These are set out in Exhibit 14.

Exhibit 14. NYGB's Ideal Investment Guidelines

What NYGB Does	What NYGB Does Not Do
<ul style="list-style-type: none"> <li>• Analyzes, accepts and prices credit and project risks in a similar manner to the private markets, but takes a view on liquidity risk and premia that may be more flexible than commercial markets (where a reasonable case for market development and/or NYGB take-out exist)</li> <li>• Provides a bridge to a sustainable and efficient private sector clean energy financing market, including:               <ul style="list-style-type: none"> <li>○ Supporting development of liquidity in markets</li> <li>○ Being creative in supporting creditworthy transactions</li> <li>○ Developing and incubating new structures</li> <li>○ Supporting transaction standardization and aggregation for distribution</li> </ul> </li> <li>• Is guided in its product offerings and types of clients and partners by the market and what the market needs</li> <li>• Addresses the market barriers and financing gaps that impede the growth and acceleration of clean energy financing</li> <li>• Partners, not competes, with financial institutions and other private sector entities, leveraging both private sector capital and institutional capabilities</li> <li>• Focuses on projects using eligible and approved technologies<sup>38</sup> that are economically viable but in respect of which market barriers and financing gaps exist</li> <li>• Works with counterparties possessing demonstrated abilities to deliver a pipeline of projects</li> <li>• Facilitates the development of clean energy capital markets</li> <li>• Ultimately enhances market confidence in clean energy investing by compiling and publishing aggregated/anonymized loan payment and project performance data on NYGB financed clean energy transactions where possible</li> <li>• Maintains the flexibility needed to adapt to movements in the markets and to focus on a constantly evolving frontier where NYGB's products can unlock new sectors of clean energy finance - across all sizes and types of eligible projects</li> </ul>	<ul style="list-style-type: none"> <li>• Take deposits</li> <li>• Provide loans directly to retail consumers/homeowners<sup>39</sup> (i.e., operates in the wholesale market only)</li> <li>• Support transactions without private capital involvement at closing (or reasonably anticipated in the case of warehouse/aggregation facilities)</li> <li>• Take risks on technology that is unproven or not yet demonstrably commercially-ready<sup>40</sup></li> <li>• Take development risks</li> <li>• Pursue one-off transactions without the ability to replicate or scale</li> <li>• Provide subsidies or grants</li> <li>• Fund manufacturing facilities</li> <li>• Provide stand-alone advisory services</li> </ul>

NYGB also assesses the following attributes of proposed transactions:

(a) Contribution to financial market transformation through:

- i. Mobilization of private capital as evidenced by a leverage ratio of private capital to NYGB investment and the introduction of capital providers to new sectors;
- ii. An ability to scale or replicate (i.e., transaction receiving NYGB capital support shows potential to drive volume that can transform markets);
- iii. Increasing awareness of, and confidence in, clean energy investments;
- iv. Evolution of private sector institutional underwriting; and
- v. Progress toward capital markets solution(s) for:
  - Contract standardization;
  - Aggregation; and
  - Data harvesting; and

(b) Contribution to expected clean energy outcomes determined by:

- i. Estimated energy savings, peak load reduction and/or clean energy generation;

<sup>38</sup> Commercially proven technologies are preferred, although NYGB may consider demonstrably commercial-ready technologies on a case-by-case basis.

<sup>39</sup> Although this category of end user may benefit from projects being undertaken by NYGB's clients and partners (e.g., residential solar, efficiency etc.).

<sup>40</sup> Commercially proven technologies are preferred, although NYGB may consider demonstrably commercial-ready technologies on a case-by-case basis.



- ii. Other estimated GHG reduction benefits to the extent included in proposed project(s) (outside those achieved through direct energy savings and/or clean energy generation);
- iii. The cost effectiveness of proposed project(s); and
- iv. The strength of the plan pursuant to which the Proposer (or designated third-party) will track, record, and report performance data.

### 6.3 Transaction Sponsor Commitment

Projects and transactions that are eligible for NYGB investment are not precluded from separately seeking and obtaining grants, subsidies or other available incentives for which they may be independently qualified from state or federal sources. However, an aspect of NYGB transaction diligence and analysis is identifying the actual amount of sponsor capital at risk (i.e., excluding grants and other private capital) over the term of commercial arrangements in order to understand alignment of interests.

### 6.4 Transaction Generation & Investment Decision-Making Process

NYGB’s origination of clients, partners and potential transactions results from interactions with market participants who submit proposals that either:

- (a) Respond to a NYGB-specific solicitation and/or other publication of NYGB’s investment criteria (a “Competitive Opportunity”); or
- (b) Identify a NYGB role consistent with its mission, but which does not strictly fall within the definition of “Competitive Opportunity” (a “Strategic Opportunity”).

While open and public competitive processes are favored in the origination of NYGB partners, clients and transactions, there may nevertheless be circumstances in which the strategic mission of NYGB may be best served by undertaking one or more Strategic Opportunities. Strategic selection methods may be utilized if NYGB management determines, with approval from the President & CEO of NYSERDA, after considering recommendations of IRC members, that one or more of the following characteristics are present and are of predominant importance to NYGB:

- i. Special Capabilities: The Strategic Opportunity is presented by a private sector party with exceptional, relevant experience and expertise;
- ii. Uniqueness: The Strategic Opportunity is one-of-a-kind by virtue of location, high visibility, probability of a successful closing or leverage with other already committed private or public funding or possesses other unique attributes;
- iii. Strategic Importance: The Strategic Opportunity has exceptionally strong compatibility with the strategic objectives and mission of NYGB as well as the other energy priorities of New York State;
- iv. Urgency and Timeliness: There is an urgent need to act on the Strategic Opportunity as a result of public exigency or emergency, or a strategically important opportunity would become unavailable as a result of delay, or it would take an unacceptable length of time for a similar opportunity to reach the same level of readiness; and/or
- v. Multiphase Project/Follow-on Investment: The Strategic Opportunity relates to the next phase of a multiphase proposal or the proposed application of funds is necessary to support or protect an existing NYGB investment or initiative.

Any Strategic Opportunity involving NYGB funding that will exceed \$1.0 million may be subject to approval pursuant to the Office of State Comptroller Rules (Part 206 to NYCRR Title 2) and will be managed by NYGB to support all requisite compliance in that regard.

All potential transactions go through an internal, standardized evaluation process as part of NYGB reaching a decision whether or not to proceed. Before any transaction terms are agreed upon or committed to by NYGB, they are fully reviewed by the IRC pursuant to a specific “Transaction Approval Memorandum” (“TAM”) process. Each TAM includes the following information:

- (a) With respect to the proposed transaction/investment:

- i. Transaction summary;
- ii. Summary of terms and conditions;
- iii. Compliance with investment criteria;
- iv. Key counterparties;
- v. Management team and qualifications;
- vi. Operational analysis (including ongoing funding mechanics, roles and responsibilities, etc.);
- vii. Credit/investment analysis (including leverage and coverage ratios, base and downside cases, sensitivity analyses, key risks and mitigants, etc.);
- viii. Accounting, tax, regulatory and legal analyses;
- ix. SEQRA determination and summary of environmental issues;
- x. Description of all local, state and federal incentives that will be utilized in the proposed project;
- xi. Technological analysis;
- xii. Energy-related impacts and corresponding monitoring plan; and
- xiii. Estimated GHG impacts and related monitoring plan.

(b) With respect to NYGB impact:

- i. NYGB returns, financial and risk metrics and pricing analysis;
- ii. Portfolio impact analysis;
- iii. Summary of strategic fit (including in respect of additionality, market transformation, scalability, replicability, etc.); and
- iv. A draft of the transaction profile, the template for which is included as Appendix A to the Metrics Plan.

Rejection, approval, recommendations or required contingencies for any proposed transaction is authorized by the President & CEO of NYSERDA, after considering the input of IRC members. Once approved, a commitment letter may be issued to the Proposer and definitive documentation negotiated<sup>41</sup>, with the amount of the approved commitment constituting an Approved Investment<sup>42</sup>.

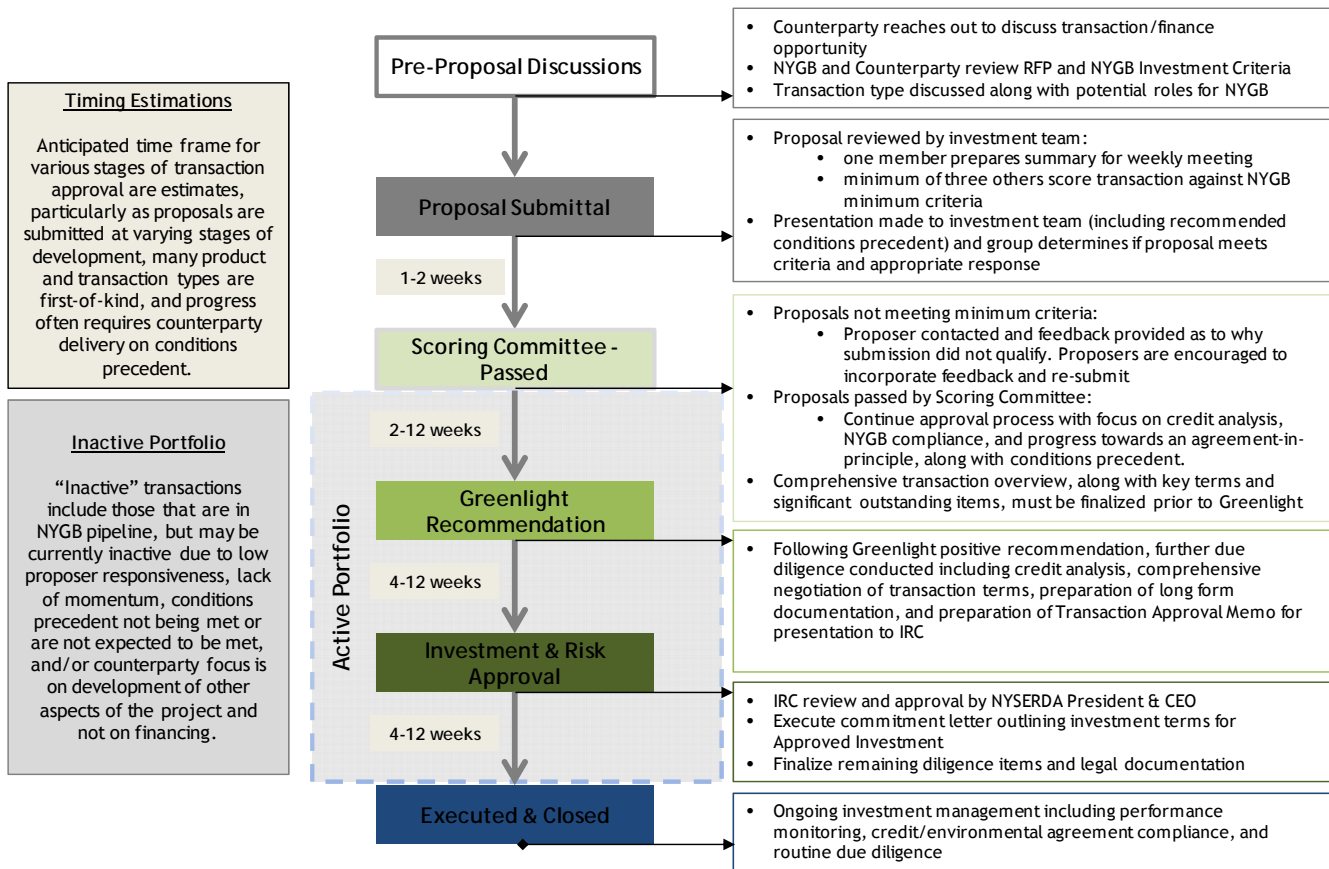
The principal steps involved in the advancement of any investment proposal received by NYGB are represented on Exhibit 15. As shown in the exhibit, each transaction goes through a number of critical steps - each in turn involving detailed review, input and other work of the NYGB transaction team, its advisors, committees and clients and partners (including their respective advisors) in an iterative and ongoing process until milestones are reached, culminating in the execution and closing of fully-negotiated transaction documentation. This is consistent with how a bank or investment fund approaches transaction opportunities.

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<sup>41</sup> Engagement or mandate letters may be issued upon positive review of the relevant transaction by NYGB's Greenlight Committee - non-binding other than with respect to terms like reimbursement of third party costs, confidentiality, exclusivity periods etc. Non-binding letters of intent may be issued before Greenlight Committee review, but only after Scoring Committee review concludes with an intention to proceed with due diligence, etc. for the particular transaction.

<sup>42</sup> As defined in Section 9.2.

Exhibit 15. NYGB Typical Transaction Process



6.5 Communications & Marketing Plans

Following issue of the Initial Capitalization Order, NYGB worked to produce marketing and communications plans and materials for the business across printed and online media. Communications efforts articulate NYGB’s mission and promote NYGB’s role in the clean energy financing marketplace, while marketing efforts establish and maintain NYGB’s brand through the development of consistent messaging and marketing materials. NYGB marketing and communications efforts are both distinct and complementary, working in tandem to support client, partner and stakeholder-facing NYGB outreach efforts and external affairs.

6.5.1 Communications

NYGB’s communications goals are two-fold:

- (a) To drive client and partner engagement and participation with NYGB in order to effectively and efficiently execute on NYGB’s mission; and
- (b) To create awareness and understanding of NYGB and the benefits it will deliver through its contributions to growing the clean energy economy in New York State.

NYGB communications are focused on continuously advancing and promoting NYGB’s profile while earning independent third-party support that is clear and credible. Client-oriented communications: focus on outreach to industry participants that are likely being impacted by market barriers and financing gaps preventing initial or expanded involvement in New York’s clean energy marketplace; and ensure potential partners are informed about NYGB’s capabilities, mission and approach to supporting their businesses. In addition, communications also promote NYGB successes, educate the general public and other stakeholder

audiences about NYGB value and benefits, and support NYGB’s positioning as an innovative and efficient use of ratepayer dollars to leverage private capital and expand clean energy financing markets in New York State. Ultimately, one of the most effective ways to inform the market and all stakeholders of NYGB activities, projects and transaction types is via the “demonstration effect” - describing specific activities, projects and transactions where possible to provide concrete illustrations. In these cases, significant efforts are made to both establish the specific barrier and/or gap that had prevented private capital from being deployed on a widespread basis and to highlight NYGB’s role in addressing and alleviating that particular impediment.

### 6.5.2 Marketing

NYGB marketing efforts establish and maintain NYGB’s brand through the development of consistent messaging and marketing materials. The overall marketing strategy is built to support and enable attainment of NYGB’s goals and mission by establishing and reinforcing a consistent brand identity.

NYGB marketing involves devising and implementing messaging that clearly communicates NYGB themes. Messages are built as part of an integrated package and segmented by audience: Proposers and Collaborators and the general public and other stakeholders.

## 6.6 Standardization & Data Collection

In considering the NYGB Initial Petition, the Commission devoted time and attention (reflected in the Initial Capitalization Order) to market barriers and financing gaps that frequently prevent commercial and economically viable clean energy projects from achieving the scale necessary to attract the capital required. Such obstacles were noted to include lack of standardized transaction structures and a lack of information, especially relating to project and payment performance data as well as return on investment. These impediments can in turn add to transaction costs and underpin misperceptions of risk with negative consequences for capital availability and transaction pricing.

As NYGB’s portfolio grows, there are opportunities for NYGB to reduce transaction costs by standardizing documents and procedures, and to reduce capital costs by gathering and making data available on project and investment performance (subject to commercial confidentiality practices and the protection of competitive information)<sup>43</sup>. Standardizing contracts and procedures plays an important role in developing capital markets for clean energy assets. Tracking energy project performance data, financing/loan payment and performance data enhances transparency where increased transparency can support private sector understanding of new asset classes and ideally encourage more willingness to invest. Greater understanding should also lead to more efficient pricing of clean energy project financing, effectively reducing the levelized cost of energy for eligible technologies.

Given NYGB’s market-responsive (compared with a preset and programmatic) approach to product strategy and offerings (as described in [Section 5.0](#)), it is not possible in this Plan to outline with specificity what type of information will be collected. The make-up of NYGB’s investment portfolio over time will be determined by actual market demand. Subject to counterparty confidentiality concerns, NYGB plans to aggregate and anonymize relevant information across underlying technologies in its investment portfolio (once that portfolio reaches the requisite size to provide representative information) and periodically make data available to the market. Expected NYGB informational solutions may include tracking and analyzing not only energy project performance data, but also financing/loan payment and performance data for projects in which NYGB has invested.

Many of the other green banks in existence - both in the U.S. and around the world - are also working to standardize emerging clean energy markets, and NYGB continues to collaborate in these areas with its national and international peers. The establishment of a formal international green bank network as

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<sup>43</sup> Commercial markets and their incumbents value confidentiality extremely highly - to protect transaction terms and other competitive information (including project know-how, progress and performance). NYGB must remain highly sensitized to usual and customary confidentiality practices. To the extent that NYGB is required to obtain disclosures from its clients and partners that are perceived to go beyond commercial norms, NYGB expects that the willingness of private market participants to engage with NYGB will be materially reduced.

described in Section 2.1 is in part aimed at standardizing global clean energy markets, based on aggregate findings and data derived from each participating jurisdiction.

## 7.0 Capital

### 7.1 Capitalization

NYGB was initially capitalized by public funds collected pursuant to programs administered by NYSERDA and New York State's investor-owned utilities, including the Energy Efficiency Portfolio Standard ("EEPS"), Renewable Portfolio Standard ("RPS") and Technology and Market Development ("T&MD"), formerly referred to as the Systems Benefit Charge ("SBC")<sup>44</sup>. Additional funding was allocated from auction proceeds under RGGI, which is also administered by NYSERDA pursuant to regulations of the New York State Department of Environmental Conservation ("NYSDEC") and NYSERDA. NYSDEC oversees New York State's participation in RGGI.

Historically, there have been two methods of allocating funds to NYGB. For EEPS, RPS and T&MD/SBC uncommitted proceeds, allocation is initiated by a petition to the Commission, which is evaluated, considered, made open to public review and comment, and ordered in accordance with the Commission's usual procedures. For RGGI proceeds, NYSERDA is the authorized party to receive and disburse proceeds in accordance with regulations promulgated by NYSDEC and NYSERDA. NYSERDA allocates RGGI proceeds to various qualifying programs through its Annual RGGI Operating Plan, approved by NYSERDA's Board.

#### 7.1.1 Timing

Governor Cuomo announced the concept of NYGB in January 2013 with target total capitalization of \$1.0 billion. On December 19, 2013, the Initial Capitalization Order established NYGB and provided NYGB with \$165.6 million initial capitalization of ratepayer funds. Added to this amount were RGGI funds of \$52.9 million providing for a total initial NYGB capitalization of \$218.5 million<sup>45</sup>.

In fall 2014, NYSERDA and NYGB filed the Petition to Complete Capitalization with the Commission. This Petition seeks authorization by the Commission for payment of the remaining installments of capital to NYGB until full public capitalization levels are reached. Public comments were submitted in that proceeding by January 12, 2015 and NYGB and NYSERDA filed the Reply Comments with the Commission on February 2, 2015.

As a division of NYSERDA, NYGB is part of the CEF and beginning in 2016 (when the CEF commences) installments of NYGB's ongoing public capital will be funded through the CEF. NYGB's total capital allocation from public funds will be reflected in the overall CEF budget included in the CEF Information Supplement expected to be filed on June 25, 2015<sup>46</sup>. As described in the Petition to Complete Capitalization, together with the Reply Comments, capitalization at \$1.0 billion that is fully authorized and allocated to NYGB provides both credibility and certainty in the clean energy financing marketplace in which NYGB operates<sup>47</sup>. NYGB's success requires market confidence in its ability to support its substantial and growing transaction pipeline based on available capital. The absence of such confidence will prevent engagement of private sector clients, partners and collaborators with NYGB, directly undermining its ability to be successful and deliver the expected benefits.

#### 7.1.2 Product Pricing

NYGB prices its products to support self-sufficiency. In doing so, NYGB serves as both a prudent fiduciary of ratepayer funds and as an agent for greater private investment in clean energy sectors.

Pricing for all NYGB investments reflects market rates for comparable transactions. NYGB investment terms are determined by credit risk and exposure assumed by NYGB and other investment participants, adopting a

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<sup>44</sup> Initial NYGB funding consisted of \$3.5 million in uncommitted NYSERDA EEPS I funds; \$22.1 million in uncommitted NYSERDA T&MD/SBC funds; \$50.0 million in NYSERDA RPS funds; and \$90.0 million in uncommitted utility EEPS I funds.

<sup>45</sup> Including \$17.248 million allocated to meeting administration and evaluation costs; Initial Capitalization Order, Ordering Clause 1, page 23.

<sup>46</sup> Case 14-M-0094.

<sup>47</sup> See e.g., Petition to Complete Capitalization at Section 6.0, pages 23 - 25; Reply Comments at Section 2.1, pages 2 - 6.

usual and customary private sector approach to identify and value risk. For certain products, ongoing or upfront fees may be charged. Although NYGB must be appropriately compensated for the underlying credit risk in all transactions, NYGB will, in certain circumstances, consider receiving a lower liquidity premium than it might otherwise be able to charge, if its involvement is expected to provide strategic benefits, such as increasing market liquidity.

Specific NYGB product pricing for any proposed transaction is set at a level comparable to the reasonable commercial expectation for similar efficient private sector funding. In particular, this means that in pricing its products, NYGB takes into account current market rates as well as commercial expectations of rates at a point when the market for the relevant investment is expected to be more liquid.

## 7.2 Asset Allocation Principles

NYGB adopts portfolio construction, diversification, evaluation, monitoring and management approaches that are similar to those employed by comparable private and public sector investment funds and specialty finance companies. These are discussed in greater detail in [Section 8.0](#).

## 7.3 Capital Redeployment Cycle

Central to achievement of NYGB's objectives is its ability to efficiently recycle funds. Unlike a pool of public funds that is dispensed once to qualifying projects as non-refundable grants or subsidies, funds entrusted to NYGB are disbursed under commercial arrangements generating investment income and requiring repayment in accordance with agreed terms for each product and client/partner project. This means that as each dollar from NYGB cycles through successive investments, benefits will compound. The effective rate of accumulation of these benefits is directly tied to the weighted average holding period of the financial products that NYGB provides to its clients. Further, as the commercial markets expand into and increasingly accommodate clean energy finance needs previously supported by NYGB, the multiplier effect on NYGB's activities and investments will continue.

Consistent with its market responsive approach, NYGB does not primarily focus on preset available product tenors and mixes. As described in [Section 5.0](#), the initial product suite offered by NYGB includes Credit Enhancements, Warehousing/Aggregation (shorter-term) and Asset Loans & Investments (longer-term). The average tenor of investments involved varies both across each product type and within a product line, depending on the needs of each specific transaction. Generally, for the type of products that NYGB is offering, tenors can be from less than a year to 15 - 20 years. However, any capital recycling calculations need to reflect expected amortization schedules for particular products as well as the likelihood of NYGB's ability to sell down or monetize its longer-term positions as the secondary market appetite develops for the classes of assets which NYGB holds. The combination of these factors means that weighted average holding periods for NYGB investments across a fully deployed capital base, in turn driving capital recycling rates, are expected to be between four and seven years.

## 8.0 Risk Management & Oversight

### 8.1 Introduction

Effective management of NYGB risk is a cornerstone of NYGB's ability to be self-sustaining, meet its mission of generating returns in excess of expenses and other uses of cash, and being a responsible steward of the public funds with which it is entrusted. While throughout this Plan it has been emphasized that realizing its market-responsive mission requires NYGB to retain flexibility in its decision-making, investments and operations, NYGB is acutely aware that such flexibility must be subject to rigorous processes and accountabilities.

Risk-taking is an intrinsic part of all investment businesses, including NYGB. At NYGB, risk management is not only important in minimizing and controlling loss, it also plays a role in the strategic planning, portfolio construction and investment management processes.

Risk management is the process for identifying, assessing and controlling both enterprise and portfolio risks to minimize unanticipated losses and uncompensated risks and optimize the reward/risk ratio<sup>48</sup>. At NYGB, risk management principles are applied at the enterprise and investment portfolio levels and are both quantitative and qualitative in nature. This means that risk management is viewed not just as the duty of one individual or department but as the responsibility of all NYGB personnel as a fundamental part of organizational culture.

This Section 8.0 outlines the key risks in NYGB's business, risk management policies, mitigants and risk management oversight.

### 8.2 Risk Framework & Identification

At NYGB, all risks arising in the business are classified into two main categories: investment risks and enterprise risks. Investment risks refer to all the risks involved in investment selection and asset management; enterprise risks reflect the balance of largely operational risks related to NYGB's business. Investment risks are further segmented into investment selection and portfolio management, reflecting that the nature of risks that arise in connection with the deployment of funds differs depending on whether NYGB is making a particular investment or managing its overall portfolio. Exhibit 16 sets out the key business risks to be managed by NYGB.

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<sup>48</sup> "Risk Principles for Asset Managers", February 2008, prepared by the Buy Side Risk Managers Forum and Capital Market Risk Advisors.



Exhibit 16. NYGB Key Business Risks

Investment Risks		Enterprise Risks	
Investment Selection			
Technology Risk	The risk that the technology employed in a potential investment will not function as and when intended, including to expected and necessary performance levels	Capitalization Risk	Risk that the balance of the targeted \$1.0 billion capitalization does not occur in a full and timely manner; and/or that uncommitted funds from time to time are targeted for redeployment by New York State. Failure to reach and maintain full capitalization will impact NYGB's concentration risk and result in a portfolio that is overweight in individual transaction types versus plan
Operating Risk	Operational risks related to potential investments, including construction, fuel/renewable resource, input prices, servicing, maintenance and billing/collections arrangements, management, performance of other debt, equity and project participants	Liquidity/ Balance Sheet Risk	Risk that counterparties are unable to finance NYGB when expected and/or NYGB is unable to sell-down assets (at times and/or on terms acceptable to NYGB), tying up capital and slowing the capital recycle rate
Legal & Capital Structure Risk	Risks of inadequate contractual terms and documentation to properly structure the relevant project and protect NYGB's interests; risks inherent in proposed capital structure and contractual risk allocations between capital providers	Capital Deployment Risk	Risk that capital is not deployed at a sufficient rate to generate the revenues necessary for self-sufficiency, or the benefits expected to the clean energy sector in New York and to the leveraging of public funds
Counterparty & Credit Risk	Risk of default by a project and/or direct NYGB counterparty in a proposed investment	Execution Risk	Risk of not having the right skills, in the needed amounts available to execute on NYGB business as intended (applies to internal capabilities and external partnerships)
Refinancing Risk	Risk of market development and condition such that project either cannot be refinanced where applicable, except in part or at a loss to NYGB, or on terms which might reasonably result in default	Operational Risk	Risks affecting NYGB's "license to operate" potentially arising in these areas: <ul style="list-style-type: none"> <li>• Legal</li> <li>• Legislative and regulatory</li> <li>• Environmental</li> <li>• Intra-Agency integration (e.g., NYSERDA)</li> <li>• Inter-Agency integration (e.g., DPS)</li> <li>• State Comptroller/NYSERDA audit deficiency</li> <li>• Inadequate systems, processes or controls</li> </ul>
Market/Price Risk	Risk that energy prices do not sustain the investment/project as modeled and proposed over its expected life	Political Risk	Risks relating to NYGB, as a state-sponsored specialty finance entity, being perceived as a target to provide special treatment to particular constituencies or suffering from changed political priorities with respect to clean energy within New York
Portfolio Management			
Non-Performance	Risk that during the course of an investment it begins to under-perform and/or becomes non-performing		
Concentration Exposures	Risks posed by lack of sufficient diversification among portfolio investments, such that non-performance in a particular transaction type has a substantial impact on overall portfolio performance	Reputation Risk	Risks that can arise in every aspect of NYGB's business and operations that an event occurs relating to a transaction, counterparty or business practice which detrimentally impacts NYGB and therefore the regard in which it is held in the marketplace and among all stakeholders. Diminished reputation can materially undercut NYGB's ability to operate and achieve success
Investment Servicing & Administration	Risk of investment servicing and administration (including all related monitoring and reporting) lacking in scope, accuracy, or timeliness, impacting the ability to optimally manage NYGB investments and portfolio		

### 8.3 Risk Mitigation Principles

Addressing the risks that arise across NYGB's business occurs through the application of key risk management principles in combination with a system of specific risk mitigation measures. NYGB's investment risks will be identified, managed and monitored through application of the practices outlined in the balance of this Section 8.3 in the context of investment analysis and review, portfolio construction, ongoing portfolio monitoring and management, and organizational risk culture. NYGB's risk management reflects the principles set out below.

#### *8.3.1 Investment Analysis & Review Principles*

- (a) Structured and comprehensive due diligence for all potential investments, addressing all identified transaction risk categories consistent with usual and customary commercial approaches;
- (b) Creating the most appropriate transaction structure, including financial terms (e.g., covenants, ratios, leverage, reporting requirements, etc.) for the particular asset class;
- (c) Implementing a comprehensive set of contractual risk mitigants (e.g., representations, warranties and covenants, indemnities, defaults, penalties, etc.);
- (d) Adhering to internal procedures for investment decision-making, including Scoring Committee, Greenlight Committee and IRC reviews, input and respective approval processes; and
- (e) Leveraging internal and external expertise as required by a particular opportunity, including technical and legal.

#### *8.3.2 Portfolio Construction Principles*

- (a) Apply prudent diversification principles to the extent possible taking into account NYGB's market-responsive approach, including with respect to:
  - i. Each transaction and how it fits within NYGB's portfolio;
  - ii. Particular clean energy sub-sectors (e.g., solar, wind, storage, efficiency, etc.);
  - iii. Types of projects (e.g., by technology etc.);
  - iv. Target segment representation (including end-use type - commercial and industrial, residential etc.);
  - v. Particular clients and partners;
  - vi. Types of product offerings; and
  - vii. Geographic distribution;
- (b) Identify and monitor concentration risk and exposures (e.g., companies, technologies, asset classes, products etc.), also taking into account NYGB's market-responsive approach;
- (c) In the context of NYGB's demand-driven approach, evaluate and revise as needed minimum and maximum indicative single investment amounts;
- (d) Use recognized commercial benchmarks for comparable asset classes to assess NYGB relative performance once the portfolio has reached sufficient size; and
- (e) Manage returns from individual investments as well as across the entire portfolio, ensuring such returns generally exceed minimum hurdle rates.

### 8.3.3 *Ongoing Portfolio Monitoring & Management Principles*

- (a) Regular and periodic evaluation of each investment against its investment case;
- (b) Identify early signs of potential/actual under-performance and/or non-performance;
- (c) Proactive management of recoveries and maximization of recovery in line with sound commercial principles; and
- (d) Regular reporting to the IRC.

### 8.3.4 *Organizational Risk Culture Principles*

- (a) NYGB has adopted and strives to maintain an organizational culture in which understanding and managing risk is everyone's responsibility. Risk mitigation and management is not just about policing and enforcing limits. NYGB personnel at all levels must be cognizant of risks and willing to do their part to make sure that those risks within their sphere of responsibility are managed in a manner consistent with NYGB's policies and disclosures to clients, partners and broader stakeholders. Implementation and compliance with NYGB risk parameters, principles, policies and procedures forms part of personnel performance assessments;
- (b) Ongoing NYGB emphasis on communications, transparency and consistent updates in connection with existing investments, investment opportunities, clients, partners and key stakeholders;
- (c) Organizational checks and balances are being established and maintained, including appropriate segregation of front/mid-back office functions. Risk function is housed in an independent control group with a single point of responsibility (i.e., the Managing Director, Risk & Compliance) and having access to NYGB's President and the IRC;
- (d) NYGB organizational structure in which risk management roles and responsibilities are clearly defined, including written policies and other procedures identifying the specific people within the organization who are authorized to approve various actions, etc.;
- (e) Senior management and the IRC are responsible to fully understand NYGB risks, define risk tolerances and set the risk management and ethical tone throughout the organization. This is critical to NYGB achieving its mission and protecting its reputation in the marketplace;
- (f) NYGB acquires and maintains technology to support risk functions, including appropriate software platforms and other tools for portfolio management, performance analysis and monitoring (as described in [Section 10.2](#));
- (g) NYGB has implemented and seeks to maintain effective record keeping and management of all documents and records pursuant to commercial and appropriate protocols;
- (h) NYGB works with information technology personnel at NYSERDA to ensure adequate backup and disaster recovery support;
- (i) NYGB works with information technology personnel at NYSERDA to ensure the existence of an effective system of security to protect the interests of NYGB employees, clients and partners;
- (j) Financial statements are prepared quarterly (unaudited) and annually (audited) in accordance with all applicable accounting standards;
- (k) An experienced and credible accounting firm is retained to audit NYGB financial statements annually; and

- (l) NYGB, as a division of NYSERDA, remains subject to NYSERDA internal controls, policies and procedures and internal audits, as applicable.

## 8.4 Risk Management Oversight

In addition to having dedicated Risk & Compliance and Legal & Regulatory Affairs functions at NYGB, a number of key committees provide oversight of and/or inputs to various aspects of NYGB's business, including the IRC, the Scoring Committee, the Greenlight Committee and the Advisory Committee. These aspects of NYGB advice, oversight and governance are summarized below.

### 8.4.1 IRC

The IRC ultimately provides risk management oversight at NYGB, with respect to both investment and enterprise risks. The IRC is made up of senior NYSERDA officers who each possess financial and investment capabilities and experience, as well as senior NYGB personnel. The IRC currently comprises:

- (a) President & CEO of NYSERDA;
- (b) Treasurer of NYSERDA;
- (c) President of NYGB; and
- (d) NYGB Managing Directors<sup>49</sup>.

The IRC meets regularly to consider, review, and provide recommendations for consideration by NYSERDA's President & CEO in connection with the following items as needed, taking into account NYGB's mission, operations, asset allocation, exposures and all NYGB risk parameters and policies:

- (a) NYGB strategy and business plans;
- (b) Overall capital deployment plans and strategies;
- (c) Risk management practices and framework;
- (d) Financial and economic performance metrics and reporting;
- (e) Key NYGB procedures;
- (f) The Metrics Plan;
- (g) Any other material documents required to be filed with the Commission or other State agency (including periodic reporting);
- (h) Transaction Approval Memoranda;
- (i) Quarterly investment reports;
- (j) Proposed material waivers, amendments, restructurings and/or dispositions of existing NYGB investments; and
- (k) Quarterly management reports.

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<sup>49</sup> Provided that no Managing Director who is responsible for the execution of a transaction being considered by the IRC will participate as a member of the IRC with respect to that transaction. In addition, any actual or potential conflicts of interest that exist or may arise for any IRC member will be reviewed by legal counsel and such member may be recused from participation if, and to the extent, warranted.

In addition to reviewing/overseeing all financing and investment agreements, the IRC meets regularly to review NYGB's overall business, positions, portfolio construction and performance, including flagging any actual or potential issues with NYGB investment assets or portfolio. No commitment of NYGB capital is made without vetting by the IRC.

The President & CEO of NYSERDA, upon consideration of the input of IRC members, is the final decision-maker with respect to matters before the IRC.

#### *8.4.2 Scoring Committee*

When NYGB receives proposals in response to the Investment RFP, those proposals are reviewed by the Scoring Committee, the members of which are all NYGB employees, designated by NYGB's President. The purpose of the Scoring Committee is to review and evaluate all competitive proposals received by NYGB for completeness and against evaluation and selection criteria described in the Investment RFP. This process is designed to ensure efficiency and standardization in NYGB's approach to evaluating, and responding to, investment opportunities.

#### *8.4.3 Greenlight Committee*

No potential investment proceeds to full-scale diligence and negotiation of terms without vetting by the Greenlight Committee. All IRC members are eligible to participate in the Greenlight Committee, which is made up of at least three IRC members, including both NYSERDA and NYGB personnel (but excluding NYGB personnel directly involved in execution of the subject transaction). This committee reviews and makes recommendations (including the requirement of certain contingencies or conditions) to NYSERDA's President & CEO with respect to a proposed transaction. Before any potential transaction is submitted to the IRC for review, prior issues raised by the Greenlight Committee must be addressed. The "greenlighting" requirement adds another check and balance on potential investments in NYGB's pipeline to ensure that individual transactions meet credit quality standards and all other applicable investment criteria, are consistent with NYGB's mission and are appropriate from a risk perspective.

#### *8.4.4 Advisory Committee*

The Advisory Committee is a group of senior professionals, prominent in their fields, which delivers guidance on an ongoing basis to the NYGB President and management team regarding matters pertinent to NYGB's business. Advisory Committee members are appointed on the recommendation of NYGB's President, with the approval of NYSERDA's President & CEO. These members represent a range of backgrounds that may include energy and environmental issues (preferably focused on the clean energy sector), project development and finance, banking, capital/financial markets, portfolio management, new venture management/business development, utility and related infrastructure, engineering/technology and real estate. Advisory Committee member expertise includes deep knowledge of project financing structures; portfolio management, renewable energy investment, regulatory and operational expertise; and active investor experience in clean energy. The Advisory Committee meets at least twice a year and details regarding its members, purpose, objectives and terms of engagement are available at [greenbank.ny.gov/About/Advisory-Committee](http://greenbank.ny.gov/About/Advisory-Committee).

## 9.0 Metrics & Evaluation

### 9.1 General

The Initial Capitalization Order directed NYSERDA to collaborate with DPS staff to develop metrics for evaluation of NYGB. Specifically, the Commission required the design of appropriate metrics for judging NYGB's effectiveness, as well as data collection and reporting requirements that support the Commission's ability to assess New Yorkers' return on investment in NYGB. Further, metrics design aims to help the Commission and the public evaluate how well NYGB is achieving clean energy goals, including the objectives of market transformation and reducing the need for future ratepayer collections.

The Metrics Plan was developed by NYGB and NYSERDA, in collaboration with DPS staff and subject to public review and comment. What is included in this Plan is a summary of the key aspects of the Metrics Plan, as that plan has evolved and been improved over time.

NYGB's publicly reportable measures fall into two broad categories: operational and risk management milestones achieved during the relevant period (collectively, the "Milestones") and the Metrics (set out in [Exhibit 17](#)). The Milestones are important indicators of NYGB progress and completion of each Milestone is documented as it occurs and reported as required in the Initial Capitalization Order.

The Metrics constitute the ongoing key success measures that are regularly tracked and publicly reported to gauge NYGB achievements. [Exhibit 17](#) also indicates the timing contemplated for the outputs and outcomes relevant to each Metric. While most of the Metrics are quantitative in nature, some have inherently more qualitative aspects including, for example, market transformation and additionality considerations. It is projected that NYGB quantitative performance targets will be established by NYGB and tracked beginning in 2017 for Energy Saved, Clean Energy Generated, and GHG Emission Reductions. Key definitions relating to the Metrics are set out in [Section 9.2](#).

In addition to the Milestones and Metrics that will be externally reported, NYGB will also internally track types of financial products and instruments, length of investments as well as other important factors identified by the Initial Capitalization Order such as geography, technology, type of consumer segment and fuel diversity in the projects in which it invests.

Exhibit 17. Metrics & Data Collection

Metric Type	Metric	Data Collection	Timing
Risk Management Metrics <sup>50</sup>	<ul style="list-style-type: none"> <li>Total Capital available</li> <li>Approved Investments</li> <li>Committed Funds</li> <li>Deployed Funds</li> <li>Overall portfolio size and concentrations<sup>51</sup></li> </ul>	NYGB records <sup>52</sup>	Reported quarterly (within 45 days after the end of each quarter) as NYGB financing agreements are signed and closed. First quarterly report filed within 45 days after the third quarter 2014
	<ul style="list-style-type: none"> <li>Portfolio Impairment (percent currently Impaired and projected recoveries)</li> </ul>	NYGB records	Reported annually, consistent with NYGB's fiscal year (April 1 - March 31). First annual report filed within 90 days after March 31, 2015 <sup>53</sup>
Financial & Market Metrics	<ul style="list-style-type: none"> <li>Cumulative Operating Expenses</li> <li>Number and type of NYGB-supported projects financed</li> <li>Number and general type of NYGB clients and partners</li> </ul>	NYGB records	Reported quarterly (within 45 days after the end of each quarter) as NYGB financing agreements are signed and closed. First quarterly report filed within 45 days after the third quarter 2014
	<ul style="list-style-type: none"> <li>Audited Financials</li> <li>Mobilization Ratio</li> <li>Return on Investment</li> <li>Capital Redeployment Cycle Time</li> </ul>	NYGB records	Reported annually, consistent with NYGB's fiscal year (April 1 - March 31). First annual report filed within 90 days after March 31, 2015 <sup>54</sup>
	<ul style="list-style-type: none"> <li>Level of awareness, knowledge and confidence of financial institutions and market intermediaries in clean energy investments<sup>55</sup></li> </ul>	Market evaluation <sup>56</sup>	Long-term outcome: Baseline and time series data to be reported as available from periodic evaluation

<sup>50</sup> The Initial Capitalization Order defines risk management metrics as those that assist in defining acceptable capital deployment opportunities.

<sup>51</sup> NYGB's risk management protocols include portfolio construction principles, which in turn address diversification and concentration. In particular, these principles require NYGB to identify and monitor concentration risk and exposures including as to technologies, product offerings and clients and counterparties.

<sup>52</sup> NYGB records include information obtained from clients and partners consistent with usual and customary commercial practice, including with respect to confidentiality determined necessary on a deal-by-deal basis.

<sup>53</sup> Timing takes into account the period required for Audited Financials to be prepared and reviewed ahead of being available for public filing.

<sup>54</sup> Timing takes into account the period required for Audited Financials to be prepared and reviewed ahead of being available for public filing.

<sup>55</sup> Over time, as financing agreements are signed and closed, NYGB will give consideration to the development of specific barriers and market transformation indicators.

<sup>56</sup> As set out in [Section 9.4.2](#) (Market Evaluation) the reporting cycle for this Metric will be tied to the timing of the required evaluations.

Metric Type	Metric	Data Collection	Timing
Energy & Environmental Metrics	<ul style="list-style-type: none"> <li>▪ Lifetime energy saved by fuel type from efficiency projects (MWh/MMBtu)<sup>57</sup> and/or lifetime clean energy generated (MWh)<sup>58</sup></li> <li>▪ Lifetime primary energy saved from CHP (Btu)</li> <li>▪ Clean energy generation installed capacity (MW), if applicable</li> <li>▪ Lifetime greenhouse gas emission reductions (tons)</li> </ul>	<p>NYGB records Impact evaluation</p>	<p>Long-term outcomes: Estimates reported quarterly (within 45 days after the end of each quarter) for Committed Funds and Deployed Funds as NYGB financing agreements are signed and closed, later verified by impact evaluation. First quarterly report filed within 45 days after the third quarter 2014</p>

## 9.2 Key Definitions

For the purposes of calculating and reporting the Metrics, the following terms have the meanings indicated:

“Approved Investments” means, in any period, the aggregate of proposed investments (expressed in dollars) that have moved through NYGB’s transaction process - from proposal submission, evaluation, structuring/diligence/negotiation, agreement in principle, to vetting by the IRC and approval by NYSERDA’s President & CEO after considering recommendations made by IRC members. Approved Investments represent a commitment of NYGB’s capital in accordance with the terms of the IRC approval - an interim stage before Committed Funds.

“Audited Financials” means annual audited financial statements prepared in accordance with applicable accounting standards by an experienced, credible and independent accounting firm, in consultation with NYGB and NYSERDA staff.

“Capital” means the aggregate capital allocated to NYGB from all public sources at the relevant time, including time-weighted adjustments to account for changes in NYGB’s capitalization, expressed in dollars.

“Capital Gains” mean, in any year, all increases in the capital available to be Deployed by NYGB in its investments derived from realized gains, expressed in dollars.

“Capital Losses” mean, in any year, the aggregate amount of funding that has been Deployed as principal by NYGB and become due and payable but that has not been repaid to, or recovered by, NYGB pursuant to the terms of the relevant transaction documents, expressed in dollars, and in respect of which NYGB has undertaken and exhausted commercially reasonable legal remedies and other means of recovery.

“Capital Redeployment Cycle Time” means the average period of time it takes for a dollar of Committed Funds or Deployed Funds to be advanced to, and repaid from, one NYGB investment and further Committed and/or Deployed to a subsequent NYGB investment, measured across NYGB’s entire portfolio.

“Committed Funds” means, in any period, the aggregate funds to be provided by NYGB pursuant to fully negotiated client and partner financing agreements executed in that period, without such funds having yet been Deployed, expressed in dollars. “Committed” has a corresponding meaning.

“Cumulative Operating Expenses” means the aggregate of all Operating Expenses since inception.

<sup>57</sup> Energy impacts will generally be based on full savings compared against the baseline of the existing condition and will be reported quarterly based on NYGB results. As these metrics are verified through impact evaluation, those results will be included in quarterly reporting following completion of corresponding evaluations.

<sup>58</sup> This Metric category will include energy impacts from on-site fuel cells and bio-heat applications.



“Deployed Funds” means, in any period, the aggregate funds that have been advanced by NYGB subject to the terms of fully negotiated client and partner financing agreements executed in that period, expressed in dollars. “Deployed” has a corresponding meaning.

“Gross ROI” for any period is calculated for NYGB as follows:

$$\frac{\text{Income} - \text{Capital Losses} + \text{Capital Gains}}{\text{Capital}}$$

“Impaired” refers to any NYGB asset where:

- (a) That asset has become non-performing, such that NYGB is no longer receiving all principal, interest and fees due in connection with that asset in accordance with the terms of the applicable transaction documentation; and
- (b) NYGB reasonably expects to incur a Capital Loss on recovery of the amount of Deployed Funds representing that investment asset and has reserved in its accounts accordingly.

“Income” during any period means all fees, interest and other receivables related to Committed Funds and Deployed Funds (including, without limitation, such amounts as may be capitalized, accrued or paid-in-kind) due to NYGB during that period as remuneration for providing financial facilities in transactions and also includes interest received on cash held by NYGB<sup>59</sup>, all expressed in dollars.

“Mobilization Ratio” means the aggregate amount of private sector capital committed or invested (or expected to be committed or invested in the case of warehouse/aggregation financings) across transactions for every dollar of Committed Funds or Deployed Funds in those transactions.

“Net ROI” for any period is calculated for NYGB as follows:

$$\frac{\text{Income} - \text{Capital Losses} + \text{Capital Gains} - \text{Operating Expenses}}{\text{Capital}}$$

“Operating Expenses” mean, during any period, the costs involved in operating NYGB on a day-to-day basis including all salaries and benefits, transaction expenses, operating expenses and other general and administrative expenses, expressed in dollars.

“Portfolio Impairment” means, at any time with respect to all assets within NYGB’s investment portfolio, the dollar value that is recorded in NYGB’s books of all such assets that are Impaired, expressed as a percentage of the total of all Committed Funds and Deployed Funds at that time.

“Return on Investment” or “ROI” represents stakeholders’ return on investment in NYGB and measures return on Capital, expressed as a percentage, including Gross ROI and Net ROI. Both Gross ROI and Net ROI will be calculated on a fiscal year basis and include:

- (a) ROI for the relevant year (gross and net of Operating Expenses); and
- (b) Cumulative ROI (gross and net of Operating Expenses) commencing from the third quarter of 2014.

### 9.3 Reporting Plan

NYGB files reports with the Commission within 45 days of the end of each quarter outlining NYGB’s progress in advancing the organization and executing on this Plan. These periodic filings also include NYGB’s performance quarter-over-quarter against tracked Metrics as identified for quarterly reporting listed in [Exhibit 17](#). Metrics data either derived from (i.e., relating to market) or verified by (i.e., in connection with

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<sup>59</sup> It is NYGB’s practice to invest cash balances in low risk instruments.

energy and environmental outputs) the evaluation efforts specified in Exhibit 17 will be reported based on the frequency of evaluation (see Section 9.4).

Reflecting the Metrics Plan, Exhibit 18 summarizes the overall NYGB reporting plan as to content and frequency.

*Exhibit 18. Summary of Reporting Plan*

Quarterly Reports	Annual Reports	Long-Term Outcomes of NYGB Impact to the Market
<ul style="list-style-type: none"> <li>▪ Filed within 45 days after the end of each calendar quarter as NYGB financing agreements are signed and closed</li> <li>▪ First quarterly report filed within 45 days after the third quarter 2014 (reflecting data through September 30, 2014)</li> <li>▪ Includes the following metrics and information:               <ul style="list-style-type: none"> <li>▪ Total Capital available</li> <li>▪ Approved Investments</li> <li>▪ Committed Funds</li> <li>▪ Deployed Funds</li> <li>▪ Overall portfolio size and concentrations</li> <li>▪ Cumulative Operating Expenses</li> <li>▪ Number and type of NYGB-supported projects financed</li> <li>▪ Number and general type of NYGB clients and partners</li> <li>▪ Estimates of Energy &amp; Environmental metrics</li> </ul> </li> <li>▪ Transaction Profiles to be posted on NYGB website as financing agreements are signed and closed</li> </ul>	<ul style="list-style-type: none"> <li>▪ Filed yearly consistent with NYGB’s fiscal year (April 1 - March 31)</li> <li>▪ First annual report filed within 90 days after March 31, 2015</li> <li>▪ Includes the following metrics:               <ul style="list-style-type: none"> <li>▪ Portfolio Impairment (percent currently Impaired and projected recoveries)</li> <li>▪ Audited Financials</li> <li>▪ Mobilization Ratio</li> <li>▪ Return on Investment</li> <li>▪ Capital Redeployment Cycle Time</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Periodic market evaluations with data reported as available</li> <li>▪ Impact evaluation of the estimates of the following Energy &amp; Environmental metrics (reported quarterly):               <ul style="list-style-type: none"> <li>▪ Lifetime energy saved by fuel type from efficiency projects (MWh/MMBtu) and/or lifetime clean energy generated (MWh)</li> <li>▪ Lifetime primary energy saved from CHP (Btu)</li> <li>▪ Clean energy generation installed capacity (MW), if applicable</li> <li>▪ Lifetime greenhouse gas emission reductions (tons)</li> </ul> </li> </ul>

## 9.4 Evaluation Plan

The NYGB evaluations will:

- (a) Assess and verify NYGB’s energy, environmental and economic impacts;
- (b) Assess the overall progress of NYGB toward meeting its market transformation goals, including increasing investor confidence and achieving scale in clean energy financing; and
- (c) Provide information to help enhance the uptake, deployment and effectiveness of NYGB product offerings.

Impact, market and process evaluation activities, described below, will support these goals.

### 9.4.1 Impact Evaluation

Impact Evaluation validates the overall energy, environmental and economic impacts attained through investment of NYGB funds as well as NYGB’s ability to bring more clean energy transactions to close through greater market confidence, building strong track records and creating a “demonstration effect”. Impact Evaluation will ensure appropriate accountability for these key metrics and will use the most cost effective

and least burdensome methods (for both NYGB and its clients and partners)<sup>60</sup>. Where data need to be collected on NYGB projects and business to fulfill the objectives of Impact Evaluation, sampling will be used, especially regarding distributed projects.

#### *9.4.2 Market Evaluation*

Market Evaluation establishes baseline levels for key indicators of market change (e.g., awareness, knowledge, and investor confidence related to financing clean energy projects). A Market Evaluation will occur when a critical mass of NYGB financing and investment arrangements are put in place and will help inform the initial areas of financial product and clean energy project emphasis<sup>61</sup>. A follow-up study will focus on measuring changes to those indicators in market sectors where NYGB has been active for some time. Market Evaluation will help identify the effect of NYGB on transforming the clean energy finance market and will provide data to inform decisions about future NYGB product offerings. Market Evaluation will employ a social science approach to address additional effects of NYGB above and beyond changes that would have occurred independently. Market Evaluation will be conducted on sectors that NYGB has supported and will occur approximately three to five years following initial NYGB capital deployments. Market Evaluation may also seek to characterize any lasting, post-intervention impact of NYGB on key market sectors. This will be done through continued, longitudinal data collection via interviews and other sources.

#### *9.4.3 Process Evaluation*

Process Evaluation will be undertaken periodically to gain insights from systematic interviews with NYGB clients, partners and other relevant parties. Process Evaluation will be designed on an as-needed basis.

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<sup>60</sup> Where NYGB projects are also utilizing EEPS incentive programs (including similar or replacement programs), there may be no need for additional evaluation. Likewise, where meter data is readily available for renewable energy installations, such data may be relied upon to verify impact.

<sup>61</sup> Market evaluation activities will begin in the period 2017 - 2019 and will be informed by the initial market research by Booz and the business experience of NYGB in its first years of full operations.

## 10.0 Organization & Resource Requirements

### 10.1 Structure & Staffing

To establish and maintain a scalable and sustainable business, it is essential that NYGB acquires and retains the necessary human capital in terms of skills, experience and number of personnel in place to achieve the goals of this Plan. The NYGB strategy depends on:

- (a) Strong upstream origination capabilities through close ties with potential private sector clients and partners, as well as Collaborators, to motivate a steady stream of quality investment submissions to NYGB consistent with its mission;
- (b) Extensive transaction structuring, diligence, financial modeling and analysis, negotiating, execution, monitoring and management capabilities;
- (c) Creative product development in response to market indications of particular areas of need in which NYGB can play a material role consistent with its mission;
- (d) Personnel to assess and manage the NYGB portfolio (from both asset and risk management perspectives);
- (e) Broad and deep capabilities in the core areas of legal and regulatory affairs, risk and compliance and operations, finance and external affairs; and
- (f) Strong additional support available as needed in the areas of investor/government relations, marketing and communications, finance and legal, contracts and procurement, engineering and technical, human resources and IT.

The skills listed in items (a) through (e) above are critical to be retained as part of the core team within NYGB itself while those referred to in item (f) can be internal or externally sourced (or both) as the situation warrants. NYGB's unique mission and business model underscore the need for specialized energy finance, development and investment capabilities to be built in-house. As a division of NYSERDA, NYGB has benefited from being able to leverage the intellectual capital and clean energy domain expertise of NYSERDA, as well as receive important business support of the kinds described in item (f) above.

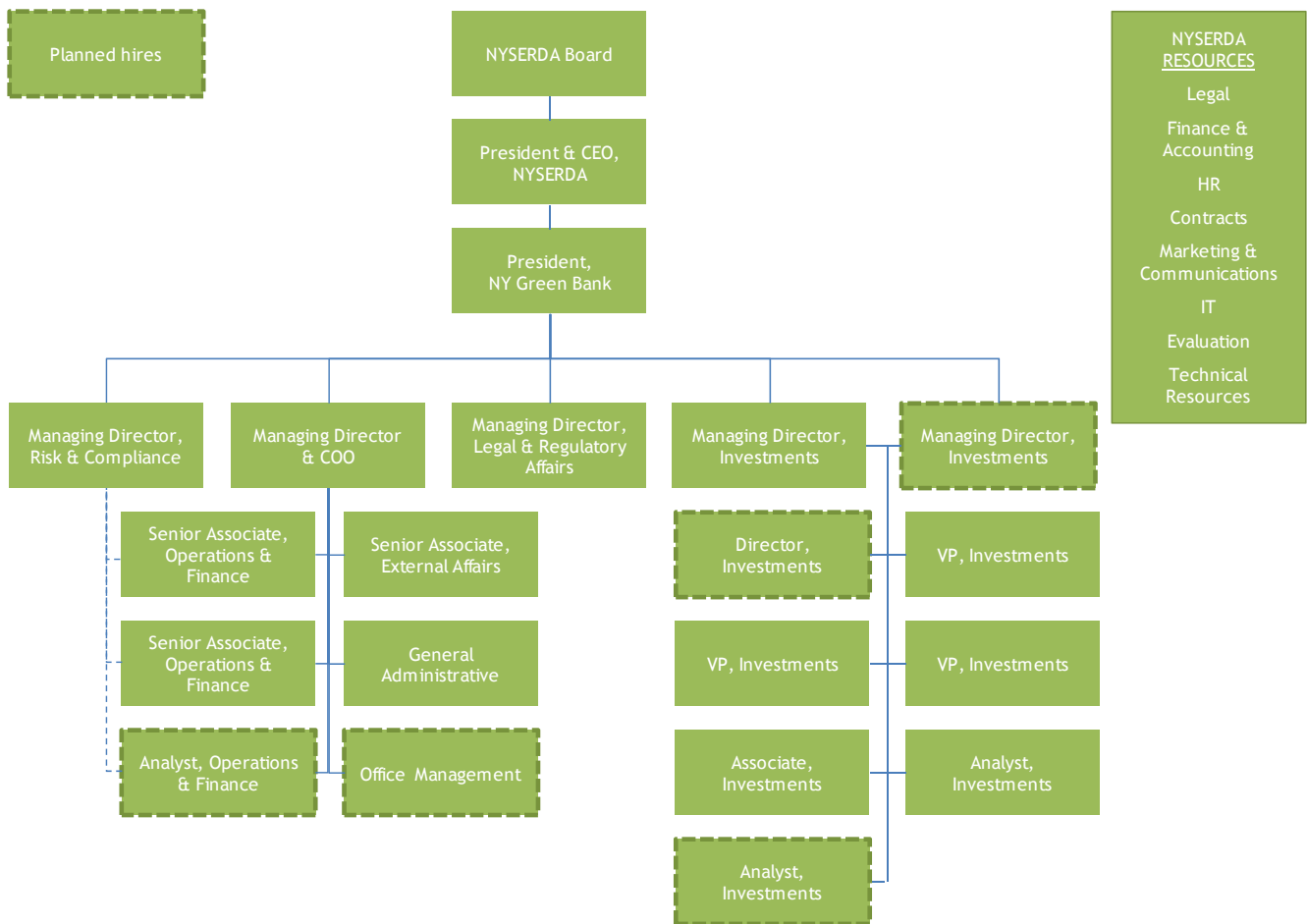
NYGB's business is characterized by complex, "high-touch" transaction structures with multiple parties and long-term transactional relationships. The process of advancing clean energy technology investment in the State consistent with NYGB's mission involves a myriad of fundamental multi-faceted and long lead-time activities. These types of activities require that there be significant infrastructure in place, not just in the front office but also mid-back office and support areas, to successfully achieve NYGB's mission and meet client, partner and key stakeholder needs in clean energy markets within New York State.

Over the past year, NYGB's staff has grown to meet the start-up and business establishment and operations needs of the organization and support all related activities. The core team and competencies are now in place and NYGB estimates that by the first part of 2016 it will have a full-time staff of 19 professionals, in an organizational structure as set out in [Exhibit 19](#)<sup>62</sup>.

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<sup>62</sup> The organizational structure at NYGB mirrors that commonly used in corporate and investment banks and funds, including similar titles and associated levels of seniority. In addition to critical support staff, the progression of positions at NYGB is generally analyst, associate, senior associate, vice president, director and managing director.

Exhibit 19. NYGB Projected Organizational Structure - Early 2016



## 10.2 Infrastructure & Information Technology

As a unique, market-based approach to motivating investment and scale in clean energy within New York State, NYGB is structured, staffed and operated as much as possible in the private sector mold. To gain and hold the attention of private sector participants and build the right profile among potential clients and partners, as well as Collaborators, dealing with NYGB in all respects must look and feel like interacting with any comparable business. It is inherent that NYGB has things such as:

- (a) Separate, stand-alone staffing for critical and business-specific functions;
- (b) Separate financials and key accounts;
- (c) Dedicated office accommodations and related systems; and
- (d) Distinct brand identity and communications and marketing materials.

While NYGB is able to leverage NYSE systems in many ways that are both efficient and effective, there are areas where NYGB's business is sufficiently different and distinct from other divisions of NYSE, requiring specific arrangements. These include having tools and a software platform capable of managing, monitoring and calculating risk relating to NYGB's portfolio of investments. The specifications for, and requirements of, such tools and software are similar to those for private infrastructure fund businesses and will facilitate tracking of the following:

- i. Status and performance of NYGB funds (e.g., Capital Committed, Deployed, realized; internal rates of return and return on NYGB's investments);
- ii. Ability to track and monitor individual transactions for performance and compliance (including draw conditions, covenants, payment obligations etc.);
- iii. Aggregate roll-up of status/performance of NYGB portfolio;
- iv. Portfolio diversification (e.g., by vintage year, product, technology, client/partner, geography);
- v. Portfolio annual cash flows, actual and projected;
- vi. Portfolio impairments;
- vii. Compliance of the NYGB fund with contractual requirements;
- viii. Contracts manager/directory of responsible NYGB personnel;
- ix. Forward calendar of expected Capital commitments and deployments; and
- x. Customized reports derived from filtering, grouping, subtotaling portfolio database information.

In March 2015, NYGB issued the Fund Administration RFP. NYGB requires traditional fund administration, loan/investment servicing and custodial services that will help to meet and manage its middle and back office needs. In the Fund Administration RFP NYGB indicated that it is seeking an initial three-year agreement from a leading provider of the requisite services possessing particular expertise in structured financing arrangements and loans. The selected provider must bring to NYGB a robust, secure platform with industry-leading technology, efficient and effective processes, as well as a highly competent support team dedicated to the NYGB account. The Fund Administration RFP due date was April 20, 2015 and NYGB is currently in the process of evaluating submissions received. It is anticipated that selection of a preferred provider will be made during summer 2015, with implementation of the fund administration platform being completed as soon as possible thereafter. The fund administration arrangements will form an integrated component of NYGB's risk management and business monitoring, including through the preparation and distribution of fund (and related entities) accounts and reports, providing a treasury support function, all portfolio and financial reporting, liaising with external auditors, etc. In addition to bolstering NYGB fund management for the benefit of all ratepayers, this type of organizational infrastructure is a necessary pre-requisite to attract and maintain third-party capital investments in NYGB where NYGB may act as asset manager for other capital providers seeking exposure to the growing clean energy sector in New York State.

## 11.0 Plan Implementation

### 11.1 Milestone Tracking & Reporting

In the Initial Business Plan, NYGB included an implementation schedule with milestones that was focused on the three main areas of: organizational, business development and origination and transaction execution. As outlined in [Section 2.0](#) and also in NYGB's quarterly Metrics filings, over the past year, NYGB has executed to plan and met scheduled milestones in establishing the business.

The one area of NYGB's initial implementation schedule that at the date of this Plan has not been entirely as expected is the timing of formally closing transactions. NYGB's basic mission is to address market barriers (thereby closing financing gaps). As such, every transaction under consideration by NYGB has novel aspects. Accordingly, these transactions take time to properly address and structure - and involve third-party timing imperatives that are beyond NYGB's control. Mindful of its role as a steward of public funds, NYGB continues to work tirelessly to balance (a) project sponsor needs; (b) private capital demands/expectations; and (c) NYGB's risk appetite and appropriate financial returns, all to provide the best value to the State. While the learning curve for participants (both internal and external) can at times be steep, knowledge gained will cause future transactions to become much more efficient and these efficiencies can be expected to transmit to, and transform, the marketplace.

In just over a year NYGB has identified ~\$3.0 billion in demand for new clean energy projects in the State in response to the Investment RFP, involving over \$734.0 million in proposed NYGB investments, as described in [Section 2.2](#). This initial demand translates to an Active Portfolio for NYGB investments in various stages of progress toward execution and closing in excess of \$338.0 million<sup>63</sup>, also as set out in [Section 2.2](#). In addition, NYGB has experienced early successes like those referenced in [Section 2.2.3](#), where NYGB's involvement in reviewing and providing input on products and structures has already facilitated sourcing needed capital from commercial markets for some counterparties.

Future quarterly Metrics reports will continue to track material NYGB achievements as they occur and provide general updates of activities.

### 11.2 Leading Indicators

Success for NYGB during the current Plan period includes achieving the following:

- (a) Maximizing certainty around amount and timing of NYGB's receipt of capital installments up to the full \$1.0 billion capitalization amount;
- (b) Originating, structuring, negotiating and closing on a growing portfolio of investments/commitments that supports reaching NYGB's "steady state" annual capital deployment rate into clean energy projects;
- (c) Maintaining a cohesive, focused NYGB team in place executing to plan;
- (d) Continuing and enhancing efficient information flows - critical to accurately adjusting course and being highly responsive to market indicators and feedback;
- (e) Building, maintaining and expanding NYGB profile and reputation for:
  - i. Commercial focus, being creative in structuring transactions and moving expeditiously towards execution and closing;
  - ii. Market orientation;
  - iii. Ability to act quickly;
  - iv. Ease of interactions and lack of bureaucracy;

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<sup>63</sup> All amounts as of June 12, 2015.

- v. Being a credible capital provider that makes smart, market leading investments; and
- vi. Realizing on its mission of expanding the market and private capital availability for clean energy investments in New York State;

(f) Making investments consistent with achieving NYGB’s objective for revenues to exceed losses and administrative expenses on a portfolio basis; and

(g) Catalyzing private sector interest and financing for “near frontier” clean energy projects - and contributing directly and indirectly to the execution and closing of a greater volume, and new classes of, transactions in the marketplace.

### 11.3 Critical Success Factors

Certain items have been identified as necessary pre-requisites to NYGB success, falling into four main categories: flexibility, strategic partnerships, longitudinal sustainability and supporting policy as set out in Exhibit 20. On an ongoing basis, NYGB remains focused on these key requirements to ensure strong and consistent underpinnings for the business.

*Exhibit 20. NYGB Critical Success Factors*

Flexibility	<p>NYGB must remain flexible and adaptive in order to:</p> <ul style="list-style-type: none"> <li>• Balance the diversity of organizational objectives</li> <li>• React to the market as it responds to NYGB</li> <li>• Facilitate ongoing partnerships to ensure that the private sector is not crowded out</li> </ul>
Strategic Partnerships	<ul style="list-style-type: none"> <li>• Strategic partnerships with large, credible private sector participants will be essential for NYGB to create a rapid and tangible impact by utilizing market platforms</li> <li>• Strategic partnerships will allow NYGB to operate at a wholesale level and leverage capabilities of existing organizations to develop a pipeline of projects</li> </ul>
Longitudinal Sustainability	<p>NYGB needs to secure longitudinal sustainability to execute its mandate</p> <ul style="list-style-type: none"> <li>• The market needs to have confidence that the institution will remain in place for multiple years</li> <li>• The market needs to “organize around \$1.0 billion,” requiring the full extent of capitalization</li> </ul>
Supporting Policy	<ul style="list-style-type: none"> <li>• Given NYGB’s unique business model, and the need to provide market certainty to the private sector, policy makers are strongly discouraged from any requirements that may undermine NYGB activities in partnering with private sector capital</li> <li>• NYGB needs continuing coordination of all NY State policies to avoid the creation of competing entities with similar offerings</li> </ul>

*Source: Market Study*



## 12.0 Glossary

### A

“ACORE” has the meaning given to that term in Section 3.4.

“Active Portfolio” has the meaning given to that term in Footnote 23.

“Advisory Committee” means the advisory committee of NYGB.

“Approved Investments” has the meaning given to that term in Section 9.2.

“Asset Loans & Investments” means the NYGB products described in Section 5.2.3.

“Audited Financials” has the meaning given to that term in Section 9.2.

### B

“Booz” means Booz & Co., as referenced in Section 1.3.

“Btu” means British thermal unit, a measure of heat energy in fuels.

### C

“Capital” has the meaning given to that term in Section 9.2.

“Capital Gains” has the meaning given to that term in Section 9.2.

“Capital Losses” has the meaning given to that term in Section 9.2.

“Capital Redeployment Cycle Time” has the meaning given to that term in Section 9.2.

“CDFI” means community development financial institution.

“CEF” has the meaning given to that term in Section 1.4.3.

“CHP” means combined heat and power.

“Collaborators” has the meaning given to that term in Section 6.1.1.

“Commission” means the New York Public Service Commission.

“Committed” has the meaning given to that term in Section 9.2.

“Committed Funds” has the meaning given to that term in Section 9.2.

“Competitive Opportunity” has the meaning given to that term in Section 6.4.

“Credit Enhancements” means the NYGB products described in Section 5.2.1.

“Cumulative Operating Expenses” has the meaning given to that term in Section 9.2.

## D

“Deployed” has the meaning given to that term in Section 9.2.

“Deployed Funds” has the meaning given to that term in Section 9.2.

“DERs” means Distributed Energy Resources as defined in the REV Proceeding.

“DPS” means the New York State Department of Public Service.

## E

“EEPS” means the New York State Energy Efficiency Portfolio Standard.

“ESA” means energy service agreement.

“ESCO” means energy service company.

## F

“Financials” has the meaning given to that term in Section 6.1.1.

“Fund Administration RFP” has the meaning given to that term in Section 2.1.

## G

“GHG” means greenhouse gas.

“Greenlight Committee” means the NYGB committee of that name tasked with “greenlight” review of potential transactions.

“Gross ROI” has the meaning given to that term in Section 9.2.

## I

“IGO” means Intergovernmental Organization.

“Impaired” has the meaning given to that term in Section 9.2.

“Income” has the meaning given to that term in Section 9.2.

“Industry” has the meaning given to that term in Section 6.1.1.

“Initial Business Plan” has the meaning given to that term in Section 1.1.

“Initial Capitalization Order” means the Order Establishing NYGB and Providing Initial Capitalization issued by the Commission on December 19, 2013, Case 13-M-0412.

“Investment & Risk Committee” or “IRC” means NYGB’s investment & risk committee.

“Investment RFP” means the “Clean Energy Financing Arrangements - Request for Proposals No. 1” issued by NYGB on February 5, 2014.

## M

“Market Study” means the NYGB Final Report issued by Booz September 3, 2013.

“Market Targeting Criteria” has the meaning given to that term in Section 6.1.2.

“Metrics” has the meaning given to that term in Section 2.2.

“Metrics Plan” has the meaning given to that term in Section 2.1.

“Milestones” has the meaning given to that term in Section 9.0.

“MMBtu” means million Btus.

“Mobilization Ratio” has the meaning given to that term in Section 9.2.

“MW” means megawatt, a measure of installed energy generation capacity.

“MWh” means megawatt hour, a measure of energy production.

## N

“Net ROI” has the meaning given to that term in Section 9.2.

“NGO” means non-governmental organization.

“NYGB” means NY Green Bank.

“NYGB Initial Petition” means the “Petition of the New York State Energy and Research Development Authority to Provide Initial Capitalization for the New York Green Bank” dated September 9, 2013, Case 13-M-0412.

“NYPA” means the New York Power Authority.

“NYSDEC” means the New York State Department of Environmental Conservation.

“NYSEDC” means the New York State Economic Development Corporation.

“NYSERDA” means the New York State Energy Research and Development Authority.

## O

“Operating Expenses” has the meaning given to that term in Section 9.2.

## P

“Petition to Complete Capitalization” has the meaning given to that term in Section 2.1.

“Plan” means this Business Plan.

“Portfolio Impairment” has the meaning given to that term in Section 9.2.

“PPA” means power purchase agreement.

“Proposers” has the meaning given to that term in Section 6.1.1.

## R

“Reply Comments” has the meaning given to that term in Section 2.1.

“Return on Investment” and “ROI” have the respective meanings given to those terms in Section 9.2.

“REV” has the meaning given to that term in Section 1.4.1.

“REV Proceeding” has the meaning given to that term in Section 1.4.2.

“RGGI” means the Regional Greenhouse Gas Initiative.

“RPS” means the New York State Renewable Portfolio Standard.

## S

“SBC” means System Benefits Charge.

“Scoring Committee” means the NYGB committee of that name tasked with the initial review of submissions received outlining potential transactions.

“SEQRA” means the State Environmental Quality Review Act of New York.

“Strategic Opportunity” has the meaning given to that term in Section 6.4.

## T

“T&MD” means the Technology and Market Development program in New York State (formerly referred to as the SBC).

“TAM” means Transaction Approval Memorandum, discussed in Section 6.4.

“Transaction Profile” means the transaction profile template that is included as Appendix A to the Metrics Plan.

## U

“US PREF” has the meaning given to that term in Section 3.4.

## W

“Warehousing/Aggregation” means the NYGB products described in Section 5.2.2.