

Supporting Deployment of Controlled Environment Agricultural Assets in New York State

Agbotic, Inc.

On June 20, 2019 NY Green Bank (“NYGB”) committed \$6.0 million to finance the construction and operation of a cluster of energy efficient robotic greenhouses (collectively, the “Project”) developed by Agbotic, Inc. (“Agbotic”). On October 29, 2020 NYGB amended the transaction and increased its commitment amount by \$1.0 million to fund short-term working capital needs. The Project is located in Sackets Harbor, NY and grows certified organic produce for sale into local markets, while the Project’s energy efficiency measures and on-site generation are expected to reduce greenhouse gas (“GHG”) emissions. NYGB’s investment in the Agbotic transaction is its first in a controlled environment agricultural (“CEA”) asset as part of its ongoing efforts to create and expand new asset classes of sustainable infrastructure investments. The transaction creates an important precedent in the CEA sector and signals to the market that project financings are available to experienced CEA producers with high-quality assets.

Transaction Description

Agbotic is a New York State (“NYS” or the “State”)-based CEA agritech company that builds regenerative “SmartFarms” with robotic greenhouse automation to produce organic food with an ecologically restorative model for farming. Agbotic produces a mix of specialty root crop, herb, leafy green, and industrial hemp products to distribute directly to retailers, food service companies, restaurants and consumers within a one-day delivery radius of its greenhouses. The company focuses on growing organic plants for healthy nutrition and in manner that improves the environment.

NYGB’s construction-to-term loan facility (the “Facility”) enabled Agbotic to complete the construction of a cluster of six robotic greenhouses and related infrastructure located in Sackets Harbor, NY. The greenhouses grow certified organic products to be sold to businesses and retailers/grocers. The greenhouses are equipped with various energy efficiency measures, including LED lights and heat sinks, and benefit from efficient on-site power generation.

To date, most CEA financings have been done at the corporate level and have been in the form of venture capital or other equity investments. Hence, there are limited comparable transactions for NYGB’s investment in Agbotic as an asset-based project financing. As CEA is a rapidly-growing sector in the United States, the Facility provides transaction history for an asset in an emerging clean infrastructure sector with appealing economics and meaningful environmental benefits. As this transaction is NYGB’s first in the CEA sector, its participation establishes a replicable financing precedent for an emerging business model.

This Transaction Profile is provided pursuant to the updated NY Green Bank – Metrics, Reporting & Evaluation Plan, Version 3.0 (the “Metrics Plan”) developed in collaboration with the NYS Department of Public Service and filed with the New York Public Service Commission (the “Commission”) on June 20, 2016.¹ This Transaction Profile contains specific information in connection with the Agbotic transaction relating to the construction-to-term loan entered into on June 20, 2019 and the increased commitment entered into on October 29, 2020, as required by the Metrics Plan.²

¹ Case 13-M-0412.

² See Section 4.0, page 8 and Schedule 3.

Form of NYGB Investment

NYGB Product	Product Sub-Type	Committed Capital
Asset Loan & Investment	Construction-to-Term Loan	\$7.0 million

Location(s) of Underlying Project(s)

North Country. The greenhouses are located in the North Country, New York.

Types of Client & Counterparty Organizations that are Transaction Participants

	Name	Participant Type
Client	Agbotic Project #1, LLC	Borrower
Counterparty	Agbotic, Inc.	Sponsor, a CEA Agritech Company

Summary of Financing Market Objectives & Barriers Addressed

Beneficiary	Market Barrier	Financing Solution
Controlled Environment Agriculture Sector	The majority of existing financings to support CEA businesses planning to scale are done at the corporate level, where companies receive venture capital and private equity investments. Early-stage companies in the CEA sector have limited access to efficient debt financing solutions in order to scale up their businesses.	NYGB's investment establishes a precedent of asset-based project finance in the CEA sector. NYGB's participation provides transaction history for an asset in an emerging clean infrastructure sector with appealing economics and limited market comparables.
Capital Market Participants	There is limited debt capital support for small to mid-sized CEA companies; however, capital providers are more likely to participate on an aggregated basis when the projects that companies plan achieve meaningful scale.	NYGB's willingness to support CEA projects demonstrates to the broader financial market that there is lender comfort with CEA revenue models. Knowledge of market liquidity and ability to periodically validate asset value via the market is expected to provide further motivation for participation by interested investors going forward.
New Yorkers	While interest and activity in local organic produce are increasing rapidly in NYS, a relatively small number of financial models are being used by CEA businesses	By bridging financing gaps in the marketplace, NYGB is encouraging the development of more clean and efficient CEA assets in the State. Ultimately this is expected to provide New Yorkers with greater choices and access to local organic produce, grown efficiently and at lower cost.

Technologies Involved

Technology	Measures
Energy Efficiency	On-site cogeneration plant, LED lighting, heat sinks

Metrics & Evaluation Plan

Planned Energy & Environmental Metrics

NYGB's minimum investment criteria require that NYGB-supported transactions have the potential for energy savings and/or clean energy generation that will contribute to greenhouse gas ("GHG") emission reductions in support of the State's energy policies. In addition, the Metrics Plan requires that the following energy and environmental measures, applicable to these transactions, be reported:

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

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

Energy/Environmental Impact	Lifetime Low Estimate	Lifetime High Estimate	Annualized Low Estimate	Annualized High Estimate
Electricity savings (MWh)	65,223	79,717	3,261	3,986
Fuel savings (MMBtu) ³	231,876	593,206	11,594	29,660
Estimated GHG emission reductions (metric tons) ⁴	44,601	70,504	2,230	3,525

Planned Market Characterization Baseline & Market Transformation Potential

The Metrics Plan requires that market evaluation occur when a critical mass of NYGB financing and investment arrangements are put in place. Market evaluation activities commenced in 2018 on sectors that NYGB has supported since inception, consistent with the requirement for such assessments approximately three to five years following initial NYGB capital deployments. NYSERDA collected baseline data for the NYGB portfolio in 2019 and will update the data to include indicators specific to this transaction. NYSERDA will use baseline data collected for indicators as a comparison point against which to assess market progress in the later studies. Progress indicators are defined below for the short, medium and long terms.

NYGB expects that program and/or future market evaluation will demonstrate progress across short-term indicators; including:

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

NYGB expects that program tracking and/or future market evaluation will demonstrate progress across medium- and long-term indicators; including:

- Increased volume of CEA projects, involving lengthening financing and investment durations (i.e., 10+ years) over time;
- Increased average and aggregate dollar value of projects;
- Competitive risk/return profiles;

³ "Natural gas usage at the site is increased by the CHP facility. Energy Savings in thermal unit form are computed as the difference between the natural gas displaced by the recovered thermal energy and natural gas consumption by the generator [refer to www.nyserdera.ny.gov/-/media/Files/Publications/PPSER/Program-Evaluation/2015ContractorReports/2015-Distributed-Generation-CHP-Impact-Evaluation-Final.pdf for information on CHP Impact evaluation methods in NYS].

⁴ As of January 1, 2016, the New York State Energy Research and Development Authority ("NYSERDA") utilizes a 1,103 lbs/MWh conversion factor to estimate GHG emissions reductions for electric generation and energy efficiency savings across all components of the Clean Energy Fund ("CEF"). NYSERDA has previously utilized a 625 lbs/MWh conversion factor and 1,160 lbs/MWh. Factors have changed – and can be expected to continue to change – to reflect the improving efficiency/"greening" of the NYS grid (i.e., the New York Independent System Operator).

- Increased awareness and use of evolving asset class financial performance data by financing entities;
- Increased scale of CEA investments; and
- Increased interest by financial partners new to CEA projects.

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

NYSERDA will evaluate the impact this transaction has had on the clean energy finance markets and the energy and environmental benefits delivered by this transaction.

Market evaluation will assess the short, medium and long-term indicators identified above. Methods will include analysis of program data along with interviews and surveys of market participants (e.g., project subscribers, financial community) to track information including but not limited to: participation rates, project scale information and influence of NYGB's participation on financial markets. As noted, NYSERDA collected baseline data on key indicators in its first phase evaluation during 2018 – 19. Later follow-up studies will assess progress against baseline levels for other market segments as those evolve. The specific timing of these efforts may be revised based on experience or other factors as NYGB's investment portfolio further develops and evolves.

Impact evaluation is expected to draw upon and include data collected to support project-specific measurement and verification activities (e.g., such as those associated with NYSERDA's CHP incentive program ("PON 2701")). Impact evaluation activities will likely include use of hourly interval data retrieved from PON 2701 Interval Data System with on-site validation activities. Annualized first-year energy savings will be based on electric usage readings (kWh) at the customer meter. Total electricity savings comprise prime mover generation as well as secondary electric impacts attributable to use of an absorption chiller to satisfy cooling load that otherwise would have been satisfied with an electric chiller. Agbotic will provide quarterly performance reports to NYGB for the duration of the Facility. On-site verification of measure installations and performance will be conducted by NYSERDA. All specific transaction and Project data will be anonymized and/or aggregated prior to being reported or published.

In accordance with the Metrics Plan, NYGB will track Agbotic projects that receive incentives or funding from other entities (e.g., utility, other NYSERDA program) to minimize any double-counting activity on a consolidated basis. As set out in the Metrics Plan, evaluation sampling approaches will also be used as a mechanism to estimate overlap and minimize double counting. NYSERDA and NYGB will attempt to coordinate market and impact evaluation activities for projects that receive support from multiple sources in order to maximize the efficiency of data collection and avoid participant survey fatigue.