

Supporting and Accelerating the Expansion of Energize NY PACE Finance Throughout New York State

Energy Improvement Corporation & Energize NY Finance

NY Green Bank (“NYGB”) has provided two letters of credit totaling \$5.5 million to New York-based Energy Improvement Corporation (“EIC”), a not-for-profit, local development corporation formed to promote and facilitate meaningful energy savings through energy efficiency and renewable generation improvements to existing properties throughout New York State (“NYS”).

Transaction Description

EIC’s Energize NY Finance product uses the Property Assessed Clean Energy (“PACE”) loan mechanism to finance qualified energy improvements to buildings for commercial property owners and not-for-profits located in participating NYS municipalities. Under the PACE structure, commercial and not-for-profit real estate owners can effectively borrow to finance energy improvements to their properties and repay this debt through additional finance charges that are included in the property tax bills collected by the participating municipalities. As PACE requires that expected energy cost savings exceed the additional annual PACE debt service payments, property owners will benefit from energy savings and any increase in the value of their upgraded buildings. The PACE mechanism eliminates the burden that large upfront capital expenditures can place upon commercial property owners and not-for-profits that so often are a barrier to making energy efficiency investments.

In May 2014, NYGB provided EIC with a \$500,000 Irrevocable Standby Letter of Credit (“LC No. 1”) serving two purposes – providing the federal credit support required by the NYS PACE enabling legislation² and protecting municipalities from absolute loss if proceeds from any eventual liquidation and sale of a defaulted property are less than the property owner’s outstanding PACE loan balance.

In December 2015, NYGB provided EIC with a \$5.0 million Irrevocable Standby Letter of Credit (“LC No. 2”) to help establish a reserve fund to support participating municipalities’ obligations to pay PACE debt service to EIC if collections of PACE charges are insufficient, whether due to late payment or default by the property owner. Any draws made on LC No. 1 or LC No. 2 will be repaid pursuant to the terms of the respective agreements with EIC.

This Transaction Profile is provided pursuant to the “NY Green Bank – Metrics, Reporting & Evaluation Plan, Version 3.0” (the “Metrics Plan”) developed in collaboration with the NYS Department of Public Service and filed with the NYS Public Service Commission (the “Commission”) on June 20, 2016.³ The Transaction Profile contains specific information in connection with the EIC transactions, as required by the Metrics Plan.⁴

Form of NYGB Investment

NYGB Product	Product Sub-Type	Committed Capital
Credit Enhancement(s)	LC No. 1 – Letter of Credit	\$500,000
Credit Enhancement(s)	LC No. 2 – Letter of Credit	\$5.0 million

¹ Refer to the Summary of Changes document for details of updates, available at www.greenbank.ny.gov/Investments/Transaction-Profiles.
² NYS General Municipal Law, Article 5-L.
³ Case 13-M-0412.
⁴ See Section 4.0, page 8 and Schedule 3.

Location(s) of Underlying Project(s)

Statewide.⁵ For eligible properties in participating NYS municipalities that install permanent improvements⁶ to reduce energy costs. Eligible properties include multifamily, commercial and industrial, retail/mixed use, privately owned schools, colleges and universities, and institutional properties. Permanent improvements can range in cost from a minimum of \$3,000 to as much as 10% of a property's appraised value.

Types of Client & Partner Organizations that are Transaction Participants

	Name	Participant Type
Client	EIC	Local Development Corporation
Counterparties	Bank of America Merrill Lynch ("BAML")	Global Corporate & Investment Bank
	First Niagara Bank	Regional Bank
	Participating NYS Municipalities	Government
	Qualified Building Contractors	Industry Vendors

Summary of Financing Market Objectives & Barriers Addressed

Beneficiary	Market Barrier	Financing Solution
Municipalities	In the absence of specially structured programs, options for municipalities to facilitate energy efficiency projects within their jurisdictions have been severely limited. Specifically, municipalities have been constrained in their ability to participate in PACE initiatives to the extent that they are obligated to make payment during the pendency of a delinquent tax charge collection associated with the PACE loan mechanism. Participating municipalities must compensate for any missing tax revenues from other funds if a property owner does not pay tax charges when due.	<p>NYGB is alleviating these concerns by providing credit support for a reserve fund which municipalities can utilize in the event of a collection delinquency or default. Energize NY Finance, together with NYGB's supporting measures, are aimed at providing PACE opportunities broadly to all interested municipalities, in turn expanding the availability of energy improvement financing to commercial, multifamily real estate owners and not-for-profits – of all sizes – within participating municipalities throughout the State.</p> <p>The two standby letters of credit NYGB provided to EIC address the following key issues for participating municipalities:</p> <ul style="list-style-type: none"> ▪ <u>LC No. 1</u> is intended to protect municipalities from absolute loss if proceeds from the eventual liquidation and sale of a defaulted property are less than the property owner's outstanding PACE loan balance; and ▪ <u>LC No. 2</u> will help to support a reserve fund that reduces participating municipality cash flow volatility if payment is due but collections of PACE charges are insufficient, whether due to late payment or default by the property owner.
Capital Market Participants	Private capital providers' interest and participation in investments is driven largely by analysis of, and comfort with, lengthy performance histories for	EIC's Energize NY Finance program, including the critical credit support provided by NYGB, is transformational in that it is expected to greatly broaden the availability of capital for energy savings

⁵ Defined as projects located in four or more regions of the State.

⁶ Which improvements are of types that have been certified by either the New York State Energy Research and Development Authority ("NYSERDA") or a utility in the context of acceptable upgrades.

Beneficiary	Market Barrier	Financing Solution
	<p>technologies and counterparties. Limited performance history for energy savings and clean energy generation projects for commercial buildings and not-for-profits has materially curtailed the provision of private funding in this sector to date.</p>	<p>and clean energy generation projects for commercial buildings and not-for-profits across the State. The PACE financing structure enhances the credit profile of many projects, allowing building owners to gain access to funding that will improve the energy efficiency of their buildings while reducing energy costs. Over time, growing performance history for this asset class, standardization of structures and documentation, and the realization of economies in transaction costs is expected to drive material PACE growth in NYS.</p> <p>This transaction exemplifies the market-based public-private partnership solutions that NYGB seeks to implement. By utilizing local jurisdictions' existing property tax structures and modest State credit support, private sector capital is effectively able to deliver public benefits by financing clean energy improvements to commercial building stock throughout the State.</p> <p>By working with EIC and all transaction partners to provide the catalyst for significant increase in the number of participating municipalities, the \$75.0 million committed by BAML and the \$3.0 million First Niagara warehouse facility, both part of this overall transaction, are expected to be deployed more quickly by EIC to finance clean energy improvements, delivering greater energy savings and environmental benefits to New Yorkers.</p>

Technologies Involved

Technology	Measures
Energy Efficiency	Boilers and controls; chillers and controls; insulation and air sealing; lighting; pumps; windows and doors
Renewable Energy	Solar photovoltaic systems; solar thermal systems; geothermal; wind turbines
Demand Management	Combined heat and power; battery storage; thermal storage; fuel cells

Metrics & Evaluation Plan

Planned Energy & Environmental Metrics

NYGB's minimum investment criteria specifically require that "transactions will have the potential for energy savings and/or clean energy generation that will contribute to greenhouse gas [{"**GHG**"}] reductions in support of New York's energy policies".⁷ In addition, the Metrics Plan requires that the following energy and environmental measures,

⁷ Case 13-M-0412, "Order Establishing New York Green Bank and Providing Initial Capitalization" issued by the Commission and effective December 19, 2013, Ordering Clause 6 at pages 24 – 25.

applicable to this transaction, be reported on⁸:

- Estimated lifetime energy saved by fuel type from efficiency projects (MWh/MMBtu) and estimated lifetime clean energy generated (MWh);
- Estimated lifetime primary energy saved from CHP (Btu);
- Estimated clean energy generation installed capacity (MW); and
- Estimated lifetime GHG emission reductions (metric tons).

LC No. 1 and LC No. 2 are expected to accelerate the expansion of EIC’s municipal membership, resulting in more than 550 PACE projects. This represents ~\$150.5 million in estimated total project costs and a projected range of cumulative lifetime⁹ GHG emission reductions of between 737,000 and 818,000 metric tons.

At closing, the estimated lifetime and annual energy and environmental impacts of the EIC program, facilitated by NYGB’s financial participation, are as follows:

Energy/Environmental Impact	Lifetime Low Estimate	Lifetime High Estimate	Annualized Low Estimate	Annualized High Estimate
Energy savings from efficiency measures (electric) (MWh)	558,000	600,000	37,200	40,000
Energy savings from efficiency measures (fuel) (MMBtu)	3,120,000	3,350,000	208,000	224,000
Clean, renewable energy generated (MWh) ¹⁰	528,000	616,000	35,200	41,100
Clean energy generation installed capacity (MW) ¹¹	30.0	35.0	Not Applicable	
GHG emission reductions (metric tons) ¹²	737,000	818,000	49,100	54,500

Planned Market Characterization Baseline & Market Transformation Potential

The Metrics Plan requires that market evaluation will occur when a critical mass of NYGB financing and investment arrangements are put in place. This market evaluation will be conducted on sectors that NYGB has supported and will occur approximately three to five years following initial NYGB capital deployments.¹³ Baseline data will be collected in 2017 for most indicators as a comparison point against which to assess market progress in the later studies.

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

- The number and rate at which municipalities join Energize NY/PACE;
- Location of municipalities joining Energize NY/PACE;
- Number of projects in development and completed;
- Average and aggregate dollar value of projects in development and completed; and
- Number and type of measures installed.

⁸ See Metrics Plan, Section 2.0, pages 2 – 6.

⁹ Assuming an average lifetime of qualifying energy efficiency and renewable energy measures undertaken under the Energize NY Finance program of 15 years.

¹⁰ Clean, renewable energy generated (MWh) and clean energy generation installed capacity (MW) presented in this table reflect impacts associated with solar projects only. It is anticipated that additional renewable energy technologies (e.g., smaller-scale wind) may also contribute to this transaction but are not estimated here.

¹¹ Built clean energy generation capacity at full deployment of funds is the same for annualized and lifetime duration.

¹² As of January 1, 2016, NYSERDA utilizes a 1,160 lbs/MWh conversion factor to estimate GHG emissions reductions for electric generation and energy efficiency savings across all components of the Clean Energy Fund. NYSERDA previously utilized a 625 lbs/MWh conversion factor.

¹³ See Metrics Plan, Section 3.3 at page 7.

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

- General understanding of renewable energy/energy efficiency benefits by municipalities and the financial community;
- Awareness and use of PACE and project performance data associated with this investment by municipalities and financial community;
- Market volume of commercial/not-for-profit energy efficiency and renewable energy loans funded through Energize NY/PACE;
- Scale of Energize NY/PACE transactions by participating municipalities;
- Number of private sector capital providers willing to step into the position of letter of credit provider in comparable future transactions;
- Number of private sector capital providers offering warehouse facilities to Energize NY or comparable programs in future; and
- Number of private sector capital providers advancing funds to finance energy efficiency and renewable energy improvements through Energize NY/PACE.

Economic Development

Energize NY Finance will not only greatly broaden the availability of capital for energy savings and clean energy generation for commercial property owners and not-for-profits, but will also support economic development and job creation in each of the qualifying municipalities where it is active.

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

Market Evaluation will address the short, mid and long-term indicators identified above. Methods will include analysis of program data, along with interviews and surveys of market participants to track information including, but not limited to participation rates, project scale information, interest in energy efficiency and renewable energy, and influence of NYGB's participation on municipalities and financial markets. As noted, baseline data will be collected on most key indicators in 2017 and subsequent follow-up studies will assess progress against baseline levels. The specific timing of these efforts may be revised based on experience and other relevant factors as Energize NY Finance evolves.

Impact evaluation is expected to include retail electric and natural gas utility billing analysis to verify initial consumption estimates and assess impacts related to installation of energy-efficient measures. Releases for billing data will be requested of all loan recipients at closing allowing NYSERDA and third-party evaluators to assess utility data both prior to, and following, measure installation. Billing analysis will be conducted beginning in 2018 and be updated annually to align initial estimates of energy savings with actual savings. On-site verification of measure installations and performance may be conducted as resources allow. This is expected to occur on a less frequent basis to support ongoing billing analyses over time, as greater experience is gained. Billing analysis is a generally accepted and cost-effective method to validate energy savings on projects involving several measures and aggregate savings levels of approximately 8% or more of consumption. Should the makeup of Energize NY financed projects indicate that billing analysis is not a viable method for certain segments of the participants, other methods will be considered. For renewable energy projects, meter reads of energy generation will be taken with on-site verification conducted as needed. Importantly, all customer data will be anonymized and/or aggregated prior to being reported or published.

As with all NYGB investments, Energize NY Finance projects that receive any public incentive or funding from other entities (e.g., utility, other NYSERDA program, etc.) will, in accordance with the Metrics Plan, ideally be tracked in order to minimize any double-counting activity on a consolidated basis. Per the Metrics Plan, evaluation sampling approaches will also be used as a mechanism to estimate overlap and minimize double-counting. Attempts will be made to coordinate market and impact evaluation activities for the Projects that receive support from multiple sources in order to maximize the efficiency of data collection and avoid participant survey fatigue.