NEW YORK STATE OF OPPORTUNITY. | NY Power Authority

ANDREW M. CUOMO
Governor

JOHN R. KOELMEL
Chairman

GIL C. QUINIONES
President and Chief Executive Officer

New York Power Authority

Green Bond Framework

Introduction:

The New York Power Authority ("NYPA") is a well-established utility with over 80% of power produced being clean and renewable low-cost electricity. Established in 1931, NYPA generates and delivers over 25% of NY State's electricity needs and owns 30% of statewide transmission assets. NYPA is committed to providing reliable low-cost renewable power in an eco-friendly sustainable manner. The Authority owns approximately 1,400 circuit miles of high voltage transmission lines, more than any other utility in the State, with the major lines being the 765-kV Massena-Marcy line, the 345-kV Marcy-South line, the 345-kV Niagara-to-Edic transmission line, the 345-kV Long Island Sound Cable and the 230-KV lines. Environmentally beneficial, long-term transmission upgrade and modernization projects are currently underway throughout the State and include improvements that will directly assist in meeting the objectives of the New York State Climate Leadership and Community Protection Act Chapter 106, as well as their critical importance to ensuring the overall resiliency and flexibility of the NY-ISO electric grid by optimizing the use of innovative, eco-friendly technologies that contribute to the economic development of the region.

NYPA shall strive to:

a) Contribute towards a clean and sustainable environment with respect to Land, Water and Air.
b) Initiate and support measures to continually optimize its commitment to providing renewable low-cost energy, increase energy efficiency and support the New York State Climate Leadership and Community Protections Act.
c) Support measures for biodiversity conservation by following the practices of protecting, conserving and restoring ecosystems.
d) Be transparent, ethical and fair to all stakeholders.
e) Be supportive in developing and enhancing people's standard of living in and around the plants.
f) Generate awareness, share knowledge and support training programs on sustainable development among the employees, neighboring communities and public at large

Framework Overview:

This Green Bond Framework (Framework) sets out how NYPA proposes to use the proceeds of Green Bonds for the construction of Eligible Green Projects in a manner consistent with the NYPA's sustainable values and to accelerate progress toward the State's clean energy and climate goals, including the mandate to obtain 70% of the State's electricity from renewable

sources, as identified under Chapter 106 of the New York State Climate Leadership and Community Protection Act of 2019.

Use of proceeds:

The 765-kV line south from the Canadian border to Marcy, New York

Two 345-kV lines from the Niagara Project east to Niagara Mohawk's Edic Substation in central New York

Two 345-kV lines from Marcy, New York, connecting to other utility substations in southeastern New York

Three 345-kV lines from the Blenheim-Gilboa Project extending to substations near Athens, New Scotland, and Delhi, respectively

Two 230-kV lines extending east from the St. Lawrence Project to Plattsburgh, New York, and to the Vermont border.

More specifically, these projects include:

- A life extension and modernization (LEM) project at the Niagara Switchyard to replace Bays 10, 14, 16, 20, 21, 22 and 25 Breakers, MOD's, Manual Disconnects, HVIT's, Tubular Bus Aerial Cable and Autotransformer No. 1. The switchyard and majority of its installed equipment including autotransformers, oil-filled circuit breakers, disconnect switches, potheads, and other related equipment were installed in the early 1960's and are becoming increasingly prone to failures, challenging to maintain and environmental risks.
- A project to extend the life of the Moses-Adirondack lines (MA-1 and MA-2) by rebuilding the lines at 345 kV on double-circuit steel monopoles with 1033 ACSR conductor. These lines were built by the Department of Defense in 1942 to transmit power from hydro generating facilities at Taylorville on the Beaver River just north of the Adirondack Substation to Alcoa in Massena. In the early 1950s, the Authority purchased the two 115kv lines and later upgraded the lines to 230kV during the construction of the St. Lawrence – F.D.R. Power Project in the late 1950s. The lines were also extended from Alcoa to Barnhart Island (North Extension) and from Taylorville to the new Adirondack Substation (South Extension).
- New 345kV double circuit line ~86mi from existing Edic (E) to existing New Scotland (NS) station -2 new 345 kV lines ~5 miles single-circuit looping the existing 345 kV E to NS #14 line to new Rotterdam (R) 345kV station. R 230kV station to be retired -2 new 345/115 kV transformers connecting R 115kV yard to the new 345kV yard -rebuild ~6 miles of the R to NS 345 kV Tline to -Remove R to NS 115kV Tline -New Princetown 345kV yard -Terminal upgrades E and Marcy -Decom. Porter and R 230kV lines

- Part of NYPA's Smart Generation & Transmission (Smart G&T) Strategic Initiative, focus is on the installation of smart sensors to improve the transmission grid by continuously monitoring assets. Sensors are planned to be installed on transformers, breakers, battery banks, exciters, reactors, regulators, cables, and capacitors, for increased reliability and enhanced decision-making.
- A project to perform life extension and modernization (LEM) actions at the Plattsburgh, Sarana and Willis substations in northern NY. This program is a multiyear project aimed at maintaining availability, increasing reliability and ensuring regulatory compliance. This project will replace the substations' circuit breakers, disconnect switches, instrument transformers, station service equipment, relaying and provide an updated control rooms.
- The STL Robert Moses Breaker and Relay Replacement Program is a multiyear program with the goal of selectively upgrading components of NYPA's existing transmission system. The switchyard 115kV busses support Alcoa (MAL4, 5, 6), Alcoa East (MAE1,2; previously MRG 1,2), Med Grasse River (MED4, 5), and Reynolds (MAE3, previously MR3) transmission line operations. The 230kV busses support Massena (MMS1, 2), Ontario Hydro's St. Lawrence Transformer Station (L33P, L34P), (MA1, 2) and Willis (MW1, 2) transmission line operations. To ensure continued reliability and regulatory compliance the following equipment is scheduled to be replaced: Bay 1500 & 1400 Breakers and Relays and Capacitor Bank Installation. Transmission Life Extension and Modernization (T-LEM) is a multiyear program that will upgrade NYPA's existing transmission system to maintain availability, increase reliability, and ensure regulatory compliance. The project at Massena Substation includes the replacement or upgrade of 765kV SF6 Breakers, CCVTs, VTs along with 13.8kV switchgear, station service equipment and insulators and all pieces of equipment that have reached their end of life, require excessive costs to maintain and pose reliability threats to the system.
- PV-20 is a single circuit 115kV transmission line running from Plattsburgh substation to Cumberland Head substation. It is approximately 7.5 miles long. The submarine cable portion consists of four (4) original 500 kcmil cables installed in 1958 (one spare), and three (3) additional 1000 kcmil cables installed in 1970.
- The Marcy Switchyard (located at Clark Energy Center) Life Extension and Modernization Program is a multiyear program with the goal of selectively upgrading components of NYPA's existing transmission system. The Clark Energy Center 765 kV busses support Massena (MSU1) and auto transformers 1, 2 and spare 1-2X which in turn service the Marcy 345 kV yard. The Clark Energy Center 345 kV yard supports the Marcy FACT system, and Coopers Corner (UCC2-41 and New Scotland (UNS-18) transmission line operations. The Marcy 345 kV Switchyard has been in service over 30 years and a majority of the original equipment is still in service. The following equipment will be replaced as part of the Marcy Switchyard LEM Program to ensure continued reliability and regulatory compliance: 765kV Breakers 7402, 7414, & 7302 and 345kV Circuit Breakers 3308 & 3302

Selection and Evaluation of Eligible Green Projects:

In December 2019, NYPA approved its 2020 Capital Budget, which estimated that it will commit approximately $3.45 billion on capital investments for its generation, transmission and other core assets and initiatives over the four-year period 2020-2023, as indicated in the table below. The 2020 Capital Budget consists of strategic initiatives focused on business diversification and growth, and specifically an investment in the NYPA's growing transmission business and growing clean energy business from the NYPA's current levels of receiving over 80% of its energy as clean energy. It contains a focus on cash flow, return on investment and maintaining credit metrics consistent with an "AA" rating.

The Authority anticipates that these capital improvements and energy efficiency initiatives will be funded by internally generated funds, additional borrowings, including commercial paper and fixed rate debt, energy efficiency customer receipts and existing construction funds. NYPA continually monitors the use of internally generated funds versus debt financing in order to achieve a desired capital structure and financial metrics. At the present time, NYPA intends to finance its capital plan initiatives with approximately 50% debt and 50% equity, and estimates that no more than 50% of its capital plan will be funded with additional borrowing, including through the issuance of the 2020 Bonds.

In respect of subsequent issuance of green bonds or changes to the initial list of projects, similar assessment and approval processes would be carried out by NYPA in accordance with the State objectives.

Management of Proceeds:

NYPA has established and will continue to maintain one or more separate bank account(s) for the proceeds received from the issue of Green Bonds and allocated to the forward spend identified in the projects discussed herein and in the Authority's Preliminary Official Statement dated April 22, 2020. The company also maintains internal tracking systems to monitor and account for the allocation of these proceeds.

Unallocated proceeds will be held in temporary liquid and readily available investment instruments that may include cash, term deposits with commercial banks, mutual funds and/or government securities permitted as per the company's investment policy.

Reporting:

For the duration of NYPA's Green Bonds issuance program, NYPA will monitor and track (i) its use of proceeds (project type, capacity and location) for each green bond issued (ii) the current allocated and outstanding amounts and contractual maturity dates and (iii) that the use of proceeds of the Green Bonds are in alignment with NYPA's Green Bond Framework. As this is NYPA's first issuance of Green Bonds, NYPA will be working internally to report and disclose the result of this issuance and ongoing efforts to work within the State's Green initiative on our website.

Assurance:

NYPA's Green Bond Framework will be reviewed and monitored internally and tracked in accordance with the guidelines discussed herein. If requested, NYPA may also engage outside firm(s) to further certify or audit the use of proceeds from the issuance of these Green Bonds.