NEW YORK STATE OF OPPORTUNITY. | NY Power Authority



# NEW YORK POWER AUTHORITY
# 2023 GREEN BOND REPORT

| Series 2020 A (Tax-Exempt) | Series 2022 A (Tax-Exempt) | Series 2023 A (Tax-Exempt) |
|---|---|---|
| Issue Date: May 12, 2020 | Issue Date: April 5, 2020 | Issue Date: November 16, 2023 |
| Par Amount: $1.1 Billion | Par Amount: $608.3 Million | Par Amount: $734.2 Million |
| Green Bonds: $791.6 Million | Green Bonds: $608.3 Million | Green Bonds: $734.2 Million |
| Final Maturity: 2060 | Final Maturity: 2061 | Final Maturity: 2063 |


## Organizational Overview

The mission of the Power Authority of the State of New York ("NYPA" or the "Authority"), as ratified by The Board of Trustees ("Board of Trustees" / "Trustee") in their December 2020 meeting, is to "Lead the transition to a carbon-free, economically vibrant New York through customer partnerships, innovative energy solutions, and the responsible supply of affordable, clean, and reliable electricity." The mission statement adheres to maintaining NYPA's core operating businesses while also moving to support the energy goals of New York State, codified primarily in the Clean Energy Standard ("CES"), New York State Climate Leadership and Community Protection Act ("CLCPA"), the Accelerated Renewable Energy Growth and Community Benefit Act, and the Power Authority Act, Title 1 of Article 5 of the Public Authorities Law, Chapter 43-A of the Consolidated Laws of the State of New York, as amended from time to time, including amendments made in 2019and in the 2023-24 Enacted State Budget.

The Authority owns and operates five major generation facilities within the state, eleven small gas-fired generating units located at seven facilities, and four small hydroelectric facilities, with a total installed capacity of approximately 6,051 megawatts ("MW"), and a number of transmission lines, including major 765 kilovolt ("kV"), 345 kV, and 230 kV

transmission facilities. The Authority's major generating facilities consist of two large hydroelectric facilities (the Niagara Power Project and St. Lawrence-FDR Power Project), a large pumped-storage hydroelectric facility (the Blenheim-Gilboa Power Project) and two gas-and-oil-fired facilities (the Flynn Power Plant located in Holtsville, New York and a combined-cycle electric generating plant, the Eugene W. Zeltmann Power Project, located in Queens, New York, previously known as the 500 MW Plant).

The Authority's customers include municipal and rural electric cooperatives; investor-owned utilities; high load factor industrial customers; commercial/industrial and not for-profit businesses; public entities located throughout New York State; local towns, villages, school districts, fire departments, etc. located in Southeastern New York within the metropolitan area of New York City; and certain neighboring states.

## Expanded Authority and Clean Energy Promise

The 2023-2024 Enacted State Budget provides NYPA with new authority to develop, own, and operate renewable energy generating projects, either alone or in collaboration with other entities, to assist the state in meeting its bold clean energy targets. This includes producing 70% of the state's electricity from renewable sources by 2030 and creating a zero-emission statewide electrical system by 2040. In addition, the enactment provides that NYPA will help lead the state's effort to decarbonize its electric grid by ceasing fossil fuel-based electricity production at its power plants by 2030. The Authority is formalizing internal taskforces charged with advancing the key pillars of the new legislation.

NYPA will also work toward the publication of its first two-year strategic plan, outlining its strategies and proposed renewable projects, after collaboration with stakeholders and a public comment process that includes public hearings.

## Summary of Green Bond Framework

NYPA's Green Bond Framework (the "Framework") was developed in 2020 and sets out guidelines for NYPA's Green Bond issuances in accordance with the 2018 International Capital Markets Association("ICMA") Green Bond Principles:

1. Use of Proceeds
2. Process for Project Evaluation and Selection
3. Management of Proceeds
4. Reporting

In planning a major debt issuance to fund its Capital Budget, NYPA developed the Framework under which it would issue Green Bonds and use the proceeds to finance and/or refinance, in whole or in part, existing and/or future projects that refurbish, upgrade, and modernize its power transmission system. The Framework defines eligible projects in the area of electric transmission infrastructure.

Consistent with our Green Bond Framework, we committed to publishing an annual use of proceeds report highlighting allocation of proceeds, and project examples. This fourth Green Bond Report follows the publication of our third annual report in 2023.

Sustainalytics, an independent provider of sustainability research to institutional investors, issued the second-party opinion on the Framework and its alignment with the Green Bond Principles. Sustainalytics has also reviewed this report and confirmed its alignment with ICMA's Green Bond Principles. This Green Bond Report provides details on allocation of proceeds, and examples of projects we have invested in.

## 2020 Allocation of Bond Proceeds

In May 2020, NYPA issued $1.2 billion in Revenue Bonds, including $1.1 billion of Series 2020 A Tax-Exempt Bonds and $114 million Series 2020 B Taxable Bonds. The Authority designated $791.5 million from Series 2020 A Bonds maturing on November 15, 2050, November 15, 2055, and November 15, 2060, and bearing interest at a rate of 4% as Green Bonds due to the environmental benefits of the projects financed with the portion of the Series 2020 A Bonds. Standard & Poor's Rating Services ("S&P") and Fitch Ratings ("Fitch") assigned a rating of AA to the Series 2020 A Tax-Exempt Bonds and Series 2020 B Taxable Bonds. Moody's Investors Service ("Moody's") assigned a rating of Aa2 to the Series 2020 A Tax-Exempt bonds and Series 2020 B Taxable Bonds.

This historic Green Bond financing, selected as Bond Buyer's Northeast Region Deal of the Year, represented the largest Green Bond transaction for any public power utility at the time and NYPA's inaugural certified Green Bond issuance with an independent second party opinion.

## Eligible Projects

Environmentally beneficial, long-term transmission upgrade and modernization projects currently underway through the State 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 NYISO electric grid by optimizing the use of innovative, eco-friendly technologies that contribute to the economic development of the region.

The Authority's internal process in evaluating and selecting projects was based on the four-year Capital Plan detailed in its 2020 Capital Budget. NYPA's Treasury team selected specific projects from the Plan that are specified within the Framework and that would make the largest impact on advancing NYPA's sustainability goals. The majority of the projects financed by NYPA's 2020 Series A Green Bonds are fully or predominantly dedicated to transmitting hydroelectric power, such as transmission line upgrades or improvements to switching facilities. Additionally, one project relates to the installation of advanced monitoring and "smart" sensing equipment. Such transmission assets dedicated to renewable energy and smart grid investments to improve resiliency and efficiency are designated to be eligible green projects without further qualification. Specifically, NYPA defined the following projects to be the focus of investment of the Series 2020 A Green Bonds proceeds:

## 2020 Series A & B Green Bond Project Descriptions

1 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.

2 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.

3 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 updated control rooms.

4 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.

5 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.

6 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 for over 30 years with a majority of the original equipment 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.

**Replacement Projects Overview**

In April 2022, the Authority issued $608 million Green Transmission Project Revenue Bonds, Series 2022 A in adherence to the Framework, as a Separately Financed Project ("SFP"). The Authority determined that the MA1 and MA2 and Marcy to New Scotland projects, which were originally included as part of the Series 2020A bond financing, should instead be selected for inclusion as part the Series 2022 A SFP financing because of their ability to be backed solely by SPF project revenues, allowing NYPA to account for and finance these transmission investments separately from its General Bond Resolution. Therefore, the Authority replaced these projects with the following green projects that were reviewed and approved by Sustainalytics in the 2021 Green Bond Report:

1 The Y-49 Life Extension and Modernization project is a prospective capital improvement, refurbishment and repairs to the facilities associated with the Y-49 circuit. Work scope includes HPFF Cable reconductoring of the Nassau segment of the circuit (Conductor size to 3000kcmil, addition of 9 manholes), GIS refurbishment of East Garden City and South Transition Station, refurbishment of HPFF and SCFF Pump houses, upgrade of existing Leak Detection System\UPRATE Dynamic Rating System, repair\replacement of Primary and Secondary relay communications fiber bundles, East Garden City shunt reactor replacement, completion of electromechanical to microprocessor protection upgrade and installation of a protective enclosure above East Garden City and South Transition Station GIS.

2 The L33P and L34P Phase Shifter project is the jointly funded engineering, purchase, and installation of a new Phase-shifter with integrated voltage regulator associated with the L33P and L34P 230 kV transmission lines. The L33P & L34P Overhead Re-Conductoring, also a partnership with HydroOne (Ontario Canada Transmission Owner and Interconnect with NY), will re-conductor the L33P (Energized 09/20/58) and L34P and overhead ground wire associated with Project 2155 for the replacement of the respective Phase Shifters.

3 Fraser SVC Control and Relay Upgrade: The Fraser SVC Control system needs to be upgraded to a Mach 3.0 and the relay protection schemes need to be upgraded to current technology relays. The cooling skid also needs upgrading to current standards. The new system will be NERC/CIP compliant.

4 The Plattsburgh AT 1 Replacement is for Auto #1 replacement that failed. To date, an internal inspection has been performed revealing the magnitude of the damage that occurred internal to the transformer during the failure.

5 TLEM Tower Coating Upgrades WNY & CNY upgrades the coating systems on the electrical towers system-wide to protect the galvanized steel surfaces from corrosion. For the Niagara region (WNY), a yearly maintenance program has been established to systematically repaint/recoat the roughly 3,200 towers spanning circuits UCC2-41, EF24-40, EF/UCC, CE-1, CE-2, PC-1, PC-2, RP-1, RP-2, NR-2, SR-1, NS-1 and PA-27.

6 The TLEM Tower Coating Upgrades CNY is a project for the STL Region Tower Painting and will provide for a yearly maintenance program of systematic repainting/recoating of the towers of circuits EF/UCC, GF-5, UCC2-41, CCRT34-42 and RFK-305. The program will be supported by yearly flyover and O&M inspections and involves 663 towers in the Marcy South Region.

7 RMPD AT 2 Replacement is due to RMPD Auto #2 failure. During a 13.8KV fault, Auto #2 took a significant amount of damage internally as well as to the bushings while in the process of feeding fault current. RMPD AT1 Replacement project are the replacement and associated station upgrades surrounding the replacement of Moses Autotransformer 1.

8 Power/Control Tunnel Water Mitigation will remediate and prevent further sitewide water infiltration into the control and power tunnels, which would increase the rate of deterioration, aging, corrosion, and risk of failure with extended unplanned outages.

**Management of Proceeds**

Upon receipt of the Series 2020 A Green Bond proceeds, NYPA transferred approximately $353 million into the Operating Fund to reimburse expenditures for the identified green projects that occurred from June 2017 to May 11, 2020.

The Authority deposited the remaining proceeds of its Series 2020 A Green Bonds into separate accounts and managed the allocation process using its existing internal tracking system. As of October 2023, all proceeds had been allocated to the spending requirements identified.

## Use of 2020 Series A Green Bond Proceeds, 2023 Spend

| Project Name | Actual Spend Jan 2023- Dec 2023 |
|---|---|
| FRASER SVC CONTROL and RELAY UPGRADE | ($1,579,815.88) |
| Y49 Nassau Seg. Reconductoring | $37,622,440.59 |
| SENSOR DEPLOYMENT (TRANSMISSION) | $3,519,324.13 |
| Transmission LEM (CEC) | $315,394.19 |
| TLEM: STL Remote Substations | $2,196,426.42 |
| TLEM Tower Coating Upgrades CNY | $6,983.94 |
| Transmission LEM (NIA) | $22,994,911.05 |
| TLEM Tower Coating Upgrades WNY | $3,744,368.81 |
| POWER/CONTROL TUNNEL WATER MITIGATION | $401.50 |
| L33P & L34P Overhead Re-Conductoring | $1,043.52 |
| Breaker & Relay Replacement (STL) | $4,831,657.32 |
| RMPD AUTO #2 | $2,301,897.76 |
| REPLACEMENT OF PLATTSBURG AUTO #1 | $3,071,037.14 |
| L33P & L34P Phase Shifter | $862,669.00 |
| RMPD AT1 Replacement | $1,531,930.14 |
| **Totals** | **$ 81,420,669.63** |

## 2022 Series A Green Bond Issuance

In April 2022, NYPA issued $608 million in tax-exempt Green Transmission Project Revenue Bonds, Series 2022 A. The bonds were issued for the purpose of financing certain transmission projects (the "2022 A SFP Transmission Projects") identified under the Authority's General Resolution Authorizing Transmission Project Revenue Obligations, adopted December 7, 2021.

The financing of the Series 2022 A SFP Transmission Projects was undertaken by the Authority as a Separately Financed Project as permitted under the Authority's General Resolution Authorizing Revenue Obligations, dated February 24, 1998, as amended, and supplemented (the "General Resolution").

## 2022 Series A Green Bond Projects Overview

The "Smart Path Reliability Transmission Project" MA1 and MA2 and "Central East Energy Connect Transmission Project" Marcy to New Scotland projects, which are described below and were initially included in the Series 2020 A Revenue Bond issuance, were instead selected for inclusion in the SFP financing because of their ability to be backed solely by project revenues, allowing NYPA to account for and finance these transmission investments separately from its General Bond Resolution.

1 The Smart Path Project to extend the file 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). Construction of the Smart Path Reliability Transmission Project has been completed and the final segment was placed in service in May 2023.

2 Central East Energy Connect, a new 345kV double circuit line ~86mi from existing Edic (E) to existing New Scotland (NS) station - two 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 - two 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. As of December 31, 2023, the project is 100% complete and placed in service.

## Management of Proceeds

Upon receipt of the Series 2022 A Green Bond proceeds, NYPA transferred approximately $95 million into the General Resolution Operating Fund to reimburse expenditures for the identified green projects that occurred from May 2019 to April 2020.

The Authority deposited the remaining proceeds of its Series 2020 A Green Bonds into separate accounts and continues to manage the allocation process using its existing internal tracking system until proceeds are allocated to the spending requirements identified.

Pending allocation, proceeds are held in liquid instruments including cash, money market funds and/or government securities as permitted by the company's investment policy.

## Use of 2022 Series A SFP Green Bond Proceeds, 2023 Spend

| Series 2022A SFP Total Spend | | |
|---|---|---|
| **Project Name** | **Actual Spend (Jan-Dec 2023)** | |
| Smart Path | | 27,093,009.42 |
| Central East Energy Connect | | 58,489,444.51 |
| **Totals** | **$** | **85,582,453.93** |

## 2023 Series A Green Bond Issuance

In November 2023, NYPA issued $734 million in tax-exempt Green Transmission Project Revenue Bonds, Series 2023 A. The bonds were issued for the purpose of financing certain transmission projects (the "2023 A SFP Transmission Projects") identified under the Authority's General Resolution Authorizing Transmission Project Revenue Obligations, adopted December 7, 2021.

The financing of the Series 2023 A SFP Transmission Projects was undertaken by the Authority as a Separately Financed Project as permitted under the Authority's General Resolution Authorizing Revenue Obligations, dated February 24, 1998, as amended, and supplemented (the "General Resolution").

## 2023 Series A Green Bond Project Overview

The "Smart Path Connect Project" consists of rebuilding approximately 100 linear miles of existing 230 kV transmission lines in northern and central New York to 345 kV, along with associated substation construction and upgrades, to address existing

congestion and curtailment issues by establishing, together with other projects currently under development by the Authority, a continuous 345 kV transmission path from areas of planned renewable generation to New York's load centers. The Smart Path Connect Project includes rebuilding all or parts of the following transmission lines: the remaining 8-mile section of the Authority's Moses-Adirondack 1&2, the Authority's Moses-Willis 1&2, the Authority's Willis-Patnode and the Authority's Willis-Ryan; and National Grid's Adirondack to Porter (Chases Lake-Porter Line 11, Adirondack-Porter Line 12, and Adirondack-Chases Lake Line 13), as well as connecting to the Authority's Moses-Adirondack 1&2 transmission facilities. The Smart Path Connect Project will be built primarily within existing rights-of-way.

The Smart Path Connect Project consists of discrete asset ownership between NYPA and National Grid creating two transmission projects. In general, the two discrete transmission projects (transmission lines and associated facilities) are: (1) an approximately 46-mile transmission line in northern New York running eastward known as "MW-Patnode" and (2) an approximately 55-mile transmission line in central New York running southward known as "Adirondack-Porter." The Authority will own all of the MW-Patnode facilities, including existing and new substations, and will own part of the Adirondack-Porter substation facilities, with the Adirondack-Porter transmission lines and remainder of the Adirondack-Porter facilities owned by National Grid.

## Use of 2023 Series A SFP Green Bond Proceeds, 2023 Spend

| Series 2023A SFP Total Spend | | |
|---|---|---|
| **Project Name** | **Actual Spend (Jan-Dec 2023)** | |
| Smart Path | | 230,787,815.34 |
| **Totals** | **$** | **230,787,815.35** |

## Governance

For the duration of all NYPA's Green Bonds issuance programs, NYPA will monitor and track (i) use of proceeds (project type, capacity and location) for each Green Bond issued, (ii) 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.

## Reporting

In accordance with our Green Bond Framework, this report is being posted to the Electronic Municipal Market Access (EMMA) website of the Municipal Securities Rulemaking Board, accessible at **www.emma.msrb.org** along with other of the Authority's fiscal year ending December 31, 2023 filings. Fiscal year-end filings include the Authority's Audited Financial Statements. These are published annually and available on NYPA's website (www.nypa.gov).

The Authority received a second-party Opinion (from Sustainalytics) on its Series 2020 A bond issuance in May 2020 and a second party Assurance Letter, also from Sustainalytics, on its assertion of the use of funds and adherence to the Framework, in April 2021. The Authority expects a second party Assurance Letter on its assertion of the use of funds in calendar year 2023 and adherence to The Framework, in April 2024.

The Authority received a pre-issuance second-party Opinion from Sustainalytics on its Series 2022 A bond issuance in May 2022 and a second party Assurance Letter, also from Sustainalytics, on its assertion of the use of funds and adherence to the Framework, in April 2022. The Authority expects a second party Assurance Letter on its assertion of the use of funds in calendar year 2023 and adherence to the Framework, in April 2024.

In addition, The Authority received a pre-issuance second-party Opinion from Sustainalytics on its Series 2023 A bond issuance in November 2023 and a second party Assurance Letter, also from Sustainalytics, on its assertion of the use of funds and adherence to the Framework, in September 2023. The Authority expects a second party Assurance Letter on its assertion of the use of funds in calendar year 2023 and adherence to the Framework, in March 2024.

The New York Power Authority shall continue to disclose allocation and impact information such as allocated amounts, project location, and project capacity, as well as broader reporting about its alignment to State environmental objectives. Reporting is a core component of the green bond market and NYPA prioritizes these actions.