New York Power Authority

Type of Engagement: Annual Review
Date: April 22, 2022
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Introduction

In May 2020, the Power Authority of the State of New York ("New York Power Authority" or "NYPA") issued a green bond aimed at financing transmission infrastructure to support the integration of renewable energy into its electricity grid. In April 2022, NYPA engaged Sustainalytics to review the projects funded through the issued green bond and provide an assessment as to whether the projects met the Use of Proceeds criteria and the Reporting commitments outlined in the New York Power Authority Green Bond Framework (the "Framework"). Sustainalytics provided a Second Party Opinion of the Framework.[1] This is Sustainalytics' second annual review of NYPA's 2020 green bond following a previous review in April 2021.

Evaluation Criteria

Sustainalytics evaluated the projects and assets funded between 2020 and 2021 based on whether the projects and assets:

1. Met the Use of Proceeds and Eligibility Criteria outlined in the New York Power Authority Green Bond Framework; and
2. Reported on at least one of the Key Performance Indicators (KPIs) for each Use of Proceeds criteria outlined in the New York Power Authority Green Bond Framework.

Table 1 lists the Use of Proceeds, Eligibility Criteria, and associated KPIs.

Table 1: Use of Proceeds, Eligibility Criteria, and associated KPIs

Use of Proceeds	Eligibility Criteria	Key performance indicators (KPIs)
Renewable Energy and Energy Efficiency	Retrofitting and upgrading energy transmission infrastructure to support the integration of low carbon energy sources. Installation of "smart sensors" to improve the transmission grid.	Project type, capacity and location of the projects financed

Issuing Entity's Responsibility

NYPA is responsible for providing accurate information and documentation relating to the details of the projects that have been funded, including description of projects, amounts allocated, and project impact.

Independence and Quality Control

Sustainalytics, a leading provider of ESG and corporate governance research and ratings to investors, conducted the verification of NYPA's Green Bond Use of Proceeds. The work undertaken as part of this engagement included collection of documentation from NYPA employees and review of documentation to confirm the conformance with the New York Power Authority Green Bond Framework.

[1] Sustainalytics, "New York Power Authority Green Bond Framework Second-Party Opinion", (2020), at: https://www.sustainalytics.com/corporate-solutions/sustainable-finance-and-lending/published-projects/project/new-york-power-authority/new-york-power-authority-green-bond-framework-second-party-opinion/nypa-green-bond-framework-second-party-opinion-pdf

Sustainalytics has relied on the information and the facts presented by NYPA with respect to the financed projects. Sustainalytics is not responsible nor shall it be held liable if any of the opinions, findings, or conclusions it has set forth herein are not correct due to incorrect or incomplete data provided by NYPA.

Sustainalytics made all efforts to ensure the highest quality and rigor during its assessment process and enlisted its Sustainability Bonds Review Committee to provide oversight over the assessment of the review.

Conclusion

Based on the limited assurance procedures conducted,[2] nothing has come to Sustainalytics' attention that causes us to believe that, in all material respects, the reviewed bond projects, funded through proceeds of NYPA's green bond, are not in conformance with the Use of Proceeds and Reporting Criteria outlined in the New York Power Authority Green Bond Framework. NYPA has disclosed to Sustainalytics that the proceeds of the green bond are approximately 63% allocated as of February 2022 and are expected to be fully allocated by May 2023, three years after the issuance.

Detailed Findings

Table 2: Detailed Findings

Eligibility Criteria	Procedure Performed	Factual Findings	Error or Exceptions Identified
Use of Proceeds Criteria	Verification of the 13 projects funded by the green bond between 2020-2022 to determine if projects aligned with the Use of Proceeds Criteria outlined in the New York Power Authority Green Bond Framework and above in Table 1.	All projects reviewed complied with the Use of Proceeds criteria.	None
Reporting Criteria	Verification of the 13 projects funded by the green bond between 2020-2022 to determine if impact of projects was reported in line with the KPIs outlined in the New York Power Authority Green Bond Framework and above in Table 1. For a list of KPIs reported please refer to Appendix 1.	All projects reviewed reported on at least one KPI per Use of Proceeds criteria.	None

[2] Sustainalytics limited assurance process includes reviewing the documentation relating to the details of the projects that have been funded, including description of projects, estimated and realized costs of projects, and project impact, which were provided by the Issuer. The Issuer is responsible for providing accurate information. Sustainalytics has not conducted on-site visits to projects.

Appendix

Appendix 1: Allocation and Impact Reporting by Eligibility Criteria

In May 2020, NYPA issued a total of USD 1.12 billion in Series A bonds with USD 791.8 million designated as "green".[3] In 2022, NYPA replaced two of the eligible projects with seven new projects 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 operations. Table 3 details the updated green bond allocation, which as a result of the project substitution, the total net green designation has been reduced to USD 472,026,336, and Table 4 includes a description of projects being financed.[4]

Table 3: Green Bond Allocation

Net Bond Proceeds Allocation (USD) **May 2020 – May 2023 (Expected)**	
Net bond proceeds allocated to eligible expenditures incurred from June 2017 to May 2020	167,952,873
Net bond proceeds allocated to eligible projects from May 2020 to February 2022	127,861,838
Allocated bond proceeds (expected future spend on ongoing projects)	176,211,625
Total:	**472,026,336**

Table 4: Details of Eligible Projects

	Project Name	**Project Description**	**New Total Project Allocation (USD)**
Projects from 2020	**Transmission LEM (NIA)**	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.	142,023,818.84
	Sensor Deployment Transmission	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	65,150,868.96
	TLEM STL Remote Substations	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.	29,583,855.14

[3] NYPA has designated as green bonds, the Series A Bonds maturing on November 15, 2050, November 15, 2055, and November 15, 2060. At: https://emma.msrb.org/SS1379786-SS1074352-SS1481598.pdf
[4] NYP has communicated to Sustainalytics that in 2023 they intend to combine the amount spend amounts related to its 2020 and 2022 issuance.

	Breaker & Relay Replacement	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.	28,954,928.60
	PV20 Cable Replacement	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.	28,320,062.78
	Transmission LEM (CEC)	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.	19,511,454.00
New Replace-ment Projects	**Y-49 LEM**	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.	66,829,629.03
	L33P & L34P Phase Shifter & Overhead Re-Conductoring	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.	34,861,494.19
	Fraser SVC Control and Relay Upgrade	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.	8,953,891.45
	Replacement of Plattsburg Auto #1	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.	11,132,134.96

	TLEM Tower Coating Upgrades WNY & CNY	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. 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.	14,462,038.69
	RMPD AT1 Replacement & Auto #2	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.	20,582,388.53
	Power/Control Tunnel Water Mitigation	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.	1,659,770.52
	Total		**472,026,335.69**

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