2021-2024

APPROVED 2021 BUDGET AND 2021-2024 FINANCIAL PLAN

In Compliance with 2 NYCRR Chapter 5, Part 203

NEW YORK STATE OF OPPORTUNITY. | NY Power Authority

Approved 2021 Budget and 2021–2024 Financial Plan

Mission of the Power Authority of the State of New York

The new mission of the Power Authority of the State of New York ("NYPA" or the "Authority,") which is expected to be ratified by our Trustees 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 new mission statement adheres to maintaining NYPA's core operating businesses while also moving to support the energy goals of New York State, codified in the Clean Energy Standard, New York State Climate Leadership and Community Protection Act, our Enhanced Authority under changes to the Power Authority Act enacted in 2019, and the Accelerated Renewable Energy Growth and Community Benefit Act, outlined below.

The Authority's financial performance goal is to maintain a strong financial position to have the resources necessary to achieve its mission.

Clean Energy Standard

On Aug. 1, 2016, the New York Public Service Commission ("NYPSC", "PSC") issued an order establishing a Clean Energy Standard (the "CES Order") to implement the clean energy goals of the State Energy Plan. Pursuant to the CES Order, load-serving entities identified in the order are required to purchase "Zero Emission Credits" ("ZECs") from the New York State Energy Research Development Authority ("NYSERDA") to support the preservation of existing at-risk zero emissions nuclear generation. The Authority is not subject to NYPSC jurisdiction for purposes of the CES Order but has assumed an obligation to purchase ZECs consistent with the terms of the CES Order and intends to seek recovery of such costs from the Authority's customers.

On Jan. 31, 2017, the Authority's Trustees authorized (a) participation in the NYPSC's ZEC program and (b) execution of an agreement with NYSERDA to purchase ZECs associated with the Authority's applicable share of energy sales. On April 1, 2020, the Authority and NYSERDA executed an agreement under which the Authority committed to purchase ZECs in a quantity based on its proportional load in the New York control area. The agreement is in effect until April 1, 2029.

As of October 2020, the Authority estimates that it will incur ZEC purchase costs associated with participation in the ZEC program of approximately $298.2 million in aggregate over the 2021-2024 period, of which approximately $20.3 million is not expected to be recovered under customer contracts that predate the adoption of the CES Order. As of June 30, 2020, the Authority has paid $167.5 million in ZEC purchase costs.

New York State Climate Leadership and Community Protection Act

On July 18, 2019, the state enacted the "New York State Climate Leadership and Community Protection Act" as Chapter 106 of the Laws of 2019 ("Chapter 106"). Chapter 106 directs the New York State Department of Environmental Conservation (the "NYDEC") to develop regulations to reduce statewide greenhouse gas emissions ("GHG") to 60 percent of 1990 levels by 2030 and 15 percent of 1990 levels by 2050. Chapter 106 also requires that the state offset the remaining 15 percent of 1990 GHG emissions in 2050. NYDEC is drafting regulations that would implement these goals.

Several provisions of Chapter 106 could potentially impact the Authority's business and operations, such as the following: (1) a requirement that specified state entities, including the Authority, adopt regulations to contribute to achieving statewide GHG emissions; (2) a requirement that state entities, including the Authority, assess and implement strategies to reduce GHG emissions; (3) consideration of whether actions that the Authority would undertake in the course of its operations are consistent with state GHG emission limits that will be established pursuant to the enactment; and (4) potential allocation or realignment of resources to support the state's clean energy and energy efficiency goals for disadvantaged communities.

As part of the 2020-2021 Enacted State Budget, legislation was enacted that is expected to significantly speed up the siting and construction of clean energy projects to combat climate change in an effort to improve the state's economic recovery from the COVID-19 health crisis.

The Accelerated Renewable Energy Growth and Community Benefit Act (the "CBA Act") will create an Office of Renewable Energy Siting to improve and streamline the process for environmentally responsible and cost-effective siting of large-scale renewable energy projects across the state while delivering significant benefits to local communities. The CBA Act, which will be implemented by the Authority and New York State Department of State, NYSERDA, the Department of Public Service (the “DPS”), NYDEC and the Empire State Development Corporation, will accelerate progress towards the state’s clean energy and climate goals, including the goal to obtain 70 percent of the state’s electricity from renewable sources by 2030.

Enhanced Authority

Chapter 58 of the Laws of 2019 (Parts KK and LL), enacted April 12, 2019, amended the Power Authority Act to give the Authority enhanced powers to continue to support New York State energy policies and priorities, and offer additional energy products to entities who desire to purchase power from the Authority. In summary, the enactment authorizes the Authority to:

1) Design, finance, develop, construct, install, lease, operate and maintain electric vehicle charging stations throughout the state for use by the public;

2) Plan, finance, construct, acquire, operate, improve and maintain transmission facilities to transmit power and energy generated from renewable wind energy generation in state territorial waters and waters under the jurisdiction or regulation of the U.S;

3) Supply power and energy from competitive market sources to any Authority power customer, public entities (e.g. state entities, municipalities, public school districts), and community choice aggregation communities (Affected Entities);

4) Sell renewable power, energy, or related attributes (Energy Products) procured from competitive market and other qualifying sources to Affected Entities; and

5) Finance the development of renewable energy generating projects in the state in U.S. property/waters, including up to six projects with a generating capacity in excess of 25 megawatts, and sell Energy Products produced from such projects to Affected Entities.

The enhanced authority summarized in items 3-5 is subject to conditions and limitations specified in the enactment and is scheduled to repeal on June 30, 2024. The enactment does not impact the Authority’s legal authority existing under any other provision of law.

Leveraging this enactment, NYPA is developing new power products for customers, including green and blended power products, through rate structures intended to meet the energy, sustainability, and financial goals of its customers. No financial estimates related to these product offerings have been incorporated into this plan.

Accelerated Renewable Energy Growth and Community Benefit Act

The Accelerated Renewable Energy Growth and Community Benefit Act (the “Renewable Energy Act”) was enacted as part of the 2020-21 Enacted State Budget and amends state law with respect to the siting of major utility transmission facilities to (1) establish a 12-month target timeframe for the siting of major utility transmission facilities (“MUTFs”); and (2) authorizes the PSC to establish in regulation an expedited nine-month target timeframe for MUTFs that: (a) are constructed within existing rights-of-way, or (b) would not result in any significant adverse environmental impacts considering current uses and conditions existing at the site, as determined by the PSC, in consultation with the NYDEC, or (c) would necessitate expanding the existing rights-of-way where the expansion is for the purpose of complying with law, regulations or industry practices relating to electromagnetic fields.

This new, expedited siting process will be administered through a new siting office to be established within the Department of State. The Renewable Energy Act also establishes a new “Clean Resources Development and Incentives Program” pursuant to which NYSERDA will establish “build-ready” sites that would be made available to renewables developers through a competitive process, and a host community benefits program to be established by PSC pursuant to which renewable developers would fund programs to provide benefits to communities that host new renewable generation projects.

The Renewable Energy Act also contains provisions to facilitate new and upgraded distribution and transmission projects that are necessary for the state to avoid congestion and reach the Chapter 106 targets (the “Transmission Component”).

The Legislature found that the Authority owns and operates backbone electric transmission assets in the state, has rights of way that can support in whole or in part bulk transmission investment projects, and has the financial stability, access to capital, technical expertise and experience to effectuate expeditious development of bulk transmission investments needed to help the state meet its targets under Chapter 106. As such, the Transmission Component grants the Authority the ability to develop projects which the PSC determines should be pursued expeditiously to promote the state's public policy goals ("Priority Transmission Projects.")

After the completion of a comprehensive study for the purpose of identifying distribution upgrades, local transmission upgrades and bulk transmission investments that are necessary or appropriate to facilitate the timely achievement of Chapter 106 targets (collectively, "Grid Study") undertaken by the DPS in consultation with the Authority, NYSERDA, the New York Independent System Operator ("NYISO"), and jurisdictional utilities and transmission operators, the PSC will establish a distribution and local transmission capital plan for each utility in whose service territory the Grid Study identified distribution upgrades and local transmission upgrades that DPS determines are necessary or appropriate to achieve targets set forth in Chapter 106.

The upgrade programs shall establish a prioritized schedule upon which each such upgrade shall be accomplished. The PSC will also establish a bulk transmission system investment program that identifies bulk transmission investments it determines to be necessary or appropriate to achieve the Chapter 106 targets. PSC will identify Priority Transmission Projects to meet the Chapter 106 targets utilizing the NYISO's policy transmission planning process.

Pursuant to the Renewable Energy Act, the Authority is authorized to solicit interest from potential co-participants in each Priority Transmission Project it agrees to develop, and assess whether any joint development would provide for significant additional benefits in achieving the Chapter 106 targets. The Authority may then undertake the development of the Priority Transmission Project on its own or undertake the Priority Transmission Project jointly with one or more other parties.

A joint development of a Priority Transmission Project may be accomplished through agreements on such terms and conditions as the Authority finds to be appropriate and necessary to undertake and complete timely development of the Priority Transmission Project. For those Priority Transmission Projects that the Authority determines to undertake, and which are not substantially within its rights of way, the Authority will select private sector participants through a competitive bidding process. Excluded from these Priority Transmission Projects are generation lead lines, and repairs to, replacement of or upgrades to the Authority's transmission assets.

Background of the Power Authority of the State of New York

The Authority generates, transmits, purchases and sells electric power and energy as authorized by law. 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 and Community Choice Aggregation Communities 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 ("SENY governmental customers"), and certain neighboring states.

Legislation enacted in 2019, amended the Power Authority Act to give the Authority enhanced powers to continue to support New York State energy policies and priorities, and offer additional energy products to entities who desire to purchase power from the Authority. In addition to contractual sales to customers, NYPA also sells power into the wholesale electricity market operated by the NYISO.

To provide electric service, the Authority owns and operates five major generating facilities, 11 small gas-fired electric generating facilities, and four small hydroelectric facilities in addition to a number of transmission lines, including major 765 kilovolt (kV), 345kV, 230kV and 115kV transmission facilities. NYPA's five major generating facilities consist of two large hydroelectric facilities: Niagara Power Project ("Niagara") and St. Lawrence-Franklin D. Roosevelt Power Project ("St. Lawrence-FDR"); Blenheim-Gilboa Pumped Storage Power Project ("Blenheim-Gilboa") a large pumped-storage hydroelectric facility, and two combined-cycle electric generating plants: the Eugene W. Zeltmann Power Project ("Zeltmann") located in Queens, New York and the Richard M. Flynn Power Plant ("Flynn") located on Long Island.

As a component of NYPA's strategic plan, there are ongoing efforts to modernize NYPA's generation and transmission infrastructure to increase flexibility and resiliency, to serve customers' needs in an increasingly dynamic energy marketplace, and to support the state's clean energy goals.

On April 29, 2020, NYPA came to market with the largest issuance in its nearly 90-year existence and its inaugural Green Bond issuance of approximately $792 million. NYPA's $1.2 billion April financing is a major stepping stone in achieving the country's most ambitious decarbonization agenda as set out by New York's Climate Leadership and Community Protection Act ("CLCPA"), which Gov. Andrew M. Cuomo signed into law on July 18, 2019.

The issuance of the 2020 bonds continues to support NYPA's Strong Governance Practices, including supporting NYPA's capital plan and its goal of avoiding deferred maintenance, keeping assets in good repair, and investing in IT infrastructure projects to protect against cyber threats. The Authority owns and operates the Niagara Power Project , which provides up to 2.6 million kilowatts of clean electricity generated by two facilities, the Robert Moses Power Plant ("RMPP") and the Lewiston Pump-Generating Plant ("LPGP.")

Because a majority of the RMPP equipment is nearly 60 years old, NYPA is undertaking a Life Extension & Modernization (LEM) program for it and its associated infrastructure. The program, called Next Generation Niagara, is focused on modernizing the 13 units at RMPP, digitization of controls and providing for security and reliability of the RMNPP and its integrated infrastructure.

The Authority provides customers with wide-ranging on-site energy solutions, including energy data analytics, planning, operations and the development of capital projects such as energy efficiency, distributed generation, advanced technologies and renewables. NYPA also has the responsibility for implementation of: (a) the Governor's Executive Order No. 88, known as BuildSmart NY, to improve energy efficiency at state-owned and managed buildings; (b) the Five Cities Energy Efficiency Implementation Plans (the cities of Albany, Buffalo, Rochester, Syracuse and Yonkers) to reduce overall energy costs and consumption, strengthen the reliability of energy infrastr ucture, create jobs in local clean energy industries and contribute to a cleaner environment.

From January 2013 through December 2019, NYPA provided approximately $651 million in financing for energy efficiency projects covered by Executive Order 88. Overall financing from January 2013 through December 2019 for energy efficiency projects for all customers (including Executive Order 88 facilities) amounted to $1.68 billion.

To achieve its goal of promoting clean energy and efficiency, NYPA implements energy services for the benefit of its power supply customers and for various other public entities throughout the state. Under these programs, the Authority finances the installation of energy-saving measures and equipment, which is owned by the customers and public entities upon their installation and which focus primarily on energy efficiency, renewables, resiliency and sustainability.

These programs provide funding for, among other things, high-efficiency lighting technology conversions, high-efficiency heating, ventilating and air conditioning systems and controls, boiler conversions, replacement of inefficient refrigerators with energy-efficient units in public housing projects, electric vehicles and charging stations, distributed generation technologies and clean energy technologies, and installation of non-electric energy-saving measures. The Authority has authorized, as of September 2019, the expenditure of an aggregate of $5.4 billion on these programs.

Effective Jan. 1, 2017, the New York State Canal Corporation (the "Canal Corporation") became a subsidiary of the Authority, and NYPA assumed certain powers and duties relating to the Canal System (as defined below) to be exercised through the Canal Corporation. The Canal Corporation is responsible for a 524-mile canal system consisting of the Erie, Champlain, Oswego and Cayuga-Seneca canals (the "Canal System"). See "(c) Budget Assumptions, Canal Corporation" for more information.

In 2019, NYPA received ISO 55001 certification for asset management enterprise wide. Asset management is one of the critical components of the Authority' business strategy. ISO 55001 is an asset management system standard, the main objective of which is to help organizations manage the lifecycle of assets more effectively. By implementing ISO 55001, organizations will have better control over daily activities, achieve higher return s with their assets and reduce the total cost of risk.

In 2019, the Authority enrolled in the premier Bitsight cyber security ranking system to validate and monitor its external security posture. Bitsight is a web application that ranks companies based on external scans of their information technology environment. Since enrolling, NYPA has consistently ranked in the top 10 percent of all utilities in its peer group.

2021-2030 Strategic Plan

The Authority is closing out the NYPA 2020 strategic plan, which encompassed Customer Empowerment, Infrastructure Modernization and Resource Alignment themes and saw accomplishments that included the achievement of ISO 55001 certification for asset management, significant progress on the transition to an all-digital utility, which allowed for a near-seamless transition to working remotely during the pandemic, and the buildout of a statewide electric vehicle charging infrastructure.

As part of the next strategic plan, VISION2030, the Authority is proposing strategic goals that will focus on preserving the value of our hydropower assets; rapidly developing new transmission assets to meet market needs; leading the transition away from natural gas while ensuring system reliability; and growing NYPA's business lines to fulfill customers' energy, resiliency and decarbonization goals. NYPA's proposed goals also will ensure the continuation of its evolution to an all-digital utility and the adoption of the rigorous Environment, Social, Governance and Economic (ESG&E) framework.

VISION2030 is anchored in helping achieve the greenhouse gas reduction targets in New York State's Climate Leadership and Community Protection Act, which was passed in 2019 and is the most ambitious climate change legislation in the country, while ensuring an equitable transition to a thriving clean energy economy in New York. This plan will be presented to the Authority's Board of Trustees for approval in December 2020 and the costs and revenues with respect with the plan are reflected in this final budget and financial plan.

Documentation and Exhibits Supporting the Budget and Financial Plan

(a) NYPA's Relationship With New York State Government

The Authority is a corporate municipal instrumentality and political subdivision of the State of New York (the "state") created in 1931 by Title 1 of Article 5 of the Public Authorities Law, Chapter 43-A of the Consolidated Laws of the State, as amended from time to time (the "Act"), to help provide a continuous and adequate supply of dependable electric power and energy to the people of the state.

The Authority's operations are overseen by a Board of Trustees. NYPA's trustees are appointed by the governor of the state with the advice and consent of the state Senate. The Authority is a fiscally independent public corporation whose operations are not supported by state tax revenues. NYPA generally finances construction of new projects through internally generated funds and the sale of bonds and notes to investors, and it pays related debt service with revenues from the generation and transmission of electricity. Income of the Authority and properties acquired by it for its projects are exempt from taxation.

(b) Budget Process

NYPA operates in a capital-intensive industry where operating revenues and expenses are significant and highly variable due to the volatility of electricity prices and fuel costs. NYPA's operations are subject to electric and fuel cost volatility, and changing water flows that have a direct effect on hydroelectric generation levels. This Approved 2021 Budget and 2021-2024 Financial Plan ("Approved Budget and Four-Year Plan") relies on data and projections developed through the following time frame:

- During July–November 2020, developed preliminary forecasts of electric prices (both energy and capacity), ancillary services revenue and expenses, and fuel expenses; customer power and energy use; customer rates; Annual Transmission Revenue Requirement; generation levels at NYPA power projects reflecting scheduled outages; and purchased energy and power requirements and sources
- During July–November 2020, developed preliminary operations and maintenance, and capital expense targets
- Nov. 2, 2020, posted Proposed Four-Year Plan for public inspection at five convenient locations and on NYPA's website
- During October–November 2020, updated and finalized all forecasts and cost estimates
- During November–December 2020, integrated input data to produce the 2021-2024 Final Budget and Financial Plan
- Seek authorization of NYPA's Board of Trustees to approve the 2021-2024 Final Budget and Financial Plan at their meeting scheduled for Dec. 9, 2020
- Submit the approved 2021-2024 Budget and Financial Plan to the state Comptroller's Office; and make the approved document available for public inspection at five convenient locations and on NYPA's website upon Board of Trustee approval.

NYPA's Four-Year Projected Income Statements

(In $ Millions)

NYPA	2021	2022	2023	2024
Operating Revenue				
Customer Revenue	$1,817.6	$1,820.4	$1,844.1	$1,830.6
Market-Based Power Sales	430.5	439.9	466.6	547.0
Ancillary Service Revenue	27.7	28.5	28.6	29.1
NTAC and Other	237.5	247.5	270.1	297.9
Non Utility Revenue	26.0	28.1	30.1	31.9
Operating Revenue Total	**2,539.3**	**2,564.4**	**2,639.5**	**2,736.5**
Operating Expense				
Purchase Power	(629.3)	(642.0)	(656.6)	(676.8)
Ancillary Service Expense	(62.5)	(64.3)	(63.4)	(62.7)
Fuel Consumed	(119.2)	(136.3)	(146.7)	(169.0)
Wheeling	(642.2)	(642.4)	(642.4)	(642.4)
Operations & Maintenance	(460.6)	(467.8)	(491.9)	(537.5)
Other Expense	(129.7)	(113.8)	(100.1)	(75.8)
Operating Expense Total	**(2,043.5)**	**(2,066.6)**	**(2,101.1)**	**(2,164.2)**
EBIDA	**495.8**	**497.8**	**538.4**	**572.3**
Compounded Annual Growth Rate (CAGR)		0%	4%	5%
Non Operating Income & Expenses				
Depreciation & Amortization	(230.3)	(252.1)	(268.6)	(291.6)
Investment and Other Income	19.6	14.7	16.8	17.0
Mark to Market Adjustments	0.0	0.0	0.0	0.0
Interest & Other Expenses	(129.3)	(111.7)	(123.7)	(128.0)
Non Operating Income & Expenses Total	**(340.0)**	**(349.1)**	**(375.5)**	**(402.6)**
NYPA NET INCOME	**$155.8**	**$148.7**	**$162.9**	**$169.7**
CANALS				
Operating Revenue	$1.5	$1.5	$1.5	$1.4
Operating Expense	(88.2)	(85.4)	(82.7)	(80.2)
EBIDA	**(86.7)**	**(83.9)**	**(81.2)**	**(78.8)**
Non Operating Income & Expenses	(28.1)	(29.5)	(32.7)	(35.5)
CANALS NET INCOME	**(114.8)**	**(113.4)**	**(113.9)**	**(114.3)**
CONSOLIDATED NET INCOME (NYPA & CANALS)	**$41.0**	**$35.3**	**$49.0**	**$55.4**

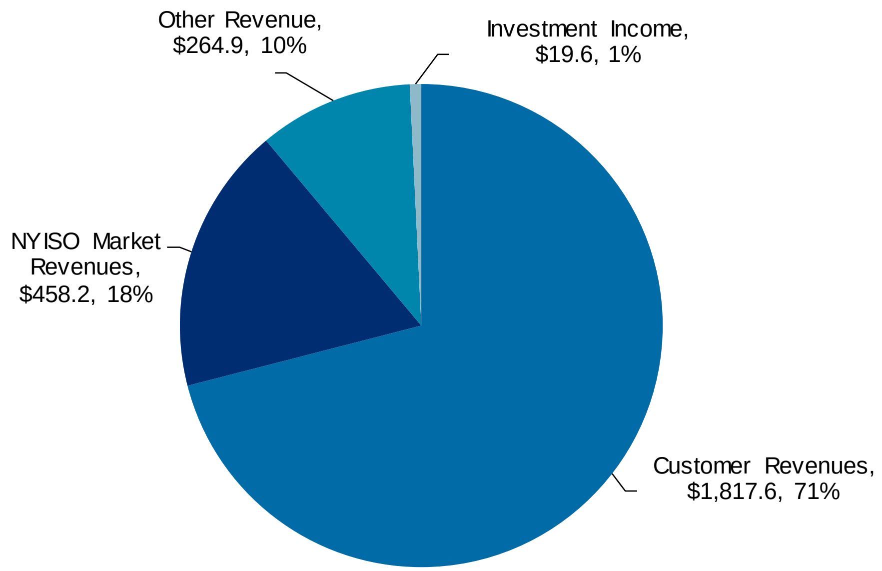
NYPA's Gross Margin Analysis*

(In $ Millions)

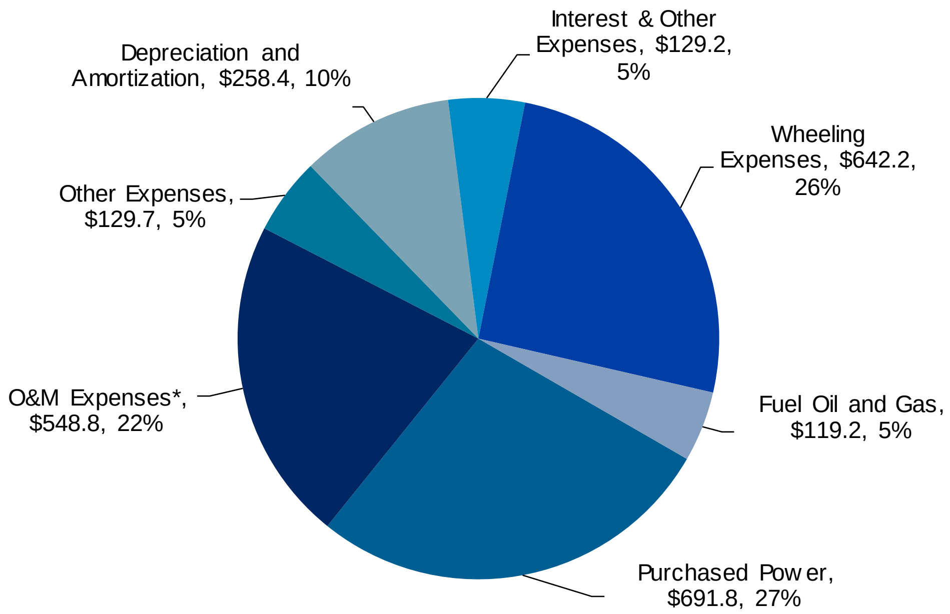
NYPA	2021	2022	2023	2024
Merchant Margin	$272.4	$249.7	$256.0	$278.8
Customer Margin	593.2	595.8	613.1	605.1
Transmission Margin	187.6	194.4	217.0	247.7
Other Margin	32.7	39.7	44.5	54.0
TOTAL MARGIN	**1,085.9**	**1,079.6**	**1,130.6**	**1,185.6**
Operations & Maintenance	(460.6)	(467.8)	(491.9)	(537.5)
Other Expenses	(129.5)	(114.0)	(100.3)	(75.8)
EBIDA	**$495.8**	**$497.8**	**$538.4**	**$572.3**

**Excludes Canals*

2021 NYPA's Budget – Sources
(In $ Millions)



2021 NYPA's Budget – Uses
(In $ Millions)



** Reflects NYPA's base O&M expenses plus administrative expenses less the Allocation to Capital.*

NYPA's Statement of Cash Flows*

(In $ Millions)

	2019	2020	2021	2022	2023	2024
Revenue Receipts:						
Sale of Power, Use of Transmission Lines,						
Wheeling Charges and other receipts	$2,355.7	$2,269.4	$2,528.8	$2,561.9	$2,645.5	$2,751.5
Earnings on Investments and Time Deposits	18.3	22.6	19.6	14.7	16.8	17.0
Total Revenues	**2,374.0**	**2,292.0**	**2,548.4**	**2,576.6**	**2,662.3**	**2,768.5**
Expenses:						
Operation and Maintenance, including Transmission						
of Electricity by others, Purchased Power and						
Fuel Purchases	**(2,113.3)**	**(2,088.4)**	**(2,258.7)**	**(2,302.1)**	**(2,334.1)**	**(2,398.9)**
Debt Service:						
Interest on Bonds and Notes	(52.8)	(64.6)	(41.4)	(43.2)	(65.1)	(104.4)
Bonds and Notes Retired	(349.0)	(268.8)	(0.9)	(2.7)	(0.9)	(16.8)
Total Debt Service	**(401.8)**	**(333.4)**	**(42.3)**	**(45.9)**	**(66.0)**	**(121.2)**
Total Requirements	**(2,515.1)**	**(2,421.8)**	**(2,301.0)**	**(2,348.0)**	**(2,400.1)**	**(2,520.1)**
Net Operations	**(141.1)**	**(129.8)**	**247.4**	**228.6**	**262.2**	**248.4**
Capital Receipts:						
Sale of Bonds, Promissory Notes & Commercial Paper	294.4	1,234.6	0.0	0.0	119.8	106.6
Less: Repayments	0.0	0.0	0.0	0.0	0.0	0.0
Earnings on Construction Funds	0.0	0.0	0.0	0.0	0.0	0.0
DSM Recovery Receipts	0.0	0.0	0.0	0.0	0.0	0.0
Temporary Asset Transfer Return from NYS	43.0	0.0	43.0	43.0	43.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
Total Capital Receipts	**337.4**	**1,234.6**	**43.0**	**43.0**	**162.8**	**106.6**
Capital Additions & Refunds:						
Additions to Electric Plant in Service and						
Construction Work in Progress, and Other costs	(391.4)	(468.9)	(805.1)	(874.3)	(695.1)	(386.8)
Construction Funds - Net Transfer	0.0	0.0	0.0	0.0	0.0	0.0
Total Capital Additions & Refunds	**(391.4)**	**(468.9)**	**(805.1)**	**(874.3)**	**(695.1)**	**(386.8)**
Net Capital	**(54.0)**	**765.7**	**(762.1)**	**(831.3)**	**(532.3)**	**(280.2)**
Net Increase/(Decrease):	**($195.1)**	**$635.9**	**($514.7)**	**($602.7)**	**($270.1)**	**($31.8)**

** This Statement of Cash Flows follows the format prescribed by §2801 of New York State Public Authorities Law and does not follow GASB financial statement standards.*

(c) Budget Assumptions

NYISO Revenue and Expenses

Based on scheduled customer power needs and available electricity generated by NYPA's operating assets, the Authority buys and sells capacity and energy through markets operated by the NYISO. Various NYISO-purchased power charges, in combination with generation-related fuel expenses, comprise a large portion of NYPA's operating expenses. A significant amount of the Authority's revenues result from sales of its generation into the NYISO market for which the energy revenues are projected based on available forward price curves and the capacity revenues are estimated using end-of-day price marks.

Customer and Project Revenue

The customers served by the Authority and the rates they pay vary within the NYPA Power Programs designated to serve such loads. NYPA's power supply customers are served under contracts and tariffs approved by the Board of Trustees.

St. Lawrence-FDR and Niagara Customers

Power and energy from the St. Lawrence-FDR and Niagara facilities are sold under contract to municipal electric systems, rural electric cooperatives, industrial and other business customers, certain public bodies, investor-owned utilities, and out-of-state customers. The balance is sold into the NYISO market.

The charges for firm and/or firm peaking power and associated energy sold by the Authority, as applicable, to the 51 municipal electric systems and rural electric cooperatives in New York State; two public transportation agencies; three investor-owned utilities for the benefit of rural and domestic customers; and seven out-of-state public customers have been established on the basis of the cost to serve these loads. This Approved Budget and Four-Year Plan models Board of Trustee-approved rate changes for customers and prospective rate changes.

Niagara and St. Lawrence-FDR's Expansion & Replacement Power, ReCharge New York and Preservation Power customers are allocated over 30 percent of the average generation capacity of the plants. Sale of expansion and replacement power historically had been handled on a sale-for-resale basis through National Grid and New York State Electric and Gas. However, the direct sale of low-cost hydropower to these customers commenced July 1, 2013. As a result, NYPA is now the load-serving entity for these transactions.

Legislation enacted in March 2011, effective July 2012, created a new economic development power program, the ReCharge New York Power Program ("RNYPP"), to replace two other economic development programs. RNYPP is a permanent power program administered by the Authority and the Economic Development Power Allocation Board ("EDPAB"). RNYPP utilizes up to 455 MW of hydropower from the Authority's Niagara and St. Lawrence-FDR projects combined with up to 455 MW of other power procured by the Authority from other sources. The 910 MW of power is available for allocations to eligible new and existing businesses and not-for-profit corporations under contracts of up to seven years.

The RNYPP legislation also authorizes the Authority, as deemed feasible and advisable by the Board of Trustees, to provide annual funding of $30 million for a residential consumer discount program for those customers that had previously received this hydropower. Revenues earned from the sale of unused RNYPP power into the wholesale market may be used to offset the cost of these residential discounts.

The Board of Trustees have authorized the release of a total $584 million for the period from August 2011 to December 2019 in support of this residential discount program. The Authority supplemented the market revenues used to fund the residential discount program with internal funds, totaling cumulatively $64 million from August 2011 through June 30, 2020.

In March 2019, the Board of Trustees approved a seven-year extension of an agreement for the sale of firm hydroelectric power and energy from the St. Lawrence-FDR project to the Aluminum Company of America ("Alcoa") at its West Plant facilities. The existing contract with Alcoa, for an aggregate of 240 MW, has been executed effective April 1, 2019 through March 31, 2026, replacing prior long-term contracts. The contract extension provides for monthly Base Rate adjustments based upon on the price of aluminum on the London Metal Exchange and contains provisions for employment (450 jobs) and capital ($14 million) commitments.

Changes from the previous contract include: a reduced allocation of 240 MW, with the additional 5 MW being allocated to Arconic, a newly formed business independent of Alcoa, sold under a separate Preservation Power sale agreement; a monthly Clean Energy Standard ("CES") charge relating to Zero Emission Credits ("ZEC") and Renewable Energy Credits ("REC") that NYPA purchases which are attributable to Alcoa's load. The contract specifies a sharing mechanism for the CES charges between Alcoa, New York State and NYPA, whereby Alcoa's share increases as the aluminum price increases. The Authority has entered into hedging contracts on the price of aluminum to mitigate potential downside risk in that market and intends to continue to do so based upon prevailing economic conditions as appropriate.

The Authority estimates that the total costs associated with the relicensing of the St. Lawrence-FDR Project in 2003 for a period of 50 years will be approximately $224 million, of which approximately $208 million has already been spent as of June 30, 2020. These total costs could increase in the future as a result of authorities reserved by the Federal Energy Regulatory Commission (FERC) in the license for the St. Lawrence-FDR Project issued in 2003. The Authority is collecting in its rates for the sale of St. Lawrence-FDR power amounts necessary to fund such relicensing costs.

Chapter 545 of the laws of 2014 enacted the "Northern New York Power Proceeds Act" ("NNYPPA.") NNYPPA authorizes the Authority, as deemed feasible and advisable by the Board of Trustees, to deposit net earnings from the sale of unallocated St. Lawrence County Economic Development Power ("SLCEDP") by the Authority in the wholesale energy market into an account known as the Northern New York Economic Development Fund ("NNYED Fund") administered by the Authority, and to make awards to eligible applicants that propose eligible projects that satisfy applicable criteria. NNYPPA established a five-member allocation board appointed by the governor to review applications seeking NNYED Fund benefits and to make recommendations to the Authority concerning benefits awards.

SLCEDP consists of up to 20 MW of hydropower from the St. Lawrence-FDR Power Project which the Authority has made available for sale to the Town of Massena Electric Department ("MED") for MED to sub-allocate for economic development purposes in accordance with a contract between the parties entered into in 2012 (the "Authority-MED Contact").

NNYPPA defines "net earnings" as the aggregate excess of revenues received by the Authority from the sale of energy associated with SLCEDP sold by the Authority in the wholesale energy market over what revenues would have been received had such energy been sold to MED on a firm basis under the terms of the Authority-MED Contract. For the first five years after enactment, the amount of SLCEDP the Authority could use to generate net earnings may not exceed the lesser of 20 MW or the amount of SLCEDP that has not been allocated by the Authority pursuant to the Authority-MED contract. Thereafter, the amount of SLCEDP that the Authority could use for such purpose may not exceed the lesser of 10 MW or the amount of SLCEDP that has not been allocated. The Authority's estimates of payments from the Authority to the NNYED Fund have been incorporated into this Approved Budget and Four-Year Plan.

The Western New York Power Proceeds Act ("WNYPPA"), which was enacted on March 30, 2012, authorizes the Authority to deposit net earnings from the sale of unused Expansion Power and Replacement Power from the Authority's Niagara project into the Western New York Economic Development Fund ("WNY Fund") as deemed feasible and advisable by the Board of Trustees.

"Net earnings" are defined as any excess revenue earned from such power sold into the wholesale market over the revenue that would have been received had the power been sold at the Expansion Power and Replacement Power rates. Proceeds from the WNY Fund may be used to support eligible projects undertaken within a 30-mile radius of the Niagara project that qualify under the applicable criteria. The WNYPPA established a five-member allocation board appointed by the governor. NYPA's estimates of payments from the Authority to the WNY Fund have been incorporated into this Approved Budget and Four-Year Plan.

SENY Governmental Customers

Various municipalities, school districts and public agencies in New York City are served by the Authority's combined-cycle Zeltmann plant, the contracted output of the Astoria Energy II plant, and capacity and energy purchased by the Authority in the NYISO markets.

In 2018 and 2019, the Authority executed new supplemental long-term electricity supply agreements (2018 LTAs) with its eleven NYC Governmental Customers, including the Metropolitan Transportation Authority, the City of New York, the Port Authority of New York and New Jersey (Port Authority), the New York City Housing Authority, and the New York State Office of General Services. Under the Supplemental LTAs, the NYC Governmental Customers agreed to purchase their electricity from the Authority through Dec. 31, 2027, with the NYC Governmental Customers having the right to terminate at any time upon at least 12 months' notice. Both the Authority and the NYC Governmental Customers may also terminate effective Dec. 31, 2022 upon at least six months' notice. Under the Supplemental LTAs, fixed costs were set for each customer and are subject to renegotiation after five years. Variable costs, including fuel, purchased power and NYISO related costs, are to be set on a pro-forma cost of service basis and reconciled as a pass-through to each customer by an energy charge adjustment.

In 2008, NYPA entered into a long-term power purchase agreement with Astoria Energy II LLC for the purchase of the output of Astoria Energy II, a 550 MW plant, which entered into commercial operation on July 1, 2011 in Astoria, Queens, for the sole benefit of the NYC Governmental Customers. Although the Astoria Energy II power purchase contract goes through to 2031 and is beyond the electricity supply agreement under the Supplemental LTA's, the Authority's contract with the NYC Governmental Customers served by the output of Astoria Energy II is coterminous with the power purchase agreement with Astoria Energy II LLC.

Energy generated by the Astoria Energy II and Zeltmann plants is sold into the NYISO markets, and proceeds are used to offset the cost associated with the production of energy and capacity from the plants. All net costs and benefits to the Authority for both facilities are directly passed through to the NYC Governmental customers. Approximately 26 percent and 20 percent of the NYC Governmental Customer load requirements are covered by Astoria Energy II and Zeltmann plants respectively, while the remainder – more than 53 percent -- remain open to be sourced from the open market.

The Authority's other Southeastern New York (SENY) Governmental Customers are Westchester County and numerous municipalities, school districts and other public agencies located in Westchester County (collectively, the "Westchester Governmental Customers.") NYPA has entered into an evergreen supplemental electricity supply agreement with all 103 Westchester Governmental Customers. Among other things, under the agreement, customers can partially terminate service from the Authority on at least two months' notice prior to the start of the NYISO capability periods. Full termination is allowed on at least one year's notice, effective no sooner than Jan. 1 following the one-year notice.

Westchester Governmental Customers are partially served by NYPA's four small hydroelectric plants. The remainder of the Westchester Governmental Customers' load requirements are supplied through energy and capacity purchased from the NYISO markets. Sales into the NYISO of energy generated by the small hydroelectric resources, as well as grandfathered and historic fixed priced transmission congestion contracts, all help to offset the cost of the energy purchased, with an energy charge adjustment mechanism in place for cost reconciliation.

Blenheim-Gilboa Customers

The Blenheim-Gilboa project operates as a merchant plant, with power and energy not committed to any customer, but primarily used to meet the requirements of the Authority's business and governmental customers and to provide services in the NYISO markets generally at the market-clearing price. The forecast assumes Blenheim-Gilboa will operate as a merchant plant for the upcoming four years.

Small Clean Power Plants ("SCPPs")

In the summer of 2001, NYPA placed in operation 44 MW natural-gas-fueled SCPPs -- 10 in New York City and one on Long Island -- to address a potential local reliability deficiency in the New York City metropolitan area and its potential impact on statewide reliability. As a result of the settlement of litigation relating to certain SCPPs, the Authority has agreed under the settlement agreement to cease operations at the Vernon location, which houses two units, under certain conditions and if the mayor of New York City directs such cessation. No such cessation has occurred. The Vernon location is assumed to be operating during the forecast period pursuant to the terms of an agreement entered into at the time of construction.

For this Approved Budget and Four-Year Plan, it is assumed that the capacity of the SCPPs may be used to meet NYPA's customers' capacity requirements, sold to other users via bilateral arrangements and/or sold into the NYISO capacity auctions. NYPA sells the energy produced by the SCPPs into the NYISO energy markets.

Flynn

The Flynn plant operates as a merchant plant, with capacity and energy output sold into the NYISO market. The forecast assumes Flynn operates as a merchant plant for the upcoming four years.

Transmission Projects

The Authority owns approximately 1,400 circuit-miles of high-voltage transmission lines and associated substations operating at voltages of 115kV, 230kV, 345kV and 765kV. The Authority's Backbone Transmission System consists of a large subset of these transmission facilities, with major circuits such as:

765kV

- MSU1 (Marcy-Massena)
- MSC-7040 (Massena-Chateauguay)

345kV

- UE1-7 (Marcy-Edic)
- UNS-18 (Marcy-New Scotland)
- VU19 (Volney-Marcy)
- NR-2 (Niagara-Rochester)
- NS-1 (Niagara-Sommerset)
- Y-49 (Long Island Sound Cable)
- Q-35L&M (Queens-Manhattan)

230kV

- MA-1/MA-2 (Moses-Adirondack)
- MMS-1/MMS-2 (Moses-Massena)
- MW-1/MW-2 (Moses-Willis)

Since the formation of the NYISO in November 1999, cost recovery for the Authority's provision of transmission service over its facilities has been governed by the NYISO tariff, which included an annual transmission revenue requirement ("TRR") for NYPA of $165.4 million. The Authority receives cost recovery through the NYISO tariff mechanism known as the NYPA Transmission Adjustment Charge ("NTAC,") recovering NYPA Backbone Transmission System costs on a statewide basis after accounting for NYPA's revenues received from pre-existing customer transmission service contracts, a Transmission Service Charge assessed on customers in NYPA's upstate load zone and other sources.

In July 2012, the Authority filed for its first TRR increase with FERC. The Authority's filing resulted in an uncontested settlement approved by FERC for a new, $175.5 million TRR applicable to the Authority, effective Aug. 1, 2012. The increased TRR is necessary to cover increased operating and maintenance expenses of NYPA's bulk transmission system, and to make necessary capital improvements.

In January 2016, the Authority filed for a TRR formula rate with FERC. In March 2016, FERC accepted the filing and made it effective April 1, 2016, as requested, subject to hearing and settlement judge procedures. The Authority requested a formula rate to more efficiently recover its increased capital and operating expenditures needed to maintain the reliability of its transmission system.

The Authority filed an unopposed Offer of Settlement on Sept. 30, 2016 that fully resolves the issues raised by interested parties in settlement negotiations concerning the formula rate. Separately, the annual TRR under the formula of $190 million initially made effective April 1 was updated on July 1, 2016 to $198.2 million pursuant to the formula rate annual update process.

Effective July 1, 2020, the Transmission Revenue Requirement is $276.7 million, which includes the revenue requirements for the Marcy South Series Compensation and AC Transmission projects. Annual updates commensurate with projected costs are assumed to continue throughout the forecast period.

NYPA is replacing a major section of the Moses Adirondack line, one of the Authority's Backbone Transmission System lines. The Smart Path Reliability Project covers 78 circuit-miles of 230kV transmission line from Massena to the Town of Croghan in Lewis County. The project includes the replacement of obsolete wood pole structures with higher, steel pole structures, as well as replacement of failing conductors with new conductors and insulators. The line will initially operate at its current 230kV level, but the conductors and insulators will accommodate 345kV operation.

In July 2017, the Authority received authorization under the NYISO tariff to include the costs of this replacement project in its NTAC mechanism for cost recovery of transmission system costs, which means the costs will be allocated to all ratepayers in the state. On Nov. 14, 2019, the PSC granted the Authority's Article VII certificate for the project. The Authority estimates a project cost of $484 million through project completion. This Approved Budget and Four-Year Plan includes revenues and costs associated with the Moses Adirondack project.

In October 2020, the PSC adopted criteria for identifying urgently needed transmission projects to meet the renewable energy goals of the Climate Leadership and Community Protection Act. The PSC identified the Authority's proposed Northern New York Project as a high-priority project and referred it to NYPA for development and construction in accordance with the Accelerated Energy Growth and Community Benefit Act.

The Northern NY Project is a multi-faceted project that includes completion of the second phase of NYPA's 86-mile Smart Path Moses-Adirondack rebuild, rebuilding approximately 45 circuit miles of transmission eastward from Massena to the Town of Clinton, rebuilding approximately 55 circuit miles of transmission southward from Croghan to Marcy, and rebuilding and expanding several substations along the impacted transmission corridor.

The work falls largely within NYPA's existing transmission rights of way. NYPA identified the multi-pronged Northern NY Project earlier this year as work that is urgently needed to help unbottle existing renewable energy in the region. NYPA estimates it will result in significant production cost savings, emissions reductions and less transmission congestion.

The project is estimated to result in more than 1.16 million tons of carbon dioxide emissions avoided annually on a statewide basis, and an annual reduction of approximately 160 tons of nitrogen oxide emissions from downstate emissions sources. NYPA estimates the project would result in more than $447 million in annual congestion savings in Northern New York and will create hundreds of jobs in the North Country during construction. The costs and revenues associated with the Northern New York Project are included as part of this plan.

On Aug. 1, 2014, the Public Policy Transmission Planning Process administered by the NYISO invited solicitations to address the AC Transmission Public Policy Need for new transmission lines to relieve the congested Central East and UPNY/SENY transmission interfaces. In June 2018, the Authority and North America Transmission ("NAT") entered into a Participation Agreement which granted the Authority the option to secure an ownership interest of up to 37.5 percent in the projects that they jointly proposed.

In April 2019, the NYISO board selected the project proposed by LS Power Grid New York, LLC ("LS Power") (formerly known as NAT) and the Authority for Segment A (also known as the Marcy to New Scotland Upgrade Project and AC Transmission) to increase transfer capability from central to eastern New York. The project proposed by NYPA and LS Power includes the construction of more than 90 circuit-miles of new 345kV and 115kV transmission lines and two substations.

In August 2019, LS Power and the Authority submitted an Article VII application to the PSC. If the PSC authorizes the project, construction is targeted to begin early 2021. The transmission lines to be rebuilt as part of the Segment A project are expected to be energized as part of New York State's electrical system by the end of 2023.

NYPA originally funded 33 percent of the Segment A project development costs and exercised its 37.5 percent purchase option in July 2020, bringing the Authority's total estimated project costs to $276 million.

FERC authorized NYPA's recovery of a facility charge for AC Transmission project costs, adopted per a NYISO filling made on behalf of NYPA. The Authority is recovering its costs associated with Segment A of the project through its FERC-approved cost-recovery mechanisms in its TRR formula rate, which include an incentive rate of return applied to the Authority's "Construction Work in Progress" balances for the project. This Approved Budget and Four-Year Plan models estimated revenues and costs associated with the AC Transmission project.

Large-Scale Renewable Program

The CLCPA and CES Order, as modified by the PSC per the Order dated Oct. 15, 2020, requires that 70 percent of the state's electricity comes from renewable sources by 2030. In support of the CLCPA and CES goal, the Authority issued a request for proposals in July 2020 to solicit Renewable Energy Certificates ("RECs"), energy and capacity from eligible large-scale renewable projects which include wind and solar resources. The Authority expects to award project(s) with long-term agreement(s) for the purchase of RECs that will be generated from the projects.

The Authority expects to recover costs associated with the agreement(s) through sales of RECs by the Authority to the Authority's customers. The Authority anticipates that it will undertake future procurements of RECs in order to support its customers and the achievement of the Clean Energy Standard goals.

Hudson Transmission Project

In 2011, the Board of Trustees authorized NYPA to enter into an agreement with Hudson Transmission Partners, LLC ("HTP") for the purchase of capacity to meet the long-term requirements of the Authority's NYC Governmental Customers and to improve the transmission infrastructure serving New York City through the transmission rights associated with HTP's transmission line (the "Line") extending from Bergen County, N.J., in the PJM Interconnection, LLC ("PJM") transmission system, to Consolidated Edison Company of New York, Inc.'s ("Con Edison") West 49th Street substation in the NYISO.

The Authority executed a Firm Transmission Capacity Purchase Agreement ("FTCPA") with HTP under which the Authority gained the entitlement to 75 percent of the Line's 660 MW capacity, or 495 MW, for 20 years. NYPA's capacity payment obligations under the FTCPA began upon the Line's commencement of commercial operation, which occurred on June 3, 2013. Also, upon commercial operation, the FTCPA obligates the Authority to reimburse HTP for the cost of interconnection and transmission upgrades in New York and New Jersey associated with the Line and to pay for all remaining upgrade costs as they are incurred.

Such interconnection and transmission upgrades have been completed at a total cost to the Authority of $334.9 million. The Authority's obligations under the FTCPA also include payment of the Regional Transmission Enhancement Plan ("RTEP") charges allocated to HTP in accordance with the PJM tariff. RTEP costs are significant and are discussed below.

PJM's RTEP cost allocation methodology for certain upgrades, such as the Bergen-Linden Corridor ("BLC") project built by Public Service Electric & Gas Company ("PSE&G") in New Jersey, was challenged at FERC in numerous proceedings by Con Edison, the Authority, HTP and other New York parties on the grounds that PJM has disproportionately allocated the costs of those projects to those parties. These challenges are pending before the D.C. Circuit Court of Appeals.

In a separate FERC proceeding (also now before the D.C. Circuit), the Authority challenged the RTEP share of the BLC project costs allocated to HTP that were effective May 1, 2017 as a result of Con Edison's termination of its PJM firm transmission rights. The cost allocations shifted approximately $533 million in RTEP charges for the BLC project that had been previously allocated to Con Edison to HTP. Such costs are in addition to the $111 million in RTEP charges for the BLC project that had been previously allocated to HTP.

In July 2017, the Authority, together with HTP, petitioned FERC to relinquish the Firm Transmission Withdrawal Rights ("FTWRs") held by HTP on the Line. HTP's FTWRs formed the basis for the allocation of RTEP costs to HTP, which are the Authority's obligation under the FTCPA. By order dated Dec. 15, 2017, FERC granted the request, permitting HTP to relinquish its firm rights ("December 2017 Order").

When PJM's annual RTEP cost allocation update for 2018 was filed, the Authority's obligation to pay RTEP charges related to the BLC project was eliminated for 2018 and beyond. FERC denied requests for rehearing of the December 2017 Order, but the New Jersey Board of Public Utilities ("BPU") petitioned for review before the D.C. Circuit, where the case is now pending.

On Jan. 19, 2018, PJM filed tariff revisions that eliminated NYPA's cost responsibility for RTEP projects subject to annual updates (a category that included the BLC project costs) and its cost responsibility for RTEP charges that are not generally updated each year. Though challenged by the PJM transmission owners and the BPU, NYPA was allocated zero RTEP charges by PJM for 2018, 2019 and the first quarter of 2020. In March 2020, FERC partially reversed PJM's allocation determinations, which is discussed below.

On March 31, 2017, the Authority and HTP executed an amendment to the FTCPA. In exchange for the Authority extending the cure period for HTP to replace underwater cables that have been subject to failure and which have resulted in the line being out of service, under the amended FTCPA the Authority received HTP's assurances to pursue certain remedies at FERC concerning the termination of the 320 MW of FTWRs in order to eliminate RTEP assessments and a guarantee that if PJM RTEP assessments cannot be eliminated despite HTP's efforts to terminate the FTWRs, that HTP will cancel its interconnection service agreement ("ISA") to physically disconnect the Line from the PJM transmission system, causing termination of all RTEP allocations.

The December 2017 Order and resulting PJM allocations have fulfilled the goal of eliminating the RTEP assessments associated with the BLC project (though subject to further legal processes as described above). In addition, the Authority and HTP agreed to: (a) based upon RTEP costs already paid, increase, by $40 million, the size of the tracking account that is used to offset the cost to purchase the line at the end of the FTCPA term, at the Authority's option, and (b) shared rights to direct power on the line in the opposite direction of its current flow should market conditions present revenue opportunities for selling capacity and energy from New York to New Jersey.

In November 2017, HTP completed the cable replacement and, pursuant to the March 31, 2017 amendments, the Authority increased the leased portion of the line's capacity from 75 percent to 87.12 percent, bringing the total leased capacity from 495 MW to 575 MW at a monthly capacity charge rate that represents a decrease in the unit price (on a $/MW-month basis) paid to HTP in the original FTCPA.

In 2020, FERC partially reversed PJM's January 2018 RTEP allocations over the Authority's objections. FERC determined that PJM's tariff did not permit the cancellation of RTEP cost responsibility for certain RTEP projects allocated using the older violations-based DFAX ("VBDFAX") methodology, which in this case applied to certain lower voltage RTEP facilities approved by PJM prior to February 2013.

FERC did not disturb PJM's decision to eliminate the Authority's RTEP responsibility for the BLC project, determining that the relinquishment of HTP's FTWRs eliminated any cost responsibility for RTEP projects allocated under the solutions-based DFAX method, which applied to projects (including BLC) approved February 2013 or later. But for RTEP projects allocated under VBDFAX, FERC determined the elimination of FTWRs did not alter cost responsibility, and said those RTEP costs had to be reinstated.

In May 2020, PJM informed NYPA that, pursuant to the FERC order, it intended to bill NYPA for the back charges for 2018, 2019 and the first half of 2020 starting in September 2020. PJM's RTEP charges total approximately $33 million through the end of 2020, and RTEP charges related to these projects will continue.

NYPA/HTP sought a rehearing of the FERC order, which was denied, but an appeal is pending in the D.C. Circuit Court of Appeals. NYPA and HTP assert the sacrifice of their firm rights and use of only non-firm rights over the HTP facility made PJM initially correct in refusing to assign any further RTEP to NYPA and that the reinstatement of those VBDFAX RTEP charges is contrary to the PJM tariff. A successful appeal would enable NYPA to receive refunds for the RTEP payments made for 2018 and beyond and disallow any future RTEP allocations to NYPA.

It is estimated that the revenues derived from NYPA's rights under the FTCPA will not be sufficient to cover the Authority's costs during the 20-year term of the FTCPA.

From June 2013 through August 2020, the Authority has paid approximately $106 million in PJM RTEP charges for the line. As noted above, the reinstatement of PJM RTEP charges for 2018/2019/2020 will result in NYPA incurring approximately $33 million in PJM RTEP charges for 2020. In addition, the Authority will accrue approximately $1.1 million per month effective 2021 through the term of the agreement which ends in 2033.

In August 2020, the Authority estimated its net cost per this order will be an additional $13 million per year for 2021 through 2033 and HTP inclusive of this amount is now estimated to be approximately $100 million per year net cost. These net cost estimates were based on projections of the capacity payment obligations, the costs of interconnection and transmission upgrades, and energy revenues.

Purchased Power Expenses

Capacity, energy and ancillary service purchases made on behalf of customers (except for those made through previously approved purchased power agreements) are assumed to be transacted at the market clearing price in the wholesale market. For purposes of developing this Approved Budget and Four-Year Plan, projected energy rates are based on published forward price curves, while capacity rates are based on internally developed capacity curves using external pricing sources such as broker quotes and trading platforms.

Fuel Expenses

Fossil-fuel purchases in this Approved Budget and Four-Year Plan are based on expected net generation levels determined with an economic dispatch model for the Authority's plants and on available forward fuel price curves. Fuel expenses also include the costs associated with emission credit requirements under the Regional Greenhouse Gas Initiative ("RGGI.") RGGI requires the Authority to buy emission credits for its fossil-fuel plants, and the Authority also purchases such credits for the contracted Astoria Energy II plant. The projections for RGGI costs are based on projected emission rates and forecasted consumption of natural gas and oil, with such costs recovered either through specific customer contract pass-through provisions or from the wholesale market.

Wheeling Expenses

Wheeling (i.e., the transmission and/or delivery of power and energy to customers over the lines of a third party) expenses are based on contractual and/or tariff rates of the service provider and are recovered through pass-through provisions in customer contracts.

Canal Corporation

Effective Jan. 1, 2017, the Canal Corporation became a subsidiary of the Authority, and the Authority assumed certain powers and duties relating to the Canal System to be exercised through the Canal Corporation.

The Canal Corporation operates at a loss and is expected to require substantial operating and maintenance support and capital investment. The Canal Corporation's expenses are expected to be funded by transfers of funds from the Authority. Any transfer of funds would be subject to approval by the Authority's Board of Trustees and compliance with the Authority's General Resolution Authorizing Revenue Obligations, as amended and supplemented. Certain expenses eligible for reimbursement are expected to be reimbursed to the Authority by moneys held in the Canal Development Fund maintained by the State Comptroller and the Commissioner of Taxation and Finance.

Given the age of the Canal System, the Authority expects significant maintenance and capital investments will be required to assure the Canal System's continuing operation. The Authority's budget and financial plan for 2021-2024 includes Canal-related operating expenditures of approximately $80-$90 million per year and capital expenditures of approximately $40 million per year. The Authority will continue to evaluate the condition of the Canal System and expects to allocate additional funding if deemed necessary through its annual budgeting process or reduce funding if efficiencies are found.

Reimagine the Canals Initiative

On Jan. 29, 2020, the Board of Trustees authorized an investment of up to $300 million over five years for the Reimagine the Canals Initiative ("Reimagine the Canals") and approved $30 million to fund Reimagine the Canals in 2020. Reimagine the Canals encompasses three prongs: (1) $100 million of funding for economic development projects in communities along the Canal System, (2) $65 million of funding for projects that will help prevent ice jams and related flooding, and (3) $135 million of funding for projects related to mitigation of drought impacts on agriculture, expansion of fishing opportunities, flood mitigation, invasive species prevention and ecosystem restoration.

AGILe

The Authority, in collaboration with the State utilities, NYSERDA and NYISO, developed the Advanced Grid Innovation Laboratory for Energy ("AGILe") to create tools to better monitor, control, accommodate and respond to the evolving energy sector. On July 25, 2017, the Board of Trustees authorized capital expenditures of $20 million for the initial phase of AGILe, which has since commenced.

Costs to the Authority are not expected to exceed $50 million through final buildout of the facility. Upon completion, operating and maintenance costs are expected to be shared among AGILe participants. As of June 30, 2020, approximately $4.9 million has been spent.

Electric Vehicle Acceleration Initiative

In May 2018, the Authority's Board of Trustees approved an allocation of up to $250 million to be used through 2025 for an electric vehicle acceleration initiative called EVolve NY and authorized $40 million for the first phase of the initiative. The Authority will own and operate a charging network of 800 DC fast chargers across the state, the first of which became operational in September 2020. As of June 30, 2020, approximately $3 million has been spent.

Investment Income

Investment of the Authority's funds is administered in accordance with the applicable provisions of the Bond Resolution and with the Authority's investment guidelines. These guidelines comply with the New York State Comptroller's investment guidelines for public authorities and were adopted pursuant to Section 2925 of the New York Public Authorities Law.

The Authority's investments include, but are not limited to (a) collateralized certificates of deposit, (b) direct obligations of or obligations guaranteed by the United States of America or the State of New York, (c) obligations issued or guaranteed by certain specified federal agencies and any agency controlled by or supervised by and acting as an instrumentality of the United States government, and (d) obligations of any state or any political subdivision thereof or any agency, instrumentality or local government unit of any such state or political subdivision which is rated in any of the three highest long-term rating categories, or the highest short-term rating category, by nationally recognized rating agencies.

The Authority's investments in the debt securities of Federal Home Loan Bank rated Aaa by Moody's Investors Services and AA+ by Standard & Poor's; Federal National Mortgage Association, Federal Farm Credit Bank and Federal Home Loan Mortgage Corp. were rated Aaa by Moody's Investors Services, AAA by Fitch Ratings, and AA+ by Standard & Poor's. All of the Authority's investments in U.S. debt instruments are issued or explicitly guaranteed by the United States government.

As part of its Series 2020 financing, NYPA raised over $1.2 billion, the proceeds of which these 2020 Bonds will be used, together with other available funds, to finance capital expenditures related to the Authority's transmission assets and other capital projects, including reimbursement for prior capital spending, defease to maturity, or call for redemption prior to maturity, a portion of the Authority's Series 2011 A Revenue Bonds, refund a portion of the CP Notes which have been or are being issued to refund certain outstanding Bonds, pay capitalized interest, and pay the costs of issuance of the 2020 Bonds.

Certain proceeds of the 2020 Bonds will be used to reimburse the Authority for capital expenditures. The remaining proceeds from the transaction were used to bolster NYPA's liquidity and restructure near-term debt service, while supporting NYPA's clean energy goals.

In addition to the green aspects of the transaction, the financing was structured to match debt service to the lifespan of the utility's assets, including restructuring existing obligations. The transaction locked in the lowest interest rate in NYPA's history.

Summary of the 2020 Transaction: Summary Information

BOND TYPE	**2020A**	**2020B (Taxable)**
Bond Ratings (M/S/F)*:	**Aa2** (Stable) / **AA** (Stable) / **AA** (Stable)	
Par Amount	$1,120,610,000	$114,020,000
Green Bonds:	**$791,620,000**	-
All-in Total Interest Cost	3.63%	2.87%
Amortization	2039 – 2060	2034 – 2039
Average Life	31.5 years	17.2 years

** Current rating at the time of this Approved Budget and Four-Year Plan*

Operations and Maintenance Expenses

NYPA's O&M plan for 2021-2024 is as follows:

Operations and Maintenance Forecast by Cost Element

(In $ Millions)

NYPA	2021	2022	2023	2024
Payroll:				
Regular Pay	$243.8	$250.1	$256.6	$263.3
Overtime	12.5	12.8	13.2	13.6
Other Payroll	6.1	6.2	6.3	6.4
Total Payroll	**262.4**	**269.1**	**276.1**	**283.3**
Benefits:				
Employee Benefits	49.3	50.5	51.8	53.0
Pension	31.8	32.6	33.5	34.3
OPEB	15.0	14.9	14.7	14.6
FICA	18.0	18.5	18.9	19.4
Total Benefits:	**114.1**	**116.5**	**118.9**	**121.3**
Materials/Supplies	**28.0**	**27.5**	**27.4**	**28.1**
Fees	**10.5**	**10.8**	**11.1**	**11.4**
Office & Station	**28.9**	**29.2**	**29.7**	**30.5**
Maintenance Repair & Service Contracts	**141.6**	**158.5**	**160.5**	**165.3**
Consultants	**48.6**	**48.9**	**49.6**	**51.0**
Charges to:				
Outside Agencies	19.0	19.6	20.2	20.6
Capital Programs	(58.4)	(59.9)	(61.4)	(63.0)
Total Charges:	**(39.4)**	**(40.3)**	**(41.3)**	**(42.4)**
Research & Development	**13.2**	**13.2**	**13.2**	**13.2**
Total NYPA O&M:	**$607.9**	**$633.3**	**$645.1**	**$661.8**

Detailed breakout of 2021 O&M by Facility

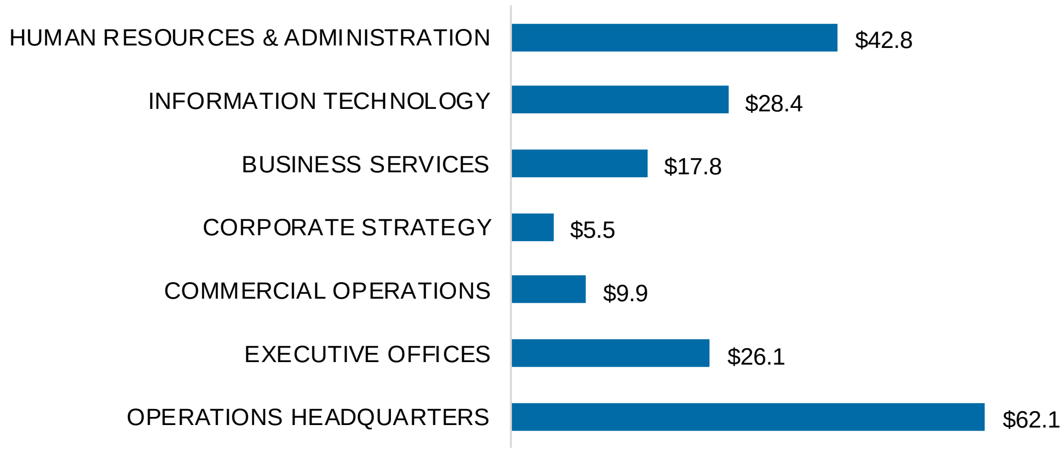
Profit Center	Site O&M	HQ	R&D	Total O&M
Niagara	$64.5	$52.0	$3.6	$120.1
St. Lawrence	31.9	27.8	1.9	61.6
Blenheim-Gilboa	20.4	19.5	1.3	41.2
Small Clean Power Plants	22.6	3.9	0.3	26.8
Flynn	8.3	6.4	0.4	15.1
Small Hydro	9.3	5.7	0.4	15.4
Zeltmann	32.2	17.5	1.2	50.9
Recharge NY	2.6	2.1	0.1	4.8
SENY	26.3	5.9	0.4	32.6
Transmission	55.4	51.7	3.5	110.6
Total Sites, HQ and R&D	**$273.4**	**$192.6**	**$13.2**	**$479.2**

Other O&M Categories	
CES	$22.3
NYEM	$7.3
Nonchargeable Profit Centers*	$7.5
Total NYPA O&M	**$516.4**
Total Canals O&M	**$91.6**

**Nonchargeable profit centers include: Green Power Supply, Reimagine Canals, EV Charging Stations, Large Energy Storage, Large Scale Renewable*

Further breakout of NYPA 2021 headquarters expenses

NYPA Total Headquarters - $192.6M
(Corporate & Operations Headquarters)



Depreciation and Amortization Expenses

Depreciation of capital assets is generally provided on a straight-line basis over the estimated lives of the various classes of capital assets. The related depreciation provisions on Dec. 31, 2019 expressed as a percentage of average depreciable capital assets was 2.6 percent.

Other Expenses

The Other Expenses category largely reflects various accruals and other miscellaneous expenses (e.g., payments to the NNYED and WNY funds,) some of which require Board of Trustee authorization on a case-by-case basis.

(d) Self–Assessment of Budgetary Risks

Set forth below is a summary of key risks associated with the Authority's assets and operations. The following discussion of risks is intended only as a summary and does not purport to identify all of the risk factors that may affect the Authority's assets and operations. Any one or more of the factors discussed and others could adversely affect the Authority's operations, assets, revenues and expenses to an extent that cannot be determined at this time.

Our business units represent the first line of defense in identifying and mitigating risk within each of their verticals. This is complemented by a robust, ongoing assessment process, overseen by the Authority's Risk group and through legal review.

During the annual budgeting process, the Financial Planning team is responsible for consolidating information received from various departments at NYPA that are inputs into our financial forecast. The team actively engages and challenges all assumptions as we work toward representing the most likely future financial outcome. Additionally, the Board of Trustees authorized an enterprise-wide risk management program and through an established Risk Management group supports the business with the identification, assessment, mitigation and monitoring of risks.

Enterprise Level Risks

Regulatory Environment Risks

On Aug. 1, 2016, the PSC issued an order establishing a Clean Energy Standard (the "CES Order") to implement the clean energy goals of the State Energy Plan. Pursuant to the CES Order, load-serving entities identified in the order are required to purchase ZECs from NYSERDA to support the preservation of existing at-risk zero-emissions nuclear generation. The Authority is not subject to NYPSC jurisdiction for purposes of the CES Order but has assumed an obligation to purchase ZECs consistent with the terms of the CES Order and intends to seek recovery of such costs from the Authority's customers.

On Jan. 31, 2017, the Board of Trustees authorized (a) participation in the NYPSC's ZEC program and (b) execution of an agreement with NYSERDA to purchase ZECs associated with the Authority's applicable share of energy sales. On April 1, 2020, the Authority and NYSERDA executed an agreement under which the Authority committed to purchase ZECs in a quantity based on its proportional load in the New York control area. The agreement is in effect until April 1, 2029.

As of August 2020, the Authority estimates that it will incur ZEC purchase costs associated with participation in the ZEC program of approximately $268.5 million in aggregate over the 2020-2023 period, of which approximately $14.4 million is not expected to be recovered under customer contracts that predate the adoption of the CES Order. As of June 30, 2020, the Authority has paid $167.5 million in ZEC purchase costs.

The Regional Greenhouse Gas Initiative is a cooperative effort by Northeastern and Mid-Atlantic states, including New York, to reduce carbon dioxide emission levels. Participating states have established a regional carbon dioxide emissions cap from the power sector (fossil fuel-fired power plants 25 MW or greater).

The emissions cap reduces by 2.5 percent annually until 2020. Central to this initiative is the implementation of a multi-state cap-and-trade program with a market-based emissions trading system. The program requires electricity generators to hold carbon dioxide allowances in a compliance account in a quantity that matches their total emissions of carbon dioxide for the compliance period.

The Authority's Flynn and Zeltmann plants, and the SCPPs, as well as Astoria Energy II, are subject to RGGI requirements. NYPA has participated in program auctions to acquire carbon dioxide allowances, which the Authority requires to cover operation of its fossil-fueled power plants and the Astoria Energy II plant and expects to recover RGGI costs through its power sales revenues. The number of allowances offered in the auction by RGGI cap and trade program was reduced from allowances covering 165 million tons of carbon dioxide emissions in 2013 to 60.3 million tons in 2018 and will decline by 2.5 percent each year through 2020.

On Dec. 19, 2017, the RGGI states released an updated Model Rule that includes a further decline of 2.275 million tons each year beginning in 2021, resulting in an additional 30 percent regional cap reduction between 2020 and 2030. The Authority is monitoring federal legislation and proposed programs that would impact RGGI.

On June 19, 2019, the United States Environmental Protection Agency ("EPA") released its final Affordable Clean Energy ("ACE") rule. This rule replaces the Clean Power Plan ("CPP") rule. The ACE rule established guidelines for states, including New York, to use for carbon dioxide emissions from coal-fired plants and other regulations for implementation of the Clean Air Act Section 111 (d) for existing power plants.

The CPP Rule was stayed by the U.S. Supreme Court on Feb. 9, 2016 pending disposition of petitions for review before the U.S. Court of Appeals for the District of Columbia Circuit. Thereafter, the D.C. Circuit Court granted EPA's motion to suspend cases challenging the CPP Rule, which the EPA has now rescinded and replaced, and is likely moot pending the D.C. Circuit Court formally ending the litigation.

On Aug. 13, 2019, 22 states, including New York, and seven local governments filed a petition with the U.S. Court of Appeals for the D.C. Circuit challenging the ACE rule (on Aug. 14, 2019, a coalition of health and environmental groups followed suit by filing a petition challenging ACE). On July 18, 2019, Gov. Andrew M. Cuomo signed CLCPA, which sets a goal of net-zero carbon emissions for the entire state, not limited to the energy sector, by 2050 (85 percent reduction of greenhouse gas emissions from 1990 levels and implement measures to offset the remainder), with a requirement for 70 percent of the state's electricity to be from renewable sources by 2030 (see discussion in "New Legislation Affecting the Authority"). The Authority continues to monitor developments in this area.

During 2011, the EPA issued a series of rulings to establish the Cross-State Air Pollution Rule ("CSAPR,") which was updated in 2016. CSAPR establishes emission allowance budgets for sulfur dioxide and nitrogen oxides for eastern states, including New York, and requires power plants in those states to hold allowances to cover their emissions. Certain trading of allowances is authorized under the CSAPR.

In July 2018, a proposed determination published by the EPA found that the 2016 CSAPR Update to the National Ambient Air Quality Standards ("NAAQS") was sufficient to address the good neighbor provisions of the Clean Air Act, and that no further rulemaking is required to address out-of-state emissions, as additional upwind reductions are not required to meet the 2008 ozone NAAQS. The U.S. Court of Appeals for the D.C. Circuit has not yet decided the legality of the CSAPR 2016 update (oral arguments were heard by the Court in October 2018). NYPA continues to operate its fossil-fueled plants within the allocated allowances and anticipates that operation of its fossil-fueled plants will not be impacted by CSAPR.

Congressional, state and regulatory action for the increased regulation of air, water and contaminants is periodically considered, and there are potential legislative and regulatory proposals which may affect the electric utility industry, including the Authority. The impact on the Authority's operations of any such proposals is not predictable or quantifiable.

On July 18, 2019, the state enacted CLCPA as Chapter 106 of the Laws of 2019 ("Chapter 106"). The date upon which most provisions of Chapter 106 will become effective will depend on the date that related legislation becomes effective.

Several provisions of Chapter 106 could potentially impact the Authority's business and operations, such as the following: (1) provisions authorizing the state Department of Environmental Conservation to promulgate regulations establishing limits on statewide greenhouse gas emissions and to ensure compliance with such limits; (2) a requirement that specified state entities, including the Authority, adopt regulations to contribute to achieving statewide GHG emissions; (3) a requirement that state entities, including the Authority, assess and implement strategies to reduce GHG emissions; (4) consideration of whether actions that the Authority would undertake in the course of its operations are consistent with state GHG emission limits that will be established pursuant the enactment; and (5) potential allocation or realignment of resources to support the state's clean energy and energy efficiency goals for disadvantaged communities.

Many of the provisions of Chapter 106 that could impact the Authority are not likely to be implemented for years, based on deadlines established in the enactment. Therefore, the Authority cannot evaluate the impact of any particular provision of Chapter 106 on the Authority's business and operations.

The Authority has flexible rate-setting authority for many of its power sales agreements with customers; however, due to FERC's jurisdiction over the Authority's transmission revenue requirement, NYPA's transmission cost recovery must adhere to FERC standards. In 2017, the Authority filed for a formula rate annual TRR consistent with those standards. The formula rate annual TRR is incorporated into the NYISO Open Access Transmission Tariff ("OATT"). This Approved Budget and Four-Year Plan assumes full recovery of eligible future costs under the provisions of the NYISO OATT.

Legislative Environment Risks

Legislative enactments have called for NYPA to subsidize business customers and the state's general fund. Legislation enacted into law, as part of the 2000-2001 state budget, as amended up to the present time, has authorized the Authority -- as deemed feasible and advisable by the Board of Trustees -- to make a series of voluntary contributions into the state treasury.

In the past, the Authority has, from time to time, made voluntary contributions or payments to the state or as otherwise authorized by legislation. Such payments were authorized by legislation and have been conditional upon the Board of Trustees' determination that such payments are "feasible and advisable." Any such contribution or transfer of funds must (i) be authorized by law (typically, legislation enacted in connection with the state budget), and (ii) satisfy the requirements of the Bond Resolution.

The Bond Resolution requirements to withdraw money "free and clear of the lien and pledge created by the (Bond) Resolution" are as follows: (1) such withdrawal must be for a "lawful corporate purpose as determined by the Authority," and (2) the Authority must determine "taking into account, among other considerations, anticipated future receipt of Revenues or other moneys constituting part of the Trust Estate, that the funds to be so withdrawn are not needed" for (a) payment of reasonable and necessary operating expenses, (b) an Operating Fund reserve for working capital, emergency repairs or replacements, major renewals, or for retirement from service, decommissioning or disposal of facilities, (c) payment of, or accumulation of a reserve for payment of, interest and principal on senior debt, or (d) payment of interest and principal on subordinate debt.

In May 2011, the Board of Trustees adopted a policy statement (Policy Statement) which relates to, among other things, voluntary contributions, transfers or other payments to the state by the Authority after that date. The Policy Statement provides, among other things, that in deciding whether to make such contributions, transfers or payments, NYPA shall use as a reference point the maintenance of a debt service coverage ratio of at least 2.0 (this reference point should not be interpreted as a covenant to maintain any particular coverage ratio), in addition to making the other determinations required by the Bond Resolution. The Policy Statement may at any time be modified or eliminated at the discretion of the Board of Trustees.

The 2020-2021 Enacted State Budget contains a provision authorizing the Authority as deemed "feasible and advisable by its trustees" to transfer to the state treasury to the credit of the general fund $20 million for the state fiscal year commencing April 1, 2020, the proceeds of which will be utilized to support energy-related state activities. This amount will be accrued by Dec. 31, 2020 but is not expected to be paid by that date.

The Authority cannot predict what additional contributions to the state may be authorized. The Board of Trustees' decision as to whether and to what extent such payments are feasible and advisable will be made based on the exercise of its fiduciary responsibilities and in light of the requirements of the Authority's Bond Resolution, other legal requirements and all the facts and circumstances known to the board at the time of the decision.

In addition to the authorization for the voluntary contributions, as a result of budget legislation enacted in February 2009, the Authority was asked to make certain temporary asset transfers to the state of funds held in reserves. Pursuant to the terms of a Memorandum of Understanding dated February 2009 (the "MOU") between the state, acting by and through the state's director of Budget, and the Authority, NYPA transferred $215 million associated with its Spent Nuclear Fuel Reserves ("Asset B") in March 2009 and $103 million of funds set aside for future construction projects ("Asset A") in September 2009.

NYPA subsequently executed amendments to the MOU in 2014 and 2017 that extended the return date for the Asset A and Asset B, respectively, and provided for their return in installments over several years, subject to annual appropriation by the state Legislature. The Authority received cumulative payments of $103 million with respect to Asset

A through 2018. As of June 30, 2020, NYPA has received cumulative payments of $86 million on Asset B. Pursuant to the amended MOU, the remaining payments on Asset B of $129 million are to be made by the state from 2020-2024, subject to annual appropriation by the state Legislature.

Both temporary transfers were authorized by the Board of Trustees and made in 2009.

In lieu of interest payments, the state waived certain future payments from the Authority to the state, including payments to which the state was entitled, pursuant to Public Authorities Law §2975, under a governmental cost recovery process for the costs of central governmental services.

On April 24, 2014, NYPA and the state executed an Amendment to the MOU which provides that the state shall, subject to appropriation by the state Legislature, return the $103 million (Asset A) in five annual installments through state Fiscal Year 2018-2019. As of Sept. 30, 2018, the Authority has received all installment payments, totaling $103 million on Asset A.

The Authority and the state executed a Second Amendment to the MOU, dated as of June 30, 2017, that provides for the return to the Authority of the $215 million (Asset B) in the following amounts and by no later than Sept. 30 of each of the following state fiscal years: (1) $22 million for 2017-18, (2) $21 million for 2018-19, (3) $43 million for 2019-20, (4) $43 million for 2020-21, (5) $43 million for 2021-22, and (6) $43 million for 2022-23.

The obligation of the state to return the money transferred by the Authority to the state is subject to annual appropriation by the state Legislature. As of Oct. 1, 2019, NYPA has received installment payments of $86 million on Asset B. In the Second Amendment to the MOU, the Authority and the state also agreed to enter into alternative cost recovery agreements for each of state Fiscal Year 2017-18 through state Fiscal Year 2022-23 that the asset transfers have not been fully returned to the Authority.

The alternative cost recovery agreements would relieve NYPA of any obligation to make up to $5 million in cost recovery assessment payments to the state in each year. If the cost recovery assessment pursuant to Public Authorities Law §2975 for a given year exceeds $5 million, the assessment due from the Authority would be limited to the difference between the assessment and $5 million. This Approved Budget and Four-Year Plan assumes no such assessments during the 2021-2024 forecast period.

Section 1011 of the Power Authority Act ("Act") constitutes a pledge of the state to holders of Authority obligations not to limit or alter the rights vested in the Authority by the Act until such obligations together with the interest thereon are fully met and discharged or unless adequate provision is made by law for the protection of the holders thereof. Several bills have been introduced into the state Legislature, some of which propose to limit or restrict the powers, rights and exemption from regulation which the Authority possesses under the Act and other applicable law, or otherwise would affect the Authority's financial condition or its ability to conduct its business, activities, or operations, in the manner presently conducted or contemplated by the Authority.

It is not possible to predict whether any of such bills or other bills of a similar type which may be introduced will be enacted. In addition, from time to time, legislation is enacted into New York State law that purports to impose financial and other obligations on the Authority, either individually or along with other public authorities or governmental entities. The applicability of such provisions to NYPA would depend upon, among other things, the nature of the obligations imposed and the applicability of the pledge of the state set forth in Section 1011 of the Act to such provisions. There can be no assurance that NYPA will be immune from the financial obligations imposed by any such provision.

Actions taken by the state Legislature or the Executive Branch to cause voluntary contributions or other obligation upon the Authority and which attempt to constrain the discretion of or bypass the Board of Trustees could negatively affect net income and possibly harm the Authority's credit ratings.

Hydropower Generation Risk

The Authority's net income is highly dependent upon generation levels at its Niagara and St. Lawrence-FDR power projects. The generation levels are a function of the hydrological conditions prevailing on the Great Lakes; primarily, Lake Erie (Niagara Project) and Lake Ontario (St. Lawrence-FDR Project). Long-term generation level at the two projects is approximately 20.3 terawatt-hours ("TWH") annually. NYPA's hydroelectric generation forecast is 24.5 TWH in 2021, 24.0 TWH in 2022, 23.7 TWH in 2023, and 23.6 TWH in 2024.

Environmental/external factors (e.g., climate change, flooding, ice, storm frequency and duration) can cause hydrological conditions to vary considerably from year to year. Hydropower generation may also face risks due to transmission line constraints within the region (e.g., spilling extra hydro power flow; high transmission prices) and increased competitiveness of other types of renewable generation.

NYPA conducted high and low hydroelectric generation sensitivities for 2021-2024 that estimated the potential net income that could result over a reasonable range of hydroelectric generation occurrences. The sensitivities were calculated only for merchant generation, as merchant revenues has significant impact on Authority's net income. The effects on estimated net income, assuming all other factors remain unchanged, were as follows:

	Low Generation		High Generation	
Year	Net Merchant Hydroelectric Generation	NYPA Net Income Change	Net Merchant Hydroelectric Generation	NYPA Net Income Change
	(In TWH)	*(In $ Millions)*	*(In TWH)*	*(In $ Millions)*
2021	7.6	($14.9)	9.2	$13.2
2022	6.8	($26.6)	9.1	$24.5
2023	6.4	($38.9)	9.1	$28.3
2024	5.9	($54.9)	8.3	$43.6

Sustained Margin Reduction and Commodity Market Volatility Risk

Through its participation in the NYISO and other commodity markets, NYPA is subject to electric energy price, fuel price and electric capacity price risks that impact the revenue and purchased power streams of its facilities and customer market areas. Volatility can have detrimental effects on NYPA's financial condition.

To moderate cost impacts to its customers and itself, NYPA, at times, hedges market risks via the use of financial instruments and physical contracts. Hedges mitigate the cost of energy or related products needed; to mitigate risk related to the price of energy and related products sold by NYPA; to mitigate risk related to electric margins (electric sales versus fuel use) where NYPA owns generation or other capacity; and mitigation of geographic cost differentials of energy procured or sold for transmission or transportation to an ultimate location.

Hedges effectuated on behalf of NYPA's customers are passed through, at cost, as provided for in customer contracts. Commodities able to be hedged include, but are not limited to, natural gas, natural gas basis, electric energy, electric capacity and congestion costs associated with the transmission of electricity.

On July 21, 2010, President Barack Obama signed into law the Dodd-Frank Wall Street Reform and Consumer Protection Act ("DF Act") which addresses, among other things, interest rate and energy related commodity swap transactions of the type in which NYPA engages. The requirements and processes are set forth in regulations promulgated by the Commodities Futures Trading Commission ("CFTC"). Pursuant to CFTC rules, the Authority, as a public entity and electric utility which uses swaps solely to manage its risk, is exempted from posting collateral beyond that of any existing credit support annexes in support of its open over-the-counter hedge positions.

These CFTC rules are not anticipated to have significant impact on NYPA's liquidity and/or future risk mitigation activities. CFTC DF Act rules are still being promulgated, and the Authority will continue to monitor their potential impact on its liquidity and/or future risk mitigation activities.

Disruptive Innovation and Customer Energy Choices

Transformative technologies and customer empowerment create uncertainty for the Authority and the electric utility industry that can produce new business opportunities or reduced demand for electric energy. Through its Strategic Planning and Risk Management processes, NYPA regularly evaluates its mission, objectives and customer needs, and seeks to appropriately position itself to effectively meet the challenges of the transforming electric industry. This is done through initiatives such as a long-term asset management strategy and a suite of customer solutions, including new/modified product offerings. The impact on NYPA's operations of any such industry transformation is not predictable or quantifiable.

Attract and Retain a Qualified Workforce

Like many other industries, the power and utility sector is seeing increased competition for, and a general shortage of, talent in high-skilled areas. This is expected to continue and be further impacted by transformations in the industry where new technologies are being developed and deployed.

The Authority recognizes the uncertainty with being able to attract and retain the skills and competencies needed to meet objectives. NYPA regularly evaluates and positions its recruiting, talent development and benefits programs accordingly, through its workforce planning strategic initiative and other ongoing efforts.

Cyber Security

The federal government recognizes the electric utility industry as critical infrastructure and works closely with the industry to ensure awareness of ongoing threats and that appropriate protections are in place against physical and cyber attacks. NYPA constantly assesses the nature of these risks and adjusts its resources to best anticipate and respond to any threats.

With more than 1,400 circuit-miles of high voltage transmission lines and 16 power generation facilities across New York State, NYPA recognizes the critical nature of its assets. Investments to harden physical and cyber assets, and their related infrastructure, are continually needed to minimize potential adverse impacts to the bulk electric system, detect and deter sabotage attempts, and protect the Authority and customer information. NYPA further mitigates its cyber risk through the purchase of insurance.

Business Continuity

A catastrophic natural event such as severe weather, flooding or an earthquake can negatively affect the operations of Authority assets and the bulk electric system. NYPA regularly evaluates the resiliency of its assets. In addition, the Authority has implemented disaster planning programs relating to Emergency Management, Disaster Recovery and Business Continuity. These plans are based on the specific, unique natural threats at each of its generation facilities.

The Authority regularly conducts drills and exercises to ensure advance preparation for these types of events. NYPA maintains close working relationships with local first responders and government agencies to ensure its ongoing preparedness.

An outbreak of disease or similar public health threat, such as the COVID-19 pandemic, or fear of such an event, could have an adverse impact on the Authority's financial condition and operating results.

Canal Corporation

The Authority has identified key risk areas relating to the Canal Corporation and continues to employ and assess risk mitigation options across multiple enterprise risk fronts to manage or reduce potential exposures. As part of the ongoing Canals management strategy, the Authority will adjust and allocate resources accordingly.

COVID-19

The COVID-19 pandemic changed societal and business operation norms and impacted the risk profiles of organizations globally. Despite the uncertainty associated with COVID-19 (i.e. vaccine development, treatment advancements, phase 2 and 3 infection waves) NYPA is mitigating its risk through proactive and robust pandemic responses plans. The Authority is well positioned to address future pandemic and business concerns by employing mitigation strategies such as an Incident Command System, Business Continuity Plans, and Return to Work procedural and physical modifications.

Critical Infrastructure

NYPA is exposed to potential critical infrastructure failure that may lead to service disruption, injury and/or degradation of system reliability, all of which could impact financial results. The Authority engages in several activities to mitigate these risks, including ISO 55001 Asset Management certification, the purchase of insurance, redundancy of major equipment, capital investments and a robust operations maintenance program.

Workforce Health and Safety

NYPA is exposed to a variety of health and safety risks. The health and safety of NYPA's workforce, customers, contractors and the citizens of New York State are of the highest priority to the Authority. NYPA has multiple levels of controls, policies, procedures and training programs in place to reduce and/or eliminate health and safety incidents.

Litigation Risk

St. Regis Litigation

In 1982 and 1989, several groups of Mohawk Indians, including a Canadian Mohawk tribe, filed lawsuits (the St. Regis litigation) against the state, the state's governor, St. Lawrence and Franklin counties, the St. Lawrence Seaway Development Corporation, the Authority and others. The plaintiffs claimed ownership of certain lands in St. Lawrence and Franklin counties and to Barnhart, Long Sault and Croil islands. The islands are within NYPA's St. Lawrence-FDR Power Project and Barnhart Island is the location of significant NYPA facilities. Settlement discussions were held periodically between 1992 and 1998. In 1998, the federal government intervened on behalf of all Mohawk plaintiffs.

The parties agreed to a land claim settlement, dated Feb. 1, 2005, which, if implemented, would have included the payment by the Authority of $2 million a year for 35 years to the tribal plaintiffs and the provision of up to 9 MW of low-cost NYPA power for use on the reservation. The legislation required to effectuate the settlement was not enacted and the litigation continued.

In 2013, all claims against NYPA were dismissed and the lawsuit against the Authority was concluded. On May 28, 2014, New York State, the St. Regis Mohawk Tribe, St. Lawrence County and the Authority executed a Memorandum of Understanding ("St. Regis MOU") that outlined a framework for the possible settlement of all the St. Regis land claims.

In the St. Regis MOU, the Authority endorses a negotiated settlement that, among other terms and conditions, would require NYPA to pay the tribe $2 million a year for 35 years and provide up to 9 MW of its hydropower at preference power rates to serve the needs of the tribe's reservation. The St. Regis MOU would require an Act of Congress to forever extinguish all Mohawk land claims prior to such a settlement becoming effective.

Any settlement agreement, including the terms endorsed in the St. Regis MOU, would in the first instance need to be negotiated and agreed upon by all parties to the St. Regis litigation, including parties that did not execute the St. Regis MOU, such as the two other Mohawk groups, the federal government and Franklin County. In addition, before any settlement becomes effective and NYPA would be obligated to make any payments contemplated by the St. Regis MOU, federal and state legislation must be enacted which approves the settlement and extinguishes all Mohawk land claims. NYPA is continuing settlement discussions with some of the parties to the St. Regis litigation.

Long Island Sound Cable Project

In January 2014, one of the Long Island Sound Cable Project's underwater cables was severely impacted by an anchor and/or anchor chain dropped by one or more vessels, causing the entire electrical circuit to fail and the circuit breaker to trip. Dielectric fluid was released into Long Island Sound.

On Dec. 31, 2019 and Dec. 31, 2018, the consolidated statements of net position includes approximately $19 million and $18 million, respectively, in other long-term assets, reflecting the cost of damages net of insurance recoveries. The Authority believes it can recover the full amount of its damages through legal proceedings, insurance coverage and contractual obligations.

Helicopter Incident Near the Authority's Transmission Lines in Beekmantown, New York

In April 2014, NYPA contracted with Northline Utilities, LLC ("Northline") to install fiber optic ground wire along the Authority's transmission system. Thereafter, Northline engaged Catalyst Aviation, LLC ("Catalyst") to provide helicopter services. On Oct. 30, 2018, a Catalyst helicopter was destroyed when it collided with a wooden utility pole and power lines near Beekmantown, N.Y. Some members of the helicopter crew were injured, and two died as a result of their injuries.

NYPA has received two notices of claim arising out of this incident. The Authority has pursued insurance coverage under Northline's insurance policies that name NYPA as an additional insured. The Authority tendered its defense of these notices of claim to Northline's insurer and the insurer has accepted the Authority's tender.

NYPA believes there is sufficient insurance coverage to cover these claims. In any event, to the extent that the insurance coverage limitations are insufficient, Northline is responsible under the defense and indemnification provisions of its contract with the Authority.

Miscellaneous

Additional actions or claims against the Authority are pending for the taking of property in connection with its projects, for negligence, for personal injury (including asbestos-related injuries), in contract, and for environmental, employment and other matters. All of such other actions or claims will, in NYPA's opinion, be disposed of within the amounts of the Authority's insurance coverage, where applicable, or the amount which NYPA has available therefore and without any material adverse effect on its business.

Economic Outlook and View on Energy Markets

Energy markets indicate an expectation that in 2021 prices will rebound somewhat from 2020's mild winter and the impact of COVID-19. Achieving long-term CLCPA goals will depress wholesale power prices, so upstate forward power prices are anticipated to be stagnant or decline from 2021 through 2023. Downstate, however, forward markets indicate that in the near-term, wholesale price depression due to CLCPA is not expected to overcome the effects of awaited unit retirements (Indian Point 3, as well as New York City "peaker" plants retiring due to the DEC's new nitrogen oxide rule). Consequently, downstate power prices are expected to mildly rise over the next four years.

Capacity prices are expected to remain low for upstate supply, and to decline off current highs in New York City. Both cases are driven by the quadrennial Demand Curve Reset resulting in lower Reference Points, and by reductions in peak loads due in part to COVID-19 impacts.

Ancillary Services prices are expected to mildly decline over the next few years, as more flexible generation replaces Indian Point, and over the longer term as responsive energy storage comes online. Ancillary Services could rebound beyond the next few years as intermittent renewables represent a larger share of supply.

Revenues from NYISO sales are expected to remain fairly static over the next few years. As always, such a statement is subject to the usual fluctuations due to weather. An additional source of energy market uncertainty is the potential for a more robust carbon dioxide price.

The Regional Greenhouse Gas Initiative (RGGI) is a mature program at this point, but efforts by the NYISO to support decarbonization by assessing a carbon dioxide charge commensurate with the social cost of carbon, or a federal assessment at such levels, could shift wholesale power prices upwards. This represents an opportunity for renewable generators and providers of energy efficiency and energy management services.

Customer expectations are continuously evolving, as the needs for improved service levels and movements toward decarbonization, are growing. These increasingly complex needs are not fully met by current offerings and domestic and international entrants into New York State's energy market are beginning to take share, raising the bar for all players with sophisticated customer solutions.

In addition, through continuous technology improvements, renewable energy sources are becoming more cost-competitive than traditional power sources, such as hydro and gas, and disrupting wholesale markets. New technologies such as electric vehicles, storage and hydrogen are either beginning to scale or starting to emerge and change the landscape. In parallel, players across the power value chain are embracing digitization and automation in pursuit of efficiency and growth, enabling a more decentralized, two-way power ecosystem.

Competition in New York State's ecosystem is taking shape as offshore wind solicitations are gathering momentum and downstream solar and storage are growing rapidly. The large and well-planned expansion of the transmission grid is widely recognized as a critical need and distribution utilities are taking actions to modernize their grids and provide new services, while new entrants are competing for business.

With the adoption of CLCPA, the state has set one of the most ambitious decarbonization agendas in the U.S., with significant implications for all participants in the state's energy and cross-sector ecosystems. The outcome of the 2020 U.S. presidential election could accelerate implementing national decarbonization plans.

Lastly, high uncertainty around a macroeconomic recovery from COVID-19 pandemic remains, while NYPA customers are facing new challenges and financial strains. The ways of working are being redefined and remote working may create substantial value even after COVID-19, in areas such as access to talent and operational efficiencies.

(e) Revised Forecast of 2020 Budget

Revised Forecast of 2020 Budget
(In $ Millions)

	Original Budget 2020	Forecast 2020	Variance Favorable / (Unfavorable) 2020
Operating Revenues:			
Customer Revenues	$1,785.9	$1,628.2	($157.7)
NYISO Market Revenues	764.2	640.3	(123.9)
Other Revenue	30.1	19.8	(10.3)
Total Operating Revenues	**2,580.2**	**2,288.3**	**(291.9)**
Operating Expenses:			
Purchased Power	681.7	512.6	169.1
Fuel - Oil and Gas	147.7	103.9	43.8
Wheeling Expenses	644.1	647.1	(3.0)
O&M Expenses	590.4	568.8	21.6
Other Expenses	119.8	136.3	(16.5)
Total Operating Expenses	**2,183.7**	**1,968.7**	**215.0**
NET OPERATING INCOME	**396.5**	**319.6**	**(76.9)**
Other Income:			
Investment Income	28.4	29.4	1.0
Other Income	0.0	0.0	0.0
Total Other Income	**28.4**	**29.4**	**1.0**
Non-Operating Expenses:			
Depreciation and Amortization	262.5	261.6	0.9
Interest & Other Expenses	120.9	104.9	16.0
Total Non-Operating Expense	**383.4**	**366.5**	**16.9**
NET INCOME:	**$41.5**	**($17.5)**	**($59.0)**

(f) Reconciliation of 2020 Budget and 2020 Revised Forecast

The 2020 year-end net income forecast is ($17.5) million, which is ($59.0) million below budget. This negative variance is primarily due to lower than budgeted merchant energy prices and lower than budgeted customer margins partially offset by higher than budgeted merchant energy MWh's sold in the market, favorable hedge settlements, and favorable capacity sales. It is additionally driven by higher than budgeted HTP RTEP payments, lower than budgeted Energy Efficiency revenue, an increase to pension expenses and by other expenses related to NYPA's response to COVID-19. This is offset by an reduction to operating expenses driven by underspend in site operations & maintenance expenses, realized gain on sale of securities and lower-than-budgeted depreciation.

(g) Statement of 2019 Financial Performance

Net Income - Actual vs. Budgeted for the Year ended December 31, 2019
(In $ Millions)

	Actual 2019	Budget 2019	Variance Favorable / (Unfavorable) 2019
Operating Revenues:			
Customer Revenues	$1,671.2	$1,825.2	($154.0)
NYISO Market Revenues	671.2	762.7	(91.5)
Other Revenue	27.7	20.9	6.8
Total Operating Revenues	**2,370.0**	**2,608.8**	**(238.7)**
Operating Expenses:			
Purchased Power	528.0	696.9	168.9
Fuel Consumed - Oil & Gas	139.8	189.2	49.4
Wheeling	647.0	644.1	(2.9)
Operations & Maintenance	601.2	596.3	(5.0)
Other Expenses	118.3	117.2	(1.2)
Depreciation & Amortization	250.1	244.1	(6.0)
Allocation to Capital	(18.6)	(18.3)	0.3
Asset Impairment Charge	0.0	0.0	0.0
Total Operating Expenses	**2,265.9**	**2,469.4**	**203.6**
NET OPERATING INCOME	**104.2**	**139.4**	**(35.2)**
Other Income:			
Investment Income	47.4	30.5	16.9
Other Income	0.0	0.0	0.0
Total Other Income	**47.4**	**30.5**	**16.9**
Non-Operating Expenses:			
Interest and Other Expenses	128.6	149.0	20.4
Total Non-Operating Expenses	**128.6**	**149.0**	**20.4**
NET INCOME:	**$23.0**	**$20.9**	**$2.1**

Net Income for the year ended Dec. 31, 2019 was $23 million, which was $2.1 million higher than the budget of $20.9 million. The increase in net income was primarily attributable to higher investment income due to an increase in the market value of NYPA's investment portfolio, lower interest expenses due to lower interest rates, and offset by lower operating income due to lower margins resulting from lower energy prices.

(h) Employee Data – number of employees, full time, FTEs and functional classification

NYPA Headcount Projections 2021-2024

NYPA	2021	2022	2023	2024
Headquarters	857	857	857	857
Power Generation	974	974	974	974
Transmission	203	203	203	203
R&D	14	14	14	14
Total NYPA:	**2,048**	**2,048**	**2,048**	**2,048**
Canals	482	482	482	482
Total NYPA & CANALS*:	**2,530**	**2,530**	**2,530**	**2,530**

** Authorized positions including vacancies.*

(i) Gap-Closing Initiatives – revenue enhancement or cost-reduction initiatives

When building a multiyear operating plan, NYPA has developed a series of contingency plans to adapt to unforeseen changes in its financial results. The Authority projects positive net income for the 2021-2024 period, constructed upon a level of expenses outlined within this final Budget and Financial Plan. If that net income projection materially changes during the forecast period, NYPA will take actions if deemed appropriate.

The Authority continues to be impacted by the ongoing COVID-19 pandemic, with effects including the shift of the majority of the employee base to a remote work configuration, a halt and subsequent restart of the planned Capital and O&M work portfolio, the temporary sequestration of operations staff to maintain reliable electric service, and increased employee/facility health and safety measures to mitigate any potential infection.

An incremental $28 million in total costs, both Capital and O&M, is the projected impact to NYPA for costs directly associated with these efforts in the 2020 budget year. However, efforts are underway to recover a significant portion of those expenses (approximately 40 percent) via reimbursement through the Federal Emergency Management Agency.

In addition to the direct financial costs of addressing COVID-19 outlined above, NYPA experienced additional financial impacts related to lower energy prices, which reduced our merchant revenues, and a decline in Energy Efficiency project completions, which reduced revenues for that business line. To lessen the effect of these revenue drops, NYPA undertook a comprehensive approach of reviewing and reducing operating costs throughout the Authority to mitigate the financial impact of the pandemic.

Moving into 2021, the risk of additional COVID-19 "waves" does exist, and could again result in similar actions taken by NYPA. However, it is expected that any impact on finances or operations should be greatly reduced due to the amount of planning conducted in preparation for such an event. This plan does not assume another shutdown within the financial forecast.

(j) Material Non-Recurring Resources – source and amount

Except as discussed elsewhere in this report, there are no material non-recurring resources expected in the 2021-2024 period.

(k) Shift in Material Resources

There are no anticipated shifts in material resources from one year to another.

(I) Debt Service

New York Power Authority Projected Debt Outstanding (FYE)

(In $ Thousands)

NYPA	2021	2022	2023	2024
Revenue Bonds	$1,624,840	$1,624,840	$1,913,416	$1,897,521
Adjustable Rate Tender Notes	-	-	-	-
Subordinated Notes	$41,185	$38,530	$37,635	$36,715
Commercial Paper Notes	$463,012	$463,012	$463,012	$463,012
Grand Total:	**$2,129,038**	**$2,126,382**	**$2,414,063**	**$2,397,248**

Debt Service as Percentage of Pledged Revenues (Accrual Based)

(In $ Thousands)

NYPA	2021		2022		2023		2024	
	Debt Service	% of Revenue	Debt Service	% of Revenue	Debt Service	% of Revenue	Debt Service	% of Revenue
Revenue Bonds	$31,279	1%	$31,279	1%	$60,947	2%	$95,900	3%
Adjustable Rate Tender Notes	$0	0%	$0	0%	$0	0%	$0	0%
Subordinated Debt	$2,421	0%	$4,200	0%	$2,370	0%	$2,371	0%
Commercial Paper Notes	$7,457	0%	$7,457	0%	$7,457	0%	$7,457	0%
Grand Total Debt Service:	**$41,157**	**2%**	**$42,936**	**2%**	**$70,774**	**3%**	**$105,728**	**4%**
Debt Service Coverage Ratio:	**10.4X**		**10.0X**		**6.7X**		**4.8X**	

Scheduled Debt Service Payments (Accrual Basis) Outstanding (Issued) Debt

(In $ Thousands)

Year	Principal	Interest	Total
2021	$855	$40,302	$41,157
2022	$2,655	$40,281	$42,936
2023	$895	$69,879	$70,774
2024	$16,815	$88,913	$105,728

Proposed Debt

Year	Principal	Interest	Total
2021	$0	$0	$0
2022	$0	$0	$0
2023	$0	$10,495	$10,495
2024	$0	$10,495	$10,495

Total Debt

Year	Principal	Interest	Total
2021	$855	$40,302	$41,157
2022	$2,655	$40,281	$42,936
2023	$895	$80,374	$81,269
2024	$16,815	$99,408	$116,223

New York Power Authority Planned Use of Debt Issuances
(In $ Thousands)

TYPE	Amount	Interest Rate	Project / Description
Period January 1, 2021 - December 31, 2021:			
Tax Exempt Commercial Paper	$0	1%	Energy Efficiency Program
Taxable Commercial Paper	$0	1%	Energy Efficiency Program
Tax Exempt Revenue Bonds	$0	4%	Transmission
Taxable Revenue Bonds	$0	5%	Robert Moses Power Plant / Lewiston Pump Generating Plant
Total Issued 2021	$0		
Period January 1, 2022 - December 31, 2022:			
Tax Exempt Commercial Paper	$0	1%	Energy Efficiency Program
Taxable Commercial Paper	$0	1%	Energy Efficiency Program
Tax Exempt Revenue Bonds	$0	4%	Transmission
Taxable Revenue Bonds	$0	5%	Robert Moses Power Plant / Lewiston Pump Generating Plant
Total Issued 2022	$0		
Period January 1, 2023 - December 31, 2023:			
Tax Exempt Commercial Paper	$0	1%	Energy Efficiency Program
Taxable Commercial Paper	$0	1%	Energy Efficiency Program
Tax-Exempt Revenue Bonds	$249,089	4%	Transmission
Taxable Revenue Bonds	$39,488	5%	Robert Moses Power Plant / Lewiston Pump Generating Plant
Total Issued 2023	$288,576		
Period January 1, 2024 - December 31, 2024:			
Tax Exempt Commercial Paper	$0	1%	Energy Efficiency Program
Taxable Commercial Paper	$0	1%	Energy Efficiency Program
Tax-Exempt Revenue Bonds	$0	4%	Transmission
Taxable Revenue Bonds	$0	5%	Robert Moses Power Plant / Lewiston Pump Generating Plant
Total Issued 2024	$0		

Note: The full faith and credit of the Authority are pledged for the payment of bonds and notes in accordance with their terms and provisions of their respective resolutions. NYPA does not have taxing power, and its obligations are not debts of New York State or any political subdivision of the state other than the Authority. NYPA's debt does not constitute a pledge of the faith and credit of the state or of any political subdivision thereof, other than the Authority.

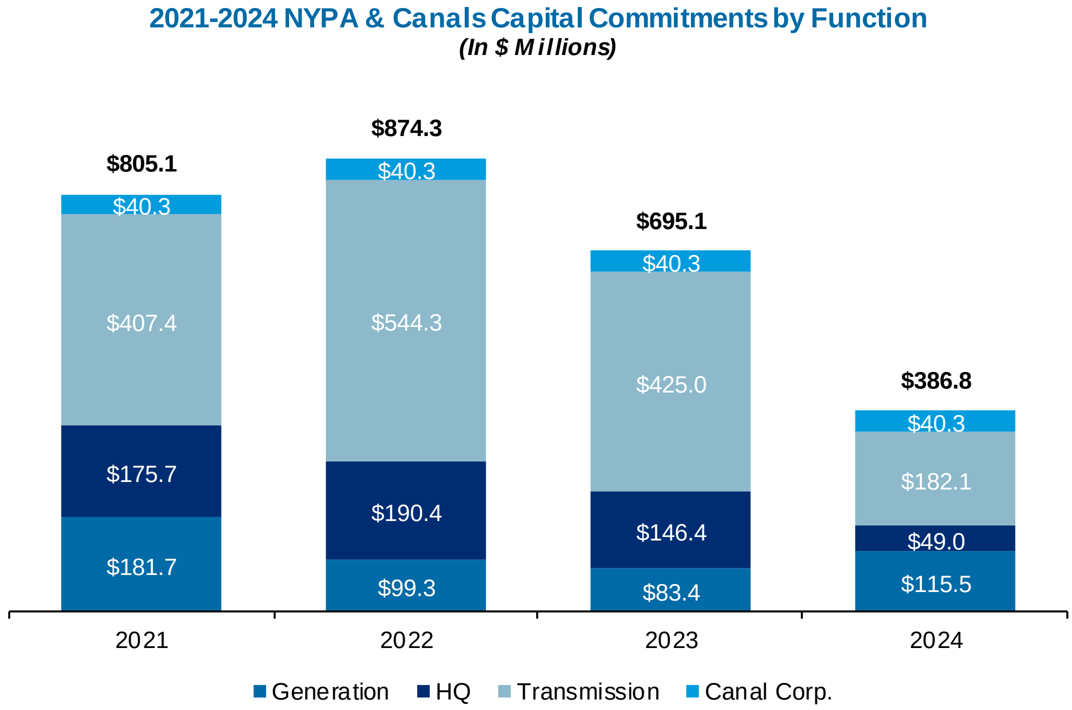
(m) Capital Commitments and Sources of Funding

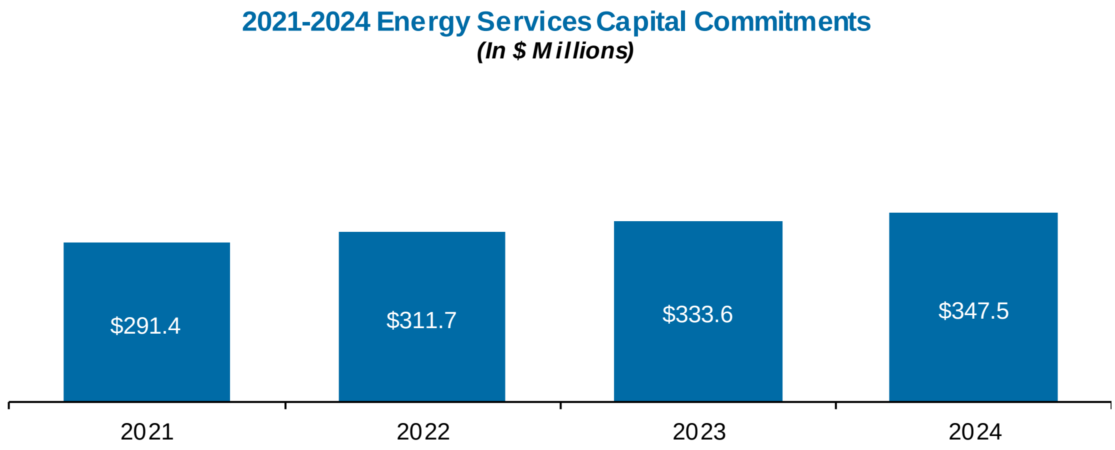
The Authority's commitments for various capital improvements are approximately $2.8 billion over the financial period 2021-2024. NYPA anticipates these improvements will be funded with existing construction funds, internally generated funds and additional borrowings. Additionally, the Authority is projecting to spend approximately $1.2 billion in Energy Services projects for our customers, which will be separately financed. Projected capital commitments during this period include those listed in the table below.

2021-2024 Capital Commitments by Function

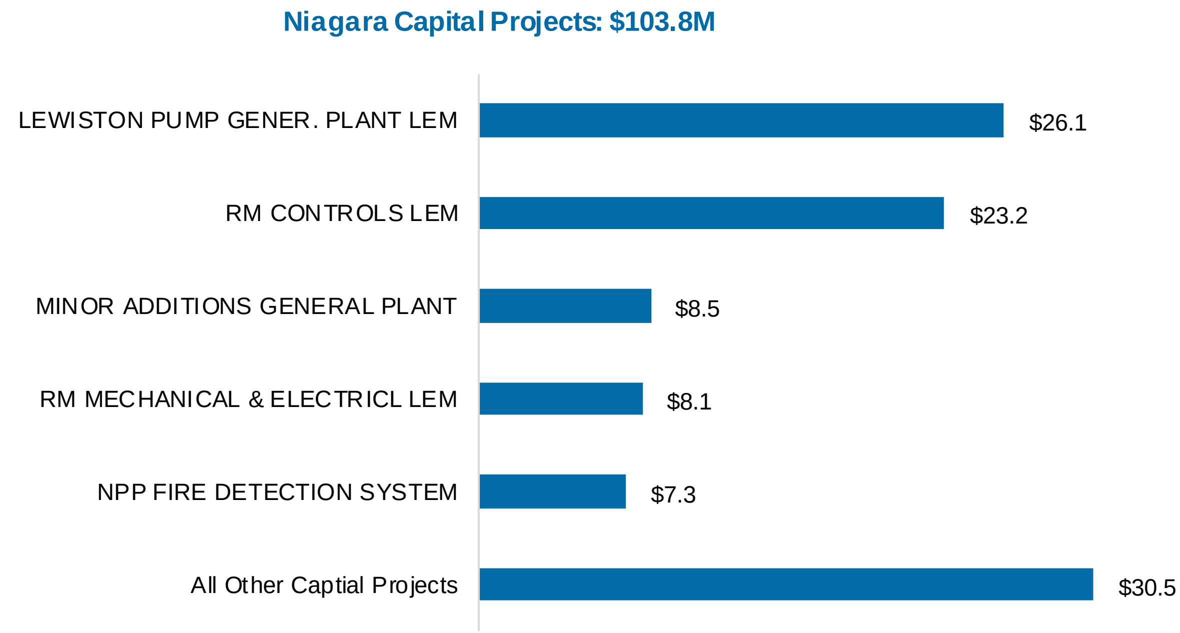
(In $ Millions)

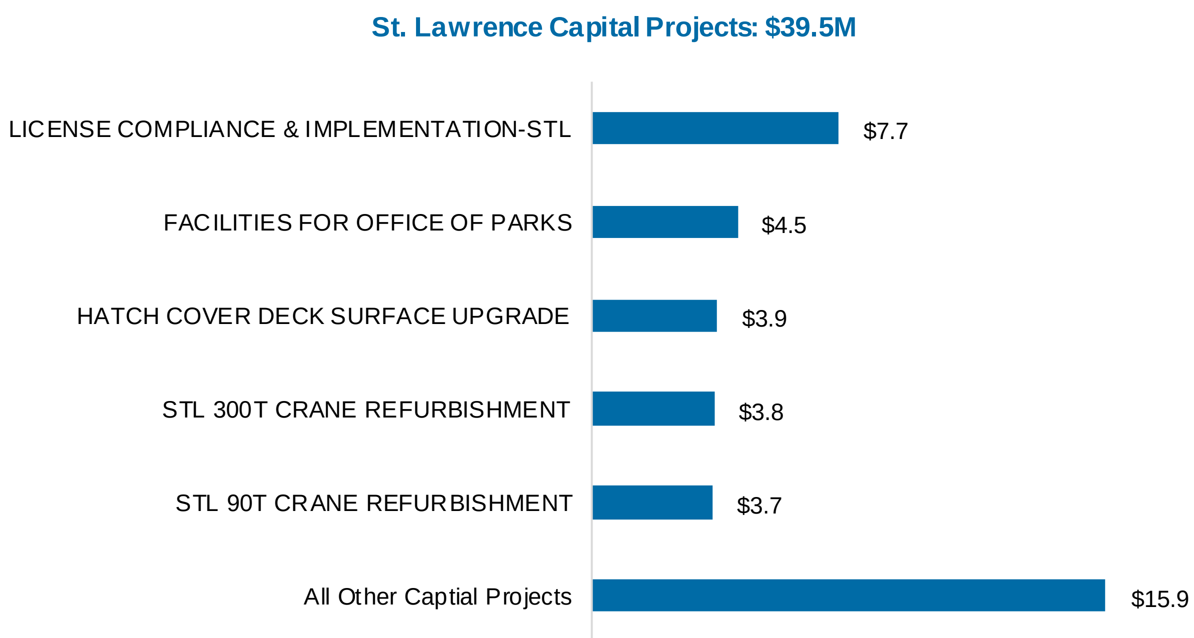
NYPA	2021	2022	2023	2024
Generation				
Robert Moses LEM (NextGen Niagara)	$44.3	$36.3	$51.7	$54.8
Lewiston Pump Generating Plant LEM	$26.1	$17.4	$0.0	$0.0
Sensor Deployment (Gen)	$6.6	$0.0	$0.0	$0.0
Other Generation	$104.8	$45.6	$31.7	$60.7
Transmission				
Northern New York Transmission	$7.6	$179.2	$226.1	$133.1
Moses Adirondack Upgrade (Smartpath)	$113.5	$121.1	$73.6	$0.0
Marcy-Scott Yard Upgrade (AC Project)	$95.3	$113.4	$47.8	$0.0
Transmission Life Extension & Modernization	$73.4	$48.4	$43.9	$25.6
Communications Backbone	$53.2	$26.5	$21.6	$0.3
NNY to Ontario Phase Shifter Replacement	$17.4	$9.1	$2.0	$0.0
Sensor Deployment (Trans)	$12.8	$0.0	$0.0	$0.0
Other Transmission	$34.2	$46.6	$10.0	$23.1
HQ				
Digital, Network & Cyber	$59.2	$28.7	$19.6	$18.8
Reimagine Canals	$29.7	$74.8	$80.2	$17.9
EVolve	$33.6	$49.9	$16.3	$0.0
White Plains Office Infrastructure	$13.7	$17.9	$29.3	$7.9
Customer Digital Experience	$14.7	$0.0	$0.0	$0.0
Other HQ	$24.9	$19.2	$1.0	$4.4
Canals				
Canals	$40.3	$40.3	$40.3	$40.3
Total NYPA & Canals Funded:	**$805.1**	**$874.3**	**$695.1**	**$386.8**
Energy Services - Separately Financed:	**$291.4**	**$311.7**	**$333.6**	**$347.5**

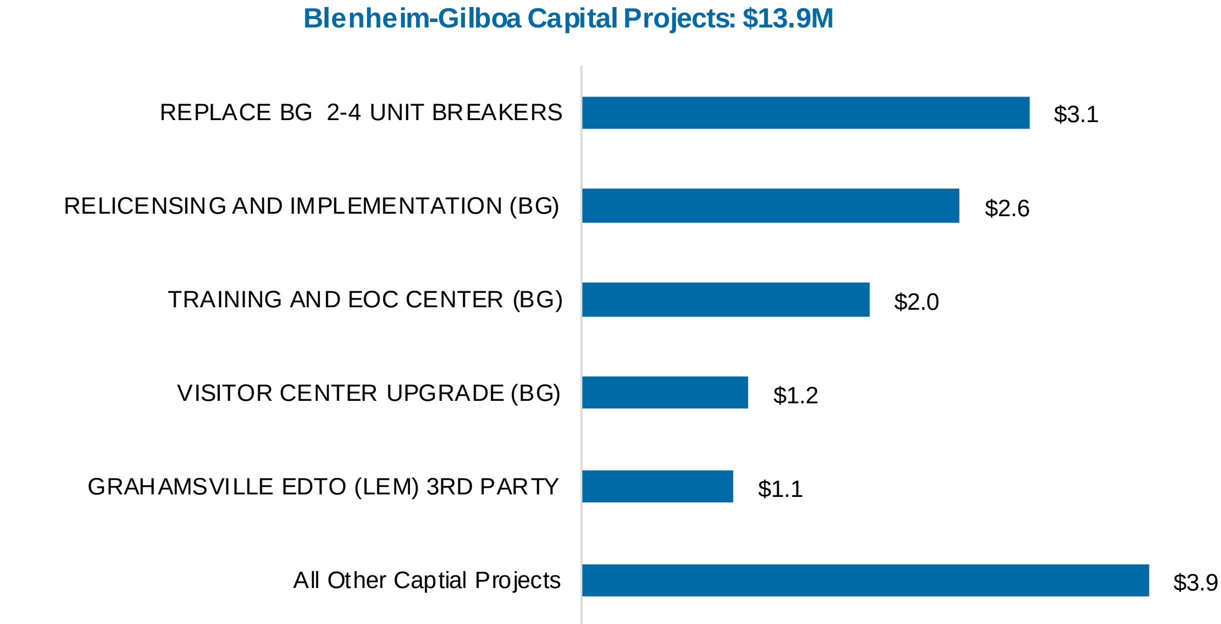

2021-2024 NYPA & Canals Capital Commitments by Function
(In $ Millions)
$805.1
$40.3
$407.4
$175.7
$181.7
$874.3
$40.3
$544.3
$190.4
$99.3
$695.1
$40.3
$425.0
$146.4
$83.4
$386.8
$40.3
$182.1
$49.0
$115.5
2021
2022
2023
2024
Generation
HQ
Transmission
Canal Corp.


2021-2024 Energy Services Capital Commitments
(In $ Millions)
$291.4
$311.7
$333.6
$347.5
2021
2022
2023
2024

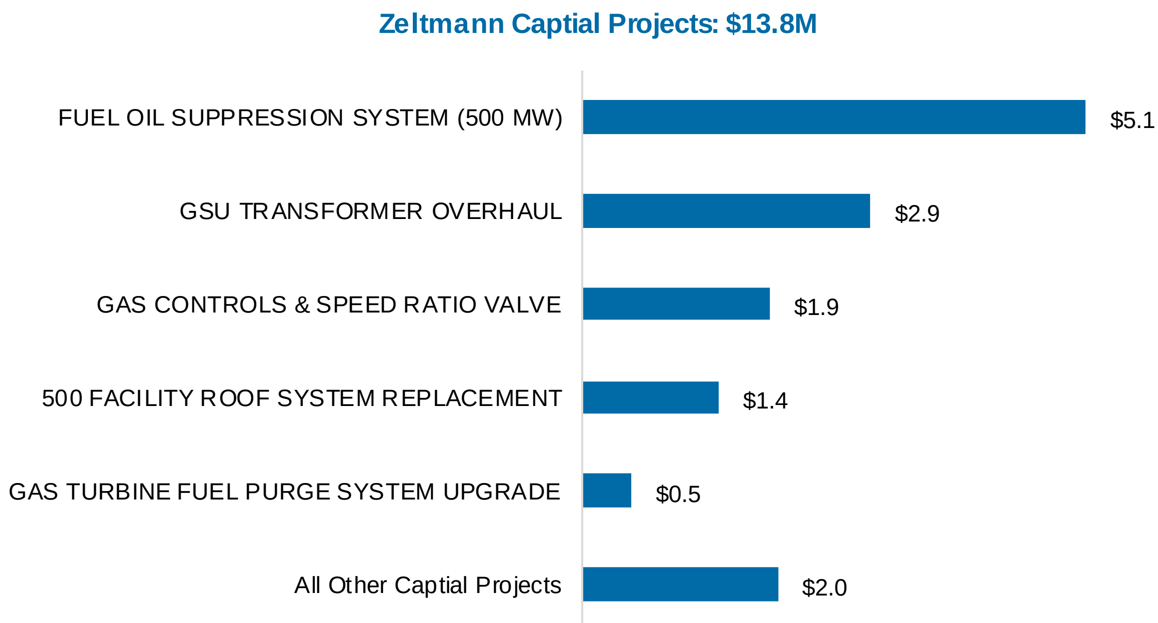
2021 NYPA & Canals Capital Project Detail by Facility





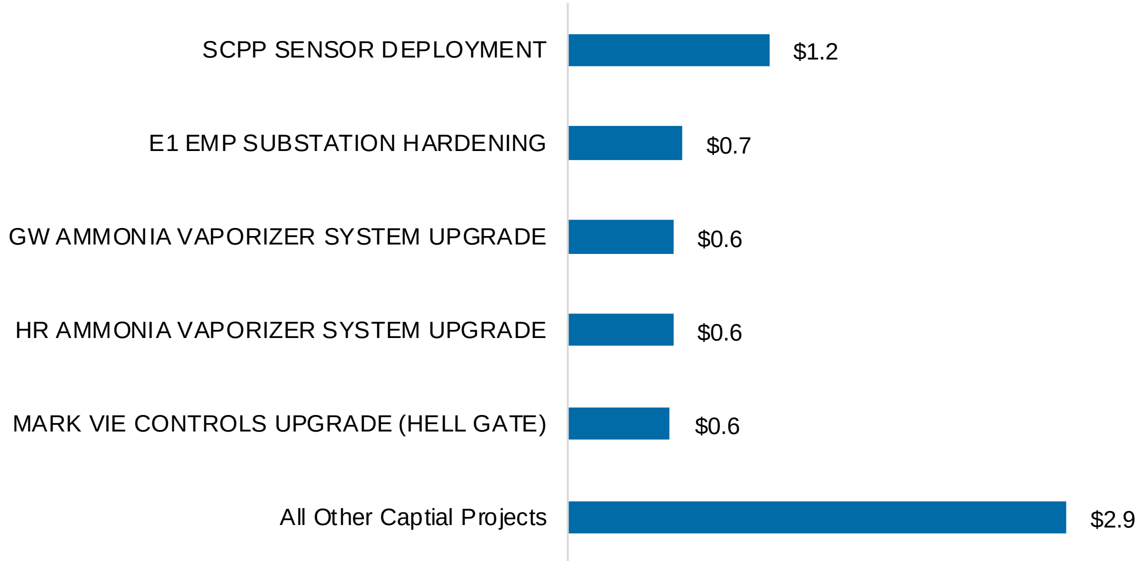


Blenheim-Gilboa Capital Projects: $13.9M
REPLACE BG 2-4 UNIT BREAKERS
$3.1
RELICENSING AND IMPLEMENTATION (BG)
$2.6
TRAINING AND EOC CENTER (BG)
$2.0
VISITOR CENTER UPGRADE (BG)
$1.2
GRAHAMSVILLE EDTO (LEM) 3RD PARTY
$1.1
All Other Captial Projects
$3.9

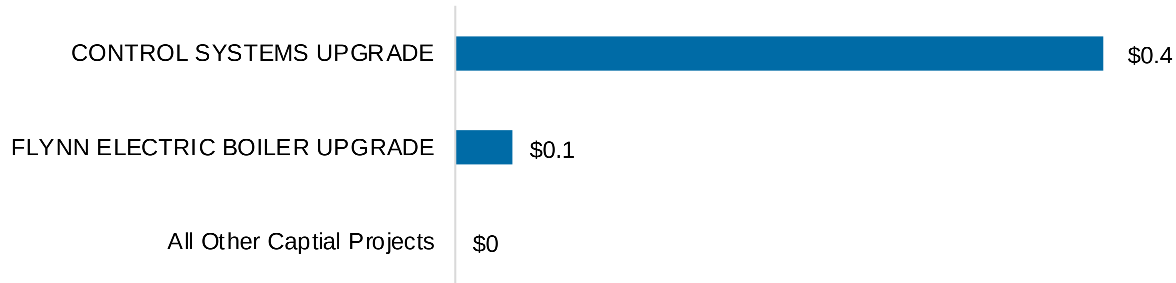


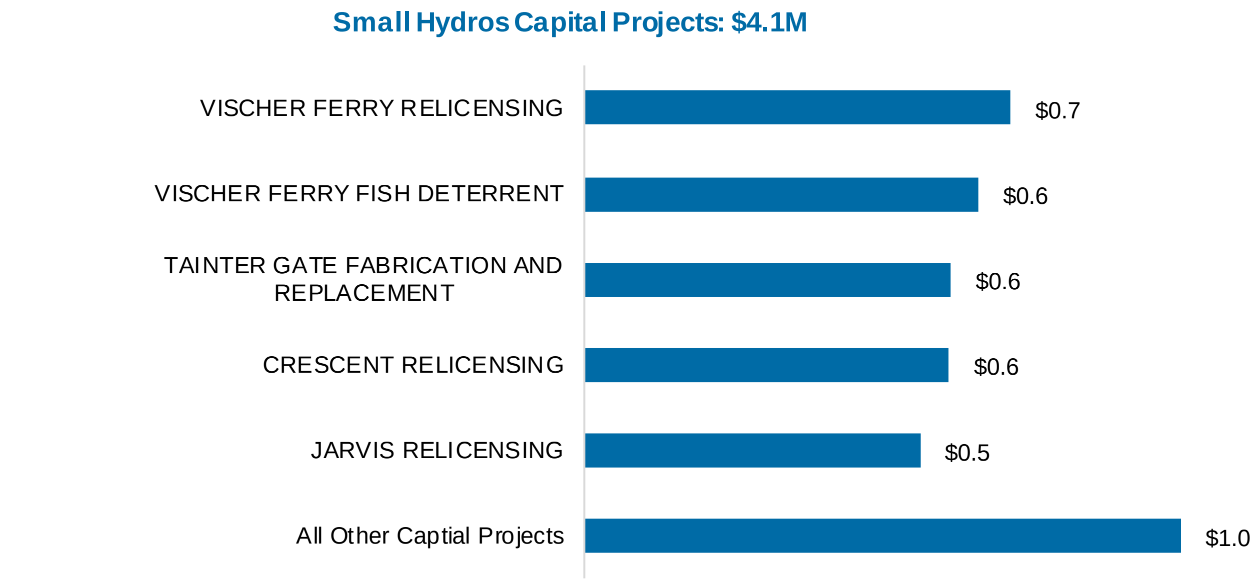
Zeltmann Captial Projects: $13.8M
FUEL OIL SUPPRESSION SYSTEM (500 MW)
$5.1
GSU TRANSFORMER OVERHAUL
$2.9
GAS CONTROLS & SPEED RATIO VALVE
$1.9
500 FACILITY ROOF SYSTEM REPLACEMENT
$1.4
GAS TURBINE FUEL PURGE SYSTEM UPGRADE
$0.5
All Other Captial Projects
$2.0

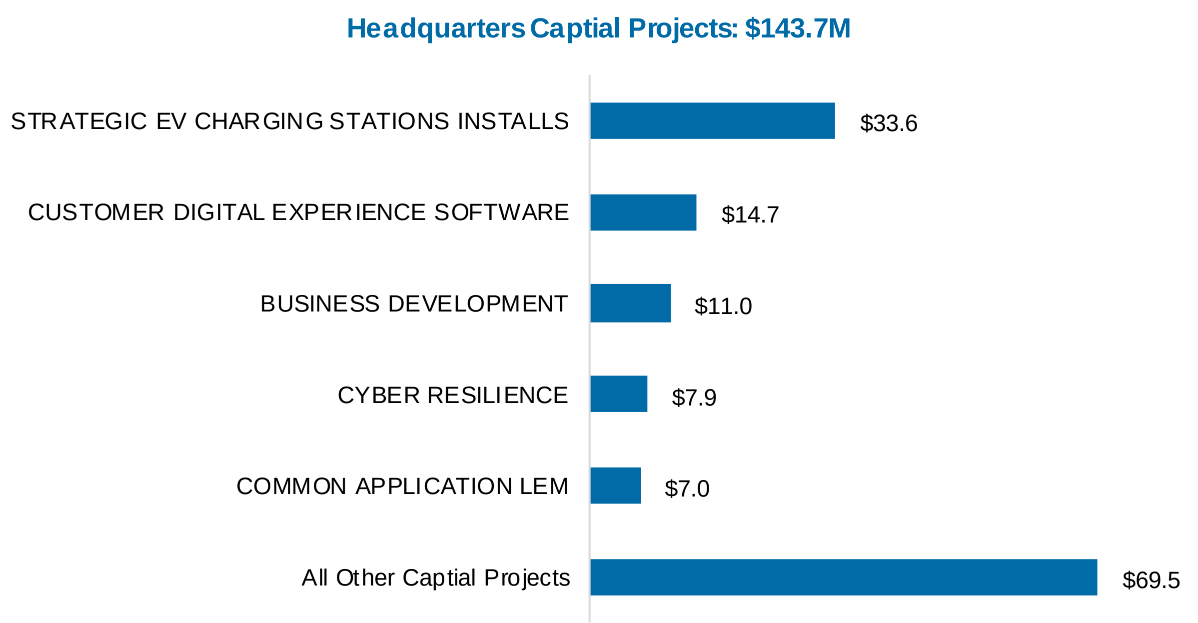
SCPP Captial Projects: $6.5M



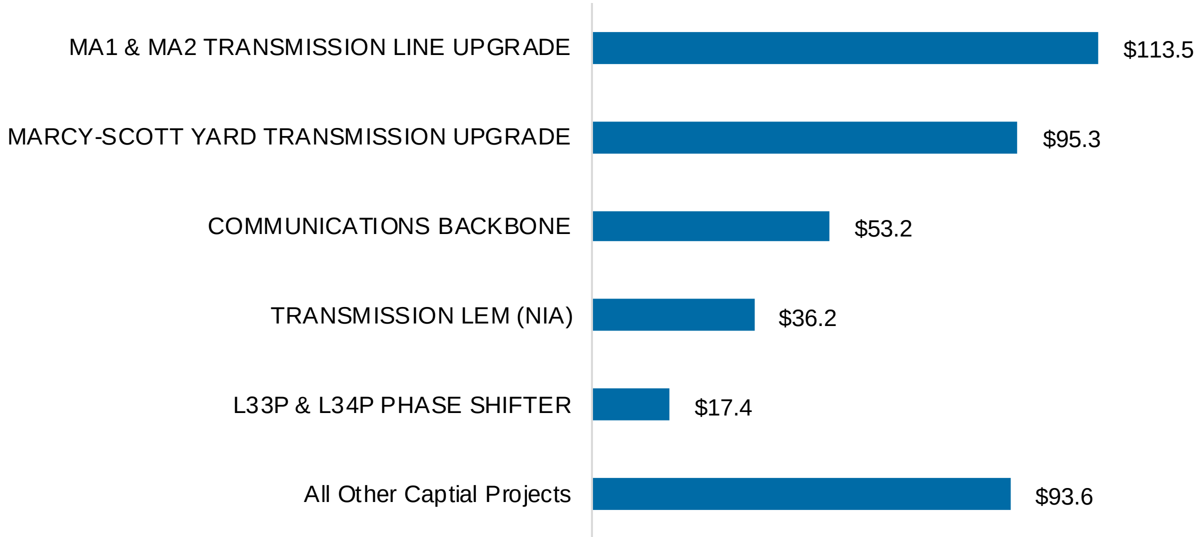
Flynn Capital Projects: $0.5M



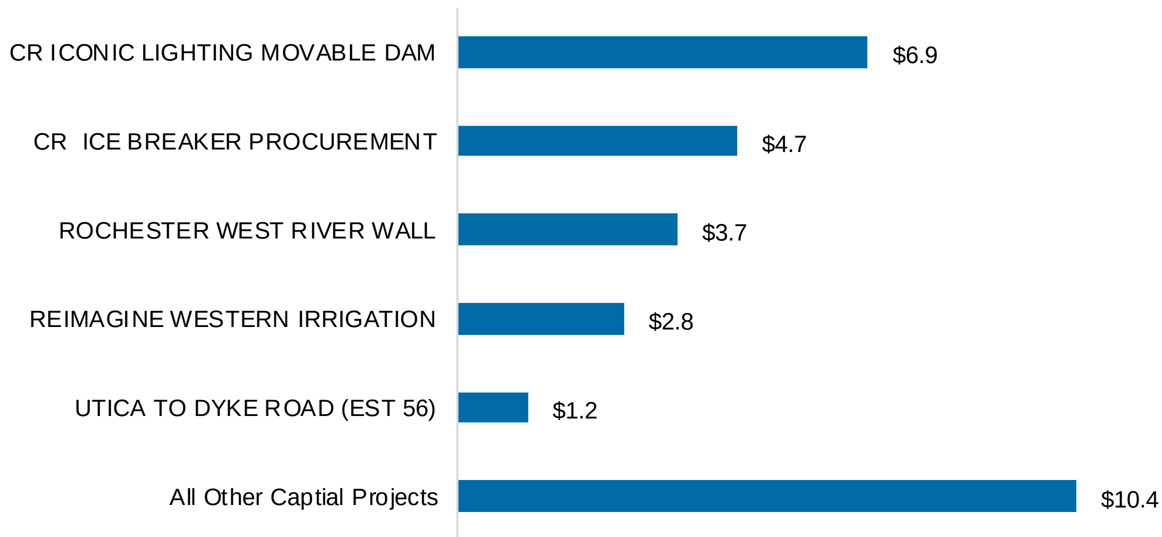

Small Hydros Capital Projects: $4.1M
VISCHER FERRY RELICENSING
$0.7
VISCHER FERRY FISH DETERRENT
$0.6
TAINTER GATE FABRICATION AND REPLACEMENT
$0.6
CRESCENT RELICENSING
$0.6
JARVIS RELICENSING
$0.5
All Other Captial Projects
$1.0


Headquarters Captial Projects: $143.7M
STRATEGIC EV CHARGING STATIONS INSTALLS
$33.6
CUSTOMER DIGITAL EXPERIENCE SOFTWARE
$14.7
BUSINESS DEVELOPMENT
$11.0
CYBER RESILIENCE
$7.9
COMMON APPLICATION LEM
$7.0
All Other Captial Projects
$69.5

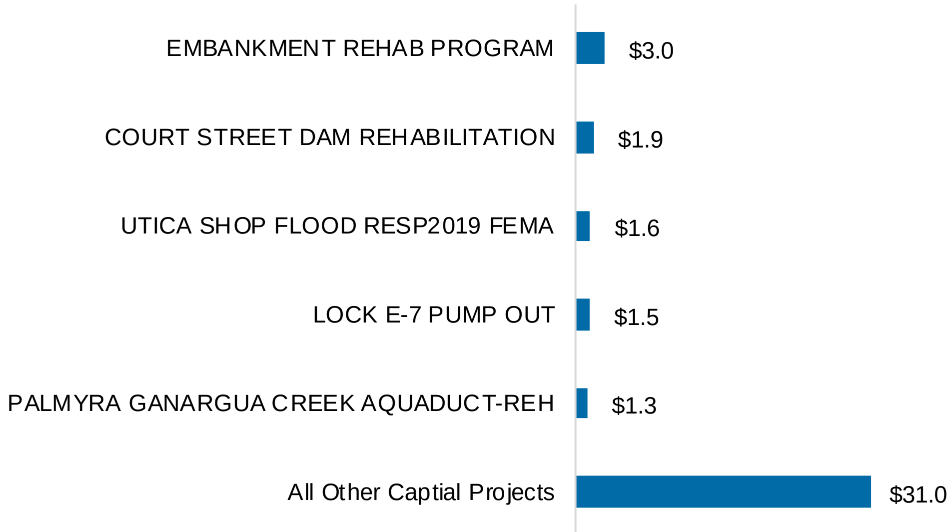
Transmission Capital Projects: $509.4M



Reimagine Canals Capital Projects: $29.7M

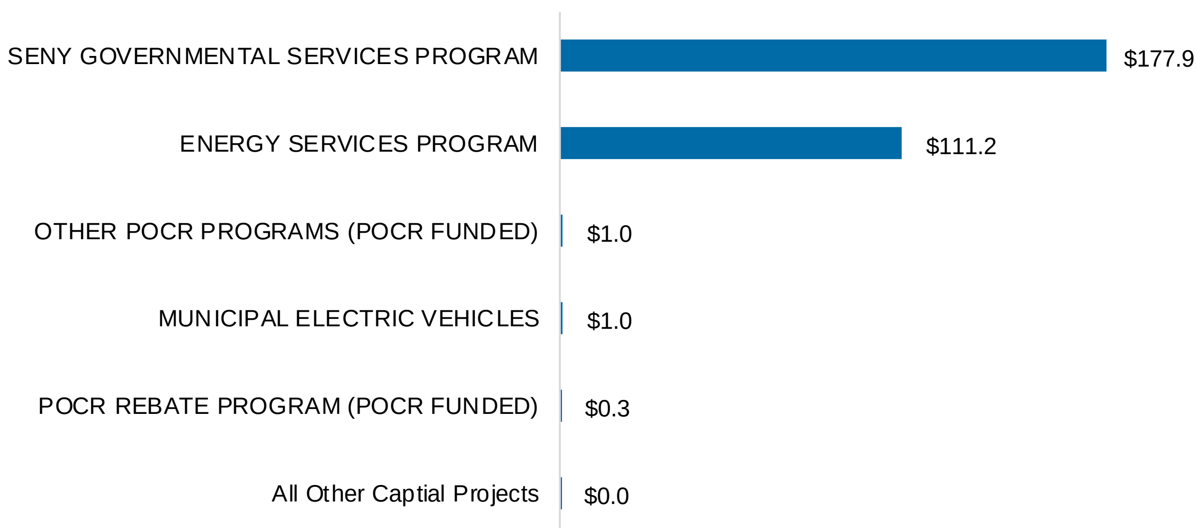


Canals Capital Projects: $40.3M



2021 Energy Services Detail

Energy Services Captial Projects: $291.4M



(n) Credit Discussion

Maintaining a strong relationship with the capital markets is critical to how NYPA operates. Fitch Ratings and S&P Global Ratings assign a AA rating to the Authority's long-term bonds, while Moody's Investor Services assigns a Aa2 rating to the Authority's long-term bonds, which is among the highest rating given to public electric utilities. This allows us to borrow money for capital projects at competitive rates, and to continue to offer low-cost financing to qualified customers to help fund impactful energy initiatives.

The Authority's long-term bonds are issued pursuant the "General Resolution Authorizing Revenue Obligations" (as amended and supplemented up to the present time, the Bond Resolution). The Bond Resolution covers all of NYPA's projects, which it defines as any project, facility, system, equipment or material related to or necessary or desirable in connection with the generation, production, transportation, transmission, distribution, delivery, storage, conservation, purchase or use of energy or fuel, whether owned jointly or singly by the Authority, including any output in which NYPA has an interest authorized by the Act or by other applicable state statutory provisions, provided, however, that the term "Project" shall not include any Separately Financed Project as that term is defined in the Bond Resolution.

NYPA has covenanted with bondholders under the Bond Resolution that at all times the Authority shall maintain rates, fees or charges, and any contracts entered into by the Authority for the sale, transmission, or distribution of power shall contain rates, fees or charges sufficient together with other monies available therefor (including the anticipated receipt of proceeds of sale of Obligations, as defined in the Bond Resolution, issued under the Bond Resolution or other bonds, notes or other obligations or evidences of indebtedness of the Authority that will be used to pay the principal of Obligations issued under the Bond Resolution in anticipation of such receipt, but not including any anticipated or actual proceeds from the sale of any Project), to meet the financial requirements of the Bond Resolution.

NYPA's revenues (excluding revenues attributable directly or indirectly to the ownership or operation for Separately Financed Projects and after deductions for operating expenses and reserves, including reserves for working capital, operating expenses or compliance purposes) are applied first to the payment of, or accumulation as a reserve for payment of, interest on and the principal or redemption price of Obligations issued under the Bond Resolution and the payment of Parity Debt issued under the Bond Resolution.

The Bond Resolution also provides for withdrawal for any lawful corporate purpose as determined by NYPA, including but not limited to the retirement of Obligations issued under the Bond Resolution, from amounts in the Operating Fund in excess of the operating expenses, debt service on Obligations and Parity Debt issued under the Bond Resolution, and subordinated debt service requirements.

To support our Aa2/AA/AA bond ratings and all of the advantages it offers the Authority and its customers, NYPA sets certain targets which are consistent with other peer-rated organizations. In May 2011, the Authority's Board of Trustees adopted a policy statement (Policy Statement) which relates to, among other things, voluntary contributions, transfers, or other payments to the State by the Authority after that date.

The Policy Statement provides, among other things, that in deciding whether to make such contributions, transfers, or payments, NYPA shall use as a reference point the maintenance of a debt service coverage ratio of at least 2.0 (this reference point should not be interpreted as a covenant to maintain any particular coverage ratio), in addition to making the other determinations required by the Bond Resolution. The Policy Statement may at any time be modified or eliminated at the discretion of the Board of Trustees.

Certification of Assumptions and Method of Estimation for Approved 2021 Budget and 2021-2024 Financial Plan in accordance with the Comptroller's Regulation § 203.9 Certification

December 9, 2020

To the Board of Trustees

Power Authority of the State of New York

To the best of my knowledge and belief after reasonable inquiry, I, the undersigned, certify that the "Authority's Method of Estimation of Approved 2021 Budget and 2021-2024 Financial Plan" is based on reasonable assumptions and methods of estimation and that the regulations enumerated in Part 203, "Budget and Financial Plan Format, Supporting Documentation and Monitoring - Public Authorities" have been satisfied.

Joseph F Kessler

Joseph Kessler

Chief Operating Officer

Adam Barsky

Adam Barsky

Chief Financial Officer

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