NY Power Authority | Canal Corporation

2020 ANNUAL REPORT

RESILIENCE IS ROOTED IN OUR PEOPLE

VISION
A thriving, resilient New York State powered by clean energy.

MISSION
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.

OUR VALUES
- We work for the greater good and a stronger, sustainable New York State
- We hold ourselves to the highest standards of integrity, safety and excellence
- We are resilient and use our ingenuity to make big things happen
- We draw strength from our diversity—everyone contributes, everyone belongs
- We work as one team, putting our trust and confidence in each other

Cover:
Daniella Piper, vice president, Digital Transformation Office and chief of staff.



Left to right: *Juan Cazorla, assistant facility manager; Ana Stachowiak, senior program director, Project Management; Mike Taylor, Canals acting section superintendent.*

Above:
NYPA's main administrative office, White Plains.

WE BOUNCED FORWARD

In 2020, NYPA and Canals showed the unique ability to bounce forward because **resilience is rooted in our people**.

We looked deep inside ourselves while facing the most serious global challenge ever experienced in our times. While essential services in healthcare, transportation and food services made headlines, we kept electricity humming. Essential services run on electricity—it is the lifeblood of our society.

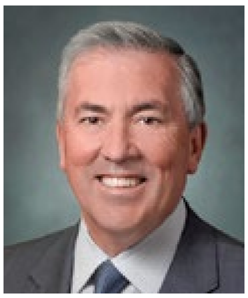
We became a community of unsung heroes going above and beyond no matter what our role. We kept generators and lines working, supplied digital tools so employees could work remotely, installed health and safety improvements, serviced Canal locks and undertook other efforts too numerous to mention.

As public entities, we looked beyond ourselves to those we serve. Offering rate deferral for customers, advancing clean energy to fight climate change and creating outdoor recreation experiences for New Yorkers with cabin-fever showed our mettle.

NYPA and Canals had pandemic plans in place long before 2020. Then COVID-19 hit. We pivoted and swayed, slipped then straightened and even failed a bit. Then we recovered, marked successes, became stronger and bounced forward because resilience is rooted in our people.

John R. Koelmel
Chairman

Eugene L. Nicandri
Vice Chairman



Michael Balboni
Trustee

Tracy B. McKibben
Trustee

Anthony J. Picente, Jr.
Trustee

Dennis Trainor
Trustee

A MESSAGE FROM THE CHAIRMAN

At the New York Power Authority (NYPA) and the New York State Canal Corporation, we take pride in doing the hard work well and—as our histories repeatedly demonstrate—rising up to meet the unexpected challenges we encounter. In 2020, that meant standing tall in the face of the fierce demands of the worst public health crisis in a century. Through it all, the people of NYPA and Canals again provided profound and lasting examples of our enduring commitment to the people, businesses and communities we serve across New York State.

Having the foresight to understand the changing nature of the energy market has been a foundational competency at NYPA. That has been true ever since Gov. Franklin D. Roosevelt signed the legislation that created the Power Authority in 1931. Since that April day almost 90 years ago, we have served the people of New York, whether by developing the vast hydroelectric resources of the St. Lawrence and Niagara rivers, meeting the demands for electricity of one of the world's largest economies or helping to lead the way in advancing clean new technologies to fight climate change.

In 2020, the innovation, commitment and focus of our team played a major role in NYPA's ability to address the challenging operational and programming demands emanating from COVID-19. By using a best-in-class crisis response plan and embracing exacting operational standards, we kept our employees and workplaces safe, upgraded our generation and transmission systems and continued to reliably provide power to all of our customers.

This Annual Report captures the essence of the year's demanding journey and reveals our excitement about the future. NYPA's newly released 10-year strategic plan, VISION2030, provides a bold and comprehensive approach that is already inspiring enormous enthusiasm across our organization. There is now an even greater sense of the endless potential offered by a technologically evolved energy marketplace and a revitalized 524-mile-long, 200-year-old Canal System.

NYPA's new mission, 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," reinforces our dedication to support Gov. Andrew M. Cuomo's decarbonization goals—the most ambitious in the nation. VISION2030's strategic priorities and foundational pillars incorporate many valuable lessons from the past decade and our best thinking about what it will take to compete effectively and serve our customers in this increasingly "green" decade.

I am also proud that we are building upon our progressive foundation with our industry-leading Diversity, Equity and Inclusion plan. We took a series of important steps to ensure we create a more dynamic work culture and that people from all walks of life are seen, valued and heard. This initiative includes NYPA and Canals employees, as well as our suppliers and external partners.

On behalf of the Board of Trustees, I congratulate all NYPA and Canals employees as they have again distinguished themselves and our organizations. As a result, we are even better positioned to look toward the future, working for the greater good of New Yorkers across the state and creating a cleaner, better world for many years to come.

— John R. Koelmel
March 2021

A MESSAGE FROM THE PRESIDENT AND CEO

If you were to ask someone to share memories of 2020, the initial response might well be, "The less said, the better." Yet, as our lives at NYPA and Canals finally return to a relative normal, fonder memories of exceptional accomplishments will come rushing back to us. This is because my colleagues came together, met the innumerable challenges posed by COVID-19 and performed magnificently.

2020 was the year in which we proved truly resilient in every way. Our Incident Command Structure—an extraordinary team of employees who directed us through the pandemic—began tracking COVID-19 in January 2020 and guided us through an unprecedented obstacle course. These around-the-clock deliberations and actions required expertise, dedication, creativity and a sense of humor. Fortunately, we had an abundance of each of these ingredients.

I am so proud of the many ways in which NYPA and Canals staff—management and union—responded to a crisis more unpredictable and pervasive than any we have ever faced. This had a ripple effect throughout our organization across the state and touched everyone we serve.

I will never forget how dozens of NYPA's most essential employees left their families behind for weeks on end, working in sequestration at our generation facilities to ensure an uninterrupted flow of power. I will never forget how our maintenance and cleaning staff kept coming to work to keep everyone safe and healthy. I will never forget how our contact tracers diligently monitored each and every COVID-19 outbreak.

And I will never forget how each department dealt with countless problems and, even better, came up with one remarkable answer after another to ensure that New Yorkers could still rely on us. As we learned last year, NYPA and Canals are built strong by design. We plan for the unimaginable.

An integral part of our effort has been keeping our finances strong. In April, we sold more than $1.2 billion in bonds (including almost $800 million certified as "green bonds") for environmentally friendly projects, with the balance to finance capital improvements to our generation and transmission assets. This issuance was the largest public power green bond transaction in history, and it was chosen by The Bond Buyer—a trade publication—as its Deal of the Year 2020 for the Northeast Region.

We also looked beyond our core responsibilities for ways to make life better in the Empire State. Momentum for our landmark Reimagine the Canals initiative remained strong and we introduced the successful Staycations program, offering free excursions in communities along the New York State Canal System so residents could remain close to home during the pandemic.

Our hard work and commitment continue into 2021. We will be guided by our new VISION2030 and we will once again adapt, invent, deliver and lead, no matter how big the challenge, for our customers, for every New Yorker and for future generations.

— Gil C. Quiniones
March 2021

Executive Management

Gil C. Quiniones
President and
Chief Executive Officer

Adam Barsky
Executive Vice President
and Chief Financial Officer

Justin E. Driscoll
Executive Vice President
and General Counsel

Joseph Kessler
Executive Vice President
and Chief Operating Officer

Kristine Pizzo
Executive Vice President
Chief Human Resources
and Administration Officer

Sarah Orban Salati
Executive Vice President and
Chief Commercial Officer

Yves Noel
Senior Vice President Strategy
and Corporate Development

Robert Piascik
Senior Vice President and
Chief Information and
Technology Officer

Karen Delince
Vice President and
Corporate Secretary

Daniella Piper
Vice President
Digital Transformation Office
and Chief of Staff

IN THIS REPORT

ALSO IN THIS REPORT:

Paul Tartaglia
Incident Commander
Incident Command Structure (ICS)

As a volunteer firefighter for more than 20 years and having been on the ground facing different difficult situations including the Sept. 11, 2001 terrorist attacks and Superstorm Sandy, Tartaglia thrives on challenges.

The environment created by the pandemic "was stimulating to me," said Paul Tartaglia, senior vice president, Technology and Innovation. His expertise, knowledge and the relationships he built over the years at NYPA were reassuring to him in his role as ICS Incident Commander.

1. MAKING THE IMPOSSIBLE HAPPEN

Above:
The Erastus Corning Tower at Empire State Plaza, Albany, illuminated in support of the state's response to COVID-19.

When 2020 started, several NYPA employees were working overseas to supervise the manufacture of power generation equipment. NYPA's senior leaders heeded their early warnings of COVID-19's inevitable arrival in the U.S.

Our preliminary steps included reinvigorating business continuity and disaster response plans and **initiating a cross-functional Incident Command Structure (ICS) team in January 2020 to manage NYPA and Canals' pandemic response.** As the COVID-19 crisis gathered momentum, the most immediate priority of the ICS was keeping people safe and healthy. This included NYPA's employees and customers, plus support for New York State's efforts to protect all residents.

NYPA and Canals labor unions—leaders and members—were immersed in the response with their knowledgeable guidance and operating support as we took on the fog of war surrounding COVID-19.

As the generator of up to 25 percent of the state's electricity, we immediately recognized the need to ensure that our essential product always remained available. The "'pilots' of our power plants," as Gil C. Quiniones, president and chief executive officer, called **critical operating employees, were sequestered at work, away from their families for weeks at a time so electricity could flow uninterrupted.** We took precautions to safely isolate these employees in temporary living quarters that quickly took shape at generating locations.

NYPA put many capital projects on hold in the initial months of COVID-19 following Gov. Andrew M. Cuomo's "New York on PAUSE" Executive Order. Our ICS implemented measures for ensuring safe and clean workplaces. Enhanced deep cleaning and sanitizing at all facilities and daily health screenings for employees were initiated. HVAC systems were retrofitted with state-of-the-art air filters and ultraviolet lighting to disinfect and decontaminate interior air supplies.

NYPA & CANALS EMPLOYEES ASSISTING NEW YORK STATE'S COVID-19 RESPONSE

NYS Department of Labor Call Center Support:

75 EMPLOYEES

46+ DAYS

NYS Contact Tracers Ongoing Support:

60 EMPLOYEES

Anthony Wayne Recreation Area COVID-19 Testing Site (Harriman State Park) Ongoing Support:

3 EMPLOYEES

40+ DAYS

28,000 TESTS COMPLETED

NYS Division of Homeland Security & Emergency Services, Albany Support:

53 EMPLOYEES

124 CONTINUOUS DAYS ON-SITE

50K+ CRITICAL SPECIMENS shipped to Wadsworth Lab

1M+ TEST KITS shipped to 1,156 nursing homes

"All these precautions resulted in a 1 percent infection rate at NYPA, far lower than the state average rate," Quiniones said.

When the NY Forward initiative was launched to begin reopening businesses and other entities shut down due to COVID-19, NYPA was prepared to safely welcome greater numbers of employees back to their workplaces, guided by a measured and phased approach. **Multiple construction, energy efficiency, energy storage and alternative energy projects were restarted** to support the aggressive clean energy goals in the state's Climate Leadership and Community Protection Act.

Recounting the extraordinary fortitude that NYPA and Canals employees demonstrated in 2020 kept us moving forward, Paul Tartaglia, senior vice president, Technology and Innovation, and incident commander, ICS, said, **"Resilience is in our DNA. It is rooted in our people."**

The dizzying pace, scale and movement of events in 2020 required making quick changes and recalibrating many plans. "At NYPA we've always done what others can't or won't do. COVID-19 proved that," said Tartaglia.

Nurturing relationships with our sister public agencies is vital to achieving long-term success, and our true colors show when times are tough.

Left: *Alana Sprague, a Canals crane and shovel operator, loads cases of hand sanitizer onto a truck at the state Office of General Services Distribution Center.*

Middle: *Ed Birdie, senior director, Community Affairs, receives a flu shot at NYPA's main administrative office, White Plains, as part of health and safety efforts during COVID-19.*

Right: *Shift Supervisor Justin Smith works while sequestered at the Richard M. Flynn Power Plant, Holtsville.*

"COVID-19 raised questions and concerns for many people, and our employees were no different.

Programs were quickly adapted, from expanded health services, leaves of absence and accommodations to services targeted for many COVID-19-related needs including child/elder care, mental health, financial concerns and coping while quarantined.

More than 35 HR and Labor employees were trained in quality contact tracing and quarantine practices. They engaged employees with compassion to navigate them through scary times, helping to keep them informed and calm. Everyone stepped up for the health of one another and our families."

Karina Saslow
Vice President
Total Compensation & HRIS

NYPA and Canals employees helped the state by serving at testing sites, providing contact tracing, working at warehouses where health supplies were stored before distribution and transporting testing materials. Crediting these efforts, Quiniones said, "All of us understood that NYPA and Canals exist for the benefit of all New Yorkers."

"The positive changes we made in 2020 are here to stay and evolve," Quiniones said. "While many may choose to forget 2020, the spirit of innovation, community and compassion was memorable. We made sacrifices and pivots while staying focused and strong. **Together, we have accomplished what may have been thought impossible."**

"All these precautions resulted in a 1 percent infection rate at NYPA, far lower than the state average rate."

– Gil Quiniones

"While 2020 has been challenging, it held silver linings for the people of NYPA and Canals. An overarching benefit of our Incident Command Structure was forming a temporary organization, within our organization, where many of us worked with people we may not have otherwise had the chance. Working side by side in crisis, with pauses for lessons learned and applying the key points, resulted in a more resilient organization."

Laura Yu
Director, Enterprise Change
Management & Engagement

A healthcare worker takes the temperature of Brad Van Auken, senior vice president, Operations Support Services and chief engineer, at NYPA's White Plains office.

When volunteers were needed to sequester for weeks at a time at a NYPA generation facility, Rob Cammer was ready. A prior stint in the U.S. Navy gave him a hint of what to expect. "My frame of mind was that it was like going to sea," he said.

For three weeks, Cammer was isolated with other plant operations, security, and building and grounds employees. They shared meals, experiences and the knowledge that they were performing an essential function.

"We all adapted to the challenges," Cammer said. "We already knew how significant the work was, but it reinforced the importance of what we do."

Rob Cammer
Operations Shift Supervisor
Blenheim-Gilboa Pumped
Storage Power Project

2. KEEPING THE LIGHTS ON

Above:
Electrical Engineer II Bosco Chan and General Maintenance Supervisor Christopher Guinn participate in a transformer installation at the Eugene W. Zeltmann Power Project, Astoria.

Resilience isn't a new concept for NYPA and Canals. With many scenario planning and business continuity exercises performed routinely, we felt prepared when COVID-19 broke out. But no one was fully prepared to grasp the potential magnitude of COVID-19's impacts. It was our moment to become more rigorous about resiliency.

For the health and safety of our employees, it was decided that most should work remotely. But dozens of control room and plant operators, plus employees who support them like security, building and ground staff, had to be sequestered for weeks at a time. It was a tough decision, but one that was necessary to keep our systems running and our people safe.

NYPA is a 24/7 operation. Even though many state businesses shut down in March 2020, we had to help ensure power was still being generated and that the reliability of our assets remained constant. With the pandemic raging in New York State, **it was critical that electricity supply to hospitals, healthcare facilities, other essential services and customers continued uninterrupted.**

With transparent and continuous communications from NYPA's leadership and senior executives, the entire organization became aware of the significance of the situation. Activating our Incident Command Structure (ICS) meant a cross-functional team began its work overseeing our needs and responding by coordinating with every business unit.

Among the ICS' first priorities were developing and implementing training, protocols and tools to screen, survey and monitor the health and safety of employees.

Leadership from the two unions that represent certain NYPA employees—the International Brotherhood of Electrical Workers Local 2032 and Local 2104, and the Utility Workers Union of America—and the two that represent some Canals employees—the Public Employees Federation and the

Civil Service Employees Association—worked closely with management to develop and support new safety protocols, work rules and other assignments to support the state's response. "I really appreciate the union leadership and their openness to discussion," said Joseph Kessler, executive vice president and chief operating officer.

Routine maintenance work and day-to-day operations continued through the shutdown. Many of NYPA's flagship generation and transmission projects, critical for system reliability, continued despite the tough challenges created by the pandemic.

Significant progress was made on the Smart Path project, which involves rebuilding and strengthening 78 miles of the 86-mile Moses-Adirondack transmission line in Northern New York. Construction involves replacing original H-frame wood poles, some of which are more than 80 years old, with more resilient single steel monopoles.

Smart Path, in addition to other system upgrades, is expected to deliver renewable energy from the North Country into the statewide power system, strengthening the power grid and helping meet the goals of Gov. Andrew M. Cuomo's Climate Leadership and Community Protection Act (CLCPA).

SMART PATH BACKGROUND

NYPA is rebuilding its 86-mile-long Moses-Adirondack transmission line.

The line runs from the switchyard at NYPA's St. Lawrence-Franklin D. Roosevelt Power Project in Massena to the Adirondack Substation in Croghan.

Though consistently well-maintained, the line is over 70 years old. The wooden portion of the line was built by the federal government in 1942. The line was acquired by NYPA in 1950 and was later extended, using steel monopoles, to the St. Lawrence project.

Left: *Construction materials for the Smart Path transmission upgrade project, Louisville.*

Right: *Robert Moses Niagara Power Plant, part of the Niagara Power Project, Lewiston. The first hydroelectric generator at the plant was digitized in 2020 as part of Next Generation Niagara, a 15-year modernization and digitization program.*

Construction work on the first 21-mile section of the line began in early 2020; it was completely rebuilt and re-energized by the fall. Smart Path work will continue and is expected to be completed in 2023.

In a separate initiative, the state Public Service Commission ruled a project proposed by NYPA met the criteria for a "priority transmission project" under the state's new Accelerated Renewable Energy Growth and Community Benefit Act. The act calls for high-priority renewable energy projects to be expedited in an environmentally responsible and cost-effective manner. NYPA's Northern New York Priority Transmission Project was the **first priority transmission project approved** under the act.

"I really appreciate the union leadership and their openness to discussion."

– *Joseph Kessler*

In 2020, NYPA gave notice it intended to exercise an option for a **37.5 percent ownership portion of a project with LS Power Grid New York to rebuild a transmission line** from Marcy, Oneida County, to New Scotland, Albany County. It will ease transmission congestion and bring more clean energy to the Mohawk Valley and Capital regions.

The first hydropower generator at the Niagara Power Project's Robert Moses Niagara Power Plant was digitized in 2020. This was **the initial milestone of Next Generation Niagara**, a 15-year modernization and digitization program at the project, which produces the largest amount of clean electricity in New York State. Digitization is a foundational element of VISION2030—NYPA's new 10-year strategic plan.

NYPA's main administrative office in White Plains became home to one of our newest clean energy projects. In December, we installed a **250-kilowatt hour, 50-kilowatt lithium-ion battery storage unit** that will lower the building's peak electricity demand for up to five hours.

This $3 million project—funded in large part by battery manufacturer Cadenza Innovation and the New York State Energy Research and Development Authority—showcases energy storage's role in enhancing demand management and grid flexibility. It will also help the state meet its clean energy targets.

NYPA performed extensive research for the battery storage project, and shared development and engineering expertise with the project partners for future use.

Watermaster, the Canal Corporation's new amphibious multipurpose dredger, undergoes testing on the Mohawk River.

We began construction, in August 2020, on a nearly $30 million, 20-megawatt battery-based energy storage project in Chateaugay on NYPA property near our Willis substation in Northern New York. The project is expected to be in service in 2021 and will use a unique one-hour lithium-ion battery system to help meet peak power needs by absorbing excess generation that can be discharged later, based upon the changing needs of the grid.

In December, we began a program to improve resiliency along the Erie Canal and Mohawk River in Schenectady County by addressing the complex causes of ice jams.

Operations continued significant work in 2020 along the 524-mile New York State Canal System. This included the **completion of a three-year, $28 million reconstruction of Oswego Canal Lock O-7.** The project resulted in an all-new lock and was completed with concrete construction and a new lock house. Revitalizing and extending the life of this facility will enhance recreational use of the Canal system.

Under Reimagine the Canals—a $300 million initiative to improve infrastructure, promote economic development and encourage tourism—we began, in December, a program to **improve resiliency along the Erie Canal and Mohawk River in Schenectady County** by addressing the complex causes of ice jams. Initial efforts include testing the ice-breaking ability of tugboats and using a newly acquired amphibious dredger to limit the formation of sheet ice, which will also benefit operations at NYPA's Vischer Ferry small hydropower plant in Niskayuna.

"Canal employees have always faced harsh winter conditions while performing extensive repairs during the non-navigation season. Whether below freezing temperatures, biting winds or snow and ice, Canals employees have always worked through it all. In 2020, with the additional challenge of COVID-19, they have continued to show the resilience to get the job done," said Ambrose Barbuto, director of Waterways Maintenance.

Josh Montonaro, Canals facilities operations assistant I, pumps out Lock E-11 in Amsterdam as part of winter maintenance on the Erie Canal.

“2020 challenged everyone to think, live and work outside of their comfort zone while testing their physical and mental fortitude. Knowing the actions taken by the NYPA and Canal family during the response and ongoing fight against COVID-19 to ensure safety at work and among the community, plus maintain our critical generation and transmission services not only makes me proud but will be one of the highlights of my career.”

Joseph “JT” Flick
Director
Emergency Management

3. ABOVE AND BEYOND

Above:
Scott Tetenman, senior vice president, Finance, at an Incident Command Structure meeting in March 2020 at NYPA's main administrative office, White Plains.

In early March 2020, with COVID-19 growing exponentially as a threat, NYPA activated its Incident Command Structure (ICS), a multidisciplinary team charged with leading, managing and monitoring the pandemic response. As early as January, planning and discussions were underway to activate the ICS if conditions worsened. They did.

The ICS was led by Incident Commander Paul Tartaglia, senior vice president, Technology and Innovation, and Deputy Incident Commander Adrienne Lotto, senior director, Energy Security & Resilience Programs. They were closely assisted by Saul Rojas, vice president, Enterprise Resilience, who served as operations section chief, a role in which he interacted closely with NYPA's generation and transmission leaders.

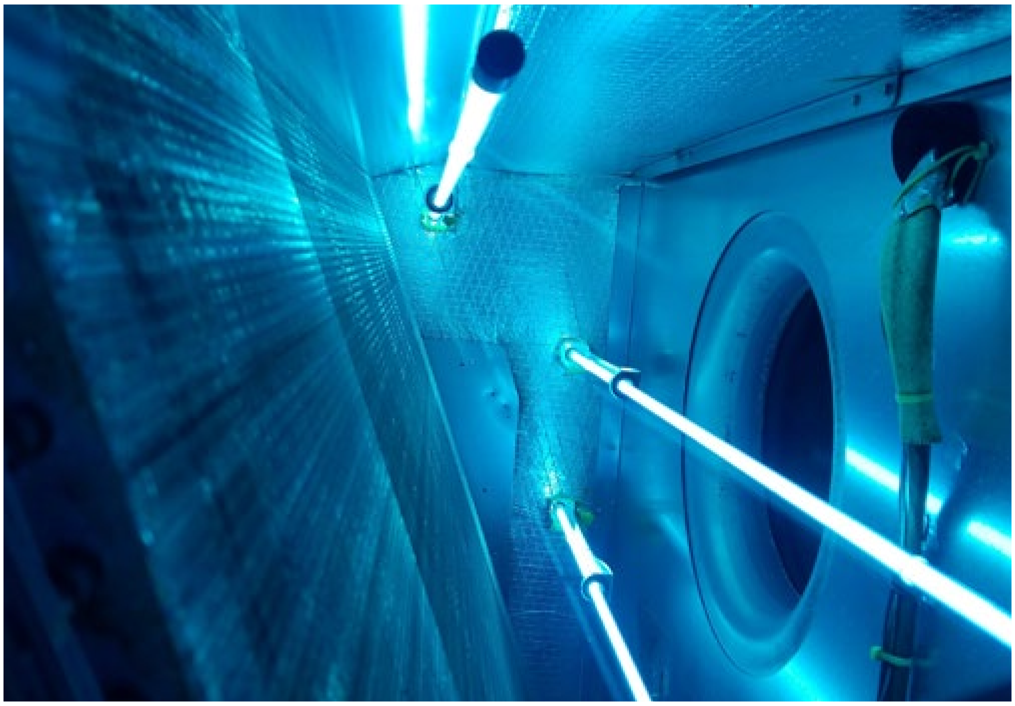
The ICS' COVID-19 response plan was based **on two fundamental priorities—employee health and continuity of operations.** ICS leadership aggressively implemented controls, became creative with solving problems and made decisions quickly and wisely. With COVID-19 as the adversary, the ICS became our "battle planning center."

COVID-19 response and crisis management plans for NYPA and Canals were developed and implemented in phases, allowing us to be flexible due to the unpredictability of the pandemic. The need for robust business continuity planning, emergency preparedness, and disaster response and recovery were heightened by the crisis.

Many employees transitioned to working remotely within a matter of days of the statewide shutdown. This was key to safeguarding health and keeping infection rates low. The health of many employees was monitored daily through screening, tracking and tracing software applications.

The ICS also planned all logistics, including accommodations, meals, access to communications and other amenities for sequestering employees at our facilities across the state.

Planning and prioritizing routine but necessary maintenance outages to keep power plants running in top shape required balancing risk-versus-reward decisions made in real time. Continuity of utility operations was essential to keeping communities safe. The ICS felt



Saul Rojas
Vice President
Enterprise Resilience

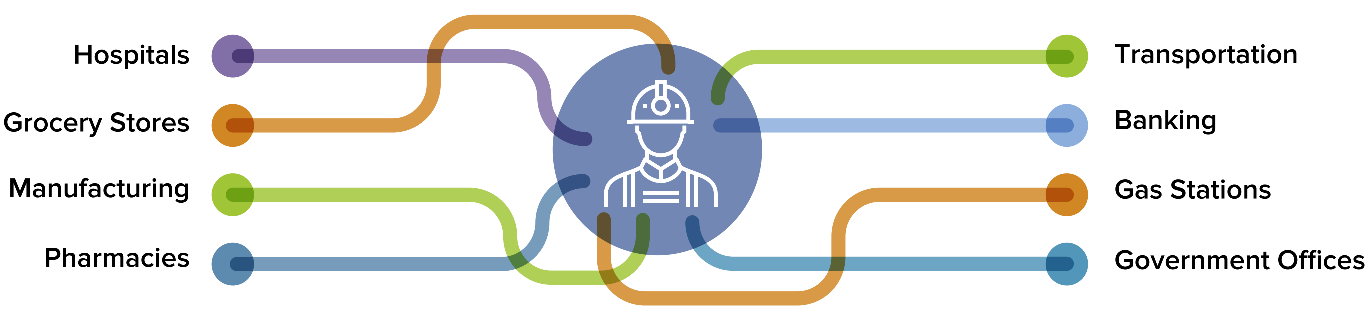
"Electricity is the oxygen of society; without electricity a lot of things can go wrong."
– Saul Rojas

a clear social **responsibility to ensure all the people in New York State had uninterrupted power supply.** "What would we do if the lights go out in NYC?" Tartaglia asked rhetorically. "A blackout in New York City would have far-reaching health, social and economic consequences to the entire country, especially during a pandemic."

The ICS prepared rigorously for supply shortages due to COVID-19. It directed NYPA's Strategic Supply Management team to adjust supply chain management from a normal, just-in-time model to one that called for stockpiling, making sure we had at least a six-month supply of personal protective equipment, and parts and equipment for our critical infrastructure and plants. "We even had gallons of sodium hypochlorite for making our own bleach if needed," Tartaglia said.

Lotto commended the resiliency and expertise of people at NYPA and Canals, and our level of trust. Having previously led the emergency response unit at the U.S. Department of Energy, she is intimately familiar with disaster preparedness. **"What is unique and distinct to NYPA is the transparency and the extent of communications,"** she said. Employees felt

ELECTRIC UTILITY WORKERS ARE ESSENTIAL FOR PROVIDING NYS SERVICES WITH POWER



Left: *An illuminated cooling coil installed at the Richard M. Flynn Power Plant, Holtsville, in 2020, an HVAC upgrade to help improve air quality for health and safety.*

Middle: *Building and Grounds Attendant Frank Felicetti disinfects door handles at the Niagara Power Project, Lewiston.*

Right: *Temporary living quarters for sequestered workers at the Niagara Power Project, Lewiston.*

safer, comforted and more confident after reading frequent emails and texts from the Executive Office, Corporate Communications and Change Management. “It displayed a sense of control and gave us the confidence of getting through the fog,” Rojas said.

When shutdown orders were gradually starting to lift and employees began returning to the workplace midyear, **the ICS unveiled a robust reopening plan called COVID-19 Countermeasures.** This series of health, safety and operating actions is based on escalating or diminishing regional infection rates.

The ICS also focused heavily on having our facilities ready for those in the workplace and those returning by installing or upgrading equipment. Touchless temperature scanners were installed to monitor the health of employees and visitors entering a facility.

Sensors for hands-free use of doors were added to help curtail spread of the virus. Plexiglass dividers were placed on reception desks. A free COVID-19 testing program for all employees was initiated at several NYPA and Canals facilities. The ICS also directed installation of UV treatment and upgraded filtration for air-circulating HVAC systems at all facilities.

NYPA invested $31.6 million and 164,500 employee hours in unforeseen, unique but necessary actions ranging from essential employee sequestration to facility protective measures to equipment for a remote workforce—dedicated to our top priorities, employee health and maintaining operations.

Prior experience of the ICS’ leadership was indispensable to the success of our COVID-19 response. Backgrounds such as Tartaglia’s community service as a volunteer fireman, Lotto’s work at the U.S. Department of Energy and Rojas’ electrical engineering expertise contributed to NYPA’s leadership abilities.

Despite contracting COVID-19 in the early stages of the pandemic, Rojas remained optimistic and confident in the competency and strength of his team, which he said, “went beyond the call.”

When she was appointed as Tartaglia’s deputy, Lotto—who had only recently joined NYPA—did not anticipate the demands of her additional role. She quickly proved her mettle by adapting and overcoming many challenges. She remained steadfast and committed to guiding us through this crisis. Echoing Rojas, she added, “The resiliency of the people of NYPA became evident.”

Adrienne Lotto
Senior Director
Energy Security &
Resilience Programs

“Communication was and remains today a regular steady cadence.”
– Adrienne Lotto

Together, today, we are more resilient as an organization and as individuals. The pandemic proved we are prepared to face future threats, but we cannot let our guard down. “We must be resilient by design, not accident,” Rojas said. **“Resilience is evolutionary. Our response, though, has to be revolutionary.”**

Rebecca Hughes
Senior Manager, Marketing & Customer Engagement, eMobility

Despite a year of canceled events and a shortage of experiential marketing opportunities, Rebecca Hughes found new ways to engage with the electric vehicle (EV) drivers. She co-led webinars alongside EV advocates to ensure that they had a voice in NYPA's EVolve NY fast charging program.

"Even though we were unable to host ride-and-drive events or attend car shows and music festivals, we found ways to stay connected," Hughes said. "Having the driver community celebrate with us at ribbon-cuttings for new stations was especially gratifying because we are building the infrastructure for them."

Above:
Lt. Gov. Kathy Hochul helps unveil EVolve NY's first electric vehicle fast-charging hub at Tops Friendly Markets in LaGrangeville.

4. TAKING CARE OF CUSTOMERS

The Commercial Operations team is customer-centric.

COVID-19 forced NYPA to temporarily stop many projects performed on behalf of customers in compliance with Gov. Andrew M. Cuomo's "New York State on PAUSE" Executive Order in March 2020. Despite this, **NYPA continued fundamental work already underway for customers that were providing essential services and emergency response to the pandemic**, including hospitals, transit agencies and government facilities.

The team immediately recognized that many of NYPA's commercial and industrial Economic Development Program (EDP) customers impacted by COVID-19 were hurting. To alleviate their financial hardship and help strengthen New York State's economy, NYPA quickly created the innovative Economic Development Customer Assistance Program (EDCAP).

EDCAP offered relief to EDP customers by providing extended interest-free bill payment terms and temporary hydropower allocations. "NYPA's low-cost hydropower is the lifeblood for hundreds of businesses across the state, supporting hundreds of thousands of jobs," NYPA Chairman John R. Koelmel said when EDCAP was announced in March 2020.

"The program was incredibly well received," said Sarah Orban Salati, executive vice president and chief commercial officer. EDCAP reached statewide, from Tulip Richardson Manufacturing, a plastic injection molding company, that receives Western New York Hydropower to ReCharge NY power recipient Magellan Aerospace in West Babylon on Long Island, which makes components for aircraft, military and space markets. Both customers are participating in bill deferral and temporarily increased hydropower allocations.

Some light during the pandemic was seeing businesses continue to look to the benefits NYPA offers as they planned for growth or looked to make their facilities greener. The results in 2020 were important signs for the future.

ECONOMIC DEVELOPMENT 2020

21.9 MW
power allocated to qualified customers

9,200
total jobs supported

$762.3 M
in capital investments

ENERGY SERVICES 2020

58 at **87**
projects state facilities

$160 M
financed for customers

14,500+
metric tons of CO_2 emissions to be reduced annually

When project work restarted in the spring, NYPA delivered several marquee projects for its customers and New York State. **EVolve NY put its first steel in the ground with the installation of its first public fast-chargers in LaGrangeville.**

This began one of EVolve NY's aims to promote electric vehicle use by providing the convenience of a **statewide public universal fast charging network along key travel corridors.** "We are continuing to reimagine New York's future fueled by clean, renewable energy," said Lt. Gov. Kathy Hochul, who attended the opening of that first charging hub in September.

Some light during the pandemic was seeing businesses continue to look to the benefits NYPA offers as they planned for growth or looked to make their facilities greener. The results in 2020 were important signs for the future.

Smart Street Lighting NY also picked up in 2020 when New York State on PAUSE was lifted. NYPA completed a LED streetlighting replacement project in Syracuse in November, cumulatively resulting in 30,500 LED streetlights being installed by NYPA in 2020.

Left: *Associate Project Engineer April Contreras (in NYPA safety vest) watches technician Jeff Burdick install an energy efficient LED streetlight on North Franklin Street in Syracuse as part of NYPA's Smart Street Lighting NY program.*

Middle: *ReCharge NY customer Magellan Aerospace, a maker of aeroengine and aerostructure assemblies and components.*

Right: *Lead Program Engineer II Edgardo Caban at Manhattan's Grand Central Terminal, where NYPA has completed several energy efficiency projects, as part of BuildSmart NY.*

Kevin Luteran
Program Manager
Smart Street Lighting NY

"It was tough managing the changing COVID-19 communications on Smart Street Lighting NY for more than 120 customers in contract and another 100 in various development stages. On the regulatory side, I was a subject matter expert on streetlights for a rate case with a regional utility to advocate for favorable terms so customers could purchase their existing streetlights from the utility and have them upgraded. In 2020, my proudest accomplishment was the launch of the new streetlight maintenance service that was in development for two years."

Since the program began in 2018, **NYPA has installed more than 70,300 energy efficient LED streetlights statewide.** That total, added to other street lighting projects completed by municipalities, contributes to more than 120,000 streetlights converted. This helped advance progress toward the state's goal to replace at least 500,000 streetlights with LED technology by 2025.

Smart Street Lighting NY projects were some of the easiest to restart, due to the small number of crew members involved—it enabled them to quickly adapt to working conditions that complied with health and safety protocols. NYPA's streetlighting customers, many experiencing tight budgets due to COVID-19 impacts, were eager to complete projects so they could secure savings that come from lowering their energy usage.

With the **successful completion of the state's multi-year, NYPA-administered BuildSmart NY**, 2020 marked yet another landmark achievement. NYPA, along with other participating state agencies and authorities, helped the program reach its target of 20 percent improvement in energy efficiency performance at state-owned facilities.

NYPA also accelerated its adoption of digital technology in 2020 as part of its goal to be the first end-to-end electric utility in the nation. An important digital touchpoint was the **growth of NYPA's online customer account center—part of the Customer Digital Experience (CDEx) initiative**—which incorporated all our power supply customers into its system in 2020. CDEx provides customers with a comprehensive view on the performance of their energy efficiency projects, energy consumption and billing.

With employee health, safety and mental well-being in mind, Commercial Operations, like other business units, instituted daily check-in calls and more frequent online all-hands team meetings. These calls proved to be an incredible opportunity for the team members to come together and address the challenges our customers faced.

Chris Copeland
Manager, Support Services

“Neither snow nor rain nor heat nor gloom of night, and now you can add during COVID-19, the mail must be delivered. As post offices were essential during the pandemic, we believed having the mailrooms at NYPA and Canals open was very important to maintain a degree of professional normalcy for business operations. Our in-house printing center followed that same thinking that helped print, produce and prepare hundreds of new health and safety educational signs needed at all locations.”

5. ON A PERSONNEL LEVEL

Above:
Executive Vice President and Chief Operating Officer Joseph Kessler addresses a group of interns at NYPA's main administrative office, White Plains.

2020 was a year of transformation personally and professionally for NYPA and Canals' approximately 2,400 employees.

The long-standing tradition of innovation at our organizations instilled confidence in our ability to be resilient and rise to the occasion with the looming challenges.

Our essential personnel stepped up. There was staff that came in to work every day to keep the lights on for us and the state of New York. These sequestered employees, many from our unions, were key to keeping our operations running smoothly.

There were NYPA and Canals employees making deliveries of hand sanitizer, personal protective equipment (PPE) and lab specimens around the state; refueling transport vehicles; stocking state agency warehouses; assisting at testing locations; and making calls at phone banks to support contact tracing and unemployment inquiries.

Within Human Resources and Administration (HR&A) there were employees on the front line to provide urgent support to the organization. They were procuring supplies—from PPE when inventories internationally were scarce to leasing mobile homes needed to isolate and protect sequestered employees—to developing programs, implementing communications, and responding to staff day and night.

HR&A essential workers also included teams in our mailrooms and reprographic services joining their colleagues at site warehouses, who continued to report to their work locations through the pandemic. They were critical in providing much-needed support to employees, whether by mailing them PPE and printing communications or providing our facilities with needed supplies.

Employees working remotely were also important to supporting operations—many teams and individuals worked long hours and were flexible in taking on additional responsibilities such as lending their expertise through the SkillShare program.

Nancy Harvey
Chief Diversity, Equity
and Inclusion Officer

Nancy Harvey was promoted to this new position, which addresses the growing importance of DEI at NYPA and Canals.

A deep understanding of the personal strain placed on all employees quickly emerged.

NYPA implemented policies to help employees thrive away from work, such as extended paid leave that allowed them to quarantine, convalesce, take care of families or adjust to pandemic-related fatigue. Assistance from the Employee Assistance Program and mindfulness apps and techniques were widely promoted. Working from home for an extended period has altered everyone's perspective on mobility and the need to be in an office.

Communication also was key to managing the chaos caused by this crisis. Teams from Total Rewards, Corporate Communications and Change Management are in the HR&A business unit, and their goals were to keep COVID-19 information flowing.

Within Human Resources and Administration there were employees on the front line to provide urgent support to the organization.

In addition to COVID-19 challenges, the death of George Floyd in May and the social upheaval that followed across the country shone the light on racial justice and equity. We engaged the organization in candid dialogues about their experiences and solicited feedback on ways to strengthen current and future diversity, equity and inclusion (DEI) initiatives.

The resulting **Ten-Point Diversity, Equity and Inclusion Plan** shows NYPA's commitment to lead by example by expanding opportunities in underserved communities, increasing the participation of minority- and women-owned businesses in the supply chain, and creating an inclusive environment that aligns with our values.

The plan also seeks to proactively implement solutions to address underrepresentation of women and minorities in the utility industry and increase opportunities. "We draw strength from our diversity—everyone contributes, everyone belongs," said Nancy Harvey, who was promoted in 2020 to NYPA's first Chief Diversity, Equity and Inclusion Officer.

While there have always been diversity programs at NYPA, **the DEI plan is comprehensive and describes our internal and external initiatives towards maximizing the potential of people** by providing details for staff and talent development; training investments; expanding supplier diversity; and recruiting a diverse workforce from the communities we serve.

Left: *System Operator I Jason Smith (left) and Ormond Ross Jr., a building and grounds attendant, prepare a meal while working in sequestration at NYPA's Emergency Energy Control Center, New Hartford.*

Middle: *Mail Center Supervisor Tony Koch in NYPA's main administrative office, White Plains.*

Right: *Employees at the Niagara Power Project, Lewiston, bag groceries for delivery to Heart, Love & Soul in Niagara Falls as part of NYPA Giving Week, during which workers volunteered at food banks and soup kitchens.*

Victoria Daniels
Manager, Supplier Diversity

As a member of the Multicultural Employee Resource Group, Victoria played a key role in galvanizing DEI efforts to include improving opportunities for diverse suppliers.

This commitment is also demonstrated through **NYPA's values**, which are part of the VISION2030 strategic plan issued in 2020. More than 700 employees were engaged in drafting the values, which form the **foundation of NYPA's collaborative community.**

This year "tested us in unimaginable ways. Everyone stepped up and we knew we would be able to move forward," said Kristine Pizzo, executive vice president and chief Human Resources and Administration officer.

TEN-POINT DIVERSITY, EQUITY AND INCLUSION PLAN

1. *Reaffirm NYPA's commitment to building and maintaining a diverse, equitable and inclusive culture.*
2. *Ensure that our processes, polices and procedures are transparent and free from bias.*
3. *Expand ongoing training to our employees on antiracism, unconscious bias, microaggression, and cultural competency.*
4. *Create a Chief Diversity, Inclusion and Equity Officer position, reporting to the President and CEO and the Chief Human Resources and Administration Officer—and increase investment in the office of Civil Rights and Inclusion.*
5. *Invest in our Black employees and create pathways for career development and upward mobility.*
6. *Cast a wider net and secure a diverse slate of applicants for vacancies by partnering with professional organizations such as the American Association of Blacks in Energy, Historically Black Colleges and Universities and local and national colleges and universities.*
7. *Partner and support of employee unions at the national, regional and local levels and invest in their diversity, equity and inclusion programs and initiatives.*
8. *Leverage NYPA's experience, resources and purchasing power to build capacity and access to MWBE firms.*
9. *Broaden our community-based STEM, student internship and mentorship programs to increase the pipeline of utility and clean energy workers of tomorrow—including the creation of a targeted college scholarship program.*
10. *Create an enterprise wide employee service program dedicated to understanding racial justice through our clean energy business (e.g., community solar) and energy sustainability work in environmental justice communities.*

In addition to keeping planned projects on track for completion, Costanza played a key role in preparing and securing the work-from-home environment for the pandemic and collaborated with multiple New York State partners for cyber mutual assistance response efforts.

"I'm proud of the Cyber team and the collective efforts put forth to achieve many significant accomplishments while keeping NYPA secure in the face of numerous emergent cyber threats in such an unprecedented year."

Vic Costanza
Senior Director, Configuration Control
Deputy Chief Information Security Officer

6. POWER ON WITH TECH

NYPA's Information Technology (IT) group has been on a long-term digitization path that allowed us to be resilient and agile in the face of the daunting challenges created by COVID-19.

Many businesses shut down or faced operating restrictions last year, but the nature of NYPA's work—supplying electricity—does not allow for that.

The story of NYPA's preparation and agility was four years in the making. **Prior investments in virtual infrastructure, cloud environments and talent development created a secure, robust digital ecosystem.**

When 2020 began, IT had already equipped many employees with mobile workstations. These measures were coupled with an Agile business mindset—in which problems and solutions are identified and solved by teams. This enhanced our digital capabilities and helped us withstand the tests we faced during the year.

In less than three days, the organization was moved to working remotely. At the same time, we continued to monitor and defend against imminent cyber threats and support NYPA's day-to-day operations and strategic business initiatives.

With a commitment to readiness, IT immediately addressed the shift to working remotely created by the pandemic so staff could collaborate in new ways. IT integrated and customized off-the-shelf platforms to facilitate seamless online communication and secure file sharing. In addition, IT provided training for employees to quickly adapt to the new cloud-based environment.

IT's internal Help Desk expanded to provide 24/7 technical support to employees and a self-service feature was introduced for further flexibility.

We further shepherded investments in digitization during 2020 to fundamentally change IT's organizational model.

Above:
Teri Pegnataro, manager, Service Fulfillment, prepares computer equipment for delivery to employees who were preparing to work from home.

Left: *Control Room Operator Danny Albrecht uploads vibration data into a specialized data acquisition system at the Eugene W. Zeltmann Power Project, Astoria.*

Middle: *Messages, on digital signs and other formats, were posted throughout workplaces to remind employees of COVID-19 health and safety measures. IT supports digital sign communications. Shown here is one example on the 8th floor of NYPA's main administrative office, White Plains.*

Right: *Senior Desktop Support Analysts James Maffucci and Guillermo "Bill" Brown (below) assist employees at the Help Desk at NYPA's main administrative office, White Plains.*

KEY IT ACCOMPLISHMENTS

RESOLVED
20,073
Help Desk Tickets

SUPPORTED
43,000+
Teams Meetings

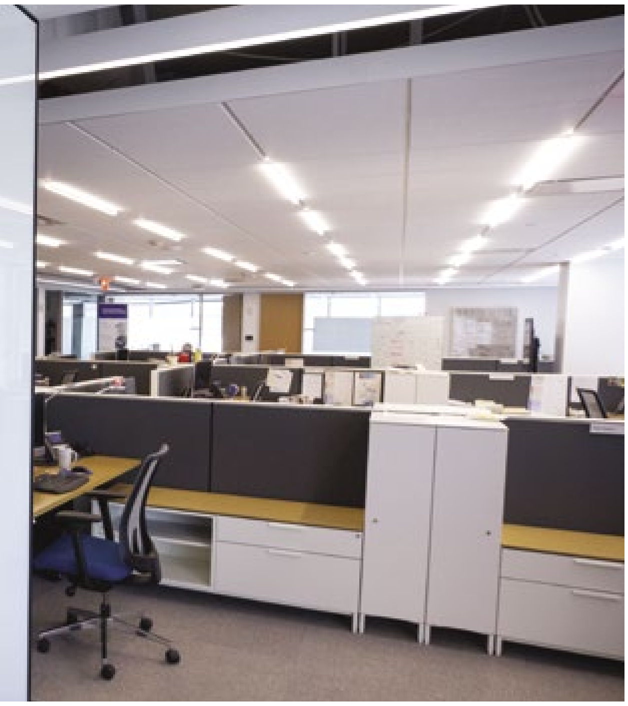
MANAGED
1,173
Servers @ 99.99% Availability

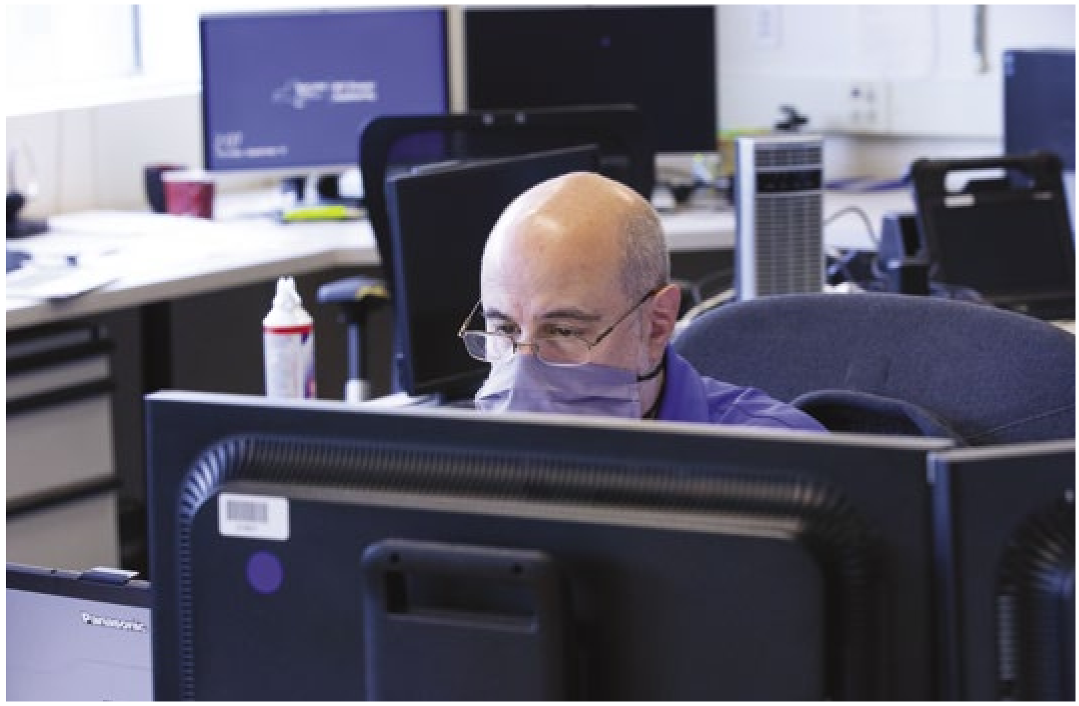
RELEASED
27
New Applications
In less than 10 months

COMPLETED
<3 DAYS
Work From Home Mobilization

We continued to institute agile principles, develop a series of operating plans and strategies from IT resiliency to business continuity and recoverability, and implement programs to nurture talent. COVID-19 demonstrated the value of IT and validated what we have been doing over the past years by leveraging digital investments.

As significant as the pandemic was to IT operations, the group faced a second crisis in 2020—an international increase in cyber threats. The same commitment to strategic planning and investments in systems and people that fueled the COVID-19 response had also been established to protect NYPA from potential external danger.





"Constant coordination with government agencies, such as the U.S. departments of Homeland Security and Energy, the FBI and numerous information sharing centers provided additional insights for identifying and mitigating threats and maintaining best preventive practices," said Vic Costanza, senior director Configuration Control and deputy chief information security officer.

In less than 10 months, 27 software applications were developed for employees by IT. These tools showed how digitization played an important role in supporting health and safety daily screenings, case tracking and contact tracing, productivity, COVID-19 test scheduling and occupancy capacities at NYPA and Canals facilities.

COVID-19 demonstrated the value of IT and validated what we have been doing over the past years by leveraging digital investments.

Moving into the future, IT will stay focused on serving many audiences while bringing value to the organization. "I'm mindful of the employee experience, customer experience and user experience. We must **continue to build and invest in the total experience while we focus on delivering the digital capabilities to achieve our VISION2030 strategy**," stated Robert Piascik, senior vice president and chief Information and Technology officer. "That's where IT is going."

“The bond deal was one of the most exciting things I have ever been professionally a part of, and I am grateful to team leaders Adam Barsky and Christina Reynolds for the opportunity to work on it. Adding the stress and uncertainty of the pandemic (also, my last semester in grad school completing my MBA at Iona College) made it three months of nerves, excitement and one of the largest feelings of accomplishment I have ever experienced once it was done.”

Alana Sausto
Senior Portfolio Analyst
Operations Portfolio Management

Above:
Newly installed metal towers in Louisville, where construction of the Smart Path transmission upgrade project began in 2020.

7. THE YEAR OF FIRSTS

The global spread of COVID-19 and the economic uncertainty that followed had wide-ranging impacts on organizations like NYPA that rely in part on market funding to pay for projects that support our operations.

Facing climate change and implementing the nation's most aggressive clean energy goals under Gov. Andrew M. Cuomo's Climate Leadership and Community Protection Act, NYPA knows a green energy future requires significant investments.

With limited access to credit and funding, lack of liquidity and short-term cash flow issues, public and private organizations across the country were put under tremendous financial stress. Such ongoing uncertainties and market dislocation were a matter of grave concern to NYPA, particularly as it affected our customers.

Before the pandemic began, NYPA planned a bond issue, its first in five years, to capitalize on low interest rates. The objectives were to use proceeds to restructure existing debt, fund capitalized interest on ongoing projects, balance the portfolio and create a funding source for ongoing capital programs.

When COVID-19 brought the economy to a standstill, NYPA reviewed its overall financial position, liquidity and impending capital outlays, and took measures to fortify our balance sheet to weather any unforeseen circumstances.

The pause in many NYPA operations during the pandemic also provided the opportunity to reflect, restructure and develop alternative strategies for shoring up liquidity and securing additional revolving lines of credit. This delay also set the stage for NYPA to re-evaluate the bond structure and prepare for its issuance.

NYPA's strong financial fundamentals, credit ratings, brand reputation, the essential nature of our business operations and commitment to renewable energy gave us the confidence to increase the value of the bond issue while interest rates stayed low. We did this even while

Left: *NYPA's Breaker II tugboat moves past the Statue of Liberty and lower Manhattan on its maiden voyage to the Niagara Power Project, where it will help break ice on the Niagara River to help keep clean energy flowing during the region's harsh winters.*

Middle: *Javits Center President and CEO Alan Steel, left, and NYPA representatives tour the facility's solar roof display with Lt. Gov. Kathy Hochul (second from right).*

Right: *A 250-kilowatt hour, 50-kilowatt lithium-ion battery storage unit is installed at NYPA's NYPA's main administrative office, White Plains. The system will lower the building's peak electricity demand for up to five hours.*

GREEN BONDS SUMMARY INFORMATION

	2020A	2020B (Taxable)
Bond Ratings (M/S/F)*	Aa1 (Neg.) / AA (Stable) / AA (Stable)	
Par Amount	$1,120,610,000	$114,020,000
Green Bonds	**791,620,000**	–
All-in TIC**	3.63%	2.87%
Amortization	2039 – 2060	2034 – 2039
Average Life	31.5 years	17.2 years

Source: SDC Platinum, 09/22/2020.
** Moody's, Standard & Poor's, Fitch*
*** True Interest Cost*

market uncertainties persisted. All these things set the stage for us to prepare for what would become **historic for NYPA and the bond market in 2020.**

In April 2020, just after the Federal Reserve intervened to stabilize the economy, NYPA took its largest-ever bond offering of $1.2 billion to the market. Historically low interest rates allowed us to lock in favorable long-term financing for liquidity and capital plans.

NYPA decided to go big instead of going home. We secured the lowest interest rate ever for a NYPA bond sale. It was the largest public power transaction in 2020 and by including NYPA's first Green Bond, it was also the largest public power "Green Bond" for clean energy projects ever issued.

The $1.2 billion bond sale was awarded Deal of the Year 2020 in the Northeast region by The Bond Buyer, a financial trade publication.

Green Bond is a relatively new concept and uniquely attractive to investors seeking to address climate change. It asserts such bonds will fund carbon-friendly assets and infrastructure, and are certified by an external party. NYPA worked closely with Sustainalytics, a global leader in Environment, Social and Governance (ESG) and Corporate Governance research and ratings, to review NYPA's clean energy projects.

Ultimately, almost $800 million of the bond was certified "Green." These funds will help enhance projects such as

continuing modernization of NYPA's major hydropower facilities, and rebuilding and adding transmission assets to integrate additional renewable energy sources into the electric grid.

Going into 2020, NYPA had a capital plan of $865 million covering about 800 projects. As COVID-19 accelerated, non-essential work was paused, and NYPA focused on maintaining core operations and preserving cash for an uncertain future. As the year progressed, **NYPA resumed construction with safety foremost and accomplished a significant $679.1 million, or 79 percent, of the capital plan** for major generation and transmission work.

In April 2020, just after the Federal Reserve intervened to stabilize the economy, NYPA took its largest-ever bond offering of $1.2 billion to the market.

Observing that people are judged on how they operate under adverse conditions, Adam Barsky, executive vice president and chief financial officer, said, "I am truly impressed with the quality of my staff and their ability to rise to the occasion."

FIRSTS FOR NYPA's $1.2 BILLION BOND SALE

FIRST
NYPA bond issue in five years

FIRST
NYPA Green Bond

LOWEST
interest rate ever for a NYPA bond

LARGEST
public power transaction in 2020

LARGEST
public power Green Bond ever issued

DEAL OF THE YEAR 2020
in the Northeast region by The Bond Buyer

Janis Archer
Vice President
Enterprise Excellence

"The biggest challenge in crafting the VISION2030 strategy was to maintain focus on the overarching goals of combating climate change and enabling a clean energy economy, while concurrently addressing the critical issues of resilience and social equity.

NYPA's leadership role is not confined to energy—we also have a responsibility to model effective and equitable corporate citizenship."

8. VISIONING THE FUTURE

Above:
Hotstick Lineperson Derrek Spencer, left, and Apprentice Lineperson Patrick Beckwith replace insulators on a transmission line in Cicero.

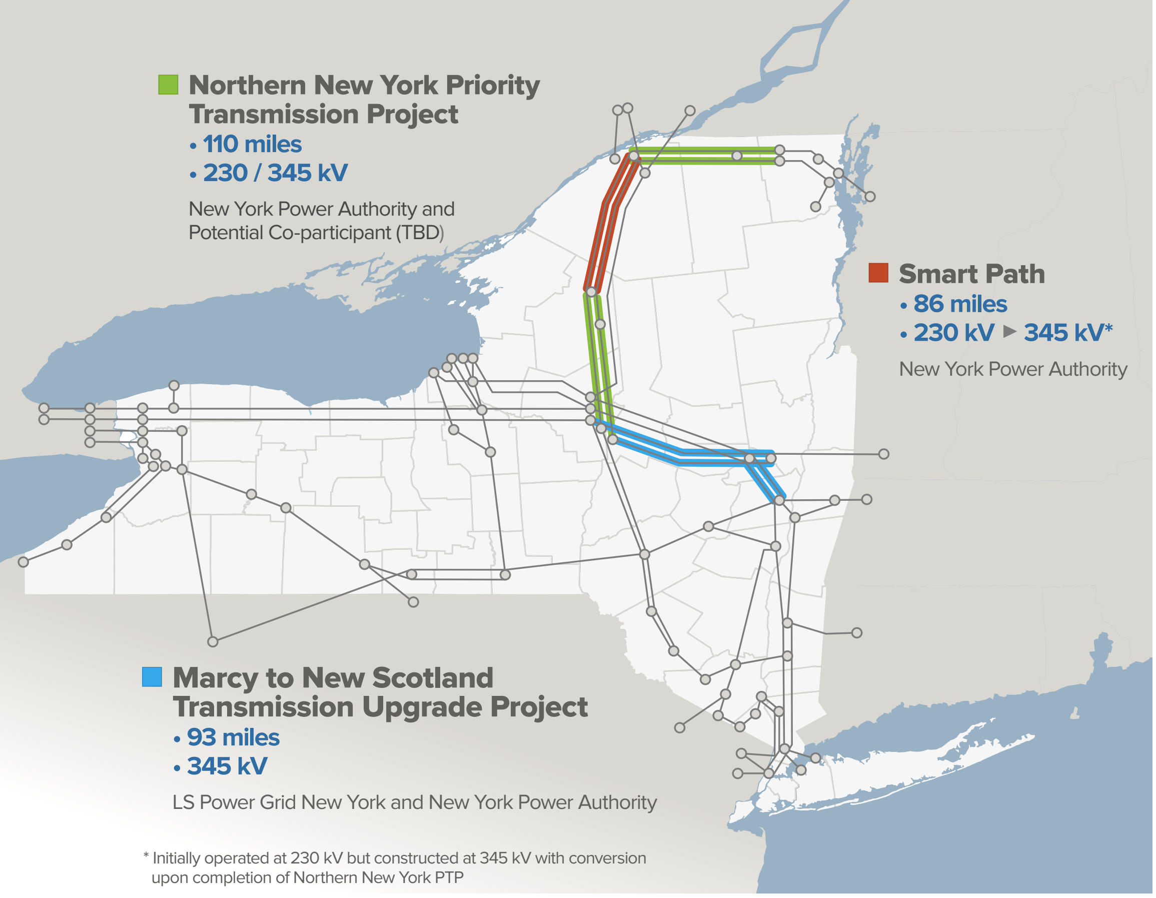
NYPA's new strategic plan, VISION2030, provides a roadmap for leading the transformation of New York State's energy infrastructure to a clean, reliable and affordable system over the next decade.

While that aspiration remained at the core of the strategy, the global pandemic compelled us to reassess the plan in 2020. Instead of issuing VISION2030 in the spring as was initially planned, **NYPA took several months to re-examine our overarching vision, mission and values through the prism of 2020.** The updated VISION2030 was released in December.

The reality of COVID-19 made it important to incorporate a tactical approach with a focus on the present. It became clear that **resiliency and sustainability for NYPA's employees, partners, customers and the communities where we operate had to be at the forefront of our new strategy.** "Resiliency and sustainability are crosscutting imperatives which drive our strategic priorities and foundational pillars for accomplishing our vision of the future," said Yves Noel, senior vice president of Strategy and Corporate Development.

COVID-19 also reinforced the need for investments in our most important areas, such as **preserving hydropower, decarbonizing gas-powered facilities, building new transmission assets, serving our customers and modernizing the New York State Canal System.** These became the strategic priorities for achieving the goals that underlie VISION2030.

Having gained a deep understanding of NYPA's infrastructure, and by listening to the employees who maintain our assets, the Strategy team delved into developing a plan that was consistent with NYPA's vision. They continued engaging with employees throughout the year to create transparency and reinforce NYPA's resiliency and readiness in leading New York State towards a cleaner and greener future.



GROWING TRANSMISSION CAPACITY IN NEW YORK STATE

Keeping the Strategy team grounded, and the strategy planning relevant and consistent, was Janis Archer, vice president, Enterprise Excellence. She was acknowledged by the team as the bedrock for viewing every aspect of strategy development from an employee's perspective.

Beyond dealing with the issues of the day, resiliency is also about having the tools to adapt to changing situations. At NYPA, the foundation had been laid with investments in cloud computing, secure data management, the Integrated Smart Operations Center (which monitors the health of NYPA's generation and transmission assets) and other advanced technology that over the past few years gave us the edge to **adapt and deploy solutions for a swift transition to a remote workplace.**

A secure, robust and reliable communication network is a critical aspect of our digitization. In 2020, **NYPA piloted a drone flight using private wireless Long-Term Evolution (LTE) technology.** NYPA's fiber optic network and private LTE network will allow us to leverage the benefits of evolving innovation in the wireless industry. This includes using drone technology to safely monitor and inspect NYPA's assets, workforce mobility, and secure communications for emergency management that will allow connectivity to remote equipment and staff in the field.

Daniella Piper, vice president, Digital Transformation Office and chief of staff, attributed these advances largely to investments made as part of our end-to-end digital transformation, and the determination of employees.

STRATEGIC PRIORITIES

- **Preserve and enhance the value of hydropower**
- **Pioneer the path to decarbonize natural gas plants**
- **Be the leading transmission developer, owner and operator for New York State**
- **Partner with our customers and the state to meet their energy goals**
- **Reimagine the New York State Canal System for economic and recreational benefit**

Left: *Locations of three NYPA transmission initiatives with milestones in 2020.*

Middle: *The Advanced Grid Innovation Lab for Energy at NYPA's main administrative office, White Plains.*

Right: *Monitoring and Diagnostic Engineer Amie Carter, Senior Transmission Engineer I Michael Fuchs, Digital Transformation Office Director Kedaar Raman, Senior Director of Digital Innovation/Transformation Munawar Ali Mohammed and Digital Solutions Specialist Neal Addison at a test flight of a drone inspection of transmission lines at the Blenheim-Gilboa Pumped Storage Power Project, North Blenheim.*

It became clear that resiliency and sustainability for NYPA's employees, partners, customers and the communities where we operate had to be at the forefront of our new strategy.

Piper, an engineer, has been involved in many aspects of NYPA's business—from a program to ensure compliance with the reliability standards that our bulk power equipment must meet to large-scale projects that modernize and extend the life of our transmission assets. She is deeply committed to exposing youth from underserved communities to careers in the power industry, a critical step in creating a diverse pipeline of energy professionals. With that in mind, Piper contributed to the development and **launch of NYPA's Ten-Point Diversity, Equity and Inclusion (DEI) plan** in 2020.

The social unrest in the U.S. last year created a sense of urgency for NYPA to accelerate our efforts in delivering greater equity. "The entire organization was involved in reinvigorating NYPA's core values," Piper said. "It became clear that DEI was one of NYPA's foundational pillars in VISION2030."

With VISION2030 setting an ambitious roadmap to a cleaner environment, the continued expansion of digital technologies for more efficient operations and accepting greater responsibility for a more inclusive world, **"2020 gave us the opportunity to reflect and develop a plan that has the potential to bring about lasting change,"** Piper said.

FOUNDATIONAL PILLARS

Digitization

Leverage connectivity, analytics, and cutting-edge digital infrastructure to optimize our physical and data assets, enable our workforce, and empower our customers

Environmental, Social and Governance

Deliver on a best-in-class sustainability strategy to meet the present and future needs of our stakeholders and ensure long-term environmental, social, governance, and economic performance

Diversity, Equity and Inclusion

Establish NYPA as a leader in DEI by developing an internal culture of inclusion, a diverse supplier base, and a commitment to environmental justice

Enterprise Resilience

Prepare for a more distributed and uncertain operating environment by rapidly embedding resilience into NYPA's culture

Resource Alignment

Ensure we can provide the clean energy environment the people of New York deserve by making our workforce as skilled and flexible as possible, improve access to information and knowledge that enable effective delivery, and optimize our core business processes

Lori Alesio served on the Incident Command Structure as legal counsel to provide legal guidance on the development and implementation of new and unprecedented work force policies during COVID 19 in compliance with federal and state laws. She also advised organizational leaders on critical personnel deployment strategies that required communication and agreement with affected labor leaders for our represented NYPA and Canals workforces.

Lori Alesio
Assistant General Counsel
Human Resources and Labor

9. FURTHERING NYPA's SUCCESS

Above:
Circuit breaker installation at Frederick R. Clark Energy Center, Marcy.

Multidisciplinary collaboration is central to the way we work at NYPA and Canals.

The legal team served on the Incident Command Structure (ICS)—the group charged with managing our response to COVID-19.

They provided guidance on a myriad of issues, including policy development on safety, site capacity, Health Insurance Portability and Accountability Act compliance, and privacy protection concerning documentation on health reporting and testing.

In addition the legal team worked with groups in other business units to assist ongoing projects needing legal input.

Dialogues with external Environmental Justice groups were facilitated by the legal team to study the transition of our fleet of natural gas-fueled small clean power plants in New York City and on Long Island to cleaner energy alternatives and technologies. The resulting landmark agreement, a Memorandum of Understanding—between NYPA and the PEAK Coalition—was the first of its kind in the nation. The work with the PEAK Coalition, a group of five leading environmental justice and clean energy interests advocating for climate-vulnerable populations, demonstrates our commitment to be a good neighbor in communities where we have facilities.

NYPA's legal affairs team helped lay the groundwork for approval of the Northern New York Priority Transmission Project (NNY PTP), which involves rebuilding lines in that region. In 2020, the state Public Service Commission ruled this project met the criteria of the state's Accelerated Renewable Energy Growth and Community Benefit Act. The act calls for high-priority renewable energy projects to be expedited in an environmentally responsible and cost-effective manner. NNY PTP was the first priority transmission project approved under this process.

Gov. Andrew M. Cuomo leads a COVID-19 information meeting in March 2020 at NYPA's main administrative office, White Plains.

NYPA's commitment to customers included the legal team that assisted with development of Economic Development Customer Assistance Program (EDCAP)—the rate deferral and temporary hydropower allocation program—initiated by the Commercial Operations business unit in March. **The legal team offered regulatory assessment, reviews and documentation to support this unique initiative, to support Economic Development customers impacted by COVID-19**, for approval by the Board of Trustees.

The resulting landmark agreement, a Memorandum of Understanding—between NYPA and the PEAK Coalition—was the first of its kind in the nation.

Furthering NYPA's technology goals involved our attorneys and their support staff during COVID-19 as reliance grew with the use of online and digital tools for document sharing and approvals, conducting contract reviews and negotiations, and participating in virtual public hearings.

"Working tirelessly, people came together to manage this crisis," said Justin Driscoll, executive vice president and general counsel.

STATEWIDE IMPACT

25%

We generate up to 25 percent of New York State's electricity

80%

More than 80 percent of our generation is carbon-free hydropower

1,400+

CUSTOMERS

Our customers include businesses; local, county and state government entities; and 51 municipal electric systems and rural electric cooperatives

500+

Miles of Canal waterways across New York State

Employees take a tour of construction at the New York Energy Zone visitors center, Utica, which NYPA plans to open in 2021.

BEING OPEN WHEN THE DOORS CLOSE

Shane Mahar
Communications Strategy Manager
Reimagine the Canals

"In three short weeks, it was truly an experience to create, develop and launch NY Canal Staycations. As many families canceled out-of-state summer vacation plans, the program promoted six hubs of canal and trail activity that allowed folks an opportunity to get outside and stay active right in their backyard. Nearly 2,900 people took advantage of the excursions offered and the program received positive coverage from local news media across the Canal system. In addition, the Staycations website and social media posts received a tremendous amount of hits."

In March 2020, as the rising rates of COVID-19 forced sudden closures and restrictions on people and their activities across the state, Joseph Leary, vice president, Government & Community Affairs, said, "I trusted my gut, relied on common sense and followed the science."

At the direction of the Incident Command Structure (ICS), which managed NYPA's COVID-19 response, Leary and his team made a difficult decision. For the first time in NYPA history, and coming off record visitation and public engagement numbers in 2019, community events were cancelled and the three NYPA public visitors centers were closed until further notice.

"Each of NYPA's visitors centers is the welcome mat, front door and living room to showcase NYPA and let us put our best foot forward," said Leary. "For school groups, local organizations and visitors from around the world, we bring the experiences of free world-class energy exhibits, local history, outdoor recreational areas and stunning vistas."

NYPA owns and operates visitors centers at its major hydropower generating facilities. They are the Power Vista at the Niagara Power Project in Lewiston, the Frank S. McCullough, Jr., Hawkins Point Visitors Center and Boat Launch near the St. Lawrence-FDR Power Project in Massena and the Blenheim-Gilboa Visitors Center for the Blenheim-Gilboa Pumped Storage Project in North Blenheim.

As the visitors centers share staff who also work in close proximity with critical operating staff responsible for electricity supplies, Leary and his team recognized closing the doors was a necessary measure to protect the health and safety of our visitors and the employees rather than risk contacts that might spread COVID-19 and hinder essential energy operations.

Fortunately, construction at NYPA's soon-to-be fourth visitors center, the New York Energy Zone in Utica, was able to continue. It had progressed to where weather exposure would have created safety hazards and damaged the facility's interior but more importantly, after ICS review, work proceeded using NYPA's COVID-19 health and safety protocols and processes specifically developed for construction sites.

In late October, again based on the science of COVID-19, NYPA felt that **two of the visitors centers, the Power Vista and Hawkins Point, could safely reopen on a limited basis with newly added safety precautions for employees and visitors.** "Despite our best intentions to offer safe outings to alleviate cabin-fever, **when COVID-19 rates again began to rise just two weeks later, we closed the visitor centers doors once again and are continually preparing for the time we can reopen,"** said Leary.

While physical doors were closing, opportunities to open virtual doors continued, in another aspect of the work Leary's team does—Government Relations. "Seamless," described Leary as the team shifted from phone calls and office visits to the virtual world when connecting with elected and municipal officials." **"If anything, it sharpened our communications skills as we were hungry to share the message**

Left: *The Niagara Power Vista visitors center, Lewiston, hosted socially distanced tours in fall 2020.*

Right: *Cyclists pedal over a bridge spanning the Erie Canal in Waterford.*

of what essential work we could continue during the pandemic," said Leary.

As doors at holiday and vacation spots across the world were shuttered, the Canal Corporation saw an opportunity. As the weather got warmer and with travel limited, New Yorkers—many suffering from COVID-fatigue—were seeking relief. In partnership with local businesses across the state, NYPA and the Canal Corporation launched the NY Canal Staycations program in July to provide close-to-home vacation experiences. Staycations highlighted ways for New Yorkers to get active and experience our state's history and natural beauty, while staying close to home and following the social distancing more easily found when outdoors.

New Yorkers—many suffering from COVID-fatigue—were seeking relief. In partnership with local businesses across the state, NYPA and the Canal Corporation launched the NY Canal Staycations program in July to provide close-to-home vacation experiences.

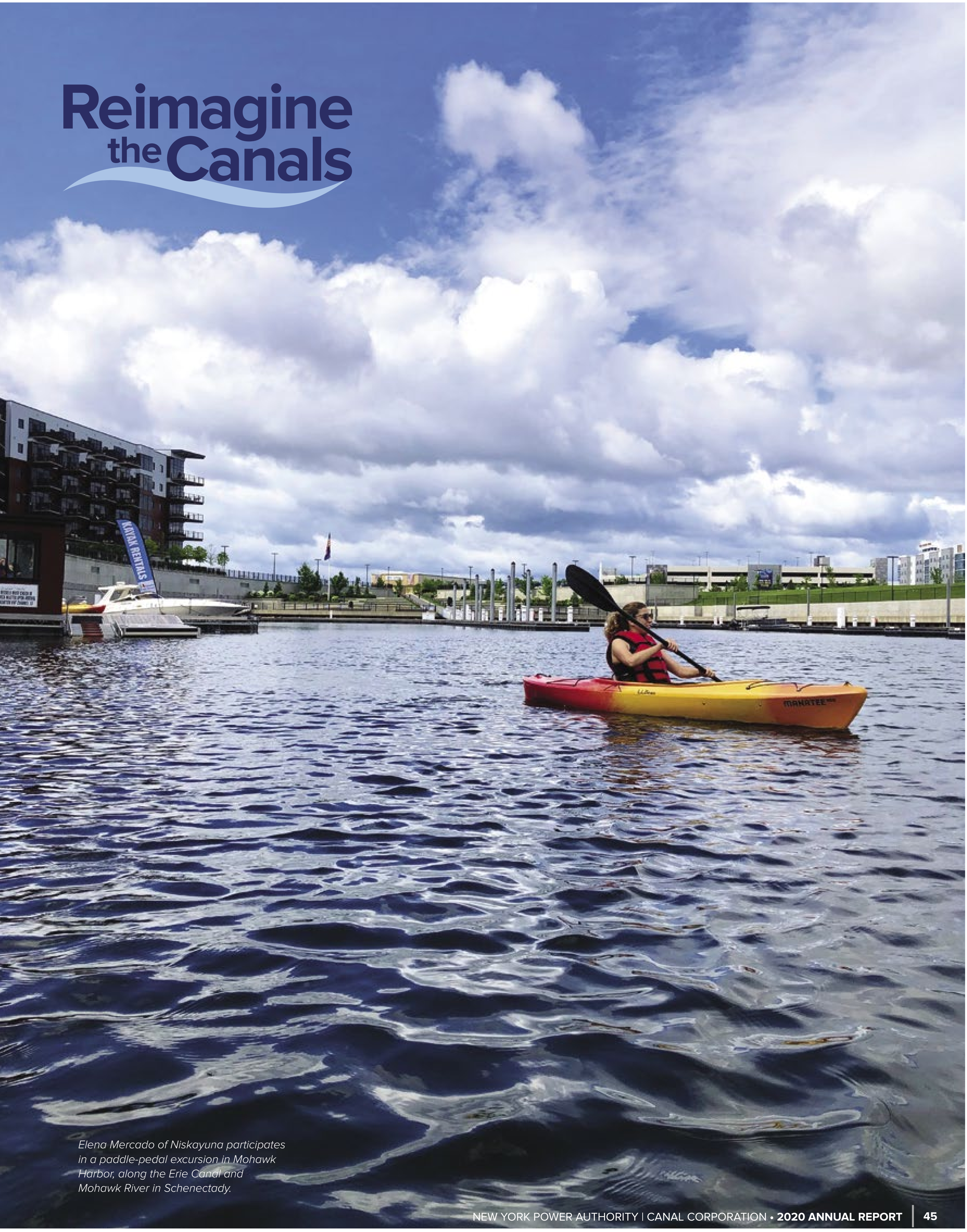
Almost 2,900 people enjoyed outdoor activities, such as hiking, biking, canoeing or kayaking, in six packaged one-day Staycations itineraries along the Canal system. "**Several of the programs sold out and some saw repeat visits from satisfied customers.** The program included promoting more than 100 local businesses and attractions for day trippers to support," said Shane Mahar, communications strategy manager.

Staycations was developed under Gov. Andrew M. Cuomo's ongoing Reimagine the Canals initiative as an innovative way to use the Canals to expand regional economic development and tourism, and improve infrastructure.

As the weather got cooler the desire by New Yorkers to enjoy the outdoors got a boost with the completion of the 750-mile Empire State Trail merging "economic development with the beautiful views along the Canal system to create exceptional outdoor recreation opportunities, both for residents of canal-side communities and for visitors from across New York and beyond," said New York State Canal Corporation Director Brian U. Stratton.

Whether the experiences were indoors virtually or outdoors physically, NYPA and Canals staffs showed their resilience by working to open and reopen doors for making life more enjoyable for stressed New Yorkers.

Reimagine the Canals



Elena Mercado of Niskayuna participates in a paddle-pedal excursion in Mohawk Harbor, along the Erie Canal and Mohawk River in Schenectady.

Kaela Mainsah
Senior Manager
Environmental Justice

“It was no surprise to EJ that the pandemic affected our vulnerable communities most acutely on every level including access to food. EJ seized the opportunity with our expertise in building Green Classrooms in New York City and expanded it to establish a sustainable indoor hydroponic urban garden in Buffalo. In just a few short months, at-risk families now have access to nutritious, organic produce year-round, right in their community. The program is also helping NYPA provide critical data about the intersection of food production and energy for a national research project on food insecurity.”

10. EMPOWERING NEW YORK

Above:
Lisa Payne Wansley, vice president, Environmental Justice (black dress) at a ribbon-cutting ceremony for a green science classroom and greenhouse established with assistance from NYPA, Highbridge Green School, Bronx.

As it was for most of the world, 2020 was a challenging year for the Environmental Justice (EJ) team. Key priorities included staying engaged with communities when in-person outreach was not feasible, launching new programs and keeping stakeholders involved.

"Professionally speaking, one of the good things that happened last year was our team learning about our resilience by showing **we had the ability to be agile under pressure and quickly transition to virtual programs for our constituents,**" said Lisa Payne Wansley, vice president of Environmental Justice.

During COVID-19, the EJ team immediately pivoted to provide virtual services to the Niagara Boys & Girls Club when programming was needed for the children of first responders during the pandemic. Wansley's personal mission is to ensure adults and youth have access to information, education and resources that will help them build a better future for themselves and future generations.

NYPA's EJ efforts are focused outward and inward. Being a good neighbor, reaching out to our communities and engaging them in our initiatives provided insights about our recently approved Ten-Point Diversity, Equity and Inclusion (DEI) Plan in action.

NYPA plans to provide employees with knowledge of sensitivity issues surrounding project planning and development and leveraging that knowledge to uplift people in historically disadvantaged communities.

One of our goals is for an EJ lens to be applied to all NYPA and Canals projects. When NYPA unveiled its accelerated transition into the world of electric vehicles (EVs), the EJ team made sure underserved communities were considered when deciding where to install fast-charging stations, and information was shared within those communities to generate interest and encourage adoption of EVs.

Advancing an idea proposed through "Eureka!," the NYPA employee innovation program, the EJ team ensured three EVs retired from NYPA's fleet would be donated to New York State's Boards of Cooperative Educational Services (BOCES) for facilitating technical instruction on EV use, maintenance and repair.

With EJ's focus on education and community engagement, **NYPA is expanding its STEM program to incorporate two statewide DEI initiatives, Pathways in Technology Early College High Schools (P-TECH) program and the Future Energy Leader Scholarship.**

"Here come our friends from NYPA" is often heard as our stakeholders and residents welcome EJ team members into their communities.

NYPA will provide curriculum development, mentoring and paid internships to designated P-TECH schools in the state. P-TECH provides a pathway for high school students to graduate with a no-cost associate degree in six years. By supporting students who study applied science, engineering, computers or other competitive STEM disciplines, NYPA hopes to help position them for jobs in the energy industry.

The scholarship program will increase diversity in the electric utility industry workplace by priming the workforce pipeline with academically accomplished, under-represented students of color residing in New York State. **In speaking about these innovative programs, Wansley said, "Access is the cornerstone to equitable progress in a society."**

Stemming from its success with the green classroom initiative that builds innovative science labs in urban schools to teach students about indoor hydroponic farming, the EJ team forayed into an Indoor Food Production (IFP) pilot project with FeedMore WNY. **Funded by NYPA and led by the national Electric Power Research Institute, this project was launched in Buffalo to advance indoor farming to address food insecurity.**

Using a specially outfitted shipping container for growing fresh produce, the program studies environmental and energy impacts by showing ways to reduce costs and carbon emissions while using electricity to expand fresh food production, especially in low-income neighborhoods.

Left: *NYPA partnered with the Electric Power Research Institute and FeedMore WNY on a food production container in Buffalo to promote indoor farming and help feed disadvantaged families. Kale (center photo) and other vegetables are being grown in the container.*

Right: *Environmental Justice Program Coordinator Matthew Caruso (left) conducts a workshop for members of the Arbor Hill Neighborhood Association, Albany.*

Maintaining continuity in community and stakeholder outreach and education remains imperative to NYPA. "Here come our friends from NYPA" is often heard as our stakeholders and residents welcome EJ team members into their communities. When face-to-face activities were stalled due to COVID-19, the team developed a Virtual Learning Center to help keep the momentum going with online educational programs and activities.

At NYPA, EJ and working with communities transcends education. It is about empowering people to influence decisions that impact their environment, health, well-being, and career choices. Through our engagement programs, advocacy and collaboration with partners, our commitment to always be a good neighbor remains steadfast.

"You cannot dictate what the community needs. You have to spend time talking with the community."

– Lisa Payne Wansley

Wansley proudly wears a facemask inscribed with the famous words, "I am my ancestor's wildest dream." A first-generation college graduate from a large family, Wansley knows systemic change happens when people are given equitable access to information and education. "They then have the ability to make informed decisions that impact their environment, their lives and those of future generations," said Wansley.

Julieanne Sullivan (center), Environmental Justice program specialist, at a workshop hosted by the Niagara Falls Boys and Girls Club.

A driver uses a zero-emissions electric vehicle charging unit in Albany, installed as part of a pilot program at state-operated parking facilities in the city. NYPA partnered with the Office of General Services and the New York State Energy Research & Development Authority on the project.

Kerry-Jane King
Director, Sustainability

"The challenge of climate change has been identified as a top priority, along with health and safety, and social equity."

MOVING BEYOND GREEN

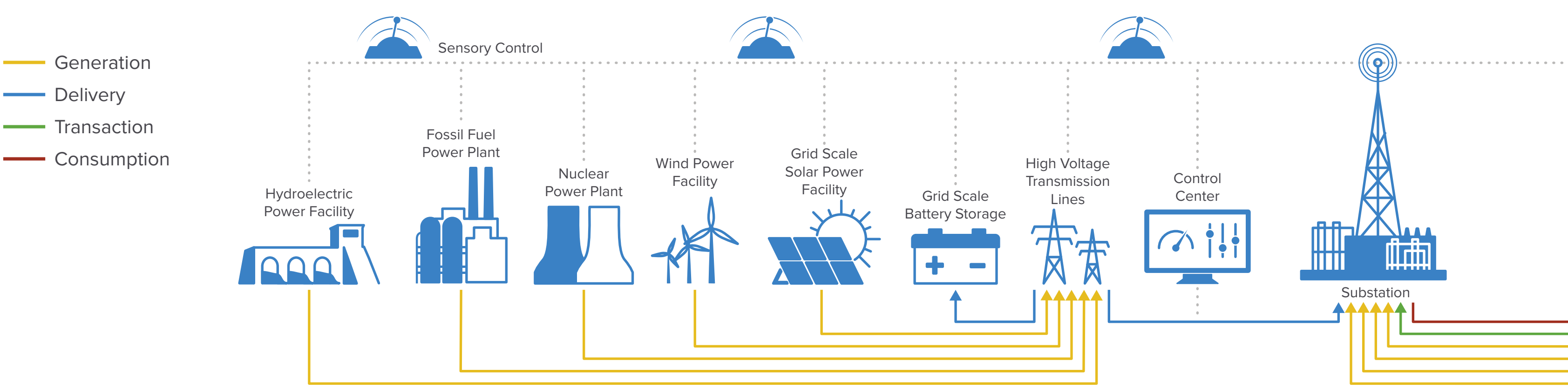
In 2020, NYPA began developing a new Sustainability Plan that builds on its 2019-2023 plan. **The new plan expands the scope beyond environmental sustainability to encompass environmental, social and governance (ESG) performance.**

It aligns with and supports NYPA's VISION2030 strategic plan, which was unveiled in 2020.

ESG is identified as a foundational pillar of VISION2030, in which it calls for us to deliver on a best-in-class strategy to meet the present and future needs of stakeholders and enhance long-term ESG and economic performance. By delivering on this strategy, NYPA will support numerous New York State priorities including Gov. Andrew M. Cuomo's Climate Leadership and Community Protection Act—the most aggressive state climate change legislation in the nation.

The new 2021-2025 Sustainability Plan aligns with leading ESG frameworks and addresses 15 issues we believe could have the greatest impact on NYPA's business and are most important to our stakeholders. The challenge of climate change has been identified as a top priority, along with health and safety, and social equity. **"COVID-19 put the spotlight on many of the issues addressed in our plan and highlighted the urgency of addressing them,"** said Kerry-Jane King, director, Sustainability.

THE FUTURE OF THE ENERGY GRID IN 2030



Representatives from NYPA and the Pollinator Partnership planted a pollinator garden at the Niagara Power Vista visitors center, part of the Niagara Power Project, Lewiston.

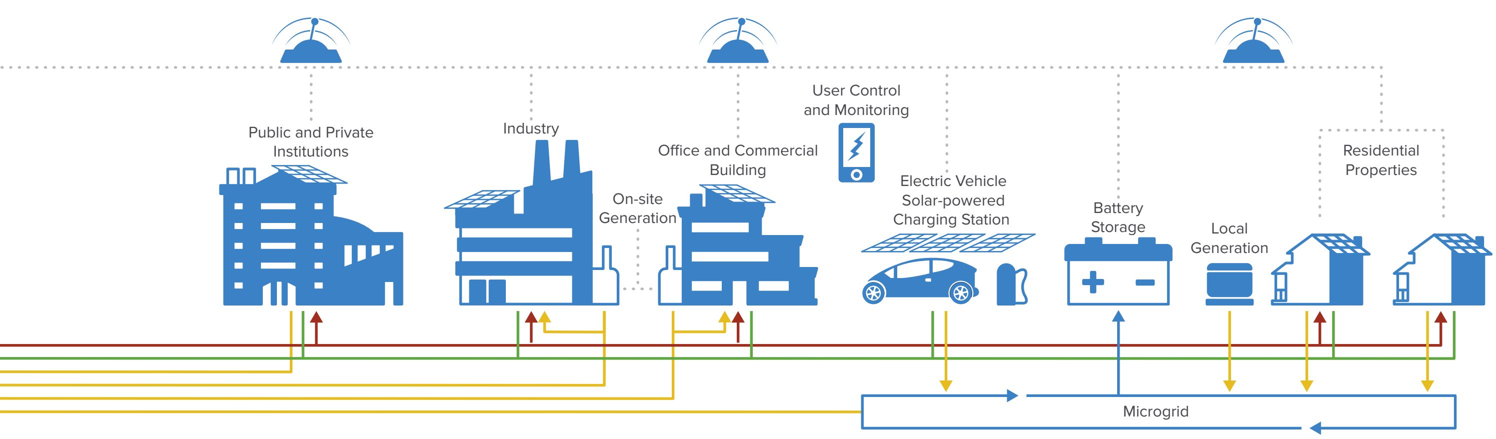
NYPA looked beyond its walls to shape the plan with ideas from external partners, research findings, leading practices, and New York State regulations and requirements. The plan includes input from the Sustainability Advisory Council, which is made up of heads from more than 30 NYPA departments and external subject matter experts.

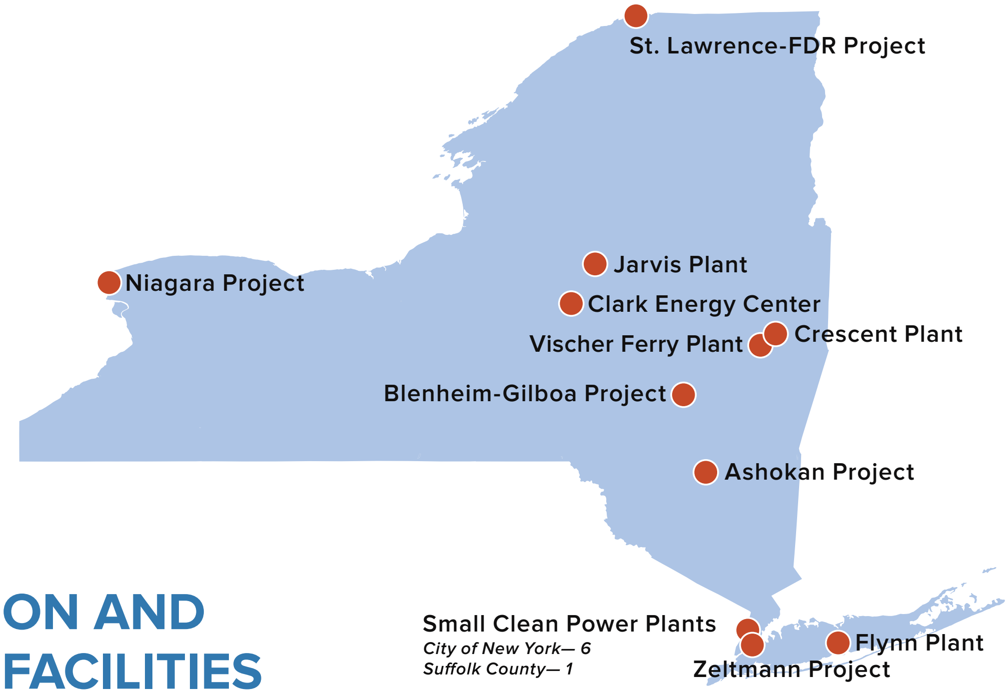
The plan includes input from the Sustainability Advisory Council, which is made up of heads from more than 30 NYPA departments, as well as subject matter experts.

"The Sustainability Plan is being created as an integrated, cross-functional and collaborative living document that will evolve as necessary to align with VISION2030 implementation," King said. To complement the Sustainability Plan, NYPA will publish an annual Sustainability Report that follows leading reporting and disclosure standards, and communicates the plan's progress.

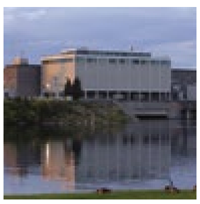
NYPA is committed to transparency in reporting, and by also publishing an annual ESG report will be fundamental to this new broader approach to sustainability.

"Sustainability and ESG are a foundational element for NYPA's future," King said. "The pause in projects due to the onset of the pandemic helped NYPA develop the roadmap for our ESG journey."





NYPA GENERATION AND TRANSMISSION FACILITIES



ST. LAWRENCE-FRANKLIN D. ROOSEVELT POWER PROJECT

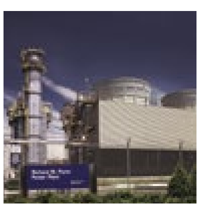
Type: Hydroelectric
Location: Massena, St. Lawrence County
Nameplate Rating: 1,088.0 MW*
First Commercial Power: July 1958
2020 Net Generation: 7,799.1 GWh

NIAGARA POWER PROJECT

Type: Hydroelectric
Location: Lewiston, Niagara County
Nameplate Rating: 3,100.0 MW*
First Commercial Power: January 1961
2020 Net Generation: 17,244.8 GWh

BLENHEIM-GILBOA PUMPED STORAGE POWER PROJECT

Type: Pumped Storage/Hydroelectric
Location: North Blenheim and Gilboa, Schoharie County
Nameplate Rating: 1,160.0 MW*
First Commercial Power: July 1973
2020 Gross Generation: 281.7 GWh

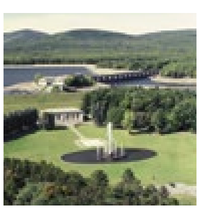


RICHARD M. FLYNN POWER PLANT

Type: Gas/Oil
Location: Holtsville, Suffolk County
Nameplate Rating: 170.0 MW*
First Commercial Power: May 1994
2020 Net Generation: 564.0 GWh

FREDERICK R. CLARK ENERGY CENTER

Function: Coordinates NYPA generation and transmission system operations
Location: Marcy, Oneida County
Opened: June 1980



SMALL HYDRO FACILITIES

Located on reservoirs and waterways around the state, these facilities include the Ashokan Project, Gregory B. Jarvis Plant, Crescent Plant and Vischer Ferry Plant
Combined Nameplate Rating: 36.8 MW*
2020 Net Generation: 129.7 GWh

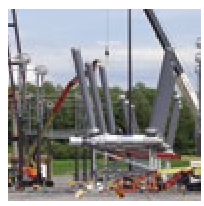
* *Nameplate Rating: The maximum rated output of a generator under specific conditions designated by the manufacturer, as defined by the United States Energy Information Agency. As submitted by NYPA for inclusion in the 2020 Load & Capacity Data ("Gold Book"), The New York Independent System Operator, Inc.*

SMALL CLEAN POWER PLANTS

Type: Gas
Location: Six New York City sites and Brentwood, Suffolk County
Combined Nameplate Rating: 517.0 MW*
First Commercial Power: June 2001
2020 Net Generation: 483.3 GWh

EUGENE W. ZELTMANN POWER PROJECT

Type: Gas/Oil
Location: Astoria, Queens County
Nameplate Rating: 576.0 MW*
First Commercial Power: December 2005
2020 Net Generation: 2,528.8 GWh



TRANSMISSION FACILITIES

1,455.7 circuit-miles of alternating current transmission lines.

Size	Underground	Overhead	TOTAL
765 kV	0.0	155.2	155.2
345 kV	42.8	884.3	927.1
230 kV	0.0	337.5	337.5
115 kV	1.8	34.1	35.9
TOTAL	**44.6**	**1,411.1**	**1,455.7**

AFFILIATED FACILITIES

ASTORIA ENERGY II **

Type: Gas/Oil
Location: Astoria, Queens County
Nameplate Rating: 660.0 MW*
First Commercial Power: July 2011

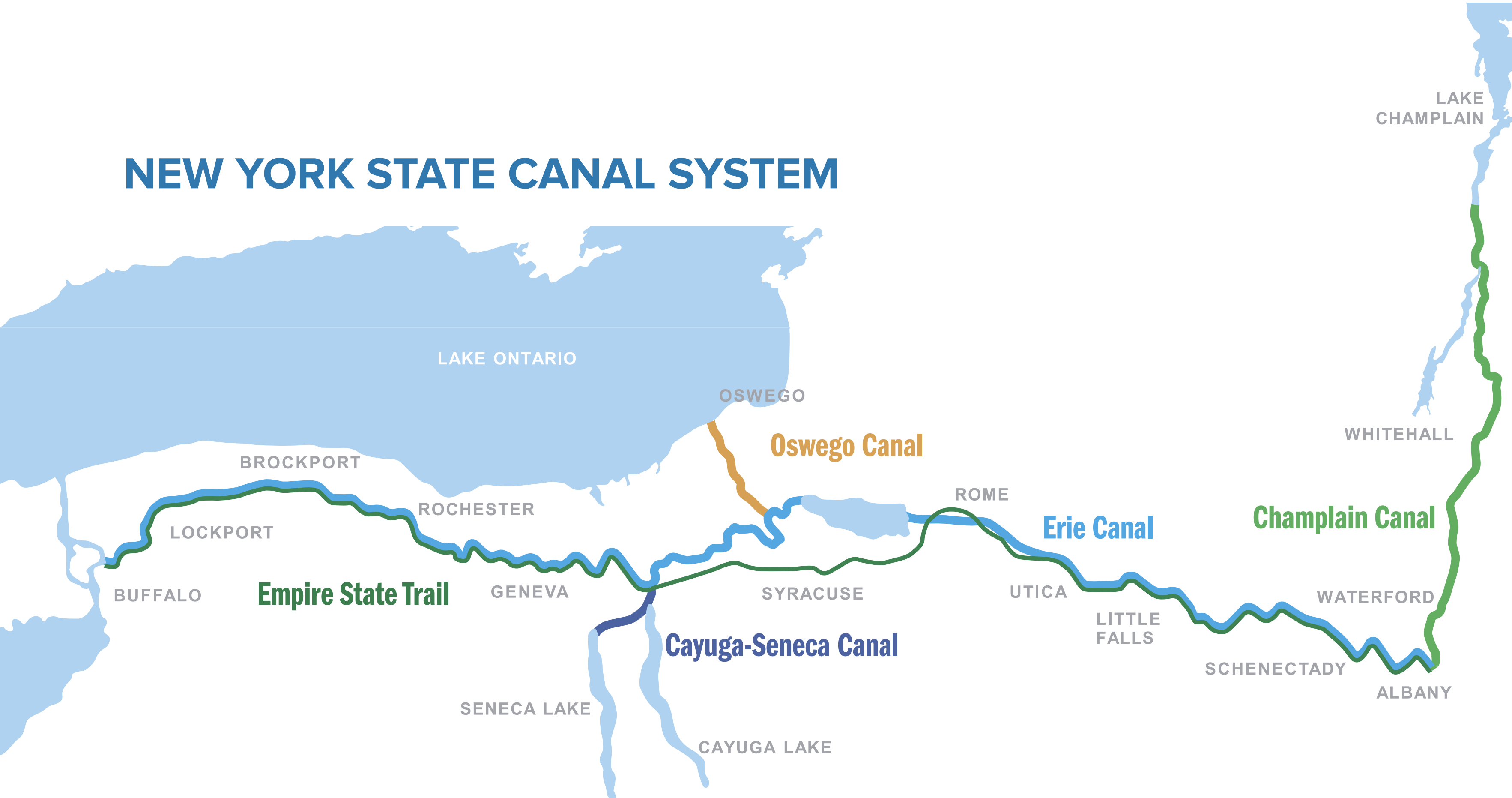
*** An independently owned facility that has a 20-year supply agreement to service NYPA's New York City governmental customers.*

HUDSON TRANSMISSION PROJECT (HTP) ***

Type: High-Voltage Transmission Line
Location: Seven-mile 345-kV line from Public Service Electric & Gas Co.'s Bergen Substation in Ridgefield, NJ, to Consolidated Edison Co.'s West 49th St. Substation in Manhattan. (Includes four-mile Hudson River underwater section)
Capacity: 660 MW
First Commercial Operation: June 2013

**** NYPA has a 20-year firm transmission capacity purchase agreement with Hudson Transmission Partners, LLC, the developer, owner and operator of the line. NYPA contracts for 87 percent of HTP's transmission capacity, or up to 575 MW.*

NEW YORK STATE CANAL SYSTEM



REIMAGINE THE CANALS

In the January 2020 State of the State, Gov. Andrew M. Cuomo recommended NYPA approve $300 million over five years for the Reimagine the Canals initiative to improve infrastructure, economic development and tourism along the Canal System. The NYPA Board of Trustees and Canal Board of Directors approved the funding, also in January.

KEY FUNDING USES

$100 M

in economic development funding: adaptive reuse of canal infrastructure in communities along the Canal

$65 M

for preventative solutions for ice jams and related flooding in the Schenectady area

$135 M

to enhance mitigation and fishing opportunities plus pursue research and interventions related to flood mitigation, invasive species prevention, and ecosystem restoration

CANAL FACILITIES

- Spans 524 miles
- Touches 200+ communities
- More than 100,000 visitors annually
- Composed of 4 Canals: Erie, Champlain, Oswego, and Cayuga-Seneca
- Two Divisions: Western and Eastern
- 16 Lift Bridges
- 57 Locks
- 2,770 Other Structures Including:
  - 400+ buildings
  - 100+ bridges
  - 100+ dams
  - 125+ miles of earthen embankment
- Used by 21,000 unique motorized boats, based on boat ownership in communities adjacent to the Canals
- About 5,100 boats use at least one lock

David R. Mellen
Deputy Director of Canal Corp.

"In the history of the Canal system, 2020 may have been the most challenging year. As they often do, Canal Corporation employees rose to the occasion when faced with challenges. By following new safety protocols, donning new personal protective equipment, transporting medical supplies and volunteering for contact tracing calls, employees worked tirelessly to maintain a safe and operating Canal system."

NYPA INVESTMENTS IN CANALS

$136 M
Total 2020

$83 M
Operations & Maintenance

$53 M
Capital

NEW YORK POWER AUTHORITY
Financial Report
December 31, 2020 and 2019

Table of Contents

KPMG LLP
345 Park Avenue
New York, NY 10154-0102

Independent Auditors' Report

Board of Trustees
New York Power Authority:

We have audited the accompanying consolidated financial statements of the business-type activities and fiduciary funds of the Power Authority of the State of New York (the Authority) and its blended component unit, as of and for the years ended December 31, 2020 and 2019, and the related notes to the consolidated financial statements, which collectively comprise the Authority's consolidated financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and fiduciary funds of the Authority and its blended component as of December 31, 2020 and 2019, and the respective changes in financial position and, where applicable, cash flows thereof for the years then ended in accordance with U.S. generally accepted accounting principles.

KPMG LLP, a Delaware limited liability partnership and a member firm of
the KPMG global organization of independent member firms affiliated with
KPMG International Limited, a private English company limited by guarantee.

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the Management's Discussion and Analysis on pages 4 through 18 and Required Supplementary Information on pages 78 through 82 be presented to supplement the consolidated financial statements. Such information, although not a part of the consolidated financial statements, are required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the consolidated financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the consolidated financial statements, and other knowledge we obtained during our audit of the consolidated financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated March 31, 2021 on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Authority's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.

KPMG LLP

New York, New York
March 31, 2021

Management Report

Management is responsible for the preparation, integrity and objectivity of the consolidated financial statements of the Authority, as well as all other information contained in the Annual Report. The consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles (U.S. GAAP) and, in some cases, reflect amounts based on the best estimates and judgments of management, giving due consideration to materiality. Financial information contained in the Annual Report is consistent with the financial statements.

The Authority maintains a system of internal controls to provide reasonable assurance that transactions are executed in accordance with management's authorization, that financial statements are prepared in accordance with U.S. generally accepted accounting principles and that the assets of the Authority are properly safeguarded. The system of internal controls is documented, evaluated and tested on a continuing basis. No internal control system can provide absolute assurance that errors and irregularities will not occur due to the inherent limitations of the effectiveness of internal controls; however, management strives to maintain a balance, recognizing that the cost of such system should not exceed the benefits derived.

The Authority maintains an internal auditing program to independently assess the effectiveness of internal controls and to report findings and recommend possible improvements to management. This program includes a comprehensive assessment of internal controls to ensure that the system is functioning as intended. Additionally, as part of its audit of the Authority's consolidated financial statements, KPMG LLP, the Authority's independent auditors, considers internal controls over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal controls over financial reporting. Management has considered the recommendations of its internal auditors, the Office of the State Comptroller (OSC), and the independent auditors concerning the system of internal controls and has taken actions that it believed to be cost-effective in the circumstances to respond appropriately to these recommendations. Based on its structure and related processes, management believes that, as of December 31, 2020, the Authority's system of internal controls provides reasonable assurance related to material items, as to the integrity and reliability of the financial statements, the protection of assets from unauthorized use or disposition and the prevention and detection of fraudulent financial reporting.

The members of the Authority's Board of Trustees (the Authority's Trustees), appointed by the Governor, by and with the advice and consent of the Senate, are not employees of the Authority. The Authority's Trustees' Audit Committee meets with the Authority's management, its Sr. Vice President of Internal Audit and its independent auditors periodically, throughout the year, to discuss internal controls and accounting matters, the Authority's financial statements, the scope and results of the audit by the independent auditors and the periodic audits by the OSC, and the audit programs of the Authority's internal auditing department. The independent auditors and the Sr. Vice President of Internal Audit have direct access to the Audit Committee.

Adam Barsky
Executive Vice President and Chief Financial Officer

March 30, 2021

Overview of the Consolidated Financial Statements

The New York Power Authority (the "Power Authority") is considered a special-purpose government entity engaged in business-type activities and follows financial reporting for enterprise funds. Effective January 1, 2017, the New York State Canal Corporation (the "Canal Corporation") became a subsidiary of the Power Authority, and the Power Authority assumed certain powers and duties relating to the Canal System 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"). The Power Authority and its subsidiary (collectively "the Authority") follow financial reporting for enterprise funds. The consolidated financial statements of the Authority are prepared in accordance with U.S. generally accepted accounting principles (U.S. GAAP) as prescribed by the Governmental Accounting Standards Board (GASB). Under the criteria set forth in GASB Statement No. 14, *The Financial Reporting Entity*, as amended by Governmental Accounting Standard (GAS) No. 39, *Determining Whether Certain Organizations Are Component Units* and GAS No. 61, *The Financial Reporting Entity: Omnibus--an amendment of GASB Statements No. 14 and No. 34*, the Authority considers its relationship to the State to be that of a related organization. The Power Authority and its subsidiary the Canal Corporation are referred to collectively as the "Authority" in the consolidated financial statements, except where noted.

This consolidated report consists of three parts: management's discussion and analysis, the basic consolidated financial statements, and the notes to the consolidated financial statements.

The consolidated financial statements provide summary information about the Authority's overall financial condition. The notes provide explanation and more details about the contents of the consolidated financial statements.

Forward Looking Statements

The statements in this management's discussion and analysis (MD&A) that are not purely historical facts are forward-looking statements based on current expectations of future events. Such forward-looking statements are necessarily based on various assumptions and estimates and are inherently subject to various risks and uncertainties, including, but not limited to, risks and uncertainties relating to the possible invalidity of the underlying assumptions and estimates and possible changes to or development in various important factors. Accordingly, actual results may vary from those we presently expect and such variations may be material. We therefore caution against placing undue reliance on the forward-looking statements contained in this MD&A. All forward-looking statements included in this MD&A are made only as of the date of this MD&A and we assume no obligation to update any such forward-looking statements as a result of new information, future events or other factors.

NEW YORK POWER AUTHORITY

Management's Discussion and Analysis

December 31, 2020 and 2019

(Unaudited)

Summary of Consolidated Revenues, Expenses and Changes in Net Position

The following is a summary of the Authority's consolidated financial information for 2020, 2019, and 2018:

	2020	2019	2018	2020 vs. 2019 favorable (unfavorable)	2019 vs. 2018 favorable (unfavorable)
		($ In millions)		(In Percentages)	
Operating revenues	$ 2,265	$ 2,370	$ 2,689	(4)%	(12)%
Operating expenses:					
Purchased power	484	529	710	9	25
Fuel oil & gas	109	140	189	22	26
Wheeling	650	647	654	—	1
Operations and maintenance	683	692	679	1	(2)
Depreciation	258	250	235	(3)	(6)
Total operating expenses	2,184	2,258	2,467	3	8
Operating income	81	112	222	(28)	(50)
Nonoperating revenues	26	46	23	(43)	100
Nonoperating expenses	124	135	143	8	(6)
Net income before contributed capitaal	(17)	23	102	(174)	(77)
Contributed capital	—	3	—		
Net loss and change in net position	(17)	26	102		
Net position – beginning, as restated	4,760	4,734	4,632		
Net position – ending	$ 4,743	$ 4,760	$ 4,734		

The following summarizes the Authority's consolidated financial performance for the years 2020 and 2019:

The Authority had a net loss of $17 million for the year ended December 31, 2020 compared to $23 million net income in 2019, a decrease of $40 million (174%). The 2020 decrease in net income compared to 2019 was primarily due to lower operating income of $31 million (28%), lower nonoperating revenues of $20 million (43%), partially offset by lower operating expenses of $74 million (3%) and non-operating expenses of $11 million (8%). The decrease in operating income resulted from lower market-based energy sales due to lower market prices and the pass through of lower power costs to customers as well as lower customer consumption. The decrease in operating expenses was primarily due to lower purchase power costs and lower fuel prices attributable to lower customer consumption, partially offset by Regional Transmission Expansion Plan ("RTEP") charges allocated to the Hudson Transmission line ("HTP") totaling $33 million, of which $20 million is retroactive to 2018 and 2019 and $13 million for 2020. The operations and maintenance expenses were $9 million (1%) lower compared to 2019 primarily due to lower direct operating costs associated with the decline in operating revenue and cost containment measures initiated by management across broad categories of expenses, partially offset by incremental expenses of $20 million, net related to COVID-19 pandemic.

The change in net position was attributable to the 2020 net loss of $17 million.

The Authority had net income of $23 million for the year ended December 31, 2019 compared to $102 million in 2018, a decrease of $79 million (77%). The decrease in net income was primarily due to lower operating income of $110 million (50%), partially offset by lower non-operating expenses of $8 million (6%) and higher non-operating revenues of $23 million. Operating income decreased by $110 million compared to 2018 primarily due to lower margins on sales of $82 million resulting from lower energy prices. Operating expenses were lower in 2019, primarily due to lower purchased power costs. The operations and maintenance expenses were $13 million (2%) higher compared to 2018 primarily due to higher postemployment benefits other than pensions (OPEB) and pension expenses.

The change in net position was attributable to the positive 2019 net income of $23 million and $3 million of contributed capital related to certain wind farm transmission assets (see note 5 "Capital Assets" of notes to the consolidated financial statements).

Operating Revenues

Operating revenues of $2,265 million in 2020 were $105 million, or 4%, lower than the $2,370 million in 2019, primarily due to lower market-based energy sales resulting from lower market prices and the pass through of lower power costs to customers as well as lower customer consumption attributable to the COVID-19 pandemic environment, partially offset by higher generation at both our hydro and fossil fuel plants resulting in a higher volume sold in the market.

Purchased Power and Fuel

Purchased power costs decreased by $45 million or 9% in 2020 to $484 million from $529 million in 2019, primarily due to lower prices in 2020 compared to 2019 resulting from lower energy and capacity costs, partially offset by RTEP charges allocated to the HTP line totaling $33 million, of which $20 million is retroactive to 2018 and 2019 and $13 million for 2020, (see note 13 "Commitments and Contingencies-(b) Governmental Customers in the New York City Metropolitan Area - HTP Transmission Line" of the notes to the financial statements), as well as lower volume due to lower customer consumption. Fuel costs were $31 million (22%) lower during 2020, primarily due to lower fuel prices ($44 million) and partially offset by higher generation volume ($13 million).

Operations and Maintenance (O&M)

O&M expenses decreased by $9 million or 1% in 2020 compared to 2019 primarily due to $29 million (4%) of lower direct operating costs associated with the decline in operating revenue and cost containment measures initiated by management across broad categories of expenses to offset lower operating margins, partially offset by incremental expenses of $20 million related to the COVID-19 pandemic ranging from critical employee sequestration and sanitization/cleaning supplies to facility protective measures and equipment for a remote workforce.

Nonoperating Revenues

Nonoperating revenues decreased by $20 million, or 43% to $26 million from $46 million in 2019, primarily due to lower investment income and decreased market value on the Authority's investment portfolio.

Nonoperating Expenses

Nonoperating expenses decreased by $11 million, or 8%, primarily attributable to capitalization of interest related to increased construction work in progress and lower debt related costs.

Net (loss) income before non-recurring charges

	2020	2019
	(In millions)	
Net (loss) income	$ (17)	$ 23
Add: RTEP (HTP line related charges) (1)	20	–
Incremental COVID-19 expenses, net (2)	20	–
Net income before non-recurring	$ 23	$ 23

(1) In 2020, HTP RTEP charges totaling $33 million were incurred, of which $20 million is retroactive to 2018 and 2019 and $13 million for 2020.
(2) See note 15 "Impact of COVID-19 Pandemic" of the notes to the financial statements.

EBIDA

Reconciliation of Net (Loss) Income to EBIDA and EBIDA after certain non-cash charges

	2020	2019	2018
		(In millions)	
Net (loss) income	$ (17)	$ 23	$ 102
Add: Interest	124	135	143
Depreciation	258	250	235
EBIDA (1)	365	408	480

(1) In 2020, EBIDA, excluding $39 million of non-cash pension expense, was $404 million. Total Pension expense recognized in accordance with GAS No. 68 was $69 million in 2020. In 2019, EBIDA, excluding $4 million of non-cash pension expense, was $412 million in 2019. Total pension expense recognized in 2019 was $35 million.

EBIDA represents net income (loss) before interest expense, depreciation and amortization and is a non-GAAP financial measure. EBIDA does not represent net income (loss), as that term is defined under Generally Accepted Accounting Principles (GAAP) and should not be considered as an alternative to net income (loss) as an indicator of the Authority's operating performance or any other measure of performance derived in accordance with GAAP. EBIDA is not intended to be a measure of cash flows, as depicted on the statement of cash flows, available for management or discretionary use as such measures do not consider certain cash requirements such as capital expenditures and debt service requirements. EBIDA as presented herein is not necessarily comparable to similarly titled measures presented by the Authority.

Cash Flows

Net cash flows provided by operating activities decreased by $6 million in 2020 compared to 2019 due to the timing of payments and receipts.

Net Generation

Net generation was 31.5 million megawatt-hours (MWh) in 2020 and 30.1 million MWh in 2019. Net generation from the Niagara and St. Lawrence hydroelectric plants in 2020 (25.0 million MWh) was 3% higher than 2019

(24.3 million MWh) due to the average river flow for both Niagara and St. Lawrence being higher in 2020 than in 2019 resulting in higher water flow to the Niagara and St. Lawrence hydroelectric plants. For 2020, net hydro generation was approximately 123% of long-term average and above 2019, which was 120%. Combined net generation of the fossil fuel plants for 2020 was 6.5 million MWh, or 12% higher than 2019 (5.8 million MWh).

Summary of Consolidated Statements of Net Position

The following is a summary of the Authority's consolidated statements of net position for 2020, 2019, and 2018:

	2020	2019	2018	2020 vs. 2019	2019 vs. 2018
		($ In millions)		(In Percentage)	
Current assets	$ 1,101	$ 1,303	$ 1,434	(16) %	(9) %
Capital assets	6,032	5,783	5,519	4	5
Other noncurrent assets	2,667	1,670	1,798	60	(7)
Deferred outflows of resources	261	185	137	41	35
Total assets and deferred outflows	$ 10,061	$ 8,941	$ 8,888	13	1
Current liabilities	$ 1,037	$ 1,293	$ 1,051	(20)	23
Noncurrent liabilities	3,690	2,456	2,631	50	(7)
Total liabilities	4,727	3,749	3,682	26	2
Deferred inflows of resources	591	432	472	37	(8)
Net position	4,743	4,760	4,734	0	1
Total liabilities, deferred inflows and net position	$ 10,061	$ 8,941	$ 8,888	13	1

The following summarizes the Authority's consolidated statements of net position variances for the years 2020 and 2019:

In 2020, current assets decreased by $202 million (16%) to $1,101 million due to use of investments to fund capital projects. Capital assets increased by $249 million (4%) to $6,032 million, compared to last year, as a result of continuing investments in generating assets at existing facilities and transmission upgrades necessary to maintain reliability. Other noncurrent assets, increased by $997 million (60%), compared to last year, as a result of bond proceeds allocation for planned capital investments and energy efficiency program and an increase in postemployment benefits other than pension (OPEB) asset as a result of the current valuation. Deferred outflows increased by $76 million (41%) primarily due to changes in deferral of pension resources and a reclassification related to asset retirement obligations, partially offset by changes in deferral of OPEB resources. Current liabilities decreased by $256 million (20%) to $1,037 million compared to last year. This decrease is attributable primarily to the decrease in short-term debt by $190 million, long-term debt due in one year by $30 million and the timing of accounts payable payments. Noncurrent liabilities were higher by $1,234 million (50%), primarily due to the issuance of the $1,235 million of Series 2020A and Series 2020B Revenue Bonds, partially offset by the redemption of certain Series 2003A Revenue Bonds and defeasance of certain Series 2007B Revenue Bonds and the outstanding Series 2011A and Series 2015A Revenue Bonds. Deferred inflows increased by $159 million (37%) compared to last year, primarily due to the changes in the deferral of OPEB resources. The changes in net position for 2020 and 2019 are discussed in the summary of revenues, expenses and changes in net position in this Management's Discussion and Analysis.

In 2019, current assets decreased by $131 million (9%) to $1,303 million due to use of investments to fund capital projects. Capital assets increased by $264 million (5%) to $5,783 million, compared to last year, as a result of continuing investments in generating assets at existing facilities and transmission upgrades necessary to maintain reliability. Other noncurrent assets, decreased by $128 million (7%), primarily due to decreased energy efficiency program work in progress and OPEB assets. Deferred outflows increased by $48 million (35%) primarily due to changes in deferral of OPEB resources and a reclassification related to asset retirement obligations, partially offset by changes in deferral of pension resources. Current liabilities increased by $242 million (23%) to $1,293 million compared to last year. This increase is attributable primarily to the increase in short-term debt due to issuance of commercial paper to refund $156 million of the Authority's Series 2007 A and Series 2007 C Revenue Bonds and the timing of accounts payable payments. Noncurrent liabilities were lower by $175 million (7%), primarily due to the decrease in long-term debt resulting from refunding of $156 million of Series 2007 A and Series 2007 C Revenue Bonds and scheduled maturities. Deferred inflows decreased by $40 million (8%) compared to last year, primarily due to the changes in the deferral of pension resources. The changes in net position for 2019 and 2018 are discussed in the summary of revenues, expenses and changes in net position in this Management's Discussion and Analysis.

Capital Asset and Long-Term Debt Activity

The Authority currently estimates that it will expend approximately $5.0 billion ($3.4 billion for various capital improvements, which includes Reimagine the Canals Initiative capital projects of approximately $214 million, and $1.6 billion for energy services projects) over the five-year period 2021-2025. The Authority anticipates that these expenditures will be funded using existing construction funds, internally generated funds and additional borrowings. Such additional borrowings are expected to be accomplished through the issuance of commercial paper notes and/or the issuance of long-term fixed rate debt.

The Authority's capital plan includes the provision of approximately $1.6 billion, the amount of which will be reimbursed subsequently back to the Authority, in financing for Energy Services projects to be undertaken by the Authority's governmental customers and other public entities in the State. It should also be noted that due to projects currently under review as well as energy initiatives announced in the Governor's State of the State address, there is a potential for significant increases in the capital expenditures indicated in the table below. Such additional capital expenditures would be subject to evaluation and Trustee approval.

Projected capital requirements during this period include (in millions):

Transmission Development	$	606
Ma1 & Ma2 Transmission Line Upgrade		308
Marcy-Scott Yard Transmission Upgrade		257
RM Mechanical & Electricl LEM		143
Strategic EV Charging Stations Installs		102
Communications Backbone		102
Transmission LEM (Nia, Massena)		97
RM Controls LEM		65
Replacement of Superstructure Bridges At RMNPP		51
Lewiston Pump Gener. Plant LEM		44
Cyber Resilience		40
T-LEM: Stl Remote Substations		38
L33P & L34P Phase Shifter		29
RM Penstock LEM		28
Garage - Centroplex Upgrade (WPO)		28
Common Application LEM		28
Core IT Infrastructure LEM		25
Transmission Power Flow Control		24
T-LEM Tower Coating Upgrades (CNY, WNY)		40
Breaker & Relay Replacement (STL)		21
Reimagine Canals initiatives		214
Canal Corporation		201
All Other (Projects Below $20.0 Million)		888
	$	3,379

The Authority is moving forward with its plans to update a major section of the Moses Adirondack line, one of the Authority's backbone transmission facilities. The project covers 78 miles of 230 kV transmission line from Massena to the town of Croghan in Lewis County. In July 2017, the Authority received authorization under the New York Independent System Operator (NYISO) tariff to include the costs of this project in its NYPA Transmission Adjustment Charge mechanism for cost recovery of the Authority's transmission system costs, which means that the costs will be allocated to all ratepayers in the State. The project includes the update of obsolete wood pole structures with higher, steel pole structures, as well as update of failing conductor with new conductor and insulation. The line will operate at its current 230 kV level, but the conductor and insulation design will accommodate future 345 kV operation. The Authority anticipates that the Moses Adirondack line will support the transmission of growing levels of renewable generation located in upstate New York and Canada, such as wind and hydroelectricity, and assist in meeting the State's renewable energy goals. The rebuilt line is also expected to enhance grid reliability by supporting the NYISO's black start plan. On September 21, 2018, the Public Service Commission (PSC) determined that the Authority's April 2018 Article VII application was complete. The PSC granted the Certificate of Compatibility and Public Need for the project on November 14, 2019, approving the Joint Proposal. On February 6, 2020, the PSC issued an order approving Part One of the Environmental Management and Construction Plan. Additionally, the Authority has received its Nationwide Permit from the U.S. Army Corps of Engineers and the New York State Department of Public Service has issued a Notice to Proceed. The Authority estimates a project cost of $484 million through project completion in 2023. As of December 31, 2020, the Authority has spent approximately $124 million on the Moses Adirondack project, which commenced in 2020.

In 2012, the Authority's Trustees approved a $726 million Transmission Life Extension and Modernization Program (Transmission LEM Program) on the Authority's Transmission system through 2025. As of December 31, 2020, the Authority has spent approximately $396 million. The Transmission LEM Program encompasses transmission assets in the Central, Northern and Western regions of New York and will include work to be done such as upgrades, refurbishments and replacements associated with switchyards and substations, transmission line structures or towers and associated hardware and replacement of the submarine cable on the PV-20 line. Reinvestment in this strategic component of the Authority's overall mission supports the repair, upgrade and/or expansion of the transmission infrastructure. The Transmission LEM Program will be financed with internal funds and proceeds from debt obligations issued by the Authority. The work on the Transmission LEM Program is underway and is expected to continue through 2025.

The Authority's Trustees approved a $460 million Life Extension and Modernization Program at the Niagara project's Lewiston Pump-Generating Plant, (Lewiston LEM Program) of which approximately $357 million has been spent as of December 31, 2020. The work to be done includes a major overhaul of the plant's 12 pump turbine generator units. The Lewiston LEM Program will increase pump and turbine efficiency, operating efficiency, and the peaking capacity of the overall Niagara project. The Authority filed an application with the Federal Energy Regulatory Commission (FERC) for a non-capacity license amendment in connection with the program. The amendment was approved with a FERC order issued in 2012. The Lewiston LEM Program will be financed with internal funds and proceeds from debt obligations issued by the Authority. The unit work began in late 2012 and is on-going, with the final unit expected to be completed in 2022.

More detailed information about the Authority's capital assets is presented in note 2 "Summary of Significant Accounting Policies" and note 5 "Capital Assets" of the notes to the consolidated financial statements.

Capital Structure

	2020	2019 (In millions)	2018
Long-term debt, net of current maturities:			
Senior:			
Revenue bonds	$ 1,629	$ 465	$ 653
Subordinated:			
Subordinated Notes, Series 2017 and 2012 (1)	40	42	43
Commercial paper	5	5	5
Total long-term debt, net of current maturities	1,674	512	701
Net position	4,743	4,760	4,734
Total capitalization	$ 6,417	$ 5,272	$ 5,435

(1) The Subordinated Notes, Series 2017 and 2012, which were issued in 2017 and 2012, respectively, are subordinate to the Series 2003A Revenue Bonds, the Series 2007B Revenue Bonds, the Series 2020A Revenue Bonds and 2020B Revenue Bonds.

During 2020, long-term debt, net of current maturities, increased by $1,162 million, primarily due to the issuance of 2020A and 2020B Revenue Bond partially offset by the redemption of certain 2003A Revenue Bonds and the defeasance of certain Series 2007B Revenue Bonds and the outstanding Series 2011A and Series 2015A Revenue Bonds.

Long-term debt to equity (long-term debt/net position) ratio as of December 31, 2020, was at .35-to-1 when compared to .11-to-1 as of December 31, 2019. Short Term debt of $502 million, consisting of the Series 1 CP Notes and certain Series 2 and Series 3 CP Notes, is excluded from the long-term debt to equity ratio, as it is used by the Authority to finance the Authority's current and future energy efficiency programs and for other corporate purposes.

Debt Ratings

	Moody's	Standard & Poor's	Fitch
NYPA's underlying credit ratings:			
Senior debt:			
Long-term debt (a)	Aa2	AA	AA
Subordinate debt:			
Subordinate Notes, Series 2017	N/A	AA-	N/A
Subordinate Notes, Series 2012	N/A	N/A	AA
Commercial paper	P-1	A-1+	F1+

(a) Long term debt includes certain bonds – Series 2007B Revenue Bonds and Series 2003A Revenue Bonds – the principal and interest when due is guaranteed under insurance policies issued by MBIA Insurance Corporation and Assured Guaranty Municipal Corporation, respectively. The credit ratings of MBIA Insurance Corporation and Assured Guaranty Municipal Corporation are currently at or below the Authority's underlying credit ratings.

In April 2020, Standard & Poor's Ratings Service affirmed the Authority's commercial paper rating, senior debt rating and Subordinated Notes rating (Series 2017). In October 2020, Moody's Investors Service affirmed the Authority's commercial paper rating and downgraded the Authority's senior debt rating to Aa2 from Aa1(Moody's did not reconfirm or review the Authority's Subordinated Notes, Series 2017 or Series 2012). In April 2020, Fitch Ratings affirmed the Authority's commercial paper rating, senior debt rating and Subordinated Notes (Series 2012).

The Authority has a line of credit under a 2019 revolving credit agreement (the 2019 RCA), with a syndicate of banks, to provide liquidity support for the Series 1-3 CP Notes, under which the Authority may borrow up to $700 million in aggregate principal amount outstanding at any time for certain purposes, including the repayment of the Series 1–3 CP Notes. The 2019 RCA expires January 14, 2022. There are no outstanding borrowings under the 2019 RCA.

In April 2020, the Authority entered into a hybrid revolving line of credit (the 2020 RCA) with a single bank under an agreement to provide liquidity support for the Series 3 and Series 4 CP Notes and/or to borrow directly. The Authority may borrow up to $250 million in aggregate principal amount outstanding at any time for certain purposes, including the repayment of Commercial Paper or for general corporate purposes. The 2020 RCA expires April 21, 2021 and the Authority is in process of renewing this RCA for an additional one-year period. There are no outstanding borrowings under the 2020 RCA.

Economic Conditions

In December 2020, the Authority's Board of Trustees approved its strategic plan, VISION2030, which focuses on preserving the value of its hydropower assets; leading the transition away from natural gas while ensuring system reliability; rapidly developing new transmission assets to meet market needs; partner with customers' and the state to help meet energy goals; and reimagine the New York State Canals System. The Authority's strategic plan will also ensure the continuation of its evolution to a digital utility; ensure long-term environmental, social, and governance (ESG) performance; the commitment to Diversity, Equity and Inclusion (DE&I); the incorporation of resiliency into all of NYPA; and the on-going focus on employee development through Resource Alignment initiatives. The costs and revenues with respect to the plan are reflected in the Authority's 2021-2024 financial plan.

Climate Leadership and Community Protection Act (CLCPA)

VISION2030 is anchored in helping achieve the greenhouse gas reduction targets in New York State's Climate Leadership and Community Protection Act (CLCPA), which was passed in 2019 and is the most ambitious climate change legislation in the country. CLCPA's targets for decarbonizing power generation include bringing 28 GW (16 GW of land-based renewables, 6 GW of offshore wind, and 6 GW of distributed solar) of renewables to market by 2030; accelerating transmission network investment to integrate renewables and alleviate load pockets; and ensuring grid reliability and flexibility through an integrated set of solutions including 3 GW of storage, dispatchable clean generation, and demand-side solutions. Targets for decarbonizing beyond the power sector include reduction of statewide energy use by 185 TBtu; electrification of transportation; and coordinated electrification of building heating and industrial processes. Fundamental to the CLCPA and NYPA's participation in achieving its goals is ensuring an equitable transition to a thriving clean energy.

Transmission Congestion and System Operation Issues

Infrastructure limitations in the vicinity of the Authority's Niagara Project contribute to transmission congestion that limits the amount of Niagara Project output that can be accommodated on the transmission system. Transmission congestion prevents the full and efficient use of this asset, as well as other generation assets located in Western New York. To begin alleviating this congestion, on July 20, 2015, the NYPSC issued an order that granted requests from the Authority and National Grid to establish a Public Policy Requirement driving the need for transmission additions to, among other things, enable the Authority to fully operate the Niagara Project and support the import of capacity from Ontario during emergency conditions. This order initiated the NYISO's competitive solicitation process which resulted in the NYISO Board of Directors selection of the NextEra Energy Transmission New York, Inc. (NextEra) Empire State Line transmission project on October 17, 2017. NextEra currently has requests pending before the PSC for two regulatory approvals that are necessary before it may begin developing the line. The project is a partial solution to the identified congestion issues and is expected to be completed in June 2022.

In 2020, New York State passed the Accelerated Renewable Energy Growth and Community Benefit Act ("Renewable Energy Act"), the purpose of which is to help prioritize the planning, investment, and responsible development of a state-of-the-art grid infrastructure the Renewable Energy Act focuses on grid planning and energy delivery constraint relief and calls for a comprehensive study to identify cost-effective distribution, local and bulk electric system upgrades and a bulk transmission investment program that draws upon NYPA's capability to expeditiously construct new transmission (Renewable Energy Act discussed herein).

Regional Greenhouse Gas Initiative

The Regional Greenhouse Gas Initiative (the "RGGI") 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 25MW or greater). RGGI States will make an adjustment to the RGGI cap to account for banked CO2 allowances accumulated through the third control period. The size of the adjustment will be calculated in March 2021 and the adjustment will be made over a five-year period (2021-2025), as specified in the 2017 Model Rule. 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 three-year compliance period. The Authority's Flynn plant, the SCPPs, and 500-MW Plant are subject to the RGGI requirements as is the Astoria Energy II plant. The Authority has participated in program auctions to acquire carbon dioxide allowances and expects to recover RGGI costs through its power sales revenues. The Authority is monitoring federal legislation and proposed programs that would impact RGGI.

Competitive Environment

The Authority's new mission statement that was ratified by the Trustees in December 2020, 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.

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

To maintain its position as a reliable provider of power in a changing environment, the Authority has undertaken and continues to carry out a multifaceted program, including: (a) the upgrade and relicensing of the Niagara, St. Lawrence-FDR, and Blenheim-Gilboa ("BG") projects; (b) long-term supplemental electricity supply agreements with NYPA's governmental customers located in Southeastern New York (NYC and Westchester Governmental Customers); (c) construction and operation of the Eugene W. Zeltmann Power Project (NYPA's 500 MW combined cycle electric generating plant) located at the Authority's Poletti plant site; (d) a long-term electricity supply contract with Astoria Energy II LLC for the purchase of the output of a 550-MW power plant in Astoria, Queens, ("AEII"), in which the Authority's net costs associated with the AEII power purchase agreement are recovered under a separate contract with the NYC Governmental Customers who are served by the output; (e) a firm transmission capacity purchase agreement with Hudson Transmission Partners, LLC ("HTP") for a portion of the output of the 660 MW, seven mile, underground and underwater transmission line connecting into the transmission system operated by PJM Interconnection LLC; (f) construction and maintenance of new transmission lines to relieve congestion and increase transfer capability from central to eastern New York addressing NYISO's AC Transmission Public Policy Need ("AC Proceeding"); (g) refinancing outstanding callable bonds to lower the overall cost of debt; (h) implementation of an enterprise-wide risk management program; and (i) implementation of an enterprise-wide resiliency program to embed resilience culture and to prepare for a more uncertain operating environment. As a component of the Authority's strategic plan, efforts to modernize the Authority's generation and transmission infrastructure are being developed and implemented to increase flexibility and resiliency, and to serve customers' needs in an increasingly dynamic energy marketplace.

To achieve its goal of promoting clean energy and efficiency, the Authority implements energy efficiency services for the benefit of its power supply customers and for various other public entities throughout the States. The Authority finances the installation of energy saving greenhouse measures and equipment which are owned by the customers and public entities to focus on the reduction of the demand for electricity and the efficient use of energy.

The Authority operates in a competitive and sometimes volatile energy market environment. Through its participation in the NYISO and other commodity markets, the Authority is subject to electric energy prices, fuel prices and electric capacity price risks that impact the revenue and purchased power streams of its facilities and customer market areas. Such volatility can potentially have adverse effects on the Authority's financial condition. To mitigate downside effects, many of the Authority's customer contracts provide for the complete or partial pass-through of these costs.

To moderate cost impacts to the Authority and its customers, the Authority, at times, hedges market risks through the use of financial instruments and physical contracts. Hedges are transacted by the Authority to mitigate volatility in the cost of energy or related products needed to meet customer needs; to mitigate risk related to the price of energy and related products sold by the Authority; to mitigate risk related to margins (electric sales versus fuel use) where the Authority owns generation or other capacity; and to mitigate geographic cost differentials of energy procured or sold for transmission or transportation to an ultimate location. Commodities to be hedged include, but are not limited to, natural gas, natural gas basis, electric energy, capacity, congestion costs and aluminum associated with the supply of electricity. Any such actions are taken pursuant to policies approved by the Authority's Trustees and under the oversight of an Executive Risk Management Committee.

The Authority can give no assurance that, even with these measures, it will retain its competitive status in the marketplace in the future as a result of the restructuring of the State's electric utility industry and the emergence of new competitors or increased competition from existing participants.

Rate Actions

Power and energy from the St. Lawrence-FDR and Niagara hydroelectric facilities are sold to municipal electric systems, rural electric cooperatives, industrial and other business customers, certain public bodies, investor-owned utilities, out-of-state customers, and into the wholesale market. The charges for firm and/or firm peaking power and associated energy sold by the Authority, as applicable, to the fifty-one municipal electric systems and rural electric cooperatives in New York State, two public transportation agencies, two investor-owned utilities for the benefit of rural and domestic customers, nine host communities and seven out-of-state public customers have been established on the basis of the hydroelectric project costs.

Expansion and Replacement Power commercial and industrial customers supplied from the Niagara facility and Preservation Power industrial customers supplied from the St. Lawrence-FDR facility are allocated over 35% of the combined firm contracted demand of the plants. Their rates are subject to annual adjustment based on the average of three contractually agreed-upon economic indices reflecting changes in industrial energy prices. In addition, one of the customers served by the St. Lawrence-FDR facility has an energy rate partially tied to market prices of aluminum.

ReCharge New York ("RNY") is Governor Cuomo's statewide economic development electric power program, designed to retain and create jobs through the allocation of low-cost power. The RNY program allocates 455 MW of hydropower from the Authority's Niagara and St. Lawrence-FDR projects at Preservation Power rates, which are similar to the Expansion and Replacement power customer rates, with certain adjustments. An additional 455 MW of market power can also be procured for RNY customers upon request.

The Authority has supplied electric power to its governmental customers located within New York City and Westchester County since 1976. New long-term agreements have been executed with the New York City governmental customers, incorporating recent shifts in the electricity business, New York State's clean energy goals, and continuing changes in the Authority's supply portfolio, all in an effort to continue to provide value for, and serve this customer group.

In an order issued January 27, 1999, FERC approved the use of a $165.4 million transmission system revenue requirement in developing rates for use of NYPA's transmission facilities in the NYISO market. FERC also approved, among other things, the imposition of a NYPA Transmission Adjustment Charge ("NTAC") and the NYPA Transmission Service Charges ("TSC") which are the tariff elements established to achieve full recovery of the Authority's annual transmission revenue requirement ("ATRR"). In July 2012, the Authority filed for its first requested increase in the revenue requirement with FERC since the implementation of the NYISO. This filing resulted in FERC's October 4, 2013 order accepting an uncontested settlement agreement establishing a new $175.5 million revenue requirement. In January 2016, the Authority filed to convert from a Stated Rate to a Formula Rate to ensure full recovery of its revenue requirement based upon operating and maintenance expenses as well as the capital spending necessary to maintain the reliability of its transmission system, such as the Life Extension and Modernization program. The Authority filed an unopposed Offer of Settlement on September 30, 2016 that fully resolved the issues raised by interested parties in settlement negotiations concerning the formula rate. The settlement was approved by FERC on January 19, 2017. Separately, the ATRR under the formula of $190 million initially made effective April 1, 2016 was updated on July 1, 2016 to $198.2 million pursuant to the formula rate annual update process. The ATRR is updated annually prior to the start of each rate year (July 1st - June 30th). The ATRR effective July 1, 2020 is $278.7 million and includes the revenue requirements for NTAC, the Marcy South Series Compensation, and AC Transmission projects.

Certain New Legislation Affecting the Authority

Bills are periodically introduced or passed in the New York State Legislature which propose to limit or restrict the powers, rights and exemptions from regulation which the Authority currently possesses under the Power Authority Act and other laws, or could otherwise affect the Authority's financial condition or its ability to conduct its business, activities, or operations in the manner presently conducted or contemplated hereby. It is not possible to predict whether any such bills, or other bills of a similar type which may be introduced or passed in the future, will be enacted.

As more specifically described in the enactment, and subject to limitations described therein, the 2019-20 Enacted State Budget (2019-20 ESB) amended the Power Authority Act to authorize the Authority, subject to feasible and advisable determinations by the Authority's Trustees, 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, either alone or jointly with one or more other entities, transmission facilities for the purpose of transmitting power and energy generated by renewable wind energy generation projects that are located in State territorial waters, and/or in waters under the jurisdiction or regulation of the U.S.; (3) supply certain market power and energy and renewable energy products to any Authority customer, public entity, or community choice aggregation ("CCA") community in the State (collectively, "Eligible Entities); and (4) alone or jointly with one or more other entities, finance the development of renewable energy generating projects that are located in the State, including its territorial waters, and/or on property or in waters under the jurisdiction or regulatory authority of the United States, purchase power, energy or related credits or attributes produced from such renewable energy generating projects, and allocate and sell such products to Eligible Entities. The Authority may exercise any of this authority at its discretion, and the amendments made by 2019-20 ESB do not affect the Authority's previously existing statutory authority.

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 ("CLCPA"). CLCPA directs the New York State Department of Environmental Conservation (the "NYSDEC") to develop regulations to reduce statewide greenhouse gas emissions ("GHG") to 60% of 1990 levels by 2030 and 15% of 1990 levels by 2050. NYSDEC is currently drafting regulations that would implement these and other related goals.

Several provisions of CLCPA 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 State clean energy and energy efficiency goals for disadvantaged communities.

Many of the provisions of CLCPA that could impact the Authority are not likely to be implemented for years based on deadlines established in the enactment. Therefore, the Authority is not in a position at this time to evaluate the impact of any particular provision of CLCPA on the Authority's business and operations.

As part of the 2020-2021 Enacted State Budget, legislation was enacted that is expected to expedite 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 ("Renewable Energy 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 Renewable Energy Act, which will be implemented by the Authority and New York State Department of State, NYSERDA, the Department of Public Service (DPS), NYSDEC and the Empire State Development Corporation, will accelerate progress towards the State's clean energy and climate goals, including the goal to obtain 70% of the State's electricity from renewable sources by 2030.

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. In summary, the Renewable Energy Act:

- Establishes a new Office of Renewable Energy Siting, through which the State will consolidate the environmental review of major renewable energy facilities.
- Provides accelerated timetables for review of applications for major utility transmission facilities.
- Authorizes NYSERDA to undertake several "host community benefit" programs to provide benefits to residents of local communities where new renewable general projects are slated for development.
- Directs the Department of Public Service ("DPS"), in consultation with NYSERDA, the Authority, the Long Island Power Authority, the New York Independent System Operator ("NYISO"), and the state's regulated utilities, to undertake a comprehensive study of the power delivery system in the state, for the purpose of identifying investor-owned utility distribution and local transmission upgrades, and bulk transmission system investments necessary to help the State meet the environmental goals of the Climate Leadership and Community Protection Act ("CLCPA").
- Requires the PSC to identify bulk transmission projects that need to be developed expeditiously to meet CLCPA goals ("Priority Transmission Project(s)" or "PTP(s)").
- Declares that it is appropriate for the Authority, by itself or in collaboration with other parties to develop those bulk transmission investments designated as PTPs that are needed expeditiously to achieve CLCPA targets.
- Authorizes the Authority, through a public process, to solicit interest from potential co-participants in each PTP it has agreed to develop and assess whether any joint development would provide for significant additional benefits in achieving the CLCPA targets, and thereafter determine to undertake the development of the PTP on its own, or undertake the PTP jointly with one or more other parties and enter into such agreements and take such other actions the Authority determines to be necessary in

order to develop the PTP. For PTPs substantially within the Authority's existing rights of way, the Renewable Energy Act authorizes the Authority to select private sector participants through a competitive bidding process.

Large-Scale Renewable Program

The current Clean Energy Standard set by the PSC requires that 50% of the State's electricity come from renewable sources by 2030. In support of the Clean Energy Standard goal for the State, the Authority issued a request for proposals in July 2020 to solicit renewable energy credits, energy and capacity from eligible large-scale renewable projects which includes wind, solar and battery storage technology. The Authority expects to award project(s) with long-term agreements for the purchase of renewable energy credits that will be generated from the projects. The Authority intends to seek recovery of costs associated with the agreements through sales of renewable energy credits by the Authority to the Authority's customers. The Authority anticipates it will undertake future procurements of large-scale renewable projects in order to fully support its customers and the State-wide Clean Energy Standard.

Commitments and contingencies

The Authority's commitments and contingencies are more fully detailed in note 13 "Commitments and Contingencies" of the notes to the consolidated financial statements.

Canal Corporation

The Canal Transfer Legislation enacted April 4, 2016, authorized, but does not require, the Authority, to the extent that the Authority's Trustees deem it feasible and advisable as required by the Resolution, to transfer moneys, property and personnel to 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. For the year ended December 31, 2020, the Canal Corporation recognized $1.8 million in revenues, $83 million in operations and maintenance expenses and $27 million in depreciation expense. For the year ended December 31, 2019, the Canal Corporation recognized $2 million in revenues, $86 million in operations and maintenance expenses and $25 million in depreciation expense.

By resolution adopted December 9, 2020, the Canal Corporation's Board of Directors adopted a budget for 2021-2024 that consisted of expenditures for operations and maintenance expenses and for capital expenses. 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 and $1.5 million per year for Canal Development Fund expenses.

Contacting the Authority

This financial report is designed to provide our customers and other interested parties with a general overview of the Authority's finances. If you have any questions about this report or need additional financial information, contact the New York Power Authority, 123 Main Street, White Plains, New York 10601-3107. Email: info@nypa.gov

NEW YORK POWER AUTHORITY

Consolidated Statements of Net Position

(In millions)

	December 31, 2020	December 31, 2019
Assets and Deferred Outflows		
Current Assets:		
Cash and cash equivalents	$ 219	$ 66
Investment in securities	349	695
Receivables - customers	219	183
Materials and supplies, at average cost:		
Plant and general	90	86
Fuel	29	30
Miscellaneous receivables and other	195	243
Total current assets	1,101	1,303
Noncurrent Assets:		
Restricted funds:		
Cash and cash equivalents	51	52
Investment in securities	16	16
Total restricted assets	67	68
Capital funds:		
Cash and cash equivalents	677	16
Investment in securities	192	10
Total capital funds	869	26
Capital Assets:		
Capital assets not being depreciated	984	931
Capital assets, net of accumulated depreciation	5,048	4,852
Total capital assets	6,032	5,783
Other Noncurrent Assets:		
Receivable - New York State	86	86
Other long-term assets	1,645	1,490
Total other noncurrent assets	1,731	1,576
Total noncurrent assets	8,699	7,453
Total assets	9,800	8,756
Deferred outflows of resources:		
Asset retirement obligation	17	17
Accumulated decrease in fair value of derivative hedging	2	5
Pensions	154	58
Postemployment benefits other than pensions	88	105
Total assets and deferred outflows of resources	$ 10,061	$ 8,941

See accompanying notes to the consolidated financial statements.

(Continued)

NEW YORK POWER AUTHORITY

Consolidated Statements of Net Position

(In millions)

Liabilities, Deferred Inflows and Net Position	**December 31, 2020**	**December 31, 2019**
Current liabilities:		
Accounts payable and accrued liabilities	$ 484	$ 527
Short-term debt	502	692
Long-term debt due within one year	1	31
Capital lease obligation due within one year	50	43
Total current liabilities	1,037	1,293
Noncurrent liabilities:		
Long-term debt:		
Senior:		
Revenue bonds	1,629	465
Subordinated:		
Subordinated Notes	40	42
Commercial paper	5	5
Total long-term debt	1,674	512
Other noncurrent liabilities:		
Capital lease obligation	984	1,034
Disposal of spent nuclear fuel	229	228
Relicensing	251	256
Postemployment benefits other than pensions	198	226
Other long-term liabilities	354	200
Total other noncurrent liabilities	2,016	1,944
Total noncurrent liabilities	3,690	2,456
Total liabilities	4,727	3,749
Deferred inflows of resources:		
Cost of removal obligations	383	365
Accumulated increase in fair value of derivative hedging	13	1
Pensions	7	20
Postemployment benefits other than pensions	188	46
Net position:		
Net investment in capital assets	3,238	3,647
Restricted	869	45
Unrestricted	636	1,068
Total net position	4,743	4,760
Total liabilities, deferred inflows of resources and net position	$ 10,061	$ 8,941

See accompanying notes to the consolidated financial statements.

NEW YORK POWER AUTHORITY

Consolidated Statements of Revenues, Expenses and Changes in Net Position

(In millions)

	Year Ended December 31, 2020	Year Ended December 31, 2019
Operating revenues:		
Power sales	$ 1,360	$ 1,481
Transmission charges	237	214
Wheeling charges	649	647
Other	19	28
Total operating revenues	2,265	2,370
Operating Expenses:		
Purchased power	484	529
Fuel oil and gas	109	140
Wheeling	650	647
Operations	555	562
Maintenance	128	130
Depreciation	258	250
Total operating expenses	2,184	2,258
Operating income	81	112
Nonoperating revenues and expenses:		
Nonoperating revenues:		
Investment income	23	44
Other	3	2
Total nonoperating revenues	26	46
Nonoperating expenses		
Interest on long-term debt	42	45
Interest - other	109	115
Interest capitalized	(27)	(23)
Amortization of debt premium	–	(2)
Total nonoperating expenses	124	135
Net income before contributed capital	(17)	23
Contributed capital- Wind farm transmission assets	–	3
Net loss and change in net position	(17)	26
Net position, January 1	4,760	4,734
Net position, December 31	$ 4,743	$ 4,760

See accompanying notes to the consolidated financial statements.

NEW YORK POWER AUTHORITY

Consolidated Statements of Cash Flows

(In millions)

	Year Ended December 31, 2020	2019
Cash flows from operating activities:		
Received from customers for the sale of power, transmission and wheeling	$ 2,206	$ 2,356
Disbursements for:		
Purchased power	(478)	(529)
Fuel, oil and gas	(102)	(145)
Wheeling of power by other utilities	(638)	(640)
Operations and maintenance	(792)	(840)
Net cash provided by operating activities	196	202
Cash flows from capital and related financing activities:		
Gross additions to capital assets	(489)	(414)
Issuance of commercial paper	140	156
Repayment of commercial paper	(231)	–
Proceeds from issuance of Series 2020A revenue bonds	1,192	–
Proceeds from issuance of 2020B revenue bonds	114	–
Redemption of bonds	(32)	(219)
Defeasance of- bonds	(131)	–
Repayment of notes	(1)	(1)
Bonds issuance costs	(18)	–
Earning on investments	1	–
Interest paid, net	(54)	(42)
Net cash provided by (used in) capital and related financing activities	491	(520)
Cash flows from noncapital–related financing activities:		
Energy conservation program payments received from participants	289	193
Energy conservation program costs	(207)	(153)
Issuance of commercial paper	80	138
Repayment of commercial paper	(179)	(128)
Interest paid on commercial paper	(6)	(10)
Payment received from New York State	–	43
Empire State Trailways and other	57	–
Margin deposits	(18)	15
NYISO collateral	–	8
Net cash provided by noncapital-related financing activities	16	106
Cash flows from investing activities:		
Earnings received on investments	28	17
Purchase of investment securities	(3,476)	(4,385)
Sale of investment securities	3,558	4,674
Net cash provided by investing activities	110	306
Net increase in cash	813	94
Cash and cash equivalents, January 1	134	40
Cash and cash equivalents, December 31	$ 947	$ 134
Reconciliation to net cash provided by operating activities:		
Operating income	$ 81	$ 112
Adjustments to reconcile operating income to net cash provided by operating activities:		
Change in assets, deferred outflows, liabilities and deferred inflows:		
Provision for depreciation	258	250
Net increase in miscellaneous payments and other	(75)	(235)
Net increase in receivables and materials and supplies	(10)	(50)
Net decrease in accounts payable/accrued liabilities and other	(58)	125
Net cash provided by operating activities	$ 196	$ 202

See accompanying notes to the consolidated financial statements.

NEW YORK POWER AUTHORITY

Statements of Fiduciary Net Position

(In millions)

	December 31, 2020	December 31, 2019
Assets:		
Cash and cash equivalents	$ 142	$ 24
Receivables:		
Due from broker for investments sold	–	–
Investment income	1	1
Total receivables	1	1
Investments at fair value:		
Domestic equity	92	130
International equity	93	46
Index Fund	195	297
Real Estate (REIT)	39	39
Fixed Income	169	152
Total investments	588	664
Total assets	731	689
Liabilities:		
Payables:		
Accrued liability	3	-
Due to broker for investments purchased	-	3
Total liabilities	3	3
Net position available for postemployment benefits other than pensions	$ 728	$ 686

See accompanying notes to the consolidated financial statements

NEW YORK POWER AUTHORITY

Statements of Changes in Fiduciary Net Position

(In millions)

	Year Ended December 31, 2020	2019
Additions:		
Employer contributions	$ 25	$ 25
Investment income:		
Net increase / (decrease) in fair value of investments	41	112
Interest and dividend income	5	11
Less: investment expense	(1)	(2)
Net investment income / (loss)	45	121
Total additions	70	146
Deductions:		
Management expense	3	-
Benefits payments	25	25
Total deductions	28	25
Changes in net position	42	121
Net position available for postemployment benefits other than pensions – beginning of year	686	565
Net position available for postemployment benefits other than pensions – end of year	$ 728	$ 686

See accompanying notes to the consolidated financial statements.

(1) General

The Power Authority of the State of New York (the Power Authority), doing business as The New York Power Authority, is a corporate municipal instrumentality and political subdivision of the State of New York (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 (Power Authority Act or Act).

The Power Authority's mission is to lead the transition to a carbon-free, economically vibrant New York through customer partnerships, innovative energy solutions, and the responsible supply of affordable, clean, and reliable electricity. The mission statement adheres to maintaining the Power Authority'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. The Authority's financial performance goal is to have the resources necessary to achieve its mission, to maximize opportunities to serve its customers better and to preserve its strong credit rating.

The Power Authority is authorized by the Power Authority Act to help provide a continuous and adequate supply of dependable electricity to the people of the State. The Power Authority generates, transmits and sells electricity principally at wholesale. The Power Authority's primary customers are municipal and investor-owned utilities, rural electric cooperatives, high load factor industries and other businesses located throughout New York State, various public corporations located in Southeastern New York within the metropolitan area of New York City (SENY Governmental Customers), and certain out-of-state customers. In addition to contractual sales to customers, the Power Authority also sells power into an electricity market operated by the NYISO.

To provide electric service, the Power Authority owns and operates five major generating facilities, eleven small gas-fired electric generating facilities, and four small hydroelectric facilities in addition to a number of transmission lines, including major 765-kV and 345-kV transmission facilities. The Power Authority's five major generating facilities consist of two large hydroelectric facilities (Niagara and St. Lawrence-FDR), a large pumped-storage hydroelectric facility (Blenheim-Gilboa), the Eugene W. Zeltmann combined cycle electric generating plant located in Queens, New York (Zeltmann or 500-MW Plant) and the Richard M. Flynn combined cycle plant located on Long Island (Flynn). To provide additional electric generation capacity to the Authority's NYC Governmental Customers, the Authority entered into a long-term electricity supply agreement with Astoria Energy II LLC in 2008 for the purchase of the output of an Astoria, Queens based natural-gas fueled 550-MW generating plant, which entered service in the summer of 2011.

The Power Authority acts through a Board of Trustees. The Power Authority's Trustees are appointed by the Governor of the State of New York, with the advice and consent of the State Senate. The Power Authority is a fiscally independent public corporation that does not receive State funds nor tax revenues nor credits. The Power Authority generally finances construction of new projects through a combination of internally generated funds and sales of bonds and notes to investors and pays related debt service with revenues from the generation and transmission of electricity. Accordingly, the financial condition of the Authority is not controlled by or dependent on the State or any political subdivision of the State. Under the criteria set forth in Governmental Accounting Standards Board (GASB) the Authority considers its relationship to the State to be that of a related organization.

Income of the Power Authority and properties acquired by it for its projects are exempt from taxation. However, the Authority is authorized by the Act to enter into agreements to make payments in lieu of taxes with respect to property acquired for any project where such payments are based solely on the value of the real property without regard to any improvement thereon by the Authority and where no bonds to pay any costs of such project were issued prior to January 1, 1972.

Article XV of the New York State Constitution provides, in part, that the barge canal, the divisions of which are the Erie canal, the Oswego canal, the Champlain canal, and the Cayuga-Seneca canal, and the terminals constructed as part of the barge canal system (collectively, the "Canal System") shall remain the property of the State and under its management and control forever. Legislation enacted in 1992 (the "1992 Legislation") transferred jurisdiction of the Canal System, among other assets and properties, from the New York State Commissioner of Transportation to the Thruway Authority, to be held by the New York Thruway Authority (the "Thruway Authority") in the name of the people of the State. Such canal system remained the property of the State and under its management and control as exercised by and through the Thruway Authority, through its then newly created subsidiary, the New York State Canal Corporation (the "Canal Corporation"). The 1992 Legislation deemed the Canal Corporation to be the State for the purposes of such management and control of the canals but for no other purposes.

Legislation was enacted on April 4, 2016 (the "Canal Transfer Legislation") which provided for (1) the transfer, effective January 1, 2017, of the New York State Canal Corporation (Canal Corporation) from the New York State Thruway Authority (Thruway Authority) to the Power Authority and (2) as of January 1, 2017, the Power Authority's assumption from the Thruway Authority of powers and duties relating to the Canal System, and jurisdiction over the Canal System and state assets, equipment and property in connection with the planning, development, construction, reconstruction, maintenance and operation of the Canal System, which the Power Authority is authorized to exercise 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 and the terminals constructed as part of the barge canal system (the "Canal System").

(2) Summary of Significant Accounting Policies

Significant accounting policies include the following:

(a) *Basis of Reporting*

The operations of the Power Authority and its subsidiary, the Canal Corporation, are presented as an enterprise fund following the accrual basis of accounting in order to recognize the flow of economic resources. Accordingly, revenues are recognized in the period in which they are earned and expenses are recognized in the period in which they are incurred. The accounts and transactions of the Canal Corporation are included in the consolidated financial statements and notes to the consolidated financial statements. All significant transactions between the Power Authority and the Canal Corporation have been eliminated. The Power Authority and its blended component unit are referred to collectively as the "Authority" in the consolidated financial statements, except where noted.

The Authority complies with all applicable pronouncements of the Governmental Accounting Standards Board (GASB). In accordance with Governmental Accounting Standards (GAS) Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements,* (GAS No. 62) the Authority applies all authoritative pronouncements applicable to nongovernmental entities (i.e., Accounting Standards Codification (ASC) of the Financial Accounting Standards Board) that do not conflict with GASB pronouncements.

(b) *Regulatory Accounting*

The Power Authority's Board of Trustees has broad rate setting authority for its power sales agreements with customers. The sale of transmission service over the Power Authority's facilities is provided pursuant to New York Independent System Operator (NYISO) tariffs and under contracts that pre-dated existence of the NYISO. The Power Authority files its transmission system revenue requirement with the Federal Energy Regulatory Commission (FERC) for inclusion in the NYISO's open access tariff.

The Authority accounts for its regulated operations under the provisions of GAS No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre November 30, 1989 FASB and AICPA Pronouncements*, paragraphs 476-500. These provisions recognize the economic ability of regulators, through the ratemaking process, to create future economic benefits and obligations affecting rate-regulated entities. Accordingly, the Authority records these future economic benefits and obligations as regulatory assets and regulatory liabilities, respectively. Regulatory assets represent probable future revenues associated with previously incurred costs that are expected to be recovered from customers. Regulatory liabilities represent amounts that are collected from customers through the ratemaking process associated with costs to be incurred in future periods. Based on the action of the Board of Trustees, the Authority believes the future collection of the costs held over through regulatory assets is probable. For regulatory assets see Note 2(l) "Summary of Accounting Polices – Other Long-Term Assets" of the notes to the consolidated financial statements.

(c) *Estimates*

The preparation of consolidated financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

(d) *Capital Assets*

Capital assets are recorded at original cost and consist of amounts expended for labor, materials, services and indirect costs to license, construct, acquire, complete and place in operation the projects of the Authority. Interest on amounts borrowed to finance construction of the Authority's projects is charged to the project prior to completion. Borrowed funds for a specific construction project are deposited in a capital fund account. Earnings on fund investments are held in this fund to be used for construction. Earnings on unexpended funds are credited to the cost of the related project (construction work in progress) until completion of that project. The costs of current repairs are charged to operating expense, and renewals and betterments are capitalized. The cost of capital assets retired less salvage is charged to accumulated depreciation. 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 at December 31, 2020 and 2019 expressed as a percentage of average depreciable capital assets on an annual basis are:

	Average depreciation rate	
	2020	2019
Type of plant:		
Production:		
Hydro	2.0%	2.0%
Gas turbine/combined cycle	2.0	2.0
Transmission	1.9	1.9
General	3.8	3.9
Canal system	3.4	3.4
	2.6%	2.6%

(e) *Asset Retirement and Cost of Removal Obligations*

The Authority has recorded a liability at fair value to recognize legal obligations for asset retirements in the period incurred and to capitalize the cost by increasing the carrying amount of the related long-lived asset. The Authority determined that it had legal liabilities for the retirement of certain Small Clean Power Plants (SCPPs) in New York City and, accordingly, has recorded a liability for the retirement of these assets. In connection with these legal obligations, the Authority has also recognized a liability for the remediation of certain contaminated soils discovered during the construction process. Accordingly, at December 31, 2020 and 2019, the Authority has reclassified $17 million from capital assets to deferred outflows of resources to reflect the application of GAS Statement No. 83 (GAS No. 83), *Accounting for Certain Asset Retirement Obligations*.

The Authority also applies GAS No. 49 *Accounting and Financial Reporting for Pollution Remediation Obligations,* to asset retirement obligations involving pollution remediation obligations, which upon the occurrence of any one of five specified obligating events, requires an entity to estimate the components of expected pollution remediation outlays and determine whether outlays for those components should be accrued as a liability or, if appropriate, capitalized when goods and services are acquired. At December 31, 2020 and 2019, the Authority had approximately $35 million and $25 million, respectively, of liabilities recorded under GASB 49.

In addition to asset retirement obligations, the Authority has other cost of removal obligations that are being collected from customers and accounted for under the provisions of GAS Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre November 30, 1989 FASB and AICPA Pronouncements*, paragraphs 476-500. These cost of removal obligations are reflected in deferred inflows of resources in the statements of net position.

Asset retirement obligations (ARO) amounts included in other noncurrent liabilities and cost of removal obligation amounts included in deferred inflows are as follows:

	ARO amounts	Cost of removal obligation
	(In millions)	
Balance – December 31, 2019	$ 17	$ 365
Depreciation Expense	–	14
Other expense	–	4
Settlements		–
Balance – December 31, 2020	$ 17	$ 383

(f) *Long-Lived Assets*

The Authority applies GAS No. 42, *Accounting and Financial Reporting for Impairment of Capital Assets and for Insurance Recoveries*, which states that asset impairments are generally recognized only when the service utility of an asset is reduced or physically impaired.

GAS No. 42 states that asset impairment is a significant, unexpected decline in the service utility of a capital asset. The service utility of a capital asset is the usable capacity that at acquisition was expected to be used to provide service, as distinguished from the level of utilization which is the portion of the usable capacity currently being used. Decreases in utilization and existence of or increases in surplus capacity that are not associated with a decline in service utility are not considered to be impairments.

(g) *Cash, Cash Equivalents and Investments*

Cash includes cash and cash equivalents and short-term investments with maturities, when purchased, of three months or less. The Authority accounts for investments at their fair value. Fair value is determined using quoted market prices. Investment income includes changes in the fair value of these investments. Realized and unrealized gains and losses on investments are recognized as investment income in accordance with GAS No. 31, *Accounting and Financial Reporting for Certain Investments and for External Investment Pools*.

(h) *Derivative Instruments*

The Authority uses financial derivative instruments to manage the impact of energy and capacity price, fuel cost changes and interest rate when applicable, on its earnings and cash flows. The Authority recognizes the fair value of all financial derivative instruments as either an asset or liability on its statements of net position with the offsetting gains or losses recognized in earnings or deferred charges. The Authority applies GAS No. 53, *Accounting and Financial Reporting for Derivative Instruments*, which establishes accounting and reporting requirements for derivative instruments (see Note 8 "Risk Management and Hedging Activities" of the notes to the consolidated financial statements).

(i) *Accounts Receivable*

Accounts receivable are classified as current assets and are reported net of an allowance for uncollectible amounts.

(j) *Materials and Supply Inventory*

Material and supplies are valued at weighted average cost and are charged to expense during the period in which the material or supplies are used.

(k) *Debt Refinancing Charges*

Debt refinancing charges, representing the difference between the reacquisition price and the net carrying value of the debt refinanced, are amortized using the interest method over the life of the new debt or the old debt, whichever is shorter, in accordance with GAS No. 23, *Accounting and Financial Reporting for Refundings of Debt Reported by Proprietary Activities.* See note 6 "Long-Term Debt" of the notes to the consolidated financial statements.

(l) *Other Long-Term Assets*

Other long-term assets at December 31, 2020 and 2019 consist of the following:

	December 31,	
	2020	2019
	(In millions)	
Other long-term assets:		
Regulatory assets (a):		
Recoverable electricity supply market costs	$ 383	$ 364
Other regulatory assets	33	12
Total regulatory assets	416	376
Energy efficiency program costs (b)	287	286
Other long-term receivables	438	443
Transmission line interconnection costs	220	238
Other postemployment employee benefits	168	–
Other	116	147
Total other long-term assets	$ 1,645	$ 1,490

(a) Regulatory assets reflect previously incurred costs that are expected to be recovered from customers through the ratemaking process.

(b) Energy efficiency program costs will be recovered from certain customers through the terms of contracts.

In 2017, a Memorandum of Understanding was entered between the Authority and five investor-owned utility companies to provide Hurricane Relief assistance in Puerto Rico. The Authority's deployment cost associated with the assistance efforts are subject to reimbursement by the Emergency Management Assistant Compact (EMAC) program. As of December 31, 2020, the related costs are included in other long-term assets in the consolidated statements of net position.

(m) *Compensated Absences*

The Authority accrues the cost of unused sick leave which is payable upon the retirement of its employees. The Authority has accrued $44 million and $35 million in other non-current liabilities at December 31, 2020 and 2019, respectively, and $6 million at December 31, 2020 and 2019, in current liabilities on the statements of net position. The current year's cost is accounted for as a current operating expense in the statements of revenues, expenses, and changes in net position.

(n) *Net Position*

Net Position represents the difference between assets plus deferred outflows and liabilities plus deferred inflows and is classified into three components:

a. Net investment in capital assets – This consists of capital assets, net of depreciation reduced by related outstanding debt and accounts. This indicates that these assets are not accessible for other purposes.

b. Restricted – This represents restricted assets reduced by related liabilities and deferred inflows of resources that are not accessible for general use because their use is subject to restrictions enforceable by third parties.

c. Unrestricted – This represents the net amount of assets, deferred outflows of resources, liabilities and deferred inflows of resources that are not included in the components noted above and that are available for general use.

(o) *New York Independent System Operator (NYISO)*

The Power Authority is a member and a customer of the New York Independent System Operator (NYISO). The NYISO schedules the use of the bulk transmission system in the State, which normally includes all the Power Authority's transmission facilities, and collects ancillary services, losses and congestion fees from customers. In addition, the Power Authority dispatches power from its generating facilities in conjunction with the NYISO. The NYISO coordinates the reliable dispatch of power and operates a market for the sale of electricity and ancillary services within the State.

Based upon the Power Authority's scheduled customer power needs and available electricity generated by the Power Authority's operating assets, the Authority buys and sells energy in an electricity market operated by the NYISO. A significant amount of the Power Authority's energy and capacity revenues result from sales of the Power Authority's generation into the NYISO market. A significant amount of the Power Authority's operating expenses consist of various NYISO purchased power charges in combination with generation related fuel expenses.

(p) *Operating Revenues*

The customers served by the Power Authority and the rates paid by such customers vary with the Power Authority facilities designated to serve such loads. These customers are served under contracts and tariffs approved by the Trustees.

The principal operating revenues are generated from the sale, transmission, and wheeling of power. Revenues are recorded when power is delivered or service is provided. Customers' meters are read, and bills are rendered, monthly. Wheeling charges are for costs the Authority incurred for the transmission and/or delivery of power and energy to customers over transmission lines owned by other utilities. Sales to the Authority's five largest customers operating in the State accounted for approximately 49% and 52% of the Authority's operating revenues in 2020 and 2019, respectively.

In addition to contractual sales to customers, the Power Authority also sells power into an electricity market operated by the NYISO. These sales are affected by market prices and are not subject to rate regulation by the Power Authority's Board of Trustees or other regulatory bodies.

(q) *Operating Expenses*

The Authority's operating expenses include fuel, operations and maintenance, depreciation, purchased power costs, and other expenses related to the sale of power. Energy costs are charged to expense as incurred.

Purchased power costs include capacity, energy and ancillary service purchases made in the wholesale market on behalf of its customers (except for those made through previously approved purchased power agreements). Wheeling expenses are based on contractual and/or tariff rates of the service provider and are recovered through pass-through provisions in customer contracts.

(r) *Pension Plans*

The Authority is a cost-sharing employer that participates in the New York State and Local Employees' Retirement System (NYSLERS), which is a cost-sharing multiple-employer plan in which the participating government employers pool their assets and their obligations to provide defined benefit pensions. The plan assets of this type of plan can be used to pay the pensions of the retirees of any participating employer. The amounts reported by the Authority for its proportionate share of the net pension liability, pension expense and deferred outflows and deferred inflows have been provided by the New York State and Local Employees' Retirement System to employers participating in the NYSLERS in accordance with Statement No. 68, *Accounting and Financial Reporting for Pensions*, and have been determined on the same basis as reported by the NYSLERS. See Note 10 "Pension Plans" of the notes to the consolidated financial statements.

(s) *Postemployment Benefits Other Than Pensions (OPEB)*

The Power Authority provides certain health care and life insurance benefits for eligible retired employees and their dependents under a single employer noncontributory (except for certain optional life insurance coverage) health care plan (Power Authority OPEB Plan). The Power Authority has an established trust for its OPEB obligations (OPEB Trust) that is separate from the Power Authority and is held by an independent custodian for the exclusive benefit of the OPEB Trust beneficiaries and not of the Power Authority. The ownership of the OPEB Trust assets are held by the independent custodian at all times and the OPEB Trust assets are not considered funds or assets of the Power Authority for any purpose. All of the OPEB Trust assets are irrevocably dedicated to, and are used for the exclusive purpose of, making payments of benefits to or for the benefit of the Power Authority OPEB Plan beneficiaries and for paying administrative expenses of the Power Authority OPEB Plan and the OPEB Trust and will not be available to any creditors of the Power Authority. The OPEB Trust does not issue a stand-alone financial report and its financial statements are reported as a fiduciary fund in the Authority's financial report.

The Power Authority's net OPEB liability was measured as of December 31, 2019, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of that date. The actuarial valuation is performed biennially. For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expenses, information about the fiduciary net position of the OPEB Trust and additions to/deductions from OPEB Trust's fiduciary net position have been determined on the same basis as they are reported by the Power Authority OPEB

Plan as of the same measurement date. For this purpose, the Power Authority OPEB Plan recognizes benefit payments when due and payable in accordance with the benefit terms. Investments are reported at fair value, except investments that have a maturity at the time of purchase of one year or less, which are reported at cost.

The Canal Corporation provides health care and death benefit for eligible retired employees. Substantially all employees may become eligible for these benefits if they reach normal retirement age while working for the Canal Corporation. The Canal Corporation participates, pursuant to the provision of Section 163(4) of the New York State Civil Service Law, in the New York State health Insurance Program (NYSHIP). NYSHIP does not issue a standalone financial report since there are no assets legally segregated for the sole purpose of paying benefits under the plan. Benefit payments are funded on a pay-as-you go basis.

(t) *New Accounting Pronouncements*

GASB issued GAS Statement No. 87 (GAS No. 87), *Leases*, which was effective for reporting periods beginning after December 15, 2019 prior to issuance of (GAS No.95). GAS No. 87 requires recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows or outflows of resources based on payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right-to-use an underlying asset. Under GAS No. 87, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. The Authority is currently evaluating the impact of GAS No. 87 on its consolidated financial statements.

GASB issued GAS Statement No. 91 (GAS No. 91), *Conduit Debt Obligations*, which was effective for reporting periods beginning after December 15, 2020 prior to issuance of GASB Statement 95 (GAS No.95). GAS No. 91 provides a single method of reporting conduit debt obligations by issuers associated with (1) commitments extended by issuers, (2) arrangements associated with conduit debt obligations, and (3) related note disclosures. This statement clarifies the definition of a conduit debt obligation, establishes that a conduit debt obligation is not a liability of the issuer, establishes standards for accounting and financial reporting of additional commitments and voluntary commitments extended by issuers and arrangements associated with conduit debt obligations and improves required note disclosures. The Authority is evaluating the impact of GAS No. 91 on its consolidated financial statements.

In May 2020, in response to challenges arising from the COVID-19 virus, GASB issued Statement No. 95 (GAS No. 95), *Postponement of the Effective Dates of Certain Authoritative Guidance*, in which GASB approved an 18-month postponement for Statement 87, *Leases*. In addition, GAS No. 95 postponed for one-year effective dates for all statements and implementation guides with a current effective date of reporting periods beginning after June 15, 2018, and later. As such GAS No. 87 will be effective for reporting periods beginning after June 15, 2021 and GAS No. 91 will be effective for reporting period beginning after December 31, 2021.

GASB issued GAS Statement No.92 (GAS No. 92), *Omnibus 2020*, which originally had an effective date for reporting periods beginning after June 15, 2020. This effective date has been postponed to June 15, 2021 due to the issuance of GAS No.95. GAS No.92 establishes accounting and financial reporting requirements for specific issues related to leases, intra-entity transfers of assets, postemployment benefits, government acquisitions, risk financing and insurance-related activities of public entity risk pools, fair value measurements, and derivative instruments. The Authority is evaluating the impact of GAS No.92 on its consolidated financial statements.

GASB issued GAS Statement No. 93 (GAS No. 93) *Replacement of Interbank Offered Rates*, which originally had an effective date for reporting periods beginning after June 15, 2020. This effective date has been postponed to June 15, 2021 due to the issuance of GAS No.95. Some governments have entered into agreements in which variable payments made or received depend on an interbank offered rate (IBOR)—most notably, the London Interbank Offered Rate (LIBOR). As a result of global reference rate reform, LIBOR is expected to cease to exist in its current form at the end of 2021, prompting governments to amend or replace financial instruments for the purpose of replacing LIBOR with other reference rates, by either changing the reference rate or adding or changing fallback provisions related to the reference rate. GASB 93 objective is to address those and other accounting and financial reporting implications that result from the replacement of an IBOR. The Authority is evaluating the impact of GAS No.93 on its consolidated financial statements.

GASB Issued GASB Statement No. 96 (GAS No. 96), *Subscription-Based Information Technology Arrangements*, which is effective for reporting periods beginning after June 15, 2022. GAS No.96 requires recognition of certain subscription assets and liabilities for Subscription-based information Technology Arrangements (SBITA) which were previously either capitalized or expensed. It establishes that a SBITA results in a right-to-use subscription asset—an intangible asset—and a corresponding subscription liability. The Authority is evaluating the impact of GAS No.96 on its consolidated financial statements.

GASB Issued GASB Statement No. 97 (GAS No. 97), C*ertain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans-an amendment of GASB Statements No.14 and No.84 and superseded of GASB Statement No.32*, which is effective for reporting periods beginning after June 15, 2021. The primary objectives of this Statement are to increase consistency and comparability related to the reporting of fiduciary component units in circumstances in which a potential component unit does not have a governing board, mitigate costs associated with the reporting of certain defined contribution pension plans, defined contribution other postemployment benefit (OPEB) plans, and employee benefit plans other than pension plans or OPEB plans and to enhance the relevance, consistency, and comparability of the accounting and financial reporting for Internal Revenue Code (IRC) Section 457 deferred compensation plans. The Authority is evaluating the impact of GAS No.97 on its consolidated financial statements.

(3) Bond Resolution and Related Matters

On February 24, 1998, the Authority adopted its “General Resolution Authorizing Revenue Obligations” (as amended and supplemented up to the present time, the Bond Resolution). The Bond Resolution covers all of the Authority’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 the Authority 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. The Authority 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 therefore (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. Revenues of the Authority (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 the Authority, 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.

Collateral **-** Under the Authority's Bond Resolution, a Trust Estate was created and pledged for the payment of the principal and redemption price of, and interest on, the Authority's Obligations issued under the Bond Resolution and, on a parity basis, other Parity Debt as defined in the Bond Resolution. The Authority's subordinated debt, including the Commercial Paper Notes, loans issued under the Revolving Credit Agreement described below, the Extendible Municipal Commercial Paper Notes, the Subordinated 2012 Notes and Subordinated 2017 Notes, are not Obligations under the Bond Resolution but share a subordinated lien in the Trust Estate. The Trust Estate means, collectively: (i) all Revenues (as defined in the Bond Resolution) of the Authority; (ii) the proceeds of the sale of Obligations until expended for the purposes authorized in the supplemental resolution authorizing the issuance of such Obligations; (iii) all funds, accounts and subaccounts established by the Bond Resolution, including investment earnings thereon; and (iv) all funds, moneys, and securities and any and all other rights and interests in property , whether tangible or intangible, conveyed as and for additional security pursuant to the Bond Resolution by the Authority, or by anyone on its behalf, or with its written consent, to the Trustee.

Events of Default/Termination **-** Pursuant to the Bond Resolution, upon an Event of Default so long as such Event of Default shall not have been remedied, either the Trustee or the owners of 25% in principal amount of the Obligations then outstanding may declare the principal and accrued interest on all Obligations due and payable immediately.

Under the revolving credit agreement supporting the Authority's Commercial Paper Notes effective January 16, 2019, and amended on November 8, 2019, among the Authority, JP Morgan Chase Bank, National Association, as Administrative Agent, and the lenders thereunder (Revolving Credit Agreement), the Authority is able to borrow up to $700 million in aggregate principal amount outstanding at any time for the repayment of the Commercial Paper Notes. In the case of an Event of Default (as defined in the Revolving Credit Agreement), the lenders under the Revolving Credit Agreement holding 66 2/3% of the commitments thereunder will be able to: terminate their commitments; direct the Authority to cease issuing Commercial Paper Notes; and declare the principal and accrued interest on obligations under the Revolving Credit Agreement due and immediately payable.

Under the hybrid revolving credit and note purchase agreement supporting the Authority's Commercial Paper Notes and Liquidity effective April 22, 2020, among the Authority, JP Morgan Chase Bank, National Association, as Administrative Agent, and sole lender thereunder (Revolving Credit Agreement), the Authority is able to borrow up to $250 million in aggregate principal amount outstanding at any time for the repayment of the Commercial Paper Notes and/or Direct Purchase Note(s) under the agreement. In the case of an Event of Default (as defined in the Revolving Credit Agreement), the sole lender under the Revolving Credit Agreement holding 100% of the commitment thereunder will be able to: terminate their commitment; direct the Authority to cease issuing Commercial Paper Notes; and declare the principal and accrued interest on obligations under the Revolving Credit Agreement due and immediately payable.

(4) Cash and Investments

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.

(a) *Credit Risk*

The Authority's investments are restricted to (a) authorized collateralized certificates of deposit, time deposits and money market funds, which shall not exceed 40% of the Authority's invested funds and no more than $50 million invested in any one fund, (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, (e) Guaranteed Investment Contracts or GIC Funds issued by creditworthy insurance companies and collateralized by issuer's general or separate account assets, with no more than $50 million invested in any one contract or fund. The Authority's investments in the senior debt securities of Federal National Mortgage Association (FNMA), Federal Home Loan Bank (FHLB), Federal Farm Credit Bank (FFCB) Federal Agricultural Mortgage Corporation (FAMC) and Federal Home Loan Mortgage Corporation (FHLMC) were rated Aaa by Moody's Investors Services (Moody's), AAA by Fitch Ratings (Fitch) and AA+ by Standard & Poor's (S&P).

(b) ***Interest Rate Risk***

Securities that are the subject of repurchase agreements or reverse repurchase agreements must have a market value at least equal to the cost of the investment. The agreements are limited to a maximum fixed term of 30 days and may not exceed $250 million or $50 million with any one dealer or bank. Monies will not be invested for terms in excess of the projected use of funds. As of December 31, 2020, the Authority had $52 million invested in repurchase agreements. As of December 31, 2019, the Authority had no investments in repurchase agreements.

(c) ***Concentration of Credit Risk***

There is no limit on the amount that the Power Authority may invest in any one issuer; however, investments in authorized certificates of deposit shall not exceed 25% of the Authority's invested funds and shall not exceed $25 million from any one bank. At December 31, 2020, the Authority's total investment portfolio of $1,488 million, excluding the Canal Development Fund, consists of investments of $100 million (7%), $147 million (10%), $16 million (1%) $75 million (5%), $146 million (10%) and $73 million (5%) in securities of FAMC, FHLMC, FHLB, FFCB, U.S. government and other various municipal debt securities, respectively.

At December 31, 2019, the Authority's total investment portfolio of $841 million, excluding the Canal Development Fund, consists of investments of $222 million (26%), $124 million (15%), $179 million (21%) $72 million (9%) and $16 million (2%), $108 (13%) in securities of FHLB, FNMA, FFCB, FHLMC, U.S. government and other various municipal debt securities, respectively.

(d) ***Other***

All investments are held by designated custodians in the name of the Authority. The bank balances at December 31, 2020 and 2019 were $662 million and $32 million, respectively, of which $661 million and $31 million, respectively, were uninsured, but were collateralized by assets held by the bank in the name of the Authority.

Cash and Investments of the Authority at December 31, 2020 and 2019 are as follows:

December 31, 2020	Total	Total restricted	Restricted: Canal Development Fund	Restricted: WNYEDF, POCR, projects and other	Capital fund	Unrestricted
			(In millions)			
Cash and investments:						
Cash and cash equivalents	$ 947	$ 51	$ 16	$ 35	$ 677	$ 219
U.S. government:						
U.S. Treasury bills	18	—	—		—	18
U.S. Treasury notes	128	—	—	—	—	128
	146	—	—	—	—	146
Other debt securities:						
FAMC	100	—	—	—	65	35
FHLMC	147	—	—	—	77	70
FHLB	16	16	—	16	—	—
FFCB	75	—	—	—	50	25
All other	73	—	—	—	—	73
	411	16	—	16	192	203
Total investments	557	16	—	16	192	349
Total cash and investments	$ 1,504	$ 67	$ 16	$ 51	$ 869	$ 568
Summary of maturities (years):						
0 – 1	$ 1,116	$ 67	$ 16	$ 51	$ 677	$ 372
1 – 5	303	—	—	—	157	146
5 – 10	35	—	—	—	35	—
10+	50	—	—	—	—	50
	$ 1,504	$ 67	$ 16	$ 51	$ 869	$ 568

As of December 31, 2020, restricted funds include the POCR fund ($8 million), the Lower Manhattan Energy Independence Initiative fund ($6 million) and the Fish & Wildlife Habitat Enhancement fund related to the Niagara relicensing ($13 million), the Western New York Economic Development Fund ($8 million), the Northern New York Economic Development Fund ($4 million) (see Note 13(a) "Commitments and Contingencies – Power Programs"), Canal Development Fund ($16 million) and other ($12 million).

As of December 31, 2019, restricted funds include the POCR fund ($8 million), the Lower Manhattan Energy Independence Initiative fund ($6 million) and the Fish & Wildlife Habitat Enhancement fund related to the Niagara relicensing ($14 million), the Western New York Economic Development Fund ($10 million), the Northern New York Economic Development Fund ($5 million) (see Note 13(a) "Commitments and Contingencies – Power Programs"), Canal Development Fund ($14 million) and other ($11 million).

December 31, 2019	Total	Total restricted	Restricted: Canal Development Fund	Restricted: WNYEDF, POCR, projects and other	Capital fund	Unrestricted
			(In millions)			
Cash and investments:						
Cash and cash equivalents	$ 134	$ 52	$ 14	$ 38	$ 16	$ 66
U.S. government:						
U.S. Treasury bills	16	16	—	16	—	—
U.S. Treasury notes	—	—	—	—	—	—
	16	16	—	16	—	—
Other debt securities:						
FNMA	124	—	—	—	—	124
FHLMC	72	—	—	—	6	66
FHLB	222	—	—	—	—	222
FFCB	179	—	—	—	1	178
All other	108	—	—	—	3	105
	705	—	—	—	10	695
Total investments	721	16	—	16	10	695
Total cash and investments	$ 855	$ 68	$ 14	$ 54	$ 26	$ 761
Summary of maturities (years):						
0 – 1	$ 336	$ 68	$ 14	$ 54	$ 23	$ 245
1 – 5	497	—	—	—	3	494
5 – 10	13	—	—	—	—	13
10+	9	—	—	—	—	9
	$ 855	$ 68	$ 14	$ 54	$ 26	$ 761

(5) Capital Assets

The following schedule summarizes the capital assets activity of the Authority for the year ended December 31, 2020.

	Beginning balance	Additions	Retirements/ Transfers	Ending balance
		(In millions)		
Capital assets, not being depreciated:				
Land	$ 193	$ —	$ —	$ 193
Construction in progress	738	490	(437)	791
Total capital assets not being depreciated	931	490	(437)	984
Capital assets, being depreciated:				
Production – Hydro	2,262	53	(2)	2,313
Production – Gas turbine/combined cycle	2,336	49	—	2,385
Transmission	2,366	185	—	2,551
General	1,301	120	(16)	1,405
Canal System	768	34	—	802
Total capital assets being depreciated	9,033	441	(18)	9,456
Less accumulated depreciation for:				
Production – Hydro	888	38	(2)	924
Production – Gas turbine/combined cycle	1,296	85	—	1,381
Transmission	1,331	40	—	1,371
General	456	52	(16)	492
Canal System	210	30	—	240
Total accumulated depreciation	4,181	245	(18)	4,408
Net value of capital assets, being depreciated	4,852	196	—	5,048
Net value of all capital assets	$ 5,783	$ 686	$ (437)	$ 6,032

The following schedule summarizes the capital assets activity of the Authority for the year ended December 31, 2019.

	Beginning balance	Additions	Retirements/ Transfers	Ending balance
	(In millions)			
Capital assets, not being depreciated:				
Land	$ 193	$ —	$ —	$ 193
Construction in progress	703	506	(471)	738
Total capital assets not being depreciated	896	506	(471)	931
Capital assets, being depreciated:				
Production – Hydro	2,114	160	(12)	2,262
Production – Gas turbine/combined cycle	2,386	17	(67)	2,336
Transmission	2,228	151	(13)	2,366
General	1,198	111	(8)	1,301
Canal System	723	45	—	768
Total capital assets being depreciated	8,649	484	(100)	9,033
Less accumulated depreciation for:				
Production – Hydro	862	38	(12)	888
Production – Gas turbine/combined cycle	1,260	86	(50)	1,296
Transmission	1,304	40	(13)	1,331
General	413	49	(6)	456
Canal System	187	25	(2)	210
Total accumulated depreciation	4,026	238	(83)	4,181
Net value of capital assets, being depreciated	4,623	246	(17)	4,852
Net value of all capital assets	$ 5,519	$ 752	$ (488)	$ 5,783

Wind Farm Transmission Assets

In April 2019, Jericho Rise Wind Farm, LLC, a wind farm developer, and in accordance with a Large Generator Interconnection Agreement signed in June 2016 between the Authority, Jericho Rise Wind Farm, LLC and the New York Independent System Operator, Inc. transferred title of certain transmission assets (valued at $3 million) to the Authority. The transfer was accounted for as a capital contribution.

(6) Long-Term Debt

a. Components

	Amount 2020	Amount 2019	Interest rate (a)	Maturity		Earliest redemption date prior to maturity
	(In millions)					
Senior debt:						
Revenue Bonds (Tax-Exempt):						
Series 2011A Revenue (b), (c) Bonds:						
Serial Bonds	—	57	N/A	N/A		N/A
Term Bonds	—	39	N/A	N/A		N/A
Series 2015A Revenue (b) Bonds:						
Serial Bonds	—	15	N/A	N/A		N/A
Series 2020A Revenue Bonds:						
Term Bonds	1,121	—	3.25% to 4.00%	11/15/2045 - 2060	**	5/15/2030
Revenue Bonds (Taxable):*						
Series 2003A Revenue Bonds:						
Term Bonds	117	149	5.649% to 5.749%	11/15/2020 to 2033	**	Any date
Series 2007B Revenue (b) Bonds:						
Term Bonds	210	231	5.905% to 5.985%	11/15/2037 and 2043	**	Any date
Series 2020B Revenue Bonds:						
Term Bonds	114	—	2.818%	11/15/2039	**	Any date
	1,562	491				
Plus unamortized premium and discount	67	9				
Less deferred refinancing costs	—	5				
	1,629	495				
Less due in one year	—	30				
Long-term senior debt, net of due in one year	$ 1,629	$ 465				

(a) interest rate at issuance
(b) Principal due in: 2020-2023 of Series 2007B of $20 million, 2020 of Series 2015A of $15 million and 2020-2023 of Series 2011A of $33 million defeased in May 2020.
(c) Principal due 2024-2038 of Series 2011A of $63 million defeased in December 2020.
* All outstanding taxable term bonds are subject to Make-Whole Call provisions.
** Bonds are subject to sinking fund provisions.

	Amount 2020	Amount 2019	Interest rate (a)	Maturity	Earliest redemption date prior to maturity
	(In millions)				
Subordinate debt:					
Subordinated Notes, Series 2017	$ 22	$ 23	2.61% to 4.27%	2022 to 2041	Any date
Subordinated Notes, Series 2012	19	20	2.50% to 4.05%	2019 to 2037	Any date
Commercial Paper:					
EMCP (Series 1)	5	5	1.41%	2021	
	46	48			
Less due within one year	1	1			
	45	47			
Total Long-term debt	1,675	543			
Less due within one year	1	31			
Long-term debt, net of due in one year	$ 1,674	$ 512			

(a) interest rate at issuance

Interest on Series 2003A, 2007B and 2020B Revenue Bonds and Subordinated Notes, Series 2012 and Subordinated Notes, Series 2017 is not excluded from gross income for bondholders' Federal income tax purposes.

The Revenue Bonds outstanding at December 31, 2020 have an average interest rate of 4.24% and mature through 2060. The Revenue Bonds outstanding at December 31, 2019 had an average interest rate of 5.27% and mature through 2041.

In May 2020, the Authority's Trustees authorized the issuance of $1.235 billion of Revenue Bonds consisting of $1.121 billion tax-exempt Series 2020A Revenue Bonds and $114.1 million of taxable Series 2020B Revenue Bonds for the purpose of refunding certain revenue bonds and commercial paper and funding on-going and future construction projects. The proceeds from the issuance of the 2020 Revenue Bonds were used to (i) redeem $32 million of the Authority's Series 2003A Revenue Bonds and a redemption premium of $3 million; (ii) defease $68 million in aggregate principal of the Authority's Series 2011A and 2015A and certain 2007B Revenue Bonds by placing the net proceeds of new bonds in an irrevocable trust to provide for all future debt service payments on the old bonds; (iii) refund $156 million of commercial paper, which was issued to refund $156 million of its Series 2007A and Series 2007C Revenue Bonds in December 2019; and (iv) pay financing and other costs relating to the issuance of the 2020A and B Revenue Bonds. Accordingly, the trust account assets and the liability for the defeased bonds are not included in the Authority's financial statements at December 31, 2020.

In December 2020, the Authority issued Commercial Paper to refund $66 million of its 2011A Revenue Bond Senior Debt.

As indicated in Note 3 “Bond Resolution and Related Matters” of notes to the consolidated financial statements, the Authority has pledged future revenues to service the Obligations and Parity Debt (Senior Debt) issued under the Bond Resolution. The total principal and interest remaining to be paid on the Senior Debt is $3.3 billion as of December 31, 2020. Principal and interest paid for 2020 and operating income plus depreciation were $283 million and $339 million, respectively. Principal and interest paid for 2019 and operating income plus depreciation were $104 million and $362 million, respectively.

Senior revenue bonds are subject to redemption prior to maturity in whole or in part as provided in the supplemental resolutions authorizing the issuance of each series of bonds, beginning for each series on the date indicated in the table above, at principal amount or at various redemption prices according to the date of redemption, together with accrued interest to the redemption date.

At December 31, 2020 and 2019, the current market value of the senior debt was approximately $2.1 billion and $632.8 million, respectively. Market values were obtained from a third party that utilized a matrix-pricing model.

Subordinate Debt:

Subordinate Notes – In November 2016, the Authority’s Trustees authorized the issuance of Subordinated Notes, Series 2017 (Subordinated Notes, Series 2017) in a principal amount not to exceed $30 million to accelerate additional funding for the State Parks Greenway Fund, which was established pursuant to the Niagara Relicensing Settlement entered into by the Authority and the New York State Office of Parks, Recreation & Historic Preservation in connection with the Niagara Project’s relicensing. The Authority issued the subordinate notes on February 24, 2017 in the amount of $25.2 million. These Subordinated Notes are subordinate to the Series 2003A Revenue Bonds, the Series 2007B, and the Series 2020A and 2020B Revenue Bonds.

In November 2012, the Authority’s Trustees authorized the issuance of Subordinated Notes, Series 2012 (Subordinated Notes, Series 2012), in a principal amount not to exceed $30 million for the purpose of accelerating the funding for the State Parks Greenway Fund, which was established pursuant to the Niagara Relicensing Settlement entered into by the Authority and the New York State Office of Parks, Recreation & Historic Preservation. The Authority issued the Subordinated Notes on December 18, 2012 in the amount of $25 million. These Subordinated Notes are subordinate to the Series 2003 A Revenue Bonds, the Series 2007B, and Revenue Bonds, and the Series 2020A and 2020B Revenue Bonds.

Commercial Paper – Under the Extendible Municipal Commercial Paper (EMCP) Note Resolution, adopted December 17, 2002, and as subsequently amended and restated, the Authority may issue a series of notes, designated EMCP Notes, Series 1, maturing not more than 270 days from the date of issue, up to a maximum amount outstanding at any time of $200 million (EMCP Notes). It is the Authority’s intent to remarket the EMCP Notes as they mature with their ultimate retirement in 2021. The Authority has the option to extend the maturity of the EMCP Notes and would exercise such right in the event there is a failed remarketing. This option serves as a substitute for a liquidity facility for the EMCP Notes.

Under the Commercial Paper Note Resolution adopted June 28, 1994, as subsequently amended and restated, the Authority may issue from time to time a separate series of notes maturing not more than 270 days from the date of issue, up to a maximum amount outstanding at any time of $400 million (Series 1 CP Notes), $450 million (Series 2 CP Notes), $350 million (Series 3 CP Notes) and $220 million (Series 4 CP Notes). See Note 7 “Short-Term Debt” of the notes to the financial statements for Series 1, and certain Series 2 and Series 3 CP Notes designated as short-term debt. There were no Series 4 CP Notes outstanding at December 31, 2020.

The proceeds of certain Series 2 Commercial Paper Notes (CP Notes) were used to refund General Purpose Bonds and the proceeds of the EMCP Notes were used to refund Series 2 and 3 CP Notes. CP Notes and EMCP Notes have been used, and may in the future be used, for other corporate purposes. It is the Authority's intention to renew the EMCP Notes as they mature.

The Authority has a line of credit under a 2019 revolving credit agreement (the 2019 RCA), with a syndicate of banks, to provide liquidity support for the Series 1-3 CP Notes, under which the Authority may borrow up to $700 million in aggregate principal amount outstanding at any time for certain purposes, including the repayment of the Series 1–3 CP Notes. The 2019 RCA expires January 14, 2022. The 2019 RCA succeeded the amended 2015 RCA, which expired by its terms on January 18, 2019 with no outstanding borrowings. There are no outstanding borrowings under the 2019 RCA.

The Authority entered into a hybrid revolving line of credit with a single bank on April 22, 2020 under an agreement (the 2020 RCA) to provide liquidity support for the Series 3 and Series 4 CP Notes and/or to borrow directly. The Authority may borrow up to $250 million in aggregate principal amount outstanding at any time for certain purposes, including the repayment of Commercial Paper or for general corporate purposes. The 2020 RCA expires April 21, 2021 and the Authority is in process of renewing this RCA for an additional one-year period. There are no outstanding borrowings under the 2020 RCA.

CP Notes and EMCP Notes are subordinate to the Series 2003A Revenue Bonds, the Series 2007B, the Series 2020A and 2020B Revenue Bonds.

Interest on the CP (Series 3) is taxable to holders for Federal income tax purposes.

The interest rate used to calculate future interest expense on variable rate debt is the interest rate at issuance.

Maturities and Interest Expense:	**Long-Term Debt** (In millions)			**Capitalized Lease Obligations** (In millions)		
	Principal	**Interest**	**Total**	**Principal**	**Interest**	**Total**
Years ending December 31:						
2021	$ 5	$ 68	$ 73	$ 50	$ 81	$ 131
2022	2	68	70	58	77	135
2023	2	68	70	66	72	138
2024	17	68	85	76	66	142
2025	17	67	84	86	60	146
2026 – 2030	102	320	422	616	169	785
2031 – 2035	135	288	423	82	2	84
2036 – 2040	193	255	448	—	—	—
2041 – 2045	243	207	450	—	—	—
2046-2050	892	277	1,169			
	1,608	1,686	3,294	1,034	527	1,561
Plus unamortized bond premium	67	—	67	—	—	—
Less deferred refinancing cost	—	—	—	—	—	—
Total	$ 1,675	$ 1,686	$ 3,361	$ 1,034	$ 527	$ 1,561

In 2008, the Authority entered into a long-term power supply contract with Astoria Energy II LLC for the purchase of all the output of Astoria Energy II, a new 550-MW plant, which entered into commercial operation on July 1, 2011 in Astoria, Queens. The delivery period under the contract is through 2031. The Authority entered into a separate contract with its' New York City Governmental Customers to purchase the output of Astoria Energy II and is coterminous with the power purchase agreement with Astoria Energy II LLC. All net costs of the Authority under the power purchase agreement with Astoria Energy II LLC pass through to the New York City Governmental Customers for the full term of the power purchase agreement. See note 13(b) "Commitments and Contingencies – Governmental Customers in the New York City Metropolitan Area" of the notes to the consolidated financial statements.

b. Terms by Which Interest Rates Change for Variable Rate Debt

CP Notes and EMCP Notes (Long-Term Portion)

The Authority determines the rate for each rate period which is the minimum rate necessary to remarket the notes at par in the Dealer's opinion. If the Authority exercises its option to extend the maturity of the EMCP Notes, the reset rate will be the higher of (SIFMA + E) or F, where SIFMA is the Securities Industry and Financial Markets Association Municipal Swap Index, which is calculated weekly, and where "E" and "F" are fixed percentage rates expressed in basis points (each basis point being 1/100 of one percent) and yields, respectively, that are determined based on the Authority's debt ratings subject to a cap rate of 12%. As of December 31, 2020, the reset rate would have been 7.09%.

c. Changes in Noncurrent Liabilities

Changes in the Authority's noncurrent liabilities for the year ended December 31, 2020 are comprised of the following:

	Beginning balance	Additions	Maturities/ refundings and other (In millions)	Ending balance	Due within one year
Senior debt:					
Revenue bonds	$ 491	$ 1,235	$ 164	$ 1,562	$ —
Subtotal	491	1,235	164	1,562	—
Subordinate debt:					
Subordinated Notes, Series 2017	23	—	1	22	1
Subordinated Notes, Series 2012	20	—	1	19	—
Commercial paper	5	—	—	5	—
Subtotal	48	—	2	46	1
Net unamortized discounts/ premiums and deferred losses	4	67	4	67	—
Total debt, net of unamortized discounts/ premiums/ deferred losses	$ 543	$ 1,302	$ 170	$ 1,675	$ 1
Other noncurrent liabilities:					
Capitalized lease obligation	$ 1,034	$ —	$ 50	984	$
Disposal of nuclear fuel	228	1	—	229	—
Relicensing	256	15	20	251	—
Other	426	126	—	$ 552	$ —
Total other noncurrent liabilities	$ 1,944	$ 142	$ 70	$ 2,016	$ —

Changes in the Authority's long-term liabilities for the year ended December 31, 2019 are comprised of the following:

	Beginning balance	Additions	Maturities/ refundings and other	Ending balance	Due within one year
			(In millions)		
Senior debt:					
Revenue bonds	$ 710	$ —	$ 219	$ 491	$ 30
Subtotal	710	—	219	491	30
Subordinate debt:					
Subordinated Notes, Series 2017	24	—	1	23	—
Subordinated Notes, Series 2012	20	—	—	20	1
Commercial paper	5	—	—	5	—
Subtotal	49	—	1	48	1
Net unamortized discounts/ premiums and deferred losses	6	—	2	4	—
Total debt, net of unamortized discounts/ premiums/ deferred losses	$ 765	$ —	$ 222	$ 543	$ 31
Other noncurrent liabilities:					
Capitalized lease obligation	$ 1,077	$ —	$ 43	1,034	$ 43
Disposal of nuclear fuel	223	5	—	228	—
Relicensing	244	37	25	256	—
Other	386	40	—	$ 426	$ —
Total other noncurrent liabilities	$ 1,930	$ 82	$ 68	$ 1,944	$ 43

(7) Short-Term Debt

CP Notes (short-term portion) outstanding was as follows:

	December 31,							
	2020				2019			
	Authorized		Outstanding		Authorized		Outstanding	
	(In millions)							
CP Notes (Series 1)	$	400	$	139	$	400	$	309
CP Notes (Series 2)		450		288		450		217
CP Notes (Series 3)		350		75		350		166

Under the Commercial Paper Note Resolution adopted June 28, 1994, as subsequently amended and restated, the Authority may issue from time to time a separate series of notes maturing not more than 270 days from the date of issue up to a maximum amount outstanding at any time of $400 million (Series 1 CP Notes), $450 million (Series 2 CP Notes), $350 million (Series 3 CP Notes) and $220 million (Series 4 CP Notes). It had been and shall be the intent of the Authority to use the proceeds of the Series 1 CP Notes and certain Series 2 and Series 3 CP Notes to finance the Authority's current and future energy efficiency programs and for other corporate purposes. In 2020, the Authority issued Series 3 CP Notes of approximately $66 million to defease $63 million of principal and $3 million of interest of the then outstanding 2011A Revenue Bonds. In December 2019, the Authority issued Series 3 CP Notes to refund $156 million of its Series 2007A and Series 2007C Revenue Bonds. In 2020, proceeds from the 2020 Revenue Bonds issuance was used to refund the $156 million of Series 3 CP Notes.

The changes in short-term debt are as follows:

		Beginning balance	Increases	Decreases		Ending balance
		(In millions)				
Year:						
2020	$	692	220	410	$	502
2019	$	526	294	128	$	692

(8) Risk Management and Hedging Activities

Overview

The Authority purchases insurance coverage for its operations, and in certain instances, is self-insured. Property insurance protects the various real and personal property owned by the Authority and the property of others while in its care, custody and control for which it may be held liable. Liability insurance protects the Authority from third-party liability related to its operations, including general liability, automobile, aircraft, marine and its officers and directors. Cyber liability insurance protects the Authority against first- and third-party losses. Insured losses by the Authority did not exceed coverage for any of the four preceding fiscal years. The Authority self-insures a certain amount of its general liability coverage, the physical damage claims for its owned and leased vehicles and for portions of its medical, dental and workers' compensation insurance programs. The Authority pursues subrogation claims as appropriate against any entities that cause damage to its property.

Another aspect of the Authority's risk management program is to manage risk and related volatility on its earnings and cash flows associated with interest rates, electric energy prices, fuel prices and electric capacity prices. Through its participation in the NYISO and other commodity markets, the Authority 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. Such volatility can potentially have adverse effects on the Authority's financial condition. To mitigate potential adverse effects and to moderate cost impacts to its customers (certain of the Authority's customer contracts provide for the complete or partial pass-through of these costs), the Authority hedges market risks by utilizing financial derivative instruments and/or physical forward contracts. Hedges are transacted by the Authority to mitigate volatility in the cost of energy or related products needed to meet customer needs; risk related to the price of energy and related products sold by the Authority; risk related to margins (electric sales versus fuel use) where the Authority owns generation or other capacity; and the geographic cost differentials of energy procured or sold for transmission or transportation to an ultimate location. Commodities to be hedged include, but are not limited to, natural gas, natural gas basis, electric energy, electric capacity, congestion costs associated with the transmission of electricity and aluminum.

To achieve the Authority's risk management program objectives, the Authority's Trustees have authorized the use of various interest rate, energy, fuel and certain non-energy commodity derivative instruments for hedging purposes that are considered derivatives under GAS No. 53, *Accounting and Financial Reporting for Derivative Instruments* (GAS No. 53).

The fair values of all Authority derivative instruments, as defined by GAS No. 53, are reported in current and noncurrent assets or liabilities on the statements of net position as risk management activities. For designated hedging derivative instruments, changes in the fair values are deferred and classified as deferred outflows or inflows on the statements of net position. The fair value for over-the-counter and exchange-traded energy, capacity and non-energy commodity derivative instruments are determined by the latest end-of-trading-month forward prices over the lifetime of each outstanding energy derivative instrument using the prices published by Standard & Poor's Global Platt's ("Platts"), market sources and/or internal pricing models.

Derivative Instruments

The following table shows the fair value of outstanding derivative instruments for 2020 and 2019:

Derivative instrument description	Fair value balance December 31, 2019	Net change in fair value	Fair value balance December 31, 2020	Type of hedge or transaction	Financial statement classification for changes in fair value	Notional amount December 31, 2020	Unit of Measure
			($ in millions)				
Energy swaps/futures (sales)	$ 5	$ (3)	$ 2	Cash Flow	Deferred outflow	(14,655,019)	MWh
Energy swaps (purchases)	(1)	1	—	Cash Flow	Deferred inflow	–	MWh
Energy capacity futures	—	(13)	(13)	Cash Flow	Deferred outflow	(17,285,000)	KWm
Totals	$ 4	$ (15)	$ (11)				

Energy swaps and futures –The Authority sells energy swaps and futures to manage the revenue stream from forecasted merchant hydro generation through 2024. Net settlement receipts were $19.3 million and $5.8 million in 2020 and 2019, respectively.

The Authority purchases energy swaps to manage the cost of energy for the benefit of its NYC Governmental Customers. Net settlement- payments in 2020 were $4.0 million. There were no settlements in 2019.

Energy capacity futures – The Authority sells forward installed capacity futures intended to mitigate the volatility of market prices for transactions in the NYISO markets through 2024. Net settlement receipts were $0.9 million and $0.7 million in 2020 and 2019, respectively.

Non-energy commodities swaps – During 2020, the Authority sold certain non-energy commodities swap to mitigate volatilities of specific commodity market prices effecting rates in certain customers' energy supply contracts through 2021. Net settlement receipts were $2.5 million in 2020. There was no activity 2019.

Natural gas swaps – During 2020, the Authority purchased natural gas swaps to mitigate the volatility of market prices for fuel to operate certain electrical generation facilities in 2020. Net settlements payments were $0.6 million in 2020.

Other – The Authority from time to time enters into certain derivative instruments that may become ineffective due to changes in the hedged item. The change in fair value of such derivative instruments would be recognized as other nonoperating charges or credits in the statements of revenues, expenses and changes in net position. In 2020 and 2019, all derivative instruments were determined to be effective.

Counterparty Credit Risk

The Authority imposes thresholds, based upon agency-published credit ratings and/or analysis, for unsecured credit that can be extended to counterparties to the Authority's commodity derivative transactions. The thresholds are established in bilateral credit support agreements with counterparties and require collateralization of market values in excess of the thresholds. In addition, the Authority regularly monitors each counterparty's credit ratings and financial ratios and the Authority can restrict transactions with counterparties on the basis of that monitoring, even if the applicable unsecured credit threshold is not exceeded.

Based upon the fair values as of December 31, 2020, the Authority's individual or aggregate exposure to derivative instrument counterparty credit risk is not significant.

Other Considerations

The Authority from time to time may be exposed to any of the following risks:

Basis risk – The Authority is exposed to other basis risk in a portion of its electrical commodity-based swaps where the electrical commodity swap payments received are based upon a reference price in a NYISO Market Zone that differs from the Zone in which the hedged electric energy load is forecasted. If the correlation between these Zones' prices should fall, the Authority may be exposed to risk as a result of the hedging inability of the electrical commodity swaps to offset the delivery price of the related energy.

Rollover risk – Certain electrical commodity swaps are based upon projected future customer loads or facility operations. Beyond the terms of these swaps, the Authority is subject to the corresponding market volatilities.

Termination risk – The Authority or its counterparties may terminate a derivative instrument agreement if either party fails to perform under the terms of the agreement. The risk that such termination may occur at a time which may be disadvantageous to the Authority has been mitigated by including certain terms in these agreements by which the counterparty has the right to terminate only as a result of certain events, which includes a payment default by the Authority; other Authority defaults which remain uncured within a defined time-frame after notice; bankruptcy or insolvency of the Authority (or similar events); or a downgrade of the Authority's credit rating below investment grade. If at the time of termination the Authority has a liability position related to its hedging derivative instruments, the Authority would be liable to the counterparty for a payment equal to the liability, subject to netting arrangements.

Market access risk – The Authority remarkets its CP Notes on a continuous basis. Should the market experience a disruption or dislocation, the Authority may be unable to remarket its Notes for a period of time. To mitigate this risk, the Authority has entered into liquidity facilities with highly rated banks to provide loans to support the CP Note programs. See Note 6 "Long-Term Debt" of the notes to the consolidated financial statements.

Dodd Frank Act

The Dodd-Frank Wall Street Reform and Consumer Protection Act (DF Act) which was enacted into law addresses, among other things, interest rate and energy related commodity swap transactions of the type in which the Authority 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 the Authority's liquidity and/or future risk mitigation activities. CFTC DF Act rules are continually being reviewed for updates and the Authority will continue to monitor their potential impact on the Authority's liquidity and/or future risk mitigation activities.

(9) Fair Value Measurements

GAS No. 72 establishes a hierarchy of valuation inputs based on the extent to which the inputs are observable in the marketplace. Inputs are used in applying the various valuation techniques and take into account the assumptions that market participants use to make valuation decisions. Inputs may include price information, credit data, interest and yield curve data, and other factors specific to the financial instrument. Observable inputs reflect market data obtained from independent sources. In contrast, unobservable inputs reflect the entity's assumptions about how market participants would value the financial instrument.

The fair value hierarchy prioritizes the inputs used to measure fair value into three broad Levels (Levels 1, 2, and 3), moving from quoted prices in active markets in Level 1 to unobservable inputs in Level 3. A financial instrument's level within the fair value hierarchy (where Level 1 is the highest and Level 3 is the lowest) is based on the lowest level of any input that is significant to the fair value measurement. The categorization of a financial instrument within the fair value hierarchy is based upon pricing transparency and is not necessarily an indication of the Authority's perceived risk of that financial instrument.

The following describes the fair value hierarchy of inputs used by the Authority to measure fair value and the primary valuation methodologies used for financial instruments measured at fair value on a recurring basis:

- Level 1 – quoted prices for identical assets or liabilities in active markets that the Authority can access at the measurement date.
- Level 2 – quoted prices other than quoted prices included within Level 1 and other inputs that are observable for an asset or liability, either directly or indirectly.
- Level 3 – pricing inputs are unobservable for the asset or liability and may rely on inputs using the best available data under the circumstances, including the Authority's own data.

The following describes the valuation methodologies used by the Authority for assets and liabilities measured at fair value:

- U.S. government obligations – The fair value is based on institutional bond quotes and evaluations based on various market data/inputs.

- U.S. government agencies and instrumentalities – The fair value of government agencies and instrumentalities are based on institutional bond quotes and evaluations based on various market and industry inputs.

- Corporate obligations – The fair value is based on institutional bond quotes and evaluations on various market and industry inputs.

- Derivative instruments – The Authority hedges market risks through the use of derivative instruments. Derivative instruments are traded on both exchange-based and non-exchange based markets. A detail disclosure on derivatives is included in Note 8 "Risk Management and Hedging Activities" of notes to the consolidated financial statements.

    - The fair values for over-the-counter and exchange-traded energy, derivative instruments are determined by the latest end-of-trading-month forward prices over the lifetime of each outstanding derivative instrument using prices published by Platts.

    - The fair value for capacity derivative instruments is based on internal pricing models which develop a demand curve for the NYISO monthly spot market capacity auctions. Capacity reference points are observed from the NYISO filing with FERC. Peak load forecast are observed in the NYISO's Gold Book and NYPSC's publications.

The following tables summarize the Authority's outstanding assets and liabilities, of which there are no Level 3, within the fair value hierarchy at December 31, 2020 and December 31, 2019:

	Fair Value Measurements (in millions)			
December 31, 2020	**Total**	**Level 1**	**Level 2**	**Level 3**
Assets				
Cash and cash equivalents	$ 947	$ 947	$ -	$ -
Treasury bills	18	18	-	-
Treasury notes	128	128	-	-
Federal Agency securities:				
FAMC	100	-	100	-
FHLMC	147	-	147	-
FHLB	16	-	16	-
FFCB	75	-	75	-
Municipal Bonds	70	-	70	-
All other	3	3	-	-
Total cash and investments at fair value	1,504	1,096	408	-
Derivative instruments:(a)				
Energy capacity futures	2	-	2	-
Total derivative assets at fair value	2	-	2	-
Total assets at fair value	$ 1,506	$ 1,096	$ 410	$ -
Liabilities				
Derivative instruments:(a)				
Energy capacity futures	$ 13	$ -	$ 13	$ -
Total derivative liabilites at fair value	13	-	13	-
Total liabilities at fair value	$ 13	$ -	$ 13	$ -

	Fair Value Measurements (in millions)			
December 31, 2019	**Total**	**Level 1**	**Level 2**	**Level 3**
Assets				
Cash and cash equivalents	$ 134	$ 134	$ -	$ -
Treasury bills	16	16	-	-
Federal Agency securities:				
FNMA	124	-	124	-
FHLMC	72	-	72	-
FHLB	222	-	222	-
FFCB	179	-	179	-
Municipal Bonds	105	-	105	-
All other	3	3	-	-
Total cash and investments at fair value	855	153	702	-
Derivative instruments:(a)				
Energy capacity futures	5	-	5	-
Total derivative assets at fair value	5	-	5	-
Total assets at fair value	$ 860	$ 153	$ 707	$ -
Liabilities				
Derivative instruments:(a)				
Energy swaps	$ 1	$ -	$ 1	$ -
Total derivative liabilites at fair value	1	-	1	-
Total liabilities at fair value	$ 1	$ -	$ 1	$ -

(a) The accounting rules for fair value measurements and disclosures require consideration of the impact of nonperformance risk (including credit risk) from a market participant perspective in the measurement of the fair value of assets and liabilities. At December 31, 2020 and 2019, the Authority determined that nonperformance risk would have no material impact on the financial position or results of operations.

(10) Pension Plans

General Information

The Authority and substantially all of the Authority's employees participate in the New York State and Local Employees' Retirement System (NYSLERS) and the Public Employees' Group Life Insurance Plan (the Plan). These are cost-sharing multiple-employer defined benefit retirement plans.

The NYSLERS uses a tier concept to distinguish membership classes (i.e., tiers 1 through 6) with tier membership based on the date an employee joins the System. The ERS is non-contributory for tiers 1 and 2 employees who joined the NYSLERS on or prior to July 27, 1976. Tiers 3 and 4 employees, who joined the NYSLERS between July 28, 1976 and December 31, 2009 and have less than ten years of service, contribute 3% of their salary. Tier 5 employees who joined the NYSLERS on or after January 1, 2010 contribute 3% of their salary during their entire length of service. Tier 6 employees who joined the NYSLERS on or after April 1, 2013 contribute 3% of their salary through March 31, 2013 and up to 6% thereafter, based on their annual salary, during their entire length of service. Members become vested in the plan after ten years of service and generally are eligible to receive benefits at age 55. The benefit is generally 1.67% of final average salary (FAS) times the number of years of service, for members who retire with less than 20 years of service, and 2% of FAS for members who retire with 20 or more years of service. The NYSLERS provides an annual automatic cost of living adjustment to members or surviving spouses based on certain eligibility criteria.

The NYSLERS and the Plan provide retirement benefits as well as death and disability benefits. Obligations of employers and employees to contribute and benefits to employees are governed by the New York State Retirement and Social Security Law (NYSRSSL). As set forth in the NYSRSSL, the Comptroller of the State of New York (Comptroller) serves as sole trustee and administrative head of the NYSLERS and the Plan. The Comptroller adopts and may amend rules and regulations for the administration and transaction of the business of the NYSLERS and the Plan, and for the custody and control of their funds. Under the authority of the NYSRSSL, the Comptroller shall certify annually the rates expressed as proportions of payroll of members, which shall be used in computing the contributions required to be made by employers.

The Authority is required to contribute at an actuarially determined rate. The average contribution rate relative to payroll for the NYSLERS fiscal year ended March 31, 2020 was 15%. The average contribution rates relative to payroll for the NYSLERS fiscal years ending March 31, 2021 and 2022 have been set at approximately 15% and 16%, respectively. The required contributions for 2020 was $30 million and $29 million for 2019. The Authority's contributions to the NYSLERS were equal to 100% of the required contributions for each year.

The NYSLERS and the Plan issue a publicly available financial report that includes financial statements and required supplementary information. That report may be obtained by writing to the New York State and Local Employees' Retirement System, 110 State Street, Albany, NY 12244 or may be found on the internet at www.osc.state.ny.us/retire/publications/index.php.

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At December 31, 2020, the Authority reported a liability of $203 million for its proportionate share of the net pension liability. The NYSLERS total pension liability, which was used to calculate the NYSLERS net pension liability, was determined by the NYSLERS actuarial valuation as of March 31, 2020 (measurement date). The Authority's proportion of the net pension liability was based on a projection of the Authority's long-term share of contributions to the pension plan relative to the projected contributions of all participating employers, actuarially determined. At March 31, 2020, the Authority's proportion percentage (0.671%) of the net pension liability remained the same as its proportion measured as of March 31, 2019 (0.671%). The Canal Corporation's proportionate share was 0.097% at March 31, 2020 and 0.083% at March 31, 2019.

For the year ended December 31, 2020 and 2019, the Authority recognized pension expense of $69 million and $35 million, respectively. At December 31, 2020, the Authority reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows	Deferred Inflows
	(In millions)	
Difference between expected and actual experience	$ 12	$ –
Net difference between projected and actual earnings on investments	103	–
Change of assumptions	5	4
Net difference between employer contributions and proportionate share of contributions	4	3
Employer contributions subsequent to the measurement date	30	–
Total	$ 154	$ 7

The $30 million reported as deferred outflows of resources related to pensions resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended December 31, 2021. The other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows (in millions):

Year ending December 31,	
2021	$ 20
2022	30
2023	38
2024	30
Total	$ 118

Actuarial Assumptions

The NYSLERS total pension liability at March 31, 2020 was determined by using the NYSLERS actuarial valuation as of April 1, 2019 with updated procedures to roll forward the NYSLERS total pension liability to March 31, 2020. The following actuarial assumptions were used for the April 1, 2019 NYSLERS actuarial valuation:

Actuarial cost method:	Entry age normal
Inflation rate:	2.5%
Salary increases:	4.2% annually
Investment rate of return:	6.8% compounded annually, net of investment
Cost of living adjustments:	1.3 % annually

The NYSLERS Annuitant mortality rates are based on April 1, 2010 – March 31, 2015 NYSLERS experience with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2018.

The NYSLERS long term expected rate of return on pension plan investments was determined using a building block method in which best estimate ranges of expected future real rates of return (expected returns net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Long-Term Expected Rate of Return

Asset Type	Target Allocation	Long-term Expected Real Rate
Domestic Equity	36%	4.05%
International Equity	14	6.15
Private Equity	10	6.75
Real Estate	10	4.95
Absolute Return	2	3.25
Opportunistic Portfolio	3	4.65
Real Asset	3	5.95
Bonds and Mortgages	17	0.75
Cash	1	0.00
Inflation Indexed Bonds	4	0.50
	100%	

Discount Rate

The discount rate used to calculate the total pension liability was 6.8%. The projection of cash flows used to determine the discount rate assumes that contributions from plan members will be made at the current contribution rates and that contributions from employers will be made at statutorily required rates, actuarially. Based upon the assumptions, the NYSLERS fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of Proportionate Share of the Net Pension Liability to Changes in the Discount Rate

The following presents the Authority's proportionate share of the net pension liability calculated using the discount rate of 6.8 percent, as well as what the Authority's proportionate share of the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (5.8 percent) or one percentage point higher (7.8 percent) than the current rate:

	1% Decrease	Current Assumption	1% Increase
Discount rate	5.8%	6.8%	7.8%
The Authority's proportionate share of the net pension liability (asset)	$ 373 million	$ 203 million	$ 47 million

The NYSLERS actuary has not recommended any future changes to the actuarial assumptions used in the NYSLERS August 2020 actuarial valuation report.

(11) Postemployment Benefits Other Than Pensions, Deferred Compensation and Savings

(a) *Power Authority*

The Power Authority provides certain health care and life insurance benefits for eligible retired employees and their dependents under a single employer noncontributory (except for certain optional life insurance coverage) health care plan (Power Authority OPEB Plan). Employees and/or their dependents become eligible for these benefits when the employee has at least 10 years of service and retires or dies while working at the Power Authority. Salaried employees hired after December 31, 2015 and IBEW employees hired after October 15, 2015, become eligible after 15 years of service. In addition, they will be required to contribute 50% of the active plan contribution.

The Power Authority has an established trust for OPEB obligations (OPEB Trust), with the trust to be held by an independent custodian. Plan members are not required to contribute to the OPEB Trust. The OPEB Trust is set-up to pay for the exclusive benefit of the OPEB Trust plan participants. The funding of the Power Authority's OPEB Trust is at the discretion of management. Changes to the Power Authority OPEB Plan or OPEB Trust agreement are approved by the Board of Trustees. The Power Authority made contributions on a pay-as you go basis in 2020 and 2019 and did not contribute any amount beyond these contributions to the OPEB Trust.

As of the December 31, 2020, the following current and former employees were covered by the benefit terms, under the Plan. It is assumed that 100% of future retirees who meet the eligibility requirements will participate in the OPEB plan.

Active employees	1,789
Inactive employees and beneficiaries, receiving and or entitled to benefits	2,798
Total	4,587

OPEB Expense and Deferred Outflows of Resources and Deferred inflows of Resources Related to OPEB

For the year ended December 31, 2020, the Authority recognized OPEB expense credit of $(8.9) million. At December 31, 2020, the Authority reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
	(In millions)	
Differences between expected and actual experience	$ 2	$ –
Changes in assumptions	–	60
Differences between projected & actual investment earnings	46	87
Employer contributions subsequent to the measurement date	25	–
Total	$ 73	$ 147

The $25 million reported as deferred outflows of resources related to OPEB resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the total OPEB liability in the following year. The other amount reported as deferred inflows of resources related to OPEB will be recognized as a credit in OPEB expense as follows:

Year ending December 31,	(In millions)
2021	$ (23)
2022	(23)
2023	(13)
2024	(40)
	$ (99)

Net OPEB Liability

The Authority's net OPEB liability (asset) was measured as of December 31, 2019 based on valuation results as of that date. The Authority's net OPEB asset of $169 million is recorded in miscellaneous receivables in current assets, respectively, in the Authority's consolidated statements of net position.

The following table shows the components of the Authority's changes in its total OPEB liability, the OPEB fiduciary net position, and the net OPEB (asset) during the measurement period ending December 31, 2019.

	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB (Asset)
		Increase (Decrease) (In millions)	
Balance – beginning of year	$ 560	$ 565	$ (5)
Service Cost	13	–	13
Interest	39	–	39
Differences between expected and actual experience	2	–	2
Changes of Assumptions	(72)	–	(72)
Contributions – employer	–	25	(25)
Net investment income	–	123	(123)
Benefit payments	(25)	(25)	–
Administrative expense	–	(2)	2
Net changes	(43)	121	(164)
Balance – end of year	$ 517	$ 686	$ (169)

The components of the net OPEB asset at December 31, 2020, were as follows (in millions):

Total OPEB liability	$ 542
Plan fiduciary net position	(728)
Net OPEB (Asset)	$ (186)
Plan fiduciary net position as a percentage of the total OPEB liability	134%

Actuarial Assumptions

The total OPEB liability in the December 31, 2019 biennial actuarial valuation was determined using the following actuarial assumptions and other inputs, applied to all periods included in the measurement, unless otherwise specified:

Investment rate of return:	7.00%
Healthcare Cost Trend Rates:	Pre-Medicare - 7.0 percent for 2020, decreasing 0.5 percent per year to an ultimate rate of 4.5 percent for 2025 and later years. Post-Medicare – 4.9 percent for 2020, decreasing to an ultimate rate of 4.5 percent for 2025. Prescription drugs (Rx) – 7 percent for 2020, decreasing to an ultimate rate of 4.5 percent for 2025.
Salary increases:	Varies by service, average of 8.0 percent for first year of service, 4.5 percent for 5years of service, 3.8 percent for 10 years of service, 3.3 percent for 15 years of service, and 3.0 percent for 20 years or more of service.
Mortality:	The General Pub-2010 headcount weighted tables were used for active employees and healthy retirees and dependents, while the corresponding Contingent Survivor mortality tables were used for current surviving spouses and the corresponding Disabled Retiree mortality tables were used for disabled participants. To project mortality improvement for years after 2010, the MP-2019 Projection Scale is applied on a fully generational basis to the base rates.

Long-Term Expected Rate of Return

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best estimate ranges of expected future real rates (expected returns net of inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Type	Target Allocation		Long-term Expected Real Rate of Return	
Domestic Equity	37	%	6.8	%
International Equity	24		7.5	
Fixed Income	30		3.3	
Real Estate	6		6.5	
Cash	3		2.4	
Total	100	%		

Rate of Return

For the year ended December 31, 2020, the annual money-weighted rate of return on investments, net of investment expense, was 6.53 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Discount Rate

The discount rate used to calculate the total OPEB liability was 7.0%, the long-term rate of return on the OPEB Trust assets. The projection of cash flows used to determine the discount rate assumed that NYPA will contribute at a rate equal to the average of contributions made over the most recent five-year period (2013 through 2017), and that contributions apply first to service cost of current and future plan members and then to past service costs. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected OPEB payments for current active and inactive employees for the foreseeable future.

Sensitivity of the Net OPEB (Asset) to Changes in the Discount Rate

Changes in the discount rate affect the measurement of the total OPEB liability. The following table depicts the Authority's Net OPEB liability / (asset), as well as the sensitivity of using a discount rate that is 1 percentage point lower (6.0 percent) or 1 percentage point higher (8.0 percent) than the current discount rate:

	1% Decrease (6.0%)	Current Discount Rate (7.0%)	1% Increase (8.0%)
Net OPEB Liability / (Asset)	$ (100) million	$ (169) million	$ (225) million

Sensitivity of the Net OPEB Liability / (Asset) to Changes in the Healthcare Cost Trend Rates

Changes in the healthcare cost trends affect the measurement of the total OPEB liability. The table below shows the sensitivity of the net OPEB liability / (asset) to the changes in the healthcare cost trends:

	1% Decrease	Current Healthcare Trend Rate	1% Increase
Net OPEB Liability / (Asset)	$ (225) million	$ (169) million	$ (99) million

(b) Canal Corporation

The Canal Corporation provides health care and death benefit for eligible retired employees. Substantially all employees may become eligible for these benefits if they reach normal retirement age while working for the Canal Corporation. The Canal Corporation participates, pursuant to the provision of Section 163(4) of the New York State Civil Service Law, in the New York State health Insurance Program (NYSHIP). NYSHIP does not issue a standalone financial report since there are no assets legally segregated for the sole purpose of paying benefits under the plan.

To be eligible an employee must (1) retire as a member of Canal Corporation, or be at least 55 years old at time of termination; (2) be enrolled in the NYSHIP on date of retirement; and (3) complete at least 5 years of service for the retiree and dependent to have coverage while the employee is living. Ten years of service are needed for continued dependent coverage upon death of the employee. The Plan currently pays a portion of the medical premium cost for retired employees and covered dependents. Additionally, the Plan reimburses retirees and covered dependents for their Medicare Part B premiums.

As of the December 31, 2019 actuarial valuation, the following current and former employees were covered by the benefit terms, under the Plan. It is assumed that 100% of future retirees who meet the eligibility requirements will participate in the OPEB plan.

Active employees, including opt-out (actives not in medical plan)	397
Inactive employees and beneficiaries, receiving and or entitled to benefits	524
Total	921

OPEB Expense and Deferred Outflows of Resources and Deferred inflows of Resources Related to OPEB

The Authority's consolidated financial statements include the Canal Corporation's OPEB costs of $9.0 million, for the year ended December 31, 2020. In addition, the Authority's consolidated statements include the Canal Corporations deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
	(in millions)	
Differences between expected & actual experience	$ –	$ 6
Changes in assumptions	8	35
Employer contributions subsequent to the measurement date	7	–
Total	$ 15	$ 41

The $7 million reported as deferred outflows of resources related to OPEB resulting from the Canal Corporation's contributions subsequent to the measurement date will be recognized as a reduction of the total OPEB liability in the following year. The other amount reported as deferred inflows of resources related to OPEB will be recognized as a credit in OPEB expense as follows:

Year ending December 31,	(in millions)
2021	$ (7)
2022	(7)
2023	(11)
2024	(8)
	$ (33)

Total OPEB Liability

The Canal Corporation's total OPEB liability was measured as of December 31, 2019, based on a no gain or loss rollforward of the May 1, 2020 valuation. The Canal Corporation's total OPEB liability is recorded in the Authority's consolidated statements of net position in other long-term liabilities in the amount of $198 million.

The following table shows the components of the Canal Corporation's changes in its total OPEB liability during the measurement period ending December 31, 2019.

	Total OPEB Liability Increase (Decrease) (in millions)
Balance – beginning of year	$ 226
Changes for the year:	
Service cost	8
Interest	8
Changes of benefit terms	–
Differences between expected & actual experience	(8)
Changes of assumptions	(30)
Benefit payments	(6)
Net Changes in Total OPEB Liability	(28)
Balance – end of year	$ 198

Actuarial Assumptions

The total OPEB liability in the December 31, 2019 biennial actuarial valuation was determined using the following actuarial assumptions and other inputs, applied to all periods included in the measurement, unless otherwise specified:

Healthcare Cost Trend Rates:	Pre-Medicare - 5.75 percent for 2020, decreasing to an ultimate rate of 4.5 percent for 2026 and later years. Post-Medicare – 4.9 percent for 2020, decreasing to an ultimate rate of 4.5 percent for 2025. Prescription drugs (Rx) – 7.0 percent for 2020, decreasing to an ultimate rate of 4.5 percent for 2025.
Salary increases:	Varies by service, 8.0 percent for first year of service, 4.5 percent for 5 years of service, 3.8 percent for 10 years of service, 3.3 percent for 15 years of service, and 3.0 percent for 20 years or more of service.
Mortality:	The General Pub-2010 headcount weighted tables were used for active employees and healthy retirees and dependents, while the corresponding Contingent Survivor mortality tables were used for current surviving spouses and the corresponding Disabled Retiree mortality tables were used for disabled participants. To project mortality improvement for years after 2010, the MP-2019 Projection Scale is applied on a fully- generational basis to the base rates.

Discount Rate

The discount rate at the measurement date used to calculate the total OPEB liability is 3.26%. The discount rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 31, 2019. Benefit payments are funded on a pay-as-you go basis. The discount rate at the previous measurement date is 3.64% based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 31, 2018.

Sensitivity of the Total OPEB Liability to Changes in the Discount Rate

Changes in the discount rate affect the measurement of the total OPEB liability. The following table depicts the Canal Corporation' Total OPEB liability, as well as the sensitivity of using a discount rate that is 1 percentage point lower (2.26 percent) or 1 percentage point higher (4.26 percent) than the current discount rate:

	1% Decrease (2.26%)	Current Discount Rate (3.26%)	1% Increase (4.26%)
Total OPEB Liability	$ 232 million	$ 198 million	$ 170 million

Sensitivity of the Total OPEB Liability to Changes in the Healthcare Cost Trend Rates

Changes in the healthcare cost trends affect the measurement of the total OPEB liability. The table below shows the sensitivity of the total OPEB liability to the changes in the healthcare cost trends:

	1% Decrease	Current Healthcare Trend Rate	1% Increase
Total OPEB Liability	$ 169 million	$ 198 million	$ 234 million

Amendment to the Authority's OPEB Trust

Prior to 2021, an OPEB Trust was established to pay benefits for those covered under the Authority's OPEB Plan. The Canal Retiree Health Plan operated on a pay-as-you-go basis, as no OPEB Trust existed for this plan. Effective January 2021, the Board approved an amendment to the Authority's OPEB Trust allowing the trust to be used to pay benefits for both the Authority's OPEB Plan and the Canal Retiree Health Plan. This change has been reflected as of the December 31, 2020 measurement date for Fiscal Year 2021 reporting, with both plans being accounted for as a single plan under GASB 75. The trust amendment resulted in an increase in the discount rate used for the Canal Plan liabilities to 7.00% as of the December 31, 2020 measurement date; if this change had not occurred, a rate of 1.93% would have been selected.

(c) Deferred Compensation and Savings Plans

The Power Authority offers union employees and salaried employees a deferred compensation plan created in accordance with Internal Revenue Code, Section 457. This plan permits participants to defer a portion of their salaries until future years. Amounts deferred under the plan are not available to employees or beneficiaries until termination, retirement, death or unforeseeable emergency.

The Power Authority also offers salaried employees a savings plan created in accordance with Internal Revenue Code, Section 401(k). This plan also permits participants to defer a portion of their salaries. The Power Authority matches contributions of employees up to limits specified in the plan. Matching annual contributions were approximately $4.1 million and $3.5 million for 2020 and 2019, respectively.

Both the deferred compensation plan and the savings plan have a loan feature.

Independent trustees are responsible for the administration of the 457 and 401(k) plan assets under the direction of a committee of union representatives and nonunion employees and a committee of nonunion employees, respectively. Various investment options are offered to employees in each plan. Employees are responsible for making the investment decisions relating to their savings plans.

(12) Nuclear Plant Divestiture and Related Matters

On November 21, 2000, the Power Authority sold the James A. Fitzpatrick nuclear plant (JAF) and the Indian Point 3 nuclear plant (IP3) to two subsidiaries of Entergy Corporation (collectively, Entergy or the Entergy Subsidiaries). On March 31, 2017, Entergy transferred JAF to Exelon Generation Company, LLC (Exelon).

In accordance with the Nuclear Waste Policy Act of 1982, in June 1983, the Power Authority entered into a contract with the U.S. Department of Energy (DOE) under which DOE, commencing not later than January 31, 1998, would accept and dispose of spent nuclear fuel. In conjunction with the sale of the nuclear plants, the Power Authority's contract with the DOE was assigned to Entergy. Entergy assigned the portion of the pre-1983 spent fuel obligation applicable to JAF to Exelon in connection with the sale of JAF to Exelon. The Power Authority remains liable for the pre-1983 spent fuel obligation to Exelon for JAF and to Entergy for IP3 (see Note 13(e) "Commitments and Contingencies – New York State Budget and Other Matters" relating to a temporary transfer of such funds to the State). As of December 31, 2020 and 2019, the pre-1983 spent fuel liability for JAF and IP3 totaled $229 million and $228 million, respectively.

(13) Commitments and Contingencies

(a) *Power Programs*

Recharge New York Power Program

Chapter 60 (Part CC) of the Laws of 2011 (Chapter 60) established the "Recharge New York Power Program" (RNYPP), administered by the Authority, which has as its central benefit up to 910 MW of low cost power comprised of up to 455 MW of hydropower from the Niagara and St. Lawrence-FDR Projects and up to 455 MW of other power procured by the Authority from other sources. The 910 MW of power is available for allocation as provided by Chapter 60 to eligible new and existing businesses and not-for-profit corporations under contracts of up to seven years. RNYPP was effective beginning July 1, 2012.

The hydropower used for the RNYPP was power formerly used to provide low-cost electricity to domestic and rural customers of the three private utilities that serve upstate New York. To mitigate the impacts from the redeployment of this hydropower for the RNYPP, Chapter 60 created a "Residential Consumer Discount Program" (RCDP). The RCDP authorizes the Authority, as deemed feasible and advisable by its Trustees, to provide annual funding of $100 million for the first three years following withdrawal of the hydropower from the residential and farm customers, $70 million for the fourth year, $50 million for the fifth year, and $30 million each year thereafter, for the purpose of funding a residential consumer discount program for those customers that had formerly received the hydropower that is utilized in the RNYPP. Chapter 60 further authorizes the Authority, as deemed feasible and advisable by the Trustees, to use revenues from the sales of hydroelectric power, and such other funds of the Authority, as deemed feasible and advisable by the Trustees, to fund the RCDP. The Authority's Trustees have authorized the release of a total $594 million for the period from August 2011 to December 2020 in support of the RCDP. The Authority supplemented the market revenues through the use of internal funds, from the August 2011 start of the program through December 31, 2020 totaling approximately $60 million. Operations and maintenance expenses included $30 million of residential consumer discounts in each year ended December 31, 2020 and 2019.

Western New York Power Proceeds Allocation Act

Effective March 30, 2012, Chapter 58 (Part GG) of the Laws of 2012 (Chapter 58) created the Western New York Power Proceeds Act (WNYPPA). The WNYPPA authorizes the Authority, as deemed feasible and advisable by the Trustees, to deposit net earnings from the sale of unallocated Expansion Power and Replacement Power from the Authority's Niagara project into an account administered by the Authority known as the Western New York Economic Development Fund (WNYED Fund). Net earnings are defined as any excess revenues earned from such power sold into the wholesale market over the revenues that would have been received had the power been sold at the Expansion Power and Replacement Power rates. Proceeds from the Fund may be used to support eligible projects undertaken within a 30-mile radius of the Niagara power project that satisfy applicable criteria. Chapter 58 also establishes a five-member Western New York Power Allocations Board, which is appointed by the Governor. Chapter 58 also repealed Chapter 436 of the Laws of 2010 which had created a similar program that could not be effectively implemented.

The Authority's Trustees have approved the release of up to $66 million in net earnings, calculated for the period August 30, 2010 through December 31, 2020 as provided in the legislation, for deposit into the WNYED Fund. As of December 31, 2020, approximately $43 million has been deposited into the Fund. As of December 31, 2020, the Authority has approved awards of Fund money totaling approximately $38 million to businesses that have proposed eligible projects and has made payments totaling $35 million to such businesses. Payment of these awards is contingent upon the execution of acceptable contracts between the Authority and individual awardees.

Northern New York Power Proceeds Allocation Act

Chapter 545 of the Laws of 2014 enacted the "Northern New York Power Proceeds Act" (NNYPPA). The NNYPPA authorizes the Authority, as deemed feasible and advisable by the 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 the Authority would administer known as the Northern New York Economic Development Fund (NNYED Fund), and to make awards to eligible applicants that propose eligible projects that satisfy applicable criteria. The NNYPPA also establishes a five-member Northern New York Power Allocations Board appointed by the Governor to review applications seeking NNY Fund benefits and to make recommendations to the Authority concerning benefits awards.

SLCEDP consists of up to 20 MW of hydropower from the Authority's 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 (Authority-MED Contract). The NNYPPA defines "net earnings" as the aggregate excess of revenues received by the Authority from the sale of energy associated with SLCEDP 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 5 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.

As of December 31, 2020, the Authority's Trustees approved the release of funds, of up to $15 million, into the NNYED Fund representing "net earnings" from the sale of unallocated SLCEDP into the wholesale energy market for the period December 29, 2014 through December 31, 2020. As of December 31, 2020, approximately $5 million has been deposited into the Fund. As of December 31, 2020, the Authority has approved awards of NNYED Fund money totaling approximately $2 million to businesses that have proposed eligible projects has made payments totaling approximately $1 million to such businesses.

Payment of approved awards of the NNYED Fund money is contingent upon the execution of acceptable contracts between the Authority and individual awardees.

Economic Development Customer Assistance Program

Based upon the current economic conditions relating to COVID-19, the Authority's Trustees on March 31,2020 approved two temporary measures to provide financial relief to its customers in the Authority's Economic Development Power Programs (Recharge New York, Western New York, Expansion Power & Replacement Power, and Preservation Power programs) that are subject to the Annual Adjustment Factor ("AAF"). The AAF, whether it represents an increase or decrease, is normally applied to program base rates annually on July 1st in accordance with the applicable tariffs. Each of the Economic Development Power Programs require a commitment from the recipients of job growth within their business, job retention and/or capital commitment.

These two temporary measures include (1) suspension of the AAF which is otherwise scheduled under applicable tariffs to be applied to energy and demand rates annually on July 1st, for a period of one year from July 1, 2020 through June 30, 2021; and (2) provision to such customers of the option to defer payment of energy bills to the Authority, beginning with the April 2020 invoice, for up to 6 months, with repayment of deferred amounts to occur in equal installments over the subsequent 18-month period. As of December 31, 2020, 373 customers have applied for this program resulting in interest free deferred payments of approximately $50 million with no corresponding increase in interest rates.

(b) *Governmental Customers in the New York City Metropolitan Area*

In 2018 and 2019, the Authority executed new supplemental long-term electricity supply agreements (Supplemental LTAs) with its eleven NYC Governmental Customers. Under the Supplemental LTAs, the NYC Governmental Customers agreed to purchase their electricity from the Authority through December 31, 2027, with the NYC Governmental Customers having the right to (1) terminate at any time upon at least 12 months' notice or (2) terminate effective December 31, 2022 upon at least 6 months' notice. Under the Supplemental LTAs, fixed costs were set for each customer and are subject to renegotiation in 2022. Variable costs, including fuel, purchased power and NYISO related costs, will be passed through to each customer by an energy charge adjustment.

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"). The Authority has entered a supplemental electricity supply agreement with all 103 Westchester Governmental Customers. Among other things, under the agreement, an energy charge adjustment mechanism is applicable, and customers are allowed to 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 January 1 following the one year notice.

Astoria Energy II

In 2008, the Authority entered into a long-term power supply contract with Astoria Energy II LLC for the purchase of all the output of Astoria Energy II, a new 550-MW plant, which entered into commercial operation on July 1, 2011 in Astoria, Queens. The delivery period under the contract is through 2031. The Authority entered into a separate contract with its' New York City Governmental Customers to purchase the output of Astoria Energy II and is coterminous with the power purchase agreement with Astoria Energy II LLC. All net costs of the Authority under the power purchase agreement with Astoria Energy II LLC pass through to the New York City Governmental Customers for the full term of the power purchase agreement.

The Authority is accounting for and reporting this lease transaction as a capital lease in the amount of $1,034 billion as of December 31, 2020 which reflects the present value of the monthly portion of lease payments allocated to real and personal property. The balance of the monthly lease payments represents the portion of the monthly lease payment allocated to operations and maintenance costs which are recorded monthly. As of December 31, 2020, the Authority has a recorded capital asset (net of depreciation) of $651 million and a regulatory asset with respect to the recoverable cost associated with the lease obligation of $383 million (see note 2 (l) "Summary of Accounting Policies – Other Long-Term Assets" of the notes to the consolidated financial statements).

HTP Transmission Line

In 2011 the Trustees authorized Authority staff 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, New Jersey 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. Specifically, the Authority executed a Firm Transmission Capacity Purchase Agreement (FTCPA) with HTP under which the Authority gained the entitlement to 75% of the Line's 660 MW capacity, or 495 MW, for 20 years. On March 31, 2017, the Authority and HTP amended the FTCPA to, among other changes, (a) create a mechanism for HTP to relinquish its Firm Transmission Withdrawal Rights as discussed below and (b) increase the Authority's leased portion of the Line's capacity to 87.12%, or 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.

The Authority's payment obligations under the FTCPA include capacity payments, interconnection and transmission upgrades, and Regional Transmission Expansion Plan ("RTEP") charges allocated to HTP in accordance with the PJM tariff. Interconnection and transmission upgrades were completed in 2018 at a total cost to the Authority of $334.9 million. The RTEP charges imposed upon HTP, which are still subject to legal challenge, are discussed in more detail below.

It is estimated that the revenues derived from the Authority's rights under the FTCPA will not be sufficient to fully cover the Authority's costs under the FTCPA during the 20-year term of the FTCPA. In December 2020, the Authority estimated that its under-recovery of costs for the Line could be in the range of approximately $106 million to $111 million per year over the period from 2021-2024. The under-recovery estimates were based on projections of the capacity payment obligations, the costs of interconnection and transmission upgrades and energy revenues.

The Authority's obligations under the FTCPA include payment of the RTEP charges allocated to HTP. From June 2013 through December 2020, the Authority has paid approximately $129.6 million in RTEP charges for the Line. Effective 2018, HTP relinquished the Firm Transmission Withdrawal Rights ("FTWRs") held by HTP on the Line that were the basis for a significant share of its RTEP allocations. PJM's annual RTEP cost allocation update for 2018 eliminated the Authority's obligation in 2018 and beyond to pay RTEP charges related to the Bergen Linden Corridor project, which accounted for the bulk of the projected RTEP allocations to HTP.

While PJM had determined that the Authority had no RTEP payment responsibility starting in 2018 as a result of HTP's FTWR relinquishment, in 2020, FERC reversed PJM's determination over the Authority's objections, and held that a portion of the RTEP charges assignable to the HTP facility dating back to 2018 had to be reinstated as they were unrelated to whether HTP had retained FTWRs. These reinstated RTEP charges were for projects other than the Bergen Linden Corridor project. FERC authorized PJM to begin collection for the back periods starting in August 2020. In 2020, the Authority's incurred $33 million of which $20 million in RTEP charges were retroactive to 2018 and 2019 and $13 million 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. Depending on PJM TO's Annual Revenue Requirement, the RTEP charges could trend downward during the out years. The Authority is contesting the ruling.

(c) *Small, Clean Power Plants*

To meet capacity deficiencies and ongoing load requirements in the New York City metropolitan area in the early 2000s, the Authority placed into operation the Small, Clean Power Plants (SCPPs), consisting of eleven natural-gas-fueled combustion-turbine electric units, six sites in New York City and one site in the service region of LIPA.

As a result of the settlement of litigation relating to certain of the SCPPs, the Authority has agreed under the settlement agreement to cease operations at one of the SCPP sites, which houses two units, under certain conditions and if the Mayor of New York City directs such cessation. No such cessation has occurred.

(d) *Legal and Related Matters*

St. Regis Litigation

In 1982 and again in 1989, several groups of Mohawk Indians, including a Canadian Mohawk tribe, filed lawsuits (the St. Regis litigation) against the State, the Governor of the State, St. Lawrence and Franklin counties, the St. Lawrence Seaway Development Corporation, the Authority and others, claiming ownership to certain lands in St. Lawrence and Franklin counties and to Barnhart, Long Sault and Croil islands. These islands are within the boundary of the Authority's St. Lawrence-FDR Project and Barnhart Island is the location of significant Project 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 February 1, 2005, which if implemented would have included, among other things, 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 Authority power for use on the reservation. The legislation required to effectuate the settlement was never enacted and the litigation continued.

In 2013, all claims against the Authority were dismissed and the lawsuit against the Authority was concluded. On May 28, 2014, the State of New York, 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 the Authority 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 the Authority is 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. The Authority is in continuing settlement discussions with some of the parties to the St. Regis litigation.

Long Island Sound Cable Project

In January 2014, one of the Sound Cable Project 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 to trip. As a result of the impact to the cable, dielectric fluid was released into Long Island Sound. At December 31, 2020 and December 31, 2019, the consolidated statements of net position includes approximately $19 million, in other long-term assets, reflecting the cost of damages net of insurance recoveries. As of February 2021, the Authority recovered $9.2M of its damages through legal proceedings and believes that it will recover the remainder through contractual obligations.

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

The Authority contracted with Northline Utilities, LLC ("Northline") to install fiber optic ground wire along the Authority's transmission system. Thereafter, Northline entered into a contract with Catalyst Aviation, LLC ("Catalyst") for helicopter services. On October 30, 2018, a Catalyst helicopter was destroyed when it collided with a wooden utility pole and power lines near Beekmantown, New York. Members of the helicopter crew were injured, and two members of that crew died as a result of their injuries. The Authority has received two notices of claim arising out of this incident. The Authority has pursued insurance coverage under Northline's insurance policies that name the Authority 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. The Authority believes that there exists 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.

Other Actions or Claims

In addition to the matters described above, other 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 the opinion of the Authority, be disposed of within the amounts of the Authority's insurance coverage, where applicable, or the amount which the Authority has available therefore and without any material adverse effect on the business of the Authority. While the Authority cannot presently predict the outcome of the matters described above or any related litigation, the Authority believes that it has meritorious defenses and positions with respect thereto. However, adverse decisions of a certain type in the matters discussed above could adversely affect Authority operations and revenues.

(e) *New York State Budget and Other Matters*

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. Bills are periodically introduced into the State Legislature, which propose to limit or restrict the powers, rights and exemption from regulation that the Authority currently 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 such bills or other bills of a similar type which may be introduced in the future will be enacted.

In addition, from time to time, legislation is enacted into New York 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 the Authority 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 in the case of each such provision, the Authority will be immune from the financial obligations imposed by such provision. Examples of such legislation affecting only the Authority include legislation, discussed below and elsewhere herein, relating to the Authority's voluntary contributions to the State, the Authority's temporary transfer of funds to the State, and contributions and transfers to fund temporary and permanent programs administered by the Authority and other State entities.

Budget

The Authority is requested, from time to time, to make financial contributions or transfers of funds to the State. 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 moneys "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 Authority's 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, the Authority 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 Authority's Trustees.

Temporary Asset Transfers

As a result of budget legislation enacted in February 2009, the Authority was authorized to provide, subject to Trustee approval, temporary asset transfers to the State of certain funds held in reserves. Pursuant to the terms of a Memorandum of Understanding dated February 2009 (the "MOU") between the State and the Authority, the Authority transferred to the State in 2009 $103 million of funds set aside for future construction projects ("Asset A") and $215 million of funds associated with its Spent Nuclear Fuel Reserves ("Asset B"). The Authority subsequently executed amendments to the MOU in 2014 and 2017 that extended the return date for Asset A and Asset B and provided for the return of the Assets in installments over several years, subject to annual appropriation by the State Legislature. In the Second Amendment to the MOU in 2017, the Authority and the State agreed on a framework for alternative cost recovery agreements for each of State Fiscal Year 2017-18 through State Fiscal Year 2022-23 the asset transfers have not been fully returned to the Authority that would relieve the Authority of up to $5 million in cost recovery assessment payments to the State in each year. Asset A was returned to the Authority in 2018.

As of December 31, 2020 and 2019, the Authority has received cumulative installment payments of $86 million on the return of Asset B. Pursuant to the amended MOU, the remaining portion of Asset B ($129 million) is to be returned by the State in installments from 2021-2023, subject to annual appropriation by the State Legislature. The asset transfers are reported in miscellaneous receivables and other ($43 million as of December 31, 2020 and December 31, 2019) and in other noncurrent assets ($86 million at December 31, 2020 and December 31, 2019, respectively) in the statements of net position. In February 2021, the Authority received a $43 million installment payment for State Fiscal Year 2020-21.

(f) *Relicensing of Niagara*

By order issued March 15, 2007, FERC issued the Authority a new 50-year license for the Niagara project effective September 1, 2007. In doing so, FERC approved six relicensing settlement agreements entered into by the Authority with various public and private entities. By decision dated March 13, 2009, the U.S. Court of Appeals for the District of Columbia Circuit denied a petition for review of FERC's order filed by certain entities, thereby concluding all litigation involving FERC's issuance of the new license. In 2007, the Authority estimated that the capital cost associated with the relicensing of the Niagara project would be approximately $495 million. This estimate does not include the value of the power allocations and operation and maintenance expenses associated with several habitat and recreational elements of the settlement agreements. As of December 31, 2020, the balance in the recorded liability associated with the Niagara relicensing on the statement of net position is $223 million ($19 million in current and $204 million in other noncurrent liabilities). As of December 31, 2019, the balance in the recorded liability associated with the Niagara relicensing on the statement of net position is $225 million ($18 million in current and $207 million in other noncurrent liabilities).

In addition to internally generated funds, the Authority issued additional debt obligations in October 2007 to fund, among other things, Niagara relicensing costs. The costs associated with the relicensing of the Niagara project, including the debt issued therefore, were incorporated into the cost-based rates of the project beginning in 2007.

New York State Office of Parks, Recreation and Historic Preservation

In 2005, the Authority executed the Relicensing Settlement Agreement Addressing New License Terms and Conditions ("Settlement Agreement") entered into by several parties to the relicensing of the Niagara Project, including The New York State Office of Parks, Recreation and Historic Preservation ("OPRHP"). The Settlement Agreement provides, among other things, for the establishment of a Relicensing Settlement Agreement State Parks Greenway Fund, which is to be funded by the Authority in the amount of $3 million per year to OPRHP for the term of the 50-year License. In 2012 and 2017, OPRHP requested that the Authority accelerate such payments by making two lump sum payments of approximately $25 million each to pay for authorized projects. In order to make the lump sum payments, the Authority issued (a) $25.2 million in subordinated notes in 2012 and (b) $25.2 million in subordinated notes in 2017. The proceeds of those subordinated note issuances were made available to OPRHP (see Note 6 "Long-Term Debt – Subordinate Debt" of notes to the financial statements).

(g) *St. Lawrence-FDR Relicensing – Local Task Force Agreement*

In 2003, FERC approved a Comprehensive Relicensing Settlement Agreement ("Relicensing Agreement") reached by the Authority and numerous parties and issued the Authority a new 50-year license for the St. Lawrence-FDR Project ("St. Lawrence-FDR License"). The St. Lawrence-FDR Power Project No. 2000 Relicensing Agreement ("LGTFSA") between the Authority and the Local Government Task Force ("LGTF") provided for a review of the LGTFSA every ten years to discuss issues not contemplated at the time of relicensing in 2003. The first such review commenced in December 2013. The Authority and the LGTF entered into an agreement in 2015 in which the Authority agreed to commit and the Trustees authorized up to $45.1 million over 10 years for certain actions, including to: (1) fund an economic development strategic marketing study (the "Marketing Study"); (2) temporarily reduce electricity costs for certain farms and businesses (the "Discount Program"); (3) initiate an energy efficiency and renewable energy program for the LGTF communities; and (4) enhance certain recreational facilities in the LGTF communities. In 2016, the Authority's Trustees approved a proposal to terminate the Discount Program early and repurpose funding to be used to support a collaborative marketing effort between the Authority and North Country communities through the St. Lawrence County Economic Development Study Advisory

Board created in connection with the Marketing Study at the rate of $2 million/year for five years ($10 million total) commencing in 2017.

In July 2017, the Authority's Trustees approved: (1) a new temporary business incentive program consisting of a monetary discount or rebate that would be payable to eligible private business applicants who agree to establish new business operations in certain North Country counties ("Business Incentive Discount Program"); and (2) the repurposing of funds previously approved for the marketing effort to include funding for the Business Incentive Discount Program. Funding repurposed for the marketing effort, including the Business Incentive Discount Program, would not exceed a total of $10 million. As of December 31, 2020, the Authority has spent approximately $30 million of the $45.1 million authorized by the Trustees for the purpose of implementing the commitments in the LGTF 10-Year Review Agreement.

(h) *Relicensing of Blenheim-Gilboa Pumped Storage Power Project*

On April 30, 2019, the Federal Energy Regulatory Commission issued a new 50-year operating license, effective May 1, 2019, to the Power Authority for the Blenheim-Gilboa Pumped Storage Power Project. In May 2019, the Power Authority's Trustees accepted the new license and approved the settlement package with state and federal resource agencies, the towns of Gilboa and Blenheim, and Schoharie County. The Trustees also authorized $37.1 million in capital expenditures for the period 2019-2069 for all compliance, implementation and settlement activities. The Authority has spent approximately $1.9 million through December 31, 2020. The Authority has established a Recreation Fund in the amount of $4 million (total commitment under the settlement package is $6 million) and an Ecological Fund in the amount of $2 million (total commitment under the settlement package is $3.5 million). As of December 31, 2020, the recorded a liability of the Blenheim-Gilboa Pumped Storage Power Project relicensing is approximately $21 million.

(i) *Construction Contracts and Net Operating Leases*

Estimated costs to be incurred on outstanding contracts in connection with the Authority's construction programs aggregated approximately $1.0 billion at December 31, 2020.

Noncancelable operating leases primarily include leases on real property (office and warehousing facilities and land) utilized in the Authority's operations. Rental expense for years ended December 31, 2020 and 2019 was $6.5 million and $5.6 million, respectively. Commitments under noncancelable operating leases are as follows:

	Total	2021	2022	2023	2024	2025	Thereafter
				(In millions)			
Operating leases	$ 7.6	1.8	1.7	1.5	1.1	0.6	0.9

(j) *Other Developments*

Marcy to New Scotland Upgrade Project

Authority executed a Memorandum of Understanding ("MOU") with North America Transmission ("NAT") to develop and submit proposals to the solicitation. The MOU provided that, if any of the Authority/NAT proposals are accepted, the Authority, at its sole discretion, may elect to purchase an ownership share in the project(s) or operate and maintain the project(s). In December 2016, the Authority's Trustees' approved funding in the amount of approximately $1 million for the Authority's share of expenses pursuant to the MOU.

In June 2018, the Authority and NAT entered into a Participation Agreement that supersedes the MOU, which granted the Authority the option to secure an ownership interest of up to 37.5% in the jointly proposed projects. In April 2019, the NYISO board selected the project proposed by LS Power Grid New York, LLC (formerly known as NAT) and the Authority for Segment A (also known as the Marcy to New Scotland Upgrade Project) to increase transfer capability from central to eastern New York.

The NYISO estimated the total cost of the Segment A project to be about $750 million (in 2018 dollars, including 30 percent contingency). In August 2019, LS Power and the Authority submitted an Article VII application to the PSC and the Authority filed a petition for incentive rate treatment with the Federal Energy Regulatory Commission ("FERC") pursuant to FERC's regulations Section 219 of the Federal Power Act. FERC granted the Authority's its requested incentive rates effective November 21, 2019 inclusive of a 9.45% return on equity. The Commission approved the Article VII Certificate and first EM&CP on January 21, 2021. Ultimately, the upgraded transmission lines and new substations as part of the Segment A project are expected to be energized as part of the New York electrical system by the end of 2023.

In January 2021, the Authority's Trustees approved a capital expenditure of approximately $208.3 million for Segment A. Prior to this the Trustees approved a total of $31 million in capital expenditures for the Project. In December 2019, the Authority's Trustees approved a capital commitment of $275 million for the Segment A project. As of December 31, 2020, the Authority has spent approximately $11.2 million.

In July 2020, the Trustees approved the Authority's request to exercise its 37.5% purchase option. LS Power transferred its project assets and assigned the participation agreement to LS Power Grid New York Corporation I (LS Corp.) on January 27, 2020. A development agreement relating to Segment A among the NYISO, LS Corp. and the Authority was executed on February 3, 2020, filed with FERC on March 4, 2020 and accepted for filing by FERC on April 16, 2020. The Authority expects its costs of the Segment A project to be recovered through FERC's cost-recovery mechanism outlined in the NYISO tariff.

BuildSmart NY Initiative

On December 28, 2012, the Governor of New York issued Executive Order No. 88 (EO88) directing state agencies collectively to reduce energy consumption in state-owned and managed buildings by 20 percent by April 2020– an initiative designed to produce significant savings for New York taxpayers, generate jobs, and significantly reduce greenhouse gas emissions. To meet this initiative, the Governor launched Build Smart NY, a plan to strategically implement EO88 by accelerating priority improvements in energy performance. The Authority has offered to provide low-cost financing for this initiative for state owned buildings. The Authority's costs of financing would be recovered from the energy efficiency customers in this program. In addition, as provided for in EO88, the Authority has established a central management and implementation team which designed implementation guidelines milestones and data collection and analysis systems to support the program. At the conclusion of EO88 on April 1, 2020, the Authority has in aggregate provided approximately $679 million in financing for the energy efficiency projects at State agencies and authorities covered by EO88.

BuildSmart 2025

Build Smart 2025 is New York State's program for aggressively pursuing energy efficiency savings in New York State owned and occupied buildings of 11 TBtu by December 31, 2025 while advancing economic growth, environmental protection, and energy security in New York State. Build Smart 2025 expands and continues the requirements of Build Smart NY to assist State entities in meeting statutory requirements established by the Climate Leadership and Community Protection Act (CLCPA), that "all state agencies shall assess and implement strategies to reduce their greenhouse gas emissions".

Clean Energy Standard

On August 1, 2016, the NYPSC 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 January 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. The Authority and NYSERDA executed an agreement covering a two-year period from April 1, 2017 to March 31, 2019 under which the Authority committed to purchase ZECs in a quantity based on its proportional load in the New York control area. The Authority and NYSERDA executed an additional agreement covering a nine-year period from April 1, 2020 to April 1, 2029 under which the Authority committed to purchase ZECs in a quantity based on its proportional load in the New York control area, subject to certain adjustments. As of December 31, 2020, the Authority estimates that it will incur ZEC purchase costs associated with participation in the ZEC program of approximately $320.6 million in aggregate over the 2021-2024 period, of which approximately $21.5 million is not expected to be recovered under customer contracts that predate the adoption of the CES Order. As of December 31, 2020, the Authority has paid $193.1 million in ZEC purchase costs.

AGILe

The Authority, in collaboration with the State utilities, NYSERDA and NYISO, has developed an advanced grid innovation lab for energy ("AGILe") to create new tools to better monitor, control, accommodate and respond to the evolving energy sector. Costs to the Authority are estimated at $20 million over the initial three-year period, which has been extended to five years, and are not expected to exceed $40 million through final build-out of the facility. Upon completion, operating and maintenance costs are expected to be shared among AGILe participants. On July 25, 2017, the Authority's Trustees authorized capital expenditures in the amount of $20 million for the initial phase of AGILe, which has since commenced. As of December 31, 2020, approximately $5.5 million has been spent.

Moses Adirondack Line

The Authority is moving forward with its plans to update a major section of the Moses Adirondack Line, one of the Authority's backbone transmission facilities. The project covers 78 miles of 230 kV transmission line from Massena to the Town of Croghan in Lewis County. In July 2017, the Authority received authorization under the NYISO tariff to include the costs of this project in its NYPA Transmission Adjustment Charge mechanism for cost recovery of the Authority's transmission system costs, which means that the costs will be allocated to all ratepayers in the State. The project includes the update of obsolete wood pole structures with higher, steel pole structures, as well as update of failing conductor with new conductor and insulation. The line will operate at its current 230 kV level, but the conductor and insulation design will accommodate future 345 kV operation. The Authority anticipates that the Moses Adirondack line will support the transmission of growing levels of renewable generation located in upstate New York and Canada, such as wind and hydroelectricity, and assist in meeting the State's renewable energy goals. The rebuilt line is also expected to enhance grid reliability by supporting the NYISO's black start plan. On September 21, 2018, the Public Service Commission (PSC) determined that the Authority's April 2018 Article VII application was complete. The PSC granted the Certificate of Compatibility and Public Need for the project on November 14, 2019, approving the Joint Proposal. On February 6, 2020, the PSC issued an order approving Part One of the Environmental Management and Construction Plan, and construction started on Part One in March 2020. Additionally, the Authority has received its Nationwide Permit from the U.S. Army Corps of Engineers and the New York State Department of Public Service has issued a Notice to

Proceed. Part Two of the Environmental Management & Construction Plan was approved in July 2020, with construction beginning immediately after the approval in July 2020. Part Three of the Environmental Management and Construction Plan was approved in September 2020 with construction beginning in October 2020. The remaining approvals will follow through the end of this year and construction will begin in 2021. Part Four of the Environmental Management and Construction Plan was approved in December 2020 with construction to begin in April 2021. The Authority estimates a project cost of $484 million through project completion in 2023. As of December 31, 2020, the Authority has spent approximately $124 million on Moses Adirondack project, which commenced in 2020.

Niagara Parkway Redevelopment

The State plans to replace an underutilized two-mile stretch of the Robert Moses Parkway North in Niagara Falls with open space, scenic overlooks and recreational trails. Construction commenced in 2018 and is expected to take approximately three years to complete with funding to be provided by the Authority. As of December 31, 2020, the Authority has approved up to $46.3 million in funding. As of December 31, 2020, the Authority has disbursed approximately $38.8 million.

Electric Vehicle Acceleration Initiative

In 2018, the Authority's Trustees approved an overall allocation of up to $250 million to be used through 2025 for an electric vehicle acceleration initiative 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, with 25 fast chargers in operation in 2020. As of Dec 31, 2020, approximately $8.2 million has been spent.

(14) Canal Corporation

The Canal Transfer Legislation enacted April 4, 2016, authorized, but does not require, the Authority, to the extent that the Authority's Trustees deem it feasible and advisable as required by the Resolution, to transfer moneys, property and personnel to 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. For the year ended December 31, 2020, the Canal Corporation recognized $1.8 million in revenues, $83 million in operations and maintenance expenses and $27 million in depreciation expense. For the year ended December 31, 2019, the Canal Corporation recognized $2 million in revenues, $86 million in operations and maintenance expenses and $25 million in depreciation expense.

(15) Impact of COVID-19 Pandemic

In March 2020, the World Health Organization declared the novel strain of the coronavirus (COVID-19) a global pandemic and recommended containment and mitigation measures worldwide. As COVID-19 accelerated throughout New York State the Authority paused all non-essential efforts temporarily and focused on maintaining core operations, keeping its workforce safe and preserving cash. As the year progressed and safety precautions implemented, the Authority methodically un-paused in field construction efforts. Significant construction was able to continue on many of the Authority's major capital projects.

To support the resiliency of the generation and transmission facilities of the Authority for the people of the State and power system generally, the Authority has entered into mutual aid agreements with other utility providers in the State and in Canada and is offering assistance to such other utilities through the exchange of employees as well as the sharing of expertise, equipment and materials. These agreements are currently expected to remain in effect through September 2021.

Because of the evolving nature of the outbreak and federal, state and local responses thereto, the Authority cannot predict the extent or duration of the outbreak or what impact it may have on the Authority's financial condition or operations. There can be no assurances that the spread of the Coronavirus and COVID-19 or other highly contagious or epidemic diseases will not have an adverse impact on the Authority's, financial position, results of operations, supply chains and customers. The effects of the pandemic on the Authority's financial performance or operations could be material.

As of December 31, 2020, the Authority incurred costs totaling $30 million in response to the pandemic ranging from critical employee sequestration and sanitization/cleaning supplies to facility protective measures and equipment for a remote workforce. Per the current federal and state regulations it is anticipated that the Authority is eligible for a total reimbursement of approximately $10 million.

REQUIRED SUPPLEMENTARY INFORMATION
(UNAUDITED)

New York Power Authority

Required Supplementary Information

(Unaudited)

Schedule of Changes in the New York Power Authority's Net OPEB Liability and Related Ratios

($ in millions, expect percentages)

	2020	2019	2018
Total OPEB liability			
Service cost	$ 13	$ 15	$ 13
Interest	37	40	37
Change of benefit terms	–	–	–
Differences between expected and actual experience	–	–	–
Change of assumptions	–	–	–
Benefit payments	(25)	(25)	(25)
Net change in total OPEB liability	25	30	25
Total OPEB liability - beginning	517	560	535
Total OPEB liability – ending	$ 542	$ 590	$ 560
Plan fiduciary net position			
Contributions – employer	25	25	25
Net investment income	46	123	(36)
Benefit payments	(25)	(25)	(25)
Administrative expense	(4)	(2)	(2)
Net change in plan fiduciary net position	42	121	(38)
Plan fiduciary net position – beginning	686	565	603
Plan fiduciary net position - ending	$ 728	$ 686	$ 565
Net OPEB liability / (asset) - ending	$ (186)	$ (96)	$ (5)
Plan fiduciary net position as a percentage of the total OPEB liability	134%	116%	101%
Covered-employee payroll	$ 199	$ 188	$ 182
Total OPEB liability as a percentage of covered-employee payroll	272%	314%	307%
Net OPEB liability / (asset) as a percentage of covered-employee payroll	(93)%	(51)%	(3)%

Notes to schedule:

The amounts presented for 2020 were determined based on a no gain loss roll-forward of the Power Authority OPEB Plan's December 31, 2019 biennial actuarial valuation.

This schedule is intended to present 10 years of data. Additional years will be presented prospectively.

New York Power Authority

Required Supplementary Information

(Unaudited)

Schedule of the New York Power Authority's OPEB Contributions

($ in millions, expect percentages)

Year Ending December 31,	(a) Contractually / Actuarially determined contribution	(b) Contributions made	Contribution deficiency / (excess)	(c) Covered employee payroll	Contributions as a percent of covered employee payroll column (b ÷ c)
2020	$ 25	$ 25	$ –	$ 199	13%
2019	25	25	–	193	13%
2018	25	25	–	182	14%
2017	40	22	18	166	13%
2016	39	24	15	161	15%
2015	38	38	–	149	25%
2014	33	39	(1)	145	27%
2013	41	42	(1)	147	29%
2012	41	41	–	143	29%
2011	35	60	(25)	144	42%

Notes to schedule:

Contributions: The Power Authority made contributions on a pay as you go basis in 2020 and 2019 and did not contribute any amount beyond the contractually / actuarially required amounts.

Valuation date: 12/31/2019

Methods and assumptions used to determine contributions:

Actuarial cost method:	Entry Age Normal, Level Percent of Salary
Amortization period:	Five-year period for differences between the expected earnings on plan investments and actual returns. Differences in assumptions and experience from expected are recognized over the average remaining service lives of all participants in the plan.
Asset Valuation:	Market Value
Per Capita Claims:	Developed using 2020 projected funding rates using NYPA claims experience from January 1, 2018 through December 31, 2019.
Salary increases:	Varies by service, 8.0 percent for first year of service, 4.5 percent for 5 years of service, 3.8 percent for 10 years of service, 3.3 percent for 15 years of service, and 3.0 percent for 20 years or more of service.
Participation rates:	Assumed 100% of future retirees who meet the eligibility requirements will participate in the OPEB plan.
Discount rate:	7.0%
Mortality:	The General Pub-2010 headcount weighted tables were used for active employees and healthy retirees and dependents, while the corresponding Contingent Survivor mortality tables were used for current surviving spouses and the corresponding Disabled Retiree mortality tables were used for disabled participants. To project mortality improvement for years after 2010, the MP-2019 Projection Scale is applied on a fully- generational basis to the base rates.

New York Power Authority

Required Supplementary Information

(Unaudited)

Schedule of Investment Returns for the New York Power Authority OPEB Trust

Schedule of Investment Returns

Year Ending December 31,	Annual money-weighted rate of return, net of investment expense
2020	6.53%
2019	21.40%
2018	(6.30)%
2017	16.70%
2016	7.00%
2015	0.41%
2014	3.99%
2013	20.41%
2012	12.57%
2011	1.43%

Note:

This schedule is intended to present 10 years of data.

Average rate of return over ten-year period was 8.1%.

New York Power Authority

Required Supplementary Information

(Unaudited)

Schedule of Changes in the Canal Corporation's Total OPEB Liability and Related Ratios

($ in millions, expect percentages)

	2020	2019	2018
Total OPEB liability			
Service cost	$ 8	$ 9	$ 7
Interest	8	7	8
Change of benefit terms	–	–	–
Differences between expected and actual experience	(8)	–	–
Change of assumptions	(30)	(18)	20
Benefit payments	(6)	(6)	(6)
Net change in total OPEB liability	(28)	(8)	29
Total OPEB liability - beginning	226	234	205
Total OPEB liability – ending	$ 198	$ 226	$ 234
Total OPEB liability - ending	$ 198	$ 226	$ 234
Covered-employee payroll	$ 27	$ 25	$ 24
Total OPEB liability as a percentage of covered-employee payroll	730%	904%	975%

Notes to Schedule:

- Changes of assumptions reflect the effect of the Further Consolidated Appropriations Act, which was signed on December 20, 2019, repealed the Cadillac Tax. As a result of this, the tax was no longer considered in the liabilities presented herein. This resulted in a decrease in liabilities.

- The per capita cost assumptions for the Empire Plan were updated to reflect claims experience through 2019. The EGWP subsidy assumption and HMO plans' cost assumptions were updated based on the report Development of Recommended Actuarial Assumptions for Other Post Employment Benefit Plans Actuarial Valuations – Participating Employer Version for New York State/SUNY produced by Aon in June of 2019. In addition, premiums were updated for the 2020 calendar year. These updates resulted in a decrease in liabilities.

- The mortality assumptions were updated to the Pub-2010 Public Retirement Plans Mortality Tables, projected forward on a fully-generational basis with the MP-2019 Mortality Improvement Scale in order to reflect the data published by the Society of Actuaries (SOA) in 2019. The prior valuation used gender distinct pre- and post-commencement rates based on experience under the NYSLRS (New York State and Local Retirement System). This update resulted in a decrease in liabilities.

- The discount rate at the measurement date used to calculate the total OPEB liability is 3.26%. The discount rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 31, 2019. Benefit payments are funded on a pay-as-you go basis. The discount rate at the previous measurement date is 3.64% based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 31, 2018.

New York Power Authority

Required Supplementary Information

(Unaudited)

Schedules Relating to the Employees' Retirement System Pension Plan

($ in millions, expect percentages)

Schedule of Proportionate Share of the Net Pension Liability

As of March 31,	Proportion of the Net Pension Liability (Asset) Percentage	Proportionate Share of the Net Pension Liability (Asset)	Covered Employee Payroll	Proportionate Share of the Net Pension Liability (Asset) as a percentage of Covered Payroll	Plan Fiduciary Net Position as a percentage of the Total Pension Liability
2020	0.77%	$ 203	$ 219	92.8%	86.4%
2019	0.76	53	214	25.0	96.3
2018	0.72	23	205	11.3	98.2
2017	0.72	67	193	35.0	94.7
2016	0.60	96	166	57.4	90.7
2015	0.59	20	150	13.3	97.9
2014	0.60	27	148	18.2	97.2

Schedule of Contributions

Year Ending December 31,	Actuarially Required Contribution	Actual Contribution	Contribution (Excess) Deficiency	Covered Employee Payroll	Contribution as a Percentage of Covered Payroll
2020	$30	$30	$–	$219	14%
2019	29	29	–	214	14
2018	28	28	–	205	14
2017	28	28	–	193	14
2016	24	24	–	166	15
2015	25	25	–	150	17
2014	28	28	–	148	19
2013	29	29	–	146	20
2012	27	27	–	146	19
2011	21	21	–	141	15

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Independent Auditors' Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With *Government Auditing Standards*

Board of Trustees
Power Authority of the State of New York:

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the consolidated financial statements of the business-type activities and fiduciary funds of the Power Authority of the State of New York (the Authority) and its blended component unit, as of December 31, 2020 and 2019, and the related notes to the consolidated financial statements, which collectively comprise the Authority's consolidated financial statements as listed in the table of contents, and have issued our report thereon dated March 31, 2021.

Internal Control Over Financial Reporting

In planning and performing our audit of the consolidated financial statements, we considered the Authority's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the consolidated financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of the Authority's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Authority's consolidated financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the consolidated financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

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Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Authority's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

KPMG LLP

New York, New York
March 31, 2021

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A self-portrait by Communications Specialist I Philip Kamrass.