New York Power Authority and New York Canal Corporation – 2022 Accomplishments

2022 was a breakthrough year for the New York Power Authority (NYPA) and its subsidiary, the New York State Canal Corporation (Canals). There was exciting progress across both organizations, including advances in transmission, power generation, electric vehicle infrastructure, sustainability, energy storage and the Reimagine the Canals program. Through this work, NYPA is leading the charge to create a clean energy future for all New Yorkers and is simultaneously making progress in advancing its ambitious 10-year VISION2030 strategic plan.

TRANSMISSION

NYPA announced more than $608 million in green bonds sold during the year, specifically earmarked for the development of transmission assets. These bonds will accelerate the Power Authority's progress toward the state's clean energy and climate goals.

There were several milestones reached this year to advance NYPA's existing transmission system.

NYPA is assisting the Village of Sherburne and three other municipalities through a NYPA pilot program as part of the governor's $1 billion ConnectALL initiative that aims to deliver affordable broadband internet access to more New Yorkers living in rural areas.

NYPA has continued construction on a $70 million upgrade and modernization of the Long Island Sound Cable (Y-49). The underground transmission line transverses the Long Island Sound from Westchester County to Nassau County, carrying up to 600 megawatts of electricity to Long Island. The upgrades, including cable section replacements, additional manholes, plus other replacements and improvements, are set to be completed in 2023.

The Power Authority is making progress toward completion of its Smart Path transmission project, a project to upgrade 78 miles of transmission lines to improve resiliency during weather events and transmit clean energy more reliably. In December 2022, NYPA kicked off construction for its Smart Path Connect project, which is a rebuild of two segments of transmission lines, totaling 105 circuit-miles. The two transmission projects will come together as one continuous transmission line from Clinton to Marcy, allowing the flow of an additional 1,000 megawatts of clean, renewable energy to travel across New York State.

The Clean Path NY project, a collaboration between NYPA and Forward Power, is a part of a set of renewable energy and transmission projects that are expected to deliver up to $5.8 billion in overall societal benefits, and $8.2 billion in economic benefits across New York State. These projects are estimated to reduce the city's reliance on fossil fuel-fired generation by more than 50 percent by 2030.

NYPA also has collaborated with TransCo to submit a set of solutions known as Propel NY Energy to the New York Independent System Operator's solicitation for proposals for connecting

new offshore wind resources to the Southeastern New York power grid. A decision on those proposals is expected in the first part of 2023.

ENERGY EFFICIENCY AND CLEAN ENERGY

NYPA helped to create more than 4,000 jobs in 2022 across New York State through ReCharge NY and other economic development programs.

To improve energy efficiency, NYPA implemented strategies throughout the year, including LED lighting installations which will aid in the transition towards cleaner energy.

NYPA, in partnership with the New York City Housing Authority (NYCHA) and the New York State Energy Research and Development Authority, built on the Clean Heat for All Challenge to develop electrified heating and cooling equipment that can better serve the needs of existing multifamily buildings and hasten the transition to fossil-free heating sources with an initial investment of $70 million for the development and production of 30,000 new heat pump units for use in NYCHA facilities. The units provide clean heat and hot water services for many, and they will help progress towards fossil-free heating sources

The Power Authority honored various customers with clean energy awards for their commitment to energy efficiency at its Customer Clean Energy Exchange (CCEX) event in Albany in May. NYPA's NY Energy Manager and eMobility services were also highlighted at CCEX under the new name NYPA Ventures, which allows the Power Authority's customer-facing business units to be more agile and lean by quickly adapting to dynamic marketplaces and evolving customer needs.

ENERGY STORAGE

Gov. Kathy's Hochul's vision for building an integrated, decarbonized energy system includes a set of policies to grow clean energy storage with a goal of reaching at least 6 gigawatts of energy storage by 2030. NYPA's VISION2030 strategic plan hopes to enable 325 megawatts of distributed solar at its customer sites by 2025. NYPA is also looking at ways to use existing infrastructure for innovative battery storage projects. NYPA collaborated with the PEAK Coalition on a study that concluded that NYPA's Small Clean Power Plants in New York City are good candidates for bulk-scale battery storage projects. NYPA subsequently issued a Request for Proposals for the potential use of the sites and related infrastructure.

NYPA also was recognized for its innovative leadership in the battery storage industry, receiving an Innovation Icon award from Cloud for Utilities for a first-of-its-kind battery storage system installed at NYPA's White Plains office. The system is expected to serve as a model for commercial buildings looking for safer, lower-cost energy storage solutions. The project showcases the role that energy storage can serve in enhancing demand management and grid flexibility while helping to advance New York State's nation-leading climate and clean energy goals.

SOLAR ENERGY

1,400 solar panels were installed on the Javits Center's green roof, which also serve as a habitat for area wildlife, will be supplemented by a 3.5-megawatt battery storage system at the facility in Manhattan.

The largest solar array in the 64-campus SUNY system, consisting of 4,783 solar panels producing 1.9 megawatts of electricity, was installed across several rooftops of the University at Albany's campus. With the array comes long-term energy cost savings and sustainability benefits to the University. It also represents a large part of NYPA's VISION2030, as it supports New York State's goal to procure 70% of the state's electricity from renewable sources by 2030 and furthers the transition to a carbon-free power grid by 2040.

NYPA was lead energy advisor for the largest municipal solar energy deployment in Westchester County with the construction of a nine-site, 6.8-megawatt community solar project in White Plains.

ELECTRIC VEHICLES

NYPA's EVolve NY electric vehicle (EV) initiative was in full swing, expanding its high-speed charging network across New York State. More than 100 EVolve NY fast chargers opened in 2022, with a focus on commuter towns, tourist destinations and Long Island, where nearly 30% of New York's EV owners live. NYPA offered free charging for the high-travel July 4 holiday at EVolve NY fast chargers to inspire more people to adopt electric vehicle driving. The expansion supports the state's goal of reducing climate-altering greenhouse gas emissions by 85% by 2050.

GREEN HYDROGEN

As part of NYPA's comprehensive decarbonization strategy, in partnership with General Electric and Electric Power Research Institute, NYPA led a first-of-its-kind green hydrogen demonstration project at its Brentwood Power Plant on Long Island. The study showed decreased carbon emissions when using hydrogen blended with natural gas. This cutting-edge research helps to advances New York State's leadership on hydrogen exploration and provides new data to inform the state's comprehensive decarbonization strategy.

SUSTAINABILITY/ENVIRONMENTAL JUSTICE

NYPA released its second annual Sustainability Report, a model for other public utilities and power companies. It illustrates NYPA's progress in achieving environmental, social and governance performance measures, and it highlights milestones in NYPA's VISION2030 strategic plan, its role in climate action, and advancement of the state's Climate Leadership and Community Protection Act.

A NYPA-operated community greenhouse lab, focused on teaching cutting-edge skills in urban agriculture, sustainability-based programming and environmental science, opened in Queens. The lab offers educational resources to students from underserved communities near the Power Authority's energy assets across the state.

NYPA expanded its internship program in partnership with Pathways in Technology Early College High School to help students from disadvantaged communities develop the professional skills needed to succeed in jobs in New York State's growing clean energy workforce and economy. In 2022, the program included a paid internship and doubled the number of eligible participating students. NYPA also joined with three more schools than in 2021 and awarded $10,000 in scholarships to New York students interested in energy-related studies. The program will help create and maintain a diverse, equitable and inclusive workforce for the future.

CANALS

In an ongoing bicentennial celebration era for the Erie Canal's construction and completion, which spanned from 1817 to 1825, the New York State Canal Corporation opened navigation season with recently finished projects like new and improved docks and accessibility opportunities along the canals. As part of the Reimagine the Canals Initiative, the Canal Corporation offered--for the third summer--an On the Canals series of free outdoor recreational and cultural activities to bring larger audiences to Canal communities and enhance economic growth for regional businesses.

In honor of Harriet Tubman, the Canal Corporation named a push tugboat after the incredible American abolitionist. This naming recognized the bicentennial of Tubman's birth.

NYPA revealed a newly integrated lighting system, provided by the Office for Visual Interaction and LiRo Engineers Inc., to illuminate historic engineering monuments along the canals. In 2022, the Erie Canal's Lock E-17 in Little Falls, the largest single-lift lock along the canal, was chosen as the canal feature worthy of the spotlight.

To improve fishing conditions for anglers and provide a better habitat for the fish, the Fall Fishing Program was permanently incorporated into Canal's annual events. The initiative extends the fishing season by releasing the regulated flows of water from the Erie Canal to several Lake Ontario tributaries. In collaboration with the state Department of Environmental Conservation, Canals developed plans to stem the spread of an invasive aquatic species to the Champlain Canal to create a better environment for native fish and protect Lake Champlain, while continuing enjoyment for boaters in the region.

ISRAEL CHALLENGE

The New York-Israel Smart Energy Innovation Challenge was offered for the second time this year. It calls for start-up technologies from companies headquartered in Israel to help meet the

needs of New York State's utility operations and advance the state's clean energy transformation. The winner of the 2022 challenge, ZOOZ, was awarded $1 million from NYPA for demonstrating the integration of a local power grid with an electric vehicle coupled with ZOOZ's power booster.

LEADERSHIP

NYPA was named one of Forbes magazine's Best Midsize Employers, a testament to the Power Authority's strong values and dedicated, talented workforce.

CONCLUSION

With the complementary work of NYPA and Canals, the future of energy and a cleaner environment in New York State is in good hands, ensuring short- and long-term goals are within reach. 2022 represented an important year for NYPA and Canals, with both organizations leaning in and playing their respective roles to make good on the promise to help create a thriving, resilient state, powered by clean energy for many years to come.