



**NY Power
Authority**

**Canal
Corporation**

**MINUTES OF THE JOINT SPECIAL MEETING
OF THE
POWER AUTHORITY OF THE STATE OF NEW YORK AND
NEW YORK STATE CANAL CORPORATION**

October 26, 2020

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Minutes of the Special Joint Meeting of the New York Power Authority's Trustees and Canal Corporation's Board of Directors held via video conference at approximately 3:00 p.m.

Members of the Board present were:

John R. Koelmel, Chairman
Eugene L. Nicandri, Vice Chairman
Anthony J. Picente, Jr.
Tracy McKibben
Michael A.L. Balboni
Dennis T. Trainor

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|----------------------|--|
| Gil Quiniones | President and Chief Executive Officer |
| Justin Driscoll | Executive Vice President and General Counsel |
| Adam Barsky | Executive Vice President and Chief Financial Officer |
| Joseph Kessler | Executive Vice President and Chief Operating Officer |
| Kristine Pizzo | Executive Vice President and Chief Human Resource & Administrative Officer |
| Sarah Salati | Executive Vice President and Chief Commercial Officer |
| Robert Piascik | Senior Vice President & Chief Information Officer |
| Kimberly Harriman | Senior Vice President – Public & Regulatory Affairs |
| Keith Hayes | Senior Vice President – Clean Energy Solutions |
| Yves Noel | Senior Vice President – Strategy & Corporate Development |
| Scott Tetenman | Senior Vice President – Finance |
| Karen Delince | Vice President and Corporate Secretary |
| Janis Archer | Vice President – Enterprise Excellence |
| Girish Behal | Vice President – Project & Business Development |
| Emilie Bolduc | Vice President – New York Energy Manager |
| Ricardo DaSilva | Vice President – Strategic Operations |
| Daniella Piper | Vice President – Digital Transformation Office and Chief of Staff |
| Christopher Fry | Director – Business Development |
| Kerry-Jane King | Director – Sustainability |
| Ali Munawar Mohammed | Director – Digital Transformation Office |
| Michael Mulhall | Corporate Strategy Director |
| Mary Cahill | Manager – Executive Office |
| Hunaid Sulemanji | Manager – Resource Planning |
| Carley Hume | Program Manager – Strategy Grid Flexibility |
| Lorna Johnson | Senior Associate Corporate Secretary |
| Ram Narayan | Senior Strategy Analyst |
| Summer Shaw | Senior Policy Advisor |
| Joseph Glazer | Strategy Analyst |
| Sheila Quatrocci | Associate Corporate Secretary |
| Michele Stockwell | Project Coordinator – Executive Office |
| Rory Clune | Partner – McKinsey & Co. |
| Ksenia Kaladiouk | Associate Partner – McKinsey & Co. |
| Koen Wolfs | Engagement Manager – McKinsey & Co. |
| Randy Kreis | President – Customer Care Network, Inc. |

Chairman Koelmel presided over the meeting. Corporate Secretary Delince kept the Minutes.

Introduction

Chairman Koelmel welcomed the Trustees/Directors and NYPA and Canal staff members who were present at the meeting. He said this is the first of two special meetings to focus on the long-term key strategic initiatives and opportunities of the Authority and Canal Corporation for which is expected positive outcomes to deliver for the benefit of all the constituents that they serve.

He said that the meeting had been duly noticed as required by the Open Meetings Law and called the meeting to order pursuant to the Authority's Bylaws, Article III, Section 3.

1. **Adoption of the October 26, 2020 Proposed Meeting Agenda**

On motion made by Trustee Trainor and seconded by Trustee McKibben, the members adopted the meeting Agenda.

Conflicts of Interest

Chairman Koelmel and members Nicandri, Picente, McKibben, Balboni and Trainor declared no conflicts of interest based on the list of entities previously provided for their review.

2. **Motion to Conduct an Executive Session**

“Mr. Chairman, I move that the NYPA and Canal Boards conduct an Executive Session to discuss the financial and credit history of a particular corporation and matters regarding public safety and security.” On motion made by Trustee Trainor and seconded by Trustee Balboni, the members held an executive session.

3. **Motion to Resume Meeting in Open Session**

“Mr. Chairman, I move to resume the meeting in Open Session.” On motion made by Trustee Trainor and seconded by Trustee Balboni, the meeting resumed in Open Session.

Chairman Koelmel said that no votes were taken during the Executive Session.

4. DISCUSSION AGENDA:

a. Vision 2030 Strategy Development

Chairman Koelmel invited President Gil Quiniones to introduce the Authority's Vision 2030 Strategy Development Plan to the Board.

President Quiniones said that this is the first of two Strategic Planning retreats with the Board of Trustees before bringing the Authority's VISION2030 Strategic Plan to the members for their review and approval at the December Board meeting. He said that at this meeting, the Authority will cover its vision and mission, how it should preserve the value of hydropower, its role in transmission development, digital transformation, and sustainability and social and corporate governance, posture and plans. He continued that subject matter experts from NYPA will cover each of the topics of discussion and invited Mr. Yves Noel, the Authority's Senior Vice President of Strategy & Corporate Development to provide highlights on NYPA's background, vision, and mission.

i. **NYPA Background, Vision & Mission**

Mr. Yves Noel, Senior Vice President of Strategy & Corporate Development, provided highlights of NYPA's background, vision, and mission to the Board. He thanked the Board members and the senior NYPA and Canals team for participating in this VISION2030 Strategy Retreat. He said that the Authority is reinventing the organization for the decade ahead. His goal is to explain how the Authority crafted its strategy and highlight the major assertions with a well-crafted approach reflected in the topics for discussion. He continued that he would begin with a description of the Authority, who it serves and end with the Authority's aspirational view of its future.

Given the major industry trends, the Authority has four strategic challenges. Subject matter experts will provide an overview of two of those challenges which will include the historic context, the Authority's aspirations, and initial recommendations. They will then transition to describing five foundational pillars, areas of focus which will support the Authority's strategy.

While no decisions will be made today, the members will have a better sense of where the largest state-owned utility must go to serve the long-term interest of the people of New York State and carry out the governor's ambition of a clean energy vision and provide leadership in this changing environment.

NYPA's Background

NYPA was created to ensure that the hydroelectric power generated by the St. Lawrence River "shall remain forever in the actual possession of the people of the state." NYPA, created by Governor Franklin Roosevelt, over considerable opposition, would become an early and successful experiment in public power and innovation. As NYPA is about to enter its 10th decade, all 2,500 members of the NYPA and Canal teams are focused on serving the people of New York State.

- NYPA provides value in generation, transmission, and customer energy solutions for the state's goals.

Generation

NYPA generates 25 percent of the power in NYS, 80 percent of which is carbon-free hydroelectric power.

Transmission

NYPA operates over one-third of the NYS high voltage transmission lines.

Customer Energy Solutions

NYPA has implemented more than 2,300 projects, reducing 1.2 million tons in greenhouse gas emissions.

- **NYPA exists to serve the people of the state of New York and operates for their benefit.**

NYPA's major customer groups include:

1. Retail, energy, and service customers
2. Local governments, municipalities, and rural electric cooperatives
3. Commercial and Industrial businesses; and
4. Wholesale market

NYPA's 2030 Vision and Mission

- NYPA's new vision of the future and mission reflects its aspirations.

NYPA's vision and mission was rewritten to reflect the fundamental fact NYPA exists to serve the people of NY. NYPA's primary focus is on the customer; its new vision statement is simple, but powerful - *A thriving resilient New York powered by clean energy*. Its mission is how to accomplish that vision - *Lead the transition to a carbon-free, economically vibrant New York through customer partnerships, innovative energy solutions, and the responsible supply of affordable, clean, reliable electricity*.

Mr. Noel ended by saying that part of this process is imagining how the Authority's stakeholders will understand its message. NYPA wants to demonstrate a focus on resiliency and serving all the people of New York State.

ii. **Preserve the Value of Hydropower**

Mr. Christopher Fry, Director of Business Development, provided highlights on NYPA's hydropower and its role in the 2030 Vision. He said that NYPA has been successfully operating its hydro facilities for more than 60 years, however, as Mr. Noel explained, the New York energy industry is rapidly transforming to achieve the ambitious goals of the Climate Leadership and Community Protection Act ("CLCPA"). That transformation creates both opportunities and challenges for NYPA's hydro units. This is critically important because NYPA's hydropower is really the foundation that makes the achievement of New York's 70 percent by 2030 renewable energy goal possible. It is, therefore, a key aspiration of NYPA's VISION2030 strategy to preserve and enhance the value of its hydropower assets as the grid evolves.

Hydropower – NYPA's 2030 Vision

NYPA's St. Lawrence Project went into operation in 1958 and its Niagara Project, shortly after, in 1961. Today, more than 60 years later, NYPA's hydro plants still provide more than 20 percent of New York's electricity needs. In 2019, NYPA generated over 25 TWh of hydropower; this is enough to power roughly 3.5 million New York homes.

In addition to being completely clean, NYPA's hydropower is among the lowest-cost electricity in the State. NYPA's hydropower has been, and continues to be, a tremendous driver of economic development through its various low-cost power programs. However, the grid is evolving and NYPA needs to prepare for the future. To that end, NYPA recently launched its Next Generation Niagara program. This is a 15-year, \$1.1 billion Life Extension, Modernization, and Digitization program to prepare Niagara for the next half century.

As the grid evolves to meet New York's clean energy goals, NYPA's hydro is becoming more important. Achieving the State's decarbonization goals will require the addition of a tremendous amount of new renewable resources, e.g. New York's ambitious 6,000 MW distributed solar goal and even larger 9,000 MW Offshore Wind goal. However, NYPA's hydro is the foundation that makes New York's 70% by 2030 renewable energy goal possible.

Without NYPA's hydropower, New York would require significantly more new renewables, potentially doubling the amount of Offshore Wind or quadrupling the amount of distributed solar, which would entail significantly greater ratepayer expense. It is therefore crucial to the cost-effective achievement of the CLCPA goals to maintain NYPA's hydropower output into the future.

In addition to continuing to provide clean baseload power, NYPA's hydropower will increasingly be sought to provide grid stabilization services.

The influx of intermittent wind and solar will place new demands on the grid. Due to their dispatchable nature, NYPA's hydro projects are uniquely positioned to provide minute-to-minute balancing and ramping capability to offset the short-term variability in intermittent renewables.

New York's transition to a clean-energy future will require long-duration storage to mitigate both hour-to-hour and day-day fluctuations in renewable generation. NYPA's hydro assets are uniquely positioned to provide this critical service to the grid. NYPA foresees a tremendous increase in the utilization of both the Lewiston Pumped-Generating Facility at Niagara as well as its Blenheim-Gilboa Pumped-Storage Facility.

However, with these opportunities also come challenges. The influx of intermittent renewable resources is expected to upend Niagara's and St. Lawrence's historical operating paradigms. This presents challenges from both operational and financial perspectives. Operationally, running the facilities this way is expected to significantly increase wear and tear on the units and correspondingly, increase O&M expenses.

In addition, the influx of renewables is expected to both reduce the volume of NYPA's hydro generation as well as suppress New York System Independent Operator ("NYISO") energy prices, delivering a double blow to NYPA's revenue.

As mentioned previously, any reduction in NYPA's hydro generation would require a corresponding increase in the volume of new renewables to get to New York's 70% by 2030 goal, resulting in greater ratepayer expense, and why this is a core component of NYPA's 2030 vision.

To that end, NYPA is proposing a plan to preserve and enhance the value of its hydro.

The first aspect is to re-double NYPA's advocacy both at the NYISO and the Public Service Commission ("PSC"). Some of the services mentioned that will be necessary to support the intermittent renewables, such as ramping, do not exist yet in the NYISO market. NYPA is an active stakeholder at the NYISO and will continue to advocate for market rules that fairly compensate NYPA's hydro units for the services they provide to the grid. In addition, New York's energy regulations continue to evolve and NYPA actively participates in policy development to help align the State's policies with operational and market realities.

Secondly, as previously mentioned, NYPA is undertaking a Life Extension, Modernization and Digitization Program at its Niagara Project which is intended to address retaining NYPA's assets in a state of good repair and improve the competitiveness of its hydro plants in the market. This comprehensive program will not only extend the useful life of the Niagara Project but also increase efficiency and reduce operational expense, improving the competitiveness of the facility in the market.

Lastly, NYPA is evaluating new customer arrangements to better capture the environmental value of NYPA's hydro generation. NYPA is developing a voluntary, green power program which it plans to launch next year. Through this program, customers who are interested in "greening" their energy supply could purchase the environmental attributes of NYPA's available hydro generation. This would both support NYPA's customers in achieving their sustainability goals as well as enable NYPA to obtain value for the environmental benefits that its hydropower provides.

iii. **Lead Transmission Development**

Ms. Kimberly Harriman, Senior Vice President, Public and Regulatory Affairs, provided highlights on the opportunities that NYPA has in the field of transmission development. She said that, as previously stated, the Climate Leadership and Community Protection Act aspires to have 70 percent of consumed energy from renewable resources and a 100% emission-free grid by 2040. To that end, following negotiations with the Legislature, an amendment was made to the way renewable energy is cited and grid investments are planned. The Accelerated Renewable Energy Growth and Community Benefit Act ("AREGCBA") of 2020 will accelerate and shape NYPA's transmission strategy.

In order to get the generation that is needed to be built to accomplish the 70% energy from renewable resources by 2030 goals, we have to make sure that we can move that renewable energy from areas where it is produced to where it can be consumed. To that end, the Legislature, along with the Governor, recognized the need for a Comprehensive Grid Study not only at the bulk level, but also at the local transmission and distribution levels. The Grid Study is currently underway and is due at the end of the year.

The Comprehensive Grid Study will identify cost-effective distribution, local and bulk electric system upgrades. The study will include an investment plan for local transmission distribution projects that New York utilities will undertake. It also includes a bulk transmission investment plan which will identify where on the electric grid investments and upgrades need to be made to facilitate this clean energy future for New York.

NYPA owns one-third of the backbone of the transmission system. A bulk transmission investment program will be developed to support identified projects that leverages NYPA's unique capability to construct new transmission. To that extent, there are two pathways in which projects will get constructed. The first is identified through the Order 1000 process, a federal paradigm in which, once a need to upgrade the bulk system is identified, the New York Independent System Operator solicit ideas and project proposals on how to solve the need identified on the system. NYPA has responded to the Request for Proposals from the New York Independent System Operator.

The second tool that The Accelerated Renewable Energy Growth and Community Benefit Act of 2020 created was a recognition that NYPA is singularly suited to develop certain transmission projects that need to go faster than what is permitted under the RFP process run by the New York Independent System Operator. To that extent, the Public Service Commission, the State Regulator, will conduct a comprehensive study to identify cost-effective distribution, local and bulk electric systems upgrades, and designate NYPA projects that it believes NYPA can build and expeditiously construct.

The last component of the deciding law looks at the fact that not only do we need to move generation to where it can be consumed, a grid investment study is needed in order to do this cost effectively. To that end, the Act included a new streamlined siting process to be applied for transmission infrastructure build within existing rights-of-way.

Mr. Girish Behal, Vice President of Project and Business Development, discussed the opportunities presented to NYPA and provided information on how the AREGCBA Act allows the Commission to designate expedited projects it wants NYPA to pursue. He said that NYPA is looking towards a 2030 Vision of being the leading transmission developer, owner, and operator for New York State, accommodating the transmission needs of the State.

As previously discussed, NYPA owns roughly 1,454 circuit miles of transmission lines in New York; basically, most of the 765 kV lines and a large backbone transmission system. NYPA is currently working on prioritizing and accelerating projects, incentivizing the transmission of renewable energy to the load centers, while, at the same time, working with the private sector to expand its transmission capabilities.

Recent NYPA transmission investments help set the stage for New York State's 2030 goals.

Types of projects that are in progress at NYPA:

1) AC Transmission – Segment A (Public Policy Transmission Project)

NYPA is working on the AC Transmission - Segment A of the Public Policy Transmission Project. NYPA is looking to increase Upstate New York/Southeast New York transfer limits and address system congestion while improving ageing infrastructure.

NYPA has partnered and collaborated with a private entity, expanded its capabilities, and won a competitive Request for Proposal for the project.

NYPA's investment will be \$281 million; the project is targeted to be completed in 2023.

2) Moses-Adirondack Smart Path Reliability Project

As a part of its local transmission plan, NYPA is currently working on the Moses-Adirondack Smart Path Project to provide a resilient and reliable electric system in upstate New York. NYPA is investing approximately \$484 million. The target in-service date is 2023.

3) Northern New York (Priority Transmission Project)

The Public Service Commission assigned NYPA to execute the Northern New York project which will address congestion and improve ageing infrastructure.

NYPA anticipates an investment of approximately \$498 million of the total \$905 million for this project. The targeted in-service date of the project is Q4 of 2025.

NYPA will be issuing a Solicitation of Interest for potential collaborators as mandated by the Accelerated Renewable Energy Growth and Community Benefit Legislation ("AREGCBA").

NYPA's strategy is to become the leading transmission owner, developer, and operator for the State of New York, supporting the State's needs, by not only growing its transmission asset base by two to three times by 2030, but also focusing its transmission portfolio on the right projects that will deliver to the wider state objectives, including accelerating the most critical projects to support the decarbonization goals set out in the Climate Leadership and Community Protection Act.

Mr. Girish ended by saying that NYPA continues to increase its focus on transmission as a core business and develop leading capabilities in planning and development, project delivery, and asset management of transmission.

iv. **Digitization as a Foundation**

Ms. Daniella Piper, Vice President of Digital Transformation Office and Chief of Staff, provided highlights of the Digitization strategy. She said that digitization is one of the four pillars of the VISION2030 Strategy. NYPA's last, 2020 Strategic Plan set forth an ambitious goal of becoming the first end-to-end digital utility by leveraging technology, advancing analytics, Artificial Intelligence ("AI") and Machine Learning ("ML") to optimize its assets, help its customers find solutions to the challenges of a decentralized grid, and enable its employees to better serve the Authority's customers and key stakeholders.

To that end, NYPA laid the foundation for achieving end-to-end digitalization and attained significant business value through the convergence of technology and business. Over the last three years, NYPA focused on improving the technical capabilities and the organizational structure that was needed to achieve this goal. As a result, NYPA established the Digital Transformation Office ("DOT") to support the organization through this transformation. The DTO team acts as a bridge between strategy and business operations and a catalyst for the transformation. DOT also filled key roles in the areas of Data Governance and Quality, Enterprise Architecture and increased NYPA's focus on cybersecurity.

NYPA Developed 3 Digital Hubs:

1) The Integrated Smart Operating Center ("iSOC") allows staff to monitor the Authority's equipment, identify trends and anomalies and work with the Plants' staff to take action to avoid unnecessary equipment outages or damages.

Asset data is currently streamed to the iSOC from 62,000 data points. NYPA intends to have another 53,000 data points streaming by the end of 2021. It is estimated that, to date, NYPA has achieved approximately \$40M in avoided costs.

2) The Advanced Grid Innovation Lab for Energy ("AGILE") allows NYPA to bring together industry stakeholders to develop solutions to the challenges of a decentralized grid. NYPA has developed a model of New York's transmission system above 230KV which will allow the Authority to simulate grid performance as it integrates renewables and distributed energy resources into the grid. NYPA will continue to partner with Transmission Owners, NYISO, NYSERDA, and the Electric Power Research Institute ("EPRI") which is supporting the Authority with the operation of the Lab.

3) The New York Energy Manager ("NYEM") was built to help NYPA's customers reach their energy goals. It is an energy information platform and service that organizes and visualizes energy information, manages load, and optimizes energy usage for almost 16,000 of the Authority's customer's facilities. To date, NYPA has helped its customers achieve over 2.3M kBTU in annual energy savings.

NYPA is also collaborating with external partners to develop new products that will improve building energy performance, lower energy bills, facilitate decarbonization, and enable the integration of distributed energy resources into the grid. This is critical to helping the Authority's customers achieve the goals laid out in the Climate Leadership and Community Protection Act.

In addition to these three energy hubs, NYPA has made investments in foundational Information Technology ("IT") infrastructure that has enabled the Authority to achieve business capabilities.

IT Infrastructure and Capabilities Investments

Mr. Robert Piascik, Senior Vice President & Chief Information Officer, provided highlights on the Authority's progress and next steps as it relates to Information Technology infrastructure and capabilities investments. He said that the strategic digital hubs, highlighted by Ms. Piper, are foundational to NYPA as a digital utility and to its 2030 Strategy. Those hubs are built on digital capabilities such as

infrastructure, numerous digital technologies and digital services which are based on scalable vendor diagnostic digital architecture.

The implementation of the five key digital investment areas, 1) Enterprise Compute & Storage; 2) Cyber AI/ML Insider and External Threat Management; 3) Data Management & Analytics; 4) Moving to Cloud; and 5) Digital Worker Program, established the foundation and services to build new, and expand on digital business solutions with greater flexibility, cost efficiency, governance, security, usability, speed and agility by:

1) Virtualizing the infrastructure and taking all components of the computing resources for existing digital services and for new data analytics, making it sharable. This shifted the infrastructure to meet the ebb and flow of the business demands for new applications or new business models. For example, IT was able to move 100% of NYPA employees offsite within 72 hours in response to COVID-19. In addition, IT created thirteen COVID-specific applications to make sure the Authority's employees were safe and tracked the dynamic changes related to COVID-19.

2) Applying Artificial Intelligence and Machine Learning technologies to derive insights from NYPA's data assets in every Business Unit. For example, AI and ML were applied at the commercial operations space for New York Energy Manager ("NYEM"), Utility Operations for Asset Performance Management, and IT to better protect the digital ecosystems such as cyber behaviors-use, internal and external threats/risks, allowing staff to be proactive and take action.

3) Building strong data management and analytics capabilities with new roles and new skill-sets with the goal to improve the quality, security, governance, ability to integrate multiple data sources, and visualization of enterprise data collected from the Authority's digital sensors, customers, third-party partners, and the business ecosystem.

4) Leveraging the use of cloud services and applications to support NYPA's mobile workforce, stakeholders, and business continuity to have ready access to applications as they become available in the marketplace. This will help to build resiliency and flexibility within NYPA's environment using collaboration tools such as WebEx, Teams, and Zoom.

5) Arming the Authority's digital workforce with easy-to-use tools and services to increase mobility, productivity, engagement, and safety (e.g., iPhones, collaboration tools/software).

NYPA has made critical, digital technology investments, achieving greater flexibility, improved governance, security usability, standardization, and agility from its investments while positioning the Authority to rapidly respond to the business needs of the 2030 Strategy.

Strategic Technology solutions

NYPA is not only implementing the digital technology ecosystem but is also deriving value by transforming and digitizing its business processes through Strategic Technology Solutions/platforms for NYPA employees and customers. For example:

- In line with NYPA's Workforce Transformation Strategies, IT implemented digital HR applications that leverage cloud services (Software as a Service apps) with data integration/sharing – resulting in higher engagement of the employees, empowered and higher skilled employees.
- Use of digital building blocks from the digital infrastructure to rollout and add to the new Customer "Account Center" (also referred to CDEx) Platform that enables NYPA's customers to digitally access their data and any new incremental services at anytime from anywhere with any device, knowing that their information is secure. The benefit is better customer experience, informed customers, and value-add services. The customers can do online billing to verify their bills and energy audits and view their consumption and changes in consumption.

- Modernizing NYPA's Treasury Management System to achieve greater efficiency and speed.
- Leverage the physical Emergency Energy Control Center to provide "hot site" availability of critical applications resulting in greater operational and business resiliency and business continuity.

Mr. Piascik ended by reinforcing that NYPA is leveraging the digital investments, transforming its business processes to become more efficient and shift to focus on the customer and employee experience and support its 2030 Strategy.

v. **Environmental, Social & Governance as a Foundation**

Ms. Kerry-Jane King, Director of Sustainability, provided highlights of the Authority's new sustainability strategy, which encompasses the environmental, social and governance ("ESG") performance that will guide the implementation of NYPA's VISION2030. She said that there is an increasing interest from the public and the financial sector in companies' sustainability performance and this is accelerating with the health, racial justice, and climate crisis we are facing.

The new sustainability strategy is an opportunity for NYPA to reassess how the company can best meet the needs of its stakeholders and take advantage of opportunities to create value for the long-term.

The Authority's strategy will include the preparation of a five-year Sustainability Plan and annual sustainability reports, and will be built around environmental, social and governance issues that have been identified in the Authority's recent Materiality Assessment as having the greatest impact on NYPA's business and being of greatest importance to its stakeholders.

Sustainability and Environmental Social Governance (ESG)

Sustainability is a business approach that applies the environmental, social, and economic framework to manage a company's performance. The idea behind this approach is that companies can do better by doing good because they will be more resilient over the long term.

Environmental, Social and Governance generally refers to the standards created to measure and report on sustainability. Investors and credit rating agencies usually use ESG standards to assess a company's capacity, response to risks and takes advantage of opportunities, and how these will impact the company's financial performance.

ESG Impact on Long-Term Business Performance

Recent events are presenting real-time tests of what companies have set up to manage complex and evolving ESG issues. Reports from BlackRock, McKinsey, JP Morgan, and others indicated that companies with strong material sustainability performance and high ESG scores are demonstrating greater financial resilience.

NYPA has made significant progress in sustainability management which provides a strong foundation for its new strategy. NYPA has been meeting and exceeding New York State's targets for environmental sustainability and is also leading among its state agency peers in sustainability management, especially with the creation of its Sustainability Advisory Council. NYPA is the only agency/authority that has a structure like this, which has been very effective in moving its sustainability performance forward.

In 2018, NYPA issued its five-year Sustainability Plan which sets enterprise-wide climate and environmental goals. NYPA is making progress in these areas and its new Sustainability Plan will address 15 material ESG issues which include climate change, diversity, equity, and inclusion, as well as renewable energy, energy resilience, and health and safety.

These priorities have been shaped by NYPA's current social and political climate, including its national reckoning with systemic racism and the ongoing COVID-19 pandemic. This new Sustainability Strategy will help NYPA adapt and respond to these new risks.

Stages and Capabilities

NYPA has performed well in the corporate sustainability journey at the compliance and functional stages, and its strategic focus on ESG will lead NYPA into the integrated stage.

To achieve of goal of becoming a "Best-in-Class" ESG leader, NYPA will embed ESG within its strategy, governance, and other programs.

A fully integrated ESG is a strategic priority for NYPA. Sustainability management oversight needs to be elevated. ESG Key Performance Indicators (KPIs) will be incorporated into the corporate scorecard with frequent reporting to the Executive Management Committee and the Board. ESG risks will also be integrated into NYPA's Risk Registry.

The Sustainability Department's function will transition to a more strategic role as advisor on ESG strategy, performance management, and reporting, and will move forward with the implementation of the strategies, programs and initiatives identified in the new Sustainability Plan. To be more responsive to NYPA's stakeholders' expectations for transparency, and to demonstrate the Authority's commitment to ESG, the Sustainability Department plans to publish annual sustainability reports that align with standards established by the Global Reporting Initiative, the Sustainability Accounting Standards Board, and the task force on financial disclosures.

Ms. King ended by saying that this new course that NYPA is taking in sustainability is a timely opportunity for the Authority to establish itself as an industry leader.

5. CONSENT AGENDA:

On motion made by Trustee Picente and seconded by Trustee Balboni, the Consent Agenda was adopted.

**a. Extension of Contract FD-13 with New Service Tariff –
Brookhaven National Laboratory**

The President and Chief Executive Officer submitted the following report:

“SUMMARY

The Trustees are requested to approve an extension of the contract ('Contract FD-13') to provide firm power service to the United States Department of Energy ('DOE') for use by Brookhaven National Laboratory ('Brookhaven' or 'BNL') for a period of ten years (January 1, 2021 through December 31, 2030), together with approval of the new service tariff, Service Tariff No. BNL-1 ('ST BNL-1'), as negotiated between the Authority and DOE. This contract extension, when combined with the Authority's existing hydropower allocation for the benefit of BNL, will enable this important scientific laboratory to continue its ground-breaking research which provides long-term economic benefits to New York State. The contract extension, along with the ST BNL-1, is attached as Exhibit '5a-A.'

BACKGROUND

The Authority has been serving Brookhaven since November 1982. The Contract FD-13 permits Brookhaven to receive 77 megawatts ('MW') of firm power and energy. The electricity provided by the Authority has saved the laboratory hundreds of millions of dollars over the life of the contract while, at the same time, giving Brookhaven the ability to attract new, cutting-edge science projects to Long Island. These projects include the Alternate Gradient Synchrotron, the National Synchrotron Light Source-II ('NSLS-II') and the Relativistic Heavy Ion Collider ('RHIC'). Most importantly, it allowed for Brookhaven to be awarded the new \$2 billion Electron-Ion Collider ('EIC') project, which will keep the laboratory at the forefront of science and is an additional investment in human capital as well.

With more than 3,000 employees and a \$500 million annual budget, Brookhaven is a major employer on Long Island, attracting members of the scientific community from New York, other states and around the world. In addition, more than 3,000 visiting researchers from universities, industry and other research institutions use the laboratory's advanced science facilities annually, with approximately one-third from New York institutions and businesses from various parts of the state. Among the institutions are the State University of New York at Plattsburgh, Cornell University and Rensselaer Polytechnic Institute. Business organizations utilizing BNL facilities include Corning, General Electric and IBM. BNL's annual financial impact on New York State's economy is estimated at nearly \$1 billion.

DISCUSSION

The extension of Contract FD-13 and the hydropower allocation for the benefit of BNL work in concert to provide economically viable power and energy to BNL.

The 15 MW hydropower allocation to the Long Island Power Authority for resale for the exclusive benefit of BNL ('Hydropower Resale Contract') is blended with the market energy purchases of up to 77 MW under Contract FD-13 to meet BNL's requirements. DOE will continue to be able to receive economic benefits associated with certain 'grandfathered' transmission congestion contracts set forth in the contract. DOE continues to be responsible for the transmission charges associated with these transmission congestion contracts. This is intended to provide stable transmission service rates and a hedge against unpredictable transmission system congestion charges.

Due to DOE's internal policy limiting energy purchase contracts to terms of no more than ten years, the proposed contract modification is for ten years.

The contract extension will continue to provide for a flow-through of market prices for that portion of Brookhaven's electricity requirements in excess of the 15 MW allocation under the Hydropower Resale Contract. The effective price of electricity for Brookhaven is substantially lower than the full market price for electricity on Long Island and allows Brookhaven to compete within the National Laboratory System

for world-class science projects. Brookhaven's continued success is directly tied to its ability to build and operate large, complex, one-of-a-kind scientific facilities that draw researchers from around the world. If Brookhaven were not able to obtain a stable source of power priced at nationally competitive rates for the long term, it would suffer future loss of jobs, reduced or eliminated technology-transfer opportunities and the eventual closure of the facility.

The contract extension renews a total 'all in' cost cap of \$375 million for power and energy provided to BNL during the term of the extension. If the total 'all in' cost cap is estimated by the Authority to be exceeded, the Authority will notify DOE in order to receive authorization to exceed the cap in accordance with the terms of the extended contract. Upon receiving such authorization, the Authority will continue performance and DOE will be obligated to compensate the Authority for costs incurred in excess of the total 'all in' cost cap. Absent receiving such authorization, the Authority is not obligated to continue performance under the extended contract. Both parties shall communicate with each other in writing about establishing a revised 'all-in' cap and will work cooperatively to establish written procedures for notification to the Customer if the revised 'all-in' cap is at risk of being exceeded.

As the Authority performs Load Serving Entity functions for both the firm power service and the hydropower allocations, under Contract FD-13, the extension requires DOE to pay the Authority's monthly clean energy implementation charge for the allocations.

FISCAL INFORMATION

Brookhaven will pay the full cost of power and energy provided under this contract extension.

RECOMMENDATION

The Senior Vice President – Clean Energy Solutions recommends that Brookhaven National Laboratory's contract be extended and ST BNL-1 as described herein and the terms of service for the sale of power to Brookhaven be modified in accordance with the foregoing (Exhibit '5a-A').

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below."

The following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That the extension of Contract FD-13 for a period of ten years (January 1, 2021 through December 31, 2030) and new Service Tariff No. BNL-1, be approved on the terms set forth in the foregoing report of the President and Chief Executive Officer; and be it further

RESOLVED, That the Senior Vice President – Clean Energy Solutions or his designee be, and hereby is, authorized to negotiate and execute any and all documents necessary or desirable to effectuate the foregoing; and be it further

RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the

October 26, 2020

foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

6. Next Meeting

Chairman Koelmel said that the New York Power Authority Board of Trustees and the Canal Corporation Board of Directors will hold a special joint meeting on November 12, 2020.

The next regular joint meeting of the New York Power Authority's Board of Trustees and the Canal Corporation's Board of Directors will be held on December 9, 2020, unless otherwise designated by the Chairman with the concurrence of the members.

Closing

On motion made by Trustee Balboni and seconded by Vice Chair Nicandri, the meeting was adjourned at approximately 5:42 p.m.

Karen Delince

Karen Delince
Corporate Secretary

POWER AUTHORITY OF THE STATE OF NEW YORK
AND
NEW YORK STATE CANAL CORPORATION

EXHIBITS

For

October 26, 2020

Joint Special

Meeting Minutes



**NY Power
Authority**

VISION2030 Strategy Development

October 26th Board Presentation

Agenda

-  1. NYPA Background, Vision & Mission
-  2. Preserve the Value of Hydropower
-  3. Lead Transmission development
-  4. Digitization as a foundation
-  5. Environmental, Social & Governance (ESG) as a foundation

Agenda



1. NYPA Background, Vision & Mission



2. Preserve the Value of Hydropower



3. Lead Transmission development



4. Digitization as a foundation



5. ESG as a foundation

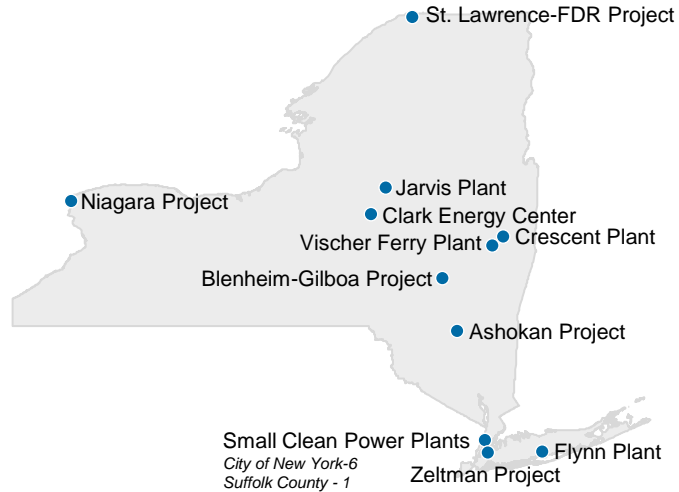
In 2030, the New York Power Authority (NYPA) will celebrate its 99th anniversary



- The New York Power Authority (NYPA) is America's largest state power organization and a unique presence in American energy markets
- Through the Power Authority Act, Governor Franklin D. Roosevelt created NYPA to ensure that the hydroelectric power generated on the St. Lawrence River should "remain forever in the actual possession of the people of the state or of an agency created by them"
- NYPA is a public-benefit state corporation in New York State that uses no tax monies and whose powers are limited by law
- A Board of Trustees, appointed by the Governor and confirmed by the State Senate, govern the Power Authority
- NYPA's staff of 2,530 employees is led by President and CEO Gil Quiniones and managed by an Executive Management Committee of the President and business unit heads
- NYPA is primarily involved in electric power generation and transmission, but also runs customer energy advisory businesses, economic development programs, and the NYS Canal system

NYPA generates, transmits, purchases electric power and energy as authorized by law

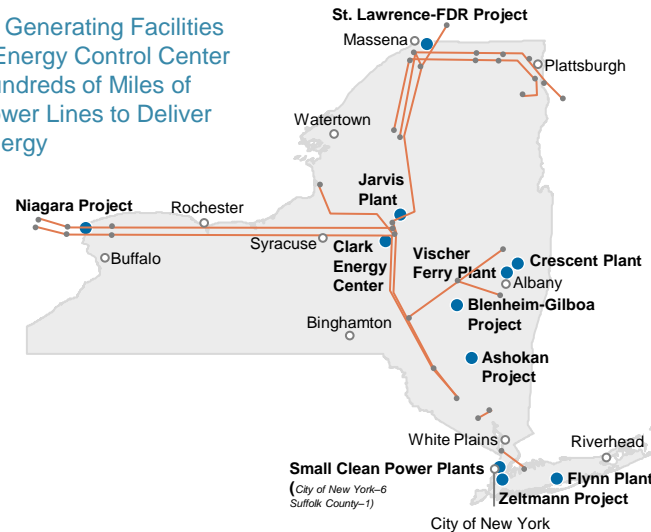
Generation



NYPA generates ~25% of power in NYS, of which 81% is carbon-free hydroelectric power

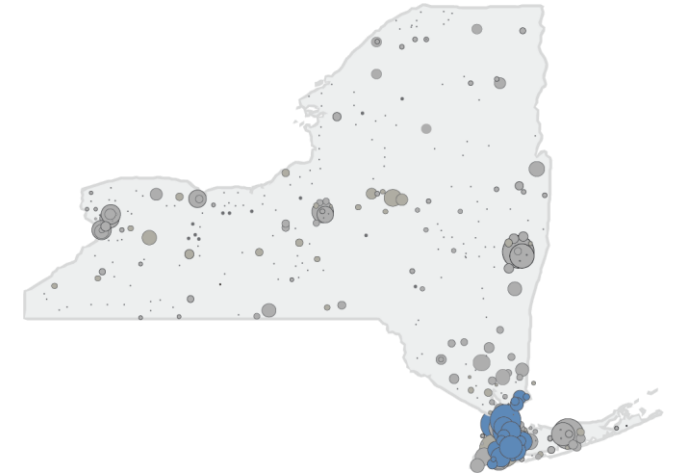
Transmission

16 Generating Facilities
1 Energy Control Center
Hundreds of Miles of Power Lines to Deliver Energy



NYPA operates over one-third of the NYS transmission lines

Customer on-site energy solutions and NYS goals



Over 2,300 projects implemented reducing 1.2 MILLION tons in GHG

NYPA provides low-cost power to incentivize business formation and operation in NYS through its Economic Development programs

NYPA exists to serve the people of the state of New York



NYPA exists to serve the people of the state of New York and is an instrument of the state

Major customer groups

1. Municipal electric systems and rural electric coops
2. Governmental entities
3. Commercial and industrial businesses
4. Wholesale market

NYPA's new vision of the future and mission reflects our aspirations

Current

NYPA's Vision

Our vision is a Power Authority that enables a thriving New York state through the provision of sustainable, affordable energy, stewardship of the state's natural resources, and leadership in innovative technologies and energy efficiency services.

NYPA's Mission

Power the economic growth and competitiveness of New York State by providing customers with low-cost, clean, reliable power and the innovative energy infrastructure and services they value.

VISION2030

NYPA's Vision

A thriving, resilient New York State powered by clean energy

NYPA's 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



Agenda



1. NYPA Background, Vision & Mission



2. Preserve the Value of Hydropower



3. Lead Transmission development



4. Digitization as a foundation



5. ESG as a foundation

Hydropower

our 2030 vision



To preserve and enhance the value of our hydropower assets as a core source of carbon-free power in New York State, and as a source of flexibility and resilience as the state's grid evolves.

Historically, our hydro assets have been a significant source of clean power for NY state

20%

Our hydropower accounts for 20%+ of New York State's electricity

25 TWh

Our hydro plants collectively generated ~25TWh of electricity in 2019, accounting for more than 80% of NYPA's total generation

60 years

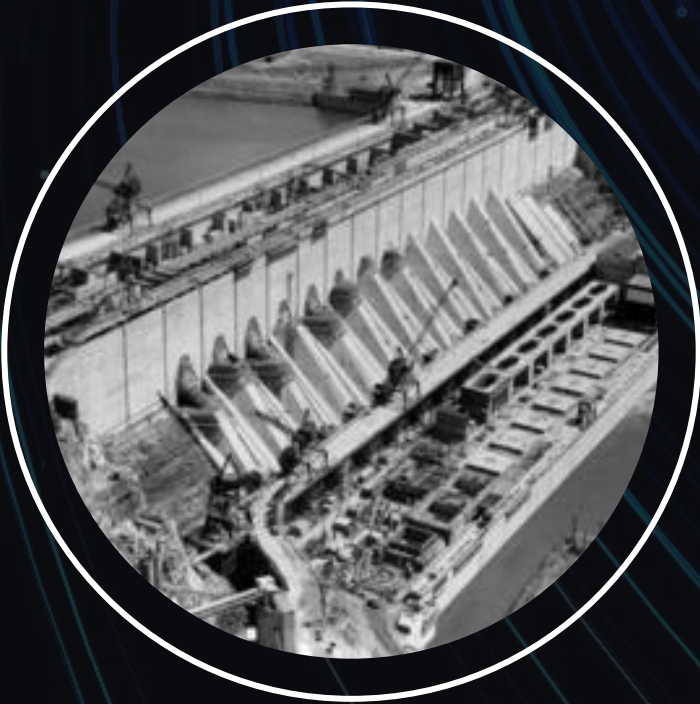
Our hydro plants have continuously operated since 1958

Economic engine

We have and continue to be a source of economic development through a variety of low-cost customer supply programs

Preparing for the future

Over 50 years of planned life extension at Robert Moses Niagara Power Plant in a 15-year, \$1.1B modernization and digitalization program



As New York decarbonizes its grid, new attributes of our hydro assets are becoming essential



Clean baseload generation

As New York pursues increasingly aggressive clean energy targets, a stable baseload will become invaluable against the background of higher renewables penetration and the higher fluctuations of power generation that goes along with it.

Long-duration storage

Mid to long-term fluctuations in NYS energy demand, e.g., through variations in weather and climate, need to be addressed by long-duration storage. Our Blenheim-Gilboa pumped storage plant and Lewiston Pump Generating Plant efficiently store energy for retimed usage during peak hours. The simulation of the NYS system predicts that the usage of pumped storage will increase from 5-10 days a year to more than 250 days by 2040.

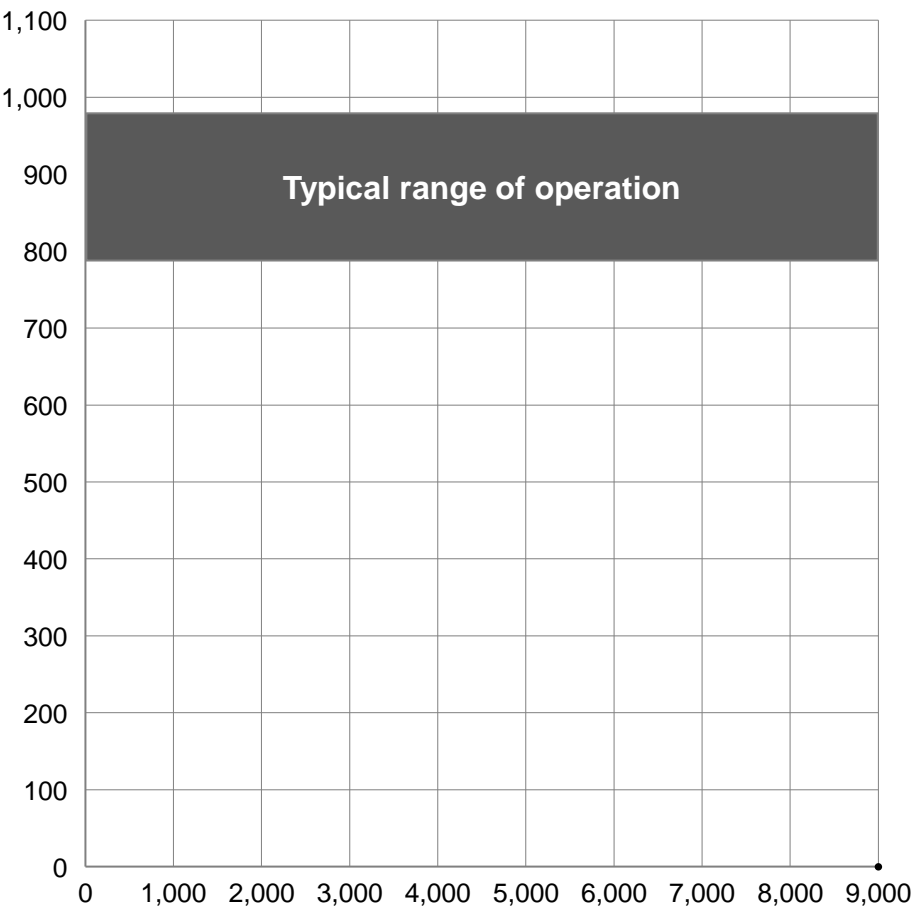
Flexibility benefits and grid stabilization

To address fluctuations in generation within a renewables-dominated power system, our hydro assets have the ability for fast ramp and dispatch. Furthermore, the spinning reserves, black start capabilities, and inertia that hydro provides are essential for counteracting potential instabilities in the power system.

Curtailment concerns imply an increase in O&M and overall system costs to ratepayers

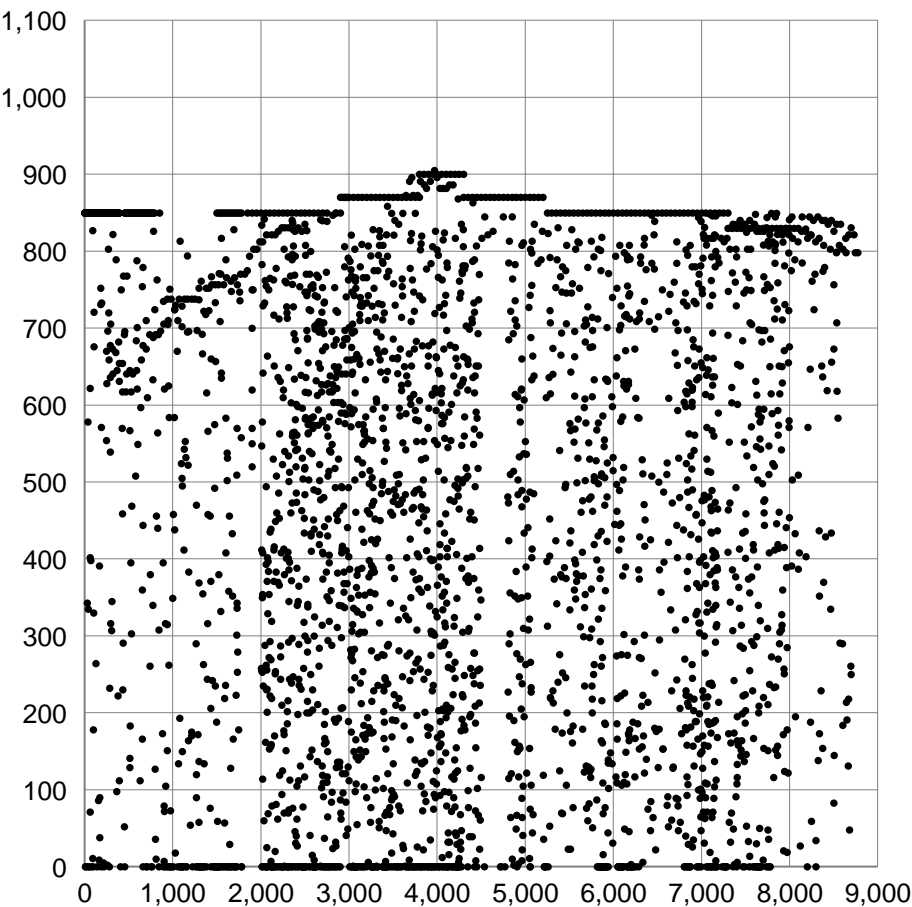
Output in 2019

St. Lawrence 2019 actual hourly output MW



Increased curtailments

St. Lawrence hourly output MW, 2030 scenario



Increased frequency of ramps and operating below the nameplate capability drive higher O&M costs, which may not be adequately compensated under current market rules

Our strategy to preserve and enhance the value of the hydropower assets



Agenda



1. NYPA Background, Vision & Mission



2. Preserve the Value of Hydropower



3. Lead Transmission development



4. Digitization as a foundation

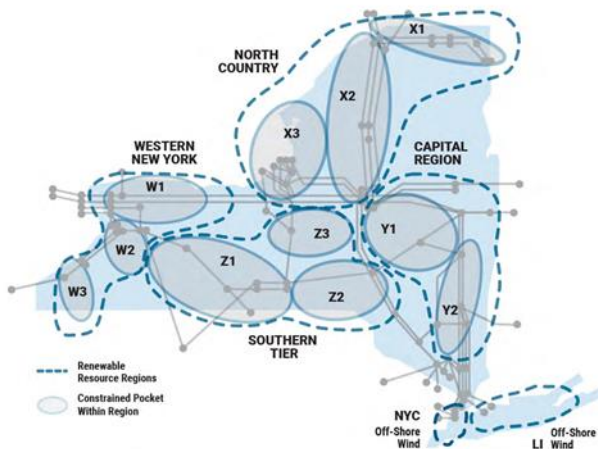


5. ESG as a foundation

The Accelerated Renewable Energy Growth and Community Benefit Act of 2020 will accelerate and shape NYPA's transmission strategy

The Act will help prioritize the **planning, investment and development of a state-of-the-art grid infrastructure**, and aggressively accelerating the ability for **renewable energy power** to be delivered statewide

The renewable power resources will help inform NYPA's transmission strategy and projects



The Act will provide a comprehensive approach to accelerate the investment in and development of a state-of-the-art grid



A Comprehensive study

The Department of Public Service will conduct a **comprehensive study** to identify cost-effective distribution, local and bulk electric system upgrades

B Utility specific guidance

A **distribution and local transmission system capital program will be established** for each utility in need of local upgrades in their service territory

C Investment program

A **bulk transmission investment program will be developed** to support identified projects that leverages NYPA's unique capability to construct new transmission

D Streamlined siting process

A **new streamlined siting process of no more than nine months** will be applied for transmission infrastructure built within existing rights-of-way

Transmission

our 2030 vision



**Be the leading transmission
developer, owner, and operator
for New York State and its
changing needs**

NYPA is integral for the state's transmission priorities, operating 1/3 of its high-voltage transmission network

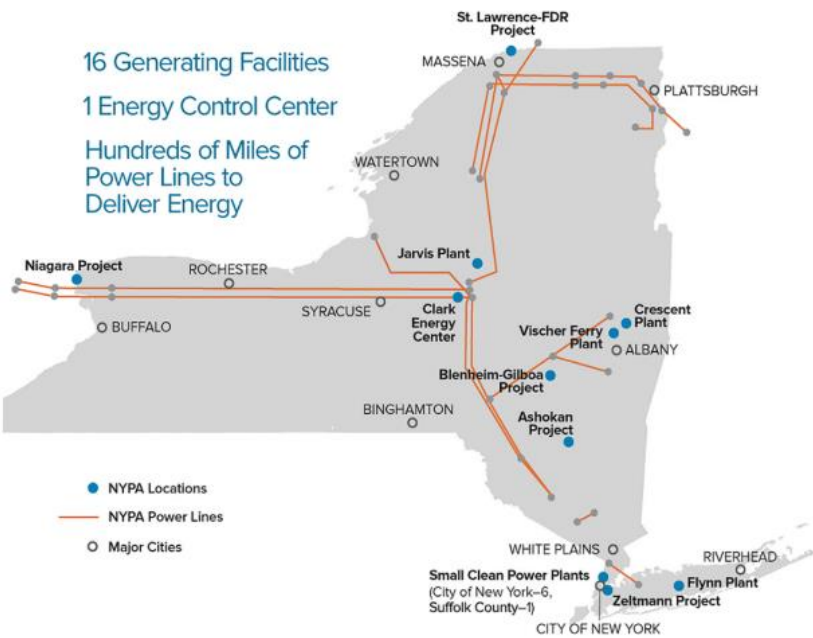
New York State: Transmission Priorities



- 1 Accelerate** construction existing projects
- 2 Prioritize** new transmission projects
- 3 Incentivize** transmission of renewable power into NYC
- 4 Partner** with private sector to expand capabilities



NYPA network: 1,454 circuit-miles of alternating current transmission lines







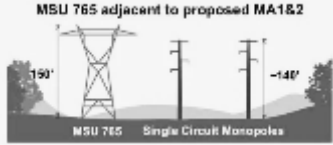
87% 230 kV or 345 kV lines

11% 765 kV lines

7GW Of renewable energy connected via NYPA lines

\$726M Investment to extend and modernize lines (2013-25)

Recent NYPA transmission investments help set the stage for New York State's 2030 goals

| | AC Transmission – Segment A (Public Policy Transmission Project)  | Moses-Adirondack Smart Path Reliability Project  | Northern New York (Priority Transmission Project)  |
|--|---|--|--|
| Goal | Increase UPNY/SENY transfer limit by 350 MW and address system congestion while improving ageing infrastructure | Provide a more robust, resilient and reliable electric system upstate to provide 900MW of renewable energy to 900k homes statewide | Establishes a continuous 345 kV path in Northern NY expanding the deliverability of approximately 1,000 MW of renewable generation and addresses congestion and improves ageing Infrastructure |
| Status / Cost | Start: 2019 → In progress (target 2023) Total cost: \$750 Million NYPA Investment: \$281 Million | Start: 2020 → In progress (target 2023) Total cost: \$484 Million NYPA Investment: \$484 Million | Start: 2020 → In progress (target Q4 2025) Total cost: \$905 Million NYPA Investment: \$498 Million |
| Details  | 86 miles of New double circuit 345 kV Edic to New Scotland Two new 5 miles of 345 kV line segments to Rotterdam Rebuild 6 miles of 345 kV south of Princetown Junction Marcy and Edic terminal upgrades Princetown 345 kV GIS switchyard. | Rebuild NYPA's 86-mile-long Moses-Adirondack transmission line Construct a new 345kV switchyard at the Robert Moses switchyard and the Adirondack substation  | Upgrading segment and stations to 345kV Rebuild National Grid Adirondack-Porter to 345 KV Rebuild NYPA Moses-Willis to 345 kV Rebuild NYPA Willis-Pantode at 230 KV Additional station and ancillary system/network improvements |
| Collaborators | LS Power | N/A | TBD |

Our strategy is to become the leading transmission developer, owner, and operator for New York State and its changing needs



A Invest \$150-200M annually to grow NYPA's transmission asset base 2-3x by 2030



B Focus our transmission portfolio on the right projects balancing system planning, returns, and wider state objectives



C Accelerate New York State's most critical transmission projects in support of the CLCPA goals



D Increase our focus on transmission as a core business within NYPA, with leading capabilities in planning and development, project delivery, and asset management

Agenda



1. NYPA Background, Vision & Mission



2. Preserve the Value of Hydropower



3. Lead Transmission development



4. Digitization as a foundation



5. ESG as a foundation

Digitization

our 2030 vision



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

NYPA 2020 stated ambitions to become the first end-to-end “digital utility”

Aspiration

NYPA will become an end-to-end digital utility leveraging connectivity, big data and analytics to drive actionable business insight that enables us to better serve our customers, employees and other key stakeholders

Accomplishments

Developed 3 Digital Hubs

AGILE, NYEM, iSOC

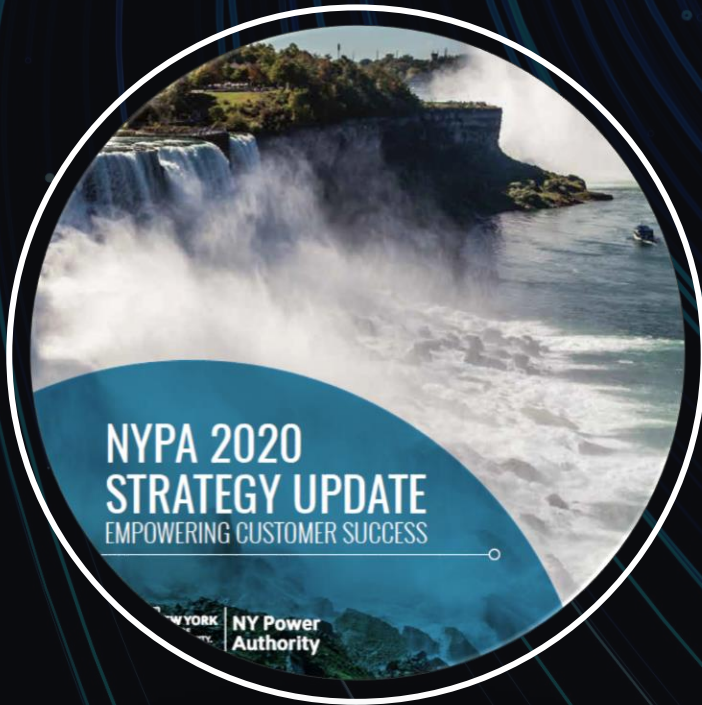
Established Digital Transformation Office

DTO established to drive NYPA's digital transformation, establish strategy and enable execution through partnerships with IT and business units

Drove Digital Project Execution while Strengthening IT Infrastructure & Capabilities

Over 50+ Projects completed or in active delivery

Strategic hires in Cyber Security, Enterprise Architecture, Data Governance & Data Quality, Solutions Architecture



IT Infrastructure and Capabilities Investments



Enterprise Compute & Storage - Digital Enterprise Services

100% conversion of workforce to remote working within 72 hours with minimal disruption in response to the COVID-19 Pandemic

Cyber AI/ ML insider and external threat management - Active Cyber Security
Automated threat hunting through the stitching of hundreds of anomalies observed across multiple-entities into a single threat to simplify and accelerate response time

Data Management & Analytics - Digital Enterprise Services

Established the ability to provision and access well-governed data for business insights, data-driven decision making and day-to-day operations.

Moving to Cloud - Digital Enterprise Services

Increased productivity and efficiency through improved communication, virtual collaboration, seamless data access and integrated information sharing

Digital Worker Program - Digital Plant & Field Worker

The iPhones for All initiative was foundational to advancing our goal of becoming an end-to-end digital utility. Every employee at NYPA and Canals were issued (~1000 iPhones) a business-ready device for communication, collaboration, training, emergency response, scheduling, and more while upholding our highest standards of information protection and cyber-security

Strategic Technology Solutions



Mosaic SuccessFactors - Digital Enterprise Services

Successful implementation of Mosaic SuccessFactors that provides a digital and mobile comprehensive suite of fully integrated applications for Talent and Learning Management that elevates HR business capabilities to the latest standards, best practices and digital delivery

Treasury Management System - Digital Enterprise Services

Modernization and replacement of the existing system and streamlining of processes used to manage NYPA's cash, debt, and investments

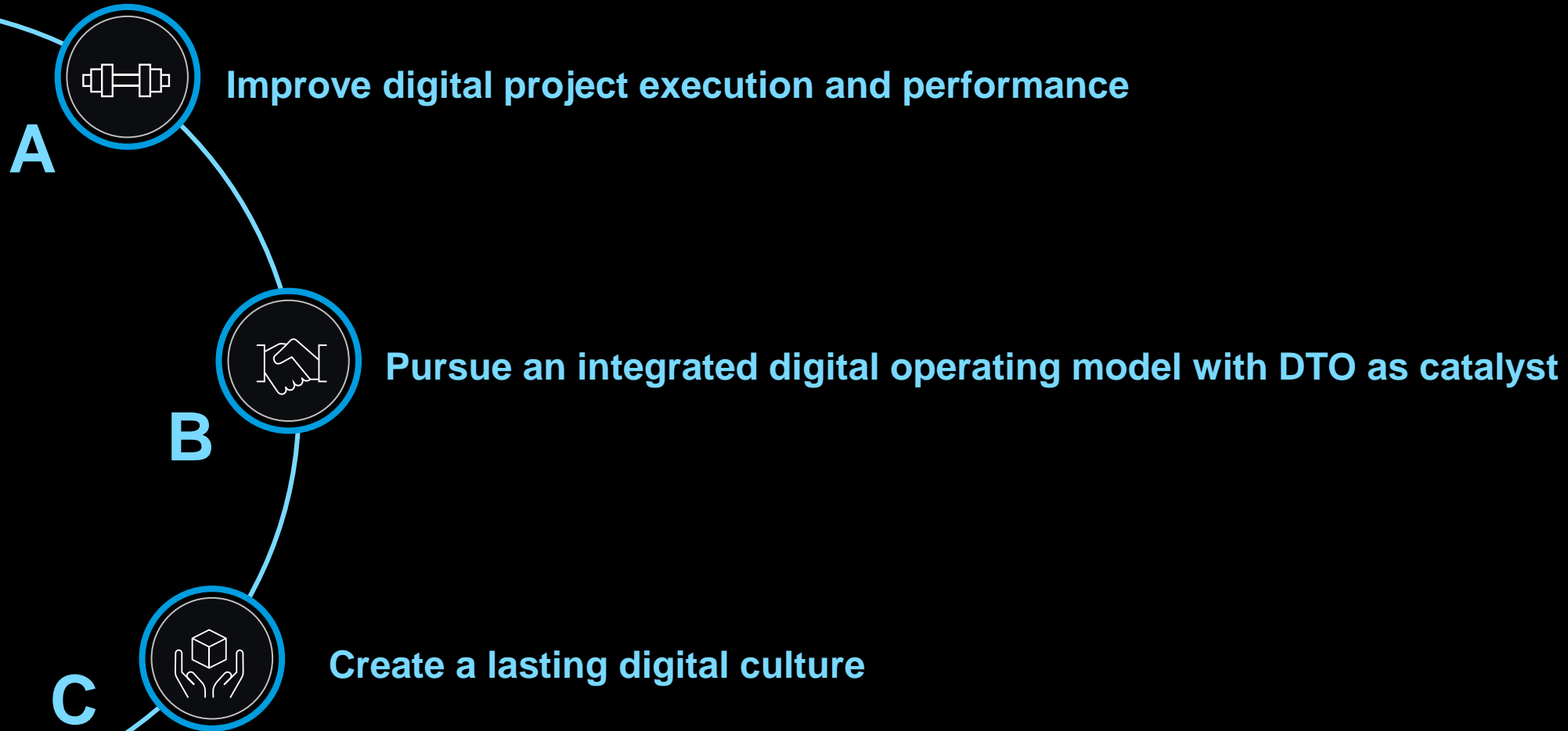
Account Center (CDEx) - Digital Energy Products & Customer Engagement

100% of commercial supply customers have access to the account center, eliminating low-value touchpoints. Enables account and business development representatives to provide other NYPA services that will help reach state GHG reduction goals

Emergency Energy Control Center - Digital Intelligent Grid

Added redundancy with building a state-of-the-art backup to the existing Energy Control Center in the event they become inoperable due to disaster

Our strategy to digitize NYPA and create the first end to end digital utility



North Star Vision to achieve business goals by investing in digital initiatives / products



Data Driven Culture

Discover and leverage meaningful patterns from our multitude of data sources, to accelerate data-driven actions and support smarter decisions using Artificial Intelligence, Machine Learning, Natural Language Processing etc.



Automation & Standardization

Deliver increased automation and digital-enabled standard solutions that augment the workforce and support business processes across the enterprise



Employee Enablement

Enable access to IT infrastructure and services with optimized experiences for each device, anywhere, anytime with seamless integration



Security Excellence

Continue to develop and sustain intelligent operations and security excellence across NYPA by protecting users, applications, assets, data, infrastructure and supply chain from risks associated with digital technology



Innovation

Incubate and drive development and testing of emerging technologies to accelerate growth of enterprise wide digital capabilities

Agenda



1. NYPA Background, Vision & Mission



2. Preserve the Value of Hydropower



3. Lead Transmission development



4. Digitization as a foundation



5. ESG as a foundation

Environmental, Social, & Governance our 2030 vision



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

Defining ESG and Sustainability

“ESG” is the framework used to assess a company’s policies, processes, practices, performance, and its economic impact relating to environmental, social and governance performance

Environmental



The natural environment and ecosystems that affect and are affected by the organization

Social



The people – both internal and external – with whom the organization interacts

Governance

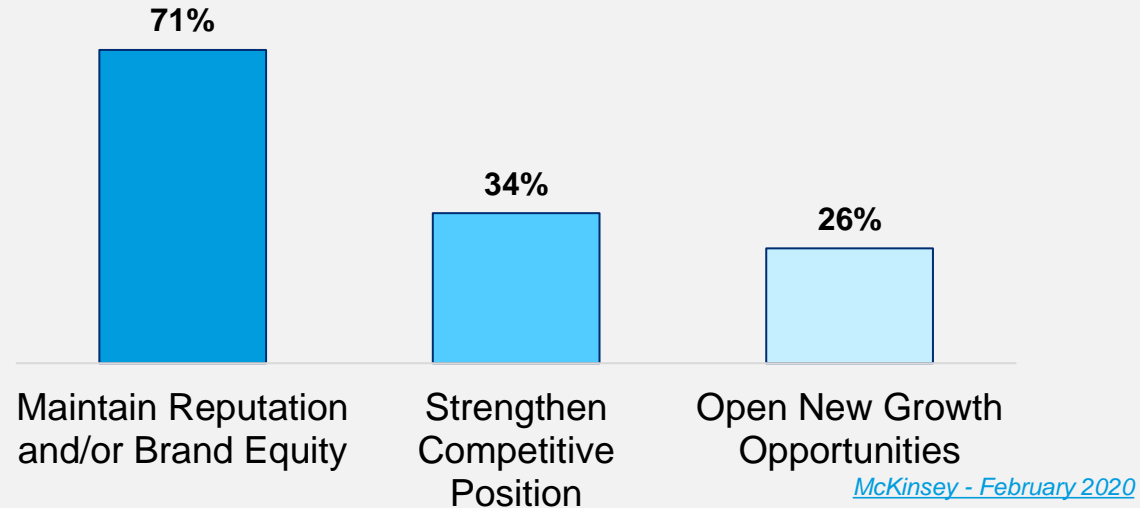


The system of processes, controls, and procedures used to manage risks, make effective decisions, and meet stakeholder needs

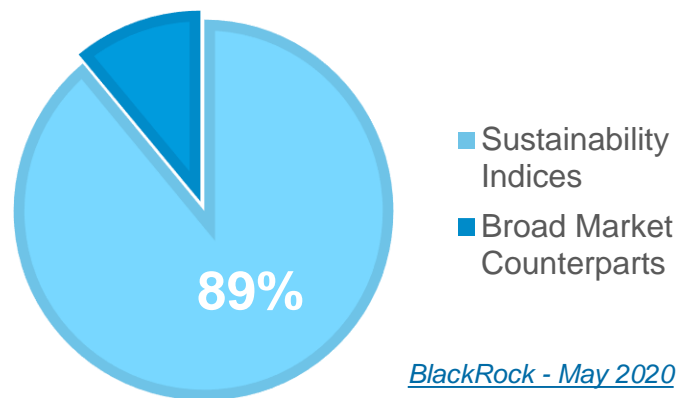
Sustainability encompasses the environmental, social, governance and economic performance of a company that contribute to long-term value creation for the company and its stakeholders

ESG Impact on Long-Term Business Performance

Top Ways That ESG Programs Improve Financial Performance



89% of both Morningstar's and MSCI's Sustainability Indices Outperformed Broad Market Counterparts in Q1 of 2020



“Companies with strong profiles on material sustainability issues have the potential to outperform those with poor profiles. In particular, we believe companies managed with a focus on sustainability should be better positioned versus their less sustainable peers to weather adverse conditions while still benefiting from positive market environments.”

BlackRock - May 2020

NYPA has made significant progress in the Sustainability journey that formally began in 2007

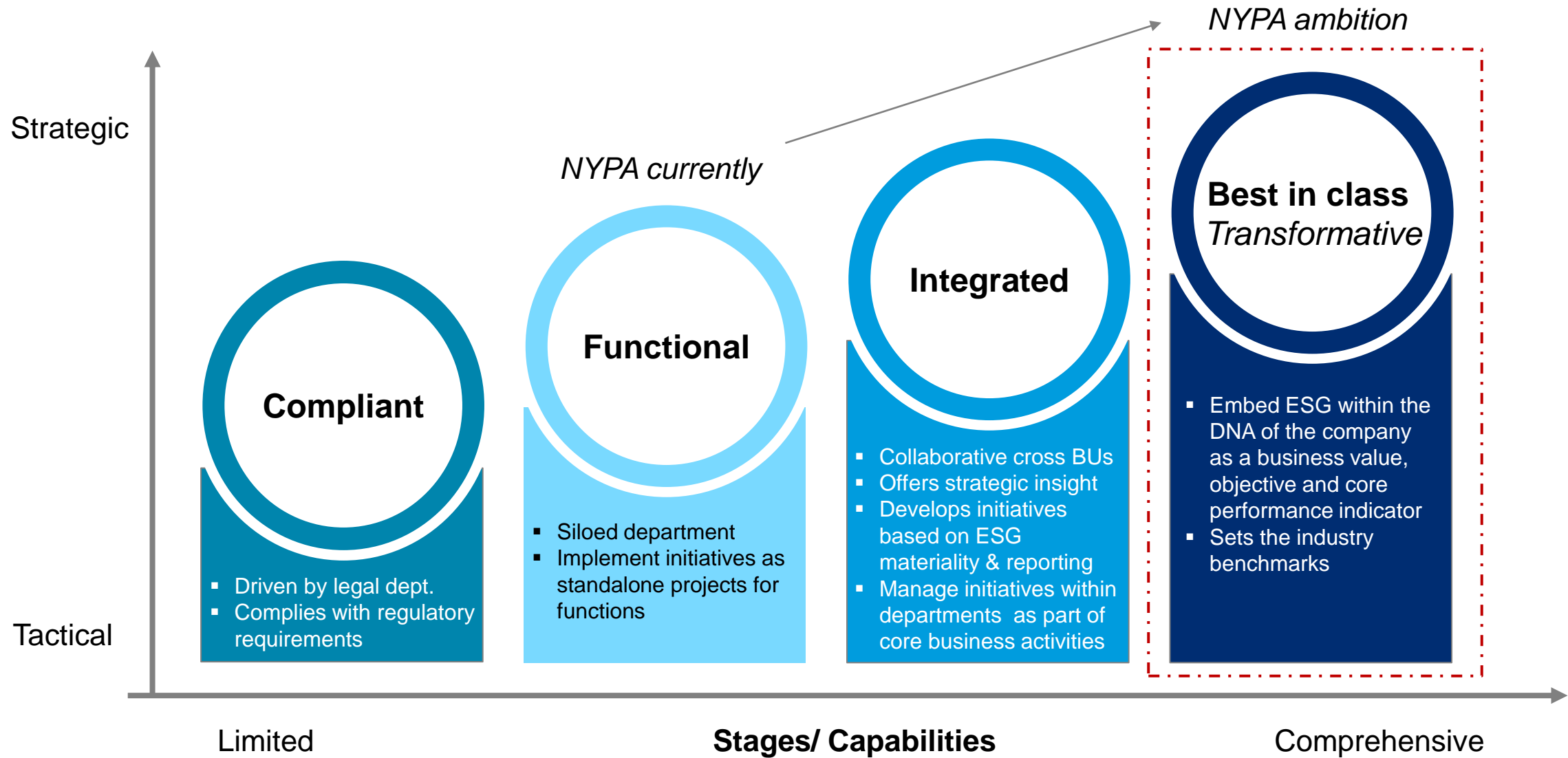
A selection of
NYPA’s key
sustainability
achievements

| | | | | |
|---|---|---|---|---|
| 2007 Sustainability Manager position established | 2016 Sustainability Department and Corporate Sustainability policy established | 2018 Sustainability Advisory Council established – all BUs and 28 departments represented | 2019 2019-2023 Sustainability Plan published – setting enterprise-wide climate and environmental goals | 2020 Sustainability Plan Refresh and ESG Report process begun – broadening scope beyond the environmental and integrating sustainability processes across core functions |
|---|---|---|---|---|

Meeting and exceeding NYS sustainability-related goals (EOs 4, 18, 88, 166)

NYPA leads state agency peers in sustainability management

Embedding a concern for current and future ESG issues in NYPA culture will transform NYPA into a “best-in-class” ESG leader



Our ambition is to become best-in-class for ESG performance and reporting



A Evaluate ESG governance model to bring best-in-class ESG ambitions to life and fully integrate ESG into NYPA's DNA



B Expand the role of Sustainability to encompass strategic guidance, oversight and reporting for material ESG issues – across environmental, social, and governance



C Implement strategies and achieve milestones articulated in refreshed and expanded Sustainability Plan



D Prepare and issue annual Sustainability Reports which reflect prioritized ESG issues

This document consists of 9 pages excluding this cover page and attachments.

MODIFICATION NO. M010
SUPPLEMENTAL AGREEMENT TO
CONTRACT NO. DE-AC02-82CH10132

MODIFICATION NO. M010

CONTRACTOR AND ADDRESS:

New York Power Authority
123 Main Street
White Plains, NY 10601

MODIFICATION FOR:

Extension of ten (10) years.

THIS MODIFICATION No. 010 ("Modification" or "MOD 10"), effective the 1st day of January 2021, by and between the UNITED STATES OF AMERICA, as represented by the UNITED STATES DEPARTMENT OF ENERGY ("DOE") (collectively, "Government" or "Customer"), and the NEW YORK POWER AUTHORITY ("Contractor", or "NYPA", or "The Power Authority of the State of New York," and together with Government, the "Parties"),

WITNESSETH THAT:

WHEREAS, Government and Contractor entered into Contract No. DE-AC02-82CH101032 (also known as "Contract FD-13" and alternatively referred to herein as "the Contract") on the 26th day of October, 1982, for the sale of Direct Firm Power Service for use at the site of Brookhaven National Laboratory ("BNL Site"); and

WHEREAS, the Contract has been modified previously, most recently on January 01, 2011 when the Parties agreed to make effective Modification No. M009 ("MOD 9"), and the Parties desire to modify the Contract further, as hereinafter provided; and

WHEREAS, in MOD 9 the Parties agreed to an extended long-term agreement for the sale of Direct Firm Power Service to succeed MOD 8; and

WHEREAS, the NYPA Board of Trustees has authorized extension of the sale of Direct Firm Power Service by NYPA to Government for ten (10) years; and

WHEREAS, the NYPA Board of Trustees has authorized the sale of 15 megawatts ("MW") of Hydroelectric Power to the Long Island Power Authority ("LIPA") for resale to, and for the exclusive use of Government, which has been memorialized in a contract entered into between NYPA and LIPA dated June 22, 2010 for a ten-year term which may be extended for an additional five years subject to certain conditions (the "Resale Agreement"); and

WHEREAS, the contract between LIPA and DOE for the resale of the 15 MW of Hydroelectric Power from LIPA to DOE was extended in 2018 to have a termination date of February 28, 2025; and

WHEREAS, the DOE has requested NYPA and LIPA to extend the Resale Agreement, which is now set to expire in February 2021, for an additional four (4) years to match the termination date of the contract between LIPA and DOE for the resale of the 15 MW of Hydroelectric Power; and

WHEREAS, NYPA understands that Customer desires the Resale Agreement to be extended for the same term as this Modification, to which NYPA agrees to work in good faith to achieve, provided such use of Hydroelectric Power is consistent with New York State law and deemed permissible by NYPA's Board of Trustees; and

WHEREAS, the Resale Agreement, among other things, authorizes NYPA to partially

assign and transfer to LIPA the rights and obligations associated with NYPA's supply of 15 MW of electricity to Government under the Contract provided LIPA receives full delivery of 15 MW of Hydroelectric Power; and

WHEREAS, LIPA's acceptance of NYPA's partial assignment and transfer, and the resulting sale of 15 MW of Hydroelectric Power to Government by LIPA under the Resale Agreement may result in a reduction in the amount of power and energy sold directly to Government under the Contract from time to time; and

WHEREAS, such reduction in the amount of power and energy sold directly to Government under the Contract described in the preceding whereas clause shall continue for any extended term of the Resale Agreement but not beyond the term of this Modification; and

WHEREAS, the Parties agree that the firm power and energy sold directly under this Modification shall henceforth be known as "Direct Firm Market Power Service" as defined herein; and

WHEREAS, this Modification is authorized by law, including 41 U.S.C. 252(c)(15), P.L. 95-91;

NOW, THEREFORE, in consideration of the mutual covenants herein, NYPA and Government agree that the Contract, as modified previously, is hereby further modified as follows:

1. DEFINITIONS.

- A. **Allocation** means the amount of Direct Firm Market Power Service (in MW) to which the Customer is entitled.
- B. **Ancillary Services** shall have the meaning set forth in the NYISO Tariffs as such definition may be modified from time to time.
- C. **BNL Site** shall have the meaning set forth in the first whereas clause of this Modification.
- D. **Contract** shall have the meaning set forth in the first whereas clause of this Modification.
- E. **Direct Firm Market Power Service** means the power and energy sold by NYPA to Customer under the Contract, as modified by this MOD 10, consistent with the terms of NYPA's Service Tariff No. BNL-1. Direct Firm Market Power Service consists of Firm Market Power and Firm Market Energy as defined in Service Tariff No. BNL-1.
- F. **Hydroelectric Power** means the firm power and firm energy generated from

NYPA's hydroelectric resources sold to LIPA for resale to Customer in accordance with the Resale Agreement.

- G. **Load Serving Entity (or LSE)** shall have the meaning set forth in the NYISO Tariffs as such definition may be modified from time to time.
- H. **Modification (or MOD 10)** shall have the meaning set forth in the preamble to this Modification.
- I. **Monthly Clean Energy Implementation Charge** has the meaning provided in Schedule A of this Modification.
- J. **NYISO** means the New York Independent System Operator, Inc. or any successor organization.
- K. **NYISO Tariffs** means the NYISO's Open Access Transmission Tariff or the NYISO's Market Administration and Control Area Services Tariff, as applicable, as such tariffs are modified from time to time, or any successor to such tariffs.
- L. **NYPA Transmission Adjustment Charge (or NTAC)** has the meaning set forth in the NYISO Tariffs as such definition may be modified from time to time.
- M. **Prudent Utility Practice** means any of the practices, methods, techniques, standards, and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods techniques, standards, or acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with applicable laws and good business practices, reliability, safety and expedition. Prudent Utility Practices are not intended to be limited to only the optimum practice, method or act to the exclusion of all others, but rather are intended to include practices, methods or acts generally accepted, in the region, having due regard for, among other things, contractual obligations, costs, operating rules or procedures of transmission operators, reliability councils or other market conditions.
- N. **Resale Agreement** has the meaning set forth in the fifth whereas clause of this Modification.
- O. **Rules** refers to NYPA's rules and regulations (Chapter X of Title 21 of the Official Compilation of Codes, Rules and Regulations of the State of New York), as may be modified from time to time or as the Authority may later promulgate.
- P. **Service Tariff No. BNL-1 (or ST BNL-1)** is NYPA's service tariff effective

January 2021 billing period governing the sale of Direct Firm Market Power Service to Customer.

Q. **Taxes** means any taxes, assessments or charges mandated by federal, state or local agencies or authorities that are levied on NYPA or that NYPA is required to collect from the Customer associated with Direct Firm Market Power Service hereunder or Hydroelectric Power, if and to the extent such taxes, assessments or charges are not recovered by NYPA pursuant to another provision of this Modification or ST BNL-1, or with respect to Hydroelectric Power, pursuant to the Resale Agreement.

R. **Transmission Congestion Contracts (or TCCs)** shall have the meaning ascribed to Grandfathered Transmission Congestion Contracts as set forth in the NYISO Tariffs as such definition may be modified from time to time.

2. **CONTRACT TERM:** The term of the Contract is extended from January 01, 2021 to December 31, 2030.

3. The Customer's Allocation shall be 77 MW.

4. A. For the period commencing January 1, 2021 and ending December 31, 2030, NYPA will procure all energy on behalf of Customer from the NYISO necessary to meet Customer's needs up to the Allocation after taking due account of the electricity supplied to Customer under the Resale Agreement. NYPA will make Firm Market Energy purchases in the manner set forth in ST BNL-1, as appropriate, to ensure provision of the required amount of energy to the point of interconnection between the BNL Site and LIPA. NYPA agrees to coordinate and consult with Customer quarterly concerning the energy purchases.

B. For the period commencing January 1, 2021 and ending December 31, 2030, NYPA will serve as the LSE for the Customer with the NYISO in order to ensure provision of Direct Firm Market Power Service and Hydroelectric Power to the BNL Site (also referred to as "PTID 211508"). As LSE, NYPA's functions will include:

- i. Scheduling and procurement of all Firm Market Power necessary to meet the electricity requirements for the BNL Site, but not to exceed the Allocation.
- ii. Procurement of all Ancillary Services, marginal losses, NTAC and congestion costs associated with deliveries to the BNL Site.
- iii. Procurement of any other products or services required by the NYISO to provide electricity to the BNL Site.

C. NYPA will use Prudent Utility Practices for all procurements referenced in paragraphs 4.A and 4.B above.

D. Customer agrees to compensate NYPA for all charges for Direct Firm Market Power Service in accordance with ST BNL-1, including the Monthly Clean Energy Implementation Charge (as set forth in Schedule A to this Modification), plus any additional charges incurred by NYPA to effectuate such service through the procurements and LSE functions described in paragraphs 4.A and 4.B above, including all transmission and wheeling charges, and Taxes.

E. For avoidance of doubt, NYPA's role as LSE with respect to sales of Hydroelectric Power from LIPA to Customer under the Resale Agreement obligates Customer to compensate NYPA under this Modification for all NYISO charges NYPA incurs associated with sales and deliveries of Hydroelectric Power to Customer. Such NYISO charges are in addition to NYISO charges associated with Direct Firm Market Power Service. In addition to NYISO charges, the Customer shall compensate NYPA for any Monthly Clean Energy Implementation Charges that may be incurred by NYPA associated with sales made under the Resale Agreement.

F. NYPA commits to credit the Customer with 100% of the credits NYPA receives each month from the TCCs associated with the Customer and Customer agrees to pay NYPA for any net monthly rents owed to the NYISO for the TCCs associated with the Customer. The parties agree to work in good faith to preserve the TCCs for the benefit of Customer, which are recorded as Contract Nos. 76.1, 76.2, 76.3 and 76.4 in Section 18, Attachment L of the NYISO Open Access Transmission Tariff.

5. A. The Parties estimate that the total "all-in" cost to Customer for the term of this Modification shall not exceed \$375.0 million (in nominal dollars) and Customer is not obligated to reimburse NYPA for any costs incurred in excess of such \$375.0 million all-in cost cap. NYPA shall notify Customer in writing when the all-in costs are at \$275.0 million, so that the Customer is duly notified that the all-in cap of \$375.0 million might be reached during the term of the Contract and is provided enough time for Customer to obtain authorization to raise the all-in cap sufficiently to reach the end date of this MOD 10, or determine if it will not obtain authorization to raise the all-in cap. In the absence of such written notice by NYPA and Customer remains unaware that the all-in cap might be exceeded, Customer is not obligated to reimburse NYPA for any costs in excess of such \$375.0 million all-in cost cap. NYPA is not obligated to provide Customer any TCC credits once the \$375.0 million all-in cost cap has been exceeded. Absent authorization provided by Customer consistent with the "Availability of Funds for the Next Fiscal Year" provision provided as item #2 in Modification No. 3, NYPA is not obligated to continue performance under this Modification or otherwise incur costs in excess of such \$375.0 million all-in estimated cost cap. If authorization is provided, the contract obligations will remain in effect. Both parties shall communicate with each other in writing about establishing a revised all-in cap, and work cooperatively to establish written procedures for notification to Customer if the

revised all-in cap is at risk of being exceeded.

B. The Parties specifically acknowledge that (i) absent the authorization from Customer to NYPA to incur costs in excess of the \$375.0 million all-in cost cap described in this paragraph 5; or (ii) any failure by Customer to make payments after it has provided authorization to NYPA to incur costs in excess of \$375.0 million all-in cost cap as described in this paragraph 5, NYPA has the right to cease performance under this Modification with respect to any costs or credits that may be associated with exceeding the \$375.0 million all-in cost cap, including the LSE functions described in paragraphs 4.B and 4.C above, and the Customer will assume full responsibility for all costs associated with those LSE functions formerly performed by NYPA, including any Customer-related NYISO costs (net of any applicable credits) imposed on NYPA (via NYISO re-bills) attributable to service for periods prior to NYPA's cessation as LSE for Customer.

6. **CONTRACT DEMAND CHANGES:** Customer will have the option to set schedules for monthly demand levels ("Contract Demand") twice within a given calendar year. Contract Demand encompasses both Direct Firm Market Power Service (not to exceed the Allocation) and Hydroelectric Power. Setting Contract Demand permits Customer to schedule NYPA deliveries around major programmatic schedules. Customer shall notify NYPA in writing a minimum of 90 days prior to the exercise of a Contract Demand change. In the absence of such notification, Customer's Contract Demand will default to the amount set forth in the Customer's prior submitted schedule for the corresponding months.
7. **WHEELING/TRANSMISSION CHARGES:** The Customer acknowledges that it is also subject to payment to NYPA for the wheeling charges incurred on Customer's behalf that arise from transmission contracts associated with the TCCs described herein.

A. Transmission charges include the following related to NYPA's facilities:

i) Marcy-South Transmission Line. Monthly transmission charges to Customer for use of NYPA's Marcy-South transmission line will be based on Customer's actual peak demand, using an integrated 30 minute average, adjusted for appropriate losses. The monthly charge will be determined by multiplying the Marcy-South wheeling rate in effect for that month by the actual monthly peak integrated 30 minute demand, adjusted for appropriate losses.

ii) Fitzpatrick Facilities Transmission Lines. Monthly transmission charges to Customer for use of NYPA's Fitzpatrick Facilities transmission lines will be based on Customer's actual peak demand, using an integrated 30 minute average, adjusted for appropriate losses. The monthly charge will be determined by multiplying the Fitzpatrick Facilities wheeling rate in effect for that month by the actual monthly peak integrated 30 minute demand,

adjusted for appropriate losses.

iii) Y-49 Transmission Cable. If applicable, monthly transmission charges to Customer for the use of NYPA's Y-49 transmission cable will be based on a 10% share of the Y-49 transmission cable's capacity in MWs, to the maximum of 60 MW on the current 600 MW line's capacity. The monthly charge will be determined by multiplying the Y-49 transmission rate in effect for that month by the calculated 10% share of the Y-49 transmission cable's capacity in MWs. Under this Modification, NYPA has the discretion to set the Y-49 transmission rate using the weighted average cost of capital in accordance with the Federal Energy Regulatory Commission-approved formula rate for NYPA's "backbone" transmission facilities, as adjusted annually, but in any event no lower than any credited amounts to Public Service Electric & Gas Company – Long Island for the Customer's share of the Y-49 transmission cable's costs.

B. Wheeling charges include those related to services provided on the facilities of Consolidated Edison Company of New York, Inc. and LIPA.

8. Customer will provide electric load forecasts by hour to NYPA on a weekly or monthly basis, or less frequently if the Parties mutually agree, but for any new forecast it shall be provided no later than noon two business days prior to the initial target day, for that target date through the balance of the calendar month.
9. BILLING DATA: All billing data as determined by the NYISO for the supply of electricity to Customer shall be included in monthly bills rendered by NYPA to Customer, including the supply of Hydroelectric Power. All such data shall reflect Customer's usage measured at PTID 211508, as determined by the NYISO.
10. The furnishing of Direct Firm Market Power Service is subject in all respects, except as noted by the provisions of Contract No. DE-AC02-82CH10132 as amended by this Modification, to ST BNL-1 and to the Rules.
11. The attached 7-page document, designated as "FAR 52.212-4--Contract Terms and Conditions - Commercial Items (October 2018)," is incorporated into this Modification.
12. The attached 9-page document, designated as "FAR 52.212-5--Contract Terms and Conditions Required to Implement Statutes or Executive Orders--Commercial Items (January 2020)," is incorporated into this Modification.
13. PAYMENT AND INVOICING: The Parties agree that, notwithstanding the fact that this Modification is between Customer and NYPA, payments will be made by the Management and Operating contractor ("M&O") for the BNL Site under its M&O contract. The M&O shall make payments for accepted services performed and/or items delivered as set forth in this Modification. Payments may be made either by

check or electronic funds transfer, at the M&O's option. Payments shall be deemed to have been made as of the date of mailing or the date on which the electronic funds transfer was made.

Until notified by the DOE Contracting Officer, all invoices shall be submitted to the following address for payment:

Brookhaven Science Associates
Brookhaven National Laboratory
Accounts Payable Bldg 400D
PO Box 5000
Upton, NY 11973

14. ORDER OF PRECEDENCE: In the event of any inconsistency between the terms of this Modification and any rate schedule, rider or exhibit incorporated herein by reference or otherwise, or any of the Rules, the terms of this Modification shall control.
15. The provisions of Contract No. DE-AC02-82CH10132 are modified to include ST BNL-1. All other provisions not modified by this Modification remain in full force and effect.

[SIGNATURES FOLLOW ON NEXT PAGE]

IN WITNESS WHEREOF, the Parties have executed this document.

UNITED STATES OF AMERICA
DEPARTMENT OF ENERGY

BY: _____

Katrina B. Porter
Contracting Officer

DATE: _____

NEW YORK POWER AUTHORITY

By: _____

Keith T. Hayes
Senior Vice President,
Clean Energy Solutions

DATE: _____

SCHEDULE A

MONTHLY CLEAN ENERGY IMPLEMENTATION CHARGE:

I. DEFINITIONS

When used with initial capitalization, whether singular or plural, the following terms, as used in this Schedule, shall have the meanings as set forth below. Capitalized terms not defined in this Schedule shall have the meaning ascribed to them elsewhere in the Agreement, in Service Tariff No. BNL-1, or in the Rules.

“Alternative Compliance Payment” means a form of payment of money by an LSE that is authorized by the State in law, regulation, or Regulatory Order as a mechanism for an LSE to satisfy an Annual LSE Obligation.

“Annual LSE Obligation” means the annual obligation of an LSE to supply a defined percentage proportion (or other applicable measure) of its retail load with supply derived from new eligible renewable resources through compliance measures that are authorized in law, regulation, or Regulatory Order for a State Energy Standard. With reference to the Zero Emission Credit Requirement, “Annual LSE Obligation” refers to an obligation of an LSE to purchase a specified number of ZECs representing the LSE’s proportional share of ZECs purchased by NYSERDA based on the load served by the LSE in relation to the total load served by all LSE’s in the New York Control Area.

“CES Order” means the Order issued by the Public Service Commission, entitled “Order Adopting a Clean Energy Standard, issued on August 1, 2016, in Case Nos. 15-E-0302 and 16-E-0270, and includes all subsequent orders amending, clarifying and/or implementing the CES Order or the CES.

“Clean Energy Compliance Measures” is a collective reference to Zero Emission Credit Requirement Compliance Measures, Renewable Energy Standard Compliance Measures, Offshore Wind Energy Standard Compliance Measures, and any other compliance measures that an LSE is authorized by law, regulation or Regulatory Order to undertake in order to meet an Annual LSE Obligation.

“Clean Energy Standard” or “CES” means the Clean Energy Standard adopted by the State, as may be amended from time to time.

“Credit” means a certificate or other claim to the environmental attributes associated with energy produced by or from qualifying resources that typically represents proof that one megawatt-hour (1 MWh, or 1000 kilowatt-hours) of qualifying electricity was generated and delivered to the power grid. A Credit includes but is not limited to a ZEC, REC and OREC.

“Load Serving Entity” has the meaning provided in the CES Order and generally refers a utility or other entity that supplies load (electricity) to a consumer of electricity.

SCHEDULE A

“Monthly Clean Energy Implementation Charge” means the monthly charge to the Customer established in this Schedule A.

“NYSERDA” means the New York State Energy Research and Development Authority.

“Offshore Wind Energy Credit” or “OREC” refers to a qualifying Offshore Wind Energy Credit as authorized by the State in law, regulation, or Regulatory Order.

“Offshore Wind Energy Standard” means the Offshore Wind Energy Standard adopted by the State as may be amended from time to time.

“Offshore Wind Energy Standard Compliance Measures” means the purchase of ORECs from NYSERDA; the Authority’s procurement of ORECs by Self-Supply; and any other compliance measures that an LSE is authorized by law, regulation, or Regulatory Order to undertake for the purpose of satisfying an Annual LSE Obligation for the Offshore Wind Energy Standard.

“Public Service Commission” or “PSC” means the New York State Public Service Commission.

“Regulatory Order” means an order issued by a regulatory agency or authority of the State of New York, and includes orders issued by the PSC. Regulatory Order includes, by way of example only, the CES Order and any other order of the PSC that establishes, supplements, modifies, or clarifies standards, requirements, obligations, or procedures for implementation of the State Energy Plan or a State Energy Standard, including the CES.

“Renewable Energy Credit” or “REC” refers to a qualifying renewable energy credit as authorized by the State in law, regulation, or Regulatory Order.

“Renewable Energy Standard” means the Renewable Energy Standard adopted by the State as may be amended from time to time.

“Renewable Energy Standard Compliance Measures” means the purchase of RECs from NYSERDA; the Authority’s procurement of RECs by Self-Supply; Alternative Compliance Payments to NYSERDA; and any other compliance measures that an LSE is authorized by law, regulation, or Regulatory Order to undertake for the purpose of satisfying an Annual LSE Obligation for the Renewable Energy Standard.

“Self-Supplied Credit Charge” means a supplemental per-Credit charge or adder that the Authority adds to the cost of any Credit that it procures by Self-Supply for the purpose of: (1) enabling the Authority to recover administrative costs that it incurs in connection with the Self-Supply of Credits; and (2) managing risk in the cost of Credits over the term of any contract that serves as a source of Credits for Self-Supply, including

SCHEDULE A

but not limited to mitigating the extent of fluctuations in the cost of Credits that the Authority procures through Self-Supply.

“Self-Supplied Credit Cost” means the annual average per-Credit cost (including any applicable Self-Supplied Credit Charge) that the Authority establishes pursuant to Section II.3.b of this Schedule A for any Credit that it procures by Self-Supply for the purpose of complying with any Annual LSE Obligation applicable to a State Energy Standard.

“Self-Supply” means the Authority’s procurement of Credits from a source other than NYSERDA.

“State” means the State of New York.

“State Energy Plan” means the 2015 New York State Energy Plan as amended from time to time.

“State Energy Standard” refers to any standard or requirement that is adopted by the State in law, regulation, or Regulatory Order for the purpose of implementing State energy and environmental goals or policies, including goals and policies set forth in the State Energy Plan, that applies to the Authority, or with which the Authority determines it will comply in implementing its business and/or power supply programs. For purposes of this Agreement, State Energy Standard includes the Clean Energy Standard, Renewable Energy Standard, Zero Emission Credit Requirement, Offshore Wind Energy Standard, and any other standard or requirement adopted by the State in law, regulation, or Regulatory Order that applies to the Authority, or with which the Authority determines it will comply, in implementing its business and/or power supply programs.

“Total Monthly Firm Market Load” has the meaning provided in Section II.3.c of this Schedule A.

“Total Monthly CE Compliance Costs” has the meaning provided in Section II.3.c of this Schedule A.

“Zero Emission Credit” or “ZEC” refers to a Zero Emission Credit as authorized by the State in law, regulation, or Regulatory Order.

“Zero Emission Credit Requirement Compliance Measures” means the purchase of ZECs from NYSERDA; and any other compliance measures that an LSE is authorized by law, regulation, or Regulatory Order to undertake for the purpose of satisfying an Annual LSE Obligation for the Zero Emission Credit Requirement.

“Zero Emission Credit Requirement” means the Zero Emission Credit Requirement adopted by the State as may be amended from time to time.

II. MONTHLY CLEAN ENERGY IMPLEMENTATION CHARGE

SCHEDULE A

1. Notwithstanding any other provision of the Agreement, or any provision of Service Tariff No. BNL-1 or the Rules, the Customer shall be subject to a Monthly Clean Energy Implementation Charge as provided in this Schedule A. The Monthly Clean Energy Implementation Charge is in addition to all other charges, fees and assessments provided in the Agreement, Service Tariff No. BNL-1 and the Rules. By accepting Electric Service under the Agreement, the Customer agrees to pay the Monthly Clean Energy Implementation Charge.
2. The Monthly Clean Energy Implementation Charge is part of a compliance program ("Compliance Program") that the Authority has adopted for the purpose of administering Direct Firm Market Power Service in a manner that is consistent with the State Energy Plan, the CES, and other applicable State Energy Standards. Pursuant to the Compliance Program, the Authority will support the preservation of at risk nuclear zero emission attributes, and support the development of renewable energy resources to serve its Direct Firm Market Power Service customers, through the implementation of various Clean Energy Compliance Measures that the Authority in its discretion determines are appropriate to enable the Authority to meet Annual LSE Obligations that have been established for each State Energy Standard that applies to the Authority, or with which the Authority determines it will comply in implementing its business and/or power supply programs. The purpose of the Monthly Clean Energy Implementation Charge is to enable the Authority to recover costs and other charges as described herein that the Authority incurs for implementing Clean Energy Compliance Measures.
3. The Monthly Clean Energy Implementation Charge will be determined and assessed as follows:
 - a. The Authority will, each calendar year, implement such Clean Energy Compliance Measures as the Authority determines in its discretion to be appropriate to meet the Annual LSE Obligation established for each State Energy Standard with respect to the load that the Authority serves using Direct Firm Market Power Service, including the Renewable Energy Standard, Zero Emission Credit Requirement and Offshore Wind Energy Standard. The specific Clean Energy Compliance Measures that the Authority determines to use, and the amount or extent of each Clean Energy Compliance Measure taken in any calendar year to meet each Annual LSE Obligation shall be within the Authority's sole discretion.
 - b. The Authority will, for each calendar year, establish a Self-Supplied Credit Cost for any Credits that it procures through Self-Supply that it will use to meet the applicable Annual LSE Obligation for each State Energy Standard for the calendar year. The Authority may, in its discretion, for any quarter in any calendar year, revise any such Self-Supplied Credit Cost established pursuant to this Section II.3.b for the purpose of addressing unanticipated circumstances that impact or that the Authority reasonably believes could impact the

SCHEDULE A

Authority's costs and risk exposure regarding Self-Supply. Any Self-Supplied Credit Cost so revised shall apply prospectively.

- c. The Authority will, for each month of each calendar year in which it incurs costs for Clean Energy Compliance Measures, calculate the total costs that the Authority has incurred or estimates that it will incur for implementing the Clean Energy Compliance Measures ("Total Monthly CE Compliance Costs") for the purpose of meeting each Annual LSE Obligation for the total Firm Market Power kilowatt-hour load for such month ("Total Monthly Firm Market Load"). The Authority may calculate Total Monthly CE Compliance Costs since forecasts of the Total Monthly Firm Market Load that the Authority expects to serve for the month, or on a lagged basis based on the actual Total Monthly Firm Market Load that the Authority served for the month.
 - d. Each month, the Authority will calculate a Monthly Clean Energy Implementation Charge applicable to the Customer. The Monthly Clean Energy Implementation Charge will represent the Customer's share of the Total Monthly CE Compliance Costs assigned to the Total Monthly Firm Market Load assessed as the proportion of the Customer's total kilowatt-hour load served by the Authority for such month to the Total Monthly Firm Market Load served by the Authority for such month.
4. The Authority may, in its discretion, include the Monthly Clean Energy Implementation Charge as part of the monthly bills for Electric Service as provided for in the Agreement, or bill the Customer for the Monthly Clean Energy Implementation Charge pursuant to another Authority-established procedure. In any case, the bill will indicate the amount of the Monthly Clean Energy Implementation Charge that is attributable to compliance with each Annual LSE Obligation.
5. The Authority will, at the conclusion of each calendar year in which it assesses a Monthly Clean Energy Implementation Charge, conduct a reconciliation process based on the actual costs it incurred for Clean Energy Compliance Measures taken (other than Credits procured through Self-Supply), and the actual load served for the year, compared with cost or load estimates or forecasts, if any, that the Authority used to calculate the Monthly Clean Energy Implementation Charge during the year. The Authority will issue a credit, or an adjusted final charge for the year, as appropriate, based on the results of such reconciliation process. Any such final charge shall be payable within the time frame applicable to the Authority's bills for Electric Service under this Agreement or as provided for in any other procedure established by the Authority pursuant to Section II.4 of this Schedule A.
6. Notwithstanding the provisions of Section II.3 of this Schedule A, if Electric Service for the Allocation is commenced after the Authority has implemented Clean Energy Compliance Measures for the year in which such Electric Service for the Customer

SCHEDULE A

is commenced, and as a result the Customer's load cannot be accounted for in such Clean Energy Compliance Measures, the Authority may in its discretion implement one or more separate Clean Energy Compliance Measures with respect to the Customer's load for the calendar year in order to meet the Annual LSE Obligation for Customer's load for the year, and bill the Customer for the costs associated with such separate Clean Energy Compliance Measures.

7. Nothing in this Schedule A shall limit or otherwise affect the Authority's right to charge or collect from the Customer, any rate, charge, fee, assessment, or tax provided for under any other provision of the Agreement, or any provision of Service Tariff No. BNL or the Rules.

III. ALTERNATIVE CES COMPLIANCE PROGRAM

Nothing in this Schedule A shall be construed as preventing the Parties from entering into other agreements for alternative arrangements to enable the Authority to meet any Annual LSE Obligation with respect to the Customer's allocation, including alternative compliance programs and cost allocation mechanisms, which may include Customer self-supply in lieu of the Monthly Clean Energy Implementation Charge established in this Schedule A, provided that such self supply meets the REC definition included herein.

Attachment 11
FEDERAL ACQUISITION REGULATION (FAR) CLAUSE

FAR 52.212-4 Contract Terms and Conditions-Commercial Items (OCT 2018)

(a) *Inspection/Acceptance.* The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. If repair/replacement or reperformance will not correct the defects or is not possible, the Government may seek an equitable price reduction or adequate consideration for acceptance of nonconforming supplies or services. The Government must exercise its post-acceptance rights-

(1) Within a reasonable time after the defect was discovered or should have been discovered;
and

(2) Before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(b) *Assignment.* The Contractor or its assignee may assign its rights to receive payment due as a result of performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency in accordance with the Assignment of Claims Act (31 U.S.C. 3727). However, when a third party makes payment (*e.g.*, use of the Governmentwide commercial purchase card), the Contractor may not assign its rights to receive payment under this contract.

(c) *Changes.* Changes in the terms and conditions of this contract may be made only by written agreement of the parties.

(d) *Disputes.* This contract is subject to 41 U.S.C. chapter 71, Contract Disputes. Failure of the parties to this contract to reach agreement on any request for equitable adjustment, claim, appeal or action arising under or relating to this contract shall be a dispute to be resolved in accordance with the clause at FAR 52.233-1, Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under the contract.

(e) *Definitions.* The clause at FAR 52.202-1, Definitions, is incorporated herein by reference.

(f) *Excusable delays.* The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(g) *Invoice.*

(1) The Contractor shall submit an original invoice and three copies (or electronic invoice, if authorized) to the address designated in the contract to receive invoices. An invoice must include-

**Attachment 11
FEDERAL ACQUISITION REGULATION (FAR) CLAUSE**

- (i) Name and address of the Contractor;
- (ii) Invoice date and number;
- (iii) Contract number, line item number and, if applicable, the order number;
- (iv) Description, quantity, unit of measure, unit price and extended price of the items delivered;
- (v) Shipping number and date of shipment, including the bill of lading number and weight of shipment if shipped on Government bill of lading;
- (vi) Terms of any discount for prompt payment offered;
- (vii) Name and address of official to whom payment is to be sent;
- (viii) Name, title, and phone number of person to notify in event of defective invoice; and
- (ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.
- (x) Electronic funds transfer (EFT) banking information.
 - (A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.
 - (B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision, contract clause (*e.g.*, 52.232-33, Payment by Electronic Funds Transfer-System for Award Management, or 52.232-34, Payment by Electronic Funds Transfer-Other Than System for Award Management), or applicable agency procedures.
 - (C) EFT banking information is not required if the Government waived the requirement to pay by EFT.
- (2) Invoices will be handled in accordance with the Prompt Payment Act (31 U.S.C.3903) and Office of Management and Budget (OMB) prompt payment regulations at 5 CFR Part 1315.
- (h) *Patent indemnity*. The Contractor shall indemnify the Government and its officers, employees and agents against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark or copyright, arising out of the performance of this contract, provided the Contractor is reasonably notified of such claims and proceedings.
- (i) Payment.-

Attachment 11
FEDERAL ACQUISITION REGULATION (FAR) CLAUSE

(1) *Items accepted.* Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract.

(2) *Prompt payment.* The Government will make payment in accordance with the Prompt Payment Act (31 U.S.C.3903) and prompt payment regulations at 5 CFR Part 1315.

(3) *Electronic Funds Transfer (EFT).* If the Government makes payment by EFT, see 52.212-5(b) for the appropriate EFT clause.

(4) *Discount.* In connection with any discount offered for early payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall be considered to have been made on the date which appears on the payment check or the specified payment date if an electronic funds transfer payment is made.

(5) *Overpayments.* If the Contractor becomes aware of a duplicate contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or invoice payment, the Contractor shall-

(i) Remit the overpayment amount to the payment office cited in the contract along with a description of the overpayment including the-

(A) Circumstances of the overpayment (*e.g.*, duplicate payment, erroneous payment, liquidation errors, date(s) of overpayment);

(B) Affected contract number and delivery order number, if applicable;

(C) Affected line item or subline item, if applicable; and

(D) Contractor point of contact.

(ii) Provide a copy of the remittance and supporting documentation to the Contracting Officer.

(6) *Interest.*

(i) All amounts that become payable by the Contractor to the Government under this contract shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in 41 U.S.C. 7109, which is applicable to the period in which the amount becomes due, as provided in (i)(6)(v) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid.

(ii) The Government may issue a demand for payment to the Contractor upon finding a debt is due under the contract.

Attachment 11
FEDERAL ACQUISITION REGULATION (FAR) CLAUSE

(iii) *Final decisions.* The Contracting Officer will issue a final decision as required by 33.211 if—

(A) The Contracting Officer and the Contractor are unable to reach agreement on the existence or amount of a debt within 30 days;

(B) The Contractor fails to liquidate a debt previously demanded by the Contracting Officer within the timeline specified in the demand for payment unless the amounts were not repaid because the Contractor has requested an installment payment agreement; or

(C) The Contractor requests a deferment of collection on a debt previously demanded by the Contracting Officer (see 32.607-2).

(iv) If a demand for payment was previously issued for the debt, the demand for payment included in the final decision shall identify the same due date as the original demand for payment.

(v) Amounts shall be due at the earliest of the following dates:

(A) The date fixed under this contract.

(B) The date of the first written demand for payment, including any demand for payment resulting from a default termination.

(vi) The interest charge shall be computed for the actual number of calendar days involved beginning on the due date and ending on—

(A) The date on which the designated office receives payment from the Contractor;

(B) The date of issuance of a Government check to the Contractor from which an amount otherwise payable has been withheld as a credit against the contract debt; or

(C) The date on which an amount withheld and applied to the contract debt would otherwise have become payable to the Contractor.

(vii) The interest charge made under this clause may be reduced under the procedures prescribed in 32.608-2 of the Federal Acquisition Regulation in effect on the date of this contract.

(j) *Risk of loss.* Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract shall remain with the Contractor until, and shall pass to the Government upon:

(1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or

(2) Delivery of the supplies to the Government at the destination specified in the contract, if transportation is f.o.b. destination.

Attachment 11
FEDERAL ACQUISITION REGULATION (FAR) CLAUSE

(k) *Taxes.* The contract price includes all applicable Federal, State, and local taxes and duties.

(l) *Termination for the Government's convenience.* The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

(m) *Termination for cause.* The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(n) *Title.* Unless specified elsewhere in this contract, title to items furnished under this contract shall pass to the Government upon acceptance, regardless of when or where the Government takes physical possession.

(o) *Warranty.* The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(p) *Limitation of liability.* Except as otherwise provided by an express warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.

(q) *Other compliances.* The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.

(r) *Compliance with laws unique to Government contracts.* The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C. chapter 37, Contract Work Hours and Safety Standards; 41 U.S.C. chapter 87, Kickbacks; 41 U.S.C. 4712 and 10 U.S.C. 2409 relating to whistleblower protections; 49 U.S.C. 40118, Fly American; and 41 U.S.C. chapter 21 relating to procurement integrity.

(s) *Order of precedence.* Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order:

- (1) The schedule of supplies/services.

**Attachment 11
FEDERAL ACQUISITION REGULATION (FAR) CLAUSE**

(2) The Assignments, Disputes, Payments, Invoice, Other Compliances, Compliance with Laws Unique to Government Contracts, and Unauthorized Obligations paragraphs of this clause;

(3) The clause at 52.212-5.

(4) Addenda to this solicitation or contract, including any license agreements for computer software.

(5) Solicitation provisions if this is a solicitation.

(6) Other paragraphs of this clause.

(7) The Standard Form 1449.

(8) Other documents, exhibits, and attachments.

(9) The specification.

(t)[Reserved]

(u) Unauthorized Obligations.

(1) Except as stated in paragraph (u)(2) of this clause, when any supply or service acquired under this contract is subject to any End User License Agreement (EULA), Terms of Service (TOS), or similar legal instrument or agreement, that includes any clause requiring the Government to indemnify the Contractor or any person or entity for damages, costs, fees, or any other loss or liability that would create an Anti-Deficiency Act violation (31 U.S.C. 1341), the following shall govern:

(i) Any such clause is unenforceable against the Government.

(ii) Neither the Government nor any Government authorized end user shall be deemed to have agreed to such clause by virtue of it appearing in the EULA, TOS, or similar legal instrument or agreement. If the EULA, TOS, or similar legal instrument or agreement is invoked through an "I agree" click box or other comparable mechanism (e.g., "click-wrap" or "browse-wrap" agreements), execution does not bind the Government or any Government authorized end user to such clause.

(iii) Any such clause is deemed to be stricken from the EULA, TOS, or similar legal instrument or agreement.

(2) Paragraph (u)(1) of this clause does not apply to indemnification by the Government that is expressly authorized by statute and specifically authorized under applicable agency regulations and procedures.

(v) Incorporation by reference. The Contractor's representations and certifications, including those completed electronically via the System for Award Management (SAM), are incorporated by reference into the contract.

CONTRACT NO. DE-AC-82CH10132 (Contract FD-13)

Modification M010

Attachment 11
FEDERAL ACQUISITION REGULATION (FAR) CLAUSE

(End of clause)

Attachment 12
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CONTRACT NO. DE-AC-82CH10132 (Contract FD-13) Modification M010

FAR 52.212-5 Contract Terms and Conditions Required to Implement Statutes or Executive Orders-Commercial Items (JAN 2020).

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clauses, which are incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

(1) 52.203-19, Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements (Jan 2017) (section 743 of Division E, Title VII, of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235) and its successor provisions in subsequent appropriations acts (and as extended in continuing resolutions)).

(2) 52.204-23, Prohibition on Contracting for Hardware, Software, and Services Developed or Provided by Kaspersky Lab and Other Covered Entities (*Jul* 2018) (Section 1634 of Pub. L. 115-91).

(3) 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment. (*Aug* 2019) (Section 889(a)(1)(A) of Pub. L. 115-232).

(4) 52.209-10, Prohibition on Contracting with Inverted Domestic Corporations (*Nov* 2015).

(5) 52.233-3, Protest After Award (*Aug* 1996) (31 U.S.C. 3553).

(6) 52.233-4, Applicable Law for Breach of Contract Claim (*Oct* 2004) (Public Laws 108-77 and 108-78 (19 U.S.C. 3805 note)).

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

X (1) 52.203-6, Restrictions on Subcontractor Sales to the Government (*Sept* 2006), with Alternate I (*Oct* 1995) (41 U.S.C. 4704 and 10 U.S.C. 2402).

X (2) 52.203-13, Contractor Code of Business Ethics and Conduct (*Oct* 2015) (41 U.S.C. 3509)).

 (3) 52.203-15, Whistleblower Protections under the American Recovery and Reinvestment Act of 2009 (*June* 2010) (Section 1553 of Pub. L. 111-5). (Applies to contracts funded by the American Recovery and Reinvestment Act of 2009.)

 (4) 52.204-10, Reporting Executive Compensation and First-Tier Subcontract Awards (*Oct* 2018) (Pub. L. 109-282) (31 U.S.C. 6101 note).

 (5)[Reserved].

 (6) 52.204-14, Service Contract Reporting Requirements (*Oct* 2016) (Pub. L. 111-117, section 743 of Div. C).

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CONTRACT NO. DE-AC-82CH10132 (Contract FD-13) **Modification M010**

— (7) 52.204-15, Service Contract Reporting Requirements for Indefinite-Delivery Contracts (Oct 2016) (Pub. L. 111-117, section 743 of Div. C).

— (8) 52.209-6, Protecting the Government’s Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment. (*Oct* 2015) (31 U.S.C. 6101 note).

— (9) 52.209-9, Updates of Publicly Available Information Regarding Responsibility Matters (*Oct* 2018) (41 U.S.C. 2313).

___ (10)[Reserved].

— (11) (i) 52.219-3, Notice of HUBZone Set-Aside or Sole-Source Award (*Nov 2011*) (15 U.S.C.657a).

____ (ii) Alternate I (Nov 2011) of 52.219-3.

— (12) (i) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (*Oct 2014*) (if the offeror elects to waive the preference, it shall so indicate in its offer) (15 U.S.C. 657a).

____ (ii) Alternate I (*Jan* 2011) of 52.219-4.

____ (13)[Reserved]

____ (14) (i) 52.219-6, Notice of Total Small Business Set-Aside (*Nov* 2011) (15 U.S.C.644).

____ (ii) Alternate I (*Nov* 2011).

(iii) Alternate II (*Nov* 2011).

____ (15) (i) ~~52.219-7~~, Notice of Partial Small Business Set-Aside (*June* 2003) (15 U.S.C. 644).

(ii) Alternate I (*Oct* 1995) of 52.219-7.

____ (iii) Alternate II (*Mar* 2004) of 52.219-7.

X (16) 52.219-8, Utilization of Small Business Concerns (*Oct* 2018) (15 U.S.C. 637(d)(2) and (3)).

____ (17) (i) 52.219-9, Small Business Subcontracting Plan (*Aug* 2018) (15 U.S.C. 637(d)(4))

____ (ii) Alternate I (*Nov* 2016) of 52.219-9.

____ (iii) Alternate II (*Nov* 2016) of 52.219-9.

____ (iv) Alternate III (*Nov* 2016) of 52.219-9.

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FEDERAL ACQUISITION REGULATION (FAR) CLAUSE
CONTRACT NO. DE-AC-82CH10132 (Contract FD-13) **Modification M010**

- ___ (v) Alternate IV (Aug 2018) of 52.219-9
- ___ (18) 52.219-13, Notice of Set-Aside of Orders (*Nov 2011*) (15 U.S.C. 644(r)).
- ___ (19) 52.219-14, Limitations on Subcontracting (*Jan 2017*) (15 U.S.C.637(a)(14)).
- ___ (20) 52.219-16, Liquidated Damages-Subcontracting Plan (*Jan 1999*) (15 U.S.C. 637(d)(4)(F)(i)).
- ___ (21) 52.219-27, Notice of Service-Disabled Veteran-Owned Small Business Set-Aside (*Oct 2019*) (15 U.S.C. 657f).
- X (22) 52.219-28, Post Award Small Business Program Rerepresentation (*Jul 2013*) (15 U.S.C. 632(a)(2)).
- ___ (23) 52.219-29, Notice of Set-Aside for, or Sole Source Award to, Economically Disadvantaged Women-Owned Small Business Concerns (*Dec 2015*) (15 U.S.C. 637(m)).
- ___ (24) 52.219-30, Notice of Set-Aside for, or Sole Source Award to, Women-Owned Small Business Concerns Eligible Under the Women-Owned Small Business Program (*Dec 2015*) (15 U.S.C. 637(m)).
- X (25) 52.222-3, Convict Labor (*June 2003*) (E.O.11755).
- X (26) 52.222-19, Child Labor-Cooperation with Authorities and Remedies (*Jan 2020*) (E.O.13126).
- X (27) 52.222-21, Prohibition of Segregated Facilities (*Apr 2015*).
- X (28) (i) 52.222-26, Equal Opportunity (*Sept 2016*) (E.O.11246).
- ___ (ii) Alternate I (*Feb 1999*) of 52.222-26.
- X (29) (i) 52.222-35, Equal Opportunity for Veterans (*Oct 2015*) (38 U.S.C. 4212).
- ___ (ii) Alternate I (*July 2014*) of 52.222-35.
- ___ (30) (i) 52.222-36, Equal Opportunity for Workers with Disabilities (*Jul 2014*) (29 U.S.C.793).
- ___ (ii) Alternate I (*July 2014*) of 52.222-36.
- X (31) 52.222-37, Employment Reports on Veterans (*Feb 2016*) (38 U.S.C. 4212).
- ___ (32) 52.222-40, Notification of Employee Rights Under the National Labor Relations Act (*Dec 2010*) (E.O. 13496).

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(33) (i) 52.222-50, Combating Trafficking in Persons (*Jan 2019*) (22 U.S.C. chapter 78 and E.O. 13627).

____ (ii) Alternate I (*Mar* 2015) of 52.222-50 (22 U.S.C. chapter 78 and E.O. 13627).

X (34) 52.222-54, Employment Eligibility Verification (*Oct 2015*). (Executive Order 12989). (Not applicable to the acquisition of commercially available off-the-shelf items or certain other types of commercial items as prescribed in 22.1803.)

— (35) (i) 52.223-9, Estimate of Percentage of Recovered Material Content for EPA–Designated Items (*May 2008*) (42 U.S.C. 6962(c)(3)(A)(ii)). (Not applicable to the acquisition of commercially available off-the-shelf items.)

___ (ii) Alternate I (*May* 2008) of 52.223-9 (42 U.S.C. 6962(i)(2)(C)). (Not applicable to the acquisition of commercially available off-the-shelf items.)

— (36) 52.223-11, Ozone-Depleting Substances and High Global Warming Potential Hydrofluorocarbons (*Jun* 2016) (E.O. 13693).

— (37) 52.223-12, Maintenance, Service, Repair, or Disposal of Refrigeration Equipment and Air Conditioners (*Jun* 2016) (E.O. 13693).

____ (38) (i) 52.223-13, Acquisition of EPEAT®-Registered Imaging Equipment (*Jun 2014*) (E.O.s 13423 and 13514).

____ (ii) Alternate I (*Oct* 2015) of 52.223-13.

____ (39) (i) 52.223-14, Acquisition of EPEAT®-Registered Televisions (*Jun 2014*) (E.O.s 13423 and 13514).

____ (ii) Alternate I (*Jun* 2014) of 52.223-14.

— (40) 52.223-15, Energy Efficiency in Energy-Consuming Products (*Dec 2007*)
(42 U.S.C. 8259b).

____ (41) (i) 52.223-16, Acquisition of EPEAT®-Registered Personal Computer Products (*Oct 2015*) (E.O.s 13423 and 13514).

___ (ii) Alternate I (*Jun* 2014) of 52.223-16.

— (42) 52.223-18, Encouraging Contractor Policies to Ban Text Messaging While Driving (*Aug 2011*) (E.O. 13513).

(43) 52.223-20, Aerosols (*Jun* 2016) (E.O. 13693).

— (44) 52.223-21, Foams (*Jun* 2016) (E.O. 13693).

— (45) (i) 52.224-3 Privacy Training (*Jan 2017*) (5 U.S.C. 552 a).

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- ___ (ii) Alternate I (*Jan 2017*) of 52.224-3.
- ___ (46) 52.225-1, Buy American-Supplies (*May 2014*) (41 U.S.C. chapter 83).
- ___ (47) (i) 52.225-3, Buy American-Free Trade Agreements-Israeli Trade Act (*May 2014*) (41 U.S.C. chapter 83, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note, 19 U.S.C. 3805 note, 19 U.S.C. 4001 note, Pub. L. 103-182, 108-77, 108-78, 108-286, 108-302, 109-53, 109-169, 109-283, 110-138, 112-41, 112-42, and 112-43).
- ___ (ii) Alternate I (*May 2014*) of 52.225-3.
- ___ (iii) Alternate II (*May 2014*) of 52.225-3.
- ___ (iv) Alternate III (*May 2014*) of 52.225-3.
- ___ (48) 52.225-5, Trade Agreements (*Oct 2019*) (19 U.S.C. 2501, *et seq.*, 19 U.S.C. 3301 note).
- ___ (49) 52.225-13, Restrictions on Certain Foreign Purchases (*June 2008*) (E.O.'s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).
- ___ (50) 52.225-26, Contractors Performing Private Security Functions Outside the United States (*Oct 2016*) (Section 862, as amended, of the National Defense Authorization Act for Fiscal Year 2008; 10 U.S.C. 2302 Note).
- ___ (51) 52.226-4, Notice of Disaster or Emergency Area Set-Aside (*Nov 2007*) (42 U.S.C. 5150).
- ___ (52) 52.226-5, Restrictions on Subcontracting Outside Disaster or Emergency Area (*Nov 2007*) (42 U.S.C. 5150).
- ___ (53) 52.232-29, Terms for Financing of Purchases of Commercial Items (*Feb 2002*) (41 U.S.C. 4505, 10 U.S.C. 2307(f)).
- ___ (54) 52.232-30, Installment Payments for Commercial Items (*Jan 2017*) (41 U.S.C. 4505, 10 U.S.C. 2307(f)).
- ___ (55) 52.232-33, Payment by Electronic Funds Transfer-System for Award Management (*Oct 2018*) (31 U.S.C. 3332).
- ___ (56) 52.232-34, Payment by Electronic Funds Transfer-Other than System for Award Management (*Jul 2013*) (31 U.S.C. 3332).
- ___ (57) 52.232-36, Payment by Third Party (*May 2014*) (31 U.S.C. 3332).
- ___ (58) 52.239-1, Privacy or Security Safeguards (*Aug 1996*) (5 U.S.C. 552a).

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___ (59) 52.242-5, Payments to Small Business Subcontractors
(*Jan 2017*) (15 U.S.C. 637(d)(13)).

___ (60) (i) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels
(*Feb 2006*) (46 U.S.C. Appx. 1241(b) and 10 U.S.C. 2631).

___ (ii) Alternate I (*Apr 2003*) of 52.247-64.

___ (iii) Alternate II (*Feb 2006*) of 52.247-64.

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

___ (1) 52.222-17, Nondisplacement of Qualified Workers (*May 2014*)(E.O. 13495).

___ (2) 52.222-41, Service Contract Labor Standards (*Aug 2018*) (41 U.S.C. chapter 67).

___ (3) 52.222-42, Statement of Equivalent Rates for Federal Hires (*May 2014*)
(29 U.S.C. 206 and 41 U.S.C. chapter 67).

___ (4) 52.222-43, Fair Labor Standards Act and Service Contract Labor Standards-Price
Adjustment (Multiple Year and Option Contracts) (*Aug 2018*)
(29 U.S.C. 206 and 41 U.S.C. chapter 67).

___ (5) 52.222-44, Fair Labor Standards Act and Service Contract Labor Standards-Price
Adjustment (*May 2014*) (29 U.S.C. 206 and 41 U.S.C. chapter 67).

___ (6) 52.222-51, Exemption from Application of the Service Contract Labor Standards to
Contracts for Maintenance, Calibration, or Repair of Certain Equipment-Requirements
(*May 2014*) (41 U.S.C. chapter 67).

___ (7) 52.222-53, Exemption from Application of the Service Contract Labor Standards to
Contracts for Certain Services-Requirements (*May 2014*) (41 U.S.C. chapter 67).

___ (8) 52.222-55, Minimum Wages Under Executive Order 13658 (*Dec 2015*).

___ (9) 52.222-62, Paid Sick Leave Under Executive Order 13706 (*Jan 2017*) (E.O. 13706).

___ (10) 52.226-6, Promoting Excess Food Donation to Nonprofit Organizations (*May 2014*)
(42 U.S.C. 1792).

(d) *Comptroller General Examination of Record*. The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records-Negotiation.

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- (1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.
- (2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.
- (3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.
- (e) (1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c), and (d) of this clause, the Contractor is not required to flow down any FAR clause, other than those in this paragraph (e)(1) in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause-
- (i) 52.203-13, Contractor Code of Business Ethics and Conduct (*Oct 2015*) (41 U.S.C. 3509).
 - (ii) 52.203-19, Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements (*Jan 2017*) (section 743 of Division E, Title VII, of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235) and its successor provisions in subsequent appropriations acts (and as extended in continuing resolutions)).
 - (iii) 52.204-23, Prohibition on Contracting for Hardware, Software, and Services Developed or Provided by Kaspersky Lab and Other Covered Entities (*Jul 2018*) (Section 1634 of Pub. L. 115-91).
 - (iv) 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment. (*Aug 2019*) (Section 889(a)(1)(A) of Pub. L. 115-232).
 - (v) 52.219-8, Utilization of Small Business Concerns (*Oct 2018*) (15 U.S.C.637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$700,000 (\$1.5 million for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.
 - (vi) 52.222-17, Nondisplacement of Qualified Workers (*May 2014*) (E.O. 13495). Flow down required in accordance with paragraph (l) of FAR clause 52.222-17.
 - (vii) 52.222-21, Prohibition of Segregated Facilities (*Apr 2015*).

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- (viii) 52.222-26, Equal Opportunity (*Sept* 2015) (E.O.11246).
- (ix) 52.222-35, Equal Opportunity for Veterans (*Oct* 2015) (38 U.S.C.4212).
- (x) 52.222-36, Equal Opportunity for Workers with Disabilities (*Jul* 2014) (29 U.S.C.793).
- (xi) 52.222-37, Employment Reports on Veterans (*Feb* 2016) (38 U.S.C.4212)
- (xii) 52.222-40, Notification of Employee Rights Under the National Labor Relations Act (*Dec* 2010) (E.O. 13496). Flow down required in accordance with paragraph (f) of FAR clause 52.222-40.
- (xiii) 52.222-41, Service Contract Labor Standards (*Aug* 2018) (41 U.S.C. chapter 67).
- (xiv) (A) 52.222-50, Combating Trafficking in Persons (*Jan* 2019) (22 U.S.C. chapter 78 and E.O 13627).
- (B) Alternate I (*Mar* 2015) of 52.222-50(22 U.S.C. chapter 78 and E.O 13627).
- (xv) 52.222-51, Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment-Requirements (*May* 2014) (41 U.S.C. chapter 67).
- (xvi) 52.222-53, Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services-Requirements (*May* 2014) (41 U.S.C. chapter 67).
- (xvii) 52.222-54, Employment Eligibility Verification (*Oct 2015*) (E.O. 12989).
- (xviii) 52.222-55, Minimum Wages Under Executive Order 13658 (*Dec* 2015).
- (xix) 52.222-62, Paid Sick Leave Under Executive Order 13706 (*Jan* 2017) (E.O. 13706).
- (xx) (A) 52.224-3, Privacy Training (*Jan* 2017) (5 U.S.C. 552a).
- (B) Alternate I (*Jan* 2017) of 52.224-3.
- (xxi) 52.225-26, Contractors Performing Private Security Functions Outside the United States (*Oct* 2016) (Section 862, as amended, of the National Defense Authorization Act for Fiscal Year 2008; 10 U.S.C. 2302 Note).
- (xxii) 52.226-6, Promoting Excess Food Donation to Nonprofit Organizations (*May* 2014) (42 U.S.C. 1792). Flow down required in accordance with paragraph (e) of FAR clause 52.226-6.
- (xxiii) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (*Feb* 2006) (46 U.S.C. Appx.1241(b) and 10 U.S.C.2631). Flow down required in accordance with paragraph (d) of FAR clause 52.247-64.

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(2) While not required, the Contractor may include in its subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(End of clause)



POWER AUTHORITY OF THE STATE OF NEW YORK
30 SOUTH PEARL STREET
ALBANY, NY 12207

Schedule of Rates for the Sale of Direct Firm Market Power
Service to U.S. Department of Energy For Use at Brookhaven
National Laboratory

Service Tariff No. BNL-1

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Schedule of Rates for Sale of Direct Firm Market Power Service

I. Applicability

To direct sales of Electric Service consisting of Firm Market Power and Firm Market Energy to U.S. Department of Energy for use at Brookhaven National Laboratory.

II. Frequently Used Abbreviations and Terms

- kW kilowatt(s)
- kWh kilowatt-hour(s)
- NYISO New York Independent System Operator, Inc. or any successor organization
- OATT Open Access Transmission Tariff
- PAL New York Public Authorities Law
- UCAP Unforced Capacity

Agreement: The contract between the Customer and the Authority setting forth the terms and conditions relating to the sale of Firm Market Power to the Customer to which this Service Tariff relates.

Allocation: The amount of Firm Market Power allocated to the Customer by the Authority.

Authority or **NYPA:** The Power Authority of the State of New York, also known as the “New York Power Authority.”

Billing Period: Any period of approximately thirty (30) days, generally ending with the last day of each calendar month, but subject to the billing cycle requirements of the Local Electric Utility in whose service territory the Customer’s Facility is located.

Contract Demand: The amount of Firm Market Power (not to exceed the Allocation) plus NYPA hydroelectric power to which Customer is entitled under a separate agreement, which the Customer requests in writing to NYPA as a monthly demand level, or, in the absence of such request, the Customer’s monthly demand level will default to the amount set forth in the Customer’s prior submitted schedule to NYPA for the corresponding months.

Customer: The Authority’s co-party to the Agreement.

Electric Service: Firm Market Power and Firm Market Energy associated with the Allocation and sold to the Customer in accordance with the Agreement, this Service Tariff and the Rules.

Facility: The Customer’s place of business specified in the Agreement that will receive or is receiving the Allocation.

Firm Market Energy: Firm energy (kWh) associated with Firm Market Power that is sourced from the NYISO Day-Ahead Market, the NYISO Real-Time Market, and/or any other third-party source

the Authority in its sole discretion deems appropriate that is supplied by the Authority to the Customer.

Firm Market Power: Firm capacity (kW) that is sourced from the NYISO and/or any other source the Authority in its sole discretion deems appropriate that is supplied by the Authority to the Customer.

Load Serving Entity: This term has the meaning provided in the Agreement.

Local Electric Utility: This term has the meaning provided in the Agreement.

Locational Based Marginal Price: This term has the meaning provided in the NYISO Tariffs.

Market Capacity Charge: This term has the meaning provided in Section III.A.1 of this Service Tariff.

Market Energy Charge: This term has the meaning provided in Section III.A.2 of this Service Tariff.

New Charges: This term has the meaning provided in Section III.B.6 of this Service Tariff.

NYISO: The New York Independent System Operator, Inc. or any successor entity.

NYISO Charges: This term has the meaning provided in Section III.B.1 of this Service Tariff.

NYISO Day-Ahead Market: This term has the meaning provided in the NYISO Tariffs.

NYISO Real-Time Market: This term has the meaning provided in the NYISO Tariffs.

NYISO Tariffs: The tariffs of the NYISO, including the NYISO OATT, as such tariffs are amended and in effect from time to time.

NYPA Administrative Charge: This term has the meaning provided in Section III.A.3 of this Service Tariff.

Rules: This term has the meaning provided in the Agreement.

Service Tariff: This service tariff, denominated as “Schedule of Rates for Sale of Firm Market Service to U.S. Department of Energy for Use at Brookhaven National Laboratory, Service Tariff No. BNL-1, as amended from time to time by the Authority.

Takedown: The portion of the Allocation the Customer requests to be scheduled for a specific period as provided in the Agreement.

Taxes: This term has the meaning provided in Section III.B.2 of this Service Tariff.

Zone: Geographical regions within New York State (sometimes referred to as “load zones” or “energy regions”) designated by the NYISO and identified by letter (A-K) that are used to facilitate energy transactions and administration of the State’s power grid.

Additional terms are defined in the text of this Service Tariff.

Unless otherwise indicated, all other capitalized terms and abbreviations used but not defined in this Service Tariff shall have the meaning as set forth in the Agreement. If not defined herein or in the Agreement, any such capitalized terms and abbreviations shall have the meaning ascribed to them in the NYISO Tariffs, if any, unless the context requires otherwise.

III. Monthly Rates and Related Charges

A. Monthly Rates and Charges

Subject to the other provisions of this Service Tariff and the Agreement, the monthly rates and charges to be charged to the Customer by the Authority will be set as follows:

1. Market Capacity Charge

Monthly rates to be charged to the Customer for Firm Market Power ("Market Capacity Charge") will be based on the following:

- a. The amount of capacity (kW) the Authority needs to secure on the Customer's behalf as required by the NYISO's rules. This is currently expressed by the NYISO as the Unforced Capacity or UCAP obligation. The UCAP obligation is inclusive of any locational requirements and adjustments for reserves needed to meet the installed reserve margin, not to exceed the Contract Demand.
- b. The market capacity rate based on the actual monthly capacity price paid by the Authority in securing the NYISO UCAP obligation for the capacity (kW) or any other market capacity rate determined to be the most applicable by the Authority in its sole discretion.
- c. The market capacity rate multiplied by the monthly capacity (kW) quantity will yield the applicable Market Capacity Charge.

2. Market Energy Charge

Monthly rates to be charged to the Customer for Firm Market Energy ("Monthly Energy Charge") will be based on the actual costs incurred by the Authority in each Billing Period, as described below:

- a. The Customer shall be responsible for payment of any and all market energy charges incurred by the Authority for procuring Firm Market Energy on the Customer's behalf ("Market Energy Charge"). Such Market Energy Charge may include, but are not limited to, forward energy purchases (i.e. NYISO Day-Ahead Market purchases), balancing energy transactions (i.e. NYISO Real-Time Market transactions), and any third-party costs.

- b. The total number of kilowatt-hours recorded on the Customer's meter for the Billing Period allocated by the Customer's Local Electric Utility for delivery of Firm Market Power and reported to the Authority will be used to pro-rate or determine each Customer's portion of the monthly Market Energy Charges. The Authority will report these kilowatt-hours on the Customer's bill.
- c. If there is firm energy other than Firm Market Energy being billed to the Customer, the Authority will determine the apportionment of the kilowatt-hours on a case by case basis. Generally, the total number of kilowatt-hours recorded on the meter shall be multiplied by a percentage based on (i) the methodology provided for in any agreement between the Authority and the Customer's Local Electric Utility for delivery of Firm Market Energy and/or (ii) the methodology provided for in Section III.C of this Service Tariff.
- d. Financial hedging instruments may be used for the purposes of mitigating the risk in energy price movements. The Authority will pass-through to the Customer the costs of any financial products used to hedge energy purchases.

3. NYPA Administrative Charge

- a. The Customer shall be responsible for payment of a "NYPA Administrative Charge." Subject to Section III.3.b, the NYPA Administrative Charge will be based on the following:
 - i. The amount of the highest interval integrated demand (kW) during each Billing Period recorded on the Customer's meter multiplied by a percentage based on the value reported to the Authority by the Customer's Local Electric Utility for delivery of Firm Market Power. Demand (kW) may not exceed the amount of the Contract Demand.
 - ii. Monthly NYPA Administrative rate set by the Authority each Rate Year based on any associated overhead and other assigned costs as determined appropriate by the Authority.
 - iii. The NYPA Administrative rate multiplied by the demand (kW) allocated to the Customer will yield the applicable NYPA Administrative Charge.
- b. If in any given month Customer's highest interval integrated demand (kW) is less than 75 percent of its Contract Demand (kW) reduced by 15,000 kW of NYPA hydroelectric power received under a separate agreement, the NYPA Administrative Charge shall be calculated as follows:
$$0.75 * (\text{Contract Demand} - 15,000 \text{ kW}) * \text{NYPA Administrative Rate}$$

B. Other Charges

The Customer shall be responsible for payment of such other charges (collectively, "Other Charges") as a separate charge from the Monthly Rates and Related Charges provided in Section III.A to the extent such Other Charges apply to such Customer.

1. NYISO Transmission Related Charges ("NYISO Charges")

NYISO Charges for services associated with the Authority's responsibilities as Load Serving Entity for the Customer, as provided by the NYISO in NYISO Tariffs, NYISO-related agreements and NYISO procedures associated with the Authority's provision of Electric Service to the Customer. NYISO Charges to be charged to the Customer by the Authority include, by way of example:

- a. Charges for all Ancillary Services, Schedules 1 through 6 and any new ancillary services as provided in accordance with NYISO Tariffs;
- b. Transmission Usage Charges or "TUC" which are Marginal Losses and Congestion costs, to the extent applicable;
- c. The New York Power Authority "Transmission Adjustment Charge" or "NTAC";
- d. Congestion costs, less any associated grandfathered Transmission Congestion Contracts ("TCCs") as provided in Attachment K of the OATT;
- e. NYISO wide uplift as provided for in the NYISO Tariffs;
- f. Any and all other charges, assessments, or other amounts associated with delivery of Firm Market Power and Firm Market Energy sold to the Customer by the Authority, or otherwise associated with the Authority's responsibilities as a Load Serving Entity for the Customer, that the NYISO assesses on the Authority under the provisions of the OATT or under other applicable NYISO Tariffs; and
- g. Any charges assessed on the Authority with respect to the provision of Electric Service to the Customer for facilities needed to maintain reliability and incurred in connection with the NYISO's Comprehensive System Planning Process (or similar reliability-related obligations incurred by the Authority with respect to Electric Service to the Customer), applicable tariffs, or required to be paid by the Authority in accordance with law, regardless of whether such charges are assessed by the NYISO or another third party.

For avoidance of doubt, if any NYISO Charges described above are incurred by the Authority for any reason with respect to Electric Service to the Customer when the Authority is not serving as the Load Serving Entity for any of the power or energy that is sold to the Customer under this Service Tariff and the Agreement, the Customer shall reimburse the Authority for all such NYISO Charges.

2. Taxes

The Authority will charge and collect from the Customer all local, state and federal taxes, assessments or other charges mandated by local, state or federal agencies or authorities that are levied on the Authority or that the Authority is required to collect from the Customer, including any applicable "in lieu of" payments (collectively, "Taxes") if and to the extent such Taxes are not recovered by the Authority pursuant to another provision of this Service Tariff.

3. Market Transaction Charges

The Authority will pass through to the Customer any costs incurred from procuring any capacity and energy described in Sections III.A.1 and III.A.2 of this Service Tariff.

4. Transmission, Wheeling and Delivery Charges

Generally, transmission, wheeling and delivery charges are billed directly to the Customer by the Local Electric Utility. If the Authority incurs any charges for transmission, wheeling and delivery, as is currently the case, the Customer shall reimburse the Authority for all such charges. In addition, if there are any charges for transmission, wheeling and delivery, charges are made applicable to the Customer under other Authority's tariffs and contracts, they will be charged to the Customer by the Authority as provided for in such tariffs and contracts.

5. Local Electric Utility Charges

The Customer shall reimburse the Authority for all charges, assessments, fees and other amounts, if any, the Local Electric Utility imposes on the Authority in any way related to the provision of data and other information the Authority requires from the Local Electric Utility in connection with providing Electric Service to the Customer. NYPA will endeavor to provide a minimum of 60 days advanced notice for such amounts due.

6. New Charges

The Customer shall be responsible for payment of any and all new costs or charges incurred by the Authority in connection with its provision of Electric Service to the Customer, including but not limited to, charges and costs incurred for supplying Firm Market Power or Firm Market Energy, and any new NYISO Charges as may be defined and applied in any NYISO Tariffs, NYISO-related agreements and NYISO procedures from time to time (collectively, "New Charges"). The Authority, in its sole discretion, may include any such New Charges in the monthly rates or the NYPA Administrative rate, or bill the Customer separately for such New Charges.

7. Monthly Clean Energy Implementation Charge

The Customer shall be subject to the Monthly Clean Energy Implementation Charge provided in the Agreement.

8. Maintenance and Related Costs

Unless the Authority and the Customer agree otherwise in writing, the Authority shall have the right to charge and collect from the Customer all expenses the Authority incurs for the installation, repair, maintenance, calibration and replacement of Authority owned or managed infrastructure (e.g., meters, instruments, transformers, communication-related apparatus, wires, hardware) which the Authority determines in its sole discretion is necessary to provide safe and reliable Electric Service to the Facility.

C. Estimated Billing

If the Authority, in its sole discretion, determines that it lacks reliable data on the Customer's actual demand/UCAP requirements and/or energy usage for a Billing Period during which the Customer receives Electric Service from the Authority, the Authority shall have the right to render a bill to the Customer for such Billing Period based on an estimate by the Authority of the Customer's demand and energy usage ("Estimated Bill").

For the purpose of calculating demand (kW), where applicable, for an Estimated Bill, the demand (kW) will be calculated based on an average of the Customer's used and reported demand (kW) values for the previous three (3) consecutive Billing Periods. If such historical data is not available, then the estimated demand (kW) value for the Estimated Bill will equal the Customer's Contract Demand (kW) amount reduced by 15,000 kW of NYPA hydroelectric power received under a separate agreement.

For the purpose of calculating energy (kWh), where applicable, for an Estimated Bill, the energy (kWh) will be calculated based on an average of the Customer's used and reported energy (kWh) values for the previous three (3) consecutive Billing Periods. If such historical data is not available, then the estimated energy value (kWh) will be equal to the Contract Demand (kW) amount (reduced by 15,000 kW of NYPA hydroelectric power received under a separate agreement) at 74 percent load factor multiplied by the number of hours in the Billing Period.

For the purpose of calculating UCAP (kW), where applicable, for an Estimated Bill, the UCAP (kW) will be calculated based on an average of the Customer's UCAP (kW) requirement values for the previous three (3) consecutive Billing Periods. If such historical data is not available, then the estimated UCAP (kW) value for the Estimated Bill will equal the Customer's Contract Demand (kW) amount reduced by 15,000 kW of NYPA hydroelectric power received under a separate agreement.

If data indicating the Customer's actual demand and usage for any Billing Period in which an Estimated Bill was rendered is subsequently provided to the Authority, the Authority will make necessary adjustments to the corresponding Estimated Bill in accordance with Section III.D of this Service Tariff and, as appropriate, render a revised bill (or provide a credit) to the Customer.

The provisions of Section IV.E of this Service Tariff shall also apply to Estimated Bills. The Authority's discretion to render Estimated Bills is not intended to limit the Authority's rights under the Agreement, this Service Tariff or the Rules.

D. Adjustments to Charges

In addition to any other adjustments provided for in this Service Tariff, in any Billing Period, the Authority may make appropriate adjustments to billings and charges to address such matters as billing and payment errors, the receipt of actual, additional, or corrected data concerning Customer meter data and NYISO rebills, including adjustments to the Market Capacity Charge and the Market Energy Charge in accordance with NYISO policies.

IV. General Provisions

A. Scheduling of Firm Market Energy and Firm Market Power

In each Billing Period the Authority shall, in accordance with the NYISO Tariffs, NYISO manuals and NYISO procedures, schedule and provide to the Customer Firm Market Energy associated with Firm Market Power in a monthly amount equal to the product of: (1) Contract Demand reduced by 15,000 kW of NYPA hydroelectric power received under a separate agreement; (2) the number of hours in the Billing Period; and (3) estimated load factor, inclusive of all applicable losses and unaccounted for energy, prorated on and extrapolated to an hourly basis, for NYISO Scheduling, unless a different process is required by the Local Electric Utility or the NYISO. Such Firm Market Energy shall be scheduled to the load bus established by the NYISO for the Facility or any successor load bus established with or by the NYISO for LSE scheduling functions.

With respect to each month in which the Authority provides Electric Service to the Customer, the Authority shall, in accordance with the NYISO Tariffs, NYISO manuals and NYISO procedures, schedule and provide UCAP in an amount equal to the applicable value calculated in accordance with NYISO rules in an amount not to exceed the Contract Demand reduced by 15,000 kW of NYPA hydroelectric power received under a separate agreement.

The Customer shall cooperate and coordinate with the Authority as necessary to enable the Authority to effectuate the required scheduling and provision of Firm Market Energy and Firm Market Power as required by this Service Tariff and the Agreement. This includes an obligation on the part of the Customer to promptly notify the Authority in advance of any changes in the Customer's load, or the manner in which Authority-supplied power is consumed, that could impact NYISO forecasting and scheduling.

B. Reconciliation of Energy Allocations

Where Firm Market Energy is delivered under this Service Tariff in conjunction with other firm energy, including but not limited to other firm energy allocations associated with another Authority program/product, the amounts supplied by the Authority hereunder shall be reconciled in accordance with the practices of the Local Electric Utility. In the event of multiple NYPA program allocations to the Facility, the order of precedence will be consistent with the procedures established in any agreements between the Authority with the Local Electric Utility, or as other agreed to by the Authority and the Local Electric Utility.

C. Reconciliation of Authority Billing with NYISO Invoices

In any Billing Period in which the Customer's energy usage as reported by the NYISO in its versioned invoices to the Authority reflects a difference from the energy usage reflected in Authority invoices to the Customer, the Authority will adjust its invoices to reflect such difference. The Authority may perform such reconciliations for each Billing Period through the time NYISO issues its final LSE invoice to the Authority.

D. Delivery of Firm Market Power

Customer's Local Electric Utility shall be responsible for delivering Firm Market Power and Firm Market Power to the Customer. The Authority shall have no responsibility for delivering any Firm Market Power or Firm Market Energy to the Customer unless the Authority agrees to do so in writing, and such agreement expressly supersedes this provision.

For the purpose of this Service Tariff, Firm Market Power and Firm Market Energy will be deemed to be offered when the Authority is able to supply Firm Market Power and Firm Market Energy to the Authority's designated NYISO load bus. If despite such offer, there is a failure of delivery caused by the Customer, NYISO or Local Electric Utility, such failure will not be subject to a billing adjustment pursuant to Section 454.6(d) of the Rules.

E. Rendition and Payment of Bills

The Authority will render bills to the Customer for Electric Service relating to the Allocation on or before the fifteenth (15th) business day of the month for charges due for the previous Billing Period. Bills will reflect the amounts due and owing in accordance with the Agreement, this Service Tariff and the Rules, and are subject to adjustment as provided for in the Agreement, this Service Tariff and the Rules. As provided in this Service Tariff, bills will include NYISO Charges and Taxes associated with the Allocation and all other applicable charges, fees and assessments provided for in the Agreement, this Service Tariff and the Rules. NYISO Charges shall be subject to adjustment consistent with any subsequent NYISO billings to the Authority in accordance with this Service Tariff.

Unless otherwise agreed to by the Authority and the Customer in writing, the Authority shall render bills to the Customer electronically.

Bills are due and payable by the Customer within twenty (20) days of the date on which the Authority renders the bill. Unless otherwise agreed to by the Authority in writing, bills are due and payable by electronic wire transfer in accordance with the Rules. Such wire transfer shall be made to J P Morgan Chase NY, NY / ABA021000021 / NYPA A/C # 008-030383, unless otherwise indicated in writing by the Authority.

The Authority and the Customer may agree in writing to an alternative method for the rendering of bills and for the payment of bills, including but not limited to the use of an Authority-established customer self-service web portal.

The Authority will charge and collect from the Customer all Taxes that the Authority determines are applicable, unless the Customer furnishes the Authority with proof satisfactory to the Authority that (1) the Customer is exempt from the payment of any such Taxes, and/or (2) the Authority is not obligated to collect such Taxes from the Customer. If the Authority is not collecting Taxes from the Customer based on the circumstances described in (1) or (2) above, the Customer shall immediately inform the Authority of any change in circumstances relating to its tax status that would require the Authority to charge and collect such Taxes from the Customer.

If the Customer fails to pay any bill when due, the Authority may add an interest charge of two percent (2%) of the amount unpaid thereto as liquidated damages, and thereafter, as further liquidated damages, may add an additional interest charge of one and one-half percent (1 1/2%) of the unpaid sum shall be added on the first day of each succeeding Billing Period until the amount due, including interest, is paid in full.

If the Customer disputes any item of any bill rendered by Authority, the Customer shall pay such bill in full within the time provided for by this Agreement, and adjustments, if appropriate, will be made thereafter.

If at any time after commencement of Electric Service the Customer fails to make complete and timely payment of any two (2) bills for Electric Service, the Authority may in its discretion: (1) require the Customer to deposit with the Authority a sum of money in an amount equal to all charges that would be due under this Agreement for Electric Service for two (2) consecutive calendar months as estimated by the Authority, which sum shall be deemed security for the payment of unpaid bills and/or other claims of the Authority against the Customer upon termination of Electric Service; (2) suspend Electric Service; or (3) modify or terminate Electric Service. If the Customer fails or refuses to provide a security the deposit within thirty (30) days of a request pursuant to this provision, the Authority may modify, suspend, or terminate Electric Service to the Customer.

The rights and remedies provided to the Authority in IV.E of this Service Tariff are in addition to any and all other rights and remedies available to Authority under the Agreement, this Service Tariff and the Rules, and at law or in equity.

F. Conflicts

In the event of any inconsistencies, conflicts, or differences between the provisions of this Service Tariff and the Rules, the provisions of the Service Tariff will govern. In the event of any inconsistencies, conflicts, or differences between this Service Tariff or the Rules and any provisions of the Agreement, the provisions of the Agreement will govern.