State of New York
Public Service Commission

Case No. 18-E-0130 In the Matter of Energy Storage Deployment Program

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COMMENTS OF THE NEW YORK POWER AUTHORITY

ON THE NEW YORK STATE ENERGY STORAGE ROADMAP

The New York Power Authority (NYPA) submits these comments in response to the New York State Department of Public Service's (DPS) notice soliciting comments on the *New York State Energy Storage Roadmap (Roadmap) and DPS/New York Energy Research and Development Authority (NYSERDA) Staff Recommendations*, issued on July 17, 2018, in Case No. 18-E-0130.

The Roadmap presents a broad list of findings and recommendations for spurring the development of energy storage (ES) resources in New York State with the goal of reaching Governor Andrew Cuomo's ES deployment target of 1,500 MW by 2025. Throughout the State, NYPA customers are eager to explore ES opportunities to reduce their electricity costs and create more resiliency for their facilities. However, NYPA customers are facing the same economic challenges to deploying ES as other stakeholders. ES resources deployed by NYPA customers will deliver services to the electric system, some of which may not be fully recognized under today's regulatory construct, and advance New York's ES marketplace to bend the installation cost curve down, ultimately benefiting all customers. For these reasons, and as discussed below in our comments, NYPA urges the Commission to ensure that all customers, including NYPA customers, are considered at every stage of the process of establishing a regulatory framework that advances New York's ES market, including eligibility for the proposed Market Acceleration Incentive.

NYPA appreciates the opportunity to provide these comments and looks forward to working with DPS, NYSERDA, and other stakeholders to achieve the State's ES goals.

COMMENTS ON THE NEW YORK STATE ENERGY STORAGE ROADMAP

4.1 Retail Rate Actions and Utility Programs

Transparent and Fixed Compensation for Full Range of Retail Services Will Support New York's ES Deployment.

NYPA supports the Roadmap's recommendation that compensation for retail services should accurately represent the value ES resources bring to New York energy consumers, the energy markets, and the grid. A predictable and transparent compensation scheme that recognizes the full range of retail services ES can provide will support wider deployments of ES resources throughout New York.

a. Value Stack (VDER) (Sec.4.1.3)

Expanded Eligibility

NYPA supports DPS Staff's (Staff) proposal to expand value of distributed energy resources (VDER) eligibility to standalone ES and regenerative braking coupled with ES, issued on May 22, 2018.[1] The expansion of VDER eligibility to standalone ES and regenerative braking will open up the existing value-based compensation scheme to ES, and in turn, will increase consumer and investor confidence in developing ES projects at scale. Broader proliferation of ES will support meeting New York's stated target of developing 1,500 MW of ES by 2025.

[1] Case 15-E-0751, *In the Matter of the Value of Distributed Energy Resources*, Staff Proposal on Value Stack Eligibility Expansion (issued May 22, 2018) and Case 18-E-0138, *In the Matter of Energy Storage Deployment Program*, New York State Energy Storage Roadmap and Department of Public Service/New York State Energy Research and Development Authority Staff Recommendations (issued on June 21, 2018), at 33-34.

Avoided Distribution Costs

NYPA generally supports the Staff's draft proposal, issued on July 26, 2018, to: (i) expand the Distribution Relief Value (DRV) rate lock-in from three to seven years for dispatchable ES resources, and (ii) phase out the locational system relief value ("LSRV") to allow utility Non-Wire Alternatives (NWAs) and Demand Response (DR) programs to address specific functionality and performance requirements.[2] NYPA recommends Staff expand the DRV rate lock-in to 7 years for intermittent resources. The extended DRV rate lock-in will provide stable and reliable compensation for avoided distribution costs, and will incentivize development of intermittent and dispatchable ES capacity where the grid needs it the most. Further, NYPA recommends that Staff maintain the current LSRV compensation scheme, as it offers clear market signals and predictable and fixed pricing to enable distributed energy resource (DER) deployment. NYPA also recommends that the New York State Public Service Commission (Commission) allow the utilities sufficient time to streamline the NWA process and gain more experience in the NWA solicitation and selection processes before considering phasing out LSRV.

Value of E

The Roadmap recommends that the VDER working group redesign the Value of E to better reflect the marginal emissions rate that varies hourly, daily, seasonally, and yearly.[3] The Commission should allow sufficient time for extensive record development, deliberation and stakeholder feedback to help design a mechanism that accurately captures the Value of E for avoided marginal emissions. This mechanism should be transparent and easy to use such that project developers, customers and sources of capital are confident in the bankability of this component of the value stack. Further, NYPA recommends

[2] Case 15-E-0751, *In the Matter of the Value of Distributed Energy Resources*, Draft Staff Whitepaper Regarding VDER Compensation for Avoided Distribution Costs (issued July 26, 2018) and Case 18-E-0138, *In the Matter of Energy Storage Deployment Program*, New York State Energy Storage Roadmap and Department of Public Service/New York State Energy Research and Development Authority Staff Recommendations (issued on June 21, 2018), at 33-34.
[3] Case 18-E-0138, *In the Matter of Energy Storage Deployment Program*, New York State Energy Storage Roadmap and Department of Public Service/New York State Energy Research and Development Authority Staff Recommendations (issued on June 21, 2018), at 37-38.

the Commission account for local emissions' value and any positive or negative impacts of distributed energy resources (DERs) on Environmental Justice communities.

Additional Values

The first phase of implementing VDER value stack compensation is based on common categories of system services provided by DERs to the distribution system. This compensation scheme includes environmental value and avoided commodity, capacity and distribution costs. However, unlike typical VDER eligible DERs, ES can provided additional services such as voltage support needed to help maintain unity power factor. Further, ES has the capability to increase the hosting capacity of distribution infrastructure by optimizing DER, removing periods of high production surplus, and avoiding distribution system overload. These value propositions are not recognized under the current VDER value stack. NYPA recommends that the Commission identify and monetize the full range of retail services ES is capable of providing to the grid, and expand the VDER value stack to account for such retail services.

b. Dynamic Load Management (Sec. 4.1.5)

NYPA supports the Roadmap recommendations to implement multi-year Dynamic Load Management (DLM) program participation agreements and a "premium" for resources with a high performance factor during DLM events.[4] Adopting these recommendations will create increased financial predictability, and the confidence of potential users and investors. At present, the utility DLM programs offer a Reservation Payment to program participants where the Reservation Payment is a fixed amount per kW per month. Additionally, the DLM resources also receive a Performance Payment where the Performance Payment is a fixed amount per kWh of load relief during planned and unplanned events.

[4] Id. at 39.

The utilities file changes to the DLM tariff and compensation levels every year based on the program performance in the prior year.

The current DLM program structure does not sufficiently incentivize the participating resources for their consistent performance and high performance factor during DR events. A high performance factor premium coupled with multi-year DLM agreements will incentivize investment into high cost, state-of-the-art, high performance ES to meet the customer needs, bring valuable services to the grid, and increase financeability of the project.[5]

4.3 Direct Procurement

Transparent and Fixed Compensation and Resource Prequalification for Non-Wires Alternative Solicitations Will Support New York's ES Deployment.

a. Non-Wires Alternative (NWA) Term Expansion (Sec. 4.3.2)

NYPA supports the Roadmap recommendation to expand the NWA project scope by allowing the NWA resource to access revenue opportunities in the wholesale energy markets when the resource is not needed for distribution system relief.[6] Allowing each project to access value streams for the full range of services the resource is capable of offering will improve project economics while also meeting specific functionality and performance requirements sought by the NWA solicitations. NYPA suggests the Commission initiate a stakeholder process to develop protocols on coordinated dispatch of ES services for the bulk power system and distribution grid.

The Roadmap also recommends a fixed capacity payment for the term of the NWA based on a discount of forecasted zonal capacity prices.[7] This fixed capacity payment offering will present a

[5] NYPA's energy efficiency customers often install high performance capable DERs to comply with the Executive Order directives to develop onsite renewable projects and capital energy efficiency measures.
[6] Case 18-E-0138, *In the Matter of Energy Storage Deployment Program*, New York State Energy Storage Roadmap and Department of Public Service/New York State Energy Research and Development Authority Staff Recommendations (issued on June 21, 2018), at 44-45.
[7] Id. at 45.

bankable contracted revenue stream, and the ratepayers may benefit from actual capacity prices higher than forecasted.

Under the REV proceeding, the Commission called for the creation of multiple mechanisms to allow market participants access to the distribution system and customer data, including, Distributed System Implementation Plans, hosting capacity maps, and Green Button Connect. However, none of the mechanisms provide static and dynamic information concerning the state of the distribution grid. Such information is necessary to identify and address current and future needs to upgrade the distribution infrastructure. NYPA and other market participants have capabilities to develop solutions even before utilities identify the needs through an NWA. NYPA recommends the Commission identify the specific data needed to define NWA needs, and develop a process for NYPA and other market participants to access such information.

For a number of reasons, public sector entities are significant potential users of ES. However, public sector customers' mandatory procurement requirements make it difficult to meet otherwise reasonable NWA deadlines. NYPA recommends the Commission develop a "prequalification" process whereby a developer may identify a technical storage solution, obtain general approval from the utility, and secure the required equipment and contracting resources. Upon a NWA solicitation by the utility, the developer may propose such "prequalified" solution on behalf of a customer, who would otherwise be unable to respond.

NYPA Will Work With Public Sector Customers to Deploy ES and Lead by Example

b. New York State Leading by Example (Sec. 4.3.4)

NYPA supports the Roadmap's recommendation that the State continue its role as an early adopter of sustainable energy solutions.[8] In that regard, NYPA will continue to lead the State's efforts in delivering energy services, including ES and renewable resource deployments, to public sector customers. NYPA is presently working with a number of state entities, including the State University of New York (SUNY), the Office of General Services (OGS), and the Metropolitan Transportation Authority (MTA) to deploy standalone ES and ES paired with on-site generation. ES systems are also considered by NYPA when developing energy efficiency, renewable, and resiliency procurement plans for its public sector customers.

NYPA is currently engaged with SUNY to develop an organization-wide contract for NYPA to provide ancillary services for campuses wishing to develop and deploy DERs. This will allow NYPA to assist SUNY campuses in procuring and implementing advanced DER projects, which include standalone, paired, and microgrid-enabled ES projects. In partnership with NYPA, OGS has developed a specific contracting mechanism to enable state and local government customers to take advantage of the power purchase agreement structure for solar photovoltaic (PV) and ES projects. OGS required that all State affected entities utilize NYPA in the implementation of that contract, and for all other users it is highly recommended. On behalf of the MTA, NYPA recently submitted a solar plus ES project to Con Edison in response to a NWA solicitation. This project could bring over 1.5 MW of solar PV and 3 MW of battery ES capacity to one of New York's most congested distribution networks. Additionally, NYPA has worked with the MTA to advocate for consideration of regenerative-braking storage for treatment under VDER value stack compensation scheme.

NYPA intends to substantially increase the number of ES projects delivered to public sector customers. However, current ES pricing and incentive structures for ES severely limit the number of

[8] Case 18-E-0138, *In the Matter of Energy Storage Deployment Program*, New York State Energy Storage Roadmap and Department of Public Service/New York State Energy Research and Development Authority Staff Recommendations (issued on June 21, 2018), at 47.

projects that can be done without subsidy, and public sector customers do not have the ability to take on investments without a reasonable payback.

4.4 Market Acceleration Incentive

There is a Need for a Market Acceleration Incentive That is Available to All Customers

NYPA supports the Roadmap's recommendation that a statewide bridge incentive be considered to accelerate the near-term adoption of customer-sited and distributed or bulk system ES systems.[9] The cost of ES systems has declined in recent years, especially the cost of lithium-ion batteries. However, in most areas of the State the costs to install and operate an ES resource exceeds currently available market revenues. This unfavorable cost/revenue profile is attributable, in part, to the fact that the revenue streams for the services ES provides to the system have not been fully monetized. At least to that extent, the bridge incentive is not a "subsidy" or a "grant," but rather is rough compensation for those, to date, unmonetized values. It also serves as a method to bend the ES installation cost curve down by deploying and utilizing these assets today that will result in beneficial impacts and costs savings to the New York State market for ES over the longer-term. This is consistent with the stated intent of the Market Acceleration Incentive.[10]

The bridge incentive should be available to all the customers, including NYPA customers. First, a grid connected ES provides benefits to the electric system (and the entire body of ratepayers), and those benefits should be compensated by the beneficiaries. Second, to the extent the incentive is sourced from the Regional Greenhouse Gas Initiative (RGGI) funds – which NYPA recommends – NYPA customers should be entitled to the bridge incentive since they contribute to RGGI in the same manner as other customers. Finally, NYPA's supply customers provide public services so projects supported through the bridge incentive would be to the public benefit. For example, an ES project at a public facility could

[9] Id., at 49.
[10] Id., at 48-49.

reduce utility costs, as well as increase resilience, allowing the facility to spend more on public services and provide power for their facility in times of emergency. Furthermore, NYPA customers are ready and willing to deploy and test ES applications, which will help accelerate early adoption of ES technologies in New York. These early adopters could be used as showcases for the emerging market, allowing data, lessons learned and site access to others to build market interest and confidence, helping to bend the cost curve for installing ES downward benefiting all New Yorkers and moving towards a self-sustaining ES market.

4.5 Address Soft Costs Including Barriers in Data and Finance

Advanced Metering Infrastructure Rollout Should Prioritize Public Sector Customers That Will Use the Data to Meet State Environmental Goals.

Data Access (Sec. 4.5.4)

a. Public Entities Will Have Strong Reasons to Utilize Data from Advanced Metering Infrastructure

The Roadmap recommends that all utilities expedite their Advanced Metering Infrastructure (AMI) deployments and identify how they are prioritizing AMI deployment and to what extent "high value customers" are being prioritized.[11] The Roadmap considers high value customers to be: customers with high demand; customers that are under Con Edison's Standby Pilot Rate Program (Rider Q) or the VDER tariff; and customers that install DERs or drive EVs.[12] NYPA supports this recommendation. NYPA suggests that, to the extent that they are not already considered a high value customer, all public facilities (except those that have a *de minimus* energy demand) be included in the definition of high value customers and receive priority for AMI deployment. Many public entities already fall within this definition of high value customer as they are required to pursue DERs and energy efficiency upgrades

[11] Id. at 62.
[12] Id.

under EO 88, EO 166[13] and other state or local environmental goals. While EO 88 and EO 166 do not apply to all public entities, NYPA suggests that they too be considered high value customers because they are likely to pursue ES and other DER and energy efficiency measures to meet State and local energy and environmental goals. Priority deployment of AMI to these facilities will encourage them to invest in ES and other DER earlier than others, reducing their greenhouse gas emissions and their electricity costs.

b. Utilities Should Work With NYPA to Streamline New York Energy Manager Access to AMI Data Installed at NYPA Customer Sites.

The Roadmap recognizes that:

"[d]etermining whether a customer will be a good candidate for energy storage is complex, given the diversity and variability of load shapes and uncertainty around future rate and demand response program levels. Increased access to customer data could reduce the costs of customer acquisition and project analysis for customers and third-party developers."[14]

To that end, the Commission should require utilities to work with the New York Energy Manager (NYEM) to provide NYEM access to AMI data installed at NYPA customer sites. NYEM provides public and private facility operators across the state with access to their buildings' energy data on a single platform to help them better manage their energy use and cost. The data provided to customers from their AMI can help customers learn more about their energy usage and help customers identify efficiency opportunities. Allowing NYEM streamlined access to NYPA customer data will enable NYPA to continue to work closely with OGS, MTA and other large public customers, facilitating better integration of ES into future energy projects.

[13] Exec. Order 88 (Dec. 28, 2012), https://www.governor.ny.gov/news/no-88-directing-state-agencies-and-authorities-improve-energy-efficiency-state-buildings; Exec. Order 166 (June 1, 2017), https://www.governor.ny.gov/news/no-166-redoubling-new-yorks-fight-against-economic-and-environmental-threats-posed-climate. EO 166 requires State entities to reduce their greenhouse gas emissions by forty percent by 2030 and eighty percent by 2050 from 1990 levels.

[14] Case 18-E-0138, *In the Matter of Energy Storage Deployment Program*, New York State Energy Storage Roadmap and Department of Public Service/New York State Energy Research and Development Authority Staff Recommendations (issued on June 21, 2018), at 26.

4.6 "Clean Peak" Actions

The Roadmap recommends that Con Edison and LIPA, the utilities directly impacted by the DEC NOx regulations currently under development, be required to conduct a "Peaking Unit Contingency Plan."[15] According to the Roadmap, the Plan should include: an analysis of peaker operational and emissions profiles to determine what units are potential candidates for repowering or replacement by ES; a series of Reliability and Operational Assessment Studies looking at the equivalent level of "clean resources" that could provide the same level of reliability as the peaker plants; and other mechanisms to enable ES to provide cleaner generation to meet periods of peak electric demand.[16] NYPA supports the recommendation to produce a Peaking Unit Contingency Plan through collaboration between DPS, Con Edison, and LIPA, so long as it is developed in a manner that safeguards confidential, market sensitive information. NYPA suggests that the NYISO be consulted in this process. Other stakeholders, including other transmission owners, should have an opportunity to comment during the Plan's development.

4.7 Wholesale Market Actions

Wholesale Market Rules Should Compensate ES for the Full Range of Services That ES Can Deliver to the Grid.

Capacity Market Recommendations (Sec. 4.7.1)

NYPA supports efforts designed to enable shorter duration ES resources to participate in the capacity markets.[17] Capacity markets are in place to ensure that an adequate level of resources are available for the bulk power system and by providing a predictable revenue outcome that facilitates and motivates the development and retention of resources where needed at the lowest long-run cost to consumers. This would also provide ES developers access to the predictable revenue outcomes of the capacity market to help encourage the deployment of ES resources in higher priced capacity zones.

[15] Id. at 64.
[16] Id. at 64-65.
[17] Id. at 65-66.

Expanded participation models would ensure that the NYISO recognizes and values all of the resources available to assure resource adequacy, protecting consumers from higher capacity prices that may result if the capacity market does not reflect their contribution.

Development of innovative participation models through DER aggregation or partial participation are viable paths to pursue in order to enable shorter duration resources to contribute to meeting system requirements for resource adequacy. Participation models for shorter duration ES resources could be done via-third party aggregators or by the NYISO through a partial participation model, where the NYISO would be in essence aggregating or stacking shorter duration resources to meet the current duration requirements and the shorter duration resource would receive a pro-rata or reduced payment based on its contribution to reliability. Any aggregation participation model should limit aggregations from crossing system constraints which could result in increased constraints or other undesirable system operating conditions. This would limit capacity aggregations to be within the applicable capacity zones. NYPA cautions against modifying the existing capacity market duration requirement that is designed to meet system needs and assure resource adequacy.[18] Mature ES technologies like pumped storage hydro are able to meet these duration requirements and new ES technology performance capabilities will evolve to meet the market rules.

NYPA also supports the Roadmap's recommendation to explore whether fast-responding resources like ES, including pumped-hydro, provide a higher value service to the electric system than resources that have longer start-up times.[19] Fast-start resources can respond quickly to any sudden loss of generation or increased demand on the system, and this service should be valued. When a significant generation or transmission resource trips offline, the first phone calls the grid operator makes are to those resources that can respond the quickest to provide generation. However, this fast-start service is not

[18] The NYISO has engaged GE Energy Consulting to conduct a study on the capacity value of resources with energy limitations that should further inform any such consideration.
[19] Id. at 67.

compensated in the NYISO's current market structure. ES resources are competing against slower and, therefore, lower quality resources that can meet current product requirements but cannot provide the faster service that the ISO/RTO relies upon. Moreover, setting compensation levels based on the capabilities of less capable resources, which have lower associated costs, can be expected to drive prices to levels below the costs required to attract new and maintain existing more capable resources, which have correspondingly greater costs, to the detriment of both system reliability and efficiency. This service may be best considered as a faster responding operating reserve product or other energy or ancillary service product rather than a capacity product.

Buyer-Side Mitigation (Sec. 4.7.1)

Buyer-Side Mitigation (BSM) rules should not be applied to ES or DERs. BSM rules are intended to address the potential exercise of market power by entities and resources that have both the incentive and the ability to artificially depress capacity prices. Like DERs, ES resources are largely coming to the market to satisfy site specific reliability or resilience needs, respond to unique energy constraints on the system, participate in distribution programs, serve retail load to reduce demand charges, and/or provide environmental benefits through reduced emissions. ES resources are also currently relatively expensive on a per-MW basis to meet the capacity market duration requirements compared to other resources like natural gas units, and as such participation in the capacity market is not a primary driver of ES deployment, and would not be the resource chosen if one's intent were to depress market prices. Thus, ES resources and DER do not have the incentive and would not be developed to artificially depress market prices. Overbroad application of BSM to ES and DER would be an unwarranted impediment to entry and serve to erode efficient market outcomes which is premised on new entries responding to price increases. Ultimately, application of BSM would result in increased consumer costs and decreased system efficiency while hampering state policy.

If a complete exemption from BSM cannot be achieved for ES and DERs, NYPA agrees with the Roadmap's recommendations for partial exemption for resources below a certain threshold that do not have meaningful ability to depress market prices due to their limited size (e.g. 20 MWs), and resources that are committed first to serving a distribution service or operating under a distribution tariff since their purpose or incentive is to meet a distribution system need and not to depress market prices.[20]

New Participation Models (Sec. 4.7.1)

a. Participation model for shorter duration storage to provide ancillary services

NYPA supports creating a participation model for short-duration ES to provide both reserve and frequency regulation with NYISO-provided state-of-charge management. However, state-of-charge management and NYISO control should be optional for larger resources providing other market services like energy and capacity. For certain ES technologies like pumped hydro there may be higher operating costs associated with NYISO control as the NYISO will be looking to optimize the grid and not the resource, which may result in more frequent starts, stops and other high impact operations. Further, and most importantly, an owner or operator is in the best position to manage its state-of-charge in a manner that balances its opportunities across all of the markets along with its operation and maintenance costs.

b. New products to reward flexible and quick responding assets

NYPA supports the Roadmap's recommendation to pursue a fast-ramping service product.[21] As the electric system evolves there may be a greater system need for ramping services in the future with increased intermittent renewable penetration that may suddenly change output. The need for fast-ramping products in the future will be aggravated by the retirement of traditional fossil fuel generators that can provide some resource flexibility. This could result in the units that are committed in the NYISO's dispatch from having insufficient ramping capability and flexibility to meet unexpected system conditions

[20] Id. at 66.
[21] Id. at 67.

that change from the assumptions during the prior real-time commitment or dispatch. Many ES resources, including pumped-hydro, can provide a fast and accurate reliable ramping service. In certain cases, NYPA has observed that its pumped storage hydro facility has not been dispatched for energy even though its bid was infra-marginal, and NYPA believes this stems from the ISO's desire to ensure the resource remains available to address system contingencies that may occur in real-time, due to the ability of the resource to address large load swings quickly. This practice supports NYPA's observation that under certain conditions the NYISO may be procuring a de facto product or service from pumped storage hydro of extended flexible ramp or fast-start operating reserves without providing compensation commensurate with the benefit of that product or service. NYPA recommends that further consideration be given to whether there is a higher value to resources that can provide an extended ramp capability via an individual resource or aggregation.

Aggregation and Infrastructure Requirements for Smaller Resources (Sec. 4.7.1)

Effective communication between DERs, DER aggregators and ISO/RTOs, as well as distribution utilities, is necessary for DER participation in the wholesale and retail electric markets. However, the cost of telemetry – the process of recording and transmitting the readings of an instrument – for aggregators and small resources is a barrier to entry. While historically there were no alternatives to hard-wired communication technology, that is not the case anymore. Communication technology is rapidly evolving in ways that continue to meet system and system operator real-time, latency, and security requirements at lower costs. Simple internet-based communication and cloud technologies can provide a fully functional and more cost-effective alternative that can meet system operator needs. According to the CAISO working group "Expanding Metering and Telemetry Options Technical Stakeholder Initiative" Draft Straw Proposal (April 18, 2013), it costs tens of thousands of dollars in initial costs to meet the existing telemetry requirements and $240-$400 per unit a month as a precondition to participate in

ISO/RTO markets.[22] Aggregators and small resources cannot afford these high costs. While costs may have changed from 2013, it is an illustrative example of potential costs that should be examined further. As such, NYPA supports the establishment of a working group and further exploration of alternatives to address this cost barrier.

Dual Participation (Sec. 4.7.2)

Storage is able to provide a wide range of services and their services and value to New York energy consumers, the energy markets and the distribution and transmission grids should be maximized. This can only be done if dual participation models are developed. NYPA agrees that such a participation model must ensure that resources are not being compensated for the same service twice. DPS Staff should work with the NYISO and its stakeholders to finalize dual participation models as soon as practicable.

The Roadmap recommends certain principles that the Commission should adopt for dual participation.[23] NYPA provides the following limited comments on those proposed principles. The sixth principle should more clearly articulate that a resource may have more than one reliability service obligation if the resource is able to perform both reliability obligations. Regarding the eighth principle, wholesale market penalties for non-performance should not apply if the resource was directed to not perform for reliability reasons by the distribution system operator. This is consistent with the fifth principle where a distribution interconnected resource must give priority to distribution system reliability.

[22] California Independent System Operator, *Expanding Metering and Telemetry Options Technical Stakeholder Initiative, Draft Straw Proposal* (issued April 18, 2013), at 10 (http://www.caiso.com/Documents/TechnicalStrawProposal-ExpandingMeteringandTelemetryOptions.pdf).

[23] Case 18-E-0138, *In the Matter of Energy Storage Deployment Program*, New York State Energy Storage Roadmap and Department of Public Service/New York State Energy Research and Development Authority Staff Recommendations (issued on June 21, 2018), at 70.

CONCLUSION

NYPA thanks the Commission and NYSERDA for the opportunity to provide these comments in response to the *New York State Energy Storage Roadmap and DPS/NYSERDA Staff Recommendations*. NYPA looks forward to the opportunity to work with DPS, NYSERDA, and other stakeholders to catalyze deployment of ES resources in New York State to meet the Governor's ES deployment goal and the State's broader environmental goals.

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