

2022 Market Project Candidates

Product and Project Management

August 27th, 2021

No Changes from July 29th BPWG

This document represents potential 2022 Market project candidates. Market projects are associated with market rule(s) including market design and study projects as well as any project implementing market rule changes. They are identified through (1) the State of the Market (SOM) Report; (2) internal NYISO discussions; and (3) discussions with Market Participants in the stakeholder process. These project candidates and their corresponding descriptions reflect information known about each of the project candidates as of the date of this document.

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Introduction

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Project Type	Description
Mandatory	Strategic Initiatives and FERC Orders. These projects will be included in the budget
Continuing	Projects approved in a prior year and that have progressed to either Software Design, Development Complete, or Deployment will generally be proposed as Continuing. Additional projects may be classified as Continuing based on stakeholder feedback. These projects will be included in the budget
Future	Consensus from stakeholder discussions of this projects priority relative to other projects has resulted in these projects NOT being prioritized and initiated in the coming budget year. Resources, time constraints, stakeholder feedback, and other project dependencies have been taken into consideration
Prioritize	Projects to be prioritized and included in the budget based on a feasibility assessment taking into consideration resources, time constraints, stakeholder feedback, priority score, and other project dependencies

Market projects that are Prioritize (not Mandatory, Continuing, or Future) are included in the stakeholder survey and scored by the NYISO during the prioritization phase. These projects are included in the budget based on a feasibility assessment taking into consideration resources, time constraints, stakeholder feedback, priority score, and other project dependencies. The table that follows identifies project type for each of the projects included in this document.

Mandatory

1 Capacity Value Study

1.1 Problem/ Opportunity

The NYISO Services Tariff requires a periodic review of the Capacity Values, in which the NYISO will select an independent consultant to re-evaluate the reliability benefit of resources with Energy Duration Limitations in meeting Resource Adequacy criteria. This project will be the first of the periodic reviews and will build on the NYISO’s multi-year efforts to value these resources in the ICAP market based on the reliability benefit that the resources provide to the system through a combination of Duration Adjustment Factors and/or weighting factor percentages during the applicable Peak Load Window, as developed through the Expanding Capacity Eligibility and Tailored Availability Metric efforts. As required by the tariff, the Capacity Value Study includes an evaluation of the reliability benefit that different duration-limited resources provide to the system, including a re-evaluation of the Peak Load Windows for Resources with Energy Duration Limitation and hourly weighting factor percentages for wind and solar Resources.

1.2 Project Objective(s) & Anticipated Deliverable(s)

This periodic review of Capacity Values seeks to ensure that the ICAP market continues to efficiently support reliability and reflect the value that resources provide to the system, particularly during peak operating hours. The review will be performed by an independent consultant to lead the Capacity Value Study process, which will include any recommendations or changes to capacity accreditation concepts or rules. The independent consultant will provide recommendations on the Energy Duration Limitations, Duration Adjustment Factors, Peak Load Windows for Resources with Energy Duration Limitations, and Peak Load Window weightings for wind and solar resources.

The 2022 deliverable is Study Defined. The NYISO will initiate the process for this study, pursuant to the schedule outlined in Section 5.12.14.3 of the NYISO Services Tariff. The Capacity Value Study will be completed in 2023 and any corresponding changes to Installed Capacity Suppliers would require a 205 process to the NYISO Services Tariff to become effective with the 2025-2026 Capability Year.

1.3 Project Justification

The quadrennial review of the Capacity Values is mandated by the tariff. The goal of the periodic review is to assess the changes to the reliability benefit of resources in the grid through time to continue to support reliable grid operations. This periodic review is a resource intensive process for both the NYISO and stakeholders that has a significant impact on the Installed Capacity market as a whole.

2 CRIS Tracking

2.1 Problem / Opportunity

The NYISO tariff indicates that Capacity Resource Interconnection Service (CRIS) expires if a project has been CRIS-inactive for three years. Recently, as part of the 2019 Class Year Redesign project, the NYISO proposed certain refinements to the CRIS expiration rules that have now been accepted by the Federal Energy Regulatory Commission (FERC). These new rules, for example, address the application of CRIS-inactive status to new projects and load modifiers. The new rules create the need for additional CRIS tracking and monitoring capabilities for the NYISO. The NYISO may also identify opportunities to enhance its current method of tracking CRIS, and CRIS-inactive status, for all projects.

2.2 Project Objective(s) & Anticipated Deliverable(s)

This 2022 project deliverable is Development Complete.

2.3 Project Justification

FERC acceptance of these enhanced CRIS rules makes this a required project to meet the new tariff obligation.

Increased administrative efficiency will be realized by the implementation of automated tracking of resource participation, in the Installed Capacity (ICAP) market, on a rolling historic basis. Automated tracking will reduce the risk of inappropriate market outcomes due to errors or delays that could arise via a manual tracking process.

3 DER Participation Model

3.1 Problem / Opportunity

Technological advancements and public policy support are encouraging greater adoption of DER to meet consumer energy needs as well as system needs. DER offer the potential to make load more dynamic and responsive to wholesale market price signals, potentially improving overall system efficiencies.

3.2 Project Objective(s) & Anticipated Deliverable(s)

The 2019 deliverable for this project was Functional Requirements. In 2020, the NYISO completed software design consistent with the FERC-accepted tariff. In 2021, the NYISO worked on development of the required software including deployment of Software-defined Wide Area Network (SD-WAN), an enabling technology used for telemetry. Once SD-WAN is implemented, MPs, including Demand-Side Ancillary Services Program (DSASP) resources and Energy Storage Resources (ESR), will be eligible to utilize the technology. In 2022, the deliverable is Deployment. The NYISO plans to complete software development of remaining components, testing, MPs' sandbox testing, and deployment to the production environment.

This project’s expected benefits are to allow the NYISO to cultivate a market that is accessible and competitive for DER, aligning with New York State policy goals.

3.3 Project Justification

Throughout 2018 and in 2019, the NYISO has worked through concepts, proposals, and Tariff edits to enhance its market rules for DER participation in NYISO’s capacity, Energy and Ancillary Services Markets. The NYISO has also evaluated potential modifications to its existing Demand Response programs in order to enable this effort. Operational and performance changes to existing Emergency Demand Response and Special Case Resource programs are not required at this time, but payments to these resources will be impacted by the expanding capacity eligibility rules that became effective in 2021. The NYISO’s Day-Ahead Demand Response Program and Demand Side Ancillary Services Program will be eliminated when the DER participation model becomes effective.

This project will have many facets that ultimately support New York State policy goals and compliance with FERC Order No. 2222, while simplifying the operational matrix of rule sets for small resources offering demand response and/or energy injections, for all stakeholders involved. These changes more closely align the bidding and performance measurements for DER with the rules applicable to generators. By doing this, the NYISO hopes to create rules universally applicable to small resources desiring to participate in an aggregation.

The target deployment in 2022 will include new software and/or modifications to existing software that supports DER eligibility and registration, aggregations, bidding and scheduling, performance obligations, metering and telemetry requirements, measurement and verification of baselines and performance, modeling, settlements, capacity market participation, interconnection, CRIS, incorporation into planning studies, market mitigation, simultaneous participation of DER in retail/distribution-level programs as well as the NYISO’s wholesale markets.

4 Support TSO and DSO Coordination Efforts

4.1 Problem / Opportunity

Throughout the multi-year DER Roadmap effort, the NYISO has worked closely with the Joint Utilities (JU) of New York to develop processes that will facilitate DER participation in the wholesale markets. The NYISO recognizes that bulk system and distribution system operational coordination and situational awareness are necessary to successfully integrate DER into the wholesale markets. The NYISO must continue working with the JU as well as Long Island Power Authority (LIPA) and New York Power Authority (NYPA) to finalize coordination details in preparation for DER participation in Q4 2021.

The NYISO will also continue to participate in the Market Design Integration Working Groups (MDIWG) hosted by the Department of Public Service to discuss Distribution System Platforms (DSP).

4.2 Project Objective(s) & Anticipated Deliverable(s)

Throughout the remainder of 2021 and 2022, the NYISO, the JU, LIPA, and NYPA will continue to coordinate in support of DER participation model topics, including but not limited to Transmission Nodes, Dual Participation, and operational tools. The NYISO will review the results of those efforts with its stakeholders in 2022 via NYISO market and operational working groups as an issue discovery effort. The 2022 deliverable will be Issue Discovery.

Additionally, the NYISO will contribute to ongoing efforts at the New York Department of Public Service to develop a Distribution System Platform on which a distribution centered marketplace may proliferate. The NYISO will support these efforts by providing background on current and planned wholesale market constructs.

4.3 Project Justification

This project will help the NYISO and the New York transmission operators to develop the proper tools, communication protocols, and procedures in place to maintain reliability as the penetration of DER on the grid increases.

In the MDIWG efforts the NYISO will advocate for distribution designs in keeping with the ISO's core mission of maintaining a reliable grid and efficient market.

Continuing

5 Comprehensive Mitigation Review

5.1 Problem / Opportunity

The ICAP market has undergone significant changes in both design and resource mix since the NYISO's Buyer Side Mitigation (BSM) measures were first implemented in May of 2008. While there have been many incremental changes to align mitigation measures with changes in the market, there has not been a holistic evaluation of the BSM rules and methodology to evaluate whether the current framework will be adequate in a future with significant renewable resources and policy objectives that impact the ICAP market.

5.2 Project Objective(s) & Anticipated Deliverable(s)

The NYISO will implement changes approved by the NYISO and accepted by FERC as part of its 2021 stakeholder process.

The 2022 deliverable for this project is Deployment. The NYISO will implement the 2021 BSM rule changes, as well as deploy any additional software changes that would facilitate the approved 2021 BSM rules.

5.3 Project Justification

The NYISO identified the “comprehensive review of the NYISO’s existing market products and operational and planning practices” as a key strategic initiative. Evaluating the BSM framework is an essential part to ensuring the efficiency of resource entry and exit as the generation mix rapidly changes in the coming years. The NYISO believes it is prudent to discuss options that can be designed and implemented consistent with the timeline necessary to support achievement of the CLCPA goals.

6 Grid in Transition

6.1 Problem / Opportunity

In a time of unprecedented change in the electricity sector, New York’s competitive electricity markets must be positioned to unleash the innovation and flexible energy solutions necessary for a reliable transformation towards a zero-emissions power grid. A rapid transition is underway in New York State from a power grid where energy is largely produced by central-station fossil fuel generation, towards a grid with increased intermittent renewable resources and distributed generation.

The pace of this transition is driven primarily by state policy, notably the CLCPA. In addition, technological advancements are expanding the capabilities of new resources and lowering their costs, further driving broader industry changes.

The NYISO is actively working on market enhancements to meet these future challenges. A grid characterized by high levels of intermittent renewable resources, ESR, and DER will require new thinking to adequately balance intermittency on the system. The NYISO approaches this work with two guiding principles: (1) all aspects of grid reliability must be maintained; and (2) competitive markets should continue to maximize economic efficiency and minimize the cost of maintaining reliability while supporting the achievement of New York’s climate policy codified in the CLCPA.

Additionally, the study effort will identify the potential level of system flexibility that will be required with increases in intermittent resources and evaluate grid and/or resource attributes necessary to continue to reliably maintain system balance.

6.2 Project Objective(s) & Anticipated Deliverable(s)

Using the work completed to date across various NYISO studies and initiatives, including the Reliability and Market Considerations for a Grid in Transition work and Climate Change Study work, identify and if possible quantify through a 2022 study, the potential level of system flexibility and/or grid attributes needed to reliably maintain system balance. Using this information will further evolve the recommendations laid out in previous Grid in Transition discussions. This project will position the wholesale markets to continue to support grid

reliability as the mix of resources and system needs continues to evolve in New York. The deliverable for 2022 is Study Complete.

6.3 Project Justification

The CLCPA includes the following goals:

- 100% of the state’s electricity must be emissions free by 2040
- 9,000MW of offshore wind energy must supply NY by 2035
- 6,000Mw of solar energy be installed in NY by 2025
- Statewide reduction of 185 trillion BTUs through energy efficiency
- 3,000MW of energy storage capacity must be installed to serve NY by 2030

Continuation of this project will help to identify means of maintaining system reliability while addressing the state’s goals and mandates in a cost-effective way through creation of proper market mechanisms.

Prioritize

7 Constraint Specific Transmission Shortage Pricing (SOM)

7.1 Problem / Opportunity

Transmission facility and line ratings limit the amount of energy that can flow from one location to the next on the bulk electric system. As transmission constraints arise, the NYISO’s energy market software prices the quantity of energy that would be necessary to alleviate them. The existing transmission constraint pricing logic applies a single graduated pricing mechanism to all facilities assigned a non-zero constraint reliability margin (CRM) value. Under the current pricing logic, some transmission constraints are relaxed without being resolved by the graduated mechanism.

In 2018, the NYISO’s Constraint Specific Transmission Demand Curves study concluded that certain enhancements to the current logic would be beneficial and should be further explored with stakeholders. Based on this study, it is expected that the NYISO and its stakeholders will complete a Market Design in 2021 to utilize a revised and more graduated transmission demand curve mechanism that better accounts for the various non-zero CRM values assigned to facilities. Under this new construct, transmission demand curve prices will increase with the severity of transmission overloads. The design reduces occurrences of constraint relaxation by instead seeking to resolve constraints for internal facilities through use of a graduated transmission demand curve mechanism that includes pricing values for shortages that exceed applicable CRM values.

7.2 Project Objective(s) & Anticipated Deliverable(s)

The 2022 deliverable for this project will be Functional Requirements.

7.3 Project Justification

The transmission constraint pricing logic enables the NYISO’s market software to re-dispatch suppliers efficiently in the short term to alleviate constraints, and incentivizes long-term investment in locations where suppliers could provide the greatest benefits.

8 Coordination of Interconnection and Transmission Expansion Study

8.1 Problem / Opportunity

The NYISO supports several different interconnection and transmission expansion processes to evaluate the reliability impact of transmission and generation projects that seek to interconnect to FERC-jurisdictional interconnection facilities.

Certain transmission projects are evaluated under the Transmission Interconnection Procedures (TIP) in OATT Attachment P. Such Transmission Projects include all proposed transmission expansions of the New York State Transmission System, regardless of whether the Transmission Developer seeks cost allocation under the NYISO OATT or proposes a market-based project, other than: 1) a new transmission facility or upgrade to an existing transmission facility pursued by a Transmission Owner (TO) as part of a Local Transmission Plan (LTP) or NYPA transmission plan that is not subject to the NYISO’s competitive selection process under Attachment Y and for which the TO is not seeking regional cost allocation under the NYISO OATT, and 2) Class Year Transmission Projects seeking CRIS that fall under the NYISO Large Facility Interconnection Procedures in Attachment X to the NYISO OATT.

Other transmission projects are evaluated under OATT 3.7 and would include, for example, LTP projects and NYPA transmission plan projects.

All new Large Generating Facilities and Class Year Transmission Projects that propose to interconnect to the NYS Transmission System or Distribution System are subject to the NYISO interconnection procedures in OATT Attachments S and X. Also, projects that materially increase the capacity of an existing Large Generating Facility or Class Year Transmission Project that is interconnected to the NYS Transmission System or Distribution System, or to make a material modification to the operating characteristics of such Large Facilities, also are subject to the NYISO’s interconnection procedures. Similarly, Small Generating Facilities that propose to interconnect to the NYS Transmission System or Distribution System are subject to the NYISO’s interconnection procedures in OATT Attachment Z.

Each set of interconnection and transmission expansion procedures has base case inclusion rules that establish the updated base case at the start of each study. As a result, it is conceivable for projects to proceed in different interconnection study processes without taking into account projects in another study process that could directly impact each other. The chance of this circumstance occurring is now more likely to be encountered given the transformation of the grid that will be needed to meet CLCPA requirements.

In addition, the NYISO’s interconnection procedures provide a mechanism for updates to the Connecting Transmission Owner’s system representation, including distribution level updates provided by the Connecting Transmission Owner. With the increasing number of distribution-level interconnections proceeding outside the NYISO interconnection queue, it is important to capture the collective reliability impacts of projects in both NYISO and TO interconnection queues.

Revising the interconnection and transmission expansion tariffs to provide for coordination among the various processes – both NYISO and Connecting Transmission Owner interconnection study processes – would mitigate the potential for inconsistent treatment among projects developers, would provide for more comprehensive study results, and would help avoid not having an explicit tariff process to address the potential for interactions between projects in different processes.

8.2 Project Objective(s) & Anticipated Deliverable(s)

The 2022 deliverable for this project would be Market Design Complete.

- Tariff Updates
- Potential for identification of new requirements for Salesforce Portal

8.3 Project Justification

In addition to the benefits described in the objectives above, this project would also lead to improved efficiencies of the interconnection study process.

9 CRIS Expiration Evaluation

9.1 Problem/Opportunity

As part of the Class Year Redesign project, the NYISO identified proposals providing for more stringent CRIS expiration rules. Some of those proposals were implemented as part of that initiative, while others were deferred for later consideration. Although the new CRIS rules are expected to prevent retention of CRIS by certain facilities not participating in the ICAP market and increase deliverability “headroom,” the rules, as accepted by FERC and implemented by the NYISO, do not significantly address circumstances under which facilities can retain their CRIS beyond the effective date of their retirement for up to three years and retain unused CRIS with minimal participation in the ICAP market under Section 25.9.3 of the NYISO Open Access Transmission Tariff (OATT).

The current tariff provisions may allow facilities to retain CRIS that, if terminated, could eliminate the need for deliverability upgrades or require less costly deliverability upgrades, thereby facilitating new entry. For example, the existing rules allow a facility to retain its full CRIS by offering as little as 1 MW into the capacity market. Additionally, a facility is able to retain all CRIS

obtained for up to three years after it retires, rather than immediately making its unused CRIS available to other new entrants.

Modifying the current tariff language with respect to CRIS transfers may allow for more flexibility as more public policy resources come on to the system. Modifications could include exploring options to include same-location transfers to better facilitate these new entrants.

9.2 Project Objective(s) & Anticipated Deliverable(s)

Continuing the work from the 2021, the objective of this project is to develop modifications to CRIS Expiration rules as well as the rules surrounding CRIS Transfers. The milestone for 2022 is a Market Design Complete.

9.3 Project Justification

This project will seek to further enhance and provide additional clarification to the CRIS expiration rules. Further enhancements to the CRIS expiration rules will more appropriately address the retention of CRIS by retired facilities and facilities no longer fully participating in the ICAP market.

Finally, this project will seek to increase the capacity deliverability headroom and potentially lower the cost of market entry to future facilities seeking to participate in the ICAP market.

10 Dynamic Reserves (SOM)

10.1 Problem / Opportunity

Today, the NYISO procures fixed quantities of operating reserves in specified regions across the state. Under this structure, the static modeling of reserve regions and their associated requirements may not optimally reflect the varying needs of the grid to respond to changes in system conditions. These system conditions are expected to become more variable as new resources enter into the market in the coming years.

Based on New York State Reliability Council, L.L.C. (NYSRC) rules, the NYISO is required to procure sufficient reserves to account for the single largest source contingency at all times. However, the current static modeling approach does not account for the potential for the largest source contingency changing based on system conditions and system topology every market run. Dynamically determining the operating reserve requirements could enhance system reliability and market efficiency based on the system needs at any time.

The NYSRC rules also require the NYISO to ensure that transmission facilities are not loaded above their Long-Term Emergency (LTE) rating, post-contingency. In some cases within NYC, the NYISO is permitted to operate transmission facilities above LTE, using generating capacity not otherwise scheduled to provide energy and phase angle regulator actions to quickly secure the transmission facilities, post-contingency. This offers opportunities to reduce production costs by relaxing the transmission limits of facilities that feed New York City load pockets. Currently, operating reserve providers in these NYC load pockets are not compensated for the avoided transmission

congestion they enable by allowing certain facilities to be secured to a rating that is higher than LTE.

Therefore, Dynamic Reserves would enhance the current modeling by: (i) allowing the adjustment of the minimum operating reserve requirements based upon the single largest source contingency and (ii) accounting for transmission capability when determining reserve needs within a constrained area. These enhancements could allow the scheduling of energy above the minimum operating reserve requirements from individual suppliers when sufficient reserves are available and also the shifting of reserves to lower-cost regions when transmission capability exists. A dynamic reserve procurement methodology could improve market efficiency through enhancing competition among suppliers, and better aligning market outcomes with how the power system is operated.

10.2 Objective(s) & Anticipated Deliverable(s)

The market design will seek to leverage the recommendations from the study being conducted in 2021 and develop potential changes to the NYISO’s market software and market rules to facilitate more efficient scheduling of operating reserves based on system conditions. Additionally, if determined to be feasible in the prototyping effort as part of the 2021 study, such enhancements could facilitate the capability for reserves to be scheduled in more cost-effective regions if sufficient transmission capability is available to deliver the reserves to another location/reserve region, post-contingency. Finally, the 2021 study is expected to provide additional information regarding how to most efficiently incorporate potential reserve requirements within certain load pockets in New York City into the market software. The deliverable for this effort in 2022 will be Market Design Concept Proposed.

10.3 Project Justification

As the markets and grid are expected to rapidly evolve in the coming years, the modeling of reserves will need to also evolve and become more flexible. The Market Monitoring Unit (MMU) has recommended that the NYISO “[d]ynamically adjust operating reserve requirements to account for factors that increase or decrease the amount of reserves that must be held on internal resources [SOM Recommendation 2015-16].” Dynamic Reserves would seek to ensure the reserve requirements and procurement of the reserves adequately reflect the conditions of the system. Specifically, the reserve modeling should dynamically account for the single largest source contingency or transmission capability into a region. This would improve market efficiency by allowing more energy to be produced from a single source if adequate reserves are available and also reserves to be scheduled in a less expensive regions when there is available transmission capability to import power into a more constrained region post-contingency. Dynamic reserve procurements present opportunities to enhance grid resilience, incentivize resource flexibility, lower total production costs, and increase efficiency in meeting applicable reserve requirements.

This project also considers an additional recommendation made by the MMU in past State of the Market Reports. The MMU has recommended that the NYISO “[c]onsider rules for efficient

pricing and settlement when operating reserve providers provide congestion relief [Recommendation 2016-1].”

11 Hybrid Aggregation Model

11.1 Problem / Opportunity

The NYISO’s market rules do not currently allow an ESR and another Generator to be co-located at a single point of interconnection and share the same point identifier (PTID). Instead, where an ESR and another Generator are co-located behind the same point of interconnection, each resource type must be separately metered and have its own PTID.

11.2 Project Objective(s) & Anticipated Deliverable(s)

This project is distinct from the DER and ESR Integration initiatives, but it will build on work completed as part of those initiatives. This project is a continuation of the 2021 Market Design Complete effort. The 2022 project deliverable is Functional Requirements.

11.3 Project Justification

State and Federal initiatives such as Renewable Energy Credit (REC) procurements provide incentives for developers to couple storage and intermittent renewable assets. Such programs are aimed at reducing the output volatility and improving the availability of intermittent resources. The 2020 deliverable developed a market participation model(s) for front-of-the-meter generators plus storage acting as two distinct resources with a shared injection limit that better align the NYISO’s market procurement with state and federal efforts to integrate more clean energy into the grid. The 2022 deliverable will establish the functional requirements necessary to implement a new market participation model to improve grid flexibility and resilience by enabling new resource types to provide their full capabilities.

12 Improved Duct-Firing Cycle Modeling (SOM)

12.1 Problem/Opportunity

Providers of reserves and regulation are currently required to achieve their emergency response rate over the entire range of operation. This is problematic for combined-cycle gas turbines (“CCGTs”) with duct firing because the response rate of the duct-firing portion is typically slower than the baseload portion of the plant. These plants cannot achieve the emergency response rate in the duct-firing portion of their range (typically the upper 10-20% of capability), which limits their availability to provide reserves and regulation.

This project would seek to develop a design that better utilizes the capability of each plant segment. Simpler alternatives may also be considered, such as: (1) testing response rates for each MW block and not the emergency rate for the entire output of the plant or (2) allowing reserves and regulation to be provided for just the baseload output of the plant.

12.2 Project Objective(s) & Anticipated Deliverable(s)

The 2022 project deliverable would be Market Design Concept Proposed. The project would evaluate the market enhancements that would be required for a combined-cycle generator to reflect its operating characteristics in the duct-burning range as well as the benefits of this functionality.

12.3 Project Justification

There are currently many combined cycle generators in the New York Control Area and the majority of these combined cycle generators have duct-firing capacity. These resources currently represent a large source of dispatchable resources. Having access to these resources' full dispatchable capability will become increasingly important as generation from intermittent resources grows over the coming years. Enabling their participation will provide consumer benefits as increased competition could result in lower market prices and greater availability of resource capability to provide various ancillary services. Thus, the project would seek to evaluate the enhancements to the scheduling of a generator's capacity that would provide more flexibility to participate in the reserves and regulation markets.

13 Improving Capacity Accreditation (SOM)

13.1 Problem / Opportunity

The resource mix is evolving and the NYISO's markets need to continue to accurately value resources for the attributes they provide in meeting system reliability. Specifically for the Installed Capacity market, a review of resource adequacy concepts including the determination of capacity requirements as well as resources' contribution to reliability is needed.

As the resource mix transitions to one more dependent on resources that rely on the sun or wind to produce energy and/or resources with energy limitations, each resources' contribution to reliability also evolves. For example, as more solar generation is added to the grid the peak load shifts to non-daylight hours therefore making it less valuable to resource adequacy.

The resource adequacy contribution of all resources must be reviewed as the diversity and performance of the resource mix changes, and must be accurately reflected in the Installed Capacity market and its processes.

13.2 Project Objective(s) & Anticipated Deliverable(s)

The objective for this project would be to expand on the principles established with the Expanding Capacity Eligibility, Tailored Availability Metric, and Capacity Valuation projects to apply to all resources. The deliverable for 2022 would be a Market Design Complete.

13.3 Project Justification

Properly valuing resources contribution to maintaining grid reliability, known as capacity accreditation, will provide the signals necessary to maintain a diverse resource mix. Enhancing

these capacity accreditation measures will allow the Installed Capacity market to continue to support grid reliability as the transition of the resource mix unfolds.

14 Internal Controllable Lines

14.1 Problem / Opportunity

As of April 2021, there are no internal controllable lines in operation within the NYCA. Although NYISO has high-level rules to allow Internal Unforced Capacity Deliverability Rights (UDRs) to participate within the ICAP Market, these rules also have gaps including, but not limited to, the determination of requirements for providing capacity on the Internal UDR and the determination of obligations for the Internal UDR that sells capacity.

Additionally, market rules for the scheduling and pricing of internal controllable lines within the Energy Market do not exist.

14.2 Project Objective(s) & Anticipated Deliverable(s)

The development of market rules for internal controllable lines that will support outcomes in the best interests of all stakeholders is needed. This project would begin with developing market rules for the scheduling and pricing of internal controllable lines within the Energy Market. Based on these newly developed rules, the NYISO would evaluate and, if necessary revise, the existing ICAP market rules for Internal UDRs to ensure compatibility with the expected operation of internal controllable lines in the Energy Market. These newly-developed rules must also consider how internal controllable lines could be used to support state and local programs.

This project will proceed to a Market Design Concept Proposed on a point-to-point internal controllable line and complete an assessment on the feasibility of implementing a multi-terminal internal controllable line. This would allow the NYISO to proceed with a market design on a point-to-point internal controllable lines if it is determined that the multi-terminal line problem is extremely complicated, but allow the NYISO to complete a market design for both point-to-point and multi-terminal internal controllable lines if no issues are found.

14.3 Project Justification

State and local initiatives such as Tier 4 REC procurements and NYC Local Law 97 provide incentives for developers to deliver renewable generation into congested areas using HVDC lines.