



Stakeholder Survey Results and NYISO Scoring of 2022 Proposed Market Projects

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Agenda

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- **Stakeholder Survey**
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Project Prioritization Phases, Milestones, Survey, and Timeline

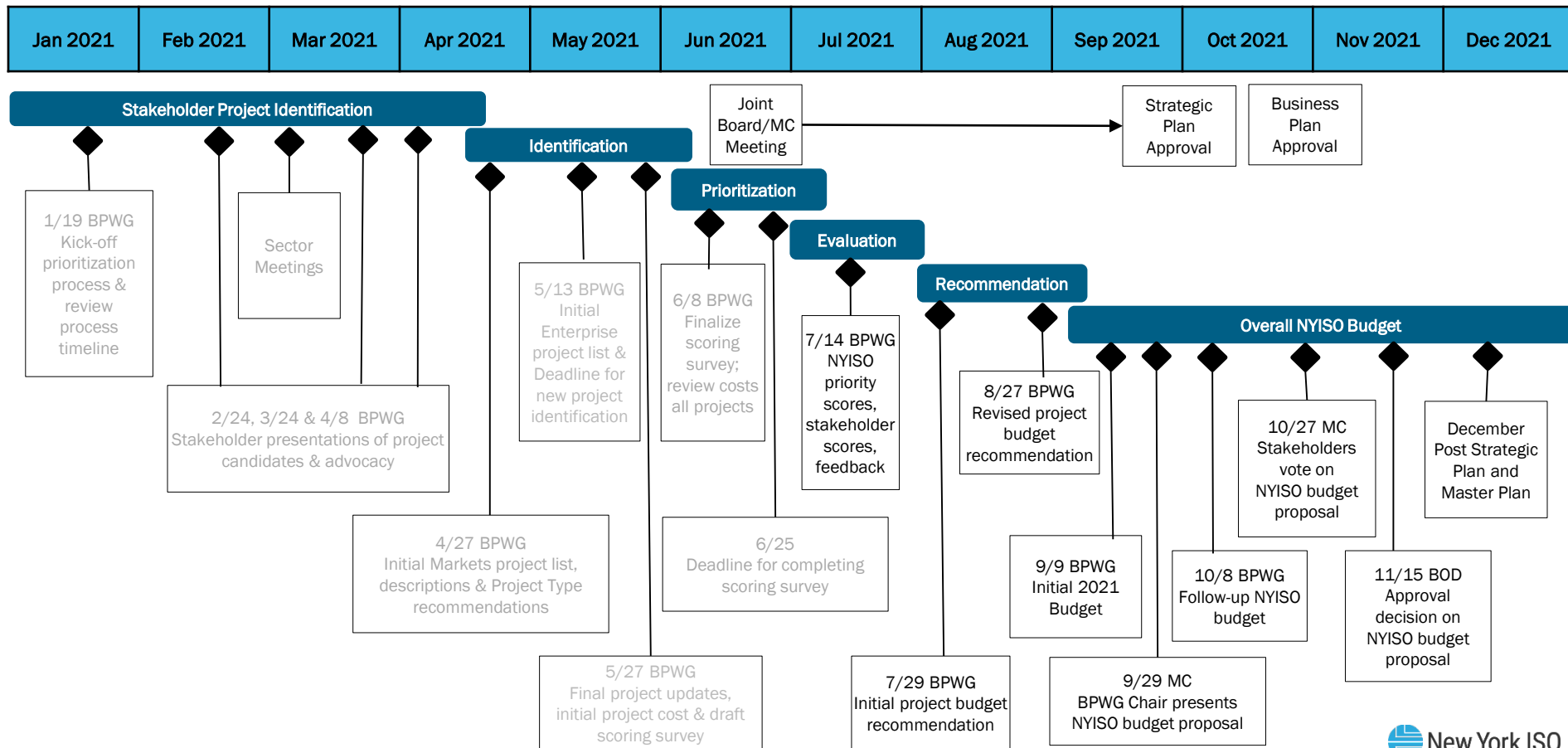
Project Prioritization Process

Phase	Description
Stakeholder Project Identification	Stakeholders may present project ideas at stakeholder meetings and sector meetings, receive feedback, and refine their proposal during this phase before the NYISO provides a comprehensive list of candidate projects for consideration.
Identification	The NYISO develops a Markets and Enterprise project candidate lists based on regulatory obligations, strategic initiatives, State of the Market recommendations, infrastructure enhancements, product plans, and stakeholder proposals. These project candidates are presented and further refined with stakeholder input during this phase.
Prioritization	This phase involves a stakeholder survey and the NYISO prioritization of projects. The stakeholder survey will facilitate an assessment of the relative priority of the topic within the portfolio and is used to determine stakeholder appeal. The NYISO prioritization incorporates the stakeholder appeal into objective criteria that reflect strategic alignment, expected outcomes, risks, and ability to execute in development of a priority score for each Market project.
Evaluation	This phase involves performing a feasibility assessment based on detailed cost and labor estimates, dependencies, priority scores, and stakeholder feedback.
Recommendation	This phase involves proposing a feasible set of project deliverables and related budget requirements. The proposal is refined as needed based on stakeholder feedback.

Project Category

Project Category	Description
Enterprise	Includes internal-facing technology and back office support projects that have no market rule changes. This list includes projects that may be noticeable to Market Participants. These projects are scored by the NYISO depending on their Project Type, NOT included in the stakeholder survey.
Market	Projects associated with market rule(s) including market design and study projects, as well as any project implementing market rule changes. These projects are scored by the NYISO and included in the stakeholder survey depending on their Project Type.

2022 Proposed Project Prioritization Timeline



Project Type

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.

Survey Scoring

Score Type	Description
Raw	Average of scores from each organization that has completed the stakeholder survey
Weighted	Scores from voting members only are averaged across the sector they are in and weighted based on governance voting weights
Sector	Number of sectors that supported a particular project. A sector is only counted if at least 25% or more of survey respondents from sector have allocated points and average across the survey respondents from the sector is 5 points or more.
Sum of Scores	The combined total of Raw, Weighted and Sector scores.

Survey Appeal Definition * Same as used in 2019

Criteria	Criteria Weight	HIGH	MEDIUM	LOW	NONE
		10	7	3	0
Appeal	15	<p>Broad Customer Support: Supported by 5 sectors; or either Raw or Weighted scores ≥ 5.00</p> <p>(5.00 is equivalent to 20% of survey respondents applying 25 points or more)</p>	<p>Moderate Customer Support: Supported by 4 sectors; or either Raw or Weighted scores ≥ 2.50</p> <p>(2.50 is equivalent to 10% of survey respondents applying 25 points or more)</p>	<p>Minimal Customer Support: Supported by 2 or 3 sectors; or either Raw or Weighted scores ≥ 1.25</p> <p>(1.25 is equivalent to 5% of survey respondents applying 25 points or more)</p>	<p>Little to No Customer Support</p>

Project Prioritization Criteria * Same as used in 2019

PRIORITIZATION CRITERIA						
Category	Criteria	Criteria Weight	HIGH	MEDIUM	LOW	NONE
			10	7	3	0
Strategy (If we do this project)	Leader in Reliability	10	Significantly improves NYISO ability to maintain NYCA Reliability	Moderately improves NYISO ability to maintain NYCA Reliability	Minimally improves NYISO ability to maintain NYCA Reliability	None
	Leader in Market Design	10	Significantly improves NYISO Market Design	Moderately improves NYISO Market Design	Minimally improves NYISO Market Design	None
	Leader in Technology Innovation	6	Significantly advances the IT strategy or technology improvement	Moderately advances the IT strategy or technology improvement	Minimally advances the IT strategy or technology improvement	None
	Sustain and Enhance Robust Planning Processes	9	Supports tariff, FERC, NPCC, or NYSERC compliance requirements for Planning Process	Supports reliability planning and/or Business Plan objectives	Required for SRP planning study efficiency or continuous improvement initiatives	None
Outcome (If we do this project)	NYISO Annual Cost Reduction	10	>\$500k savings-Direct and soft (labor)	>\$100k, <\$500k savings-Direct and soft (labor)	>\$10k,<\$100k savings - Direct and soft (labor)	<\$10k savings - Direct and soft (labor)
	Appeal	15	Broad Customer Support : Supported by 5 sectors with 25% or more of survey respondents per sector applying points and average across the survey respondents per sector of 5 points or more; or either raw or weighted scores equivalent to 20% of survey respondents applying 25 points or more	Moderate Customer Support: Supported by 4 sectors with 25% or more of survey respondents per sector applying points and average across the survey respondents per sector of 5 points or more; ; or either raw or weighted scores equivalent to 10% of survey respondents applying 25 points or more	Minimal Customer Support: Supported by 2 sectors with 25% or more of survey respondents per sector applying points and average across the survey respondents per sector of 5 points or more; ; or either raw or weighted scores equivalent to 5% of survey respondents applying 25 points or more	Little to No Customer Support
	Market Efficiency	10	Significant improvement	Moderate improvement	Minimal improvement	No impact
	Post Production Sustainability	5	Existing support structure and skills	Support structure exists but needs minimal modifications	Support structure exists but needs major modifications	No skills or support structure in place
Risk (If we do NOT do this project)	Compliance	10	Significant risk of compliance violation	Moderate risk of compliance violation	Minimal risk of compliance violation	None
	Business Process (inclusive of technology impact on business process)	5	Enterprise Wide and/or Bid to Bill Impact. The project impacts processes in most departments	Multiple Department Impact.	Department Wide Impact The project impacts many processes within a department	Only one or two processes impacted
	Reliability and Market	10	Mission-critical systems becoming non operational or above \$1 million market impact	Non mission-critical systems becoming non operational or \$100,000 - \$1 million market impact	Non mission-critical systems affected or \$10,000 - \$100,000 market impact	No or less than 10,000 impact
Execution (If we do this project)	Cost	4	Total project cost (current & future years) estimated <\$100k	Total project cost (current & future years) estimated >\$100k, <\$500k	Total project cost (current & future years) estimated >\$500, <\$1M	Total project cost (current & future years) estimated >\$1M
	Multi-Year Dependency	8	Continuation of a multi-year project - postponement significantly disrupts value of previous investments	Continuation of a multi-year project - postponement moderately disrupts value of previous investments	Continuation of a multi-year project - postponement minimally disrupts value of previous investments	None
	Complexity of Business and Technology	4	One area/technology	Cross-functional < 3 Areas/Technology	Highly Cross-functional/ Re-engineering	Complex, solution and impact unknown
	Compliance	8	Non-appealable, ordered by FERC / desired by NYISO and MP	Ordered by FERC, undesired by NYISO or MP	Potential order identified by FERC	No order identified by FERC

Milestone Definitions

Milestone	Definition
Issue Discovery	NYISO has facilitated education session(s) for stakeholder knowledge development of problem/issue, conducted stakeholder solicitation of potential solutions to address problem/issue, and summarized findings at a working group meeting for potential ranking and future project identification.
Study Defined	The scope of work for the study has been presented to stakeholders, including a discussion on the necessary input(s), assumption(s) and objective(s) of the study.
Study Complete	Scope of work to be performed has been completed; results and recommendations have been presented to the appropriate Business Owners and stakeholders.
Market Design Concept Proposed	NYISO has initiated or furthered discussions with stakeholders that explore potential concepts to address opportunities for market efficiency or administration improvements.
Market Design Complete	NYISO has developed with stakeholders a market design concept such that the proposal can be presented for a vote at the BIC or MC to define further action on the proposal.
Functional Requirements	NYISO has completed documentation of the functional requirements and the Business Owner has approved.
Architectural Design	The architectural design document is complete and software development is ready to begin.
Projects with the following Milestones will generally be proposed as Continuing in future years, subject to Stakeholder input	
Software Design	The software design document is complete and software development is ready to begin.
Development Complete	Development has been completed, packaged and approved by the Supervisor.
Deployment	Required software changes to support commitment have been integrated into the production environment.

Stakeholder Survey

Survey Participation

Sector	Sub Sector	2021 Survey			2020 Survey			2019 Survey		
		Num. Eligible Orgs.	Num. Comp.	Percent Participation	Num. Eligible Orgs.	Num. Comp.	Percent Participation	Num. Eligible Orgs.	Num. Comp.	Percent Participation
End Use Consumer	Gov. Sm. Cons. & Retail Aggr.	2	2	100%	2	2	100%	2	2	100%
"	Gov. State-wide Cons. Advocate	1	1	100%	1	1	100%	1	1	100%
"	Large Cons. Gov. Agency	1	0	0%	1	0	0%	1	0	0%
"	Large Consumer	5	5	100%	5	4	80%	5	4	80%
"	Small Consumer	5	5	100%	6	6	100%	7	6	86%
Generation Owner		21	9	43%	17	2	12%	15	5	33%
Other Supplier		35	13	37%	33	12	36%	35	13	37%
Public/Environment	Environmental	7	2	29%	7	2	29%	6	2	33%
"	Munis & Co-Ops	11	10	91%	11	9	82%	11	11	100%
"	State Power Authorities	2	2	100%	2	2	100%	2	2	100%
Transmission Owner		4	4	100%	4	4	100%	4	4	100%
Non Voting Entity		58	18	31%	62	11	18%	60	15	25%
Total		152	71	47%	151	55	36%	149	65	44%

Governance Weights 2021 Stakeholder Survey

Sector	Sub-Sector	Eligible Percentage	Subsector Percentage	Num. Eligible Orgs.	Num. Responses	Score Weights
End Use		20.0%		14	13	
	Gov. Sm. Cons. & Retail Aggr.		1.8%	2	2	2.0%
	Gov. State-wide Cons. Advocate		2.7%	1	1	3.0%
	Governmental Agency		2.0%	1	0	0.0%
	Large Consumer		9.0%	5	5	10.0%
	Small Consumer		4.5%	5	5	5.0%
Generation Owner		21.5%		21	9	21.5%
Other Supplier		21.5%		35	13	21.5%
Public Power / Environmental		17.0%		20	14	
	Environmental		2.0%	7	2	2.0%
	Munis & Co-Ops		7.0%	11	10	7.0%
	State Power Authorities		8.0%	2	2	8.0%
Transmission Owner			20.0%	4	4	20.0%

Survey Appeal Score * Stakeholder survey details posted with today's materials

- Projects are ordered by Weighted Score

Proposed Projects	Raw Score (Avg.)	Weighted Score	Sector Count	Sum of Scores	Appeal Score	Stakeholder Appeal
Internal Controllable Lines	● 12.8	● 12.2	● 5.0	30.0	10	High
Improving Capacity Accreditation (SOM)	● 9.2	● 12.1	● 3.0	24.3	10	High
Coordination of Interconnection and Transmission Expansion Study	● 9.8	● 10.9	● 4.0	24.8	10	High
Hybrid Aggregation Model	● 9.7	● 9.7	● 4.0	23.4	10	High
Engaging the Demand Side	● 9.3	● 8.5	● 3.0	20.8	10	High
Dynamic Reserves (SOM)	● 6.1	● 7.6	● 2.0	15.7	10	High
Grid Services from Renewable Generators	● 5.7	● 5.7	● 3.0	14.4	10	High
Time Differentiated TCCs	● 4.9	● 4.7	● 1.0	10.6	7	Medium
CRIS Expiration Evaluation	● 3.0	● 3.8	● 2.0	8.8	7	Medium
Improved Duct-Firing Cycle Modeling (SOM)	● 3.7	● 2.9	● 1.0	7.6	7	Medium

●	= 10, High Stakeholder Appeal
●	= 7, Medium Stakeholder Appeal
●	= 3, Low Stakeholder Appeal
●	= 0, Little to None Stakeholder Appeal

Survey Appeal Score * Stakeholder survey details posted with today's materials

- Projects are ordered by Weighted Score

Proposed Projects	Raw Score (Avg.)	Weighted Score	Sector Count	Sum of Scores	Appeal Score	Stakeholder Appeal
Storage as Transmission	3.4	2.7	2.0	8.1	7	Medium
Demand Curve Translation Enhancement (SOM)	1.2	2.1	1.0	4.3	3	Low
Constraint Specific Transmission Shortage Pricing (SOM)	1.6	2.1	0.0	3.7	3	Low
5 Minute Transaction Scheduling	2.6	2.1	1.0	5.7	7	Medium
Capacity Demand Curve Adjustments	1.3	1.9	0.0	3.2	3	Low
Advancing NYISO Transparency	2.9	1.5	0.0	4.4	7	Medium
More Granular Operating Reserves (SOM)	2.5	1.4	0.0	3.9	3	Low
Expanding Application of Peak Hour Forecasts	0.5	1.2	1.0	2.7	0	None
Reserving Capacity for TCC Balance-of-Period (BoP)	1.3	1.2	0.0	2.5	3	Low
Eliminate Offline GT Pricing (SOM)	0.9	1.2	1.0	3.1	0	None

	= 10, High Stakeholder Appeal
	= 7, Medium Stakeholder Appeal
	= 3, Low Stakeholder Appeal
	= 0, Little to None Stakeholder Appeal

Survey Appeal Score * Stakeholder survey details posted with today's materials

- Projects are ordered by Weighted Score

Proposed Projects	Raw Score (Avg.)	Weighted Score	Sector Count	Sum of Scores	Appeal Score	Stakeholder Appeal
Multi-Level References	0.6	0.9	0.0	1.5	0	None
Adjustment of Energy Offer/Bid Floor (SOM)	0.7	0.8	0.0	1.5	0	None
Transmission Security in the ICAP Market	1.6	0.7	0.0	2.2	3	Low
15-Minute Transactions Enhancement	1.0	0.6	0.0	1.7	0	None
Enhanced BSM Forecasts Assumptions (SOM)	0.7	0.6	0.0	1.3	0	None
Eliminate Fees for CTS Transactions with PJM (SOM)	0.7	0.4	0.0	1.2	0	None
Long Island Reserve Constraint Pricing (SOM)	0.8	0.4	0.0	1.2	0	None
Locational Marginal Pricing of Capacity (SOM)	1.1	0.1	0.0	1.1	0	None
Lines in Series Constraint Pricing	0.1	0.0	0.0	0.1	0	None
Monthly Demand Curves (SOM)	0.2	0.0	0.0	0.2	0	None

	= 10, High Stakeholder Appeal
	= 7, Medium Stakeholder Appeal
	= 3, Low Stakeholder Appeal
	= 0, Little to None Stakeholder Appeal

Stakeholder Survey Comments

Stakeholder Survey Comments

Project	Organization	Comment
Adjustment of Energy Offer/Bid Floor (SOM)	Helix Ravenswood, LLC	The project is worthwhile working on at some time in the future, but there are currently higher priorities considering the apparent low levels of uplift.
Advancing NYISO Transparency	Taylor Biomass Energy, LLC	This is the only item I can opine on as we are not connected to grid at this time
Capacity Demand Curve Adjustments	COI Energy Services, Inc.	Demand curve adjustment is crucial to ensuring resource adequacy. The market should more dynamically calculate ICAP demand to incent more efficient demand-side energy use.
Capacity Demand Curve Adjustments	Helix Ravenswood, LLC	Considering the other critical capacity/resource adequacy projects and improvements to ensure resource adequacy, it is premature to begin changing these aspects of the demand curve until more is known with respect to BSM and accreditation.
Constraint Specific Transmission Shortage Pricing (SOM)	Helix Ravenswood, LLC	The project is worthwhile working on at some time in the future, but there are currently higher priorities.
Coordination of Interconnection and Transmission Expansion Study	North East Offshore, LLC	North East Offshore, LLC requests that any changes to the Tariff do not affect projects that are currently participating in a Class Year so that setbacks to the interconnection process do not occur.

Stakeholder Survey Comments

Project	Organization	Comment
Dynamic Reserves (SOM)	COI Energy Services, Inc.	Dynamic reserves, including demand response, will be crucial in an efficient grid with heavy intermittent penetration.
Dynamic Reserves (SOM)	Helix Ravenswood, LLC	The project is worthwhile working on at some time in the future, but there are currently higher priorities.
Engaging the Demand Side	COI Energy Services, Inc.	Mandatory Hourly Pricing is effectively bypassed. There is no incentive for operational efficiency from the demand side. Without fixing this structural flaw, it will be impossible to achieve clean energy requirements.
Engaging the Demand Side	Nucor Steel Auburn, Inc.	Essential actions that require definition and focus
Hybrid Aggregation Model	COI Energy Services, Inc.	The current design flaw discourages investments that would firm up intermittent generation. It must be revised.
Hybrid Aggregation Model	Enerwise Global Technologies, Inc. dba CPower	As NYISO indicated during the 6/17 ICAP meeting that aggregations for single DERs (other than DR) would not be able to be accommodated to comply with FERC Order 2222 and instead intends to deal with this issue in the Hybrid Aggregation model, we recommend that this project is addressed as early as possible with stakeholders.
Hybrid Aggregation Model	New York Battery and Energy Storage Technology Consortium	NYISO has stated that for FERC 2222 compliance they will not yet allow aggregations to perform services of the strongest asset as opposed to weakest in aggregation. NYISO indicated that this capability will be developed in the Hybrid Aggregation model, so in addition to the general importance of this project it is also critically important to support FERC 2222 compliance.

Stakeholder Survey Comments

Project	Organization	Comment
Hybrid Aggregation Model	NextEra Energy Marketing, LLC	<p>NextEra is concerned that the Hybrid Aggregation Model has not been assigned “continuing” status as a 2022 project by NYISO consistent with the designation assigned to this effort for the current project cycle. While we appreciate the incremental progress made in 2020 with the Co-Located Storage Resource effort, it was expressly stated by a number of parties at that time that they were willing to accept a “building block” approach based on the NYISO’s assurances that the hybrid piece would continue apace. The Hybrid Aggregation Model is the next logical step in the evolution of integrating storage with other technologies – both for renewable and non-renewable resources. Indeed, given other NYISO efforts such as capacity accreditation, the need to develop these rules expeditiously has only become more pronounced. Assigning Hybrid Aggregation as among the various “priority projects” for ranking by stakeholders risks stagnating these efforts despite the positive momentum that began to be gained in 2020, as well as the progress anticipated by FERC and New York State agencies in integrating storage resources.</p>
Hybrid Aggregation Model	NYS Energy Research & Dev. Authority (NYSERDA)	<p>We don’t believe that the Hybrid Aggregated Storage project should have required prioritization. The project is critical to certain developers who are seeking to connect and participate in markets, and NYISERDA is aware of 100MW of projects at late stages of development and hundreds more MWs under development at earlier stages. The Co-located model is an inadequate solution if the only Hybrid model. We recommend the NYISO consider revisions to its guidelines for what constitutes a “Continuing” project.</p>

Stakeholder Survey Comments

Project	Organization	Comment
Improving Capacity Accreditation (SOM)	Helix Ravenswood, LLC	In both the short and long run, valuing the contribution of resources to maintaining resource adequacy is critical in order for the NYISO market to provide the proper signals as opposed to relying on out-of-market reliability agreements. NYISO studies indicate 30,000 MW of dispatchable capacity resources will continue to be needed in the future even when renewable resources are providing 90% of energy needs. There was conceptual agreement at the NYISO Joint Board/MC meeting that this is a very important market improvement.
Internal Controllable Lines	Helix Ravenswood, LLC	This project is critical in that the Services Tariff establishes the ability of such resources to sell capacity and energy but the associated detailed settlement and dispatch procedures were not developed. Moreover, these types of resources will be developed in the NYISO market in response to state policies and therefore the NYISO must complete its processes to align with the previously approved services tariff.
Locational Marginal Pricing of Capacity (SOM)	COI Energy Services, Inc.	Locational Marginal Capacity pricing would be a strong tool to incent demand-side engagement in the capacity market.
More Granular Operating Reserves (SOM)	Helix Ravenswood, LLC	The project is worthwhile working on at some time in the future, but there are currently higher priorities.

Stakeholder Survey Comments

Project	Organization	Comment
Reserving Capacity for TCC Balance-of-Period (BoP)	Helix Ravenswood, LLC	<p>This project is contrary to the intent of TCCs. Suppliers rely on transmission capacity released in multi-round Centralized TCC auctions to hedge exposure to congestion risk. 12-months and 6-months TCC products align well with tenors of energy revenue and fuel cost hedges available in bilateral and exchange traded markets. The reduction in transmission capacity sold in these auctions will diminish the ability to procure TCC hedges and protect against congestion risks. Monthly TCC auctions were designed to allow market participants to "reconfigure" their hedges in the event that they expect their supply to be unavailable due to an outage or other interruption. The prices in monthly TCC auctions are most likely to reflect the most up-to-date information on weather, transmission and generation outages, and other underlying congestion drivers. Just as if there were daily TCC products, their pricing would likely be very close, on average, to the Day-Ahead market outcome. At this point, their value as hedging instruments would be greatly diminished. Allowing suppliers to hedge their exposure to congestion risks is one of the fundamental goals of TCC market design. Centralized auctions are best suited for achieving this because suppliers can procure hedges against unexpected congestion events ahead of time, covering longer periods. Removing transmission capacity from the centralized auctions would diminish suppliers' ability to do so.</p>

Stakeholder Survey Comments

Project	Organization	Comment
Please enter any additional comments below:	Helix Ravenswood, LLC	Although there are many other worthwhile projects on the list, the NYISO needs to focus on making sure its markets maintain reliability and sends the appropriate signals to the necessary resources for the services that maintain that reliability during the transition to a more intermittent and renewable system. Other projects may provide incremental value, the projects noted are fundamental to the NYISO ongoing competitive market, reliability and state policies.
Please enter any additional comments below:	Taylor Biomass Energy, LLC	Provide Additional consideration(s) be granted for baseload, innovative, first-commercial alternative energy technologies entering the NYS market place & NYISO. This type of investment must have a PPA & interconnection agreement in order to obtain financing. The timeline for financing continues to increase while decreasing schedule time.
Please enter any additional comments below:	Enerwise Global Technologies, Inc. dba CPower	While unable to assign points to Enterprise Projects, CPower supports Project #27 for the Meter Services System to build a system to accommodate management of Meter Service Entity requirements and data submissions (i.e. Meter Inventory, etc.).
Please enter any additional comments below:	COI Energy Services, Inc.	Engaging the demand side must be prioritized. The ESCO loopholes exempting large businesses from MHP must be closed. Smaller customers must be offered MHP rates that are not cost-prohibitive (as they are currently). The system should eventually move to a locational-based marginal pricing model. There should be more of an emphasis on using demand response to shave peaks, balance loads, and provide ancillary services. These market incentives will help address all the other problems listed in this survey.

Stakeholder Survey Comments

Project	Organization	Comment
Please enter any additional comments below:	Shell Energy North America (US), L.P.	While not an option, I suspect federal and state initiatives will require attention to offshore wind resource transmission integration and interregional project development.
Please provide any recommendations you may have for future enhancements to the Project Prioritization Process:	Appian Way Energy Partners East, LLC	Really well done – Thanks Brian! Nice job.
Please provide any recommendations you may have for future enhancements to the Project Prioritization Process:	Taylor Biomass Energy, LLC	Provide exemption to schedule for first commercial, base load, alternative, innovative energy technology introduced into NYS & NYISO under 25MWh. Wind & solar are not appropriate for this definition as they both have been in existence for almost 150 years

NYISO Scoring

NYISO Scoring

Product / Project	Product portfolio	Leader in Reliability	Leader in Market Design	Leader in Technology Innovation	Sustain and Enhance Robust Planning Processes	NYISO Annual Cost Reduction	Appeal*	Market Efficiency	Post Production Sustainability	Compliance	Business Process (inclusive of technology impact on business process)	Reliability and Market	Cost	Multi-Year Dependency	Complexity of Business and Technology	Compliance	Score* (1-1240)
		10	10	6	9	10	15	10	5	10	5	10	4	8	4	8	
Improving Capacity Accreditation (SOM)	Capacity Market	10	10	0	7	0	10	7	0	0	0	0	3	3	7	0	547
Dynamic Reserves (SOM)	Energy Market	7	10	0	0	0	10	10	7	0	7	0	0	3	0	0	514
Coordination of Interconnection and Transmission Expansion Study	Planning	3	0	0	7	3	10	3	3	3	3	3	7	0	7	0	449
Grid Services from Renewable Generators - Requested by NYSERDA	Energy Market	3	7	0	0	0	10	7	3	0	0	0	0	3	7	0	387
Internal Controllable Lines	New Resource	3	7	0	3	0	10	7	3	0	0	0	0	0	3	0	374
Improve Duct-Firing Modeling (SOM)	Energy Market	7	7	0	0	0	7	7	3	3	0	0	0	0	3	0	372
CRIS Expiration Evaluation	Capacity Market	3	3	0	3	0	7	7	3	0	0	0	7	3	7	0	357
Hybrid Aggregation Model	New Resource	3	7	0	0	0	10	3	3	0	0	0	0	3	3	3	355
Engaging the Demand Side	New Resource	0	7	0	0	0	10	7	3	0	0	0	0	0	3	0	317
More Granular Operating Reserves (SOM)	Energy Market	7	7	0	0	0	3	7	3	0	0	0	0	3	3	0	306

*The score for an individual project is computed by taking the sum of project score times the weight of the category, which is listed in the top row of the table. Projects not included in the stakeholder survey have no appeal category score. Project scores with no appeal score have been normalized to those with scores by multiplying their raw score by the ratio of the weights with appeal category divided by the weights without appeal category (i.e. score = raw score * 124 / 109).

NYISO Scoring

Product / Project	Product portfolio	Leader in Reliability	Leader in Market Design	Leader in Technology Innovation	Sustain and Enhance Robust Planning Processes	NYISO Annual Cost Reduction	Appeal*	Market Efficiency	Post Production Sustainability	Compliance	Business Process (inclusive of technology impact on business process)	Reliability and Market	Cost	Multi-Year Dependency	Complexity of Business and Technology	Compliance	Score* (1-1240)
		10	10	6	9	10	15	10	5	10	5	10	4	8	4	8	
5 Minute Transaction Scheduling - Requested by HQUS	Energy Market	3	7	0	0	0	7	7	3	0	0	0	0	0	3	0	302
Constraint Specific Transmission Shortage Pricing (SOM)	Energy Market	3	7	0	0	0	3	7	7	0	0	0	0	3	7	0	302
Demand Curve Translation Enhancement (SOM)	Capacity Market	0	7	0	0	0	3	7	7	0	0	10	0	10	0	0	300
Reserving Capacity for TCC Balance-of-Period (BOP) Auctions	TCC	0	7	0	0	0	3	3	7	0	3	3	7	0	10	0	293
Time Differentiated TCCs – Requested by Calpine and Vitol	TCC	0	7	0	0	0	7	3	3	0	3	0	0	3	7	0	287
Advancing NYISO Transparency - Requested by DC Energy	Energy Market	0	3	0	0	0	7	3	3	0	7	0	7	0	7	0	271
Lines in Series Constraint Pricing	Energy Market	7	7	0	0	0	0	7	3	0	3	0	0	0	7	0	268
Capacity Demand Curve Adjustments	Capacity Market	3	7	0	0	0	3	3	7	0	0	0	3	0	3	0	234
Transmission Security in the ICAP Market	Capacity Market	7	3	0	3	0	3	3	3	0	0	0	0	0	3	0	229
Storage as Transmission - Requested by NYSERDA	New Resource	0	7	0	0	0	7	0	3	0	0	0	0	0	3	0	202

*The score for an individual project is computed by taking the sum of project score times the weight of the category, which is listed in the top row of the table. Projects not included in the stakeholder survey have no appeal category score. Project scores with no appeal score have been normalized to those with scores by multiplying their raw score by the ratio of the weights with appeal category divided by the weights without appeal category (i.e. score = raw score * 124 / 109).

NYISO Scoring

Product / Project	Product portfolio	Leader in Reliability	Leader in Market Design	Leader in Technology Innovation	Sustain and Enhance Robust Planning Processes	NYISO Annual Cost Reduction	Appeal*	Market Efficiency	Post Production Sustainability	Compliance	Business Process (inclusive of technology impact on business process)	Reliability and Market	Cost	Multi-Year Dependency	Complexity of Business and Technology	Compliance	Score* (1-1240)
		10	10	6	9	10	15	10	5	10	5	10	4	8	4	8	
Eliminate Offline GT Pricing (SOM)	Energy Market	0	7	0	0	0	0	7	3	0	0	0	3	0	7	0	195
Adjustment of Energy Offer/Bid Floor (SOM)	Energy Market	0	3	0	0	0	0	7	7	0	0	0	7	0	7	0	191
Locational Marginal Pricing of Capacity (SOM)	Capacity Market	3	7	0	3	0	0	3	0	0	0	0	0	3	0	0	181
Long Island Reserve Constraint Pricing (SOM)	Energy Market	0	3	0	0	0	0	7	7	0	0	0	3	0	7	0	175
Multi-Level References	Energy Market	0	7	0	0	0	0	3	7	0	0	0	0	0	7	0	163
Eliminate Fees for CTS Transactions with PJM (SOM)	Energy Market	0	3	0	0	0	0	7	7	0	0	0	3	0	3	0	159
Monthly Demand Curves (SOM)	Capacity Market	3	7	0	0	0	0	3	3	0	0	0	0	0	3	0	157
Enhanced BSM Forecasts Assumptions (SOM)	Capacity Market	0	3	0	0	0	0	3	7	0	0	0	7	0	7	0	151
Expanding Application of Peak Hour Forecasts	Capacity Market	0	3	0	0	0	0	3	7	0	0	0	7	0	7	0	151
15-Minute Transactions Enhancement - Requested by HQUS	Energy Market	0	3	0	0	0	0	3	3	0	0	0	3	0	3	0	99

*The score for an individual project is computed by taking the sum of project score times the weight of the category, which is listed in the top row of the table. Projects not included in the stakeholder survey have no appeal category score. Project scores with no appeal score have been normalized to those with scores by multiplying their raw score by the ratio of the weights with appeal category divided by the weights without appeal category (i.e. score = raw score * 124 / 109).

2022 Market Projects Candidates

(No changes from June 8th BPWG materials)

Mandatory 2022 Market Projects

Item	Project	Product Area	Project Type	2022 Proposed Deliverable	2021 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
1	Capacity Value Study	Capacity Market	Mandatory	Study Defined		0.18	0.00	0.45	0.63
2	CRIS Tracking	Capacity Market	Mandatory	Development Complete	Software Design	0.17	0.00	0.00	0.17
3	DER Participation Model	New Resource	Mandatory	Deployment	Deployment	4.67	0.10	6.50	11.27
4	Support TSO and DSO Coordination Efforts	New Resource	Mandatory	Issue Discovery	Issue Discovery	0.12	0.00	0.20	0.32

Continuing 2022 Market Projects

Item	Project	Product Area	Project Type	2022 Proposed Deliverable	2021 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
5	Comprehensive Mitigation Review	Capacity Market	Continuing	Deployment	Market Design Complete	0.16	0.00	0.60	0.76
6	Grid in Transition	New Resource	Continuing	Study Complete	Issue Discovery	0.17	0.00	0.50	0.67

Prioritize 2022 Market Projects

Item	Project	Product Area	Project Type	2022 Proposed Deliverable	2021 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
7	15-Minute Transactions Enhancement - Requested by HQUS	Energy Market	Prioritize	Market Design Complete		0.09	0.00	0.25	0.34
8	5 Minute Transaction Scheduling - Requested by HQUS	Energy Market	Prioritize	Market Design Concept Proposed		0.10	0.00	0.25	0.35
9	Adjustment of Energy Offer/Bid Floor (SOM)	Energy Market	Prioritize	Market Design Complete		0.06	0.00	0.00	0.06
10	Advancing NYISO Transparency - Requested by DC Energy	Energy Market	Prioritize	Deployment		0.13	0.00	0.25	0.38
11	Capacity Demand Curve Adjustments	Capacity Market	Prioritize	Study Complete		0.13	0.00	0.35	0.48
12	Constraint Specific Transmission Shortage Pricing (SOM)	Energy Market	Prioritize	Functional Requirements	Market Design Complete	0.10	0.00	0.00	0.10
13	Coordination of Interconnection and Transmission Expansion Study	Planning	Prioritize	Market Design Complete		0.06	0.00	0.00	0.06

Prioritize 2022 Market Projects

Item	Project	Product Area	Project Type	2022 Proposed Deliverable	2021 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
14	CRIS Expiration Evaluation	Capacity Market	Prioritize	Market Design Complete	Market Design Concept Proposed	0.13	0.00	0.00	0.13
15	Demand Curve Translation Enhancement (SOM)	Capacity Market	Prioritize	Market Design Complete		0.06	0.00	0.00	0.06
16	Dynamic Reserves (SOM)	Energy Market	Prioritize	Market Design Concept Proposed	Study Complete	0.12	0.00	0.40	0.52
17	Eliminate Fees for CTS Transactions with PJM (SOM)	Energy Market	Prioritize	Market Design Concept Proposed		0.05	0.00	0.00	0.05
18	Eliminate Offline GT Pricing (SOM)	Energy Market	Prioritize	Market Design Complete		0.11	0.00	0.00	0.11
19	Engaging the Demand Side	New Resource	Prioritize	Study Complete	Issue Discovery	0.18	0.00	0.25	0.43
20	Enhanced BSM Forecasts Assumptions (SOM)	Capacity Market	Prioritize	Market Design Concept Proposed		0.12	0.00	0.00	0.12

Prioritize 2022 Market Projects

Item	Project	Product Area	Project Type	2022 Proposed Deliverable	2021 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
21	Expanding Application of Peak Hour Forecasts	Capacity Market	Prioritize	Market Design Complete	Market Design Concept Proposed	0.08	0.00	0.00	0.08
22	Grid Services from Renewable Generators - Requested by NYSERDA	Energy Market	Prioritize	Market Design Concept Proposed	Study Complete	0.10	0.00	0.15	0.25
23	Hybrid Aggregation Model	New Resource	Prioritize	Functional Requirements	Market Design Complete	0.23	0.00	0.30	0.53
24	Improve Duct-Firing Modeling (SOM)	Energy Market	Prioritize	Market Design Complete		0.10	0.00	0.30	0.40
25	Improving Capacity Accreditation (SOM)	Capacity Market	Prioritize	Market Design Complete		0.32	0.00	0.40	0.72
26	Internal Controllable Lines	New Resource	Prioritize	Market Design Complete		0.36	0.00	0.40	0.76
27	Lines in Series Constraint Pricing	Energy Market	Prioritize	Study Complete		0.06	0.00	0.00	0.06

Prioritize 2022 Market Projects

Item	Project	Product Area	Project Type	2022 Proposed Deliverable	2021 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
28	Locational Marginal Pricing of Capacity (SOM)	Capacity Market	Prioritize	Market Design Concept Proposed		0.27	0.00	0.65	0.92
29	Long Island Reserve Constraint Pricing (SOM)	Energy Market	Prioritize	Market Design Complete		0.09	0.00	0.00	0.09
30	Monthly Demand Curves (SOM)	Capacity Market	Prioritize	Issue Discovery		0.11	0.00	0.00	0.11
31	More Granular Operating Reserves (SOM)	Energy Market	Prioritize	Market Design Concept Proposed		0.11	0.00	0.00	0.11
32	Multi-Level References	Energy Market	Prioritize	Functional Requirements		0.10	0.00	0.05	0.15
33	Reserving Capacity for TCC Balance-of-Period (BOP) Auctions	TCC	Prioritize	Software Design	Functional Requirements	0.25	0.00	0.00	0.25
34	Storage as Transmission - Requested by NYSERDA	New Resource	Prioritize	Market Design Concept Proposed		0.29	0.00	0.55	0.84

Prioritize 2022 Market Projects

Item	Project	Product Area	Project Type	2022 Proposed Deliverable	2021 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
35	Time Differentiated TCCs – Requested by Calpine and Vitol	TCC	Prioritize	Market Design Complete	Market Design Concept Proposed	0.17	0.00	0.20	0.37
36	Transmission Security in the ICAP Market	Capacity Market	Prioritize	Market Design Concept Proposed		0.25	0.00	0.13	0.38

Future 2022 Market Projects

Item	Project	Product Area	Project Type	2022 Proposed Deliverable	2021 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
37	Capacity Transfer Rights for Internal Transmission Upgrades (SOM)	Capacity Market	Future						
38	Carbon Pricing	Energy Market	Future		Software Design				
39	Enhanced PAR Modeling (SOM)	Energy Market	Future						
40	Long Island PAR Optimization and Financial Rights (SOM)	Energy Market	Future						
41	Review of Real-Time Market Structure (SOM)	Energy Market	Future						

Historic Budgets

2022 Proposed Projects Compared to Historic Approved Budgets

Project Budget*	Estimated Cost (in millions)				Mandatory	Continuing
	Labor	Capital	Prof. Serv.	Total		
2022 Proposed Projects	16.82	12.65	18.65	48.12	12.39	17.23
2021 Approved	11.58	5.92	9.02	26.52	7.58	14.15
2020 Approved	13.57	5.73	12.40	31.69	10.48	10.74
2019 Approved*	11.47	4.65	12.82	28.95	9.40	14.82

* Excludes EMS/BMS Upgrade project as it had separate financing

Comparison of Proposed Projects Budgets

Project Budget*	Estimated Cost (in millions)				Mandatory	Continuing
	Labor	Capital	Prof. Serv.	Total		
2022 Proposed Projects	16.82	12.65	18.65	48.12	12.39	17.23
2021 Proposed Projects	16.41	14.50	13.82	44.73	11.73	19.64
2020 Proposed Projects	17.98	6.12	20.16	44.26	13.31	12.82
2019 Proposed Projects*	14.88	5.44	18.10	38.42	10.02	16.40

* Excludes EMS/BMS Upgrade project as it had separate financing

Markets & Enterprise Budget Breakdown

	Markets Estimated Cost (in millions)					
Project Budget*	Labor	Capital	Prof. Serv.	Total	Mandatory	Continuing
2022 All Proposed	9.76	0.10	13.13	22.99	12.39	1.44
2021 Approved	6.45	0.10	5.54	12.09	5.80	4.58
2020 Approved	6.89	0.27	5.85	13.01	10.10	0.77

	Enterprise Estimated Cost (in millions)					
Project Budget*	Labor	Capital	Prof. Serv.	Total	Mandatory	Continuing
2022 All Proposed	6.99	12.55	5.52	25.07	0.00	15.79
2021 Approved	5.13	5.82	3.49	14.44	1.77	9.57
2020 Approved	6.67	5.46	6.55	18.68	9.97	10.74

Note: The NYISO did not have separate Market and Enterprise categories prior to 2020

Next Steps

Next Steps

- Review the NYISO's initial project budget recommendation at the July 29th BPWG meeting
- Review the NYISO's revised project budget recommendation at the August 27th BPWG meeting
- Contact Brian Hurysz or Member Relations for any Project Prioritization related issues
 - Send to Brian Hurysz at bhurysz@nyiso.com or cell (518) 461-6405

Our mission, in collaboration with our stakeholders, is to serve the public interest and provide benefit to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policymakers, stakeholders and investors in the power system



Questions?