

2020 Market Project Updates, Costs, and Stakeholder Survey

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Agenda

- Project Prioritization Phases, Milestones, and Timeline
- Stakeholder Survey
- 2020 Market Project Candidates – Updates, Costs, and Deliverables
- Next Steps

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Project Prioritization Phases, Milestones, and Timeline

Project Prioritization Process

Phase	Description
Identification	This phase involves developing the list of project candidates taking into consideration regulatory obligations, strategic initiatives, State of the Market recommendations, necessary infrastructure enhancements, product plans, stakeholder feedback, etc.
Prioritization	The 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 reflects 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 Type

Project Type	Description
Mandatory	Strategic Initiatives and FERC Orders. These projects will be included in the budget
Continuing	Approved in a prior year and have progressed to either software design or development complete. 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 in to 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 are included in the stakeholder survey

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 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 included in the stakeholder survey unless they are Mandatory, Continuing, or Future

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Project Scoring

Project Scoring	Description
NYISO Only	Enterprise projects that are not Mandatory, Continuing, or Future types are scored by the NYISO Only during the Prioritization phase. These projects are included in the budget based on a feasibility assessment taking into consideration resources, time constraints, priority score and other project dependencies.
Stakeholder Scored	Market projects that are 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.

Survey Appeal Definition * Same as used in 2018

Criteria	Criteria Weight	HIGH	MEDIUM	LOW	NONE
		10	7	3	0
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

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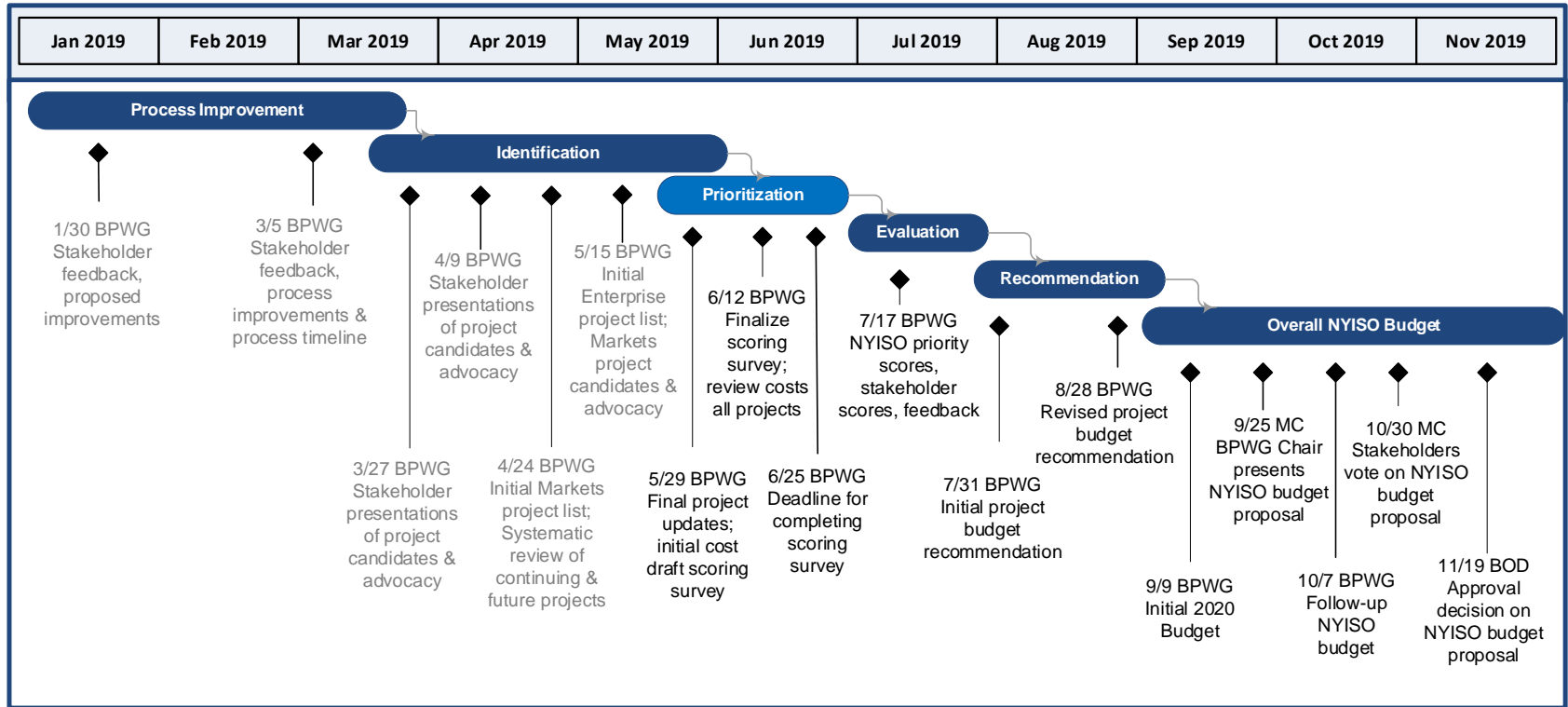
Project Prioritization Criteria * Same as used in 2018

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
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.
Architectural Design	The architectural design document is complete and software development is ready to begin.
Functional Requirements	NYISO has completed documentation of the functional requirements and the Business Owner has approved.
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.
Study Complete	Scope of work to be performed has been completed; results and recommendations have been presented to the appropriate Business Owners and stakeholders.
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.

Project Prioritization Timeline



Stakeholder Survey

Stakeholder Scoring Survey

- The survey will be conducted by Siena Research Institute
- Registered shared governance organizations including non-voting participants and affiliates will have an opportunity to score projects
- All survey results are public including, identifying organization that provided the scoring and any comments
- Survey link will be sent to the primary MC representative (unless written notification is provided to use different or additional contacts)
 - List of organizations and contacts to receive survey is included with today's posted materials
- Each organization may provide one survey response with 100 points available to assign to projects based on their priorities

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Stakeholder Scoring Survey Enhancements

- Each organization will be assigned a unique code to access their survey that will be included in email to MC representative
- MC representative can provide others the ability to access survey by sharing code
- Anyone with survey code can submit the survey
- There will be a comment section after each project as well as at the end of survey to supplement scoring information
- Once submitted, the link and code will no longer provide access the survey
 - The survey link and code can be reset if there is a need to revise after submission
 - Contact Brian Hurysz or Member Relations for any survey related issues including any changes to contact survey is being sent to

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Stakeholder Scoring Draft

- Draft survey is included with today's posted materials

Start of Stakeholder Survey



Please score the projects that your organization believes are the most important for the NYISO to pursue in 2020. All Survey responses and comments will be made public and posted with Budget and Priorities Working Group materials after the survey due date of June 25, 2019.

- You have a total of 100 points to allocate to as many projects as you like. Please only use POSITIVE whole numbers and no decimals. Negative numbers are not accepted.
- Click on the project title to display a description. To minimize the description, click on the project title again.
- There is an area under each project to add any comments pertaining to that project.
- You may share your link and individual code with your colleagues to work collaboratively on scoring prior to submitting your scores.
- Any questions, please reach out to Brian Hurysz at bhurysz@nyiso.com or 518-356-6126.

The organization you are completing this survey for is:

Capacity Market Products

1. BSM Evaluation for Small Resources Outside of the Class Year (SOM)

1.1 Problem / Opportunity

Per the [2018 State of the Market Report for the New York ISO Markets](#), Potomac Economics recommends, "Application of the BSM Evaluation Process Outside the Class Year Process. In its recent compliance filing in response to Order 841; Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators, the NYISO highlighted issues with applying the BSM measures to generators that do not go through the Class Year process because they are smaller than 2 MW. The BSM measures are currently applied within the Class Year process, which was designed for conventional generators that take years to develop and bring into commercial operation. However, battery storage

End of Stakeholder Survey

24.3 Project Justification

Today the TCC Automated Market System and other supporting systems do not support the reservation of transmission Capacity for sale in BoP Auctions. Certain stakeholders have previously requested this capability.

The proposed solution is intended to:

- o Generate more efficient market outcomes, consistent with the MMU's expectation that "selling more of the capability of the transmission system in the [BoP] auctions (by holding back a portion of the capability from the six-month auctions) would likely raise the overall amount of revenue collected from the sale of TCC's (2018 State of the Market Report for the New York ISO Markets at 39);
- o Address stakeholder requests for such enhancements to the current TCC auction design; as auction participants have indicated interest in reserving transfer capability for release in BoP Auctions in surveys of auction participants preceding each of the last six Centralized TCC Auctions; and
- o Provide additional opportunities for interested parties to obtain shorter-duration TCCs because it would remove a constraint that limits the availability of shorter-term TCCs in the BoP Auctions.

Please enter any additional comments below:

Your project priorities will not be submitted until you click submit on this page. If you want to continue working, **DO NOT CLICK SUBMIT UNTIL YOU ARE COMPLETELY DONE** - you will be able to re-enter your form and see your saved work upon entering your 8-digit code.

After clicking submit, a summary of your scores will be available in PDF form.

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Stakeholder Scoring Survey Timeline

- A draft of the survey is included with today's BPWG materials for review and finalization of project descriptions
- All project cost and benefit information to be posted by June 7th with June 12th BPWG materials
- Official survey will be distributed June 12th after BPWG
 - If last minute updates to survey are made at June 12th BPWG, this may delay the survey distribution
- Surveys deadline is June 25th
- Survey results to be reviewed at July 17th BPWG

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2020 Market Project Candidates – Updates, Costs, and Deliverables

2020 Market Project Candidates

Project Name	Product Area	Project Type	Proposed Deliverable	Estimated Cost (in millions)			
				Labor	Capital	Prof. Serv.	Total
NYISO Budget (Rate Schedule 1) Cost Recovery Update	Business and Finance Products	Continuing	Functional Requirements	0.06	0.00	0.00	0.06
BSM Evaluation for Small Resources Outside of the Class Year (SOM)	Capacity Market Products	Prioritize	Market Design Complete				
BSM Renewables Exemption Study	Capacity Market Products	Mandatory	Study Complete	0.05	0.00	0.30	0.35
Capacity Transfer Rights for Internal Transmission Upgrades (SOM)	Capacity Market Products	Future					
Capacity Zone Elimination	Capacity Market Products	Prioritize	Market Design Concept Proposed				
Class Year Redesign	Capacity Market Products	Prioritize	Functional Requirements				
Competitive Entry Exemption Non-Qualifying Contract Rule Review (SOM)	Capacity Market Products	Continuing	Market Design Concept Proposed	0.03	0.00	0.00	0.03

* Prioritized Market projects are included in stakeholder survey

2020 Market Project Candidates

Project Name	Product Area	Project Type	Proposed Deliverable	Estimated Cost (in millions)			
				Labor	Capital	Prof. Serv.	Total
Comprehensive Mitigation Review	Capacity Market Products	Prioritize	Study Defined	0.05	0.00	0.50	0.55
Demand Curve Reset	Capacity Market Products	Mandatory	Study Complete	0.45	0.00	1.50	1.95
Dynamic Creation of Zones (SOM)	Capacity Market Products	Future					
Enhanced BSM Forecasts Assumptions (SOM)	Capacity Market Products	Prioritize	Market Design Concept Proposed	0.05	0.00	0.00	0.05
Enhanced BSM Mitigation Study Period	Capacity Market Products	Prioritize	Market Design Complete	0.05	0.00	0.00	0.05
Enhancing Fuel and Energy Security	Capacity Market Products	Prioritize	Market Design Concept Proposed	0.10	0.00	0.00	0.10
Locational Marginal Pricing of Capacity (SOM)	Capacity Market Products	Prioritize	Market Design Concept Proposed	0.06	0.00	0.50	0.56

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2020 Market Project Candidates

Project Name	Product Area	Project Type	Proposed Deliverable	Estimated Cost (in millions)			
				Labor	Capital	Prof. Serv.	Total
NYC Part A Test Exemption (SOM)	Capacity Market Products	Prioritize	Market Design Concept Proposed				
Tailored Availability Metric	Capacity Market Products	Prioritize	Market Design Complete	0.13	0.00	0.05	0.18
DER Participation Model	DER Products	Mandatory	Software Design				
Dual Participation	DER Products	Mandatory	Deployment				
Expanding Capacity Eligibility	DER Products	Mandatory	Development Complete				
Meter Service Entity for DER	DER Products	Mandatory	Functional Requirements				
NYISO Pilot Framework	DER Products	Continuing	Study Complete	0.14	0.00	0.00	0.14

* Prioritized Market projects are included in stakeholder survey

2020 Market Project Candidates

Project Name	Product Area	Project Type	Proposed Deliverable	Estimated Cost (in millions)			
				Labor	Capital	Prof. Serv.	Total
5 Minute Transaction Scheduling	Energy Market Products	Prioritize	Market Design Concept Proposed	0.09	0.00	0.00	0.09
Ancillary Services Shortage Pricing (SOM)	Energy Market Products	Prioritize	Deployment	0.33	0.00	0.16	0.49
Carbon Pricing	Energy Market Products	Continuing	Development Complete	0.72	0.00	0.00	0.72
Constraint Specific Transmission Shortage Pricing (SOM)	Energy Market Products	Prioritize	Functional Requirements	0.15	0.00	0.00	0.15
Eliminate Fees for CTS Transactions with PJM (SOM)	Energy Market Products	Future					
Enhanced Fast Start Pricing	Energy Market Products	Mandatory	Deployment	0.32	0.00	0.40	0.72
Enhanced PAR Modeling (SOM)	Energy Market Products	Future					

* Prioritized Market projects are included in stakeholder survey

2020 Market Project Candidates

Project Name	Product Area	Project Type	Proposed Deliverable	Estimated Cost (in millions)			
				Labor	Capital	Prof. Serv.	Total
ESR Participation Model	Energy Market Products	Mandatory	Deployment				
Grid in Transition Enhancements	Energy Market Products	Prioritize	Study Defined	0.03	0.00	0.40	0.43
Hybrid Storage Model	Energy Market Products	Prioritize	Market Design Complete	0.15	0.00	0.00	0.15
Linked Virtual Transactions	Energy Market Products	Prioritize	Functional Requirements				
Long Island PAR Optimization and Financial Rights (SOM)	Energy Market Products	Future					
Mitigation Thresholds Review	Energy Market Products	Prioritize	Market Design Concept Proposed	0.03	0.00	0.00	0.03
Relocating the IESO Proxy Bus	Energy Market Products	Prioritize					

* Prioritized Market projects are included in stakeholder survey

2020 Market Project Candidates

Project Name	Product Area	Project Type	Proposed Deliverable	Estimated Cost (in millions)			
				Labor	Capital	Prof. Serv.	Total
Reserve Enhancement for Constrained Areas (SOM)	Energy Market Products	Prioritize	Study Complete	0.11	0.00	0.40	0.51
Reserves for Resource Flexibility	Energy Market Products	Prioritize	Deployment	0.23	0.00	0.00	0.23
RTC-RTD Convergence Improvements (SOM)	Energy Market Products	Future					
WEELR Participation Model	Energy Market Products	Prioritize	Market Design Concept Proposed	0.16	0.00	0.00	0.16
Communication of Voltage Schedule to Generators	Operations & Reliability Products	Prioritize	Deployment				
Climate Change Impact and Resilience Study	Planning Products	Continuing	Study Complete	0.09	0.00	0.40	0.49
On-Peak/Off-Peak TCC's	TCC Products	Future					
Reserving Capacity for TCC Balance-of-Period (BOP) Auctions	TCC Products	Prioritize	Market Design Complete	0.12	0.00	0.00	0.12

* Prioritized Market projects are included in stakeholder survey

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Next Steps

Next Steps

- **Written feedback may be provided until June 3rd**
 - Send to Leigh Bullock and Brian Hurysz
 - LBullock@nyiso.com : (518) 356-7503
 - Bhurysz@nyiso.com : (518) 356-6126
- **Cost review for all projects is scheduled for June 12th BPWG with stakeholder survey distribution after the meeting**
- **Deadline for completing scoring survey will be June 25th**

Questions?

The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits 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 policy makers, stakeholders and investors in the power system



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