

Proposed 2024 Market Projects

Kevin Pytel

Senior Manager, Product and Project Management

Budget and Priorities Working Group

April 26, 2023, KCC

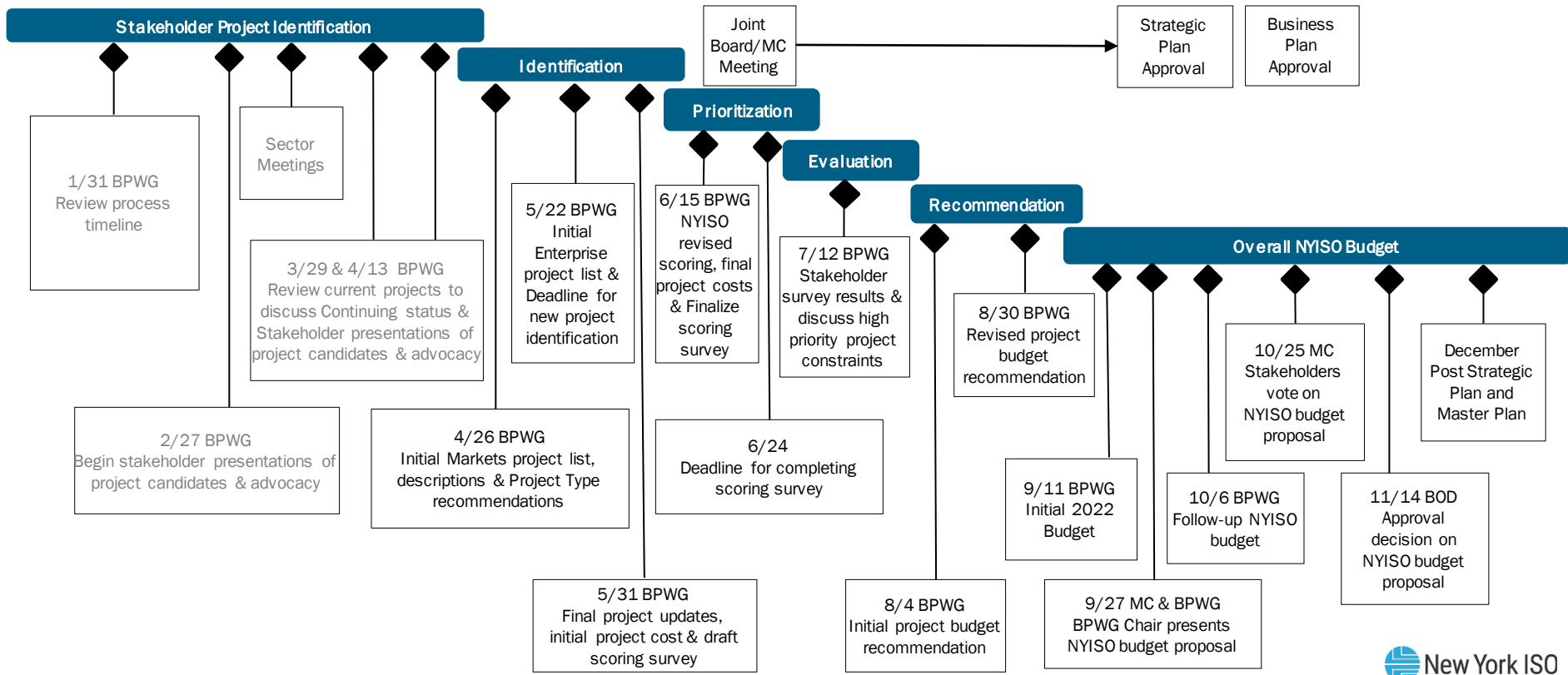
Agenda

- **Project Timeline**
- **Project Descriptions**
- **2024 Market Project Candidates/Project Type Recommendations**
- **Next Steps**

Project Prioritization Timeline

2024 Proposed Project Prioritization Timeline

Jan 2023	Feb 2023	Mar 2023	Apr 2023	May 2023	Jun 2023	Jul 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 2023
----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------



Project Descriptions

Project Descriptions

- **The NYISO has developed project descriptions for 48 proposed Market projects**
 - 13 Capacity Market, 10 New Resource, 22 Energy Markets, 1 Planning, & 2 TCC Market
 - 6 Mandatory, 2 Continuing, 29 Prioritize & 11 Future
- **Last year, there were 37 proposed Market projects at this time in the project prioritization process**
- **Project descriptions are included with today's posted meeting materials**

Market Project Descriptions

■ Problem / Opportunity

- This section describes the business problem to be addressed or opportunity to be studied by the proposed project. Supporting background information, prior work, and analysis to the extent it is available should be included.

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

- This section describes what the project should do to address the business problem or opportunity. It summarizes the approach and desired outcome and may build on project work in a prior year. It includes the expected deliverables to satisfy the project objective and is tied to the proposed project milestone. The NYISO will work with the stakeholder(s) proposing a project to formulate what may be feasibly delivered in a particular time frame based on resourcing estimated for the effort.

■ Project Justification

- This section provides reason(s) why the candidate project should be considered. Examples would include addressing a FERC Order, Tariff requirements, automate manual processes, mitigate risk, market enhancements, State of the Market recommendations.

2024 Market Project Candidates and Project Type Recommendations

Prioritize 2024 Market Projects

Item	Project	Product Area	Project Type	2024 Proposed Deliverable	2023 Deliverable
1	5 Minute Transaction Scheduling	Energy Market	Prioritize	Market Design Concept Proposed	
2	Advanced Storage Modeling and Operation	New Resource	Prioritize	Market Design Concept Proposed	
3	Advancing NYISO Transparency - Requested by DC Energy	Energy Market	Prioritize	Deployment	
4	Balancing Intermittency	Energy Market	Prioritize	Market Design Complete	Market Design Concept Proposed
5	Clean Hydrogen - Requested by NextEra and Constellation	New Resource	Prioritize	Market Design Concept Proposed	
6	Dynamic Reserves - Phase 1	Energy Market	Prioritize	Functional Requirements	Market Design Complete
7	Eliminate Offline GT Pricing	Energy Market	Prioritize	Deployment	

Prioritize 2024 Market Projects

Item	Project	Product Area	Project Type	2024 Proposed Deliverable	2023 Deliverable
8	Emissions Transparency	Energy Market	Prioritize	Deployment	Functional Requirements
9	Engaging the Demand Side	New Resource	Prioritize	Market Design Concept Proposed	Issue Discovery
10	Evolving Resource Adequacy Model	Capacity Market	Prioritize	Study Complete	
11	Expanding Peak Hour Definition - Requested by DPS	Capacity Market	Prioritize	Market Design Complete	
12	Improve Duct-Firing Modeling	Energy Market	Prioritize	Functional Requirements	
13	Integrating Champlain Hudson Power Express (CHPE)	New Resource	Prioritize	Study Complete	
14	Internal Controllable Lines	New Resource	Prioritize	Functional Requirements	Market Design Complete

Prioritize 2024 Market Projects

Item	Project	Product Area	Project Type	2024 Proposed Deliverable	2023 Deliverable
15	LCR Optimizer Enhancements	Capacity Market	Prioritize	Deployment	Market Design Complete
16	Long Island Reserve Constraint Pricing	Energy Market	Prioritize	Market Design Concept Proposed	
17	Market Purchase Hub Transactions - Requested by LIPA	Energy Market	Prioritize	Market Design Complete	
18	MDIWG Support	New Resource	Prioritize	Issue Discovery	
19	Mitigation Threshold Review	Energy Market	Prioritize	Market Design Concept Proposed	
20	Operating Reserves Performance	Energy Market	Prioritize	Market Design Complete	
21	Participation Opportunities for Small DER	New Resource	Prioritize	Market Design Concept Proposed	

Prioritize 2024 Market Projects

Item	Project	Product Area	Project Type	2024 Proposed Deliverable	2023 Deliverable
22	Pivotal Supplier Calculation Change	Capacity Market	Prioritize	Market Design Concept Proposed	
23	Reference Level Software Cleanup	Energy Market	Prioritize	Deployment	
24	Reserving Capacity for TCC Balance-of-Period (BOP) Auctions	TCC	Prioritize	Software Design	
25	Storage as Transmission	New Resource	Prioritize	Market Design Concept Proposed	Issue Discovery
26	Supply Side Mitigation for Controllable Lines	Capacity Market	Prioritize	Market Design Complete	
27	Time Differentiated TCCs	TCC	Prioritize	Market Design Complete	
28	Valuing Transmission Security	Capacity Market	Prioritize	Issue Discovery	

Prioritize 2024 Market Projects

Item	Project	Product Area	Project Type	2024 Proposed Deliverable	2023 Deliverable
29	Winter Reliability Capacity Enhancements	Capacity Market	Prioritize	Issue Discovery	

Mandatory 2024 Market Projects

Item	Project	Product Area	Project Type	2024 Proposed Deliverable	2023 Deliverable
30	Ambient Adjusted Transmission Lines Rating	Energy Market	Mandatory	Development Complete	Functional Requirements
31	CRIS Expiration Evaluation	Capacity Market	Mandatory	Development Complete	Functional Requirements
32	Demand Curve Reset	Capacity Market	Mandatory	Study Complete	Study Defined
33	FERC Order 2222 Compliance	New Resource	Mandatory	Functional Requirements	Market Design Concept Proposed
34	Interconnection Process Enhancements	Planning	Mandatory	Deployment	Market Design Complete
35	Modeling Improvements for Capacity Accreditation	Capacity Market	Mandatory	Deployment	Functional Requirements

Continuing 2024 Market Projects

Item	Project	Product Area	Project Type	2024 Proposed Deliverable	2023 Deliverable
36	Evolving Financial Transaction Capabilities - Bilateral Transactions	Energy Market	Continuing	Deployment	Software Design
37	Hybrid Aggregation Model	New Resource	Continuing	Deployment	Software Design

Future 2024 Market Projects

Item	Project	Product Area	Project Type	2024 Proposed Deliverable	2023 Deliverable
38	Capacity Transfer Rights for Internal Transmission Upgrades	Capacity Market	Future		
39	Dynamic Reserves - Phase 2	Energy Market	Future		
40	Eliminate Fees for CTS Transactions with PJM	Energy Market	Future		
41	Granular Capacity Market Pricing	Capacity Market	Future		
42	Locational Marginal Pricing of Capacity	Capacity Market	Future		
43	Long Island PAR Optimization and Financial Rights	Energy Market	Future		

Future 2024 Market Projects

Item	Project	Product Area	Project Type	2024 Proposed Deliverable	2023 Deliverable
44	M2M West PARs	Energy Market	Future		
45	More Granular Operating Reserves	Energy Market	Future		
46	Reserves for Congestion Management	Energy Market	Future		
47	Review of Real-Time Market Structure	Energy Market	Future		
48	Separating Up and Down Regulation Service	Energy Market	Future		

Next Steps

Next Steps

- **Written feedback on project descriptions and project type categorization may be provided by May 15th for incorporation into May 22nd presentation**
 - Send email to Kevin Pytel at kpytel@nyiso.com or call his cell at (518) 428-9528 for assistance
- **May 22nd BPWG is the deadline for stakeholders to identify new projects and still have them included in the scoring survey**
- **Proposed 2024 Enterprise projects to be reviewed at the May 22nd BPWG along with any updates to proposed Market projects**
- **Stakeholder advocacy and draft scoring survey are scheduled for the May 31st BPWG**

Our Mission & Vision



Mission

Ensure power system reliability and competitive markets for New York in a clean energy future



Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation

Questions?

Appendix – Milestone Definitions

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.

Project Prioritization Process

Phase	Description
Stakeholder Project Identification	Stakeholders may present project ideas at stakeholder meetings, sector meetings, get 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 from regulatory obligations, strategic initiatives, State of the Market recommendations, infrastructure enhancements, product plans and stakeholder proposals. These 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 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	Projects that are key to support Strategic Initiatives, FERC Orders, maintain reliable operations, or sustain the operation of the NYISO business. These projects will be included in the budget.
Continuing	Approved in a prior year and have progressed to either Software Design, Development Complete, or Deployment. 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 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

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.

Appendix – Scoring

NYISO Scoring Criteria

PRIORITIZATION CRITERIA			
Category	Category Score	Criteria Supported	Category Weight
Strategy (Leader in Reliability, Leader in Market Design & Performance, Leader in Application of Technology, Robust System Planning, Excellence In Execution, & Authoritative Source of Information on Key Issues)	How well does the project support the strategic objectives where 10 is highest and 0 is lowest	Identify what primary strategic objective the project supports, none to several	40%
Operational or Market Issue (The category focuses on the need to include a project to address an operational or market issue including sustaining NYISO systems)	How well does the project address operational or market issue where 10 is highest and 0 is lowest	Identify what primary operational or market issue criteria the project supports, none to several	40%
Cost & Complexity (This category considers current & future year project cost, complexity and sustainability of the proposed solution)	Scores project form a cost and complexity standpoint where 10 is lowest cost, simplest project; and 0 is highest cost, most complex	Identify if project has a significant multi-year dependency	20%

Scoring Results Example

- Stakeholders requested an example showing how the NYISO scoring results would be presented
- Using mock test data, the below table shows how results would be presented in a NYISO rank order

Product / Project	Product portfolio	Strategy	Operational or Market Issue	Cost & Complexity	Score (1-100)	Rank
		4	4	2		
Improving Capacity Accreditation (SOM)	Capacity Market	9.5	4.0	6.0	66	1
Dynamic Reserves (SOM)	Energy Market	8.5	4.0	6.0	62	2
Coordination of Interconnection and Transmission Expansion Study	Planning	6.5	5.0	6.5	59	3
Improve Duct-Firing Modeling (SOM)	Energy Market	7.0	5.0	4.0	56	4
Constraint Specific Transmission Shortage Pricing (SOM)	Energy Market	6.5	4.0	6.0	54	5
Internal Controllable Lines	New Resource	6.0	2.0	2.0	36	6
Hybrid Aggregation Model	New Resource	5.5	2.0	2.0	34	7
Monthly Demand Curves (SOM)	Capacity Market	4.0	2.0	2.0	28	8
Expanding Application of Peak Hour Forecasts	Capacity Market	1.0	2.0	6.0	24	9