

2025 Enterprise Projects Cost & NYISO Score

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Budget and Priorities Working Group

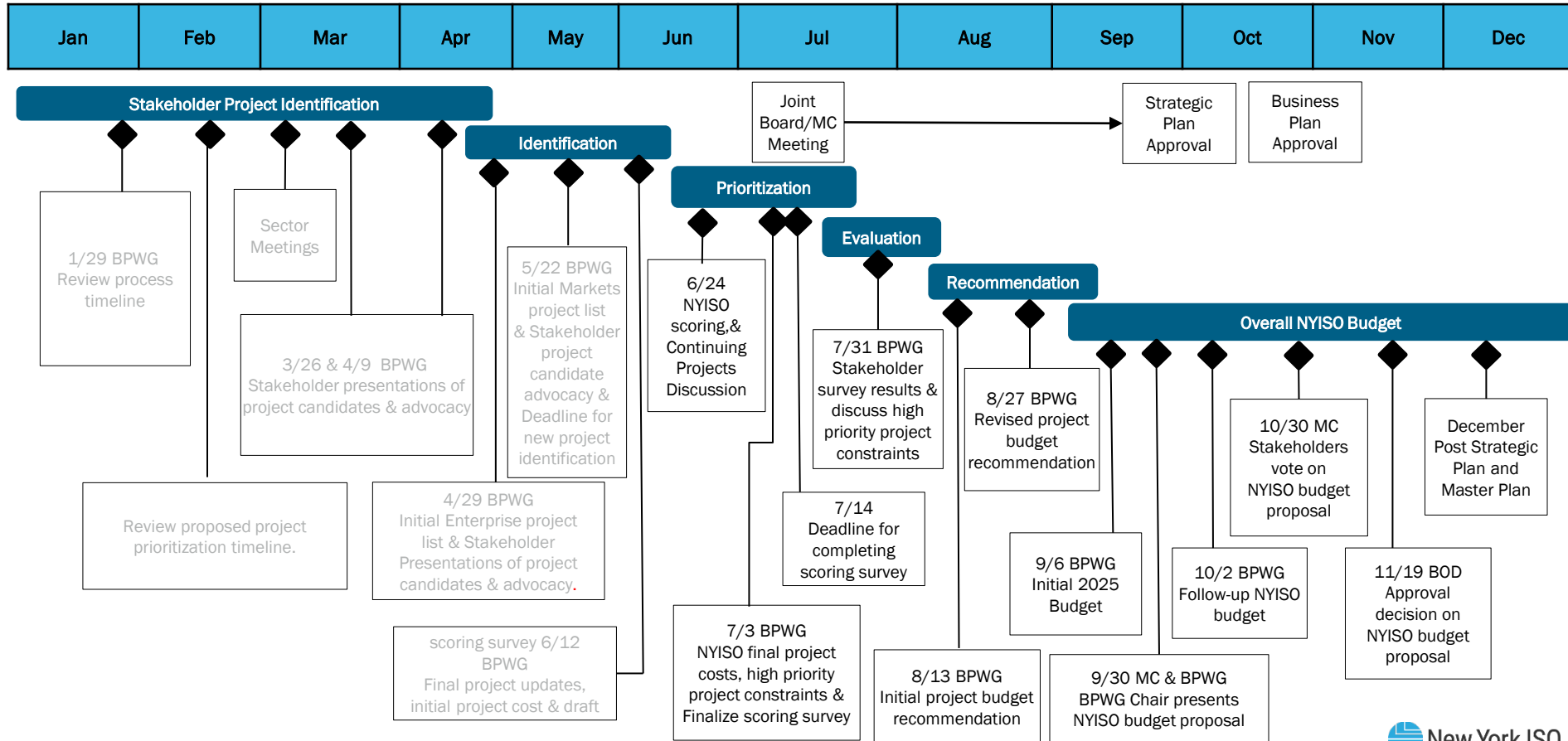
June 24, 2024, WebEx

Agenda

- **Project Prioritization Timeline**
- **Project Descriptions**
- **2025 Enterprise Project Candidates**
- **NYISO Scores**
- **Next Steps**

Project Prioritization Timeline

Project Prioritization Timeline



Project Descriptions

Project Descriptions

- **The NYISO has developed project descriptions for 63 proposed Enterprise projects**
 - 5 Business & Finance, 5 Capacity Market, 4 Energy Markets, 32 Enterprise, 1 New Resource, 12 Operations and Reliability, 4 Planning & 0 TCC Market
 - 3 Mandatory, 60 Prioritize & 0 Future
- **Last year, there were 51 proposed Enterprise projects at this time in the project prioritization process**
- **Project descriptions are included with today's posted meeting materials**

2025 Enterprise Project Candidates - Updates, Costs, and Deliverables

Prioritize 2025 Enterprise Projects

Item	Project	Product Area	Project Type	2025 Proposed Deliverable	2024 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
1	3rd Floor Data Center (Krey)	Enterprise	Prioritize	Deployment	Study Complete				
2	Access Management Program Enhancements	Enterprise	Prioritize	Deployment	Deployment	0.25	0.08	0.05	0.37
3	Activate VSA Application	Energy Market	Prioritize	Deployment		0.23	0.00	0.50	0.73
4	Activu Server Upgrade	Enterprise	Prioritize	Deployment		0.14	1.74	0.40	2.28
5	Advanced Storage Modeling	Operations & Reliability	Prioritize	Development Complete					
6	Air Handling Units Replacement (Krey)	Enterprise	Prioritize	Study Complete		0.03	1.94	0.00	1.97
7	Anomaly Report Redesign	Business & Finance	Prioritize	Deployment		0.15	0.00	0.00	0.15

Prioritize 2025 Enterprise Projects

Item	Project	Product Area	Project Type	2025 Proposed Deliverable	2024 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
8	Automation of DMNC Validation	Operations & Reliability	Prioritize	Deployment		0.06	0.00	0.00	0.06
9	Bidding Upload Download Security Enhancements	Enterprise	Prioritize	Deployment	Deployment	0.24	0.00	0.33	0.56
10	Building Management System (BMS) Controls Upgrade	Enterprise	Prioritize	Deployment	Deployment	0.05	0.99	0.00	1.03
11	Conference Center Renovations (1D) (Krey)	Enterprise	Prioritize	Study Complete		0.03	0.00	0.09	0.12
12	Conference Room Technology Upgrade	Enterprise	Prioritize	Deployment		0.04	0.40	0.15	0.59
13	Contingency Database Enhancements Project	Planning	Prioritize	Study Complete		0.31	0.00	0.00	0.31
14	Control Room Video Wall Replacement	Enterprise	Prioritize	Study Complete		0.21	0.00	0.16	0.37

Prioritize 2025 Enterprise Projects

Item	Project	Product Area	Project Type	2025 Proposed Deliverable	2024 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
15	Demand Forecasting Machine Learning	Enterprise	Prioritize	Study Complete		0.06	0.03	0.13	0.21
16	DRIS Efficiency Improvements	New Resource	Prioritize	Deployment		0.35	0.00	0.28	0.63
17	EMS/BMS Operational Enhancements	Operations & Reliability	Prioritize	Deployment	Deployment	0.16	0.00	0.40	0.56
18	EMS/BMS Technologies Upgrade	Operations & Reliability	Prioritize	Deployment	Development Complete	1.38	0.20	1.50	3.08
19	EMT Modeling Software Enhancements	Planning	Prioritize	Deployment	Deployment	0.25	0.02	0.25	0.52
20	Endpoint Protection Modernization	Enterprise	Prioritize	Deployment		0.21	0.40	0.00	0.61
21	Enhanced Exterior Security Profile (Carmen)	Enterprise	Prioritize	Deployment		0.04	1.21	0.00	1.24

Prioritize 2025 Enterprise Projects

Item	Project	Product Area	Project Type	2025 Proposed Deliverable	2024 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
22	Enhancements to Risk Verification Functionality	Business & Finance	Prioritize	Functional Requirements		0.12	0.00	0.00	0.12
23	Enterprise Monitoring Redesign	Enterprise	Prioritize	Deployment		0.23	0.42	0.00	0.65
24	Enterprise Project Collaboration	Enterprise	Prioritize	Study Complete		0.10	0.00	0.10	0.20
25	Export Tool for EMS Offline Studies	Operations & Reliability	Prioritize	Deployment					
26	Grid Outage Analysis Tool	Energy Market	Prioritize	Software Design		0.30	0.00	0.00	0.30
27	Hybrid Infrastructure Migration	Enterprise	Prioritize	Deployment		1.26	0.32	0.55	2.12
28	ICAP AMS Improved System Integrations, Customer Transitions and Offers Project	Capacity Market	Prioritize	Software Design	Functional Requirements	0.10	0.00	0.00	0.10

Prioritize 2025 Enterprise Projects

Item	Project	Product Area	Project Type	2025 Proposed Deliverable	2024 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
29	ICAP Auction Simulator Enhancements	Capacity Market	Prioritize	Functional Requirements		0.06	0.00	0.00	0.06
30	ICAP Supplier Status Enhancements	Capacity Market	Prioritize	Functional Requirements		0.05	0.00	0.00	0.05
31	IT Infrastructure Automation	Enterprise	Prioritize	Deployment		0.14	0.07	0.14	0.34
32	LDAP Upgrade	Enterprise	Prioritize	Deployment	Deployment	0.25	0.00	0.00	0.25
33	LFDR Upgrade	Operations & Reliability	Prioritize	Deployment	Deployment				
34	Liferay Upgrade to Version 7.4	Enterprise	Prioritize	Deployment		0.07	0.00	0.20	0.27
35	Load Forecasting System Upgrade and Build Out	Operations & Reliability	Prioritize	Deployment					

Prioritize 2025 Enterprise Projects

Item	Project	Product Area	Project Type	2025 Proposed Deliverable	2024 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
36	Media and Podcast Rooms	Enterprise	Prioritize	Study Complete		0.02	0.00	0.04	0.06
37	Microsegmentation	Enterprise	Prioritize	Deployment	Deployment	0.25	0.11	0.00	0.35
38	Microsoft 365	Enterprise	Prioritize	Deployment	Deployment	0.33	1.26	0.00	1.58
39	Midrange and Storage Upgrade	Enterprise	Prioritize	Deployment	Study Complete	0.23	0.00	0.33	0.56
40	NAS Storage Refresh	Enterprise	Prioritize	Deployment		0.17	0.23	0.26	0.65
41	Natural Gas Notices Service Subscriptions	Operations & Reliability	Prioritize	Deployment					
42	Network Infrastructure Upgrade	Enterprise	Prioritize	Deployment	Deployment	0.30	2.21	0.15	2.66

Prioritize 2025 Enterprise Projects

Item	Project	Product Area	Project Type	2025 Proposed Deliverable	2024 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
43	New Ties and Gens Management	Business & Finance	Prioritize	Functional Requirements		0.11	0.00	0.00	0.11
44	Office Mechanical Systems (Krey)	Enterprise	Prioritize	Deployment	Deployment	0.03	0.53	0.00	0.56
45	Oracle Database Evolution	Enterprise	Prioritize	Deployment					
46	Probabalistic Forecasting Enhancements	Operations & Reliability	Prioritize	Functional Requirements		0.13	0.00	0.01	0.14
46	Outage States Portal Dashboard	Capacity Market	Prioritize	Functional Requirements		0.05	0.00	0.00	0.05
48	Production Cost Software Upgrade	Planning	Prioritize	Development Complete	Software Design	0.18	0.00	0.20	0.38
49	Quarterly Project Status Enhancements	Planning	Prioritize	Deployment					

Note: Items in red are changed or new since last BPWG meeting

Prioritize 2025 Enterprise Projects

Item	Project	Product Area	Project Type	2025 Proposed Deliverable	2024 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
50	Reference Level Software Cleanup	Energy Market	Prioritize	Deployment		0.22	0.00	0.00	0.22
51	Reliability Compliance Tools Enhancements	Operations & Reliability	Prioritize	Deployment		0.54	0.00	0.38	0.92
52	Renewable Energy Forecast Integration and Reporting Enhs	Operations & Reliability	Prioritize	Functional Requirements	Issue Discovery	0.15	0.00	0.00	0.15
53	Salesforce Flow Migration	Enterprise	Prioritize	Deployment		0.15	0.00	0.10	0.25
54	Security Information and Event Management (SIEM) Modernization	Enterprise	Prioritize	Deployment		0.35	0.31	0.18	0.84
55	SQL Server Monitoring Tool	Enterprise	Prioritize	Deployment		0.03	0.04	0.02	0.09
56	Telemetry Tone Gear Upgrade	Enterprise	Prioritize	Deployment	Deployment	0.16	0.06	0.08	0.30

Prioritize 2025 Enterprise Projects

Item	Project	Product Area	Project Type	2025 Proposed Deliverable	2024 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
57	Thunderstorm Alert	Business & Finance	Prioritize	Functional Requirements		0.19	0.00	0.00	0.19
58	Uncertainty Response Tool (URT)	Operations & Reliability	Prioritize	Functional Requirements		0.12	0.00	0.00	0.12
59	Watchlist for Rest of State Units	Energy Market	Prioritize	Deployment		0.06	0.00	0.00	0.06
60	Windows & SQL Upgrade	Enterprise	Prioritize	Deployment		0.43	0.88	0.00	1.31

Mandatory 2025 Enterprise Projects

Item	Project	Product Area	Project Type	2025 Proposed Deliverable	2024 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
61	Automation in CMS for Interconnection Credit Instruments	Business & Finance	Mandatory	Development Complete		0.19	0.00	0.00	0.19
62	Generator Data Reporting System	Capacity Market	Mandatory	Deployment	Study Complete	0.19	0.00	0.15	0.34
63	Modification to NERC CIP Standards (Virtualization)	Enterprise	Mandatory	Study Complete		0.30	0.00	0.00	0.30

NYISO Scores

NYISO Scores

Item	Project	Product Area	Strategy	Operational or Market Issue	Cost & Complexity	NYISO Score	Rank (All Projects)
			4	4	2	NYISO Score	
17	EMS/BMS Operational Enhancements	Operations & Reliability	6.0	8.0	5.0	66	3
18	EMS/BMS Technologies Upgrade	Operations & Reliability	5.0	10.0	2.0	64	5
51	Reliability Compliance Tools Enhancements	Operations & Reliability	6.0	8.0	4.0	64	5
52	Renewable Energy Forecast Integration and Reporting Enhancements	Operations & Reliability	5.0	8.0	6.0	64	5
56	Telemetry Tone Gear Upgrade	Enterprise	5.0	10.0	2.0	64	5
5	Advanced Storage Modeling	Operations & Reliability	7.0	7.0	3.0	62	10
40	NAS Storage Refresh	Enterprise	5.0	10.0	1.0	62	10

Note: NYISO Rank is across Market and Enterprise Projects

NYISO Scores

Item	Project	Product Area	Strategy	Operational or Market Issue	Cost & Complexity	NYISO Score	Rank (All Projects)
			4	4	2	NYISO Score	
4	Activu Server Upgrade	Enterprise	4.0	10.0	2.0	60	12
10	Building Management System (BMS) Controls Upgrade	Enterprise	4.0	10.0	2.0	60	12
27	Hybrid Infrastructure Migration	Enterprise	6.0	8.0	2.0	60	12
32	LDAP Upgrade	Enterprise	4.0	8.0	6.0	60	12
1	3rd Floor Data Center (Krey)	Enterprise	6.0	8.0	1.0	58	17
2	Access Management Program Enhancements	Enterprise	7.0	5.0	5.0	58	17
9	Bidding Upload Download Security Enhancements	Enterprise	5.0	7.0	5.0	58	17

Note: NYISO Rank is across Market and Enterprise Projects

NYISO Scores

Item	Project	Product Area	Strategy	Operational or Market Issue	Cost & Complexity	NYISO Score	Rank (All Projects)
			4	4	2	NYISO Score	
13	Contingency Database Enhancements Project	Planning	6.0	6.0	5.0	58	17
35	Load Forecasting System Upgrade and Build Out	Operations & Reliability	4.0	8.0	5.0	58	17
39	Midrange and Storage Upgrade	Enterprise	4.0	8.0	5.0	58	17
44	Office Mechanical Systems (Krey)	Enterprise	5.0	9.0	1.0	58	17
6	Air Handling Units Replacement (Krey)	Enterprise	4.0	10.0	0.0	56	25
7	Anomaly Report Redesign	Business & Finance	3.0	7.0	8.0	56	25
37	Microsegmentation	Enterprise	6.0	5.0	6.0	56	25

Note: NYISO Rank is across Market and Enterprise Projects

NYISO Scores

Item	Project	Product Area	Strategy	Operational or Market Issue	Cost & Complexity	NYISO Score	Rank (All Projects)
			4	4	2	NYISO Score	
38	Microsoft 365	Enterprise	7.0	6.0	2.0	56	25
42	Network Infrastructure Upgrade	Enterprise	5.0	9.0	0.0	56	25
45	Oracle Database Evolution	Enterprise	6.0	5.0	6.0	56	25
60	Windows & SQL Upgrade	Enterprise	5.0	8.0	2.0	56	25
16	DRIS Efficiency Improvements	New Resource	4.0	7.0	5.0	54	33
19	EMT Modeling Software Enhancements	Planning	5.0	6.0	5.0	54	33
21	Enhanced Exterior Security Profile (Carmen)	Enterprise	5.0	7.0	3.0	54	33

Note: NYISO Rank is across Market and Enterprise Projects

NYISO Scores

Item	Project	Product Area	Strategy	Operational or Market Issue	Cost & Complexity	NYISO Score	Rank (All Projects)
			4	4	2	NYISO Score	
31	IT Infrastructure Automation	Enterprise	5.0	6.0	5.0	54	33
33	LFDR Upgrade	Operations & Reliability	4.0	7.0	5.0	54	33
34	Liferay Upgrade to Version 7.4	Enterprise	4.0	6.0	7.0	54	33
48	Production Cost Software Upgrade	Planning	4.0	7.0	5.0	54	33
53	Salesforce Flow Migration	Enterprise	4.0	6.0	7.0	54	33
57	Thunderstorm Alert	Business & Finance	3.0	8.0	5.0	54	33
3	Activate VSA Application	Energy Market	5.0	5.0	6.0	52	45

Note: NYISO Rank is across Market and Enterprise Projects

NYISO Scores

Item	Project	Product Area	Strategy	Operational or Market Issue	Cost & Complexity	NYISO Score	Rank (All Projects)
			4	4	2	NYISO Score	
14	Control Room Video Wall Replacement	Enterprise	6.0	6.0	2.0	52	45
15	Demand Forecasting Machine Learning	Enterprise	6.0	4.0	6.0	52	45
20	Endpoint Protection Modernization	Enterprise	6.0	5.0	4.0	52	45
23	Enterprise Monitoring Redesign	Enterprise	6.0	5.0	4.0	52	45
54	Security Information and Event Management (SIEM) Modernization	Enterprise	6.0	5.0	4.0	52	45
22	Enhancements to Risk Verification Functionality	Business & Finance	2.0	7.0	7.0	50	52
24	Enterprise Project Collaboration	Enterprise	2.0	7.0	7.0	50	52

Note: NYISO Rank is across Market and Enterprise Projects

NYISO Scores

Item	Project	Product Area	Strategy	Operational or Market Issue	Cost & Complexity	NYISO Score	Rank (All Projects)
			4	4	2	NYISO Score	
25	Export Tool for EMS Offline Studies	Operations & Reliability	3.0	7.0	5.0	50	52
26	Grid Outage Analysis Tool	Energy Market	3.0	6.0	7.0	50	52
28	ICAP AMS Improved System Integrations, Customer Transitions and Offers Project	Capacity Market	3.0	7.0	5.0	50	52
30	ICAP Supplier Status Enhancements	Capacity Market	5.0	5.0	5.0	50	52
46	Probabalistic Forecasting Enhancements	Operations & Reliability	5.0	5.0	5.0	50	52
49	Quarterly Project Status Enhancements	Planning	3.0	7.0	5.0	50	52
58	Uncertainty Response Tool (URT)	Operations & Reliability	6.0	4.0	5.0	50	52

Note: NYISO Rank is across Market and Enterprise Projects

NYISO Scores

Item	Project	Product Area	Strategy	Operational or Market Issue	Cost & Complexity	NYISO Score	Rank (All Projects)
			4	4	2	NYISO Score	
12	Conference Room Technology Upgrade	Enterprise	4.0	6.0	4.0	48	65
46	Outage States Portal Dashboard	Capacity Market	6.0	4.0	4.0	48	65
29	ICAP Auction Simulator Enhancements	Capacity Market	2.0	7.0	5.0	46	67
41	Natural Gas Notices Service Subscriptions	Operations & Reliability	3.0	5.0	7.0	46	67
8	Automation of DMNC Validation	Operations & Reliability	4.0	3.0	7.0	42	74
11	Conference Center Renovations (1D) (Krey)	Enterprise	5.0	4.0	3.0	42	74
55	SQL Server Monitoring Tool	Enterprise	3.0	4.0	7.0	42	74

Note: NYISO Rank is across Market and Enterprise Projects

NYISO Scores

Item	Project	Product Area	Strategy	Operational or Market Issue	Cost & Complexity	NYISO Score	Rank (All Projects)
			4	4	2	NYISO Score	
36	Media and Podcast Rooms	Enterprise	5.0	2.0	6.0	40	79
43	New Ties and Gens Management	Business & Finance	3.0	3.0	7.0	38	80
59	Watchlist for Rest of State Units	Energy Market	2.0	3.0	9.0	38	80
50	Reference Level Software Cleanup	Energy Market	3.0	4.0	2.0	32	86

Note: NYISO Rank is across Market and Enterprise Projects

Next Steps

Next Steps

- **Final Project Costs will be presented at the July 3rd BPWG**
- **High Priority Project Constraints will be presented at the July 3rd BPWG**
- **Contact Kevin Pytel, Shaun Johnson or Member Relations for any related issues or questions**
 - Kevin Pytel (kpytel@nyiso.com) or Shaun Johnson (sjohnson@nyiso.com). You may also call them at 518-428-9528 and 518-774-3959, respectively

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 – Milestones and Project Prioritization Phases

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%

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 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.
Market Projects with the following Milestones will generally be proposed as Continuing in future years, subject to Stakeholder input.	
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.

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 Functional Requirements, 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. No Enterprise Projects will be Continuing.
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.