2021 Enterprise Project Updates & Cost

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Budget and Priorities Working Group

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Agenda

- Project Prioritization Phases, Milestones, and Timeline

- 2021 Market Project Candidates – Updates, Costs, and Deliverables

- Next Steps

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Project Prioritization Phases, Milestones, and Timeline

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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	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.

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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 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

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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

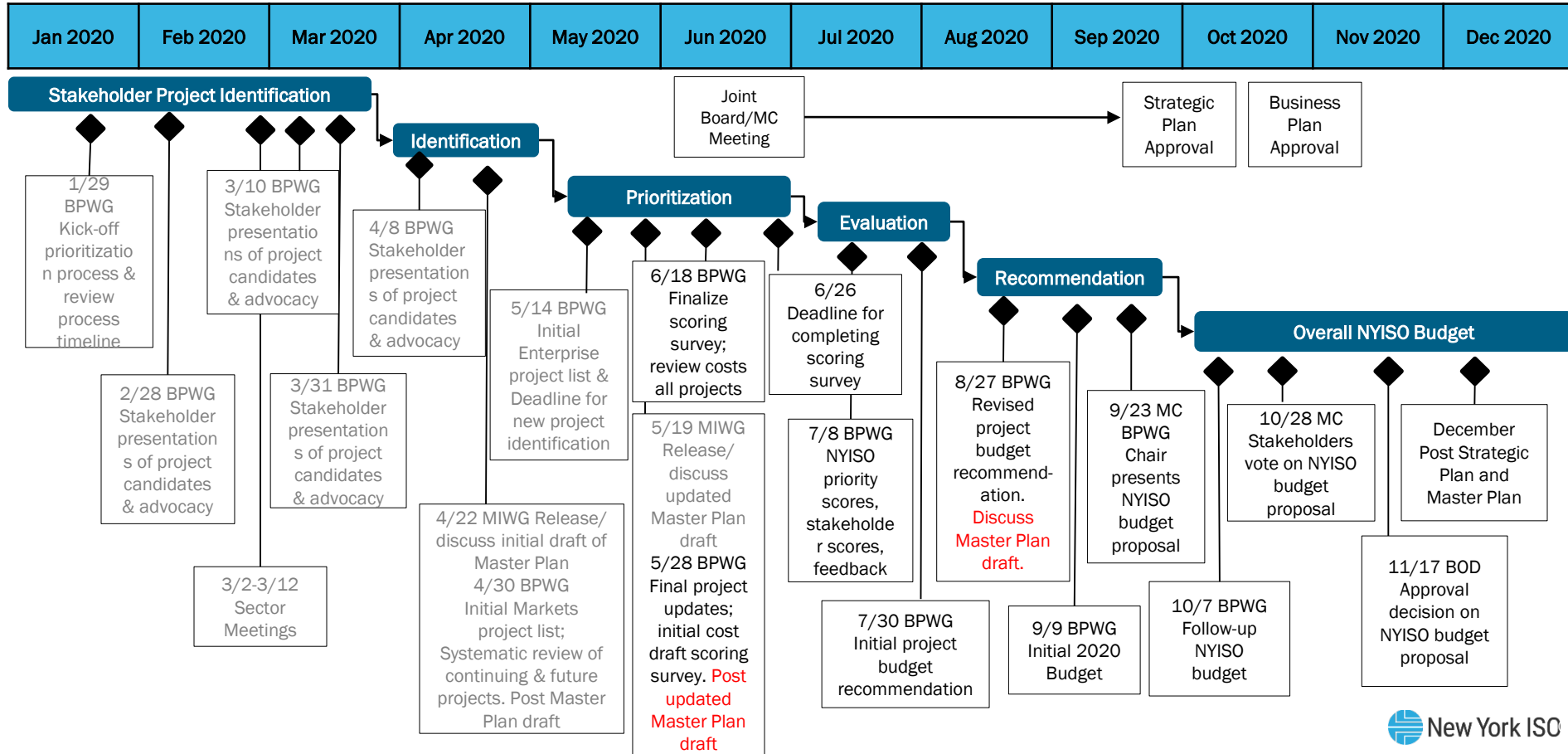| Project Scoring	Description
NYISO Only	Enterprise projects that are not Mandatory, Continuing, or Future types are scored by the NYISO Only during the Prioritization phase. These projects are included in the budget based on a feasibility assessment taking into consideration resources, time constraints, 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.

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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.
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.

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Project Prioritization Criteria* Same as used in 2019

Category	Criteria	Criteria Weight	HIGH 10	MEDIUM 7	LOW 3	NONE 0
PRIORITIZATION CRITERIA						
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

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2021 Proposed Project Prioritization Timeline

Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020

Stakeholder Project Identification

Identification

Prioritization

Evaluation

Recommendation

Overall NYISO Budget

Joint Board/MC Meeting → Strategic Plan Approval

Business Plan Approval

1/29 BPWG Kick-off prioritization process & review process timeline

2/28 BPWG Stakeholder presentations of project candidates & advocacy

3/10 BPWG Stakeholder presentations of project candidates & advocacy

3/31 BPWG Stakeholder presentations of project candidates & advocacy

3/2-3/12 Sector Meetings

4/8 BPWG Stakeholder presentations of project candidates & advocacy

5/14 BPWG Initial Enterprise project list & Deadline for new project identification

4/22 MIWG Release/ discuss initial draft of Master Plan
4/30 BPWG Initial Markets project list; Systematic review of continuing & future projects. Post Master Plan draft

6/18 BPWG Finalize scoring survey; review costs all projects

5/19 MIWG Release/ discuss updated Master Plan draft
5/28 BPWG Final project updates; initial cost draft scoring survey. Post updated Master Plan draft

6/26 Deadline for completing scoring survey

7/8 BPWG NYISO priority scores, stakeholder scores, feedback

7/30 BPWG Initial project budget recommendation

8/27 BPWG Revised project budget recommend-ation. Discuss Master Plan draft.

9/9 BPWG Initial 2020 Budget

9/23 MC BPWG Chair presents NYISO budget proposal

10/7 BPWG Follow-up NYISO budget

10/28 MC Stakeholders vote on NYISO budget proposal

11/17 BOD Approval decision on NYISO budget proposal

December Post Strategic Plan and Master Plan

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2021 Enterprise Project Updates, Costs, and Deliverables

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2021 Enterprise Project Candidates

Item	Project Name	Product Area	Project Type	Proposed Deliverable	Estimated Cost (in millions)			
					Labor	Capital	Prof. Serv.	Total
1	Enterprise Information Management - Data Integration Phase IV	Business and Finance Products	Continuing	Deployment	0.84	0.10	1.60	2.54
2	FERC Form1 Redesign	Business and Finance Products	Mandatory	Deployment	0.04	0.00	0.00	0.04
3	NYISO Budget (Rate Schedule 1) Cost Recovery Update	Business and Finance Products	Prioritize	Functional Requirements	0.04	0.00	0.00	0.04
4	Transactions Modifications and Confirmation Tool	Business and Finance Products	Continuing	Deployment	0.17	0.00	0.00	0.17
5	Credit Price Spread Updates - Virtual & External Transactions	Business and Finance Products	Prioritize	Functional Requirements	0.04	0.00	0.00	0.04
6	Working Capital Application Enhancements	Business and Finance Products	Prioritize	Functional Requirements	0.06	0.00	0.00	0.06
7	Accounting and Settlements Integration	Business and Finance Products	Prioritize	Deployment	0.07	0.00	0.00	0.07

Note: Changes from prior presentation are shown in red

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2021 Enterprise Project Candidates

Item	Project Name	Product Area	Project Type	Proposed Deliverable	Estimated Cost (in millions)			
					Labor	Capital	Prof. Serv.	Total
8	Minimum Oil Burn Enhancements	Business and Finance Products	Prioritize	Deployment	0.12	0.00	0.00	0.12
9	SDX API Pilot	Business and Finance Products	Prioritize	Deployment	0.14	0.00	0.00	0.14
10	Stakeholder Services Salesforce CRM Enhancements	Business and Finance Products	Prioritize	Deployment	0.26	0.00	0.21	0.47
11	Demand Curve Reset Tool Updates	Capacity Market Products	Prioritize	Deployment	0.03	0.00	0.00	0.03
12	DAM Congestion Settlement Re-Allocation	Energy Market Products	Continuing	Deployment	0.06	0.00	0.00	0.06
13	Energy Market Software Performance	Energy Market Products	Prioritize	Deployment	0.15	0.00	1.22	1.37
14	ACC Control Room Renovations	Enterprise Products	Continuing	Deployment	0.27	4.72	0.00	4.98

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2021 Enterprise Project Candidates

Item	Project Name	Product Area	Project Type	Proposed Deliverable	Estimated Cost (in millions)			
					Labor	Capital	Prof. Serv.	Total
15	Access Management	Enterprise Products	Prioritize	Deployment	0.50	0.00	0.00	0.50
16	Application Platform Upgrade	Enterprise Products	Prioritize	Deployment	0.40	0.00	0.00	0.40
17	Database Upgrade	Enterprise Products	Prioritize	Deployment	0.27	0.00	0.01	0.29
18	IT Infrastructure Automation	Enterprise Products	Continuing	Deployment	0.29	0.08	0.23	0.59
19	IT Service Management Improvements	Enterprise Products	Continuing	Deployment	0.30	0.00	0.25	0.55
20	Network Infrastructure Upgrade	Enterprise Products	Continuing	Deployment	0.25	3.29	0.00	3.54
21	2021 NERC CIP Audit	Enterprise Products	Mandatory	Study Complete	0.52	0.00	0.00	0.52

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2021 Enterprise Project Candidates

Item	Project Name	Product Area	Project Type	Proposed Deliverable	Estimated Cost (in millions)			
					Labor	Capital	Prof. Serv.	Total
22	Linux and Storage Infrastructure Refresh	Enterprise Products	Prioritize	Deployment	0.20	0.77	0.04	1.01
23	Ringdown Replacement	Enterprise Products	Prioritize	Deployment	0.08	0.00	0.00	0.08
24	Unified Communications Platform	Enterprise Products	Prioritize	Study Complete	0.06	0.01	0.07	0.14
25	Windows System Upgrade	Enterprise Products	Prioritize	Deployment	0.38	1.19	0.20	1.78
26	Application Security Enhancements	Enterprise Products	Prioritize	Deployment	0.09	0.14	0.00	0.24
27	Gurobi (MIP) Migration and Upgrade	Enterprise Products	Prioritize	Deployment	0.09	0.23	0.00	0.32
28	Web Content Management System Upgrade	Enterprise Products	Prioritize	Deployment	0.05	0.00	0.35	0.40

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2021 Enterprise Project Candidates

Item	Project Name	Product Area	Project Type	Proposed Deliverable	Estimated Cost (in millions)			
					Labor	Capital	Prof. Serv.	Total
29	UPS Replacement	Enterprise Products	Prioritize	Deployment	0.06	1.10	0.00	1.16
30	Automated Default Bid Mitigation	Operations & Reliability Products	Continuing	Deployment	0.10	0.00	0.00	0.10
31	Load Forecasting System Upgrade and Build Out	Operations & Reliability Products	Prioritize	Deployment	0.28	0.00	0.07	0.35
32	Transmission and Generation Scheduling System (TAGSS)	Operations & Reliability Products	Continuing	Development Complete	0.44	2.00	0.00	2.44
33	NextEra Transmission Owner Integration	Operations & Reliability Products	Mandatory	Development Complete	0.63	0.09	0.45	1.18
34	EMS Visualization Native PI Viewer - Interface and Event Tool	Operations & Reliability Products	Prioritize	Deployment	0.05	0.13	0.00	0.18
35	EMS/BMS Operational Enhancements	Operations & Reliability Products	Continuing	Deployment	0.09	0.00	0.80	0.89

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2021 Enterprise Project Candidates

Item	Project Name	Product Area	Project Type	Proposed Deliverable	Estimated Cost (in millions)			
					Labor	Capital	Prof. Serv.	Total
36	Grid Guardian Network Topology Feature Implementation	Operations & Reliability Products	Prioritize	Deployment	0.07	0.13	0.00	0.20
37	Natural Gas Notices Enhancement Project	Operations & Reliability Products	Prioritize	Functional Requirements	0.02	0.00	0.00	0.02
38	IT Development and Control of Compliance Reports	Operations & Reliability Products	Prioritize	Deployment	0.10	0.00	0.00	0.10
39	LFDR Upgrade and Enhancements	Planning Products	Prioritize	Functional Requirements				
40	Demand Forecasting Operational Reporting Enhancements (SAS)	Planning Products	Prioritize	Functional Requirements				
41	ePlanning Migration	Planning Products	Prioritize	Functional Requirements	0.15	0.00	0.00	0.15
42	Dynamic Modeling Database Enhancements	Planning Products	Prioritize	Deployment	0.03	0.09	0.00	0.12
43	TCC Auction Billing	TCC Products	Prioritize	Deployment	0.19	0.00	0.00	0.19

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Next Steps

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Next Steps

- Written feedback on project descriptions and project type categorization may be provided up till June 10th for incorporation into June 18th presentation
  - Send to Brian Hurysz at bhurysz@nyiso.com or cell (518) 461-6405
- Cost review for all projects is scheduled for June 18th BPWG with stakeholder survey distribution after the meeting
- Deadline for completing scoring survey will be June 26th
- Scoring results will be presented at the July 8th BPWG

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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

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Questions?

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