New York ISO
Independent System Operator

Stakeholder Survey Results and NYISO Scoring of 2023 Proposed Market Projects (revised)

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Budget and Priorities Working Group

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Agenda

- Project Prioritization Timeline
- Stakeholder Survey
- Stakeholder Survey Comments
- High Priority Project Constraints and Options
- Historic Budgets
- Next Steps
- Appendix : (Material from May 31st BPWG)
  - Milestones and Project Prioritization Phases
  - 2023 Market Project Candidates
  - NYISO Scores & High Priority Project Constraints

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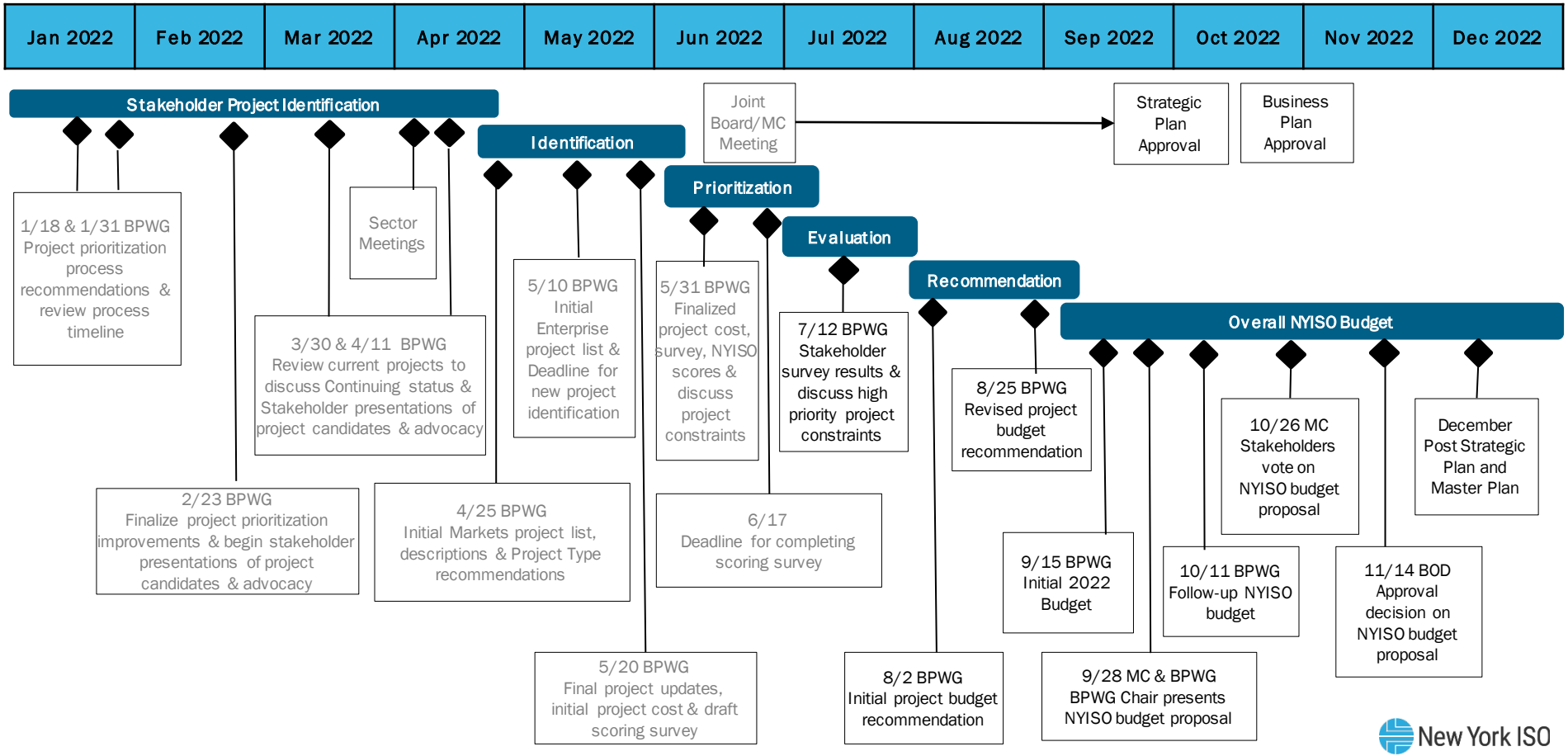
Project Prioritization Timeline

2023 Proposed Project Prioritization Timeline



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Stakeholder Survey

Survey Participation

		2022 Survey			2021 Survey			2020 Survey		
Sector	Sub Sector	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	5	100%	5	4	80%
"	Small Consumer	5	5	100%	5	5	100%	6	6	100%
Generation Owner		21	10	48%	21	9	43%	17	2	12%
Other Supplier		34	14	41%	35	13	37%	33	12	36%
Public/Environment	Environmental	6	1	17%	7	2	29%	7	2	29%
"	Munis & Co-Ops	11	10	91%	11	10	91%	11	9	82%
"	State Power Authorities	2	2	100%	2	2	100%	2	2	100%
Transmission Owner		4	3	75%	4	4	100%	4	4	100%
Non Voting Entity		66	23	35%	58	18	31%	62	11	18%
Total		**158**	**76**	**48%**	**152**	**71**	**47%**	**151**	**55**	**36%**

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Governance Weights 2022 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	10	21.5%
Other Supplier		21.5%		34	14	21.5%
Public Power / Environmental		17.0%		19	13	
	Environmental		2.0%	6	1	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	3	20.0%

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Stakeholder Scores

Account Name	Sector	5-Minute Transaction Scheduling	Advancing NYISO Transparency	Balancing Intermittency (SOM)	Constraint Specific Transmission Shortage Pricing (SOM)	Coordinated Grid Planning Process (CGPP) Support	CRIS Expiration Evaluation	Dispatchability and Fast Response Product	Dynamic Reserves (SOM)	Emissions Transparency	Engaging the Demand Side	Enhancing Fuel and Energy Security	Evolving Financial Transaction Capabilities: Bilateral Transactions	Hybrid Aggregation Model	Improve Duct-Firing Modeling (SOM)	Interconnection Process Enhancements	LCR Optimizer Enhancements	M2M West PARs	Meter Data Management Modernization	Mitigation Threshold Review	Multi-Level References	Reserving Capacity for TCC Balance-of-Period (BoP) Auctions	Review of Real-Time Market Structure (SOM)	Storage as Transmission	Time Differentiated TCCs
City of New York	End Use Consumer	0	0	10	0	5	0	0	15	20	15	0	0	20	0	0	0	0	0	0	0	0	0	15	0
NYS Energy Research & Dev. Authority (NYSERDA)	End Use Consumer	0	0	10	0	5	0	0	10	0	15	0	0	25	0	10	0	0	0	0	0	0	0	25	0
NYS Department of State Utility Intervention Unit	End Use Consumer	0	0	20	20	5	0	0	20	0	5	0	0	10	0	0	10	0	0	0	0	0	0	10	0
Alcoa, Inc.	End Use Consumer	0	0	20	10	5	0	0	20	5	25	0	0	10	0	0	0	0	0	0	0	0	0	5	0
GlobalFoundries, U.S., Inc.	End Use Consumer	0	0	20	10	5	0	0	20	5	25	0	0	10	0	0	0	0	0	0	0	0	0	5	0
IBM Corporation	End Use Consumer	0	0	20	10	5	0	0	20	5	25	0	0	10	0	0	0	0	0	0	0	0	0	5	0
Nucor Steel Auburn, Inc.	End Use Consumer	0	0	25	0	0	0	0	25	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wegmans Food Markets	End Use Consumer	0	0	20	10	5	0	0	20	5	25	0	0	10	0	0	0	0	0	0	0	0	0	5	0
Beth Israel Health Care System	End Use Consumer	0	0	20	10	0	0	0	20	0	25	0	0	25	0	0	0	0	0	0	0	0	0	0	0
Fordham University	End Use Consumer	0	0	0	0	10	0	0	20	0	25	0	0	25	0	0	0	0	0	0	0	0	0	20	0
Memorial Sloan Kettering Cancer Center	End Use Consumer	0	0	20	0	0	0	0	20	20	20	0	0	20	0	0	0	0	0	0	0	0	0	0	0
Mount Sinai Medical Center	End Use Consumer	0	0	20	0	0	0	0	20	0	20	0	0	20	0	0	0	0	0	0	0	0	0	20	0
New York University	End Use Consumer	0	0	0	0	0	15	0	15	20	20	0	10	20	0	0	0	0	0	0	0	0	0	0	0
Borrego Solar Systems, Inc.	Generation Owner	0	0	5	0	15	0	0	10	5	0	0	10	5	0	40	0	0	0	0	0	0	5	5	0
Calpine Energy Services LP	Generation Owner	0	0	50	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	5	0	0	30
Covanta Niagara, LP	Generation Owner	0	25	0	0	0	0	0	0	25	0	25	0	0	0	0	0	0	25	0	0	0	0	0	0
CPV Valley, LLC	Generation Owner	0	0	25	0	0	0	0	0	0	0	10	0	0	25	0	40	0	0	0	0	0	0	0	0
Cypress Creek Renewables, LLC	Generation Owner	0	0	0	0	5	1	11	0	8	0	0	11	5	0	58	0	0	0	0	0	0	0	1	0
East Coast Power, LLC	Generation Owner	0	0	0	0	0	0	0	5	0	0	25	0	0	25	0	40	0	0	0	0	0	0	5	0
EDP Renewables North America LLC	Generation Owner	0	0	5	5	5	15	0	0	0	0	0	0	10	0	60	0	0	0	0	0	0	0	0	0
Helix Ravenswood, LLC	Generation Owner	0	0	15	0	0	0	0	20	0	0	0	0	1	0	15	34	0	0	0	0	0	15	0	0
Invenergy Energy Management LLC	Generation Owner	0	0	0	0	15	5	0	0	5	0	0	5	5	0	60	0	0	0	0	0	0	0	5	0
Key Capture Energy, LLC	Generation Owner	0	10	5	0	0	10	10	0	0	0	0	15	0	0	30	0	0	0	0	0	0	10	10	0
Able Grid Energy Solutions, Inc.	Non Voting Entity	0	0	0	0	0	0	0	0	20	0	0	20	15	0	25	0	0	0	0	0	0	0	20	0
AES ES Holdings LLC	Non Voting Entity	0	0	0	0	5	5	0	0	5	0	0	5	5	0	70	0	0	0	0	0	0	0	5	0

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Stakeholder Scores

Account Name	Sector	5-Minute Transaction Scheduling	Advancing NYISO Transparency	Balancing Intermittency (SOM)	Constraint Specific Transmission Shortage Pricing (SOM)	Coordinated Grid Planning Process (CGPP) Support	CRIS Expiration Evaluation	Dispatchability and Fast Response Product	Dynamic Reserves (SOM)	Emissions Transparency	Engaging the Demand Side	Enhancing Fuel and Energy Security	Evolving Financial Transaction Capabilities: Bilateral Transactions	Hybrid Aggregation Model	Improve Duct-Firing Modeling (SOM)	Interconnection Process Enhancements	LCR Optimizer Enhancements	M2M West PARs	Meter Data Management Modernization	Mitigation Threshold Review	Multi-Level References	Reserving Capacity for TCC Balance-of-Period (BoP) Auctions	Review of Real-Time Market Structure (SOM)	Storage as Transmission	Time Differentiated TCCs
Alliance for Clean Energy New York	Non Voting Entity	0	0	0	0	5	5	0	0	5	0	0	5	5	0	70	0	0	0	0	0	0	0	5	0
Bayonne Energy Center, LLC	Non Voting Entity	0	0	10	10	0	0	0	10	0	0	0	60	0	0	0	10	0	0	0	0	0	0	0	0
Bloom Energy	Non Voting Entity	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ConnectGen East LLC	Non Voting Entity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	85	0
Constellation NewEnergy, Inc.	Non Voting Entity	0	30	0	0	0	0	0	0	30	0	10	0	0	0	30	0	0	0	0	0	0	0	0	0
Cricket Valley Energy Center, LLC	Non Voting Entity	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0
Cubit Power One Inc.	Non Voting Entity	0	25	0	0	0	25	20	10	15	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
Enerwise Global Technologies, Inc. dba CPower	Non Voting Entity	0	0	10	0	0	0	10	0	15	50	0	0	15	0	0	0	0	0	0	0	0	0	0	0
GI Endurant LLC dba GI Energy	Non Voting Entity	0	0	15	0	0	0	15	0	10	10	0	10	10	0	20	0	0	0	0	0	0	0	10	0
Hanwha Q CELLS USA Corp.	Non Voting Entity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0
Institute for Policy Integrity at NYU School of Law	Non Voting Entity	0	0	0	0	25	0	0	0	25	15	0	0	7	0	15	0	0	0	0	0	0	3	7	3
Jupiter Power LLC	Non Voting Entity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0
LS Power Grid New York, LLC	Non Voting Entity	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New York Battery and Energy Storage Technology Consortium	Non Voting Entity	0	0	5	0	5	0	5	0	15	5	0	20	20	0	5	0	0	0	0	0	0	0	20	0
New York Transco LLC	Non Voting Entity	0	10	10	0	20	0	0	0	0	0	10	0	0	0	10	10	0	0	0	0	0	0	30	0
NuEnerGen, LLC	Non Voting Entity	0	0	25	0	0	0	0	0	0	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Orange & Rockland Utilities, Inc.	Non Voting Entity	0	0	20	5	30	0	0	5	25	0	5	0	0	0	0	0	0	0	0	0	0	0	10	0
Richard P. Felak	Non Voting Entity	5	10	5	0	10	0	0	5	5	20	10	0	5	0	5	5	0	0	0	0	0	10	5	0
Saracen Energy East LP	Non Voting Entity	75	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Savion, LLC	Non Voting Entity	0	2	0	0	10	20	0	0	5	0	5	5	0	0	30	0	10	0	0	0	0	5	0	8
Taylor Biomass Energy, LLC	Non Voting Entity	5	0	5	5	10	5	5	5	8	5	10	2	2	2	2	2	2	2	2	2	2	5	10	2
Brookfield Energy Marketing LP	Other Supplier	10	0	20	0	0	0	20	0	0	0	0	10	10	0	0	0	0	0	0	0	10	10	0	10
Centrica Business Solutions Optimize, LLC	Other Supplier	0	0	20	0	0	0	0	0	10	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Danske Commodities US LLC	Other Supplier	0	0	0	0	10	0	0	0	0	0	0	10	0	0	80	0	0	0	0	0	0	0	0	0
DC Energy LLC	Other Supplier	0	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	10

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Stakeholder Scores

Account Name	Sector	5-Minute Transaction Scheduling	Advancing NYISO Transparency	Balancing Intermittency (SOM)	Constraint Specific Transmission Shortage Pricing (SOM)	Coordinated Grid Planning Process (CGPP) Support	CRIS Expiration Evaluation	Dispatchability and Fast Response Product	Dynamic Reserves (SOM)	Emissions Transparency	Engaging the Demand Side	Enhancing Fuel and Energy Security	Evolving Financial Transaction Capabilities: Bilateral Transactions	Hybrid Aggregation Model	Improve Duct-Firing Modeling (SOM)	Interconnection Process Enhancements	LCR Optimizer Enhancements	M2M West PARs	Meter Data Management Modernization	Mitigation Threshold Review	Multi-Level References	Reserving Capacity for TCC Balance-of-Period (BoP) Auctions	Review of Real-Time Market Structure (SOM)	Storage as Transmission	Time Differentiated TCCs
Eastern Generation	Other Supplier	0	0	15	0	0	0	0	30	0	0	5	0	0	20	0	30	0	0	0	0	0	0	0	0
Enel X North America, Inc.	Other Supplier	0	0	0	0	0	0	0	0	30	30	0	0	5	0	20	10	0	5	0	0	0	0	0	0
ENGIE Energy Marketing NA, Inc.	Other Supplier	20	0	0	0	0	0	0	0	20	0	0	20	20	0	0	0	0	0	0	0	0	0	20	0
H.Q. Energy Services (U.S.) Inc.	Other Supplier	60	0	20	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Innoventive Power LLC	Other Supplier	0	20	0	0	0	0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	20	0
NextEra Energy Marketing, LLC	Other Supplier	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	50	0
NRG Power Marketing LLC	Other Supplier	0	0	20	10	10	0	0	10	0	20	10	20	0	0	0	0	0	0	0	0	0	0	0	0
Ontario Power Generation Inc.	Other Supplier	0	10	10	10	0	0	0	0	10	10	10	10	10	0	0	0	0	0	0	0	0	10	0	10
PSEG Energy Resource & Trade, LLC	Other Supplier	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	20	0	20
Vitol Inc.	Other Supplier	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Natural Resources Defense Council	Public/Environment	0	0	5	0	15	0	0	0	20	20	0	5	5	0	15	0	0	0	0	0	0	0	15	0
Bath Electric, Gas & Water Systems	Public/Environment	0	0	20	5	5	0	0	20	0	5	0	0	20	0	20	0	0	0	0	0	0	0	5	0
Jamestown Board of Public Utilities	Public/Environment	0	0	20	10	0	10	20	20	0	0	0	0	0	0	0	10	10	0	0	0	0	0	0	0
Lake Placid Village	Public/Environment	0	0	20	5	5	0	0	20	0	5	0	0	20	0	20	0	0	0	0	0	0	0	5	0
Municipal Commission of Boonville	Public/Environment	0	0	20	5	5	0	0	20	0	5	0	0	20	0	20	0	0	0	0	0	0	0	5	0
Plattsburgh Municipal Lighting Dept.	Public/Environment	0	0	20	5	5	0	0	20	0	5	0	0	20	0	20	0	0	0	0	0	0	0	5	0
Village of Arcade	Public/Environment	0	0	20	5	5	0	0	20	0	5	0	0	20	0	20	0	0	0	0	0	0	0	5	0
Village of Fairport	Public/Environment	0	0	20	5	5	0	0	20	0	5	0	0	20	0	20	0	0	0	0	0	0	0	5	0
Village of Rockville Centre	Public/Environment	0	0	20	10	0	10	20	20	0	0	0	0	0	0	0	0	10	10	0	0	0	0	0	0
Village of Solvay	Public/Environment	0	0	20	5	5	0	0	20	0	5	0	0	20	0	20	0	0	0	0	0	0	0	5	0
Village of Westfield	Public/Environment	0	0	20	5	5	0	0	20	0	5	0	0	20	0	20	0	0	0	0	0	0	0	5	0
Long Island Power Authority	Public/Environment	15	0	10	5	15	0	10	10	5	0	10	0	5	5	0	5	0	0	0	0	0	0	5	0
New York Power Authority	Public/Environment	0	0	5	15	10	5	15	5	0	10	5	10	10	0	0	0	0	0	0	5	0	0	5	0
Central Hudson Gas & Electric Corp.	Transmission Owner	0	0	5	10	15	5	10	10	5	0	5	0	10	0	5	0	0	0	0	0	5	0	15	0
Consolidated Edison Co. of New York, Inc.	Transmission Owner	0	0	20	5	30	0	0	5	25	0	5	0	0	0	0	0	0	0	0	0	0	0	10	0
New York State Electric & Gas Corp.	Transmission Owner	5	0	20	10	20	5	5	10	0	0	10	0	5	5	0	0	0	0	0	0	0	0	5	0

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Stakeholder Survey Score

- Projects are ordered by Weighted Score

Product / Project	Product portfolio	Raw Score	**Weighted Score**	Sector Count	Count
Balancing Intermittency (SOM)	Energy Market	10.3	**11.9**	5	48
Interconnection Process Enhancements - Requested by ACE-NY	Planning	13.2	**10.6**	3	34
Dynamic Reserves (SOM)	Energy Market	8.4	**9.3**	3	40
Coordinated Grid Planning Process (CGPP) Support - Requested by New York TOs	Planning	6.2	**8.0**	2	38
Engaging the Demand Side	New Resource	9.3	**7.6**	3	35
Hybrid Aggregation Model	New Resource	7.3	**6.9**	3	43
Storage as Transmission - Requested by Stakeholders	New Resource	8.3	**6.7**	3	43
Emissions Transparency (Requested by Stakeholders)	Energy Market	7.3	**6.4**	2	34
Constraint Specific Transmission Shortage Pricing (SOM)	Energy Market	2.9	**4.8**	3	27
Enhancing Fuel and Energy Security Refresh Study	Energy Market	2.2	**3.5**	1	17
LCR Optimizer Enhancements	Capacity Market	2.7	**3.1**	1	12
Dispatchability and Fast Response Product - Requested by NYPA	Energy Market	2.3	**3.0**	2	14

Raw Score = Average of scores from each organization that completed the stakeholder survey
Weighted Score = Scores from voting members only are averaged across the sector they are in and weighted based on governance voting weights
Sector Count = number of sectors where at least 25% of the sector's survey responses put points on a project and the average points across the sector was 5 or greater
Count = number of survey responses that had assigned points to the project

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Stakeholder Survey Score

- Projects are ordered by Weighted Score

Product / Project	Product portfolio	Raw Score	Weighted Score	Sector Count	Count
Evolving Financial Transaction Capabilities - Bilateral Transactions - Requested by NY-Best and Bayonne Energy Center	Energy Market	3.5	**2.8**	1	20
5 Minute Transaction Scheduling	Energy Market	2.8	**2.6**	1	9
Time Differentiated TCCs	TCC	2.5	**2.6**	1	9
Advancing NYISO Transparency - Requested by DC Energy	Energy Market	3.3	**2.4**	1	11
CRIS Expiration Evaluation	Capacity Market	1.9	**2.1**	0	15
Improve Duct-Firing Modeling (SOM)	Energy Market	2.6	**2.0**	1	8
Review of Real-Time Market Structure (SOM)	Energy Market	1.2	**1.2**	0	10
Reserving Capacity for TCC Balance-of-Period (BOP) Auctions	TCC	0.4	**0.6**	0	5
Meter Data Management Modernization	Business & Finance	0.6	**0.6**	0	4
M2M West PARs	Energy Market	0.4	**0.3**	0	4
Mitigation Threshold Review	Energy Market	0.3	**0.3**	0	2
Multi-Level References	Energy Market	0.1	**0.2**	0	2

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Weighted Score = Scores from voting members only are averaged across the sector they are in and weighted based on governance voting weights
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Count = number of survey responses that had assigned points to the project

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Stakeholder Survey Comments

Stakeholder Comments

Project	Organization	Comment
5-Minute Transaction Scheduling	Long Island Power Authority	The ability to address ramping and quickly changing resource needs on a wholesale level is increasingly important.
Advancing NYISO Transparency	Savion, LLC	This doesn't take much effort, just release studies to stakeholder's as they become available.
Balancing Intermittency (SOM)	City of New York	This project, the Dispatchability and Fast Response Product project, and the Review of Real-Time Market Structure project all seem to be addressing the same general topic - the transition that is now occurring and the changing resource mix. The NYISO should merge these three projects into one project and comprehensively consider the overlapping issues they are intended to address.
Balancing Intermittency (SOM)	Enerwise Global Technologies, Inc. dba CPower	This project will be important to planning for future market dynamics and identify market reforms and new products or designs that will help accommodate and incent the resource operating characteristics that will provide the most value in maintaining a reliable electric system.
Balancing Intermittency (SOM)	Long Island Power Authority	Addressing cost-causation and avoiding externalizing balance of system costs will create a more economic renewable build-out.
Balancing Intermittency (SOM)	NYS Department of State Utility Intervention Unit	Project Nos. 3, 7, and 22 all designed to address a common issue of intermittent resource integration. The ultimate work product of the three would be best considered in an integrated project.

Stakeholder Comments

Project	Organization	Comment
Constraint Specific Transmission Shortage Pricing (SOM)	Long Island Power Authority	Worth continuing.
Coordinated Grid Planning Process (CGPP) Support - Requested by New York TOs	Long Island Power Authority	Important for timely and cost-effective CL&CPA implementation.
Coordinated Grid Planning Process (CGPP) Support - Requested by New York TOs	Savion, LLC	This local grid work is imperative to meeting CLCPA goals.
CRIS Expiration Evaluation	Savion, LLC	The NYISO has at least 3GW of CRIS tied up in units with very low capacity factors. This is costing IC's and rate payers hundreds of millions in Transmission overbuild.
Dispatchability and Fast Response Product - Requested by NYPA	Enerwise Global Technologies, Inc. dba CPower	We support investigation and development of new market products that incent resource flexibility and fast-response capabilities that will be applicable to all technology and resource types.
Dispatchability and Fast Response Product - Requested by NYPA	Helix Ravenswood, LLC	This will likely be an important project at a later date - other priorities prevent an allocation of vote at this time.
Dispatchability and Fast Response Product - Requested by NYPA	Long Island Power Authority	Cost recovery for dispatchable products is important. Cost allocation on a cost-causation basis will also help.

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Stakeholder Comments

Project	Organization	Comment
Dispatchability and Fast Response Product - Requested by NYPA	NYS Department of State Utility Intervention Unit	Project Nos. 3, 7, and 22 all designed to address a common issue of intermittent resource integration. The ultimate work product of the three would be best considered in an integrated project.
Dynamic Reserves (SOM)	Long Island Power Authority	Important as need for reserves becomes increasingly dynamic.
Emissions Transparency - Requested by Stakeholders	Enerwise Global Technologies, Inc. dba CPower	Increased visibility into grid emissions in real time on an hourly basis will help to provide visibility to all MPs, stakeholders, and energy users and will help optimize energy consumption/DER operation to times when they will be most beneficial to reduce carbon. The transparency will also be beneficial for reporting and policy development.
Emissions Transparency - Requested by Stakeholders	Long Island Power Authority	Helpful in understanding marginal emissions impacts of various market choices.
Emissions Transparency - Requested by Stakeholders	Savion, LLC	If this isn't included as carbon pricing in the market, then this won't move the needle.
Engaging the Demand Side	Centrica Business Solutions Optimize, LLC	The language focuses on price responsiveness as a way of enhancing demand side participation, but does not limit it to those types of approaches. Our point allocation is explicitly conditioned on this project being open to considering other ways of enhancing DR participation including specifically making changes to the existing SCR program, as suggested by Mike DeSocio in a conversation at the Annual Meeting.

New York ISO

Stakeholder Comments

Project	Organization	Comment
Engaging the Demand Side	City of New York	The need to consider load as much as supply was made clear at the recent Joint MC-Board meeting. While we appreciate the other work facing this team, the NYISO should dedicate some resources to engaging with customers and understanding the contributions they can make to maintaining a reliable system.
Engaging the Demand Side	Enel X North America, Inc.	Do not support project as written but would support reforming SCR to include an option for longer duration participation and an option for shorter notification times if it led to higher capacity accreditation
Engaging the Demand Side	Enerwise Global Technologies, Inc. dba CPower	While the Engaging the Demand Side project looks to explore opportunities to enhance participation of demand based in response to price, the NYISO should also explore opportunities to modify existing demand response programs to retain and grow participation in these programs. Following conversation with NYISO staff during the Joint Board and Management Committee meetings this year, they indicated that this project could be utilized to explore such program modifications.
Engaging the Demand Side	Helix Ravenswood, LLC	This will likely be an important project to enhance the interaction of demand with intermittent supply at a later date when intermittency becomes a critical variable - other priorities prevent an allocation of vote at this time.

New York ISO

Stakeholder Comments

Project	Organization	Comment
Engaging the Demand Side	NRG Power Marketing LLC	While the focus of the project is to examine how to incorporate price-responsive load into the market, there is a low-hanging fruit of revising demand response program -- that was first developed 15+ years ago -- to provide another tool to balance the NYCA system. Our point allocation is explicitly conditioned on this project being open to considering ways of enhancing SCR program, for example: (1) allowing demand response resources to provide longer than 4-hr load reduction for additional compensation; and/or (2) creating a fast (-er) response demand response product that can be committed just few hours ahead of the anticipated need thus introducing additional operational flexibility addressing peaking conditions and intermittency.
Enhancing Fuel and Energy Security	Long Island Power Authority	Critical ongoing work.
Enhancing Fuel and Energy Security	Savion, LLC	This will happen automatically.
Evolving Financial Transaction Capabilities: Bilateral Transactions -Requested by NY-Best and Bayonne Energy Center	Savion, LLC	There isn't much meat here, ESR's need to be deliverable in their load zone. Charging as a sink only really helps energy, which is consistent with the MIS.
Hybrid Aggregation Model	Consolidated Edison Co. of New York, Inc.	While Con Edison has not given any points to this project, we support continued work on it in 2023 and believe that the project should have been characterized as Continuing given its current stage of development.

New York ISO

Stakeholder Comments

Project	Organization	Comment
Hybrid Aggregation Model	Enerwise Global Technologies, Inc. dba CPower	This project will be key to helping enable heterogenous DER aggregations a viable option for participation within the DER PM.
Hybrid Aggregation Model	Helix Ravenswood, LLC	See note to Storage as Transmission – Requested by Stakeholders project.
Hybrid Aggregation Model	Long Island Power Authority	Very important in supporting hybrid resources not externalizing their balance of system costs.
Hybrid Aggregation Model	Orange & Rockland Utilities, Inc.	While Con Edison has not given any points to this project, we support continued work on it in 2023 and believe that the project should have been characterized as Continuing given its current stage of development.
Improve Duct-Firing Modeling (SOM)	Long Island Power Authority	Savings to loads and generators.
Interconnection Process Enhancements - Requested by ACE-NY	City of New York	The City is supportive of the need to improve the interconnection process, and it appears that the FERC intends to take action on this issue later this year. In other words, this likely will become a mandatory project for 2023.

New York ISO

Stakeholder Comments

Project	Organization	Comment
Interconnection Process Enhancements - Requested by ACE-NY	GI Endurant LLC dba GI Energy	With advent of "dual participation," the new Energy Storage Resources (ESR) asset class under FERC Order 841, and especially the coming DER participation model under FERC Order 2222, it will be invaluable to NYISO and developers/customers alike to have more streamlined, standardized, and transparent interconnection protocols and interfaces as the volume of applications increases. The Joint Utilities (JU) of NY have each started to adopt interconnection portals/software--e.g. PowerClerk or other CRM-based portals--that provide a centralized way to interact with case managers and to track application progress. An equivalent system for NYISO interconnections would be fantastic!
Interconnection Process Enhancements - Requested by ACE-NY	NYS Department of State Utility Intervention Unit	The NYISO has recognized the benefit of making improvements to its interconnection process and FERC has signaled that it will be exploring this issue later this year. Therefore, we anticipate the NYISO will have to put resources to address interconnection in 2023.
Interconnection Process Enhancements - Requested by ACE-NY	Savion, LLC	We are seeing studies that are very behind. 300 Interconnection requests went in last year and are waiting SRIS studies. This needs to happen or CLCPA will fail.
LCR Optimizer Enhancements	Long Island Power Authority	Cost savings can be expected.
M2M West PARs	Savion, LLC	This is good planning practice.

New York ISO

Stakeholder Comments

Project	Organization	Comment
Reserving Capacity for TCC Balance-of-Period (BoP) Auctions	Long Island Power Authority	Can postpone pending higher priority items.
Review of Real-Time Market Structure (SOM)	NYS Department of State Utility Intervention Unit	Project Nos. 3, 7, and 22 all designed to address a common issue of intermittent resource integration. The ultimate work product of the three would be best considered in an integrated project.
Storage as Transmission – Requested by Stakeholders	Helix Ravenswood, LLC	Additional mechanisms for storage participation in the NYISO markets must be just and reasonable and not unduly discriminatory or preferential. Proposals that would result in storage as a transmission only asset ("SATOA") run the risk of being unduly discriminatory or preferential because they can favor incumbent transmission owners. Helix Ravenswood supports creating just and reasonable opportunities for storage to participate in the NYISO markets and as part of competitive solicitations. As opposed to a new project, one possibility could be to fit certain storage under the NYISO's "CSR" or integrate it into the discussions for the development of hybrid storage rules. However, at this time, rather than create a new project, the NYISO should focus on other priorities. As storage becomes part of solicitations for supply, RECs, transmission or some combination of service, rules can be developed to accommodate their integration in an existing project. As long as a storage resource is selected as part of a just and reasonable and not unduly discriminatory or preferential competitive solicitation, market rules should be able to follow.

New York ISO

Stakeholder Comments

Project	Organization	Comment
Storage as Transmission – Requested by Stakeholders	Long Island Power Authority	Creating processes where storage PPR solutions can be compared and if warranted, selected for regional cost allocation will be helpful as storage costs decline.
Storage as Transmission – Requested by Stakeholders	Savion, LLC	The NYISO should dedicate 0 effort. Storage is always a market participant and should be required to go through the queue like all market participants. Further storage projects in lieu of transmission upgrades rarely makes economic sense.

New York ISO

Stakeholder Comments

Project	Organization	Comment
Please enter any additional comments below	Alcoa, Inc.	Given increasing demands and challenges being placed on the system, Multiple Intervenors feels that the NYISO needs to better enhance load participation in wholesale markets and, therefore, strongly supports the Engaging the Demand Side project.
Please enter any additional comments below	Alliance for Clean Energy New York	Thank you NYISO!
Please enter any additional comments below	Covanta Niagara, LP	I believe the constant phone surveys are unnecessary and bring absolutely zero value to the stakeholders.
Please enter any additional comments below	Cypress Creek Renewables, LLC	In addition to working on the HSR model, we would be interested in the NYISO working to fine-tune the CSR model.
Please enter any additional comments below	Enel X North America, Inc.	Please see my comment above that my support for "Engaging the Demand Side" is contingent on a different scope of work. Thanks.
Please enter any additional comments below	GlobalFoundries, U.S., Inc.	Given increasing demands and challenges being placed on the system, Multiple Intervenors feels that the NYISO needs to better enhance load participation in wholesale markets and, therefore, strongly support the Engaging the Demand Side project.

New York ISO

Stakeholder Comments

Project	Organization	Comment
Please enter any additional comments below	Helix Ravenswood, LLC	Overall the NYISO market designs and rules must be just and reasonable and not unduly discriminatory or preferential on a collective basis. Individual market rules, which might make sense as part of a more comprehensive and larger market design, might not be just and reasonable without other changes to ensure efficient competitive incentives. Similar to how the buyer-side mitigation changes and capacity accreditation revisions moved forward in a coordinated manner, future rule changes need to continue to be developed and implemented in a balanced and coordinated manner. Although Helix Ravenswood may have provided 0% for certain projects, it is not necessarily because the project is not worthwhile at some time in the future, it is because it thinks other priorities need to be addressed sooner.
Please enter any additional comments below	IBM Corporation	Given increasing demands and challenges being placed on the system, Multiple Intervenors feels that the NYISO needs to better enhance load participation in wholesale markets and, therefore, strongly support the Engaging the Demand Side project.
Please enter any additional comments below	Long Island Power Authority	Lots of work to do to accommodate renewable build-out and required flexible emission-free resources.
Please enter any additional comments below	LS Power Grid New York, LLC	The coordination between the NYISO, DPS Staff, and NY Utilities on this effort is critical in identifying the most efficient and cost effective transmission solutions for the market.

New York ISO

Stakeholder Comments

Project	Organization	Comment
Please enter any additional comments below	Savion, LLC	Please hire extra staff for IC studies. Also review the process and scope to find efficiencies. It seems many SRIS scoped items bare little fruit in terms of reliability issues resolved. Perhaps some of them are not necessary and further some of the scope can be addressed in the CY, since they are dependent on other projects.
Please enter any additional comments below	Wegmans Food Markets	Given increasing demands and challenges being placed on the system, Multiple Intervenors feels that the NYISO needs to better enhance load participation in wholesale markets and, therefore, strongly supports the Engaging the Demand Side project.
Please provide any recommendations you may have for future enhancements to the Project Prioritization Process	Borrego Solar Systems, Inc.	We greatly appreciate you providing the NYISO resource scoring and prioritization prior to the stakeholder votes.
Please provide any recommendations you may have for future enhancements to the Project Prioritization Process	Hanwha Q CELLS USA Corp.	Any future interconnection cost allocation should have cost cap and system impact studies should have binding costs.
Please provide any recommendations you may have for future enhancements to the Project Prioritization Process	Savion, LLC	This is a good way to understand the stakeholder aggregate needs, but the NYISO has to re-allocate resources accordingly. It seems the same departments have the same staff each year regardless of the survey results. I'd say act on the survey results.

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High Priority Project Constraints and Options

High Priority Constraints - Stakeholder Scores

- **New Resource Team**
  - Resource constraints start to show up with Engaging the Demand Side
- **Energy Market Team**
  - Resource constraints start to show up with Emissions Transparency – Requested by Stakeholders
- **Capacity Market Team**
  - Resource constraints start to show up with LCR Optimizer Enhancements
- **Planning Department**
  - Resource constraints start to show up with Storage as Transmission – Requested by Stakeholders
- **Dispatchability and Fast Response Product – Requested by NYPA and lower stakeholder ranked projects do not appear supportable based on our initial analysis**
  - The NYISO believes the Dispatchability and Fast Response Product and the Balancing Intermittency efforts are very similar in scope. Therefore, the NYISO will consider some of this scope as part of the Balancing Intermittency effort.

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Score Comparison

- Projects are ordered by Weighted Score

Product / Project	Product portfolio	NYISO Score (1-100)	NYISO Rank	Weighted Score
Balancing Intermittency (SOM)	Energy Market	70	1	11.9
Interconnection Process Enhancements - Requested by ACE-NY	Planning	66	2	10.6
Dynamic Reserves (SOM)	Energy Market	62	4	9.3
Coordinated Grid Planning Process (CGPP) Support - Requested by New York TOs	Planning	62	4	8.0
Engaging the Demand Side	New Resource	54	12	7.6
Hybrid Aggregation Model	New Resource	58	7	6.9
Storage as Transmission - Requested by Stakeholders	New Resource	30	22	6.7
Emissions Transparency (Requested by Stakeholders)	Energy Market	56	10	6.4
Constraint Specific Transmission Shortage Pricing (SOM)	Energy Market	58	7	4.8
Enhancing Fuel and Energy Security Refresh Study	Energy Market	62	4	3.5
LCR Optimizer Enhancements	Capacity Market	66	2	3.1
Dispatchability and Fast Response Product - Requested by NYPA	Energy Market	40	19	3.0

New York ISO

Score Comparison

- Projects are ordered by Weighted Score

Product / Project	Product portfolio	NYISO Score (1-100)	NYISO Rank	Weighted Score
Evolving Financial Transaction Capabilities - Bilateral Transactions - Requested by NY-Best and Bayonne Energy Center	Energy Market	56	10	2.8
5 Minute Transaction Scheduling	Energy Market	48	14	2.6
Time Differentiated TCCs	TCC	48	14	2.6
Advancing NYISO Transparency - Requested by DC Energy	Energy Market	40	19	2.4
CRIS Expiration Evaluation	Capacity Market	54	12	2.1
Improve Duct-Firing Modeling (SOM)	Energy Market	58	7	2.0
Review of Real-Time Market Structure (SOM)	Energy Market	44	17	1.2
Reserving Capacity for TCC Balance-of-Period (BOP) Auctions	TCC	34	21	0.6
Meter Data Management Modernization	Business & Finance	46	16	0.6
M2M West PARs	Energy Market	26	24	0.3
Mitigation Threshold Review	Energy Market	42	18	0.3
Multi-Level References	Energy Market	30	22	0.2

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Potential Options being considered by the NYISO to Resolve Constraints

- **Increase NYISO staff to support more projects**
  - The NYISO will also be reallocating staff to support additional high appeal projects
  - For example, Market Design staff will be assigned to cover projects outside their department scope if/when needed
- **Utilize consulting to extent possible – Impacts Rate Schedule 1**
  - For example, utilize consulting to assist with Engaging the Demand Side so that projects like Hybrid Aggregation Model might be supportable
- **Adjust proposed project commitments to reduce scope allowing for work on more projects at the same time**
  - For example, changing the Storage as Transmission project milestone from Market Design Concept Proposed to Issue Discovery would help to resolve resource constraints
- **Remove projects from consideration that had high NYISO score and lower stakeholder score**
  - For example, remove Improving Duct Firing Modeling as a project for 2023
- **Options being discussed to resolve resource constraints need to be assessed for their impact on the overall NYISO budget**

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Historic Budgets

2023 Proposed Projects Compared to Historic Approved Budgets

	Estimated Cost (in millions)					
Project Budget*	Labor	Capital	Prof. Serv.	Total	Mandatory	Continuing
2023 Proposed Projects	14.44	11.25	12.84	38.53	3.16	10.98
2022 Approved	13.36	12.48	11.35	37.20	11.56	1.18
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

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Markets & Enterprise Budget Breakdown

	Markets Estimated Cost (in millions)					
Project Budget*	Labor	Capital	Prof. Serv.	Total	Mandatory	Continuing
2023 Proposed Projects	5.70	0.00	7.24	12.94	3.16	1.65
2022 Approved	7.79	0.10	7.52	15.41	11.56	1.18
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
2023 Proposed Projects	8.74	11.25	5.60	25.59	0.00	9.34
2022 Approved	5.57	12.38	3.83	21.79	0.00	15.77
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

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Next Steps

Next Steps

- Review the NYISO's initial project budget recommendation at the August 2nd BPWG meeting
- Review the NYISO's revised project budget recommendation at the August 25th 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

New York ISO

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

New York ISO

Questions?

Appendix

(Material from May 31st BPWG)

Milestones and Project Prioritization Phases

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.

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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.

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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, 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

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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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2023 Market Project Candidates

Prioritize 2023 Market Projects

Item	Project	Product Area	Project Type	2023 Proposed Deliverable	2022 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
1	5 Minute Transaction Scheduling	Energy Market	Prioritize	Market Design Concept Proposed		0.07	0.00	0.74	0.81
2	Advancing NYISO Transparency - Requested by DC Energy	Energy Market	Prioritize	Deployment		0.09	0.00	0.40	0.49
3	Balancing Intermittency (SOM)	Energy Market	Prioritize	Market Design Concept Proposed		0.07	0.00	0.15	0.22
4	Constraint Specific Transmission Shortage Pricing (SOM)	Energy Market	Prioritize	Deployment	Functional Requirements	0.20	0.00	0.65	0.85
5	Coordinated Grid Planning Process (CGPP) Support - Requested by New York TOs	Planning	Prioritize	Issue Discovery		0.04	0.00	0.00	0.04
6	CRIS Expiration Evaluation	Capacity Market	Prioritize	Functional Requirements	Market Design Complete	0.06	0.00	0.00	0.06
7	Dispatchability and Fast Response Product - Requested by NYPA	Energy Market	Prioritize	Market Design Concept Proposed		0.07	0.00	0.00	0.07

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Prioritize 2023 Market Projects

Item	Project	Product Area	Project Type	2023 Proposed Deliverable	2022 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
8	Dynamic Reserves (SOM)	Energy Market	Prioritize	Market Design Complete	Market Design Concept Proposed	0.12	0.00	1.00	1.12
9	Emissions Transparency (Requested by Stakeholders)	Energy Market	Prioritize	Functional Requirements		0.11	0.00	0.08	0.19
10	Engaging the Demand Side	New Resource	Prioritize	Issue Discovery		0.13	0.00	0.00	0.13
11	Enhancing Fuel and Energy Security Refresh Study	Energy Market	Prioritize	Study Complete		0.07	0.00	0.45	0.52
12	Evolving Financial Transaction Capabilities - Bilateral Transactions - Requested by NY-Best and Bayonne Energy Center	Energy Market	Prioritize	Software Design		0.11	0.00	0.00	0.11
13	Hybrid Aggregation Model	New Resource	Prioritize	Software Design	Functional Requirements	0.48	0.00	0.22	0.70
14	Improve Duct-Firing Modeling (SOM)	Energy Market	Prioritize	Market Design Complete	Market Design Concept Proposed	0.07	0.00	0.60	0.67

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Prioritize 2023 Market Projects

Item	Project	Product Area	Project Type	2023 Proposed Deliverable	2022 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
15	Interconnection Process Enhancements - Requested by ACE-NY	Planning	Prioritize	Market Design Complete		0.08	0.00	0.00	0.08
16	LCR Optimizer Enhancements	Capacity Market	Prioritize	Market Design Complete		0.15	0.00	0.30	0.45
17	M2M West PARs	Energy Market	Prioritize	Market Design Concept Proposed		0.05	0.00	0.00	0.05
18	Meter Data Management Modernization	Business & Finance	Prioritize	Deployment		0.19	0.00	0.00	0.19
19	Mitigation Threshold Review	Energy Market	Prioritize	Market Design Concept Proposed		0.03	0.00	0.00	0.03
20	Multi-Level References	Energy Market	Prioritize	Software Design		0.09	0.00	0.10	0.19
21	Reserving Capacity for TCC Balance-of-Period (BOP) Auctions	TCC	Prioritize	Software Design		0.15	0.00	0.00	0.15

New York ISO

Prioritize 2023 Market Projects

Item	Project	Product Area	Project Type	2023 Proposed Deliverable	2022 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
22	Review of Real-Time Market Structure (SOM)	Energy Market	Prioritize	Issue Discovery		0.10	0.00	0.05	0.15
23	Storage as Transmission - Requested by Stakeholders	New Resource	Prioritize	Market Design Concept Proposed		0.31	0.00	0.25	0.56
24	Time Differentiated TCCs	TCC	Prioritize	Market Design Complete		0.11	0.00	0.20	0.31

New York ISO

Mandatory 2023 Market Projects

Item	Project	Product Area	Project Type	2023 Proposed Deliverable	2022 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
25	Ambient Adjusted Transmission Lines Rating	Energy Market	Mandatory	Functional Requirements		0.11	0.00	0.00	0.11
26	Demand Curve Reset	Capacity Market	Mandatory	Study Defined		0.18	0.00	0.50	0.68
27	DER Participation Model	New Resource	Mandatory	Deployment	Deployment	0.46	0.00	0.30	0.76
28	FERC Order 2222 Compliance	New Resource	Mandatory	Functional Requirements		0.50	0.00	0.25	0.75
29	Long Mountain PAR Operating Protocol with ISO-NE	Energy Market	Mandatory	Market Design Complete		0.05	0.00	0.00	0.05
30	Modeling Improvements for Capacity Accreditation (SOM)	Capacity Market	Mandatory	Functional Requirements		0.30	0.00	0.50	0.80

New York ISO

Continuing 2023 Market Projects

Item	Project	Product Area	Project Type	2023 Proposed Deliverable	2022 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
31	CRIS Tracking	Capacity Market	Continuing	Deployment	Development Complete	0.19	0.00	0.10	0.29
32	Improving Capacity Accreditation (SOM)	Capacity Market	Continuing	Deployment	Market Design Complete	0.74	0.00	0.15	0.89
33	Internal Controllable Lines	New Resource	Continuing	Market Design Complete	Market Design Concept Proposed	0.21	0.00	0.25	0.46

New York ISO

Future 2023 Market Projects

Item	Project	Product Area	Project Type	2023 Proposed Deliverable	2022 Deliverable	Estimated Cost (in millions)			
						Labor	Capital	Prof. Serv.	Total
34	Capacity Transfer Rights for Internal Transmission Upgrades (SOM)	Capacity Market	Future						
36	Eliminate Fees for CTS Transactions with PJM (SOM)	Energy Market	Future						
37	Eliminate Offline GT Pricing (SOM)	Energy Market	Future						
38	Locational Marginal Pricing of Capacity (SOM)	Capacity Market	Future						
39	Long Island PAR Optimization and Financial Rights (SOM)	Energy Market	Future						
40	Long Island Reserve Constraint Pricing (SOM)	Energy Market	Future						
41	Monthly Demand Curves (SOM)	Capacity Market	Future						

New York ISO

Future 2023 Market Projects

Item	Project	Product Area	Project Type	2023 Proposed Deliverable	2022 Deliverable
42	More Granular Operating Reserves (SOM)	Energy Market	Future		
43	Separating Up and Down Regulation Service	Energy Market	Future		

New York ISO

NYISO Scores & High Priority Project Constraints

NYISO Scores

Project	Product Area	Strategy	Operational or Market Issue	Cost & Complexity	Score (1-100)	Rank
		4	4	2		
Balancing Intermittency (SOM)	Energy Market	8	6	7	70	1
Interconnection Process Enhancements - Requested by ACE-NY	Planning	8	6	5	66	2
LCR Optimizer Enhancements	Capacity Market	7	7	5	66	2
Coordinated Grid Planning Process (CGPP) Support - Requested by New York TOs	Planning	7	5	7	62	4
Dynamic Reserves (SOM)	Energy Market	8	7	1	62	4
Enhancing Fuel and Energy Security Refresh Study	Energy Market	8	5	5	62	4

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NYISO Scores

Project	Product Area	Strategy	Operational or Market Issue	Cost & Complexity	Score (1-100)	Rank
		4	4	2		
Constraint Specific Transmission Shortage Pricing (SOM)	Energy Market	8	6	1	58	7
Hybrid Aggregation Model	New Resource	7	6	3	58	7
Improve Duct-Firing Modeling (SOM)	Energy Market	7	6	3	58	7
Emissions Transparency (Requested by Stakeholders)	Energy Market	7	4	6	56	10
Evolving Financial Transaction Capabilities - Bilateral Transactions - Requested by NY-Best and Bayonne Energy Center	Energy Market	6	4	8	56	10
CRIS Expiration Evaluation	Capacity Market	5	4	9	54	12
Engaging the Demand Side	New Resource	7	5	3	54	12

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NYISO Scores

Project	Product Area	Strategy	Operational or Market Issue	Cost & Complexity	Score (1-100)	Rank
		4	4	2		
5 Minute Transaction Scheduling	Energy Market	6	5	2	48	14
Time Differentiated TCCs	TCC	6	4	4	48	14
Meter Data Management Modernization	Business & Finance	5	4	5	46	16
Review of Real-Time Market Structure (SOM)	Energy Market	7	4	0	44	17
Mitigation Threshold Review	Energy Market	3	4	7	42	18

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NYISO Scores

Project	Product Area	Strategy	Operational or Market Issue	Cost & Complexity	Score (1-100)	Rank
		4	4	2		
Advancing NYISO Transparency - Requested by DC Energy	Energy Market	4	3	6	40	19
Dispatchability and Fast Response Product - Requested by NYPA	Energy Market	3	3	8	40	19
Reserving Capacity for TCC Balance-of-Period (BOP) Auctions	TCC	3	5	1	34	21
Multi-Level References	Energy Market	3	3	3	30	22
Storage as Transmission - Requested by Stakeholders	New Resource	4	2	3	30	22
M2M West PARs	Energy Market	2	3	3	26	24

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High Priority Project Constraints

- **New Resource Team**
  - Resource constraints start to show up with Hybrid Aggregation Model
- **Energy Market Team**
  - Resource constraints start to show up with Improve Duct-Firing Modeling (SOM)
- **Capacity Market Team**
  - Resource constraints start to show up with CRIS Expiration Evaluation
- **Engaging the Demand Side and lower-ranked projects do not appear supportable based on our initial analysis**
- **The NYISO is continuing to evaluate these resource constraints and looks forward to more insights from the Stakeholder Survey**

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