

2013 Project Prioritization and Budgeting Process

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Budget & Priorities Working Group

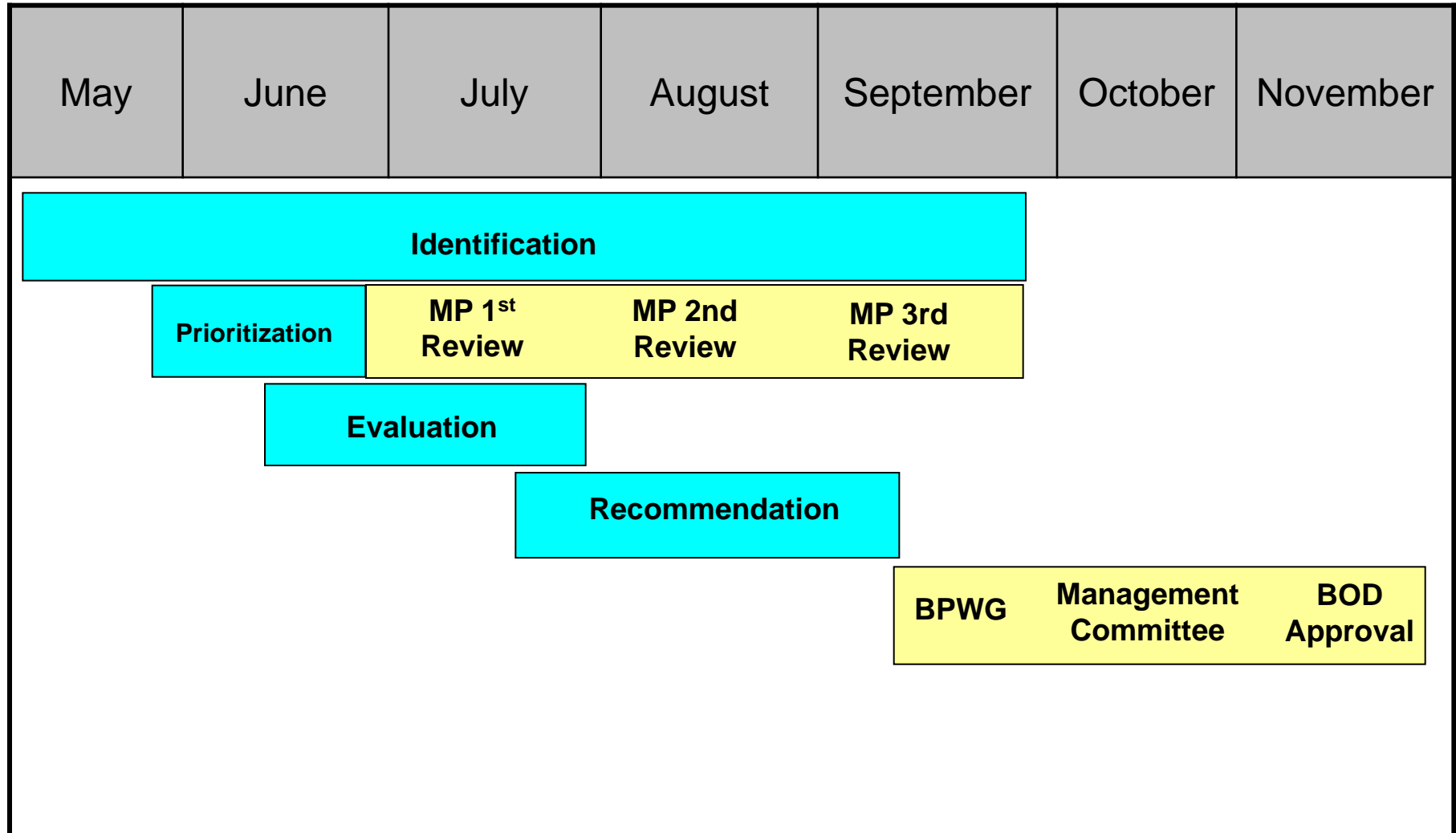
July 20, 2012

Krey Corporate Center

2013 Project Selection Process

Phase	Definition
Identification	<ul style="list-style-type: none"> ◆ FERC Orders ◆ Existing tariff obligations ◆ Strategic Initiatives ◆ State of the Market recommendations ◆ Necessary infrastructure enhancements ◆ Feedback from MPs throughout the year ◆ Product Plans, Market Design Evolution and Strategic Plan
Prioritization	Evaluate projects using objective criteria that reflects the NYISO strategy, stakeholder interest, and potential impacts to budget and resources
Evaluation	Conduct feasibility assessment – detailed estimates of hardware, software, consultancy and staff
Recommendation	Refine 2013 proposed projects based on feasibility assessment

2013 Project Prioritization and Budgeting Timeline



2013 Project Prioritization

2013 Prioritization Criteria

PRIORITIZATION CRITERIA							
#	Category	Criteria	Criteria Weight (1-10)	HIGH	MEDIUM	LOW	NONE
				10	7	3	0
1	Strategy	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
2		Leader in Market Design	10	Significantly improves NYISO Market Design	Moderately improves NYISO Market Design	Minimally improves NYISO Market Design	None
3		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
4		Sustain and Enhance Robust Planning Processes	9	Supports tariff, FERC, NPCC, or NYSERC compliance requirements	Supports reliability planning and/or Business Plan objectives	Required for SRP planning study efficiency or continuous improvement initiatives	None
5	Outcome	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)
6		Appeal	10	Broad Customer and NYISO desirability.	Desired by Customer	Desired by NYISO	Not Desired by Customer & Not Desired by NYISO
7		Market Efficiency	10	Significant improvement	Moderate improvement	Minimal improvement	No impact
8		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
9	Risk	Compliance	10	Significant risk of compliance violation	Moderate risk of compliance violation	Minimal risk of compliance violation	None
10		Business Process (inclusive of technology impact on business process)	10	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
11		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 million market impact	No or less than 10,000 impact
Sum			100				

Execution							
1	Execution	Cost	4	project, <\$100k	>\$100k, <\$500k	>\$500, <\$1M	>\$1M
2		Multi-Year Dependency	6	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
3		Complexity of Business and Technology	4	One area/technology	Cross-functional < 3 Areas/Technology	Highly Cross-functional/ Re-engineering	Complex, solution and impact unknown
4		Compliance	10	Non-appealable, ordered by FERC / desired by NYISO and MP	Ordered by FERC, undesired by NYISO or MP	Potential order identified by FERC	No regulatory impact

2013 Preliminary Project Candidates

Priority Scores

- ◆ **Individual projects scored against objective criteria**
- ◆ **Objective criteria aligned with NYISO Strategic Plan**
- ◆ **High level project descriptions utilized as a basis for potential scope for evaluation purposes**
- ◆ **Individual project priority scores provide indication of relative ranking**

Business Intelligence Products

	<i>Proposed Deliverable</i>	<i>Priority Score</i>
<i>Mandatory Projects*</i>		
FERC Order 760 Automation	Deployment	367
<i>Projects for Prioritization</i>		
Business Intelligence Platform Design	Software Design	225
DSS Business Objects Webi Migration	Deployment	158
DSS Environment Upgrade	Deployment	283
eTariff Business Owner Assignment	Deployment	265
NYS Generator Attributes Tracking System (GATS) Integration	Development Complete	421
Public Website: Maps and Graphs	Deployment	207
Public Website: Marginal Unit Fuel Data	Software Design	135
Public Website: Technology Upgrade	Deployment	213

*Mandatory = FERC Order, Strategic Initiative, Tariff Obligation, or Dependency To Support Order, Initiative, or Obligation

Capacity Market Products

	<i>Proposed Deliverable</i>	<i>Priority Score</i>
<i>Mandatory Projects*</i>		
Additional Capacity Zones	Development Complete	725
Demand Curve Reset	Study Complete	590
<i>Projects for Prioritization</i>		
GADS Portal	Software Design	553
ICAP Masked Bid Data Automation	Deployment	353
ICAP Reference System	Software Design	637

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Demand Response Products

	<i>Proposed Deliverable</i>	<i>Priority Score</i>
<i>Mandatory Projects*</i>		
Demand Response - Real Time Energy Market	Functional Requirements	615
FERC Order 745: Monthly Net Benefits Test**	Deployment	335
<i>2012 Project Continuation</i>		
DSASP Aggregations	Deployment	633
<i>Projects for Prioritization</i>		
DRIS-SCR: Local Generators	Market Design Approved	472
DRIS-SCR: Provisional ACL	Deployment	633
DRIS-SCR: 6-hour Performance and ACL Weather Adjustment	Market Design Approved	438
SCR Baseline Study	Deployment	338

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**NYISO currently awaiting FERC response to August 2011 Compliance Filing

Energy Market Products

	<i>Proposed Deliverable</i>	<i>Priority Score</i>
<i>Mandatory Projects*</i>		
CTS –NE Phase 1: Internal System Build-out	Deployment	637
CTS – NE Phase 2: Activation	Development Complete	637
CTS-PJM	Market Design Approved	365
<i>2012 Project Continuation</i>		
Ancillary Services Mitigation	Deployment	240
Scheduling & Pricing: Graduated Transmission Demand Curve	Deployment	420
<i>Projects for Prioritization</i>		
Disaggregated Virtual Trading	Deployment	165
PAR Modeling Phase 2: Partially Controlling Mode	Functional Requirements	265
Scheduling & Pricing: Hybrid GT Pricing Improvements	Market Design Concept Proposed	235

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Enterprise Products

	<i>Proposed Deliverable</i>	<i>Priority Score</i>
<i>Projects for Prioritization</i>		
Corporate Workstation Upgrades	Deployment	352
Enterprise Data Storage Management	Deployment	277
Enterprise Project Management Phase II	Deployment	307
Enterprise System Reliability Monitoring Enhancements	Deployment	167
HR Business System	Deployment	187
Identity and Access Management Phase III	Architectural Design	305
Market Data Management	Deployment	512
Market Job Scheduling Upgrade	Deployment	368
Market and Web Application Server Upgrade	Architectural Design	228
Mobile Device Management Upgrade	Architectural Design	295
Network Reliability Upgrades	Deployment	368
Ranger Messaging Integration Phase II	Deployment	495
Windows Server Upgrade	Deployment	188

Finance Products

	<i>Proposed Deliverable</i>	<i>Priority Score</i>
<i>2012 Project Continuation</i>		
Credit Management System (CMS): Energy Transactions	Deployment	575
<i>Projects for Prioritization</i>		
CMS: Enhanced MP Data Access	Functional Requirements	337
DSS: Enhanced MP Data Availability	Deployment	390
Data Retention: Settlements Data	Functional Requirements	492
Expanded Functionality Billing Simulator	Deployment	250
ICAP Spot Market Credit Enhancements	Market Design Concept	270
Oracle Financials Upgrade	Functional Requirements	387
Performance Tracking System Replacement	Deployment	322
Unbalanced Trading Hubs	Market Design Concept	145

Operations & Reliability Products

	<i>Proposed Deliverable</i>	<i>Priority Score</i>
<i>Mandatory Projects*</i>		
Energy Management System (EMS) Visualization	Deployment	232
Phase I Metering Upgrade	Deployment	413
<i>2012 Project Continuation</i>		
HTP Controllable Tie Line	Deployment	420
<i>Projects for Prioritization</i>		
Dispatcher Training System (DTS) Sustainability	Deployment	568
Enhanced Scarcity Pricing	Deployment	650
LI PAR Optimization	Market Design	480
MetrixIDR (Load Forecaster Upgrade)	Deployment	542
Operational Tools 2013	Deployment	520
Ranger Enhancements	Deployment	480

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Operations & Reliability Products - Continued

	<i>Proposed Deliverable</i>	<i>Priority Score</i>
<i>Projects for Prioritization</i>		
Ranger Optimization & Performance Enhancements	Development Complete	865
Ranger Software Upgrade	Development Complete	672
Ranger Workstation Upgrade	Deployment	528
Reference Level Software (RLS) Enhancements	Deployment	600
ROS DAM BPCG Mitigation Automation	Deployment	410

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Planning and TCC Products

	<i>Proposed Deliverable</i>	<i>Priority Score</i>
<i>Projects for Prioritization</i>		
High Performance Computing Redundancy	Deployment	388
Multi-Duration Centralized TCC Auction Phase 2	Functional Requirements	438
Siemens PTI Model-on-Demand Phase 2	Deployment	473
TCC Auction Engine Upgrade	Software Ready	468
TCC Auction VB6 Validation Tool Replacement Phase 1	Deployment	288
TCC Three-month Bid Data Release Automation	Deployment	298

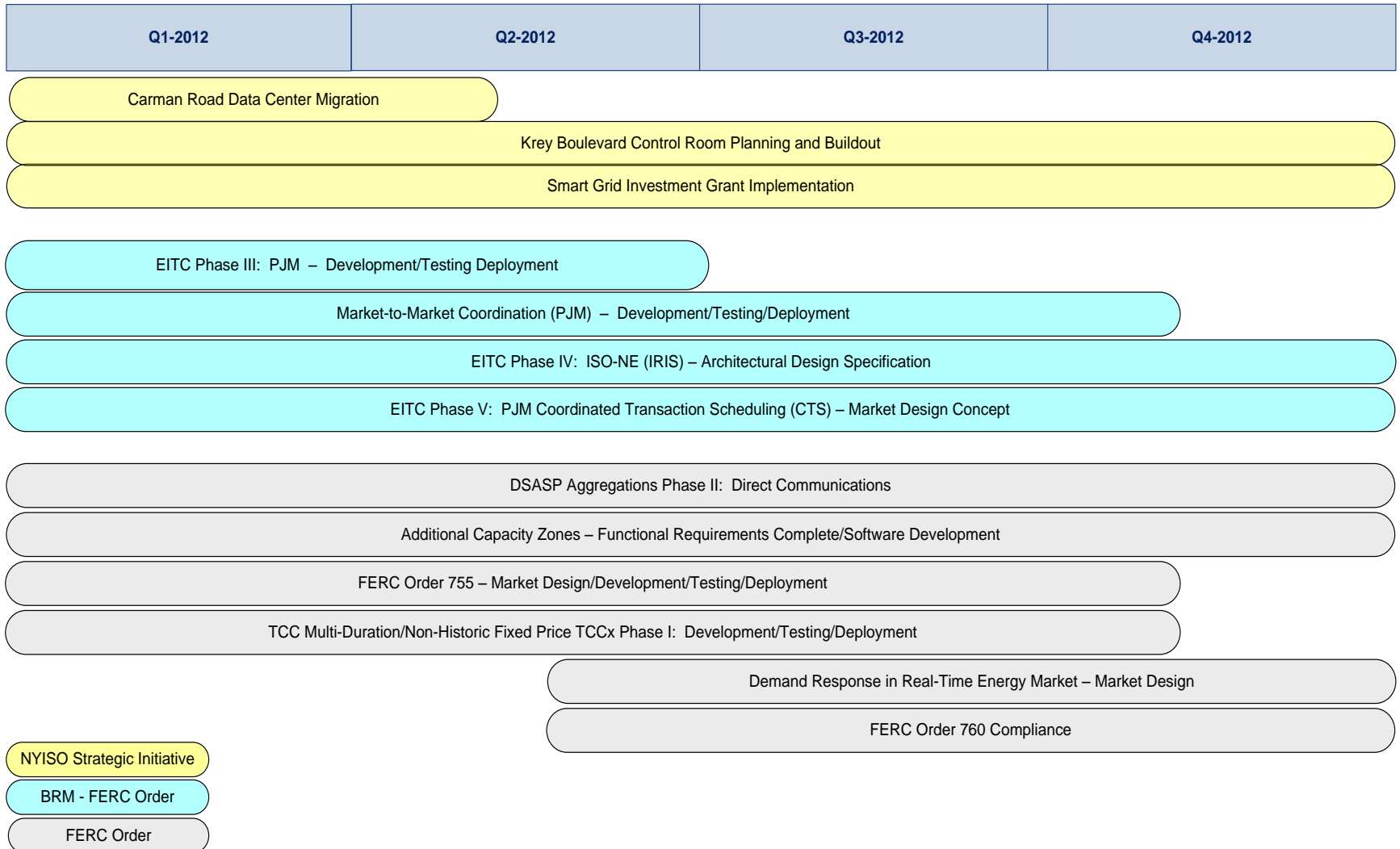
Next Steps

- ◆ **Ongoing dialogue with Market Participants at BPWG and other working groups**
- ◆ **Continue internal NYISO prioritization process**
- ◆ **Continue feasibility assessment of mandatory projects and high priority projects**
- ◆ **Provide cost estimates and benefits**
- ◆ **Solicit feedback from Market Participants at August BPWG**

Appendix: Strategic Initiatives and Stakeholder Input

2012 – 2014 Product Plan: Strategic Initiatives and FERC Orders

2012 Product Plan - Strategic Initiatives and FERC Orders



2013 - 2014 Product Plan - Strategic Initiatives and FERC Orders

2013	2014
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- Krey Boulevard Control Room Migration Planning and Execution
- Smart Grid Investment Grant Implementation

- EITC Phase V: PJM CTS – Market Design
- EITC Phase IV: ISO-NE CTS – Internal System Buildout

- EITC Phase V: PJM CTS – Software Development
- EITC Phase IV: ISO-NE CTS – Software Development
- Market-to-Market: New England – Requirements

- Additional Capacity Zones – Development/Testing/Deployment
- FERC Order 745
- FERC Order 760
- Demand Response in RT Energy Market – Market Rule Development/Requirements
- Demand Curve Reset

- Demand Response in RT Energy Market – Development and Testing

- NYISO Strategic Initiative
- BRM - FERC Order
- FERC Order
- Tariff Compliance

BRM Estimated Timeline – As of June 2012



Project	2011 Deliverables	2012 Deliverables	2013 Deliverables	2014-2015 Deliverables	Post 2015 Deliverables
Buy Through of Congestion					Evaluation
ITC ¹ Phase I: HQ on Dispatch	Deployment 15-Minute				Deployment 5-Minute
ITC Phase II: Ancillary Services				Evaluation	Deployment
ITC Phase III: PJM Intra-hour Transaction Scheduling		Deployment*			
ITC Phase IV: ISO – NE Intra-hour Transaction Scheduling	Tariff Filing	Arch. Design	Development	Deployment	
ITC Phase V: PJM – Coordinated Transaction Scheduling		Market Design Concept	Market Design	Deployment	
ITC Phase VI: OH – Coordinated Transaction Scheduling				Evaluation	Deployment
Market to Market Coordination: PJM		Deployment*			
Market to Market Coordination: ISO-NE				Requirement	Deployment ²
Market to Market Coordination: MISO				Evaluation	
Market Flow Calculator (PJM M2M)	Deployment				
Market Flow Calculator (NERC IDC)	Deployment				
PAR Modeling Upgrades (updated proxy bus pricing)	Deployment				
Ranger Software Upgrade				Deployment	
Ranger Optimization and Performance Enhancements ³			Arch. Design	Deployment	

¹ITC = Interregional Transaction Coordination

²ISO-NE has indicated it could not support a deployment of Market to Market Coordination prior to 2014

³Includes Mixed Integer Programming (MIP) algorithm in Security Constrained Unit Commitment (SCUC)

*Deployed & operational no later than January 15, 2013

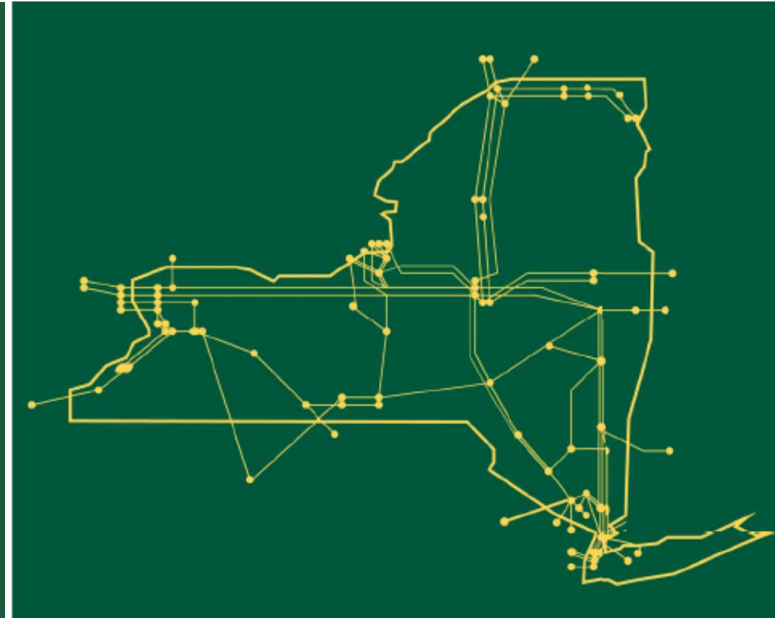
Stakeholder Input Following 5/21 BPWG

Stakeholder Input	NYISO Response
Any software changes necessary to enable a transfer of data to a GATS system	Project included for prioritization/evaluation in Business Intelligence Products
Disaggregated Virtual Trading	Project included for prioritization/evaluation in Energy Market Products
Ranger software changes to allow more pricing nodes and bid volume	Ranger Optimization & Performance Enhancements included in Operations & Reliability Products for prioritization/evaluation
Unbalanced Trading Hubs	Project included for prioritization/evaluation in Finance Products
Phase II of ICAP Bidding Requirements	Project included for prioritization/evaluation in Finance Products
Removing capacity zones determined to be no longer needed	NYISO is open to further exploring the development of criteria to eliminate existing or newly created zones
Phase II Improvements in Frequency Regulation	Frequency Regulation Compensation scheduled for October 2012; Phase II would require stakeholder discussions regarding enhancement opportunities based on Phase I outcomes

Stakeholder Input Following 5/21 BPWG

Stakeholder Input	NYISO Response
Internal dispatch/external import limits: trade-off for economics	Concept needs to be introduced by stakeholders at MIWG for discussion
Capacity Market Restructuring Proposals	Capacity Market Study under way with expected completion late summer 2012; results will be discussed with stakeholders at ICAPWG
Changes related to mothballed/retired generators	Topic to be addressed through stakeholder process
Modeling of excess capacity in Planning studies	Input forwarded to System Resource Planning group
Tariff changes related to the impact of potential gas supply outages under future electric system conditions to be conducted in conjunction with the reliability planning process	Input forwarded to System Resource Planning group
Improved bid mitigation notification	Input forwarded to Market Mitigation & Analysis
Additional storage for RLS attachments	Input forwarded to Market Mitigation & Analysis

The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



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