2012 Project Prioritization and Budgeting Process

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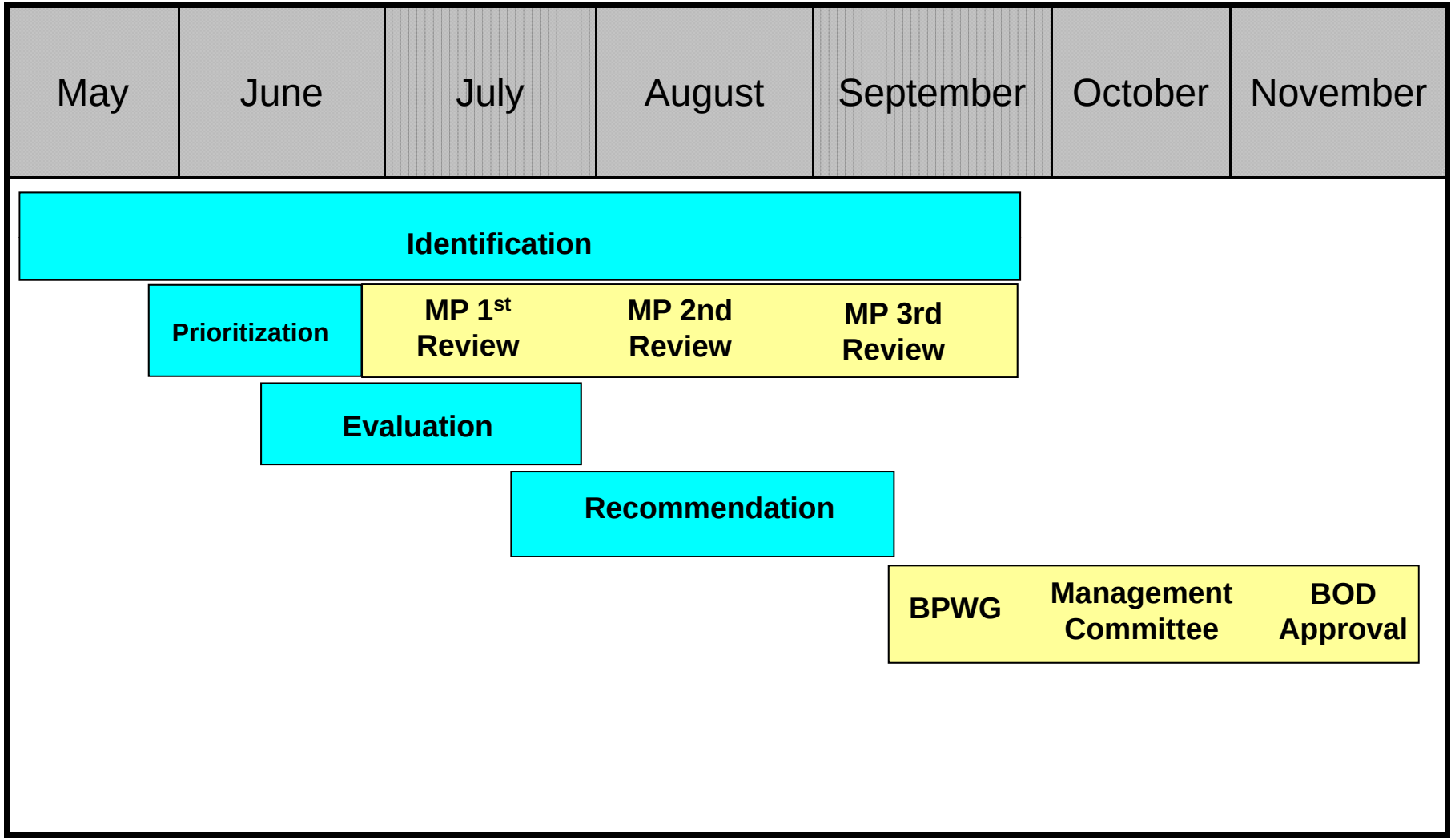
Summary of Project Prioritization and Budgeting Process To Date

- **May 18 BPWG**
  - ***Overview of 2012 Project Prioritization and Budgeting Process***
  - ***Review of 2011-2013 Product Plan: NYISO Strategic Initiatives and FERC Orders***
- **June 23 BPWG**
  - ***Review of 2012 Project Prioritization Criteria and link to NYISO Strategic Plan***
  - ***Review of 2012 Preliminary Project Candidate List***
- **July 29 BPWG**
  - ***Proposed Project Descriptions for 2012 Preliminary Project Candidates***
  - ***Review of Prioritized 2012 Preliminary Project Candidate List and potential milestones***
- **August 24 BPWG**
  - ***Proposed Project Descriptions for 2012 Preliminary Project Candidates***
  - ***Review of Prioritized 2012 Preliminary Project Candidate List and potential milestones with cost/benefit analysis***

2012 Project Selection Process

Phase	Definition
Identification	◆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 2012 proposed projects based on feasibility assessment

2012 Project Prioritization and Budgeting Timeline



2012 Preliminary Project Candidates: Cost/Benefit Analysis*

***All projects in the following list are currently being evaluated on an individual basis according to priority, cost and resource availability for 2011. NYISO does not have the resource and budget capacity to feasibly do all of the following projects. NYISO will propose a feasible list of projects and a schedule at the September BPWG.**

2012 Preliminary Project Candidates

Business Intelligence Products	Strategic Objective	Potential Milestone	Priority	NYISO Labor	Capital & Prof. Fees*	Total Cost	Benefits
Market and Settlement Data Management Phase 1: Broader Regional Markets	Excellence in Execution	Deployment	1	.178	.000	.178	• Support required data analysis for large volume of BRM data • Reduce performance impact to productions database • Lower cost solution to meet data retention requirements
eTariff Public Website Module	Excellence in Execution	Deployment	2	.023	.040	.063	• Improved navigation for MP access to NYISO tariffs • Reduce manual processes for displaying tariff changes & filings on website • Display sections of the tariff immediately upon effective date
Public Website: Posting Marginal Unit Fuel Data	Excellence in Execution	Deployment	2	.090	.000	.090	• Provide data requested by MPs • Improved transparency • Authoritative source of information
Public Website: Publishing Process	Excellence in Execution	Deployment	2	.184	.090	.274	• Improved efficiency for posting documents • Reduced software licensing costs
Web Posting Enhancements	Excellence in Execution	Architectural Design	2	.398	.000	.398	• Increased performance and availability • Eliminate outdated/unsupported technology
Public Website: Maps and Graphs Upgrade	Excellence in Execution	Deployment	3	.213	.075	.288	• Eliminate outdated/unsupported technology • Introduce technology that aligns with NYISO technology stack

*In $ millions; includes hardware, software, and professional fees

2012 Preliminary Project Candidates

Capacity Market Products	Strategic Objective	Potential Milestone	Priority	NYISO Labor	Capital & Prof. Fees*	Total Cost	Benefits
Additional Capacity Zones	Leader in Market Design	Functional Requirements	1	.348	.250	.598	• Reflect capacity values inside and outside SENY more efficiently via prices • Incentivize new capacity more consistent with future reliability needs • Achieve long-term benefits of more efficient, locational investment decisions, including eliminating the deliverability barrier to building outside SENY, which are substantial and very difficult to quantify
Generator Availability Data System (GADS) Portal	Excellence in Execution	Architectural Design	2	.050	.000	.050	• Greater market functionality and ability for MPs to move away from spreadsheet-based data submission • Potential elimination of errors associated with manual processes
ICAP Software Enhancements	Leader in Market Design	Deployment	2	.205	.000	.205	• Ability to implement necessary software changes to support ICAP market rule changes from FERC Orders and/or the NYISO stakeholder process • Ensure ICAP Automated Market System (AMS) contains the most up-to-date rule set for 2012

*In $ millions; includes hardware, software, and professional fees

2012 Preliminary Project Candidates

Demand Response Products	Strategic Objective	Potential Milestone	Priority	NYISO Labor	Capital & Prof. Fees*	Total Cost	Benefits
Demand Response – Real Time Energy Market	Leader in Market Design	Market Design	1	.090	.025	.115	• Potential for increased demand response in real-time energy markets
DSASP Direct Communication Phase 2	Leader in Market Design	Deployment	1	.091	.025	.116	• Reduce barriers to entry for demand resources to become ancillary service providers
Order 745 – DADRP Compliance Implementation	Leader in Market Design	Deployment	1	.193	.000	.193	• DADRP compliance with FERC Order 745 • Potential for increased demand response in day-ahead energy market • Monthly offer floor indexed to changes in gas prices • Refined DADRP cost allocation procedures to address simultaneous constraints in multiple zones
Order 745 – Dynamic Net Benefits Study	Leader in Market Design	Compliance Filing	1	.038	.250	.288	• Real-time or near real-time integration of the Order 745 net benefits test to better integrate the effects of demand response in NYISO's energy markets
Demand Response Information System: Event Notification	Excellence in Execution	Deployment	2	.120	.070	.190	• Flexible and reliable communication with demand response providers for events and tests • Integration with other NYISO systems for improved availability of information
Demand Response Information System: Enhancements	Leader in Market Design	Deployment	2	.217	.000	.217	• Ability to implement necessary software changes affecting EDRP and SCR programs as a result of FERC Orders and/or the NYISO stakeholder process

*In $ millions; includes hardware, software, and professional fees

2012 Preliminary Project Candidates

Energy Market Products	Strategic Objective	Potential Milestone	Priority	NYISO Labor	Capital & Prof. Fees*	Total Cost	Benefits
ITC** Phase III – PJM Intra-hour Transaction Scheduling	Leader in Market Design	Deployment	1	.405	.600	1.005	• Up to $46 million***
ITC Phase IV – ISO-NE Inter-Regional Interchange Scheduling (IRIS)	Leader in Market Design	Architectural Design	1	.309	.750	1.059	• $17 million ***
ITC Phase V: PJM Coordinated Transaction Scheduling	Leader in Market Design	Market Design Concept Proposed	1	.041	.000	.041	• $46 million***
Market to Market Coordination – PJM	Leader in Market Design	Deployment	1	.969	1.900	2.869	• $14 million***
Ancillary Services Mitigation	Leader in Market Design	Deployment	2	.022	.000	.022	• $1.4 - $4.4 million***
Reliability Resource Compensation	Leader in Market Design	Market Design Approved	2	.030	.025	.055	• Potential reliability gain
Scheduling & Pricing: Enhance Scarcity Pricing	Leader in Market Design	Market Design Concept Proposed	2	.031	.000	.031	• Improved price signals • More efficient scheduling

*In $ millions; includes hardware, software, and professional fees
**ITC = Interregional Transaction Coordination
***Estimated production cost savings as presented to stakeholders at the Technical Conference on Broader Regional Markets Initiatives by Dr. David Patton, Potomac Economics, September 27, 2010

2012 Preliminary Project Candidates

Energy Market Products cont.	Strategic Objective	Potential Milestone	Priority	NYISO Labor	Capital & Prof. Fees*	Total Cost	Benefits
Scheduling and Pricing: Graduated Transmission Demand Curve	Leader in Market Design	Deployment	2	.031	.035	.066	• Improved price signals • More efficient scheduling • Reduce residuals
Disaggregated Virtual Trading	Leader in Market Design	Deployment	3	1.200	.700	1.900	• $2 million in production cost savings** • Improved market efficiency • Enhanced market functionality
Operations Systems Documentation	Excellence in Execution	Documentation	3	.039	.300	.339	• Increased transparency • Increased efficiency
Price Validation Redesign	Excellence in Execution	Deployment	3	.285	.000	.285	• Reduce market risk • Increased efficiency
Regulation Mileage Compensation	Leader in Market Design	Market Design Approved	3	.040	.025	.065	• Potential long term reliability gain

*In $ millions; includes hardware, software, and professional fees
**As estimated by Dr. David Patton in the 2010 NYISO "State of the Market" report

2012 Preliminary Project Candidates

Enterprise Products	Strategic Objective	Potential Milestone	Priority	NYISO Labor	Capital & Prof. Fees*	Total Cost	Benefits
Ranger Messaging Integration	Excellence in Execution	Deployment	1	.264	.650	.914	• Add near real-time messaging capabilities to support NYISO business integration with external partners • Support future integration with Demand Response partners and Smart Grid applications
Data Integration Platform	Excellence in Execution	Deployment	2	.136	.223	.359	• Add capability to integrate and monitor relatively large amounts of market and operational data from external partners • Enable market flow validation and reporting requirements required for market to market coordination
Identity and Access Management Phase III	Excellence in Execution	Deployment	2	.272	.125	.397	• Reduce security risks • Improve audit and compliance reporting • Automate and reduce manual efforts • Improve process controls and efficiency

*In $ millions; includes hardware, software, and professional fees

2012 Preliminary Project Candidates

Enterprise Products	Strategic Objective	Potential Milestone	Priority	NYISO Labor	Capital & Prof. Fees*	Total Cost	Benefits
Service Manager Upgrade	Excellence in Execution	Deployment	2	.229	.050	.279	• Maintain vendor support for strategic IT service delivery platform • Remove customization to improve support and reduce IT maintenance costs • Improve controls in IT change management process • Enable IT release and configuration management enhancements to support quality delivery
Project Management Platform	Excellence in Execution	Deployment	2	.060	.175	.235	• Replace aging platform with reliable system utilizing latest MS Project and SharePoint features • Enable improved portfolio management of approved project priorities • Provide enhanced project collaboration, tracking, and reporting • Create foundation for future centralized resource planning and management

*In $ millions; includes hardware, software, and professional fees

2012 Preliminary Project Candidates

Finance Products	Strategic Objective	Potential Milestone	Priority	NYISO Labor	Capital & Prof. Fees*	Total Cost	Benefits
Bad Debt Processing Flexibility	Excellence in Execution	Deployment	2	.175	.000	.175	• Reduce exposure and aid in timely recovery of funds • Reduce length of time funds borrowed from working capital
Bank Wire and ACH Processing Improvements	Excellence in Execution	Deployment	2	.339	.000	.339	• Reduction in manual processes • Offset increased processing time with initiation of weekly invoicing and payment
ICAP Weekly Invoicing Automation	Excellence in Execution	Deployment	2	.095	.000	.095	• Elimination of manual processes spanning multiple departments
Oracle Financials Upgrade	Excellence in Execution	Functional Requirements	2	.099	.100	.199	• Improved supportability and performance • Enhanced Functionality
Performance Tracking System (PTS) Replacement	Excellence in Execution	Functional Requirements	2	.157	.000	.157	• Improved supportability and performance • Enhanced Functionality
Transactions Credit Enhancements	Leader in Market Design	Deployment	2	.600	.000	.600	• Better alignment of credit requirements to market risk • Support enhancements to transaction bidding and scheduling associated with Broader Regional Markets

*In $ millions; includes hardware, software, and professional fees

2012 Preliminary Project Candidates

Operations & Reliability Products	Strategic Objective	Potential Milestone	Priority	NYISO Labor	Capital & Prof. Fees*	Total Cost	Benefits
EMS Visualization	Leader in Reliability	Architectural Design	1	.038	1.020	1.058	• Improved situational awareness • Data processing redundancy • Improved communication infrastructure • Improved system reliability
Phase I Meter Upgrade	Leader in Reliability		1	.819	1.775	2.594	• Improved system reliability • Data processing redundancy
Hudson Transmission Partners (HTP) Controllable Tie Line	Leader in Reliability	Deployment	1	.144	.000	.144	• Improved system reliability
Operational Tools 2012	Excellence in Execution	Deployment	2	.246	.162	.408	• Improved efficiency through automation • Data processing efficiency • Increased reliability via better visibility and controls for the NYISO
Ranger Enhancements 2012	Excellence in Execution	Deployment	2	.251	.000	.251	• Improved efficiency through automation • Enhanced market visibility • Data processing efficiency
Ranger Optimization and Performance	Excellence in Execution	Deploy(2013)	2	.277	3.100	3.377	• Improved market efficiency • Improved system reliability • Data processing efficiency
Ranger Software Platform Upgrade	Excellence in Execution	Deploy (2013)	2	.354	.750	1.104	• Improved system reliability • Security enhancements • Data processing efficiency • Increased supportability

*In $ millions; includes hardware, software, and professional fees

2012 Preliminary Project Candidates

Operations & Reliability Products	Strategic Objective	Potential Milestone	Priority	NYISO Labor	Capital & Prof. Fees*	Total Cost	Benefits
Reference Level Software Enhancements 2012	Excellence in Execution	Deployment	2	.338	.000	.338	• Improved efficiency through automation • Enhanced market visibility • Data processing efficiency
ROS DAM Mitigation Automation	Excellence in Execution	Deployment	2	.148	.000	.148	• Improved efficiency through automation • Data processing efficiency
TSC Enhancements	Excellence in Execution	Software Ready	2	.144	.000	.144	• Improved efficiency through automation

*In $ millions; includes hardware, software, and professional fees

2012 Preliminary Project Candidates

Planning and TCC Products	Strategic Objective	Potential Milestone	Priority	NYISO Labor	Capital & Prof. Fees*	Total Cost	Benefits
Multi-Duration/Non-Historic Long Term Fixed Price TCC	Leader in Market Design	Software Design	1	1.113	.400	1.513	• Allows for sale of longer term TCCs and support of Balance-of-Period Auctions • Allows Offering Non-Historic Fixed Price TCCs to eligible LSEs • Provide flexibility to support Day Ahead Market as a result of implementing Market to Market with PJM
Market to Market Coordination – PJM : TCC Changes	Leader in Market Design	Software Ready	1	.015	.250	.265	• Provide flexibility to support Day Ahead Market as a result of implementing Market to Market with PJM
Automation of System Upgrade Facilities Headroom Tracking	Robust Planning Processes	Software Design	2	.095	.000	.095	• Improved tracking and assessment of financial information for all parties • Increased control and security • Improved efficiency through automation
High Performance Computing Phase II: MAPS	Robust Planning Processes	Software Ready	2	.065	.050	.115	• Increased performance for System Planning to conduct large, data intensive studies with GE MAPS application • Increased controls and reduced risk of system failure by migrating to high availability environment in NYISO Data Center
Siemens PTI - Model-on-Demand Phase II: Transmission Operator User Interface	Robust Planning Processes	Software Ready	2	.068	.050	.118	• Support intent of FERC Order 890 • Increased controls and reduced risk of errors from manual entry required for modeling efforts • Provides interface for TOs to enter, review and submit data for NYISO developed models

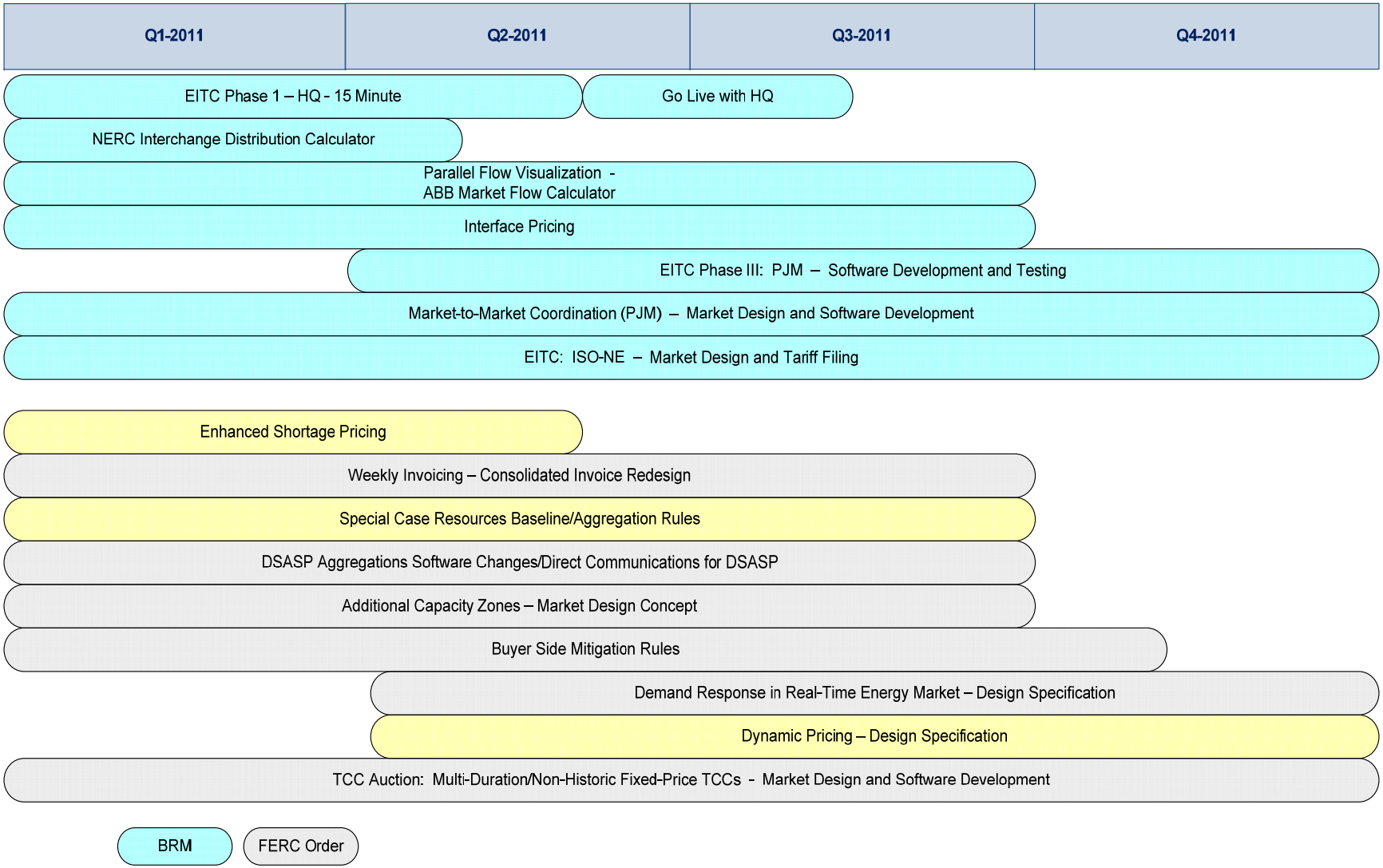
*In $ millions; includes hardware, software, and professional fees

Next Steps

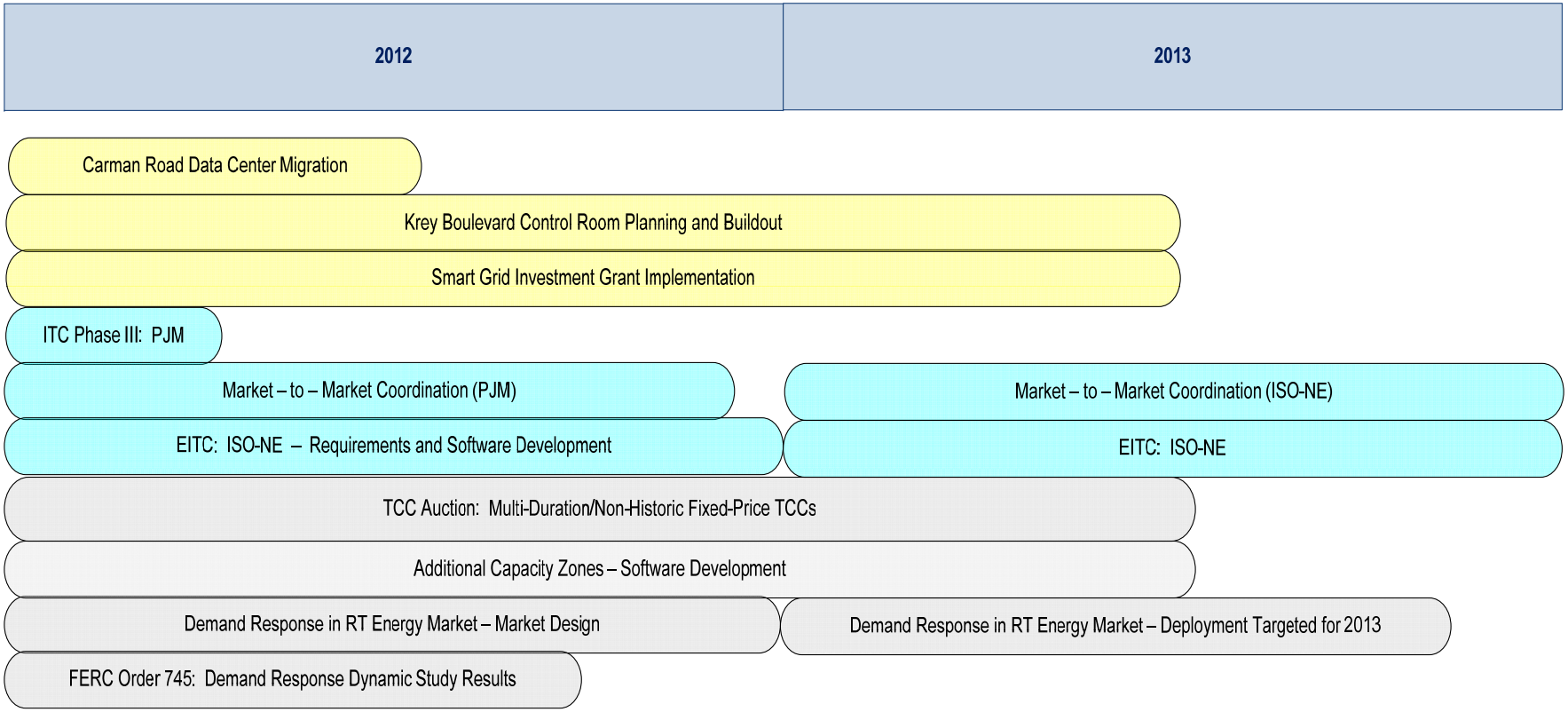
- **Ongoing dialogue with Market Participants at BPWG and other working groups**
- **Complete feasibility assessment of mandatory projects and high priority projects**
- **Finalize individual project cost estimates**
- **Propose 2012 project list and deliverables at September BPWG**
- **Solicit feedback from Market Participants and modify, if necessary**

Appendix
2011 – 2013 Product Plan:
Strategic Initiatives and FERC Orders

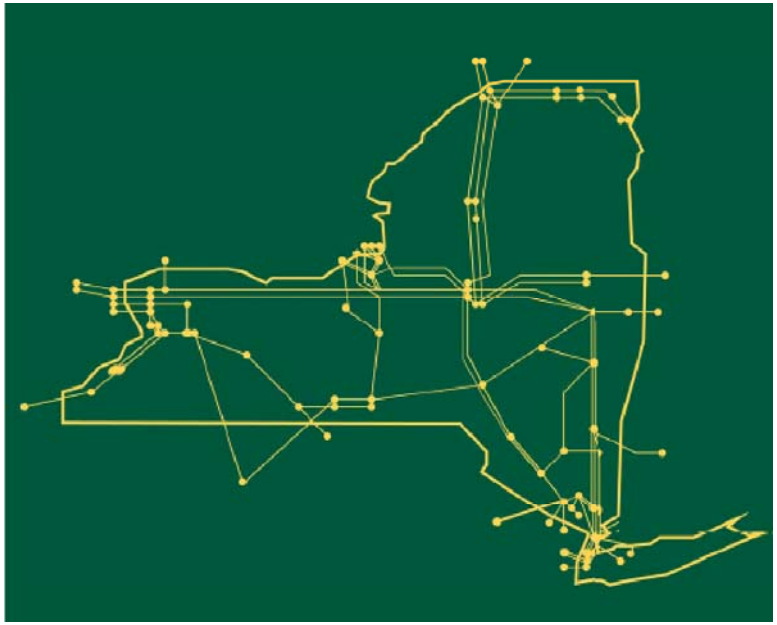
2011 Product Plan - Strategic Initiatives and FERC Orders



2012 - 2013 Product Plan - Strategic Initiatives and FERC Orders



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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