Project Title	Project Description
Auxiliary Market Products	
Additional Capacity Zones	The NYISO and stakeholders are developing the rationale in 2010 for creating additional capacity zones, identified as a recommendation in the 2009 State of the Market report. A FERC compliance filing is due in October 2010 that will define the criteria for creating new capacity zones. A Lower Hudson Valley capacity zone is under consideration to reduce the impact of deliverability and better reflect the cost of new entry. The 2011 project would focus on the functional design of the logic to generalize the addition, and possibly subtraction, of capacity zones within the ICAP Automated Market System.
Buyer Side Mitigation Rules	Implement any rule changes required as a result of 2010 stakeholder discussions on buyer-side mitigation; changes could include floor price adjustment, duration of mitigation, and exemption tests. Implementation would require changes to the ICAP Automated Market System.
Demand Response Aggregations in DSASP	Based on the NYISO's response to FERC Order 719, in 2010 NYISO will be investigating the changes needed to accommodate aggregated small demand response resources providing ancillary services (DSASP). The current DSASP program allows individual resource participation through a TO; Market rule changes should be minimal if aggregations are treated in the same manner as individual DSASP resources. Implementing required rule changes and software changes will be the focus of the project in 2011.
DSASP Direct Metering	This project will address the required market rule, software, and hardware changes needed to enable direct communications from the NYISO to the DSASP provider/aggregator. The scope of this effort will be determined by NYISO and stakeholder discussions in 2010.
Demand Response – Real Time Energy Market	The focus of this project in 2011 is implementation of the market rules and any software changes required to permit demand response entities to participate in the NYISO's real-time energy market. The scope of this effort will be determined in the 4th quarter of 2010.
SCR Baseline/Aggregation Rules	The focus of the project in 2011 is the deployment of any necessary software changes within the Demand Response Information System (DRIS) to implement changes as the result of stakeholder discussions in 2010 on SCR baseline/aggregation rules.
Business Intelligence Products	
Data Warehouse Platform Evolution	The Netezza data warehouse appliance is a high performance, scalable, and cost effective solution for NYISO to deliver business intelligence projects faster and greatly increase reporting performance. NYISO will complete the installation and the migration of the first data mart in 2010. In 2011 the NYISO will migrate the remaining data marts to this new platform.
Data Access for Market Mitigation and Analysis	The MMA data access project is progressing through the functional areas that MMA has identified for their analysis and monitoring work. ICAP and TCC data could be integrated with the large number of data elements already within the MMA

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Project Title	Project Description
	data mart to provide a more comprehensive set of data for analysis and reporting. This data would be loaded into the new Netezza platform.
E-Planning Enhancements	E-Planning is a comprehensive collaboration system for NYISO System Resource Planning. The 2010 deployment was specific for Interconnection Studies. The focus of the 2011 project will be extending functionality to include other types of studies conducted by System Resource Planning, such as Transmission Studies.
Public Website: Maps and Graphs Upgrade	The maps and graphs displayed on the Market Data pages of the Public Website are extensively used. They are displayed using a very old technology, which cannot continue to be effectively supported. This project would replace the technology and examine possible enhancements to these graphical displays.
Web Posting Enhancements	The Web Posting Enhancement project is a multi-year project with phased deliverables to address the following objectives: • Improve reliability and performance of the web posting process • Enable the posting of events to nyiso.com in real time such as Major Emergency, Thunder Storm Alert, Reserve Pickup and Area Control Error (ACE). • Support SmartGrid initiative by posting LBMP prices to TOs over ICCP "Web Postings" refers to a series of processes that generate and publish various CSV, PDF, and HTML files to NYISO's OASIS site (http://mis.nyiso.com/public). These files include zonal and generator pricing data for the Real-Time, Hour-Ahead, and Day-Ahead markets, outage data, interface limits & flows, PAR schedules & flows, actual load and load forecasts, various reports, and other publicly available data used by Market Participants.
Energy Markets Products	
Ancillary Services Mitigation	Per recommendation of NYISO's Market Advisor, NYISO should modify two mitigation provisions that may limit competitive 10-minute reserves offers in the day-ahead market. This project would focus on an evaluation of these two mitigation provisions and identification of appropriate modifications, if necessary.
Buy-through of Congestion	Buy-Through of Congestion is a Broader Regional Markets initiative that addresses congestion costs created by loop flow from external transactions. Parties scheduling transactions with any of the ISOs surrounding Lake Erie would be billed for real-time congestion costs incurred by neighboring systems supporting the loop flow created by the transaction to maintain the schedule. Parties scheduling transactions would specify if they are, or are not, willing to pay for off-contract path congestion. This project will implement this functionality. This project was one of the BRM initiatives identified in NYISO's response to FERC on Loop Flows.
Enhanced Shortage Pricing	The NYISO implemented reserve demand curves as part of the SMD2 implementation to accurately and consistently capture shortage conditions directly into the market clearing prices. During the development of the market rules, set points (or set point/ MW pairs) were established for the Ancillary Service products.
Interregional Transaction Coordination Phase III – PJM Intra-hour Transaction	Interregional Transaction Coordination Phase 3 is a Broader Regional Markets initiative that provides more frequent scheduling of external energy transactions, specifically with PJM. Currently energy transactions between NY and other

Project Title	Project Description
Scheduling	control areas are evaluated economically once for the hour. The 2008 and 2009 State of the Market recommendation #2 is, "NYISO continue its work with neighboring control areas to better utilize the transfer capability between regions." This project expands upon the work completed in Phase 1 by implementing Intra-hour energy transaction scheduling capabilities with PJM. This project was one of the BRM initiatives identified in NYISO's response to FERC on Loop Flows.
Interregional Transaction Coordination Phase IV – ISO-NE Intra-hour Transaction Scheduling	This project expands upon the work completed in Phases 1 and 3 by implementing Intra-hour energy transaction scheduling capabilities with ISO-NE. The 2008 and 2009 State of the Market recommendation #2 is, "NYISO continue its work with neighboring control areas to better utilize the transfer capability between regions." This project was one of the BRM initiatives identified in NYISO's response to FERC on Loop Flows.
Market to Market Coordination - PJM	In late-2006, PJM approached NYISO, interested in developing a program to allow inter-control area dispatch to help manage congestion. PJM has implemented a program with MISO and is currently in the early stages of designing such a program with SPP. In 2007, NYISO initiated discussions with PJM to further understand the MISO program and begin to outline a conceptual straw proposal for a similar program between PJM and NY. NYISO has continued to define the details of a Market to Market (formerly known as Congestion Management) protocol between NYISO and PJM. In 2009, NYISO worked with PJM and NYISO stakeholders to develop a Market to Market protocol. Protocol development was not completed in 2009. The question of entitlement rights on coordinated flowgates could not be addressed until the NYISO had developed or procured a market flow calculator. In 2010 the NYISO worked with OATI to develop the NERC IDC market flow calculator to provide the necessary data input for the Market-to-Market process. In 2011 the NYISO will implement software to enable Market to Market coordination between PJM and NY. This project was one of the BRM initiatives identified in NYISO's response to FERC on Loop Flows.
PAR Modeling Upgrades – Broader Regional Markets	PAR Modeling Upgrades is a Broader Regional Markets initiative that modifies how power flows are represented on the SCUC, RTC and RTD models. This requires changes to the current PAR modeling techniques used by SCUC, RTC and RTD, where PARs will need to be modeled as free flow devices for the purposes of pricing and dispatch but also provide the ability to offset the PAR schedules with an injection or withdrawal to represents extrinsic power flow effects like Lake Erie Loop Flow.
Scheduling and Pricing: Regulation Ramp	Today, some generators have a physical limitation on the regulation that can be provided within certain unit operating ranges. This project will allow generators to specify different regulation response rates for different energy output levels, similarly to the three energy response rates allowed today. With these additional regulation response rates, SCUC, RTC, RTD and AGC will know how best to co-optimize the output of a generating unit while meeting the physical operating characteristics of that unit. Additionally, these responses rates will still need to be maintained at a rate that is equal to or lower than the energy response rate. An alternative solution may be to create a distinct regulation upper limit.

Enterprise Technology Products

Application Platform Evolution	This is a multi-year initiative that will evolve the way NYISO designs and develops software. The first phase of this project will complete the application web server migration from WebLogic to JBoss that started in 2010. This will reduce the

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Project Title	Project Description
	application server maintenance costs and enable NYISO's strategic application platform evolution to Service Oriented Architecture (SOA). The second phase of this project will advance the SOA strategy adopted by NYISO to provide greater flexibility for integrating its applications with outside applications and reduce development response time for meeting business needs and evolving industry requirements.
Enterprise Data Storage Migration	The leases for the current hardware expire November 30, 2011. This project focuses on migrating from leased storage hardware onto storage hardware with a longer lifespan that can be upgraded with minimal disruptions to the organization. This new storage hardware supports increased performance and storage requirements, which are required for upcoming market design and Smart Grid initiatives.
Ranger Hardware Migration	The leases for the current hardware expire November 30, 2011. This project focuses on migrating from leased servers onto a scalable solution that can be upgraded with minimal disruptions to the organization, extends the lifespan of the Ranger platform, and enables software performance tuning to support data volumes anticipated with future market initiatives.

Finance Products

Project Title	Project Description
Bid Production Cost Guarantee Enhancements	These changes were requested as part of the Strategic Tariff review and specifically impact the DA & RT BPCG calculations with respect to Bilateral transactions and RT BPCG for regulation providers. Modifications are needed to the DA and RT BPCG calculations for generators with bilateral transactions to use implied revenues based on LBMPs and actual bid costs. In addition, to include start up costs in the calculation of BPCG regardless of the existence of bilateral transactions. Modification needed to the RT BPCG calculations for generators providing RT regulation that do not have a DA schedule for energy to include both the cost and revenue components associated with Incremental energy from the units Min Gen to Min Gen plus scheduled regulation MW's. The incremental energy costs are currently not included in the calculation.
Consolidated Invoice Redesign	This is a multi-year project focused on replacing the existing ConInvoice system. This project will focus on migrating the Consolidated Invoice application technology to align with the NYISO footprint. This migration will provide flexibility for the existing modules while also ensuring a consistent look and feel across the Consolidated Invoice application suite. In addition, this project will include modifications to Consolidated Invoice, Credit Management System, Oracle Financials and Finance Department processes, and the Customer Settlements Data Mart to support flexible invoicing. This project has a proposed implementation of Phase 1 August 2011 to support the FERC NOPR regarding a shortened settlement cycle; Phase 2 is anticipated in 2012 to complete a necessary technology upgrade, redesigned Settlements Application Architecture (SAA) and additional user functionality.
Credit Management System Technology Enhancements	Enhancements to CMS will align this application with the NYISO technology footprint. The CMS application needs to be upgraded to JBoss to address known communication issues between JBoss and Weblogic and upgrade the database to Oracle 11g. In addition, the NYISO will be enhancing the data design and building out the User Interface to better support production needs.

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Project Title	Project Description
Rate Schedule 1 Automation	The project would focus on a market design concept for Rate Schedule 1 Allocation based on the outcome of the Rate Schedule 1 study and stakeholder discussions in 2011.
Revised TCC Credit Requirements	The current TCC credit requirements lead to potential over or under- collateralization in certain circumstances so the NYISO is proposing to address these issues by choosing to re-price TCC's more frequently as follows: • For 2 year TCCs - re-price them at the 1 yr point, 6 month point and 1 month point using the auction prices for the remaining duration of the TCC as determined by the last round of the auction. • For 1 year TCCs - re-price them at the 6 month point and 1 month point using the auction prices for the remaining duration of the TCC as determined by the last round of the auction. • For 6 month TCCs - re-price them at the 1 month point using the auction prices for the remaining duration of the TCC as determined by the last round of the auction. These changes would reduce the holding requirement on TCCs which are sold in their entirety to $0, recalculate appropriate holding requirement for partially sold TCCs and would adjust TCC holding requirements more frequently to account for changes in market conditions.

NYISO Business Products

Compliance Tracking	The compliance tracking tool allows NYISO to store and track all of its compliance requirements across various business units, as well as provide reports, mapping, scheduling and alerting on compliance requirements. NYISO business units are developing compliance workflows for deployment into a production environment in 2010. In 2011 the project will focus on remaining business units required to manage compliance initiatives and requirements.
Data Records Retention and Email Archiving	This project will utilize an enterprise solution to provide the NYISO with all the required tools for email archiving and discovery, as well as managing storage and data retention schedules. The solution will be aligned with the NYISO's email retention policy.
Identity and Access Management	This project continues the roadmap initiated in 2010. This project will help address NERC CIP compliance requirements and deliver a foundation for enterprise-wide identity and access management. Technical controls and workflows will manage employee user identities and access rights to widely used critical cyber assets defined by NERC CIP. The solution will provide reporting and visibility to current access entitlements and immediate revocation of rights on employee exit.
Performance Management and Applicant Tracking	This project will focus on identifying and deploying cost-effective, efficient solutions to automate time-consuming manual processes for performance management, as well as an application for tracking job applicants and providing documentation for EEO compliance purposes.

Operations & Reliability Products

Dynamic Pricing	Pending the outcome of the technological evaluation in 2010, this project will make available LBMP data directly to the Transmission Owners in support of on-going Smart Grid efforts. Today TOs must gather LBMP data from the NYISO web.

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Project Title	Project Description
Operational Tools Enhancements	The focus of this project is to provide the tools necessary to improve NYISO Operations' analytical capabilities for purposes of improving reliability. There are several initiatives, including support for continuing to provide NERC IDC mandated data exchanges to meet NERC and NASB standards. Additional tools will be identified and selected to address the requirements of larger bid volumes as a result of upcoming market design initiatives. Existing manual processes used by SCUC Engineers in determining DAM Unit Commitment will be reviewed and automated where possible.
Ranger Enhancements for Optimization and Performance	Over the next few years, projects like Disaggregated Virtual Trading and the Broader Regional Market initiatives are expected to significantly increase data and transaction volumes processed in the Ranger system. This project aims to analyze and deploy optimization requirements from ABB that are appropriate to improve processing. The primary focus will be on optimization of SCUC processing time.
Reference Level Software Enhancements	This project will focus on enhancing the Reference Level Software (RLS) application scheduled for implementation in 2010. The enhancements to the RLS application will continue to automate manual processes and provide long term monitoring tools to Market Mitigation and Analysis.
Reliability Commitment Transparency	This project will provide Dispatchers with a drop down list of available Application of Reliability Rules (ARR) to select the ARR in effect when TOs call to inform dispatchers of a DARU.

Planning and TCC Market Products

Project Title	Project Description
Non-historic Fixed Price TCCs	Auction automation changes required to support the implementation of Non-Historic LTTCCs. This is a FERC order from 2009. The compliance filing was made to FERC on April 2, 2010 with a proposal of Fall 2012 offering.
TCC Multi-Duration and Balance of Period Centralized Auction	This project continues the 2010 efforts to provide for TCC Auction 'End State' functionality; in 2010 NYISO implemented functionality for MPs to sell TCCs in any round. Continuing efforts will focus on the following: • Implement Multi Duration Capability Period Auctions • Balance of period (BOP) TCCs; revised structure of the monthly auctions.
High Performance Computing for Planning Studies	This is a project to put in place the infrastructure required to enable System Resource Planning to conduct large, data intensive planning studies.
Siemen's PTI Model-on-Demand Phase II	The second phase of this project will focus on maintenance and consulting for implementation of the Siemens PTI Model-on-Demand (MOD) web portal, which will allow TOs and MPs to review and approve data in a structured, interactive manor; updates and corrections can be submitted to the NYISO for review and approval.

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