

NYISO 2005 Projects Summary

Budget, Standards & Performance Subcommittee meeting
September 20, 2004

Summary of Projects Included in 2005 Budget (*\$ in millions*)

<u>Priority</u>	<u>Project Name</u>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
1a	Billing Automation & Enhancements: TCC Settlement	\$0.2	\$0.0	\$ 0.2
1b	Billing Automation & Enhancements: Rate Schedule 1 Allocation	\$0.2	\$0.2	\$ 0.4
1c	Billing Automation & Enhancements: NTAC & TSC Rate Mgt.	\$0.2	\$0.0	\$ 0.2
1d	Billing Automation & Enhancements: BAS Replacement Strategy / Billing Sim.	\$0.7	\$1.1	\$ 1.8
1e	Billing Automation & Enhancements: DSS Customer Settlements Expansion	\$0.4	\$1.6	\$ 2.0
2,3	TCC & UCAP Auction Automation	\$0.7	\$1.1	\$ 1.8
4	Controllable Tie Lines Scheduling and Pricing	\$0.3	\$0.6	\$ 0.9
5	15 Minute Scheduling	\$0.1	\$0.3	\$ 0.4
6	Scheduling of Combined Cycle Units	\$1.0	\$0.5	\$ 1.5
7	Self Supply of Reserves	\$0.4	\$0.5	\$ 0.9
8	SMD Feature Extensions	\$0.7	\$0.2	\$ 0.9
9a	MIS Enhancements: Comprehensive Bid Mgt. System	\$0.5	\$0.1	\$ 0.6
9b	MIS Enhancements: Oracle Forms Replacement	\$0.2	\$0.1	\$ 0.3
10	Outage Schedule Reporting	\$0.5	\$0.3	\$ 0.8
11	Intra-Hour Transaction Scheduling (<i>previously named VRD</i>)	\$0.1	\$0.5	\$ 0.6
12	Market Data Exchange Enhancements (Portal)	\$0.1	\$0.7	\$ 0.8
13	Documentum Expanded Implementation	\$0.3	\$0.2	\$ 0.5
14	Consolidate NYISO Offices (<i>** labor projection is TBD: pending further direction</i>)	<u>\$0.0 **</u>	<u>\$2.3</u>	<u>\$ 2.3</u>
	Total	\$6.6	\$10.3	\$16.9

Summary of Projects Not Included in 2005 Budget

Following is a list of issues and projects that were reviewed by NYISO for funding consideration in 2005, but were not selected. Some of these items may be addressed as baseline efforts, others may become projects in 2006, and still others may never be completed.

<u>Issues/Projects Reviewed – Not Budgeted</u>	
Automate FERC Reports (Forms 582 & 714)	Load Bid Verification
Automated Generator Derate Interface	Metering Upgrades
Automated Notification for System Events	MMP MIS / Market Simulation Environment
BPCG for RRC Down Units	Netting Bilaterals for Credit Requirements
Comprehensive Market Simulator	New Meter Authorities Management
Credit Management System	Operational Tools for Broader System Monitoring
Customer Relations Management System	Oracle Clustering
DADRP Enhancements	Real-Time Credit Risk Validation
DSS Expansion, including MMP	Reference Price Calculations in MIS
EDRP Settlements	Regulating Unit Specification of UOL
ELR MWhr Bidding Capability for SCUC	Renew/Intermittent Unit Scheduling Enhancements
Enterprise Metadata	Reserve Sharing among Northeast ISOs/RTOs
Expanding Product Environments	RT Bid Adjustments for Units with DAM Awards
Generator Attributes Tracking System	SCUC LRR Pass Changes
Generator Audit Reporting Application	Virtual Trading in NYC Load Pockets
Internal Controllable Lines	Voltage Support Service Calculation
Intranet Upgrade	Working Capital Rebalancing

Project Name:
Priority Ranking:
2005 Status:

**Billing Automation & Enhancement: TCC Settlement
1a
Completes**

 **Brief Description of Project:**

This project provides for changes to the BAS to allow for calculation and billing of settlements associated with TCC surcharges and tracking of the working capital accounts as required in the TCC Settlement Agreement approved by FERC in July 2004.

 **Primary Driver of Project:**

Risk Avoidance (automation of regulatory requirement effective November 1, 2004)

 **Anticipated Deliverables / Benefits:**

- Reduces risks associated with performing manual billing processes & invoice adjustments
- Provides more timely and accurate invoice adjustments
- Allows Customer Settlements staff to focus on other priorities, such as customer inquiries and data analysis

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.2	\$0.0	\$0.2

Project Name: Billing Automation & Enhancement: RS#1 Allocation
Priority Ranking: 1b
2005 Status: Completes

Brief Description of Project:

This project will implement BAS software changes to facilitate the automatic calculation and allocation of LSE and Power Supplier Rate Schedule #1 charges in BAS.

Primary Driver of Project:

Risk Avoidance (replaces the existing manually-intensive and spreadsheet-oriented process used to allocate Rate Schedule 1 costs to Market Participants)

Anticipated Deliverables / Benefits:

- Reduces risks associated with performing manual billing processes & invoice adjustments
- Provides more timely and accurate invoice adjustments
- Allows Customer Settlements staff to focus on other priorities, such as customer inquiries and data analysis

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.2	\$0.2	\$0.4

Project Name:
Priority Ranking:
2005 Status:

Billing Automation & Enhancement: NTAC & TSC
1c
Completes

 **Brief Description of Project:**

This project modifies the BAS software to eliminate export fees (TSC charges by TOs and NTAC charges by NYPA) between NYISO and ISO-NE, which are due to be billed beginning in December 2004.

 **Primary Driver of Project:**

Risk Avoidance (automation of regulatory requirement effective in December 2004)

 **Anticipated Deliverables / Benefits:**

- Reduces risks associated with performing manual billing processes & invoice adjustments
- Provides more timely and accurate invoice adjustments
- Allows Customer Settlements staff to focus on other priorities, such as customer inquiries and data analysis

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.2	\$0.0	\$0.2

Project Name:

**Billing Automation & Enhancement:
BAS Replacement Strategy / Billing Simulator**

Priority Ranking:

1d

2005 Status:

Started

 **Brief Description of Project:**

This project continues development and enhancements to the billing simulator to be used by the BAS team to proactively review and analyze historical data and proposed rule changes. It will allow the review of changes to billing and historical data prior to creating a bill and provide the basis for a new billing and settlement system.

 **Primary Driver of Project:**

Continuation of Current Project (originated from an audit recommendation)

 **Anticipated Deliverables / Benefits:**

- Ability to analyze retroactive billing changes or market impact from a specific market participant(s)
- Ability to analyze business rule changes for a specific market sector(s)
- Ability to analyze billing patterns and behaviors relative to specific billing type changes
- Ability to pro-actively analyze and mitigate risks to the market based on the financial condition of a specific market participant or to mitigate impacts of billing adjustments due to rule or code changes.
- Build the foundation for a new billing and settlement system

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.7	\$1.1	\$1.8

Project Name: Billing Automation & Enhancement:
DSS Customer Settlements Expansion

Priority Ranking: 1e

2005 Status: Started

- Brief Description of Project:**
 This project completes the Customer Settlements portion of the DSS by adding the remaining areas including, but not limited to NYISO Adjustments, Working Capital, Interest, Past Due Balances, Invoice Summary, Station Power, UCAP Auction Support and TCC Auction Support. Corporate reports and Ad Hoc reporting of these areas would be included such that the DSS could become the source of all Customer Settlements data. Additional corporate reports requested by Market Participants and NYISO business unites will be developed based on a predefined release schedule.
- Primary Driver of Project:**
 Continuation of Current Project (originated from MP and NYISO need for data analysis and final bill verification)
- Anticipated Deliverables / Benefits:**
Deliverables include:
 - Enhance DSS product with additional data and reports, as defined and prioritized by BAWG, to enable comprehensive settlements analysis
 - Expansion of database and applications to access settlements business and technical metadataBenefits include:
 - Increased visibility, accuracy and timeliness of data analysis and context
 - Reduced time for impact analysis and development
 - Reduced operational costs and increased efficiency in response to customer inquiries

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.4	\$1.6	\$ 2.0

Project Name: TCC & UCAP Auction Automation (Phase 1)
Priority Ranking: 2 & 3
2005 Status: Completes

Brief Description of Project:

- TCC: This project will develop user interfaces that can support online data entry and reporting of TCC auction information and provide auction data to the auction analysis products.
- UCAP: This project will develop software to automate the UCAP Process, develop web-enabled interface to facilitate online bidding, bid validation and posting in support of the UCAP auction process

Primary Driver of Project:

Continuation of Current Project and Risk Avoidance (originated from need to automate current TCC and UCAP processes that are labor-intensive, potentially error-prone auction processes using spreadsheets)

Anticipated Deliverables / Benefits:

Deliverables Include:

The automated systems will enable Market Participants to send and receive information via a web-enabled process, which will interface with existing NYISO legacy systems.

Benefits include:

- Improves data integrity and security by reducing data errors likely to occur by manual/human interfaces
- Provides easy access to data & improves timeliness of communication between NYISO / MPs
- Provides flexibility to support future changes to auction processes

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.7	\$1.1	\$1.8

Project Name:
Priority Ranking:
2005 Status:

Controllable Tie Lines Scheduling & Pricing
4
Completes

 **Brief Description of Project:**

This project will provide an external proxy bus representation for controllable tie lines (HVDC and/or PAR) which span two control areas. The project addresses both the external node pricing calculations as well as scheduling of primary and secondary party transactions. It also includes additional changes necessary for NY/NE coordination for the Cross Sound Cable project.

 **Primary Driver of Project:**

Regulatory and reliability drivers to provide on a confidential basis the ability for secondary purchases of transmission service by all Market Participants

 **Anticipated Deliverables / Benefits:**

- Allows bidding and scheduling of inter-control area transactions across controllable lines & provides secondary service on a competitive bid based system
- Provides NYISO Operations capabilities to monitor and control transactions across controllable ties & allows improved coordination between control areas

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.3	\$0.6	\$0.9

Project Name: 15 Minute Scheduling
Priority Ranking: 5
2005 Status: Completes



Brief Description of Project:

This project will provide a software solution to enable 15-minute scheduling, update the necessary procedures to accommodate the scheduling change, and implement the required changes to the billing system. The new software will perform 15-minute economic dispatch scheduling for nominally off-dispatch units during the real-time commitment execution and reflect those schedules into the real-time dispatch process.



Primary Driver of Project:

FERC requirement



Anticipated Deliverables / Benefits:

- Improved economic treatment of units
- Increased generator response in real-time dispatching

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.1	\$0.3	\$0.4

Project Name: Scheduling of Combined Cycle Units
Priority Ranking: 6
2005 Status: Started

 **Brief Description of Project:**

Market Participants have historically expressed concern that NYISO does not model or schedule combined cycle generating units to their most efficient capabilities. This inefficiency impacts both real-time operations and market outcomes. This project will deliver a scheduling software solution and network modeling optimization for combined cycle generating units. Software will perform 15-minute economic dispatch scheduling for nominally off-dispatch units during the real-time commitment execution and reflect those schedules into the real-time dispatch process.

 **Primary Driver of Project:**

FERC Requirement

 **Anticipated Deliverables / Benefits:**

- Increased generator response in real-time dispatching solution & reserve markets
- Improved economic treatment of units
- Increased recognition of unit physical characteristics into scheduling processes

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$1.0	\$0.5	\$1.5

Project Name: Self-Supply of Reserves
Priority Ranking: 7
2005 Status: Completes



Brief Description of Project:

FERC has ordered that the NYISO markets be expanded to provide a mechanism for Market Participants to self-supply for reserves.



Primary Driver of Project:

FERC Requirement



Anticipated Deliverables / Benefits:

Deliverables include:

- Scheduling software solution
- Billing system upgrade to implement new solution

Benefits include:

- Improved economic scheduling flexibility and options for Market Participants

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.4	\$0.5	\$0.9

Project Name: SMD Feature Extensions
Priority Ranking: 8
2005 Status: Completes



Brief Description of Project:

Following the implementation of SMD2 and its suite of applications, it is expected that a subset of the planned functionality will fail to make the initial release, and will be required to be deployed in 2005. Included in this feature set is the original project Phase 2b and Phase 3 features; these items are SMD2 post-live requirements as defined in the current project.



Primary Driver of Project:

Implementation of originally-required functionality that was deferred due to SMD 2 time schedule



Anticipated Deliverables / Benefits:

- Improved market designs and operational tools
- Increased system efficiency and data analysis
- Incorporated performance enhancing solutions based on first months of SMD operation

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.7	\$0.2	\$0.9

Project Name: MIS Enhancements: Comprehensive Bid Mgt. System
Priority Ranking: 9a
2005 Status: Started



Brief Description of Project:

This project will upgrade web-based application structure to replace overlapping applications by allowing common components to support current application functionality and future application functional growth.



Primary Driver of Project:

Risk Avoidance and Organizational Efficiency (two market applications have overlapping uses requiring maintenance in both places)



Anticipated Deliverables / Benefits:

Deliverables include:

- Updated functional requirements allowing for ease of future additional functionality
- Enhanced secure market-facing application requiring less maintenance

Benefits include:

- Improved availability of MIS
- Reduction in resource constraints within QA department
- Improved ability to utilize Portal functionality

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.5	\$0.1	\$0.6

Project Name: MIS Enhancements: Oracle Forms Replacement
Priority Ranking: 9b
2005 Status: Started



Brief Description of Project:

Oracle Forms, a proprietary interface used by MPs and NYISO staff, will no longer be supported by the vendor in 2005. This project allows for a replacement solution, which will also facilitate more rapid development of new services.



Primary Driver of Project:

Risk Avoidance and Organizational Efficiency (need to replace de-supported interface)



Anticipated Deliverables / Benefits:

Deliverables include:

- Software development lifecycle artifacts
- Web-based interfaces for interacting with NYISO systems
- Reusable software components

Benefits include:

- Alternate means to provide support for Oracle Forms interface
- Less dependency on vendor for support to critical piece of technology

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.2	\$0.1	\$0.3

Project Name: Outage Schedule Reporting
Priority Ranking: 10
2005 Status: Completes

 **Brief Description of Project:**

The Outage Scheduling software was moved entirely to the RANGER system for both Scheduling and Operations to provide consistency. Due to the timeframe for the SMD2 project, the process of creating the Outage Schedule reports on the primary database was left on a secondary database. The creation of the required reports needs to be ported to the RANGER system as intended.

 **Primary Driver of Project:**

Implementation of originally-required functionality that was deferred due to SMD 2 time schedule

 **Anticipated Deliverables / Benefits:**

Improved reporting process on a consistent database

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.5	\$0.3	\$0.8

Project Name: Intra-Hour Transaction Scheduling (*previously VRD*)
Priority Ranking: 11
2005 Status: Completes 2005 phase (multi-phase project)

Brief Description of Project:

This initiative has been encouraged by the NYISO Board of Directors and independent market advisor. In 2004, NYISO will conduct a pilot project to assess the ability to evaluate and schedule intra-hour transactions and to identify any operational issues with scheduling. Additional work in 2005 will be based on the outcome of the pilot program, however, it is not expected that any significant software development will be completed in 2005.

Primary Driver of Project:

Continuation of Current Project (originated from the need to resolve seams issues in the Northeast & improve the liquidity of the ISO spot markets)

Anticipated Deliverables / Benefits:

Deliverables include:

- Data interchange – Supply curve info and other iso/iso communication (data exchange between the web & MIS, and simulation of the NE web interface for all communication sufficient to conduct end to end testing)
- Development of NY supply curves
- Interface between supply curve production application and the MIS
- All web services to MIS functions
- ISO-NE Dummy interface function suitable for limited testing of NY functionality

Benefits include:

- Produce more efficient use of the transmission system between NY and NE
- Market advisor believes that post-2005, significant potential savings in production costs and consumer savings

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.1	\$0.5	\$0.6

Project Name:
Priority Ranking:
2005 Status:

Market Data Exchange Enhancements (Portal)
12
Completes



Brief Description of Project:

Building on the Market Data Exchange (MDEX) technology released in 2003-4, NYISO will expand the capabilities for delivery of information and reorganize the presentation of system and market conditions.



Primary Driver of Project:

Continuation of Current Project (originated from Market Participant mandates for improvements to the usability of the NYISO website as passed through various committee resolutions)



Anticipated Deliverables / Benefits:

Deliverables include:

- Allow external portal users to filter OASIS/Operational data and create reports
- Enhance NYISO internal intranet to enable personalized screen views

Benefits include:

- Easy to find and customizable information services
- Common look and feel of data presentation, including data from other markets

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.1	\$0.7	\$0.8

Project Name: Documentum Expanded Implementation
Priority Ranking: 13
2005 Status: Completes 2005 phase (multi-phased project)

Brief Description of Project:

NYISO has a growing number of critical business documents, which are information assets and need to be managed as such. Documentum provides the tools to manage these critical documents. In addition, Documentum can satisfy the demand for increased efficiency, quality and control in the document lifecycle process through an enterprise-wide repository for all documents, automation of life cycle processes, document retention/archival, and SAS 70 compliance requirements. Documentum will provide a number of key functions including: version control, workflow, check-in/out, document level security, full-text search, and e-mail integration and tracking.

Primary Driver of Project:

Continuation of Current Project (originated from the need to manage risk associate with NYISO documents)

Anticipated Deliverables / Benefits:

- Integration with TIBCO Portal Builder will improve Internet document management and publishing
- Improve quality by routing key business documents through the appropriate review and approval processes, thereby enabling regulatory and SAS 70 compliance
- Boost productivity by enabling users to access and repurpose critical information stored in business documents

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.3	\$0.2	\$0.5

Project Name: Consolidate NYISO Offices
Priority Ranking: 14
2005 Status: TBD

Brief Description of Project:

This project seeks to secure during 2005 ~150,000 square feet of office space to include administrative offices, alternate control center and back-up IT/disaster recovery functionality. During 2006, this facility would replace the current NYISO locations at Washington Avenue, Wolf Road, and Western Turnpike.

Primary Driver of Project:

- 1) Geographical separation of PCC and ACC;
- 2) Consolidation of administration offices

Anticipated Deliverables / Benefits:

Deliverables include: A single, permanent, fully-functional ACC and IT back-up facility that is:

- Sufficiently distant from PCC,
- Capable of housing all NYISO employees currently located in three geographically-separate leased facilities.

Benefits include:

- Minimizes the probability of simultaneous loss of the PCC and ACC, and maximizes capability to maintain system reliability and Market Operations in the event of disaster
- Enhances communication, productivity, and efficiency by centrally locating approximately 400 NYISO employees in a single facility
- Provides a meeting & conference room capacity to facilitate/accommodate most NYISO committee meetings.

<i>(\$ in millions)</i>	<u>Labor</u>	<u>Non-Labor</u>	<u>Total</u>
2005	\$0.0	\$2.3	\$2.3