

# **Product Management Update**

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August 2005**

*Draft – for discussion purposes only*

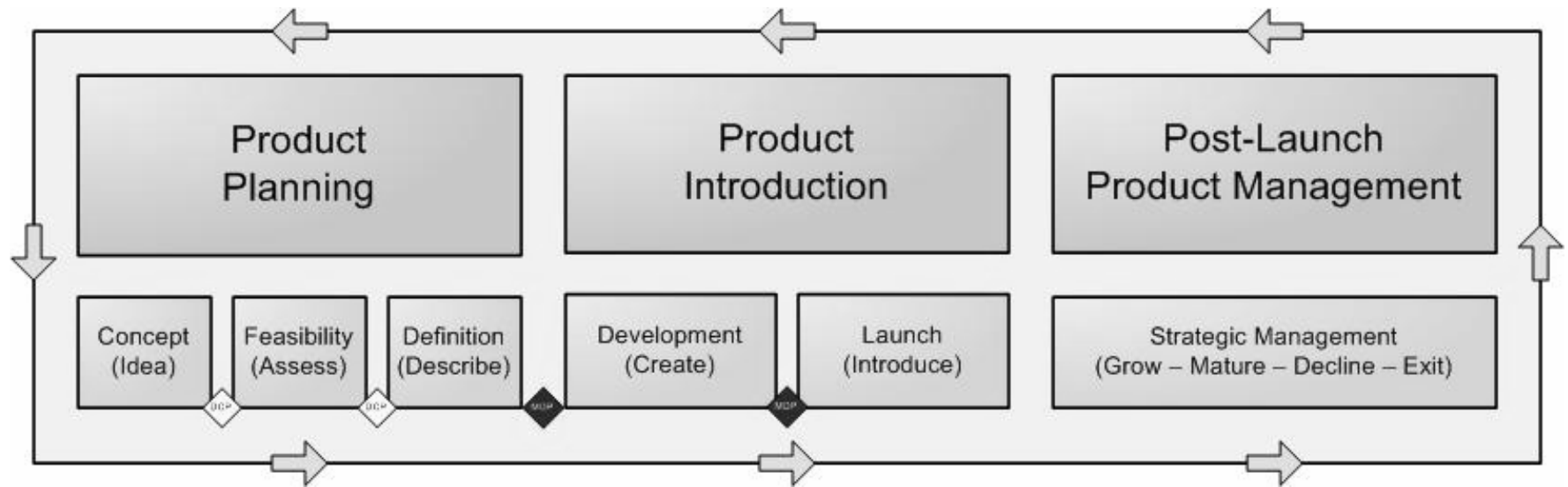
# **NYISO Products**

***Business solutions delivered as features, functions and services that enable Market Participants to conduct business in NYISO markets***

# **NYISO Product Portfolios**

- ***Energy Marketplace***
- ***ICAP Marketplace***
- ***TCC Marketplace***
- ***Operations & Reliability***
- ***Financial Services***
- ***Business Intelligence***

# Product Management Lifecycle Model



# Energy Marketplace Product Portfolio

## ▪ Markets

- ✓ *Energy*
  - **Generation**
  - **Load**
  - **Transactions**
  - **Virtual**
- ✓ *Ancillary Services*
  - **Reserves**
  - **Regulation**
- ✓ *Demand Response*
  - **DADRP**
  - **EDRP**

## ▪ Core Delivery Mechanisms

- ✓ *MIS*
- ✓ *OSS*
- ✓ *Upload/Download*

# 2006 Products and Enhancements

Products & Enhancements	Concept Development	Feasibility and Design	Product Development	Product Launch
Comprehensive Bid Management	X	X	X	X
Price Accuracy	X	X	X	X
Combined Cycle Modeling*	X			
Intra-hour Transaction Scheduling*	X			
Self Supply of Reserves*	X			
Wind Forecasting System*	X			

\*These products could progress to feasibility and design depending on market drivers and resource availability.

# Comprehensive Bid Mgmt System

## ■ Description

- ✓ A thorough reengineering of NYISO Energy Marketplace applications to systematically replace the original technology introduced at NYISO's inception.
- ✓ 2006 deliverables include infrastructure components and delivery of Transaction bidding functionality on the new architecture.
- ✓ Post 2006 deliverables include Generation, Load, and Virtual bidding plus a new user interface and improvements to the data model.

## ■ Primary Driver

- ✓ Following years of extensive feature and functionality growth, the technology supporting Energy Marketplace applications has become fragmented and increasingly more difficult to sustain. This poses a significant risk to the NYISO's ability to meet current and future needs of Market Participants.

## ■ Anticipated Benefits

- ✓ Improved availability of critical marketplace applications
- ✓ Faster, more predictable implementation of future market enhancement requests
- ✓ Reduced costs for baseline maintenance and future expansion efforts.

# ICAP Marketplace Product Portfolio

- **Market**

- ✓ *Design*
- ✓ *Auction*
- ✓ *Manual*
- ✓ *Documentation*

- **Core Delivery Mechanism**

- ✓ *Currently manual processes*



# 2006 ICAP Product Enhancements

<b>Product Enhancements</b>	<b>Concept Development</b>	<b>Feasibility And Design</b>	<b>Product Development</b>	<b>Product Launch</b>
<b>Submittal of GADS data</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>Maintain EFORd for generators</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
Request import rights				
All aspects of SCRs				

# ICAP Marketplace Automation Phase II

## ▪ Description

- ✓ Continuation of product automation started in 2004 to replace the manual ICAP market processes with a web enabled system.
- ✓ 2006 deliverables include:
  - Ability to calculate, maintain and view EFOR<sub>d</sub> data
  - Submit and validate GADS data

## ▪ Primary Drivers

- ✓ Mitigate potential risks associated with manually entering data, which could lead to inaccurate results and the unintentional release of confidential information.
- ✓ Provide a system to make it easier for Market Participants to do business with NYISO.

## ▪ Anticipated Benefits

- ✓ A more efficient ICAP market
- ✓ Improved data integrity
- ✓ Improved data security

# TCC Marketplace Product Portfolio

- **Market**

- ✓ *Design*
- ✓ *Auction*
- ✓ *Manual*
- ✓ *Documentation*

- **Core Delivery Mechanism**

- ✓ *Currently manual processes*

# 2006 TCC Product Enhancements

<b>Product Enhancements</b>	<b>Concept Development</b>	<b>Feasibility And Design</b>	<b>Product Development</b>	<b>Product Launch</b>
<b>Submit, maintain and view bids/offers</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>Track MP TCC credit requirements</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>Develop TCC inventory control database</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>Dynamic access to market related data and billing information</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>x</b>
Conduct End-State design auctions				
TCC options				
Integration with DAM to produce network model for auctions				
Perform auction revenue allocation calculations				
Perform DAM transmission facility outage cost calculations				

# TCC Marketplace Automation Phase I

## ■ Description

- ✓ Automate the existing manually intensive and spreadsheet oriented processes used to administer the TCC market.
- ✓ 2006 deliverables include a web-enabled system to:
  - Enable Market Participants to submit bids/offers into auctions
  - Track Market Participant TCC credit requirements
  - Resolve TCC inventory control issues
  - Provide Market Participants access to market related data and billing information

## ■ Primary Drivers

- ✓ Mitigate potential risks associated with manually entering data, which could lead to inaccurate results and the unintentional release of confidential information.
- ✓ Provide a system to make it easier for Market Participants to do business with NYISO.

## ■ Anticipated Benefits

- ✓ A more efficient TCC market
- ✓ Improved data integrity
- ✓ Improved data security

# Operations & Reliability Product Portfolio

- **Focus**

- ✓ *Scheduling & Dispatch*
- ✓ *Management*
- ✓ *Reporting*

- **Core Delivery Mechanisms**

- ✓ *Energy Management System (EMS)*

# 2006 Operations & Reliability Products and Enhancements

Products & Enhancements	Concept Development	Feasibility and Design	Product Development	Product Launch
Automate outage schedule reporting	X	X	X	X
Integrate SRE/OOM applications	X	X	X	X
1385 controllable tie line			X	X
Other controllable tie line additions*	X			
Data communications security	X			

\*Other tie line additions/proxy bus additions could be developed and launched if the generic CTL solution can be used.

# Outage Schedule Reporting

## ▪ Description

- ✓ Automate and integrate the outage schedule reporting function into the Ranger environment.

## ▪ Primary Driver

- ✓ Outage schedule reporting is currently a two-step process. Outage information is entered into a proprietary legacy database to facilitate the posting of outage information, and separately entered into the Ranger system to support scheduling and dispatch functions. Automating and integrating this function should increase efficiency and avoid risks associated with manual processes.

## ▪ Anticipated Benefits

- ✓ Ensures that posted outage information directly reflects the outage information within the Ranger system.
- ✓ Improves the timeliness of outage schedule reporting.
- ✓ Supports improved compliance with NERC SDX (System Data Exchange) data posting requirements.
- ✓ Retires the legacy software currently used, which has become more difficult to support.
- ✓ Provides the infrastructure required to support Web-enabled submission of outage information as a possible future enhancement.



# Integrate SRE/OOM Applications

## ▪ Description

- ✓ Integrate the Supplemental Resource Evaluation (SRE) and Out-of-Merit (OOM) processes into the automated mitigation and settlement processes to ensure consistent treatment and accurate settlements.
- ✓ Develop automated operator tools to support SRE/OOM related control room activities.

## ▪ Primary Driver

- ✓ Reduce risk and subjectivity associated with the processes used to commit, mitigate and settle units that are committed via SRE and/or placed OOM. Current processes include many manual operations and subjective operator actions.

## ▪ Anticipated Benefits

- ✓ Provide correct and consistent commitment of SRE and OOM resources.
- ✓ Provide correct and consistent mitigation of SRE and OOM resources.
- ✓ Improved settlement accuracy for both resources and loads.

# Financial Services Product Portfolio

## ▪ Focus

- ✓ *Customer Settlements*
- ✓ *Process automation*
- ✓ *Web-based reconciliation requests*
- ✓ *Credit Management*
- ✓ *Working Capital Rebalancing*
- ✓ *Data storage and performance optimization*

## ▪ Core Delivery Mechanisms

- ✓ *Billing and Accounting System*
- ✓ *Customer Settlements Data Mart*
- ✓ *NYISO.com*

# 2006 Financial Services Products and Enhancements

Products & Enhancements	Concept Development	Feasibility And Design	Product Development	Product Launch
Billing Engine Replacement	X	X	X	
Automation of Voltage Support Service	X	X	X	X
Automation of Thunderstorm Alert cost reallocation	X			
Automation of Quick-Start Reserves settlement and cost reallocation	X			
Web-Based Reconciliation enhancements prioritization	X			
Automated, integrated credit management system	X			
Automation of Working Capital rebalancing process	X	X	X	X

# Billing Engine Replacement

## ■ Description

- ✓ Use the billing simulator technology to deliver a high performance, rules-based engine that enables real time capabilities.
- ✓ Reconstruct rules for real time usage, efficiency and tuning.
- ✓ Update the rules and develop a rules editor.

## ■ Primary Drivers

- ✓ Provide billing accuracy and efficiency
- ✓ Provide accurate convenient financial services
- ✓ Eliminate risk associated with older, less efficient technology

## ■ Anticipated Benefits

- ✓ Accurate billing invoices
- ✓ A more efficient settlement close-out process
- ✓ Increased flexibility in improving and increasing settlement functionality

# Business Intelligence Product Portfolio

- **Focus**

- ✓ *Data access*
- ✓ *Analytical tools*
- ✓ *Reports*
- ✓ *Dashboards*

- **Core Delivery Mechanisms**

- ✓ *Data Warehouse*
- ✓ *NYISO.com*

# 2006 Business Intelligence Products and Enhancements

Products & Enhancements	Concept Development	Feasibility and Design	Product Development	Product Launch
Operational and Pricing Information Data Mart	X	X	X	X
Operational and Pricing Dashboard	X	X	X	X

# Operational and Pricing Information Data Mart

## ▪ Description

- ✓ Create a new operational and pricing information data mart, which includes pricing data and OASIS operational data such as loads, flows, forecasts, and transmission line outages.
- ✓ The data mart will provide a complete history of the data in a form that allows for customized reports and detailed performance and trending analysis.
- ✓ It will provide the full range of Business Objects analysis and reporting capabilities as well as download capabilities for automated data migration from one machine to another.

## ▪ Primary Driver

- ✓ Replicate the success of the customer settlements data mart
- ✓ Provides consistent and auditable data
- ✓ Provides more transparency of the markets by making market data more readily available and easier to view and analyze

## ▪ Anticipated Benefits

- ✓ Provide a single, user-friendly access method for NYISO data
- ✓ Provide powerful analysis tools for data mining, time-series analysis, and spatial analysis
- ✓ Provide reporting tools for customized reports combining data across the customer settlements and operational data marts

# Operational and Pricing Dashboard

## ■ Description

- ✓ Provide new access to some of the operational and pricing data currently available on the OASIS section of the NYISO web site via a dashboard. This product enhancement includes table and graphical views as well as “gauges” and “meters” to show data values and trends. Users will have the ability to set “alarms” with thresholds for notification when these preset values go out of range. Users also will have the ability to query this operational information by using filters and indicating the desired data format, such as XML or CSV.

## ■ Primary Driver

- ✓ Market Participants have requested the ability to query and view operational data in an easy manner.
- ✓ Eliminates the need to create specialized dashboards in the future.

## ■ Anticipated Benefits

- ✓ User can customize web screen graphs and maps
- ✓ Reduced requests for customized reports and views of data
- ✓ Reduced development and maintenance of data views