

Billing / Settlements Data Retention

**Billing and Accounting Working
Group – February 20, 2007**

Agenda

- ◆ Background
- ◆ Current Data Retention Issues
- ◆ BAS and Consolidate Invoice (“CI”) Issues and Recommendations
- ◆ DSS Issues and Recommendations
- ◆ Gap Analysis
- ◆ Summary Recommendations
- ◆ Next Steps

Background

- ◆ Article 10 of the Services Tariff states that:
“Settlement information rendered under the ISO Services Tariff shall be maintained for at least twenty-four (24) months from the date that Settlement information is rendered.”

- ◆ Strategy Overviews Originally Presented
 - *BAWG: July 20, 2006*
 - *BIC: September 13, 2006*
 - *BITF: January 16, 2007 (DSS Proposal)*

Current Data Retention Issues

- ◆ Volume of data stored in BAS, CI and DSS systems leads to poor performance and presents an availability risk.
- ◆ Cost, both financial and operational, is increased by maintaining a large on-line data store
 - *Procurement of additional storage*
 - *Management of multiple, large storage systems*
- ◆ Redundant nature of BAS, CI and DSS systems further exacerbates data storage overhead and costs.

BAS and CI

BAS & CI Issues

- ◆ These systems were designed and their purpose continues to be, transaction systems to run the NYISO settlement functions.
- ◆ These systems were not designed as data storage repositories.
- ◆ NYISO is currently maintaining seven years worth of data on-line in transactional databases.

BAS & CI – Original Strategy Presented at BIC

- ◆ Market data applicable to open settlement periods will be available in BAS through the end of the challenge period plus six (6) months.

BAS & CI Strategy Change Catalysts

- ◆ Extraordinary Circumstances
 - *Per Section 7.2.1.C of the Services Tariff, “...the ISO may, upon notice to Customers within this time of extraordinary circumstances requiring a longer evaluation period, take up to six (6) months to evaluate a settlement challenge.”*
 - *The challenge period currently ends at nine (9) months and 23 days. In the event an extraordinary circumstance was declared the existing proposal could result in the necessary data being purged. Therefore, we will implement an appropriate process so this does not occur.*

BAS & CI - Recommended Strategy

- ◆ Retention Strategy
 - *Final Invoice Posting Plus Three (3) Months*
 - Archive Data to Off-Line Storage
 - Data not available in DSS may be requested through Customer Relations and will be provided in CSV format. Response time Service Level Agreement to be determined.
 - Purge Data Out of Transactional System
 - Market Participants, and possibly FERC, will be notified prior to the data purge.
 - Guaranteeing the ability to reconstruct bills outside the data retention window will require software development efforts, and may be very costly.

BAS & CI - Recommended Strategy con't

- ◆ Destruction Strategy
 - *Seven (7) Years From Date of Transaction*
 - Market Participants, and possibly FERC, will be notified prior to data destruction.
 - Archived data will be destroyed.
 - Data/records that are, or may be, related to matters under litigation, including without limitation, pending or threatened litigation, billing disputes, and settlement challenges, will not be destroyed.

BAS & CI - Recommended Strategy Exception

- ◆ In accordance with OATT Attachment V, working capital transaction histories will not be purged from the BAS database unless the tariff is amended otherwise.
 - *Section 2.0 of Attachment V provides: “The detailed working capital transaction history page will provide a complete history of all transactions relating to the Customer’s contributions to the Working Capital Fund.”*

Decision Support System

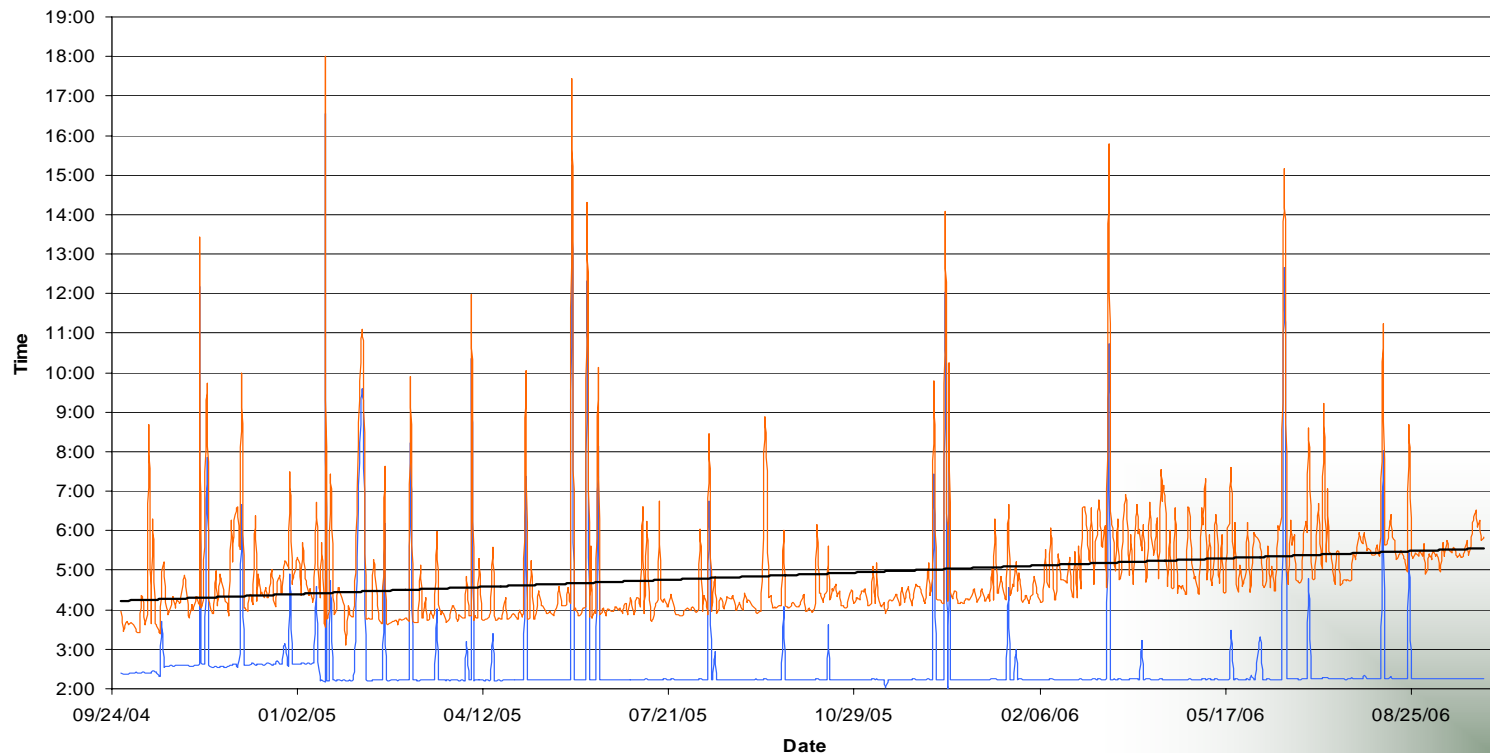
DSS - Issues

- ◆ Data volume in Settlements DataMart will continue to grow resulting in increased performance impacts.
 - *ETL Process*
 - Tables have billions of rows of information.
 - Each night, the volume of data increases with the overnight load.
 - The DSS availability is delayed at times due to the increase in time necessary to run the load with the extremely large volume of data.
 - *Report/Query Times*
 - Applications, reports and queries run slower due to the increased data volume and table sizes.

DSS – Availability Issues

- ◆ DataMart Availability Trend Line

Datamart Start/Finish Times



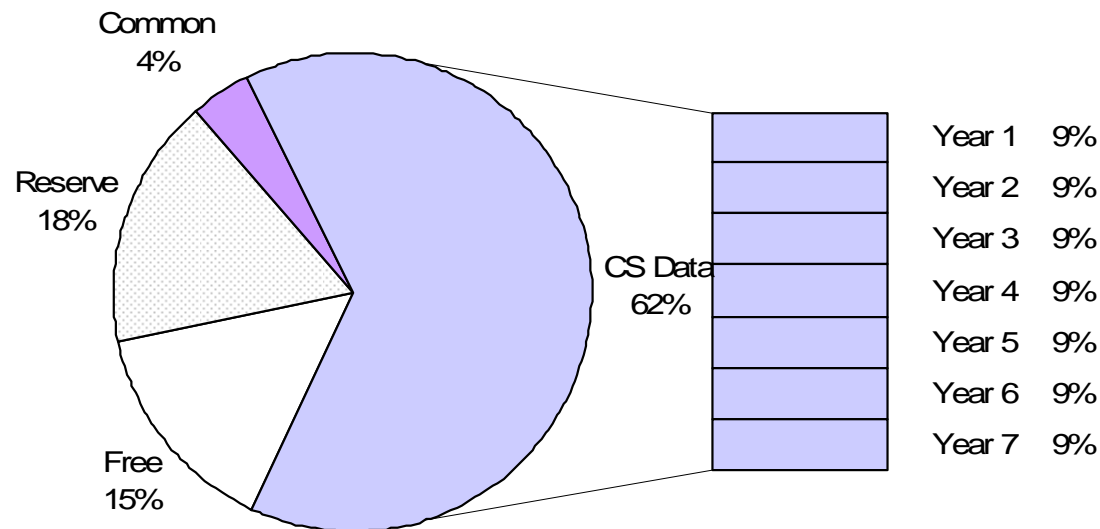
DSS – Cost Issues

- ◆ Costs

- *The annual costs to support the current Settlements functionality will continue to increase exponentially to support increases in data storage requirements.*

DSS – Current Storage Usage

DSS Disk Storage Current - Customer Settlements Only



DSS - Original Strategy

Presented to BIC

- ◆ Settlement data will be available from the DSS settlements datamart for a period of seven (7) years from market date.

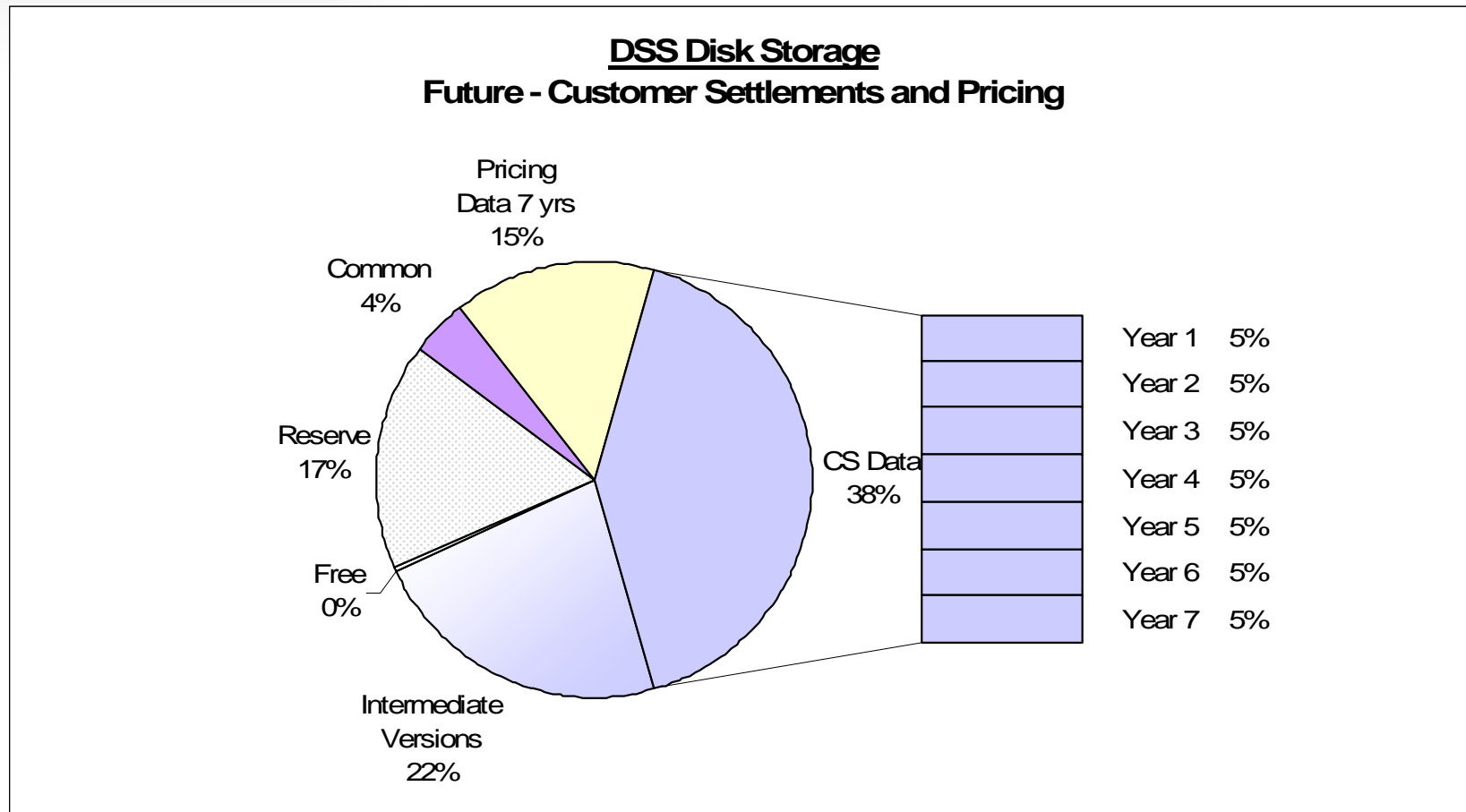
Strategy Change Catalysts – DSS

- ◆ Tax Auditing
 - *Capabilities for full tax audit history will require data to be retained in DSS for the current fiscal year plus seven (7) additional years.*
- ◆ Version Impacts on DataMart
 - *The number of preliminary versions of the invoice due to the nature of the settlement process and final bill close-out initiatives has significantly increased the storage requirements.*

Recommended Strategy - DSS

- ◆ Seven (7) Full Calendar Years After the Current Fiscal Year
 - *All other settlements data, including final invoices, will be retained until this point and then purged.*
- ◆ Final Invoice Posting Plus Three Months
 - *All but final invoice versions will be retained until this point and then purged (corresponds with data archive in transactional system).*

DSS – Future Storage Usage



Gap Analysis

- ◆ Data not in DSS or Transactional System after the implementation of the retention strategy (final invoice posting plus three months):
 - *Monthly level data that is a roll-up of the daily detail*
 - *Station Power*

Summary Recommendations

- ◆ Retention Strategy
 - *BAS, CI and all but final invoices in DSS*
 - Final Invoice Posting Plus Three Months
- ◆ Destruction Strategy
 - *BAS and CI*
 - Seven Years From Date of Transaction
 - *DSS*
 - Seven Full Calendar Years After the Current Fiscal Year

Next Steps

- ◆ Confirm with legal that the proposed approach does not violate any applicable rules or regulations.
- ◆ Present Strategy to BIC: March 7
- ◆ NYISO to continue work on implementation effort
- ◆ NYISO to develop proposal for request and retrieval process
- ◆ NYISO to review proposal with Market Participants