NEW YORK INDEPENDENT SYSTEM OPERATOR

Building the Energy Markets of Tomorrow . . . Today

Planned Changes to Price Validation Reporting

Scheduling and Pricing Working Group
Wednesday, October 18, 2006

Draft – For discussion purposes only

Outline

✓ Review Enhanced Price Validation Project Drivers

✓ Review Price Correction Log

- Current State
- Future State Prototype
- Key Differences

✓ Review Market Participant Correction Report

- Current State
- Future State Prototype
- Key Differences

✓ Discuss Any Additional Requests

Enhanced Price Validation Project Drivers

- ✓ Greater <u>consistency</u> and <u>repeatability</u>
- ✓ Greater <u>standardization</u> of business processes and <u>maturity</u> of IT tools
- ✓ Greater <u>certainty</u> of energy market prices
- ✓ Greater <u>accuracy</u>, <u>timeliness</u>, and **<u>transparency</u>** of energy market prices

Price Correction Log – Background

✓ Background / Purpose

- Posted daily

- Displays current state of every hour of every day in a month

- Tracks the Market Settlement Date, Operating Date, Correction Due Date and Correction Processing Date for each Reservation Date

- Provides a count of all Original, Reserved, Corrected, Released and Verified hours in each day

✓ Issues

- Does not show any data for Correction Due Date and Correction Processing Date

- Lacks traceability – Can't determine whether hours that were verified had been corrected or released with looking through each previous Price Correction Log

Price Correction Log – Current State

LBMP CORRECTION LOG

O=Original N=No Chg Req
R=Reserv C=Changed V=Verified

Prepared by
NYISO IS Dept

As of
10/10/2006 @ 04:07

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Price Correction Log – New Prototype

Price Correction Log - RTD

Correction Log Key:

☐ Original N Reserved & Released (Not Corrected)
R Reserved C Reserved & Corrected

Market Date	Reservation Date	Correction Due Date	Correction/Release Date	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	O	R	C	N
01/01/06	01/02/06	01/05/06	01/05/06																									24	00	00	00
01/02/06	01/03/06	01/06/06	01/06/06																									24	00	00	00
01/03/06	01/04/06	01/07/06	01/07/06				C		N		C				C		N		C	C		N		C				15	00	06	03
01/04/06	01/05/06	01/08/06	01/08/06																									24	00	00	00
01/05/06	01/06/06	01/09/06	01/09/06		N		N																			N		21	00	00	03
01/06/06	01/07/06	01/10/06	01/10/06		N								N								N							21	00	00	03
01/07/06	01/08/06	01/11/06	01/11/06																									24	00	00	00
01/08/06	01/09/06	01/12/06	01/12/06																									24	00	00	00
01/09/06	01/10/06	01/13/06	01/13/06	N											N													22	00	00	02
01/10/06	01/11/06	01/14/06	01/14/06						N								N					N						21	00	00	03
01/11/06	01/12/06	01/15/06	01/15/06																									24	00	00	00
01/12/06	01/13/06	01/16/06	01/16/06		C							C													C			21	00	03	00
01/13/06	01/14/06	01/17/06	01/17/06		C						N	C						N						N		C		18	00	03	03
01/14/06	01/15/06	01/18/06	01/18/06															N						N				22	00	00	02
01/15/06	01/16/06	01/19/06	01/19/06									C																23	00	01	00
01/16/06	01/17/06	01/20/06	01/20/06	C		C		C		C			C		C		C		C		C		C		C		C	12	00	12	00
01/17/06	01/18/06	01/21/06	01/21/06																									24	00	00	00
01/18/06	01/19/06	01/22/06	01/22/06																									24	00	00	00
01/19/06	01/20/06	01/23/06	01/23/06																									24	00	00	00
01/20/06	01/21/06	01/24/06	01/24/06																									24	00	00	00
01/21/06	01/22/06	01/25/06	01/25/06								C							C					C					21	00	03	00
01/22/06	01/23/06	01/26/06	01/26/06																									24	00	00	00
01/23/06	01/24/06	01/27/06	01/27/06																									24	00	00	00
01/24/06	01/25/06	01/28/06	01/28/06							C							C					C						21	00	03	00
01/25/06	01/26/06	01/29/06	01/29/06																									24	00	00	00
01/26/06	01/27/06	01/30/06	01/30/06									N																23	00	00	01
01/27/06	01/28/06	01/31/06	01/31/06				N						R											N				21	01	00	02
01/28/06	01/29/06	02/01/06		R																	R							22	02	00	00
01/29/06	01/30/06	02/02/06							N			R				R						R						21	03	00	01
01/30/06	01/31/06	02/03/06		N			R										N				R			R	N			18	03	00	03
01/31/06	02/01/06	02/04/06								R							R										R	21	03	00	00

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Price Correction Log – Key Differences

- ✓ The report will be generated for all three markets and will still be generated daily, but the same report will be updated each day and the trail of previous day's information will not be lost
  - ■ *Only three reports are needed each month instead of thirty*
- ✓ The report now contains Correction Due Date and Correction / Release Date
  - ■ *Accurately track the full lifecycle of hourly price changes each day*
- ✓ The report has been redesigned to improve usability
  - ■ *Better look and feel*

Correction Report – Background

✓ Background / Purpose

- Posted weekly
- Displays full correction details for every corrected interval in a month

✓ Issues

- List of Correction Modes is redundant
- Does not provide additional correction details for intervals that were corrected via Replacement or Average
- Currently only exists for RTD

Correction Report – Current State

RTD Energy Price Correction Report

Error Description:
1. Posting Error
2. Indeterminancy / Penalty or Shift Factor Trade-offs
3. Data Error - Static
4. Computer System Failure
5. Software Error
6. Telemetry
7. Prices Inconsistent w/Dispatch / No Marginal Unit
8. Operator Input

Error Type:
I. Calculation Error
II. Incorrect Price Setting Resource

Correction Mode:
a. Replace w/Preceeding Interval
b. Replace w/Subsequent Interval
c. Average - Preceeding & Subsequent
d. Replace w/RTD Advisory Price
e. Substitution w/Similar Bus Price
f. RTD Re-Run
g. Replace w/RTC Prices
h. Replace w/SCUC Prices
i. Recalculation - External Proxy
j. Recalculation

Date	First Interval	Last Interval	# of Intervals corrected	Hours with Corrections	Error Type	Error Description	Correction Mode	WEST	CENTRL	MHK VL	CAPITL	HUD VL	GENESE	LONGIL	NORTH	NYC	MILLWD	DUNWOD	HQ	NPX	OH	PJM	Additional Comments
1-Jun-2006	13:45:00	13:45:00	1	13	II	2	d	1	1	1	1	1	1	1	1	1	1	1	-	1	-	1	Operationally ineffective dispatch - HUD VL
1-Jun-2006	13:50:00	13:50:00	1	13	II	2	b	1	1	1	1	1	1	1	1	1	1	1	-	1	-	1	Operationally ineffective dispatch - HUD VL
1-Jun-2006	16:10:00	16:10:00	1	16	II	2	d	1	1	1	1	1	1	1	1	1	1	1	1	1	-	1	Operationally ineffective dispatch - HUD VL
1-Jun-2006	16:15:00	16:20:00	2	16	II	2	b	2	2	2	2	2	2	2	2	2	2	2	2	2	-	2	Operationally ineffective dispatch - HUD VL
1-Jun-2006	17:25:00	17:50:00	4	17	II	2	d	4	4	4	4	4	4	4	4	4	4	4	-	-	-	-	Operationally ineffective dispatch - HUD VL
1-Jun-2006	20:35:00	20:40:00	2	20	II	2	d	2	2	2	2	2	2	2	2	2	2	2	2	2	2	-	Operationally ineffective dispatch - HUD VL
4-Jun-2006	06:55:00	07:10:00	4	6 - 7	II	7	f	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	No basepoints - HUD VL - 200 to 500 MW Gen
6-Jun-2006	13:00:00	13:00:00	1	12	II	2	d	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	No basepoints - NYC & CAPITL units - 200 to 500 MW
6-Jun-2006	13:55:00	14:10:00	4	13 - 14	II	4	c	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	No basepoints - NYC & CAPITL units - 200 to 500 MW
12-Jun-2006	12:55:00	12:55:00	1	12	II	2	a	1	1	1	1	1	1	1	1	1	1			1	1	1	Operationally ineffective dispatch - LI
13-Jun-2006	15:25:00	15:25:00	1	15	II	2	d	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Operationally ineffective dispatch - LI
13-Jun-2006	15:40:00	15:40:00	1	15	II	2	a	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Operationally ineffective dispatch - LI
13-Jun-2006	16:30:00	16:50:00	4	16	II	2	d	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	Operationally ineffective dispatch - LI
13-Jun-2006	17:05:00	17:10:00	2	17	II	2	a	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	Operationally ineffective dispatch - LI
13-Jun-2006	18:20:00	18:25:00	2	18	II	2	a	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	Operationally ineffective dispatch - LI
13-Jun-2006	18:45:00	18:45:00	1	18	II	2	d	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Operationally ineffective dispatch - LI
13-Jun-2006	19:00:00	19:00:00	1	18	II	2	d	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Operationally ineffective dispatch - LI
13-Jun-2006	19:10:00	19:20:00	3	19	II	2	a	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	Operationally ineffective dispatch - LI
13-Jun-2006	19:30:00	19:30:00	1	19	II	2	b	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Operationally ineffective dispatch - LI
13-Jun-2006	19:50:00	19:50:00	1	19	II	2	d	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Operationally ineffective dispatch - LI
16-Jun-2006	15:55:00	15:55:00	1	15	II	2	j	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	Operationally ineffective dispatch - LI
16-Jun-2006	16:05:00	16:06:00	2	16	II	2	j	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	Operationally ineffective dispatch - LI
16-Jun-2006	16:20:00	16:40:00	5	16	II	2	j	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	Operationally ineffective dispatch - LI
16-Jun-2006	18:30:00	18:50:00	4	18	II	2	j	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	Operationally ineffective dispatch - LI

Energy Price Correction Report - RTD

Error Description Key:

1. Posting Error
2. Indeterminacy/Penalty or Shift Factor Trade-offs
3. Data Error – Static Data
4. Computer System Failure
5. Software Error
6. Telemetry
7. Prices Inconsistent with Dispatch/No Marginal Unit
8. Operator Input

Error Type Key:

I — Calculation Error
II — Incorrect Price Setting Resource
I & II — Calculation Error & Incorrect Price Setting Resource

Correction Mode Key:

a. Replacement
b. Average
c. Substitution w/ Similar Bus Price
d. Ranger Re-Run
e. Recalculation – External Proxy
f. Recalculation
g. Re-Post

Date	First Interval	Last Interval	# Intervals Corrected	Hours w/ Corrections	Error Type	Error Description	Correction Mode	Reference Market	Reference Interval(s)	Reference Base Point	WEST	CENTRAL	MHK VL	CAPITL	HUD VL	GENESE	LONGIL	NORTH	NYC	MILLWD	DUNWOD	HQ	NPX	OH	PJM	Additional Comments
06/01/2006	13:45:00	13:45:00	1	13	II	2	d				1	1	1	1	1	1	1	1	1	1	1	-	1	-	1	Operationally ineffective dispatch - HUD VL
06/01/2006	13:50:00	13:50:00	1	13	II	2	b	RTC	06/01/2006 13:45:00 06/01/2006 14:00:00	01,01	1	1	1	1	1	1	1	1	1	1	1	-	1	-	1	Operationally ineffective dispatch - HUD VL
06/01/2006	16:10:00	16:10:00	1	16	II	2	d				1	1	1	1	1	1	1	1	1	1	1	1	1	-	1	Operationally ineffective dispatch - HUD VL
06/01/2006	16:15:00	16:20:00	2	16	II	2	b	RTC	06/01/2006 16:15:00 06/01/2006 16:30:00	01,01	2	2	2	2	2	2	2	2	2	2	2	2	2	-	2	Operationally ineffective dispatch - HUD VL
06/01/2006	17:25:00	17:50:00	4	17	II	2	d				4	4	4	4	4	4	4	4	4	4	4	-	-	-	-	Operationally ineffective dispatch - HUD VL
06/01/2006	20:35:00	20:40:00	2	20	II	2	d				2	2	2	2	2	2	2	2	2	2	2	2	2	-		Operationally ineffective dispatch - HUD VL
06/04/2006	06:55:00	07:10:00	4	6-7	II	7	f				4	4	4	4	4	4	4	4	4	4	4	4	4	2		No basepoints - HUD VL - 200 to 500 MW Gen
06/06/2006	13:00:00	13:00:00	1	12	I & II	3,4	d				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	No basepoints - NYC & CAPITL units - 200 to 500 MW
06/06/2006	13:55:00	14:10:00	4	13-14	II	4	c				4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	No basepoints - NYC & CAPITL units - 200 to 500 MW
06/12/2006	12:55:00	12:55:00	1	12	II	2	a	RTC	06/12/2006 13:45:00	01	1	1	1	1	1	1	1	1	1	1	1		1	1	1	Operationally ineffective dispatch - LI
06/13/2006	15:25:00	15:25:00	1	15	II	2	d				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Operationally ineffective dispatch - LI
06/13/2006	15:40:00	15:40:00	1	15	II	2	a	RTC	06/13/2006 15:45:00	01	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Operationally ineffective dispatch - LI
06/13/2006	16:30:00	16:50:00	4	16	I	2,4	d				4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	Operationally ineffective dispatch - LI
06/13/2006	17:05:00	17:10:00	2	17	II	2	a	RTC	06/13/2006 17:00:00	01	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	Operationally ineffective dispatch - LI
06/13/2006	18:20:00	18:25:00	2	18	II	2	a	RTC	06/13/2006 18:15:00	01	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	Operationally ineffective dispatch - LI
06/13/2006	18:45:00	18:45:00	1	18	II	2	d				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Operationally ineffective dispatch - LI
06/13/2006	19:00:00	19:00:00	1	18	II	2	d				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Operationally ineffective dispatch - LI
06/13/2006	19:10:00	19:20:00	3	19	II	2	a	RTC	06/13/2006 18:15:00	01	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	Operationally ineffective dispatch - LI
06/13/2006	19:30:00	19:30:00	1	19	II	2	b	RTC	06/01/2006 16:15:00 06/01/2006 16:30:00	01,01	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Operationally ineffective dispatch - LI
06/13/2006	19:50:00	19:50:00	1	19	II	2	d				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Operationally ineffective dispatch - LI

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Correction Report – Key Differences

✓ The report will now be generated for all three markets

- ***More transparency for corrections in each market***

✓ The list of Correction Modes has been cut down to remove redundancy

- ***Correction Modes are more clear and intuitive***

✓ The report now provides Reference Market, Interval and Base Point information for Intervals corrected via the "Replacement" or "Average" Correction Modes

- ***More correction details are provided***

✓ Potential to post more frequently if determined to add value

- ***Accelerated notification of correction details***
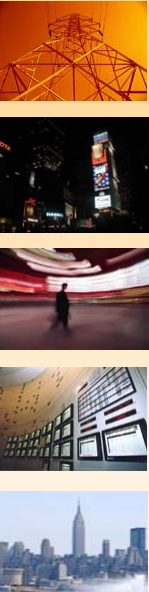
Additional Requests for PV Reporting?

✓ Please submit requests to both:
- Mike Martin: mmartin@nyiso.com
- Larry Sutkowski: lsutkowski@nyiso.com