## **DMNC** Testing and Verification

#### Presented to the ICAP Working Group On 1/24/2006 By Robert S. Boyle

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## NYISO Proposes to use Locked Down Revenue Meter Data to Verify DMNC Test Results

- Problems
  - Revenue meter data is locked down on the 6<sup>th</sup> day of the following month
  - Revenue meter data can be changed at the 4 month and 12 month true-ups

## NYISO Proposes to use Locked Down Revenue Meter Data to Verify DMNC Test Results

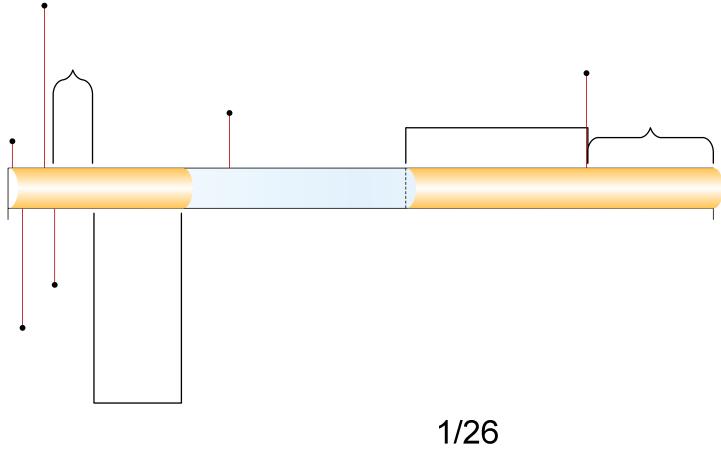
Solutions

- Locked down data is available not later than the 6<sup>th</sup> day of the month following the test
- Provisional DMNC values (prior to lock down) can be used
  - Generators will be responsible for overselling position if provisional data gets revised down
  - Generators can increase DMNC if data gets revised up

#### Metering Exposure at 4 and 12 Month True-Ups

- Four Month Revisions
  - Generator will be responsible for covering future ICAP position if DMNC is reduced in the four month true-up
  - Generator will not be responsible for shortfalls between initial meter read and 4 month true-up
- Twelve Month Revisions
  - Generator will be responsible for covering future ICAP position if DMNC is reduced in the twelve month true-up
  - Generator will not be responsible for shortfalls between 4 month true-up meter read and 12 month true-up
- Shortfalls not covered after true-up are subject to penalties

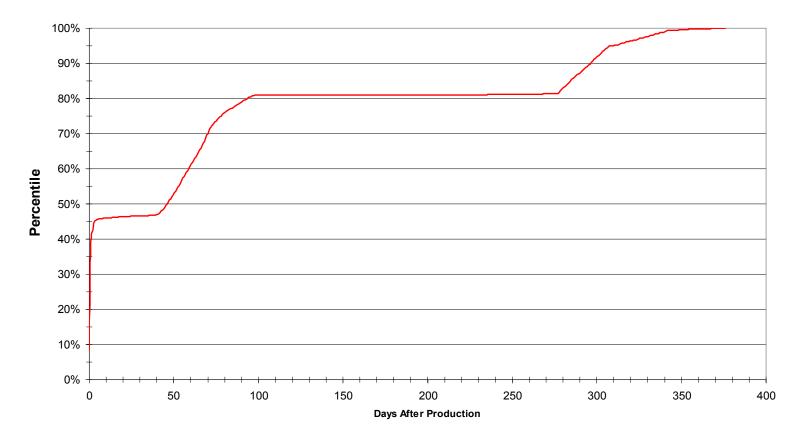
## **Metering Timeline**



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# Study Results of TO Data With Respect to 12 Month True-Up

**Generator Meter Process Capability** 



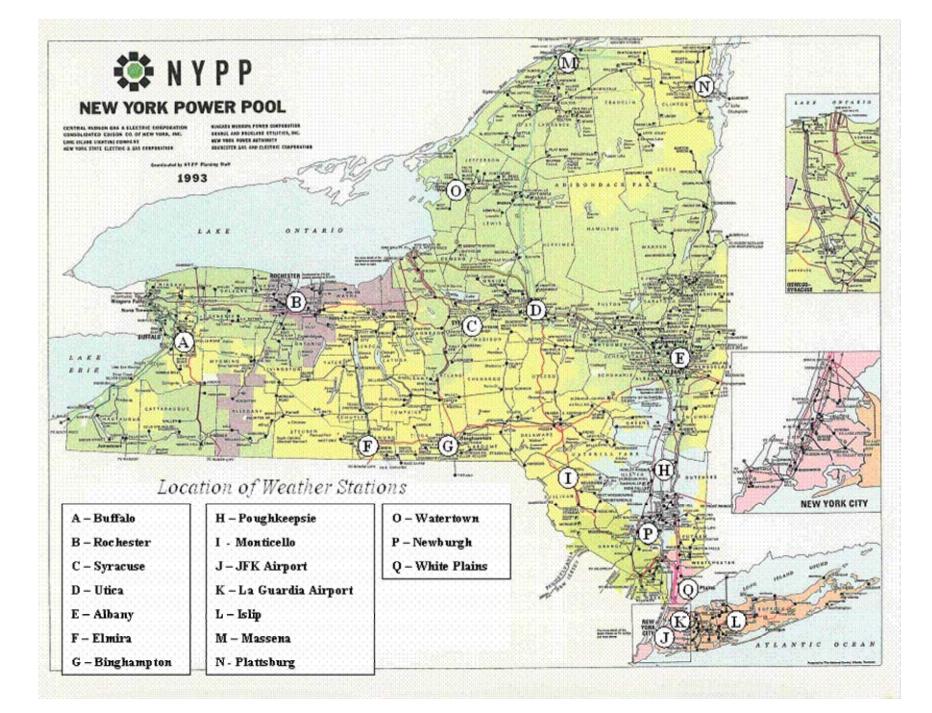
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# Notes Relating to Graph

- Period of study Jul-Sept 2004.
- Graph charts percentile of Meter Reads which were considered final, as a function of days after the production date.
- Many changes occur during the two true-up periods, which are clearly evident on the graph.
- This graph does not take into account the magnitude of the true-up changes; some changes may be immaterial, and some Meter Authorities may resubmit the same values at a later date, giving an apparent update with no real change in meter value.

#### The NYISO Proposes to use Acutal Data From Centralized Weather Stations (WS) in Lieu of Plant Temperature Data

- Weather conditions can be monitored by the NYISO from its headquarters
- The NYISO will post the actual temperatures by hour from its 17 stations located around the State
- WS can be used for current and historical measurements
- NYISO will post weather data with a 5 business day delay
- DMNC test MUST begin at the top of the hour



	Cent Hud		Con Ed		LIPA		NYSEG		NMPC		O&R		RG&E	
	Date Ho	our Ended	Date	Hour Ended	Date	Hour Ended	Date	Hour Ended	Date	Hour Ended	Date	Hour Ended	Date	Hour Ended
Winter Peaks														
1996 -1997	1/17/1997	18	1/9/1997	18	1/17/1997	19	1/17/1997	19	1/17/1997	18	12/20/1996	i 19	1/13/1997	18
1997 -1998	12/10/1997	18	3/31/1998	17	1/28/1998	18	12/10/1997	18	12/22/1997	18	12/22/1997	19	1/14/1998	19
1998 -1999	1/14/1999	18	1/14/1999	18	1/14/1999	18	1/14/1999	19	3/3/1999	18	1/14/1999	18	1/4/1999	18
1999 -2000	1/17/2000	19	1/18/2000	18	1/17/2000	19	1/17/2000	19	1/27/2000	19	12/14/1999	19	1/17/2000	
2000 -2001														
2001 -2002	1/2/2002	17	1/3/2002	18	1/2/2002	19	12/17/2001	19	12/17/2001	18	12/17/2001	19	2/4/2002	19
2002 -2003	1/23/2003	19	1/23/2003	18	1/27/2003	19	1/22/2003	19	1/22/2003	19	1/27/2003	19	12/9/2002	18
and	1/27/2003	19											12/16/2002	18
2003 -2004	1/15/2004	19	1/15/2004	18	1/15/2004	19	1/15/2004	19	1/15/2004	19	1/15/2004	. 19	1/15/2004	19
2004 -2005	12/20/2004	19	12/20/2004	18	12/20/2004	19	12/20/2004	19	12/20/2004	19	12/20/2004	. 19	12/20/2004	18
	Temperature was 86 degrees. "Winter o				nditions" per	ak was:								
			12/10/1997	18										
	For 2001 - 2002, only peaks from 12/01/01					/ere used.								
Summer Peaks														
1996	8/23/1996	16	7/18/1996	17	7/18/1996	16	8/7/1996	15	8/7/1996	15	7/18/1997		8/7/1996	
1997	7/15/1997	14	7/15/1997	16	7/15/1997	17	7/15/1997	14	7/15/1997	14	7/15/1997		7/15/1997	14
1998	7/22/1998	17	7/22/1998	16	7/22/1998	17	7/16/1998	15	7/16/1998	15	6/25/1998	17	7/16/1998	
1999	7/6/1900	15	7/6/1999	13	7/6/1999	15	7/6/1999	15	7/16/1999	15	7/6/1999	ı 19	7/6/1999	
2000	6/26/2000	16	6/26/2000	17	8/8/2000	17	wcb		9/1/2000	14	6/26/2000	17	8/31/2000	
2001	8/9/2001	16	8/9/2001	15	8/8/2001	17	8/7/2001	15	7/23/2001	15	8/9/2001	17	8/9/2001	16
2002	7/29/2002	17	7/3/2002	17	7/29/2002	18	8/14/2002	15	8/13/2002	16	8/14/2002	: 17	7/22/2002	
2003	6/26/2003	17	6/26/2003	16	6/26/2003	17	8/21/2002	16	6/26/2003	15	6/26/2003	i 18	6/26/2003	
2004	8/3/2004	17	6/9/2004	17	6/9/2004	16	8/3/2004	15	6/9/2004	16	6/9/2004	- 17	6/9/2004	17

#### Weather Station Temperatures on TO Peak Days

 ICAP presentation Jan 2006 weather station data.xls

#### Using WS data

- Will permit MMP to use NYISO data to verify the output of the machine
- Will permit MMP to calculate the average temperature that the generator must correct their output to
- Should minimize disputes if we are all using the same data

#### Results of Comparative Analysis of Weather Stations Data and Submitted DMNC Results

- Not all Turbines were included Data not available
- Summer 2004 data for some NYC units
  - Submitted 1,282.2 MW
  - Weather Station Adjusted 1,264.3 MW
  - Summer change (17.9) MW

## Verification of DMNC Test Results

 Suppliers will also submit requests for ambient temperature adjustments and or CLR classification under TB 75 (which is being moved to the ICAP manual).

And

- FAX a copy of MSP calibration letter to MMP
  - This will give MMP assurance that the meter was tested and was within specifications at the time of the DMNC test.

#### MMP Audits

- The audit period starts on the day of the test and ends on the day after the end of the next like capability period.
  - This ties to the periods that the DMNC value could be used in UCAP calculations and sales of UCAP.
  - After the next like capability period ends there is little reason for reviewing DMNC methodologies.

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# Summary

- Preliminary DMNCs can be used
- Revenue billing meter readings will be used for DMNC verification
- The closest weather station reading will be used for the testing temperature
- The closest weather station reading will be used for historical data
- TB 75 will be included in the manual
- Auditing time will be from the date of the test through the end of the next like capability period