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 6th 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

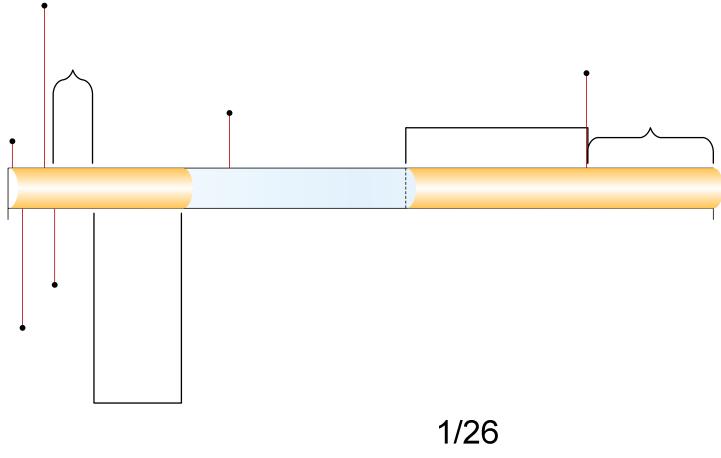
Solutions

- Locked down data is available not later than the 6th 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

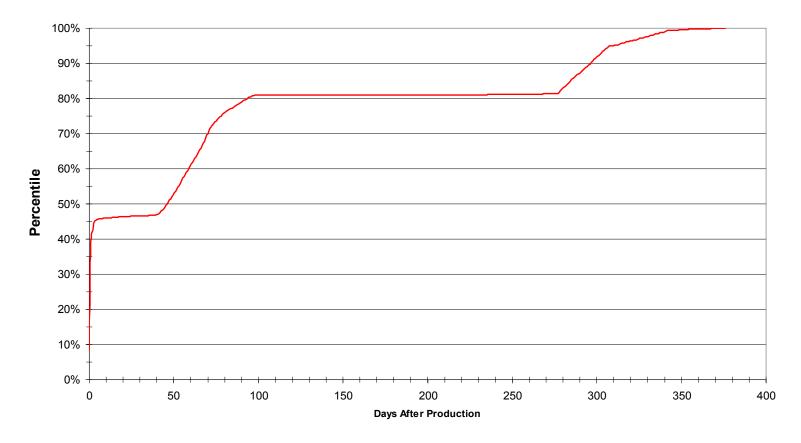
Metering Timeline



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

Generator Meter Process Capability



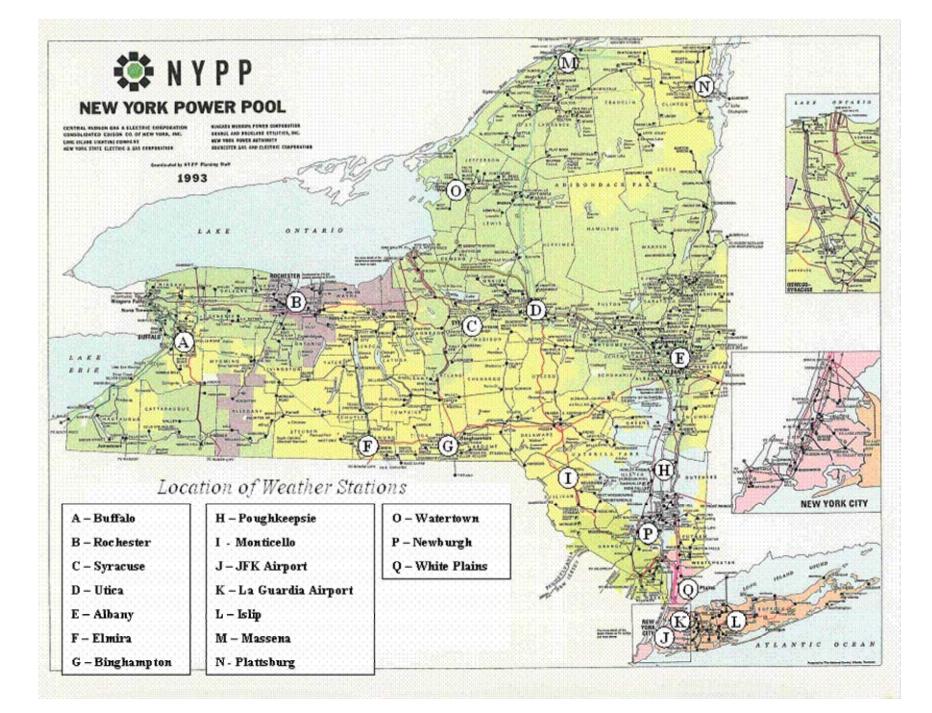
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Notes Relating to Graph

- 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