



IT SCED Pricing Transparency and Accuracy

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Market Implementation Committee
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Look Ahead Price Amendment to CTS Proposal

- The MIC endorsed the following items to address the current lack of forward price projections at the September 11, 2013 meeting:
 - PJM will begin posting forward prices on the NYISO-PJM interface for November 2013 by the 15th of December and for each month thereafter by the 15th of the following month until the automated forward price posting process is placed into production - *Complete*
 - PJM will conduct the necessary stakeholder sessions to develop reasonable standards of accuracy for the ITSCED price forecasts by April 2014 – *Initiated with this presentation*
 - PJM will begin automated forward price posting in April 2014 – *In Progress*
 - PJM will provide price performance analysis to stakeholders for review and discussion at or before the June 2014 MRC meeting – *Initiated with this presentation*
 - PJM shall schedule a vote to move forward with the CTS implementation no later than the July 2014 meeting but at least two full months prior to the implementation of CTS – *Not Started*
 - PJM shall make reasonable efforts to notify market participants of any changes to ITSCED that would have any effect on ITSCED forecasts, including any software updates, 90 minutes prior to making such changes – *On Going*

- Starting in December 2013 PJM began posting forecasted LMPs from IT SCED
 - November 2013 data is the first month of data posted
 - NYIS, NEPTUNE, LINDENVFT, and HUDSONTP interface pricing points are included in the posting
 - Data is available on the [IT SCED Forecasted LMPs](#) webpage
 - [Overview of IT SCED](#) document posted
- PJM is working towards an end of April deployment for IT SCED prices available in eData in real time

- PJM's IT SCED Application provides four look ahead solution intervals over a two hour period
- Analysis was performed to compare the accuracy of the IT SCED forecasted LMPs to the Real Time (RT) LMP
 - Data referenced from February through December 2013
 - Pricing point representative of the NYISO Interface price

	<i>% Occurrence</i>			
CATEGORY	Interval 1	Interval 2	Interval 3	Interval 4
> \$0 and <= \$5	69.23%	68.59%	63.37%	57.68%
> \$5 and <= \$10	11.85%	12.34%	13.87%	15.26%
> \$10 and <= \$15	5.05%	5.12%	6.04%	6.93%
> \$15 and <= \$20	2.79%	2.95%	3.40%	4.10%
> \$20	11.07%	11.00%	13.32%	16.04%



Look Ahead Price Accuracy Metrics - Monthly

ITSCED_INTERVAL	CATEGORY	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	> \$0 and <= \$5	64%	66%	64%	69%	72%	60%	75%	75%	76%	76%	66%
	> \$5 and <= \$10	8%	14%	16%	14%	12%	12%	12%	9%	12%	10%	12%
	> \$10 and <= \$15	5%	6%	6%	5%	5%	7%	4%	4%	4%	4%	5%
	> \$15 and <= \$20	3%	3%	3%	3%	3%	4%	3%	3%	2%	2%	3%
	> \$20	21%	11%	12%	10%	9%	17%	6%	8%	6%	8%	15%
ITSCED_INTERVAL	CATEGORY	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2	> \$0 and <= \$5	59%	64%	64%	68%	72%	60%	75%	74%	76%	76%	66%
	> \$5 and <= \$10	10%	16%	16%	14%	12%	12%	12%	11%	11%	10%	12%
	> \$10 and <= \$15	4%	7%	6%	6%	6%	6%	4%	4%	4%	4%	5%
	> \$15 and <= \$20	3%	4%	3%	3%	3%	4%	2%	2%	2%	2%	3%
	> \$20	23%	10%	11%	9%	8%	18%	7%	8%	6%	8%	14%
ITSCED_INTERVAL	CATEGORY	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3	> \$0 and <= \$5	51%	57%	58%	63%	67%	55%	71%	72%	73%	71%	59%
	> \$5 and <= \$10	10%	18%	17%	16%	14%	13%	14%	13%	12%	11%	14%
	> \$10 and <= \$15	6%	8%	7%	7%	6%	8%	6%	4%	5%	4%	6%
	> \$15 and <= \$20	4%	4%	4%	3%	3%	4%	3%	2%	3%	3%	4%
	> \$20	29%	12%	14%	11%	9%	20%	7%	8%	7%	10%	18%
ITSCED_INTERVAL	CATEGORY	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4	> \$0 and <= \$5	44%	50%	52%	58%	60%	48%	64%	67%	69%	66%	55%
	> \$5 and <= \$10	12%	19%	20%	17%	16%	15%	15%	13%	14%	13%	14%
	> \$10 and <= \$15	6%	10%	7%	7%	8%	8%	7%	5%	6%	5%	7%
	> \$15 and <= \$20	4%	5%	4%	4%	3%	5%	4%	3%	3%	4%	4%
	> \$20	33%	15%	16%	14%	13%	24%	11%	11%	9%	12%	20%



Look Ahead Price Accuracy Metrics - Seasonal

ITSCED_INTERVAL	CATEGORY	Winter	Spring	Summer	Fall
1	> \$0 and <= \$5	64.80%	66.08%	68.92%	75.65%
	> \$5 and <= \$10	10.03%	14.40%	12.07%	10.28%
	> \$10 and <= \$15	4.77%	5.91%	5.30%	4.14%
	> \$15 and <= \$20	2.81%	2.97%	3.08%	2.31%
	> \$20	17.59%	10.63%	10.62%	7.63%
ITSCED_INTERVAL	CATEGORY	Winter	Spring	Summer	Fall
2	> \$0 and <= \$5	62.57%	65.25%	69.00%	75.54%
	> \$5 and <= \$10	10.90%	15.35%	11.88%	10.75%
	> \$10 and <= \$15	4.78%	6.18%	5.33%	4.08%
	> \$15 and <= \$20	3.44%	3.19%	3.01%	2.33%
	> \$20	18.31%	10.03%	10.78%	7.31%
ITSCED_INTERVAL	CATEGORY	Winter	Spring	Summer	Fall
3	> \$0 and <= \$5	54.94%	59.54%	64.39%	71.79%
	> \$5 and <= \$10	11.84%	17.05%	13.70%	12.23%
	> \$10 and <= \$15	5.99%	7.26%	6.36%	4.53%
	> \$15 and <= \$20	3.73%	3.69%	3.57%	2.73%
	> \$20	23.50%	12.46%	11.99%	8.72%
ITSCED_INTERVAL	CATEGORY	Winter	Spring	Summer	Fall
4	> \$0 and <= \$5	49.66%	53.61%	57.19%	67.57%
	> \$5 and <= \$10	12.71%	18.86%	15.34%	13.30%
	> \$10 and <= \$15	6.62%	8.24%	7.55%	5.21%
	> \$15 and <= \$20	4.41%	4.45%	4.25%	3.37%
	> \$20	26.60%	14.85%	15.68%	10.54%

Seasonal Classifications

Winter = February, December

Spring = March, April, May

Summer = June, July, August

Fall = September, October, November



Look Ahead Price Accuracy – NYISO’s PJM Interface

- NYISO performed analysis to compare the accuracy of the RTC first base point forecasted LMPs to the RTD LMPs
 - Data referenced from January through December 2013
 - Pricing point representative of their PJM Interface price

\$ Difference	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
>20	6%	4%	2%	2%	2%	2%	5%	2%	2%	2%	6%	4%
10 to 20	5%	6%	5%	5%	3%	3%	4%	2%	3%	4%	5%	5%
5 to 10	6%	8%	8%	7%	7%	6%	6%	8%	7%	8%	6%	7%
-5 to 5	61%	65%	71%	68%	73%	72%	69%	73%	72%	67%	61%	69%
-10 to -5	6%	8%	7%	8%	6%	7%	7%	7%	5%	7%	8%	7%
-20 to -10	6%	5%	4%	7%	5%	6%	4%	4%	5%	5%	6%	4%
<-20	9%	5%	3%	4%	4%	4%	6%	4%	6%	7%	7%	4%

- Interchange Modeling Improvement
 - Move to an interface-based interchange forecast to more accurately model interchange at each interface
 - Late April implementation target
- Hydro Modeling Enhancement
 - Use DA committed MW rather than SE MW to predict hydro unit output for those units that generally follow their DA schedule
 - May implementation target

- Continue posting IT SCED prices on a month delay
- Publish IT SCED prices in eData in real time at the end of April
- Publish monthly accuracy metrics
 - [IT SCED Forecasted LMPs](#) webpage
- Receive stakeholder feedback on level of comfort with accuracy metrics
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