

XO Energy  
 EMU Proposal - Phase 2 - Package U

XO Energy proposes to eliminate the Four Tick Rule. This package is considered an add-on to the other Phase 2 packages that don't currently address the elimination of the Four Tick Rule.

**If a unit is called on uneconomically, its uplift should remain in the reliability bucket regardless of the number of intervals in which LMP may be higher than the unit's offer price.** Under the current Four Tick Rule, if LMP prices are higher than a unit's offer price for four intervals in an hour, the cost of running the unit is shifted from the reliability bucket to the deviations bucket. This is an unjust and unreasonable cost shift. Whether the LMP price is higher or lower than the unit's offer price has no bearing on the reason the unit was called upon: reliability. When a unit is called on for reliability, any uplift costs associated with that unit must be allocated to the reliability bucket.

A disproportionate amount of balancing uplift is allocated to the deviations bucket and not the reliability bucket. In 2015, 20.7% of balancing charges were allocated to reliability, while 79.3% were allocated to deviations.  
<http://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14198362> (at 45)

As stated in PJM's 2010 State of the Market Report:

*"Conservative operations means that units are committed due to conditions that warrant conservative actions to ensure the maintenance of system reliability. Such conditions include hot and cold weather alerts. The resultant credits are defined as reliability credits and are allocated to real-time load plus exports."*

[http://www.monitoringanalytics.com/reports/PJM\\_State\\_of\\_the\\_Market/2010/2010-som-pjm-volume2-sec3.pdf](http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2010/2010-som-pjm-volume2-sec3.pdf)

There were 45 days with conservative operations in 2015. Uplift totaled \$86,759,653, of which 81%, or \$70,558,234, was allocated to deviations and 19%, or \$16,201,419, was allocated to reliability. Logically, a greater percentage of uplift paid during conservative operations should be allocated to and paid for by load, however, this has not been the case since the inception of the 2008 BORCA. **Clearly, there is a fundamental market design flaw in the manner in which these credits are allocated.**

Over the past 5 years, there have only been 62 days (less than 4%) during which the Four Tick Rule would not be applicable. (See Figure 1). As the number of hours that have four 5-minute interval LMP spikes, the percentage of balancing uplift being allocated to reliability decreases significantly.

**Figure 1: Energy LMP Spikes Calculated over 5 Years**

Hours in Day With 4 LMP Spikes	Number of Days	Total Reliability Uplift	Total Deviation Uplift	Total Uplift	Total Reliability %	Total Deviation %
0	62	\$12,397,866	\$15,066,253	\$27,464,119	45%	55%
1	218	\$27,003,143	\$110,278,874	\$137,282,017	20%	80%
2	269	\$36,490,884	\$171,282,812	\$207,773,697	18%	82%
3	284	\$51,597,768	\$249,383,291	\$300,981,059	17%	83%
4	247	\$40,571,593	\$235,763,248	\$276,334,841	15%	85%
5	143	\$22,634,664	\$139,918,060	\$162,552,724	14%	86%
6	84	\$20,205,666	\$84,580,722	\$104,786,388	19%	81%
7	23	\$6,517,000	\$29,220,176	\$35,737,176	18%	82%
8	5	\$3,880,497	\$19,714,746	\$23,595,243	16%	84%
9	2	\$311,303	\$9,474,554	\$9,785,856	3%	97%

**Figure 2: Total Uplift Paid, Allocated between Reliability and Deviations**

Date	Emergency Alert (Cold/Hot)	Region	Total Reliability Uplift	Total Deviations Uplift	Total Uplift	Reliability %	Deviation %
1/5/2015	Cold	COMED	\$29,437	\$466,961	\$496,397	6%	94%
1/6/2015	Cold	COMED	\$180,650	\$373,215	\$553,866	33%	67%
1/7/2015	Cold	Western	\$149,792	\$1,974,743	\$2,124,536	7%	93%
1/8/2015	Cold	RTO	\$860,768	\$5,336,268	\$6,197,036	14%	86%
1/9/2015	Cold	Western	\$100,324	\$2,604,956	\$2,705,280	4%	96%
1/10/2015	Cold	Western	\$574,019	\$540,007	\$1,114,026	52%	49%
1/14/2015	Cold	Western	\$15,130	\$888,534	\$903,664	2%	98%
1/15/2015	Cold	Western	\$25,995	\$185,474	\$211,468	12%	88%
2/2/2015	Cold	RTO	\$132,610	\$897,616	\$1,030,226	13%	87%
2/3/2015	Cold	RTO	\$35,684	\$407,240	\$442,924	8%	92%
2/5/2015	Cold	DUQ, ATSI, COMED	\$50,752	\$466,264	\$517,016	10%	90%
2/6/2015	Cold	MAAC	\$45,984	\$360,279	\$406,263	11%	89%
2/13/2015	Cold	AP, DUQ, ATSI	\$283,427	\$640,038	\$923,466	31%	69%
2/14/2015	Cold	Western	\$242,394	\$1,767,478	\$2,009,871	12%	88%
2/15/2015	Cold	MAAC, Western	\$530,539	\$3,867,071	\$4,397,610	12%	88%
2/16/2015	Cold	RTO	\$337,185	\$4,935,388	\$5,272,573	6%	94%
2/17/2015	Cold	MAAC	\$1,144,847	\$6,028,967	\$7,173,813	16%	84%
2/18/2015	Cold	Western	\$656,583	\$2,832,982	\$3,489,565	19%	81%
2/19/2015	Cold	RTO	\$2,346,336	\$8,814,470	\$11,160,806	21%	79%
2/20/2015	Cold	RTO	\$627,458	\$5,662,870	\$6,290,329	10%	90%
2/23/2015	Cold	Western	\$677,159	\$1,506,719	\$2,183,879	31%	69%
2/24/2015	Cold	RTO	\$1,048,828	\$3,420,024	\$4,468,852	24%	77%
2/26/2015	Cold	ATSI, DUQ	\$200,720	\$2,054,455	\$2,255,175	9%	91%
2/27/2015	Cold	Western	\$641,106	\$889,683	\$1,530,789	42%	58%
3/5/2015	Cold	COMED	\$644,904	\$5,137,892	\$5,782,796	11%	89%
3/6/2015	Cold	Western	\$1,125,524	\$2,658,035	\$3,783,559	30%	70%
5/26/2015	Hot	MAAC, Southern	\$3,280	\$596,533	\$599,814	1%	100%
5/27/2015	Hot	MAAC, Southern	\$33,160	\$355,871	\$389,031	9%	92%
6/11/2015	Hot	MAAC, Southern	\$68,915	\$144,982	\$213,898	32%	68%
6/12/2015	Hot	MAAC, Southern	\$318,827	\$147,256	\$466,082	68%	32%
6/13/2015	Hot	MAAC, Southern	\$58,193	\$129,511	\$187,704	31%	69%
6/16/2015	Hot	Southern	\$115,525	\$371,269	\$486,794	24%	76%
6/21/2015	Hot	Southern	\$9,863	\$220,039	\$229,903	4%	96%
6/22/2015	Hot	MAAC, Southern					
6/23/2015	Hot	MAAC, Southern	\$279,775	\$376,947	\$656,722	43%	57%
7/20/2015	Hot	MAAC, DOM	\$68,382	\$1,205,284	\$1,273,666	5%	95%
7/21/2015	Hot	MAAC	\$154,162	\$202,659	\$356,821	43%	57%
7/29/2015	Hot	MAAC, DOM	\$101,727	\$129,033	\$230,761	44%	56%
7/30/2015	Hot	MAAC, DOM	\$769,187	\$45,482	\$814,669	94%	6%
8/17/2015	Hot	MAAC	\$202,076	\$139,430	\$341,506	59%	41%
9/1/2015	Hot	MAAC	\$44,698	\$245,913	\$290,611	15%	85%
9/2/2015	Hot	MAAC	\$32,509	\$14,754	\$47,263	69%	31%
9/3/2015	Hot	MAAC	\$50,449	\$95,400	\$145,849	35%	65%
9/8/2015	Hot	MAAC	\$139,563	\$824,334	\$963,896	15%	86%
9/9/2015	Hot	MAAC	\$1,042,971	\$595,907	\$1,638,877	64%	36%
<b>Total Weather Alerts Uplift</b>			<b>\$16,201,419</b>	<b>\$70,558,234</b>	<b>\$86,759,653</b>	<b>19%</b>	<b>81%</b>
<b>Total 2015 Uplift</b>			<b>\$38,736,768</b>	<b>\$149,280,316</b>	<b>\$188,017,084</b>	<b>21%</b>	<b>79%</b>
<b>Total Weather Alerts</b>			<b>42%</b>	<b>47%</b>	<b>46%</b>		