Market Monitor Report

MC Webinar
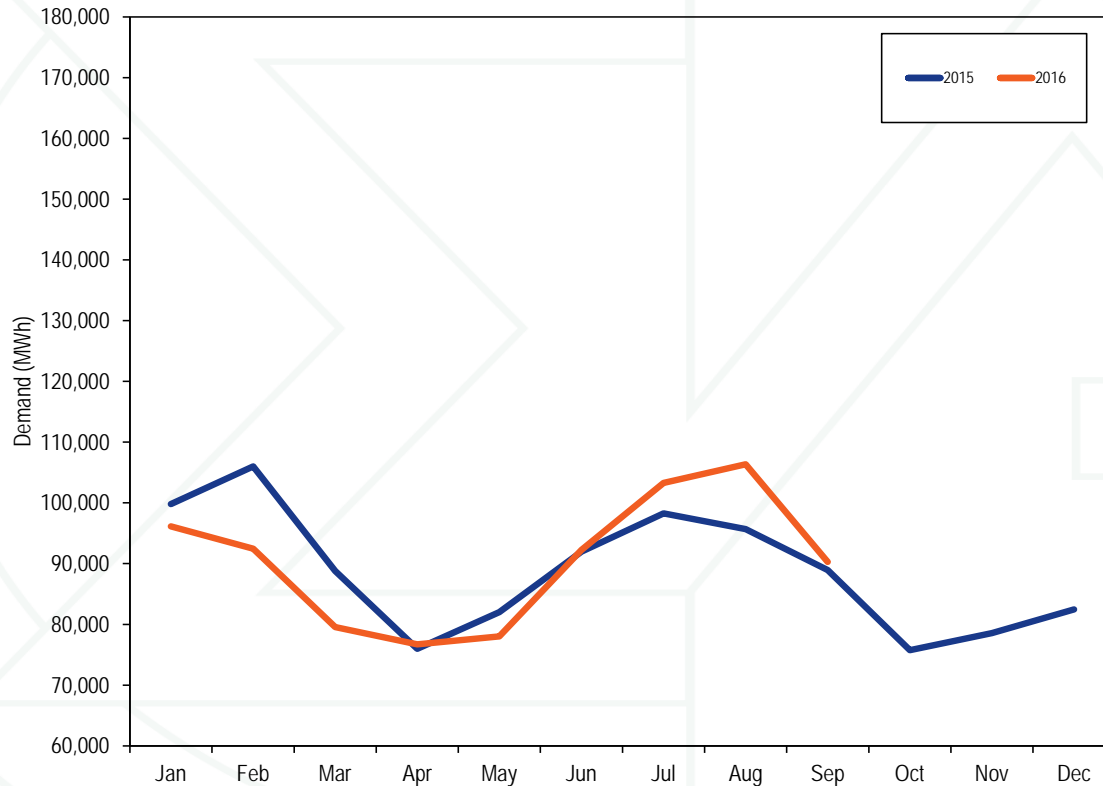
October 24, 2016

Joe Bowring

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PJM real-time monthly average hourly load: January 2015 through September 2016

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PJM real-time, load-weighted, average LMP ($/MWh): January - September, 1998 - 2016

| Jan-Sep | Real-Time, Load-Weighted, Average LMP | | | Year-to-Year Change | | |
	Average	Median	Standard Deviation	Average	Median	Standard Deviation
1998	$26.06	$18.20	$44.65	NA	NA	NA
1999	$38.65	$20.02	$104.17	48.3%	10.0%	133.3%
2000	$28.49	$19.30	$26.89	(26.3%)	(3.6%)	(74.2%)
2001	$40.96	$28.18	$64.57	43.8%	46.0%	140.1%
2002	$31.95	$23.09	$29.14	(22.0%)	(18.1%)	(54.9%)
2003	$43.57	$38.17	$26.53	36.3%	65.3%	(9.0%)
2004	$46.44	$43.03	$21.89	6.6%	12.7%	(17.5%)
2005	$60.44	$50.10	$36.52	30.2%	16.4%	66.9%
2006	$56.39	$46.82	$40.70	(6.7%)	(6.5%)	11.4%
2007	$61.83	$55.12	$37.98	9.7%	17.7%	(6.7%)
2008	$77.27	$66.73	$43.80	25.0%	21.1%	15.3%
2009	$39.57	$34.57	$19.04	(48.8%)	(48.2%)	(56.5%)
2010	$49.91	$40.33	$29.65	26.2%	16.7%	55.7%
2011	$49.48	$38.72	$37.02	(0.9%)	(4.0%)	24.8%
2012	$35.02	$29.84	$25.44	(29.2%)	(22.9%)	(31.3%)
2013	$39.75	$33.61	$26.47	13.5%	12.6%	4.0%
2014	$58.60	$37.93	$86.22	47.4%	12.8%	225.8%
2015	$38.94	$29.09	$33.95	(33.5%)	(23.3%)	(60.6%)
2016	$29.32	$24.60	$17.13	(24.7%)	(15.4%)	(49.6%)

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PJM real-time, load-weighted, average LMP: January through September 2016

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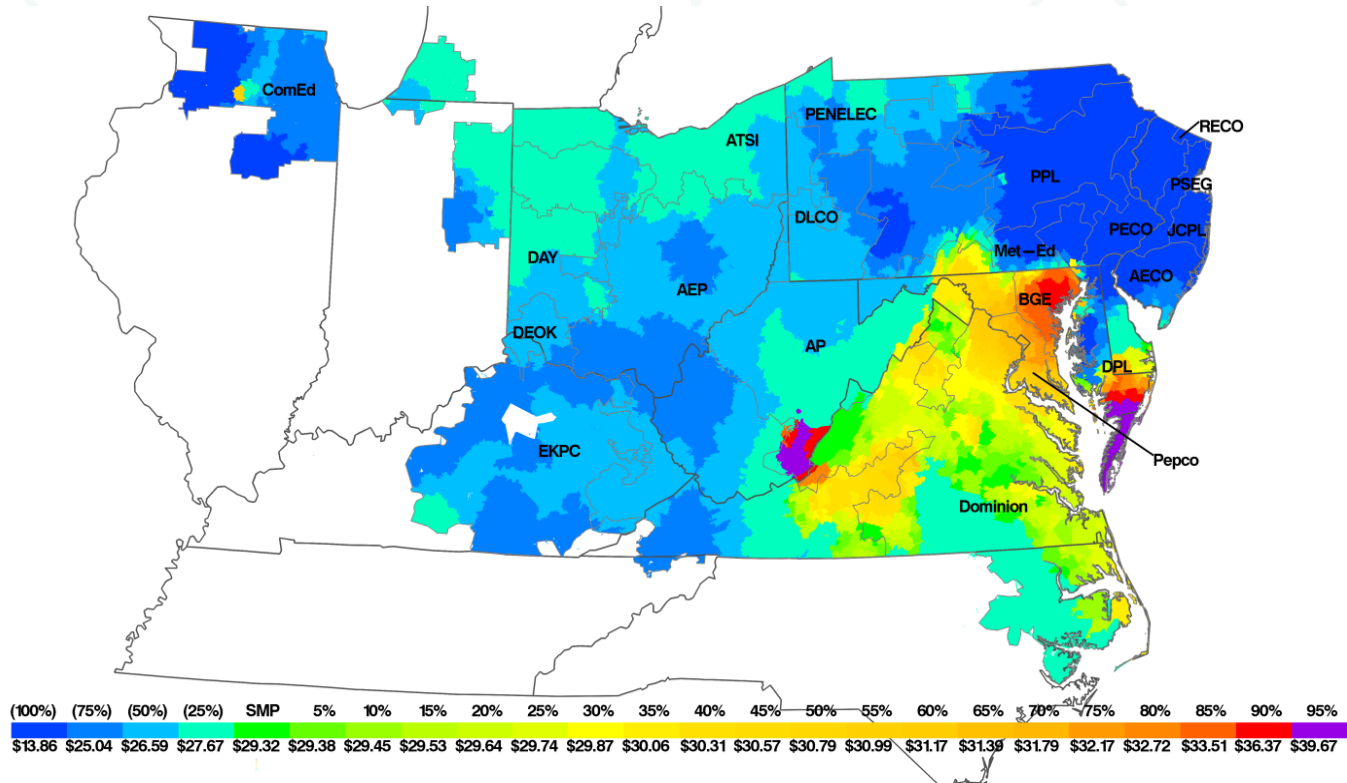
Energy uplift charges by category: January through September, 2015 and 2016

Category	Jan - Sep 2015 Charges	Jan - Sep 2016 Charges	Change (Millions)	Percent Change
Day-Ahead Operating Reserves	$86.8	$40.8	($46.0)	(53.0%)
Balancing Operating Reserves	$182.6	$61.0	($121.6)	(66.6%)
Reactive Services	$10.0	$0.8	($9.2)	(91.7%)
Synchronous Condensing	$0.0	$0.0	($0.0)	(99.3%)
Black Start Services	$5.1	$0.2	($4.9)	(96.4%)
Total	$284.5	$102.8	($181.7)	(63.9%)

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MISO Multi-Value Project Usage Rate (MUR)

- **A multi-value project (MVP) is a project that enables the reliable and economic delivery of energy in support of public policy needs, provides multiple types of regional economic value or provides a combination of regional reliability and economic value**

- **On July 13, 2016, FERC issued an Order permitting MISO to collect charges associated with MVPs for export and wheel-through transactions sinking in PJM (MUR charges)**

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MISO Multi-Value Project Usage Rate (MUR)

- **"The development of large scale wind generation capable of serving both MISO's and its neighbors' energy policy requirements in the western areas of MISO; the reported need of PJM entities to access those resources; and the reported need for MISO to build new transmission facilities to deliver the output of those resources within MISO for export."[1]**

[1] **156 FERC ¶ 61,034 (2016).** *Order on Remand.*

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MISO Multi-Value Project Usage Rate (MUR)

- **"Given these changes, it is appropriate to allow MISO to assess the MVP usage charge for transmission service used to export to PJM just as MISO assesses the MVP usage charge for transmission service used to export energy to other regions."** [1]

[1] **156 FERC ¶ 61,034 (2016).** *Order on Remand.*

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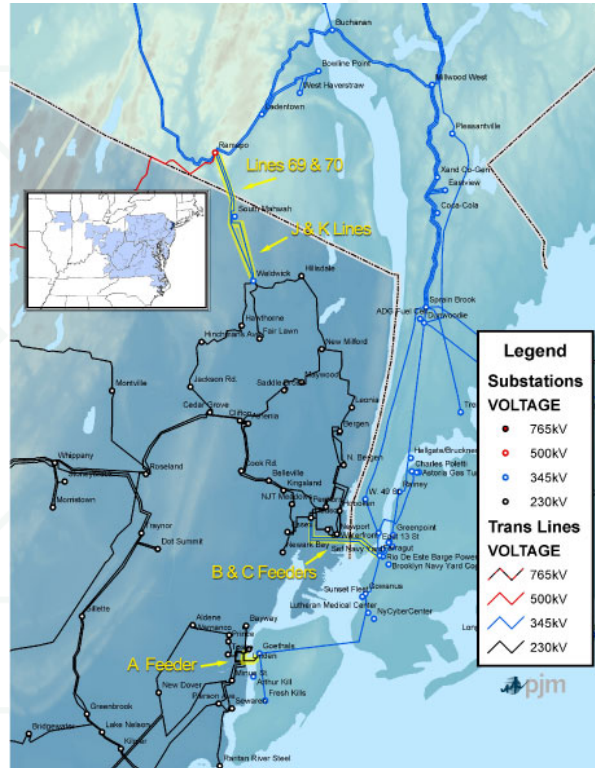# MISO Multi-Value Project Usage Rate (MUR)

- **The charge applies to the relevant transactions in addition to the applicable transmission, ancillary service and network upgrade charges**

- **The July 13th Order permitted MISO to include a MUR usage charge for transactions sinking in PJM effective July 13, 2016**

- **Indicative MUR for 2017 is estimated at $1.39/MWh**

- **It is not clear whether the MUR usage charge has affected interchange volumes from MISO into PJM**

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ConEd Wheel Replacement

- **On April 28, 2016, ConEd announced its intent to terminate its 1,000 MW long-term firm transmission service effective May 1, 2017.**

- **NYISO and PJM issued a draft whitepaper outlining a potential alternative for utilizing the ABC and JK interfaces effective May 1, 2017.[1]**

[1] **http://www.pjm.com/~/media/documents/reports/20161004-coned-pseg-wheel-replacement-proposal.ashx**

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ConEd Wheel Replacement

ConEd Wheel Replacement

- **The NYISO/PJM whitepaper proposes to:**
  - **Include the JK and ABC lines in the PJM-NY AC Proxy Bus definition,**
  - **Include the JK and ABC lines in the M2M PAR coordination process,**
  - **Determine the JK and ABC target flows using a static percentage of interchange, a percentage of RECO load and 400 MW of operational base flow from NY to PJM over the JK interface and 400 MW from PJM to NY over the ABC interface**

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Fuel Cost Policies – Penalty Gas

- **Penalties for unauthorized natural gas consumption should not be included in cost-based energy offers under fuel cost policies for gas fired generators.**

- **The purpose of such penalties is to provide an economic incentive to avoid the use of unauthorized natural gas. If generators are allowed to include such costs in energy offers, this will remove the economic incentive to maintain the reliability of the pipeline system.**

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Fuel Cost Policies – Penalty Gas

- **The FERC order in NYISO (154 FERC ¶ 61,111) explicitly excluded penalty gas in the calculation of the reference levels used in NYISO energy offers.**

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Fuel Cost Policies – Ratable Take Gas

- **The cost of unburned gas should not be included in cost-based energy offers under fuel cost policies for gas fired generators.**

- **The cost of unburned gas is not a short run marginal cost. This cost decreases with every additional MWh produced.**

- **Generators have different approaches to meeting their capacity obligation under the Capacity Performance rules.**

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Fuel Cost Policies- Ratable Take Gas

- **If a generator chooses a higher risk and lower cost approach, the generator should bear the risk.**

- **For example, if a generator chooses to meet its Capacity Performance obligation using interruptible gas rather than firm, no-notice service or dual fuel capability, the resultant ratable take risk should not be includable in energy offers.**

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