

Market Monitor Report

MC Webinar
January 22, 2018

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Monitoring Analytics

High Offers During Cold Weather

- **January 4 to 8, 2018**
- **High natural gas prices**
 - **TETCO M-3**
 - **Transco Zones 5 and 6**
- **For January 5, 2018, most natural gas-fired units in eastern PJM footprint experienced short run marginal costs exceeding \$1,000 per MWh.**
- **Marginal costs over \$1,000 per MWh more limited on other days.**

<http://www.monitoringanalytics.com/reports/Reports/2018/IMM Offer Cap Report Jan 2018 20180119.pdf>

Offer Cap Violations

From the OA, Section 1.10.1A (d) (viii), offers:

Shall not exceed an energy offer price of \$1,000/megawatt-hour for all generation resources, except (1) when a Market Seller's cost-based offer is above \$1,000/megawatt-hour and less than or equal to \$2,000/megawatt-hour, then its market-based offer must be less than or equal to the cost-based offer; and (2) when a Market Seller's cost-based offer is greater than \$2,000/megawatt-hour, then its market-based offer must be less than or equal to \$2,000/megawatt-hour;

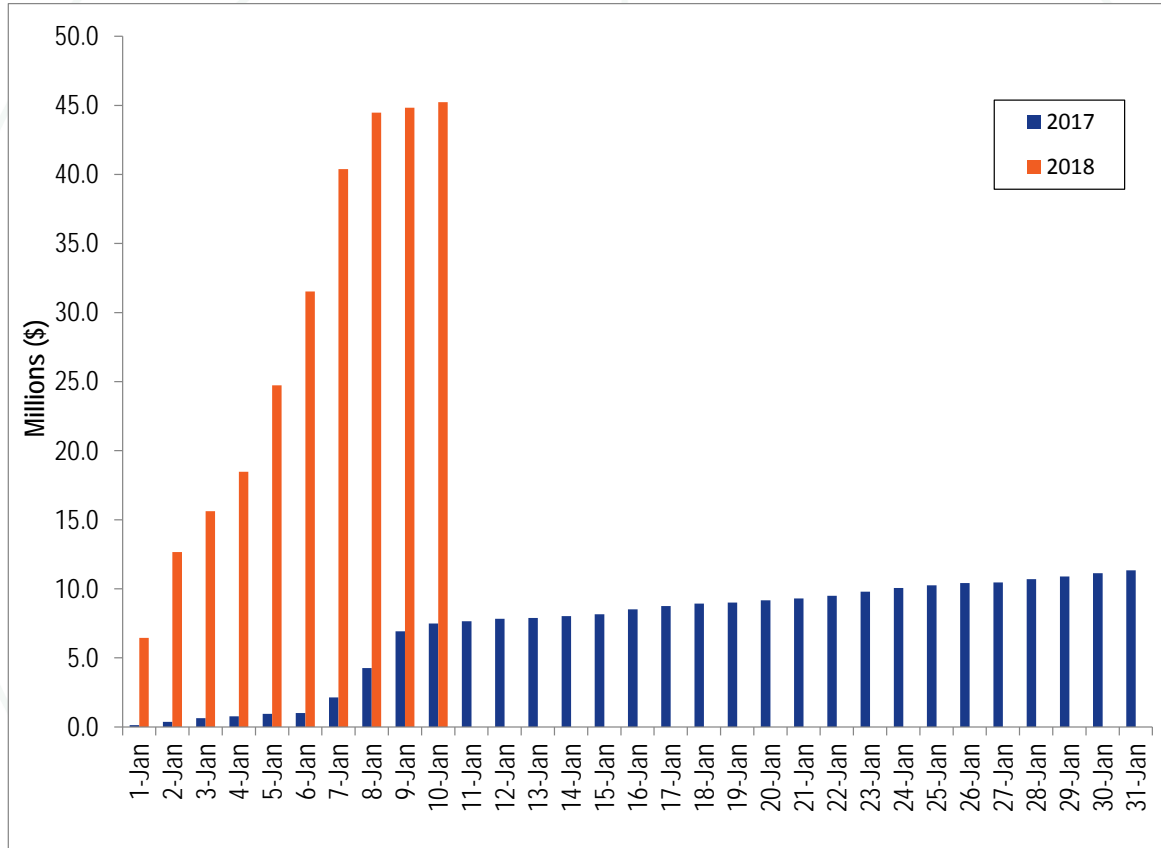
Offer Issues During Cold Weather

- **Natural gas market prices reached levels of pipeline unauthorized use penalty rates.**
- **High VOM changed the dispatch order of some units.**
- **Fuel availability changed during the day for dual fuel units.**
- **IMM is examining appropriate outage reporting and use of maximum emergency status, especially for oil-fired units.**

Uplift During Cold Weather: December 26, 2017 through January 7, 2018

Unit Type	Day Ahead (Millions)	Balancing (Millions)	LOC (Millions)	Reactive (Millions)	Synchronous Condensing (Millions)	Total (Millions)	Percent of Total
CC	\$1.02	\$8.41	\$2.21	\$0.08	\$0.00	\$11.73	23.6%
CT	\$1.02	\$16.88	\$13.12	\$0.33	\$0.04	\$31.50	63.3%
Diesel	\$0.02	\$0.07	\$0.36	\$0.04	\$0.00	\$0.50	1.0%
Steam-Coal	\$0.12	\$0.05	\$3.48	\$0.00	\$0.00	\$3.64	7.3%
Steam-Others	\$1.18	\$1.00	\$0.19	\$0.00	\$0.00	\$2.37	4.8%
Total	\$3.36	\$26.41	\$19.37	\$0.45	\$0.04	\$49.73	100.0%

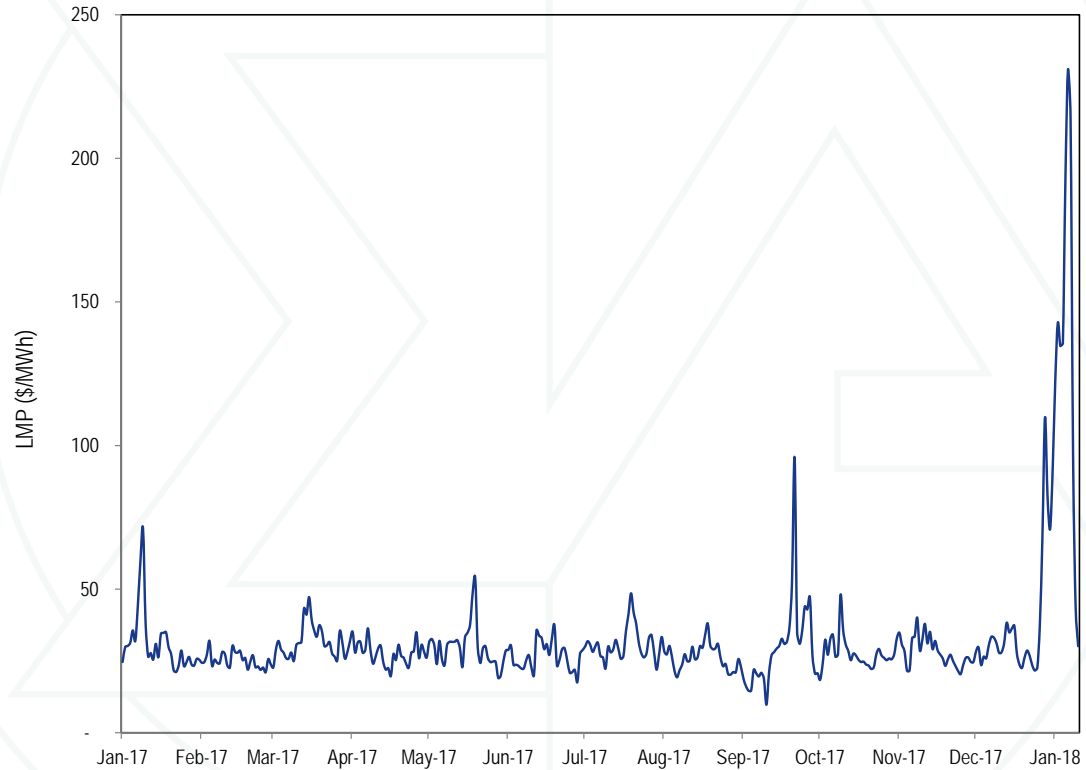
Uplift Running Total for January



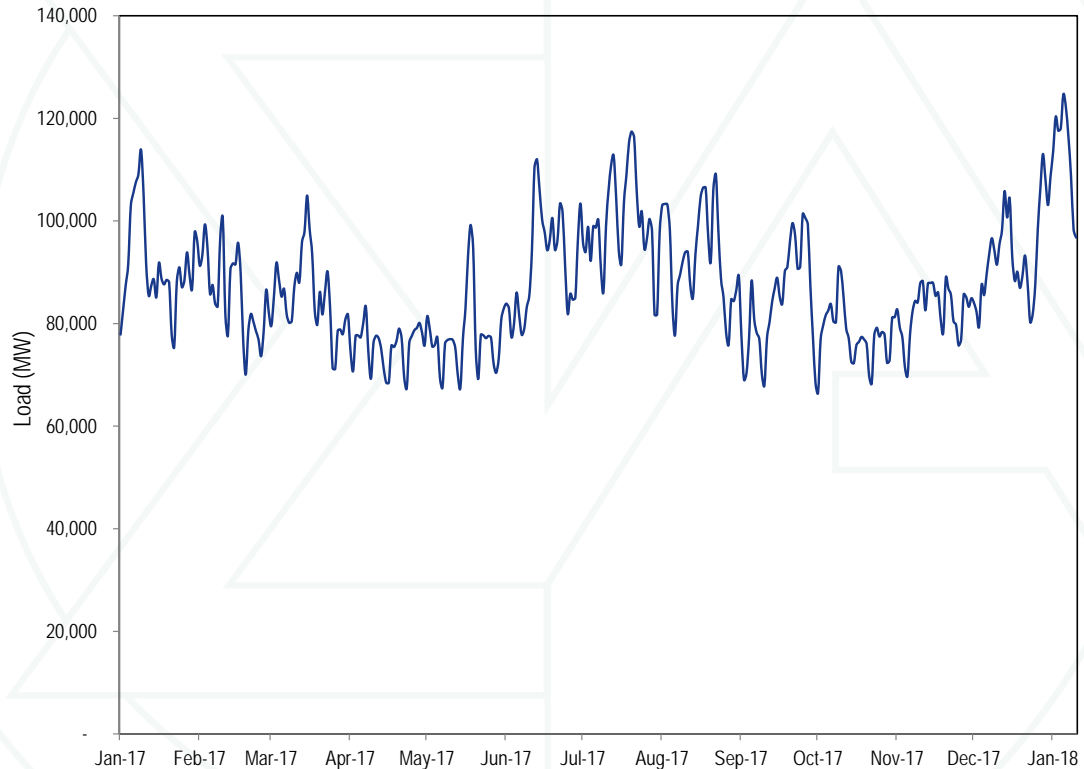
Opportunity Costs During Cold Weather

- **IMM provided opportunity cost adders to 23 generation plants during 2017**
- **Average opportunity cost adder for 2017 was \$6.11 per MWH.**
- **Opportunity cost adders increased on average 22.2 percent from the last week of 2017 to the first week of 2018**
- **Opportunity cost adders decreased on average 5.7 percent from the first week of 2018 to the second week of 2018**

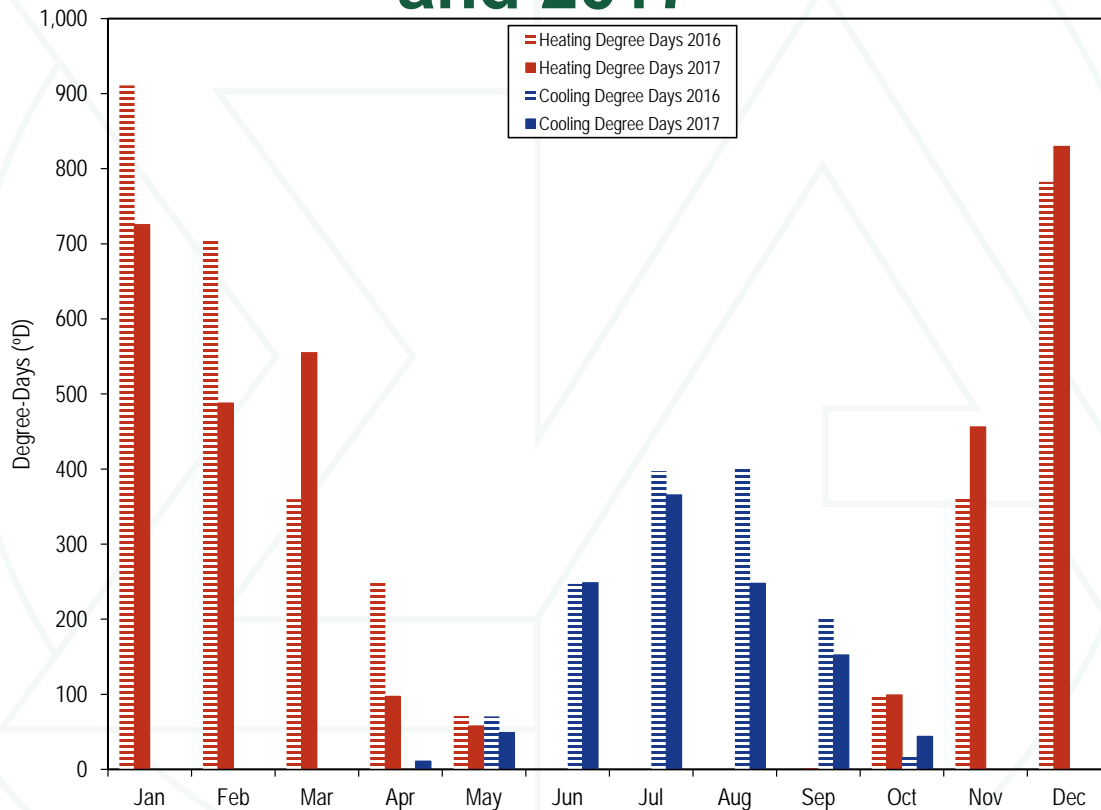
PJM Real-Time Load-Weighted Average Daily LMP: January 1, 2017 through January 10, 2018



PJM Real-Time Average Daily Load: January 1, 2017 through January 10, 2018



PJM Heating and Cooling Degree Days: 2016 and 2017



PJM Heating and Cooling Degree Days: 2016, and 2017

	2016		2017		Percent Change	
	Heating Degree Days	Cooling Degree Days	Heating Degree Days	Cooling Degree Days	Heating Degree Days	Cooling Degree Days
Jan	911	0	725	0	(20.4%)	0.0%
Feb	706	0	488	0	(30.9%)	0.0%
Mar	360	0	555	0	54.1%	0.0%
Apr	250	1	97	11	(61.0%)	1375.9%
May	71	71	58	49	(18.9%)	(30.6%)
Jun	0	247	0	249	0.0%	0.6%
Jul	0	397	0	366	0.0%	(8.0%)
Aug	0	402	0	248	0.0%	(38.3%)
Sep	0	203	1	152	0.0%	(24.8%)
Oct	98	17	99	44	1.6%	164.0%
Nov	363	0	456	0	25.8%	0.0%
Dec	782	0	830	0	6.0%	0.0%
Total	3,541	1,337	3,309	1,118	(6.5%)	(16.3%)

MOPR Exception Requests

Auction	Number of Requests (Company-Plant Level)	Number of Resources	Requested ICAP (MW)
2018/2019 Third Incremental Auction	9	21	624.0
2021/2022 Base Residual Auction	26	63	10,670.9

Note: Number of resources calculation assumes that not yet modeled combined cycles will be modeled as one capacity resource in eRPM.

Grid Resilience and Fast-Start FERC Proceedings

- **FERC rejected the DOE proposal to subsidize resources with 90 day fuel supplies.**
- **FERC initiated a new proceeding to change PJM's fast-start resource pricing.**
- **The fast-start order rules out extending pricing changes to resources that require more than an hour to start.**

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