

# 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;**

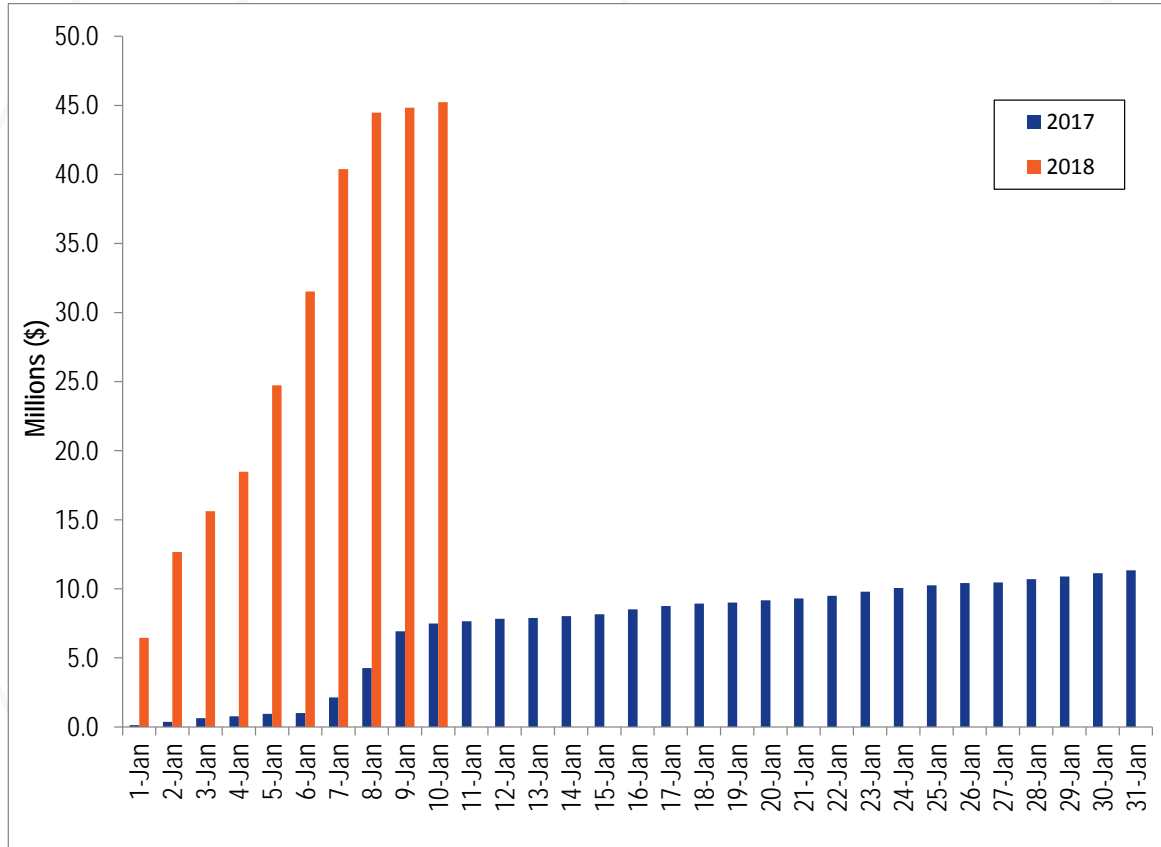
# Offer Issues During Cold Weather

- **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<br>(Millions) | Balancing<br>(Millions) | LOC (Millions) | Reactive<br>(Millions) | Synchronous<br>Condensing<br>(Millions) | Total<br>(Millions) | Percent of<br>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%                |
| <b>Total</b> | <b>\$3.36</b>           | <b>\$26.41</b>          | <b>\$19.37</b> | <b>\$0.45</b>          | <b>\$0.04</b>                           | <b>\$49.73</b>      | <b>100.0%</b>       |

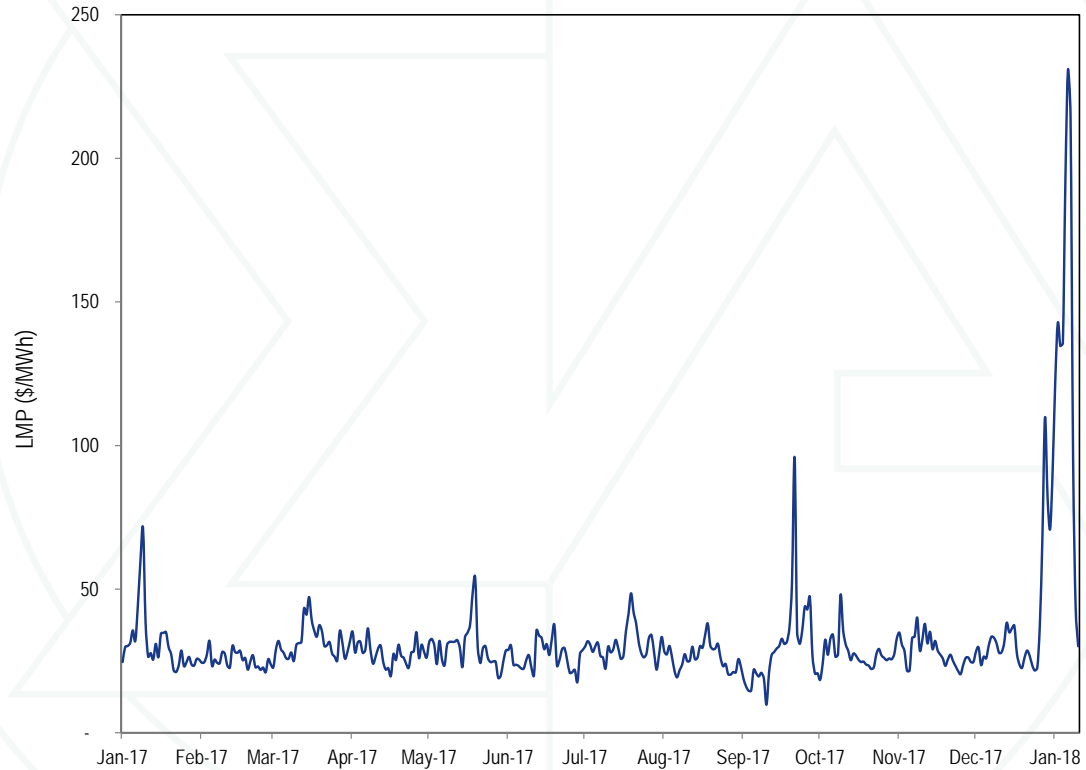
# Uplift Running Total for January



# Opportunity Costs During Cold Weather

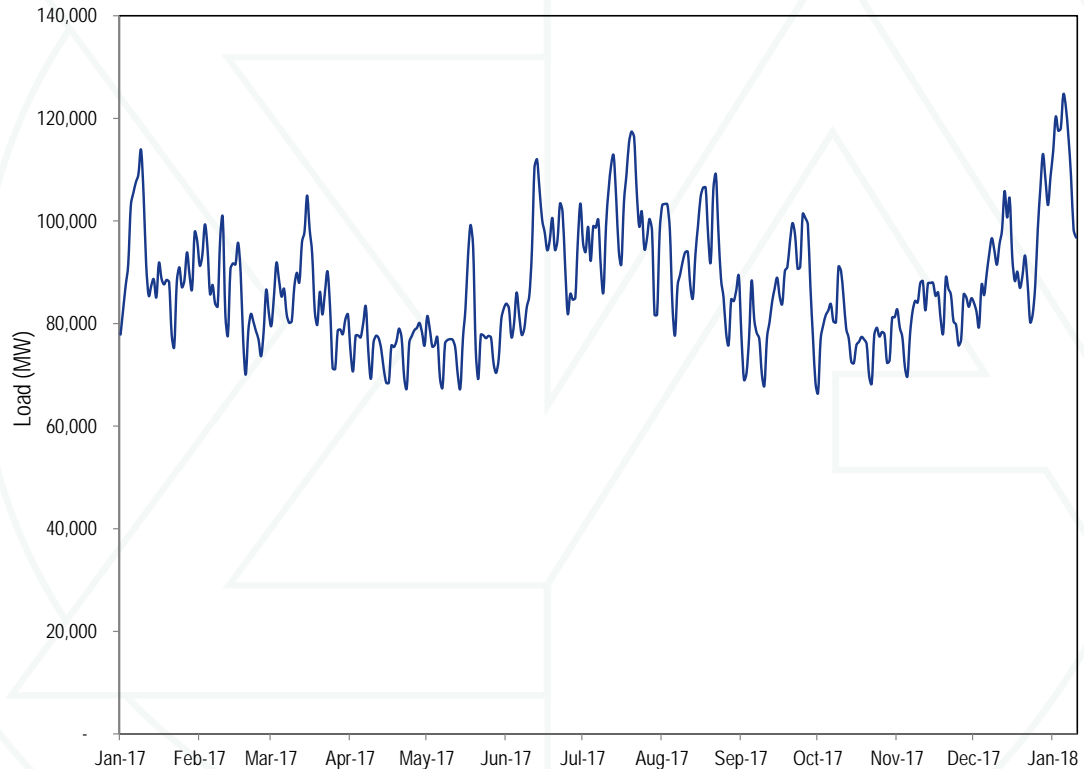
- **IMM provided opportunity cost adders to 23 generation plants during 2017**
- **Average opportunity cost adder for 2017 was \$6.11 per MWH.**
- **Opportunity cost adders increased on average 22.2 percent from the last week of 2017 to the first week of 2018**
- **Opportunity cost adders decreased on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

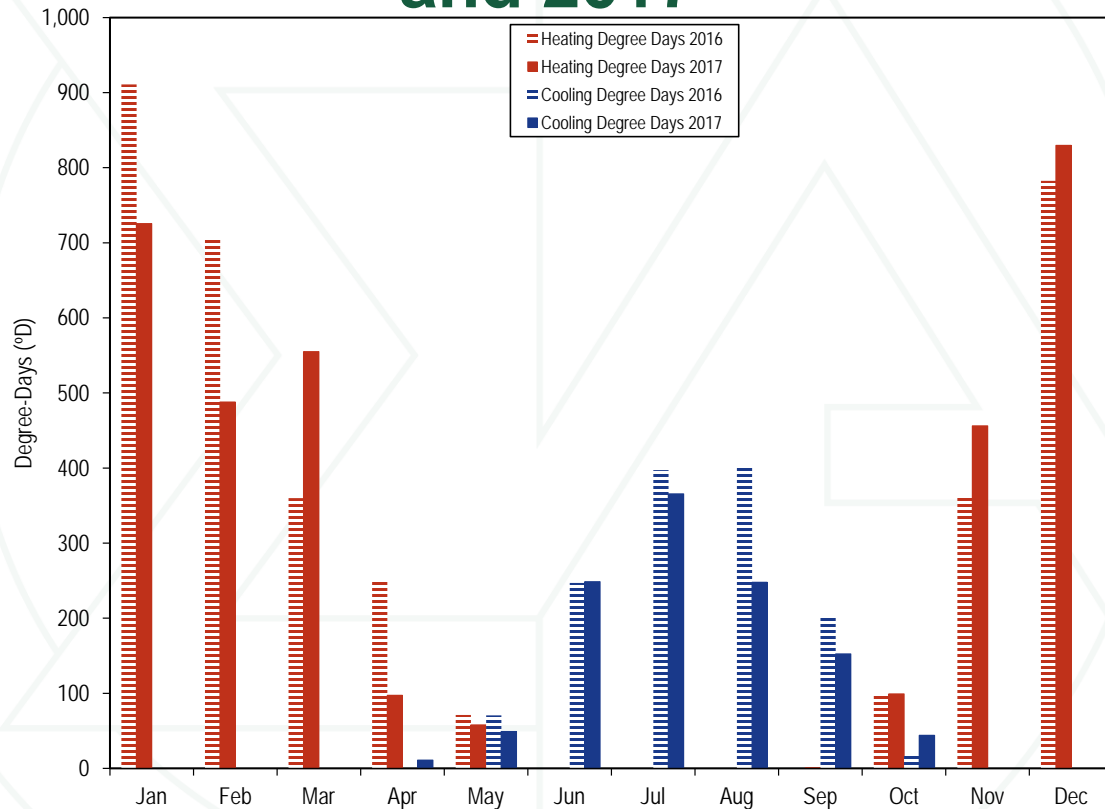




# PJM Real-Time Average Daily Load: January 1, 2017 through January 10, 2018



# 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<br>(Company-Plant Level) | Number of Resources | Requested<br>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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