Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Valley Forge Corporate Center
Eagleville, PA 19403
Phone: 610-271-8050
Fax: 610-271-8057

FOR IMMEDIATE RELEASE

2021 Quarterly State of the Market Report for PJM: January through March

MARKET MONITOR FINDS PJM WHOLESALE ELECTRICITY MARKETS COMPETITIVE

(Eagleville, PA May 13, 2021) PJM Interconnection's wholesale electric energy market produced competitive results during the first three months of 2021, according to the *2021 Quarterly State of the Market Report for PJM: January through March* released today by Monitoring Analytics, LLC, the Independent Market Monitor for PJM.

The Independent Market Monitor, Joseph Bowring, announced findings of the report today. The report is the Independent Market Monitor's assessment of the competitiveness of the wholesale electricity markets managed by PJM in 13 states and the District of Columbia. The report includes analysis of market structure, participant behavior and market performance for each of the PJM markets.

"Our analysis concludes that the results of the PJM Energy Market were competitive in the first three months of 2021," Bowring said.

Energy prices increased significantly in the first three months of 2021, but remained almost 20 percent below the five year average for the first three months of 2015 through 2019. Energy prices were lower in 2020 than in any year since PJM markets were established in 1999. The load-weighted average, real-time LMP was 55.3 percent higher in the first three months of 2021 than in the first three months of 2020, $30.84 per MWh versus $19.85 per MWh. Of the $10.99 per MWh increase, 95.9 percent was a direct result of higher fuel costs. The primary contributor to the increase in energy prices was higher natural gas prices, especially in February. Load also rose due to colder winter weather and the economic recovery.

Energy prices in PJM in the first three months of 2021 were set, on average, by units operating at, or close to, their short run marginal costs, although this was not always the case. This is evidence of generally competitive behavior and competitive market outcomes, although high markups for some marginal units did affect prices.

The total cost of wholesale power consists primarily of the cost of energy, capacity and transmission. The cost of energy has been the largest component, the cost of capacity has been the second largest and the cost of transmission service has been third largest. In 2020, for the first time since the start of the PJM capacity market in 2007, the cost of transmission was greater than the cost of capacity for an entire year. The cost of transmission continued to be greater than

 -MORE-

the cost of capacity in the first three months of 2021. The total cost of wholesale power increased by 26.7 percent.

Higher energy prices and higher gas costs made coal units more economic in the first three months of 2021. The share of total PJM energy produced from coal increased from 18.0 percent in the first three months of 2020 to 25.1 percent in the first three months of 2021 while the share of energy produced from natural gas decreased from 40.0 to 34.6 percent. The capacity factor of coal units increased from 23.7 percent to 35.1 percent.

Net revenue is a key measure of overall market performance as well as a measure of the incentive to invest in new generation to serve PJM markets. Theoretical net revenues from the energy market increased for all unit types in the first three months of 2021 compared to the first three months of 2020. Theoretical net revenues increased by 55 percent for a new combustion turbine, 32 percent for a new combined cycle, 9,549 percent for a new coal unit, and 53 percent for a new nuclear plant.

Total energy uplift charges increased by $27.2 million or 378.5 percent, from $7.2 million in the first three months of 2021 to $34.4 million in the first three months of 2021.

When there are binding transmission constraints and locational energy price differences, load pays more for energy than generation is paid to produce that energy. The difference is congestion. Congestion belongs to load and should be returned to load. Total congestion costs increased by $35.9 million or 42.2 percent, from $85.1 million in the first three months of 2020 to $121.0 million in the first three months of 2021. But only 45.8 percent of total congestion costs for the first 10 months of the 2020/2021 planning period were returned to load through the total ARR and self-scheduled FTR revenues offset. The goal of the FTR market design should be to ensure that load has the rights to 100 percent of congestion costs.

The Independent Market Monitor (also known as the Market Monitoring Unit or MMU) evaluates the operation of PJM's wholesale markets to identify ineffective market rules and tariff provisions, proposes improvements to market rules and tariff provisions when needed, monitors compliance with and implementation of the market rules, identifies potential anticompetitive behavior by market participants and provides comprehensive market analysis critical for informed policy and decision making. Joseph Bowring, the Market Monitor, ensures the independence and objectivity of the monitoring program.

For a copy of the State of the Market Report, visit Monitoring Analytics at: http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2021.shtml