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FOR IMMEDIATE RELEASE

2022 Quarterly State of the Market Report for PJM: January through June

MARKET MONITOR FINDS PJM WHOLESALE ELECTRICITY MARKETS COMPETITIVE

(Eagleville, PA August 11, 2022) PJM Interconnection's wholesale electric energy market produced competitive results during the first six months of 2022, according to the *2022 Quarterly State of the Market Report for PJM: January through June* 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 six months of 2022," Bowring said.

Energy prices increased significantly in the first six months of 2022 from the first six months of 2021. The real-time load-weighted average LMP in the first six months of 2022 increased 121.3 percent from the first six months of 2021, from \$30.62 per MWh to \$67.77 per MWh. The price level is the third highest real-time load-weighted average LMP for the first six months of a year, while the price increase of \$37.15 per MWh and the percent price increase of 121.3 percent are the largest increases in load-weighted average prices for the first six months of a year since the creation of PJM markets in 1999. Of the \$37.15 per MWh increase, 46.9 percent was a direct result of higher fuel and emission costs. Both coal and natural gas prices were higher in the first six months of 2022 compared to 2021, although fuel prices varied by time period and area. Coal prices, and gas prices in the eastern part of PJM doubled. The real-time hourly average load in the first six months of 2022, increased by 1.9 percent from the first six months of 2021, from 85,958 MWh to 87,616 MWh.

The total price of wholesale power increased from \$56.52 per MWh in the first six months of 2021 to \$95.93 per MWh in the first six months of 2022, an increase of 69.7 percent. Energy, capacity and transmission charges are the three largest components of the total price of wholesale power, comprising 98.1 percent of the total price per MWh in the first six months of 2022. Starting in the third quarter of 2019, the cost of transmission per MWh of wholesale power has been higher than the cost of capacity.

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Energy prices in PJM in the first six months of 2022 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.

In the first six months of 2022, generation from coal units decreased 6.4 percent, and generation from natural gas units increased 5.2 percent compared to the first six months of 2021.

Net revenue is a key measure of overall market performance as well as a measure of the incentive to invest in generation to serve PJM markets. Theoretical net revenues from the energy market increased for all unit types in the first six months of 2022 compared to the first six months of 2021. Theoretical energy net revenues increased by 138 percent for a new combustion turbine, 127 percent for a new combined cycle, 87 percent for a new coal unit, and 117 percent for a new nuclear plant.

Total energy uplift charges increased by \$2.8 million, or 3.6 percent, in the first six months of 2022 compared to the first six months of 2021, from \$79.3 million to \$82.1million.

When there are binding transmission constraints and locational energy price differences, customers pay more for energy than generation is paid to produce that energy. The difference is congestion. Congestion belongs to customers and should be returned to customers. Total congestion increased by \$791.9 million or 223.7 percent, from \$354.0 million in the first six months of 2021 to \$1,145.9 million in the first six months of 2022. But only 31.5 percent of total congestion paid by customers for the 2021/2022 planning period was returned to customers through the ARR and self-scheduled FTR revenues offset, the lowest offset since ARRs were implemented. The goal of the FTR market design should be to ensure that customers have the rights to 100 percent of the congestion that customers pay.

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/2022.shtml