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*FOR IMMEDIATE RELEASE*

*2022 State of the Market Report for PJM*

## **MARKET MONITOR FINDS PJM WHOLESALE ELECTRICITY MARKETS COMPETITIVE**

(Eagleville, PA, March 9, 2023) PJM Interconnection's wholesale electric energy market produced competitive results during 2022, according to the *2022 State of the Market Report for PJM* 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 2022," Bowring said.

Energy prices increased significantly in 2022 from 2021. The real-time load-weighted average LMP in 2022 increased 101.4 percent from 2021, from \$39.78 per MWh to \$80.14 per MWh. This was the highest average PJM price (\$80.14 per MWh), the highest price increase (\$40.36 per MWh) and the highest percent price increase (101.4 percent) for a year since the creation of PJM markets in 1999. Of the \$40.36 per MWh increase, 65.7 percent was a direct result of the increased costs of fuel, emissions allowances, and consumables. Both coal and natural gas prices were higher in 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 2022 increased by 1.5 percent from 2021, from 87,606 MWh to 88,884 MWh.

The total price of wholesale power increased from \$66.78 per MWh in 2021 to \$105.34 per MWh in 2022, an increase of 57.7 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 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.

Energy prices in PJM in 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.

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In 2022, generation from coal units decreased 9.1 percent, generation from natural gas units increased 6.8 percent, and generation from oil increased 17.8 percent compared to 2021. Wind and solar generation increased by 16.2 percent compared to 2021, supplying 6.8 percent of PJM energy in 2022.

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 2022 compared to 2021. Theoretical energy market net revenues increased by 140 percent for a new combustion turbine, 99 percent for a new combined cycle, 77 percent for a new coal unit, 86 percent for a new nuclear plant, 104 percent for a new onshore wind installation, 101 percent for a new offshore wind installation and 123 percent for a new solar installation.

Total energy uplift charges increased by \$111.5 million, or 62.5 percent, in 2022 compared to 2021, from \$178.4 million to \$289.9 million.

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 costs increased by \$1,506.0 million or 151.3 percent, from \$995.3 million in 2021 to \$2,501.3 million in 2022. But only 61.8 percent of total congestion paid by customers for the first seven months of the 2022/2023 planning period was returned to customers through the ARR and self-scheduled FTR revenues offset. 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. Load has received \$4.0 billion less in congestion revenues than load should have received from the 2011/2012 planning period through the first seven months of the 2022/2023 planning period.

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](http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2022.shtml)