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FOR IMMEDIATE RELEASE

2020 State of the Market Report for PJM: January through June

MARKET MONITOR FINDS PJM WHOLESALE ELECTRICITY MARKETS COMPETITIVE

(Eagleville, PA August 13, 2020) PJM Interconnection's wholesale electric energy market produced competitive results during the first six months of 2020, according to the *2020 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 2020," Bowring said.

Energy prices were lower in the first six months of 2020 than in the first six months of any year since the creation of PJM markets in 1999. Energy prices in PJM were already among the lowest in PJM's history in the first six months of 2019. The load-weighted average real-time LMP was 29.4 percent lower in the first six months of 2020 than in the first six months of 2019, \$19.40 per MWh versus \$27.49 per MWh. Of the \$8.09 per MWh decrease, 51.3 percent was a direct result of lower fuel costs. The other major contributor to the decline in energy prices was the significant drop in demand as a result of both the mild winter weather and COVID-19. On a cumulative basis, PJM load was down 5.9 percent compared to the first six months of 2019, and load was down 4.5 percent on a weather normalized basis.

Energy prices in PJM in the first six months of 2020 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.

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. Net revenues are significantly affected by fuel prices, energy prices and capacity prices. Theoretical net revenues decreased for all unit types in the first six months of 2020 compared to the first six months of 2019 as a result of lower energy prices. Theoretical net revenues decreased by 26 percent for a new combustion

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turbine, 29 percent for a new combined cycle, 91 percent for a new coal unit, and 31 percent for a new nuclear plant.

The trend toward more energy from natural gas and less from coal accelerated in the first six months of 2020. The share of total PJM energy produced from coal fell from 24.8 percent in the first six months of 2019 to 17.6 percent in the first six months of 2020 while the share of gas increased from 33.8 to 39.4 percent. The capacity factor of coal units fell from 30.9 percent to 22.1 percent.

Total energy uplift charges decreased by \$13.7 million or 37.2 percent, from \$36.7 million in the first six months of 2019 to \$23.0 million in the first six months of 2020.

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 decreased by \$74.8 million or 29.4 percent, from \$254.1 million in the first six months of 2019 to \$179.3 million in the first six months of 2020.

Total ARR and self-scheduled FTR revenues offset 138.8 percent of total congestion costs for the 2019/2020 planning period because FTR bidders paid more in the auctions than actual day-ahead payments for the same paths. 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/2020.shtml>