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FOR IMMEDIATE RELEASE

2017 Quarterly State of the Market Report for PJM: January through September

MARKET MONITOR FINDS PJM WHOLESALE ELECTRICITY MARKETS COMPETITIVE

(Eagleville, PA November 9, 2017) PJM Interconnection's wholesale electric energy, capacity and regulation markets produced competitive results during the first nine months of 2017, according to the *2017 Quarterly State of the Market Report for PJM: January through September* 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 and Capacity Markets in the first nine months of 2017 were competitive," Bowring said.

One of the benefits of competitive power markets is that changes in input prices and changes in the balance of supply and demand are reflected immediately in energy prices. PJM real-time energy market prices increased in the first nine months of 2017 compared to the first nine months of 2016. The load-weighted average real-time LMP was 3.5 percent higher in the first nine months of 2017 than in the first nine months of 2016, \$30.36 per MWh versus \$29.32 per MWh. Energy prices were higher primarily as a result of higher fuel prices.

Energy prices in PJM in the first nine months of 2017 were set, on average, by units operating at, or close to, their short run marginal costs, although this was not always the case during high demand hours. This is evidence of generally competitive behavior and resulted in a competitive energy market outcome.

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. Energy net revenues are significantly affected by energy prices and fuel prices. Energy prices and fuel prices were higher in the first nine months of 2017 than in the first nine months of 2016. For gas and coal fired units, fuel prices increased more than energy prices, resulting in lower energy market net revenues for a new combustion turbine (CT) and a new combined cycle (CC), the most commonly built type of new unit in PJM, as well as a new coal plant (CP). In the first nine months of 2017, average energy market net revenues decreased by 51 percent for a new CT, 28

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percent for a new CC, and 17 percent for a new CP. For nuclear plants, energy net revenues were higher because of higher energy prices. In the first nine months of 2017, average energy market net revenues increased 6 percent for a new nuclear plant.

Total energy uplift charges decreased by \$16.0 million or 15.7 percent, from \$102.3 million in the first nine months of 2016 to \$86.3 million in the first nine months of 2017.

Total payments for demand response programs decreased by \$167.2 million or 31.1 percent, from \$537.8 million in the first nine months of 2016 to \$370.6 million in the first nine months of 2017. The capacity market is the primary source of revenue to participants in PJM demand response programs.

Congestion costs decreased by \$366.8 million or 44.6 percent, from \$822.2 million in the first nine months of 2016 to \$455.4 million in the first nine months of 2017. Congestion reflects the underlying characteristics of the power system, including the capability of transmission facilities, the fuel costs and geographic distribution of generation facilities and the geographic distribution of load. Congestion is neither good nor bad, but is a direct measure of the extent to which there are multiple marginal generating units dispatched to serve load as a result of transmission constraints and the costs of operating those units.

ARR and FTR revenues offset 98.1 percent of total congestion costs for load during the 2016/2017 planning period and only 79.7 percent of total congestion costs for the first four months of the 2017/2018 planning period after the reallocation of balancing congestion to load.

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/2017.shtml