



**Monitoring  
Analytics**

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**VIA EMAIL**

November 27, 2017

Honorable Fred Upton  
Chairman, Subcommittee on Energy  
2125 Rayburn House Office Building  
Washington, D.C. 20515-6115

Honorable Bobby L. Rush  
Ranking Member, Subcommittee on Energy  
2125 Rayburn House Office Building  
Washington, D.C. 20515-6115

Re: Hearing of November 29, 2017, re role of Financial Participants in Wholesale Power Markets

Dear Sirs:

I am the Independent Market Monitor for the PJM wholesale power markets. I do not speak for PJM. The role of the independent market monitor, as defined by FERC and included in the PJM tariff, is to help ensure that the PJM markets are competitive by proposing market rules that incent competition, by monitoring for the exercise of market power and by reporting on the markets to regulators and market participants.

In an LMP market, the lowest cost generation is dispatched to meet the load, subject to the ability of the transmission system to deliver that energy. When the lowest cost generation is remote from load centers, the physical transmission system permits that lowest cost generation to be delivered to load. Prior to the introduction of LMP markets, firm transmission customers who paid for the transmission system through rates received the low cost generation.

After the introduction of LMP markets, financial transmission rights (FTRs) were introduced to permit the loads which pay for the transmission system to continue to receive those benefits in the form of revenues which offset congestion to the extent permitted by the transmission system. Financial transmission rights and the associated revenues were directly provided to loads in recognition of the facts that loads pay for the transmission system which permits low cost generation to be delivered to load. Another way of describing the result is that FTRs and the associated congestion revenues were directly provided to loads in recognition of the fact that load pays locational prices which result in load payments in excess of generation revenues which are the source of the funds available to offset congestion costs in an LMP market. Congestion is defined to be load payments in excess of generation revenues. Congestion

revenues are the source of the funds to pay FTRs. In an LMP system, the only way to ensure that load receives the benefits associated with the use of the transmission system to deliver low cost energy is to use FTRs, or an equivalent mechanism, to pay back to load the difference between the total load payments and the total generation revenues. The only way to ensure that load receives the benefits associated with the use of the transmission system to deliver low cost energy is to ensure that all congestion revenues are returned to load. Congestion revenues are defined to be equal to the sum of day ahead and balancing congestion. FTRs are one way to do that.

Effective April 1, 1999, FTRs were introduced with the LMP market, there was a real-time market but no day-ahead market, and FTRs returned real-time congestion revenue to load. Effective June 1, 2000, the day-ahead market was introduced and FTRs returned total congestion including day-ahead and balancing congestion to load. Effective June 1, 2003, PJM replaced the direct allocation of FTRs to load with an allocation of Auction Revenue Rights (ARRs). The load still owns the rights to congestion collected under this system, but the ARR construct allows load to either claim the FTRs directly (through a process called self scheduling), or to sell the rights in the FTR auction in exchange for a revenue stream based on the prices of the FTRs. Under the ARR construct, all of the FTR auction revenues should belong to the load and all of the congestion revenues should belong to those that purchase or self schedule the FTRs.

The current ARR/FTR design does not serve as an efficient way to ensure that load receives all the congestion revenues or has the ability to receive the auction revenues associated with all the potential congestion revenues. Total ARR and self scheduled FTR revenue offset only 86.5 percent of total congestion costs including congestion in the Day-Ahead Energy Market and the balancing energy market for the 2015/2016 planning period.

The goal of the ARR/FTR design should be to return 100 percent of the congestion revenues to the load. But the actual results fall well short of that goal. The current allocation of congestion revenue resulted in a total of \$1,714.8 million in unreturned congestion revenue to ARR holders, and a 73.9 percent congestion offset, over the last seven planning periods.

Sincerely,

Joseph Bowring

Independent Market Monitor for PJM