

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

|                                       |   |                        |
|---------------------------------------|---|------------------------|
| FirstEnergy Solutions Corp.           | ) |                        |
| Allegheny Energy Supply Company, LLC, | ) |                        |
|                                       | ) | Docket No. EL12-19-000 |
| v.                                    | ) |                        |
|                                       | ) |                        |
| PJM Interconnection, L.L.C.           | ) |                        |
|                                       | ) |                        |

**COMMENTS OF THE INDEPENDENT MARKET MONITOR FOR PJM**

Pursuant to Rule 211 of the Commission’s Rules and Regulations,<sup>1</sup> Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM<sup>2</sup> (“Market Monitor”), submits these comments responding to the complaint filed by FirstEnergy Solutions Corp. and Allegheny Energy Supply Company, LLC (“FirstEnergy”) on December 28, 2012. FirstEnergy seeks to modify the PJM market rules governing the funding of Financial Transmission Rights (“FTRs”), and requests a decision from the Commission on a fast track basis.

FirstEnergy has not supported its claim that balancing congestion should be removed from the FTR revenue calculation nor has it adequately addressed the issue of how to treat balancing congestion dollars. The true issue is FTR revenue adequacy and not balancing congestion. As a result, the relief requested by FirstEnergy should be denied.

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<sup>1</sup> 18 CFR § 385.211 (2011).

<sup>2</sup> Capitalized terms herein are not otherwise defined have the meaning used in the PJM Open Access Transmission Tariff (“OATT”).

FirstEnergy's filing references complex issues that deserve the Commission's attention. Given the complexities and issues of fairness involved, the Market Monitor believes that an optimal result cannot be achieved without careful deliberation by market participants and substantial additional analysis of the reasons for underfunding and the sources and significance of balancing congestion. Additional study from PJM will be required, and experience to date suggests that this study will require time, resources and effort. PJM has done significant work and made useful suggestions for resolving the FTR funding issues which were not adequately considered in the stakeholder process or by FirstEnergy. The Market Monitor believes that the costs and risks of an incorrect result rendered in haste in this proceeding will exceed the costs of administering an additional Planning Period under the current rules. Accordingly, should the Commission decide to undertake additional inquiry in this proceeding rather than simply deny the Complaint, the Market Monitor opposes the request for fast track consideration.

## **I. COMMENTS**

FirstEnergy reviews the history of the development of FTRs in the LMP model generally and in PJM specifically. FirstEnergy correctly points out that the existence of FTRs permitted loads, which pay for the transmission system via fixed payments, to receive the benefits of that transmission as a natural part of the LMP system, without requiring physical transmission rights that are difficult to define and enforce. When introduced, FTRs were directly allocated to loads. There were no substantial funding issues. If PJM had continued with a system that included only directly allocated FTRs, it is unlikely that the underfunding issue would have emerged.

PJM introduced a new instrument designed to allocate the value of the congestion hedge associated with FTRs to loads, Auction Revenue Rights or "ARRs." FirstEnergy

discusses but does not adequately recognize the significance of the introduction of the current structure that includes both ARR and FTR. It is ARR which now have the characteristics and rationale that were associated with FTR when FTR were introduced. FirstEnergy fails to note this critical distinction. ARR are directly allocated to loads in recognition of the fact that loads pay for the transmission system which permits low cost generation to be delivered to load and which creates the funds available to pay ARR holders to offset congestion costs.<sup>3</sup> When ARR and FTR were created as separate instruments, FTR no longer represented this basic feature of the LMP system which FirstEnergy recognizes by its citation to Professor Hogan. While FirstEnergy's discussion of the genesis of FTR is helpful, that discussion is about ARR in the current structure and not about FTR. PJM created the split between ARR and FTR in order to both continue to provide the appropriate protection against congestion for load, and to permit any excess transmission capacity on the system to be made available to those market participants who wished to use FTR to speculate or to hedge positions. When discussing comparability, FirstEnergy also fails to note that neither the California ISO (CAISO) nor the New York ISO (NYISO) have ARR. Thus any reference to the method of FTR funding in those ISOs is referring to a product fundamentally different from the FTRs now traded in PJM. The product initially defined as an FTR in PJM, and which continues to be defined as an FTR in the CAISO and NYISO, is now defined as an ARR in PJM.

There has been no issue of revenue adequacy for ARR. The revenue adequacy issue is related only to FTR, which are no longer the vehicle used to ensure that load receives the

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<sup>3</sup> Stoddard's example at P 24 and P 25 is a good illustration of the source of these funds.

equivalent of firm transmission service. Contrary to FirstEnergy's assertion, there is no guarantee of full revenue adequacy for FTRs. This is a subtle but critical point. The mechanism that has the stated intent of assuring full revenue adequacy for FTRs is in fact a mechanism for self funding of revenue adequacy. FTR holders themselves make up any shortfall. Rather than a revenue adequacy mechanism, this can be more accurately described as a mechanism to ensure that revenue shortfalls on specific transmission paths are socialized among all FTR holders and that all FTR holders share in the shortfall proportionately. Despite their lengthy review of cost causation, FirstEnergy has not explained why this is not an equitable solution. FirstEnergy has not explained why, given their views of cost causation, they do not recommend assigning revenue shortfalls to the holders of FTRs on the paths where the shortfalls occur rather than requiring the holders of FTRs on paths with adequate revenue exists to subsidize the shortfalls.

Contrary to FirstEnergy, FTR holders have not lost money. FTR holders have received a lower level of revenues than the total target allocation. The target allocation represents the maximum revenue that the FTR holder could receive, but does not represent a guarantee. Unlike the ARR holders, the FTR holders do not pay for the transmission system as the basis for receiving FTRs and are not guaranteed compensation equal to the level of congestion. If an ARR holder converts their ARRs to FTRs, that is a market choice to receive congestion revenues rather than the ARR value based on the FTR auction.

The distinction between ARRs and FTRs is important for another reason. FirstEnergy asserts that all users of the transmission system should pay for negative balancing congestion charges. But FirstEnergy fails to point out that by imposing costs on ARR holders, who, by definition, are users of the transmission system, they are reducing the value of ARRs. This outcome is inconsistent with the reason for the creation of FTRs/ARRs

in the first place, as described in the citations to Hogan, which was to provide the financial equivalent of firm transmission rights. It would be inappropriate for the underfunding of FTRs to be the reason for reducing ARR funding, which is effectively what the FirstEnergy proposal would do.

Contrary to the assertion of FirstEnergy, balancing congestion is not the cause of FTR underfunding. There have been negative balancing congestion levels since at least 2005 and there is no demonstrated causal relationship between balancing congestion levels and FTR underfunding. (See Attachment.)

FirstEnergy suggests (at 32) that the reasons for negative balancing congestion are the occurrence of unexpected events in real time that could not have been reflected in the day-ahead market. Even according to PJM's estimates, such events are only 12 percent of the reason for the underfunding. PJM did not estimate the relationship between such events and negative balancing congestion. Although PJM has not been able to state definitively what the reasons for underfunding are, the approximately 88 percent that is not the result of unexpected events in real time, appears to result from differences between events on the PJM system and the model used to define available FTRs. It is clear that the modeling used to determine the availability of FTRs is a significant cause of underfunding. This is consistent with views expressed in PJM's presentations at the FTR Task Force. PJM states that a number of factors are not included in the model. A review of the percentages of negative balancing congestion by month shows that balancing congestion is the lowest percentage during the peak summer months and highest percentage during off peak months. (See Attachment.) As the FTR model is based on a peak day, this is consistent with the hypothesis that mismatches between the FTR model and actual results are the source of the issue. The differences between the system models used by PJM in the Day-Ahead and

Real-Time Energy Markets are also a potential cause of underfunding. For example, PJM assigns zonal aggregate load to nodes based on real-time nodal loads from the prior week. Finally, the large increase in up to congestion transactions appears to have exacerbated the negative balancing congestion issue. Although up to congestion transactions cannot directly cause underfunding, they can exacerbate underfunding.

If the PJM markets worked perfectly, with no uncertainty, and the models used by PJM worked in exactly the same way that this perfect world worked, then there might be a logical reason not to include balancing congestion in the calculation of FTR revenue. However, the practical reality does not meet this standard of perfection. Inclusion of balancing congestion revenues in the calculation of FTR revenues does make practical sense, given the way in which the modeling of FTRs occurs and the way in which the modeling of the day ahead and real time markets occurs. If, for example, the modeling of loop flow in the day ahead market is regularly inconsistent with actual loop flows, the use of balancing congestion is a convenient and appropriate way to ensure that the difference affects funding for FTRs. The use of balancing congestion is a practical way to capture the impacts of modeling issues and ensure that any differences, whether positive or negative, affect funding for FTRs. It is appropriate to have the impacts of these imperfections in the application of the modeling process captured within the FTR revenues. It would not be appropriate to have these errors separated from FTR funding and allocated to some broad category of customers. The FTR funding mechanism should be left as it is because it appropriately assigns the dollars associated with any errors to the holders of FTRs. In addition, if the modeling of loop flows can be improved, then FTR holders will have an incentive to encourage PJM to improve the modeling. Allocating these dollars to all

transmission customers would attenuate the incentive and reduce the likelihood that the issues will be addressed.

The causes of FTR underfunding have not been specified exactly or quantified based on a full, root cause analysis. Balancing congestion charges are not the cause of underfunding. The fact that removal of balancing congestion charges would compensate for the FTR underfunding should not be allowed to confuse the issue. Balancing congestion charges predated the FTR underfunding issue. PJM should be directed to conduct a root cause analysis of FTR underfunding which results in a detailed and quantified specification of the reasons for underfunding. PJM could bring its constructive proposals directly to the Commission, including PJM's recognition that the issue of underfunding is related directly to monthly and long term FTRs and not to annual FTRs. It is inappropriate to attempt to resolve the issue of underfunding before the reasons for underfunding have been identified.

This proceeding may afford a useful opportunity to explore the issue of revenue adequacy. If this proceeding is not the proper vehicle to move forward with a search for solutions to the issue of revenue adequacy, then the relief requested by FirstEnergy should be denied.

## II. CONCLUSION

The Market Monitor respectfully requests that the Commission afford due consideration to these comments as the Commission resolves the issues raised in this proceeding.

Respectfully submitted,



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Dated: January 13, 2012



**CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Eagleville, Pennsylvania,  
this 13<sup>th</sup> day of January, 2012.



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**ATTACHMENT**

**Table 1 2005 Monthly Day-Ahead and Balancing Congestion Charges**

| Monthly Day-Ahead and Balancing Congestion Charges |            |         |            |         |            |
|--|------------|---------|------------|---------|------------|
| Date   | Day-Ahead  |         | Balancing  |         | Total      |
|  | Dollars    | Percent | Dollars    | Percent |            |
| Jan-05   | \$149.04   | 106.2%  | (\$8.76)   | (6.2%)  | \$140.28   |
| Feb-05   | \$76.28    | 109.6%  | (\$6.65)   | (9.6%)  | \$69.63    |
| Mar-05   | \$70.55    | 124.8%  | (\$14.01)  | (24.8%) | \$56.55    |
| Apr-05   | \$78.89    | 113.5%  | (\$9.39)   | (13.5%) | \$69.50    |
| May-05   | \$85.25    | 109.8%  | (\$7.63)   | (9.8%)  | \$77.62    |
| Jun-05   | \$199.95   | 109.6%  | (\$17.50)  | (9.6%)  | \$182.45   |
| Jul-05   | \$349.49   | 108.8%  | (\$28.30)  | (8.8%)  | \$321.19   |
| Aug-05   | \$375.10   | 112.3%  | (\$41.22)  | (12.3%) | \$333.88   |
| Sep-05   | \$269.57   | 119.2%  | (\$43.49)  | (19.2%) | \$226.08   |
| Oct-05   | \$254.09   | 113.7%  | (\$30.60)  | (13.7%) | \$223.50   |
| Nov-05   | \$130.36   | 118.6%  | (\$20.44)  | (18.6%) | \$109.93   |
| Dec-05   | \$318.26   | 113.2%  | (\$37.21)  | (13.2%) | \$281.05   |
| Total  | \$2,356.82 | 112.7%  | (\$265.19) | (12.7%) | \$2,091.64 |

**Table 2 2006 Monthly Day-Ahead and Balancing Congestion Charges**

| Monthly Day-Ahead and Balancing Congestion Charges |            |            |            |         |            |
|--|------------|------------|------------|---------|------------|
| Date   | Day-Ahead  |            | Balancing  |         | Total      |
|  | Dollars    | Percentage | Dollars    | Percent |            |
| Jan-06   | \$150.94   | 97.1%      | \$4.55     | 2.9%    | \$155.49   |
| Feb-06   | \$164.02   | 103.0%     | (\$4.81)   | (3.0%)  | \$159.21   |
| Mar-06   | \$117.09   | 124.9%     | (\$23.37)  | (24.9%) | \$93.71    |
| Apr-06   | \$57.18    | 116.3%     | (\$8.02)   | (16.3%) | \$49.16    |
| May-06   | \$68.79    | 100.8%     | (\$0.53)   | (0.8%)  | \$68.26    |
| Jun-06   | \$170.46   | 107.3%     | (\$11.62)  | (7.3%)  | \$158.84   |
| Jul-06   | \$305.78   | 103.5%     | (\$10.31)  | (3.5%)  | \$295.47   |
| Aug-06   | \$399.52   | 106.2%     | (\$23.47)  | (6.2%)  | \$376.05   |
| Sep-06   | \$76.01    | 109.4%     | (\$6.51)   | (9.4%)  | \$69.51    |
| Oct-06   | \$50.78    | 124.4%     | (\$9.96)   | (24.4%) | \$40.82    |
| Nov-06   | \$49.05    | 107.4%     | (\$3.38)   | (7.4%)  | \$45.67    |
| Dec-06   | \$97.49    | 106.9%     | (\$6.30)   | (6.9%)  | \$91.19    |
| Total  | \$1,707.12 | 106.5%     | (\$103.74) | (6.5%)  | \$1,603.38 |

**Table 3 2007 Monthly Day-Ahead and Balancing Congestion Charges**

| Monthly Day-Ahead and Balancing Congestion Charges |            |         |            |         |            |
|--|------------|---------|------------|---------|------------|
| Date   | Day-Ahead  |         | Balancing  |         | Total      |
|  | Dollars    | Percent | Dollars    | Percent |            |
| Jan-07   | \$128.36   | 114.6%  | (\$16.37)  | (14.6%) | \$111.99   |
| Feb-07   | \$200.58   | 114.8%  | (\$25.91)  | (14.8%) | \$174.67   |
| Mar-07   | \$165.51   | 103.2%  | (\$5.20)   | (3.2%)  | \$160.31   |
| Apr-07   | \$123.92   | 114.0%  | (\$15.26)  | (14.0%) | \$108.66   |
| May-07   | \$111.24   | 124.2%  | (\$21.68)  | (24.2%) | \$89.56    |
| Jun-07   | \$205.12   | 109.0%  | (\$16.90)  | (9.0%)  | \$188.22   |
| Jul-07   | \$219.89   | 107.1%  | (\$14.64)  | (7.1%)  | \$205.26   |
| Aug-07   | \$235.83   | 114.2%  | (\$29.27)  | (14.2%) | \$206.55   |
| Sep-07   | \$154.94   | 113.7%  | (\$18.66)  | (13.7%) | \$136.27   |
| Oct-07   | \$135.47   | 111.0%  | (\$13.48)  | (11.0%) | \$121.99   |
| Nov-07   | \$140.13   | 119.8%  | (\$23.13)  | (19.8%) | \$117.00   |
| Dec-07   | \$253.94   | 112.6%  | (\$28.40)  | (12.6%) | \$225.54   |
| Total  | \$2,074.92 | 112.4%  | (\$228.90) | (12.4%) | \$1,846.03 |

**Table 4 2008 Monthly Day-Ahead and Balancing Congestion Charges**

| Monthly Day-Ahead and Balancing Congestion Charges |            |            |            |         |            |
|--|------------|------------|------------|---------|------------|
| Date   | Day-Ahead  |            | Balancing  |         | Total      |
|  | Dollars    | Percentage | Dollars    | Percent |            |
| Jan-08   | \$290.52   | 125.7%     | (\$59.47)  | (25.7%) | \$231.05   |
| Feb-08   | \$184.80   | 109.9%     | (\$16.66)  | (9.9%)  | \$168.13   |
| Mar-08   | \$116.96   | 135.4%     | (\$30.56)  | (35.4%) | \$86.40    |
| Apr-08   | \$163.76   | 129.7%     | (\$37.54)  | (29.7%) | \$126.22   |
| May-08   | \$203.38   | 111.2%     | (\$20.54)  | (11.2%) | \$182.84   |
| Jun-08   | \$444.36   | 119.6%     | (\$72.90)  | (19.6%) | \$371.46   |
| Jul-08   | \$467.18   | 129.8%     | (\$107.28) | (29.8%) | \$359.90   |
| Aug-08   | \$175.17   | 137.5%     | (\$47.77)  | (37.5%) | \$127.40   |
| Sep-08   | \$204.78   | 164.1%     | (\$79.98)  | (64.1%) | \$124.80   |
| Oct-08   | \$133.76   | 130.9%     | (\$31.54)  | (30.9%) | \$102.22   |
| Nov-08   | \$120.21   | 129.3%     | (\$27.23)  | (29.3%) | \$92.98    |
| Dec-08   | \$91.60    | 116.8%     | (\$13.16)  | (16.8%) | \$78.44    |
| Total  | \$2,596.46 | 126.5%     | (\$544.63) | (26.5%) | \$2,051.83 |

**Table 5 2009 Monthly Day-Ahead and Balancing Congestion Charges**

| Monthly Day-Ahead and Balancing Congestion Charges |           |         |            |         |          |
|--|-----------|---------|------------|---------|----------|
| Date   | Day-Ahead |         | Balancing  |         | Total    |
|  | Dollars   | Percent | Dollars    | Percent |          |
| Jan-09   | \$191.93  | 128.5%  | (\$42.61)  | (28.5%) | \$149.32 |
| Feb-09   | \$98.89   | 119.2%  | (\$15.92)  | (19.2%) | \$82.97  |
| Mar-09   | \$98.69   | 132.3%  | (\$24.09)  | (32.3%) | \$74.60  |
| Apr-09   | \$42.93   | 167.4%  | (\$17.29)  | (67.4%) | \$25.64  |
| May-09   | \$39.51   | 152.7%  | (\$13.63)  | (52.7%) | \$25.88  |
| Jun-09   | \$49.77   | 100.0%  | (\$0.02)   | (0.0%)  | \$49.76  |
| Jul-09   | \$53.43   | 135.6%  | (\$14.04)  | (35.6%) | \$39.39  |
| Aug-09   | \$95.62   | 132.7%  | (\$23.55)  | (32.7%) | \$72.08  |
| Sep-09   | \$33.82   | 141.2%  | (\$9.87)   | (41.2%) | \$23.95  |
| Oct-09   | \$55.12   | 129.0%  | (\$12.38)  | (29.0%) | \$42.74  |
| Nov-09   | \$43.15   | 119.0%  | (\$6.90)   | (19.0%) | \$36.26  |
| Dec-09   | \$98.57   | 102.2%  | (\$2.14)   | (2.2%)  | \$96.44  |
| Total  | \$901.44  | 125.4%  | (\$182.43) | (25.4%) | \$719.00 |

**Table 6 2010 Monthly Day-Ahead and Balancing Congestion Charges**

| Monthly Day-Ahead and Balancing Congestion Charges |            |            |            |         |            |
|--|------------|------------|------------|---------|------------|
| Date   | Day-Ahead  |            | Balancing  |         | Total      |
|  | Dollars    | Percentage | Dollars    | Percen  |            |
| Jan-10   | \$230.25   | 105.5%     | (\$11.94)  | (5.5%)  | \$218.30   |
| Feb-10   | \$124.15   | 116.7%     | (\$17.74)  | (16.7%) | \$106.41   |
| Mar-10   | \$37.55    | 184.5%     | (\$17.19)  | (84.5%) | \$20.36    |
| Apr-10   | \$64.65    | 152.0%     | (\$22.11)  | (52.0%) | \$42.54    |
| May-10   | \$78.24    | 114.3%     | (\$9.76)   | (14.3%) | \$68.48    |
| Jun-10   | \$199.09   | 105.6%     | (\$10.63)  | (5.6%)  | \$188.46   |
| Jul-10   | \$295.27   | 109.8%     | (\$26.39)  | (9.8%)  | \$268.89   |
| Aug-10   | \$124.59   | 118.5%     | (\$19.47)  | (18.5%) | \$105.12   |
| Sep-10   | \$154.52   | 128.9%     | (\$34.62)  | (28.9%) | \$119.90   |
| Oct-10   | \$68.85    | 136.8%     | (\$18.54)  | (36.8%) | \$50.31    |
| Nov-10   | \$80.33    | 154.5%     | (\$28.35)  | (54.5%) | \$51.98    |
| Dec-10   | \$260.02   | 139.0%     | (\$72.95)  | (39.0%) | \$187.07   |
| Total  | \$1,717.51 | 120.3%     | (\$289.68) | (20.3%) | \$1,427.83 |

**Table 7 2011 Monthly Day-Ahead and Balancing Congestion Charges**

| Monthly Day-Ahead and Balancing Congestion Charges |            |         |            |         |          |
|--|------------|---------|------------|---------|----------|
| Date   | Day-Ahead  |         | Balancing  |         | Total    |
|  | Dollars    | Percent | Dollars    | Percent |          |
| Jan-11   | \$256.27   | 106.1%  | (\$14.73)  | (6.1%)  | \$241.54 |
| Feb-11   | \$92.19    | 124.6%  | (\$18.18)  | (24.6%) | \$74.02  |
| Mar-11   | \$58.43    | 132.6%  | (\$14.37)  | (32.6%) | \$44.06  |
| Apr-11   | \$68.01    | 174.7%  | (\$29.09)  | (74.8%) | \$38.92  |
| May-11   | \$64.40    | 183.6%  | (\$29.32)  | (83.6%) | \$35.07  |
| Jun-11   | \$153.54   | 123.0%  | (\$28.71)  | (23.0%) | \$124.83 |
| Jul-11   | \$183.05   | 113.6%  | (\$21.93)  | (13.6%) | \$161.12 |
| Aug-11   | \$72.36    | 121.7%  | (\$12.88)  | (21.7%) | \$59.48  |
| Sep-11   | \$91.01    | 136.9%  | (\$24.55)  | (36.9%) | \$66.46  |
| Oct-11   | \$58.24    | 150.7%  | (\$19.59)  | (50.7%) | \$38.65  |
| Nov-11   | \$57.25    | 152.4%  | (\$19.68)  | (52.4%) | \$37.57  |
| Total  | \$1,154.73 | 125.3%  | (\$233.02) | (25.3%) | \$921.71 |

Figure 1 2005-2011 Monthly Day Ahead and Balancing Congestion Percentages

