

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

Meyersdale Storage, LLC

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Docket No. ER21-864-000

**COMMENTS OF THE
INDEPENDENT MARKET MONITOR FOR PJM
IN OPPOSITION TO OFFER OF SETTLEMENT**

Pursuant to Rule 602(f) of the Commission's Rules and Regulations,¹ Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor ("Market Monitor") for PJM Interconnection, L.L.C.² ("PJM"), submits this reply in opposition to the offer of settlement ("Offer") filed in this proceeding on January 10, 2022, by Meyersdale Storage, LLC ("Meyersdale"). Because Meyersdale operates a storage facility, not a generating unit, its filing for reactive capability compensation under Schedule 2 to the PJM OATT ("Schedule 2") raises new issues, including whether a storage facility is eligible to receive compensation under Schedule 2. Meyersdale proposes on a black box basis an annual revenue requirement for Reactive Capability of \$207,000, or \$11,500 per MW-year, effective March 16, 2021. The level is excessive and should not be accepted, particularly without evidentiary support.

The Commission may approve a contested offer of settlement only based on its merits.³ A contested settlement may be approved on its merits under one of the four

¹ 18 CFR § 385.602(f) (2021).

² Capitalized terms used herein and not otherwise defined have the meaning used in the PJM Open Access Transmission Tariff ("OATT").

³ 18 CFR § 385.602(h)(1) ("If the Commission determines that any offer of settlement is contested in whole or in part, by any party, the Commission may decide the merits of the contested settlement issues, if the record contains substantial evidence upon which to base a reasoned decision or the Commission determines there is no genuine issue of material fact.")

approaches set forth in *Trailblazer Pipeline Company*.⁴ None the approaches under *Trailblazer Pipeline Company* can be relied on for approval of the Offer. The Offer does not resolve the eligibility issue. There is no record supporting the revenue requirement as just and reasonable, including as a “package.” Staff and the Market Monitor, the only active participants in this case other than Meyersdale, represent the public interest. There are no benefits to preserve for settling ratepayers and no possibility for severing the issues in the manner contemplated under the *Trailblazer Pipeline Company* approaches.

Although the Commission encourages settlements, that policy is not a license to resolve cases at all costs.⁵ An offer of settlement, as in this case, that is unfair, unreasonable, or against the public interest must be rejected.⁶ Instead, this case should proceed to hearing so that the record can be developed and issues of material fact and law can be resolved on the merits.

Paragraph 12 of the Offer provides that the settlement includes “no admissions by any party of any fact or any liability, and that the Settlement has no precedential effect.” If the Offer is approved, it will unavoidably indicate that electric storage can receive compensation for reactive capability under Schedule 2, and it would further establish a benchmark rate level for storage facilities. The public interest is better served by resolution of the issues raised in this proceeding on the basis of a full evidentiary record and reasoned analysis.

⁴ The four approaches for approving a settlement under *Trailblazer Pipeline Company* include: (i) addressing the contentions of the contesting party on the merits when there is any adequate record; (ii) approving a contested settlement as a package on the ground that the overall result of the settlement is just and reasonable; (iii) determining that the contesting party's interest is sufficiently attenuated such that the settlement can be analyzed under the fair and reasonable standard applicable to uncontested settlements when the settlement benefits the directly affected settling parties; or (iv) preserving the settlement for the consenting parties while allowing contesting parties to obtain a litigated result on the merits. See *Trailblazer Pipeline Company*, 85 FERC ¶ 61,345 (1998)..

⁵ See, e.g., *Arkla Energy Resources*, 49 FERC ¶ 61,051, 61,217 (1989); *Transwestern Pipeline Co.*, 9 FERC ¶ 61,075, at 61,166 (1979).

⁶ 496 F.3d at 701.

In the attached affidavit of Dr. Joseph E. Bowring (“Affidavit”), included pursuant to Rule 602(f)(4),⁷ Dr. Bowring explains why the *AEP* method does not apply to battery storage facilities and why the requested revenue requirement is excessive.

Meyersdale has not shown that it is capable of providing reactive supply when it operates as a regulation resource.

The issues of eligibility and capability are issues of first impression. These issues have significant cost implications going forward. Failing to resolve these issues risks making payments to Meyersdale and similar facilities that could later be determined they are not eligible to receive. Resolution of these issues should not be deferred. There is significantly greater administrative efficiency if new issues are resolved now, rather than after years of baseless and arbitrary settlements.

In the Affidavit, Dr. Bowring explains why the level of the annual revenue requirement is excessive. Calculation of an appropriate annual revenue requirement for an electric storage facility is an issue of first impression. The issue of an appropriate rate level, if Meyersdale is eligible to receive any rate under Schedule 2, needs resolution on the merits in this case and for future cases. The Market Monitor is the only active participant in settlement discussions other than Commission Trial Staff. The Market Monitor opposes the Offer. The Offer should be rejected. Further, settlement discussions in the proceeding should be terminated, and the issues raised in this proceeding should be decided on the merits.

Respectfully submitted,



Jeffrey W. Mayes

Joseph E. Bowring
Independent Market Monitor for PJM
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⁷ 18 CFR § 385.602(f)(4).

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Dated: January 31, 2022

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 31st day of January, 2022.



Jeffrey W. Mayes
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Attachment
Exhibit Nos. IMM-0001, -0002

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

Meyersdale Storage, LLC

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Docket No. ER21-864-000

**AFFIDAVIT OF JOSEPH E. BOWRING
ON BEHALF OF THE INDEPENDENT MARKET MONITOR FOR PJM**

1 Q 1. PLEASE STATE YOUR NAME AND POSITION.

2 A. My name is Joseph E. Bowring. I am the Market Monitor for PJM. I am the
3 President of Monitoring Analytics, LLC. My business address is 2621 Van Buren
4 Avenue, Suite 160, Eagleville, Pennsylvania. Monitoring Analytics serves as the
5 Independent Market Monitor (IMM) for PJM, also known as the Market Monitoring
6 Unit (MMU or Market Monitor). Since March 8, 1999, I have been responsible for
7 all the market monitoring activities of PJM, first as the head of the internal PJM
8 Market Monitoring Unit and, since August 1, 2008, as President of Monitoring
9 Analytics. The market monitoring activities of PJM are defined in the PJM Market
10 Monitoring Plan, Attachment M and Attachment M-Appendix to PJM Open Access
11 Transmission Tariff (OATT).¹

12 Q 2. WHAT IS THE PURPOSE OF YOUR AFFIDAVIT?

13 A. The purpose of my affidavit is to support the Market Monitor's comments opposing
14 the offer of settlement submitted by Meyersdale Storage, LLC ("Meyersdale") on
15 January 10, 2022 ("Offer"), based on specific, material facts.

¹ See *PJM Interconnection, L.L.C.*, 86 FERC ¶ 61,247; 18 CFR § 35.34(k)(6).

1 **Q 3. HAVE YOU PROVIDED TESTIMONY ON COMPENSATION FOR**
2 **REACTIVE POWER IN OTHER PROCEEDINGS BEFORE THE FERC?**

3 A. Yes. I provided testimony in the *Panda Stonewall* reactive supply capability case
4 (Docket No. ER21-1821-002) and the *Whitetail Solar 3, et al.* reactive supply
5 capability case (Docket No. ER20-1851-004 et al.).

6 **Q 4. HAVE YOU PARTICIPATED IN OTHER FERC PROCEEDINGS**
7 **RELATED TO REACTIVE POWER?**

8 A. Yes, I was invited to participate in a Commission technical conference and provided
9 comments to the Commission in a proceeding convened to “discuss compensation
10 for Reactive Supply and Voltage Control (Reactive Supply) within the Regional
11 Transmission Organizations (RTOs) and Independent System Operators (ISOs).”²
12 Specifically, the proceeding explored “types of costs incurred by generators for
13 providing Reactive Supply capability and service; whether those costs are being
14 recovered solely as compensation for Reactive Supply or whether recovery is also
15 through compensation for other services; and different methods by which generators
16 receive compensation for Reactive Supply (e.g., Commission-approved revenue
17 requirements, market-wide rates, etc.).”³

18 The Market Monitor has intervened in and actively participated in FERC reactive
19 power cases during the past five years.

20 The Market Monitor includes analysis and recommendations related to reactive
21 power in the State of the Market Reports for PJM.⁴

² *Reactive Supply Compensation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Docket No. AD16-17-000. I participated in a workshop convened June 20, 2016. The Market Monitor filed comments on July 29, 2016, and reply comments on September 20, 2016.

³ *Id.* at 1.

⁴ See, for example, *2020 State of the Market Report for PJM*, Section 10 (Ancillary Services Markets), which can be accessed at: http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2020.shtml.

1 **Q 5. WHY SHOULD THE OFFER BE REJECTED?**

2 A. The Offer should be rejected because the Offer at a \$207,000 annual revenue
3 requirement for an 18 MW facility, or \$11,500 per MW-year, on a black box basis
4 has not been demonstrated to have a rational basis. The *AEP* method that is typically
5 used in reactive capability proceedings was developed for use with generating
6 facilities that have very different engineering and operational characters.⁵
7 Regardless of whether the *AEP* method is itself appropriate for use in establishing
8 reactive capability costs, there is no corresponding method for defining the reactive
9 capability costs, if any, associated with battery storage facilities. Even by the
10 standards of the *AEP* method, a \$207,000 annual revenue requirement level, or
11 \$11,500 per MW-year, is excessive, has not been demonstrated to have a rational
12 basis, has not been demonstrated to be just and reasonable, and should be rejected.
13 The average revenue requirement for reactive capability is about \$2,000 per MW-
14 year. The revenue requirement for reactive capability included in the PJM capacity
15 market is \$2,199 per MW-year.

16 **Q 6. WHAT IS REACTIVE SUPPLY CAPABILITY?**

17 A. Reactive supply capability is the capability to produce MVAR that can be relied
18 upon by the Transmission Provider to provide Reactive Supply and Voltage Control,
19 an ancillary service under the Schedule 2 to the PJM OATT (“Schedule 2”), which
20 is provided as Exhibit No. IMM-0002. Reactive supply and voltage control are
21 necessary to ensure the reliable operation of the grid.⁶

22 PJM procures reactive supply capability from generators located on the high voltage
23 transmission system that it plans and operates. Reactive power is local and cannot
24 be transferred over long distances.

25 **Q 7. WHAT DOES SCHEDULE 2 PROVIDE?**

26 A. Schedule 2 provides, in part:

⁵ See *American Electric Power Service Corp.*, 80 FERC ¶ 63,006 (1997), *aff'd*, 88 FERC ¶ 61,141 (1999).

⁶ See *Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, 75 FERC ¶ 61,080 (1996).

1 In order to maintain transmission voltages on the Transmission
2 Provider's transmission facilities within acceptable limits,
3 generation facilities and non-generation resources capable of
4 providing this service that are under the control of the control
5 area operator are operated to produce (or absorb) reactive
6 power. Thus, Reactive Supply and Voltage Control from
7 Generation or Other Sources Service must be provided for each
8 transaction on the Transmission Provider's transmission
9 facilities. The amount of Reactive Supply and Voltage Control
10 from Generation or Other Sources Service that must be
11 supplied with respect to the Transmission Customer's
12 transaction will be determined based on the reactive power
13 support necessary to maintain transmission voltages within
14 limits that are generally accepted in the region and consistently
15 adhered to by the Transmission Provider.

16 Reactive Supply and Voltage Control from Generation or
17 Other Sources Service is to be provided directly by the
18 Transmission Provider. The Transmission Customer must
19 purchase this service from the Transmission Provider.

20 **Q 8. IS COMPENSATION FOR REACTIVE SUPPLY CAPABILITY UNDER**
21 **OATT SCHEDULE 2 THE ONLY COMPENSATION THAT PJM**
22 **PROVIDES RELATED TO REACTIVE POWER?**

23 A. No. Schedule 2 explicitly states the separate compensation that applies to Market
24 Sellers following dispatch instructions:

25 In addition to the charges and payments set forth in this Tariff,
26 Schedule 2, Market Sellers providing reactive services at the
27 direction of the Office of the Interconnection shall be credited
28 for such services, and Market Participants shall be charged for
29 such services, as set forth in Tariff, Attachment K-Appendix,
30 section 3.2.3B.

31 Schedule 2 explains that when PJM actually calls upon a resource to provide
32 reactive output, the resource is paid directly based on lost opportunity costs under

1 Section 3.2.3B of the PJM energy market rules.⁷ As Schedule 2 states, these charges
2 and payments are separate from the charges and payments for reactive supply
3 capability set forth in Schedule 2.⁸

4 **Q 9. WOULD MEYERSDALE RECEIVE COMPENSATION IF IT WERE**
5 **DISPATCHED FOR REACTIVE OUTPUT BY PJM?**

6 A. Yes, Meyersdale is eligible under the PJM Market Rules (OA Schedule 1 § 3.2.3B)
7 to receive compensation for lost opportunity cost for following PJM instructions
8 related to reactive output.

9 **Q 10. WHAT IS PJM'S ROLE IN IMPLEMENTING SCHEDULE 2?**

10 A. PJM is the Transmission Provider responsible under Schedule 2 to procure reactive
11 supply capability for its system to ensure that it will have the reactive power to
12 operate its system at acceptable transmission voltages.

13 Schedule 2 authorizes PJM to charge its Transmission Customers for reactive supply
14 capability and to pay generating facilities that provide the reactive supply capability
15 that supports reactive supply and voltage control service. Most MVAR output from
16 generating units located on the PJM system is the result of normal generating
17 operations and is not in response to special PJM dispatch instructions.

18 **Q 11. IS THERE AN APPROVED METHOD FOR DEFINING THE REACTIVE**
19 **CAPABILITY COSTS OF A BATTERY?**

20 A. No. The primary method used to calculate reactive supply capability rates, the *AEP*
21 method, was developed to calculate rates for a coal-fired steam generating plant.⁹
22 The *AEP* method has not been approved or accepted for use with a battery storage
23 facility.

7 *Id.*

8 OATT Attachment K–Appendix § 3.2.3B (Reactive Services). The provisions of
the Appendix K–Appendix incorporate into the OATT “for ease of reference” the
provisions of Schedule 1 of the Operating Agreement (PJM Interchange Energy
Market).

9 *See American Electric Power Service Corp.*, 80 FERC ¶ 63,006 (1997), *aff'd*, 88
FERC ¶ 61,141 (1999).

1 There is no approved or defined method that could result in an accurate calculation
2 of the costs of reactive capability for a battery storage facility.

3 **Q 12. WHAT IS YOUR CONCLUSION?**

4 A. There is no established method for determining the appropriate level of revenue
5 requirement for a battery storage facility like Meyersdale. The black box Offer of a
6 \$207,000 annual revenue requirement for an 18 MW facility, or \$11,500 per MW-
7 year, is unjustified and excessive. The Offer provides no basis for a revenue
8 requirement of \$207,000. The *AEP* method does not apply to Meyersdale. The Offer
9 does not indicate reliance on any other method.

10 **Q 13. DOES THIS CONCLUDE YOUR AFFIDAVIT?**

11 A. Yes.

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

Meyersdale Storage, LLC

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Docket No. ER21-824-000

AFFIDAVIT

JOSEPH E. BOWRING states that I prepared the testimony to which this affidavit is attached with the assistance of the staff of Monitoring Analytics, LLC, and that the statements contained therein are true and correct to the best of my knowledge and belief. Monitoring Analytics, LLC, is acting in its capacity as the Independent Market Monitor for PJM.

Pursuant to Rule 2005(b)(3) (18 CFR § 385.2005(b)(3), citing 28 U.S.C. § 1746), I further state under penalty of perjury that the foregoing is true and correct.

Executed on January 31, 2022.



Joseph E. Bowring

Exhibit IMM-0002
PJM OATT Schedule 2

PJM OATT Schedule 2 - Reactive Supply
and Voltage Control from Generation or
Other Sources Service

SCHEDULE 2
Reactive Supply and Voltage Control from
Generation or Other Sources Service

In order to maintain transmission voltages on the Transmission Provider's transmission facilities within acceptable limits, generation facilities and non-generation resources capable of providing this service that are under the control of the control area operator are operated to produce (or absorb) reactive power. Thus, Reactive Supply and Voltage Control from Generation or Other Sources Service must be provided for each transaction on the Transmission Provider's transmission facilities. The amount of Reactive Supply and Voltage Control from Generation or Other Sources Service that must be supplied with respect to the Transmission Customer's transaction will be determined based on the reactive power support necessary to maintain transmission voltages within limits that are generally accepted in the region and consistently adhered to by the Transmission Provider.

Reactive Supply and Voltage Control from Generation or Other Sources Service is to be provided directly by the Transmission Provider. The Transmission Customer must purchase this service from the Transmission Provider.

In addition to the charges and payments set forth in this Tariff, Schedule 2, Market Sellers providing reactive services at the direction of the Office of the Interconnection shall be credited for such services, and Market Participants shall be charged for such services, as set forth in Tariff, Attachment K-Appendix, section 3.2.3B.

The Transmission Provider shall administer the purchases and sales of Reactive Supply. PJMSettlement shall be the Counterparty to (a) the purchases of Reactive Supply from owners of Generation or Other Sources and Market Sellers and (b) the sales of Reactive Supply to Transmission Customers and Market Participants.

Charges

Purchasers of Reactive Supply and Voltage Control from Generation or Other Sources Service shall be charged for such service in accordance with the following formulae.

Monthly Charge for a purchaser receiving Network Integration Transmission Service or Point-to-Point Transmission Service to serve Non-Zone Load = Allocation Factor * Total Generation Owner or other source owner Monthly Revenue Requirement

Monthly Charge for a purchaser receiving Network Integration Transmission Service or Point-to-Point Transmission Service to serve Zone Load = Allocation Factor * Zonal Generation Owner or other source owner Monthly Revenue Requirement * Adjustment Factor

Where:

Purchaser serving Non-Zone Load is a Network Customer serving Non-Zone Network Load or serving Network Load in a zone with no revenue requirement for Reactive Supply and Voltage Control from Generation or Other Sources Service, or a Transmission Customer where the Point of Delivery is at the boundary of the PJM Region.

Zonal Generation Owner or other source owner Monthly Revenue Requirement is the sum of the monthly revenue requirements for each generator or other source located in a Zone, as such revenue requirements have been accepted or approved, upon application, by the Commission.

Total Generation Owner or other source owner Monthly Revenue Requirement is the sum of the Zonal Generation or other source owner Monthly Revenue Requirements for all Zones in the PJM Region.

Allocation Factor is the monthly transmission use of each Network Customer or Transmission Customer per Zone or Non-Zone, as applicable, on a megawatt basis divided by the total transmission use in the Zone or in the PJM Region, as applicable, on a megawatt basis.

For Network Customers, monthly transmission use on a megawatt basis is the sum of a Network Customer's daily values of DCPZ or DCPNZ (as those terms are defined in Tariff, Part III, section 34.1) as applicable, for all days of the month.

For Transmission Customers, monthly transmission use on a megawatt basis is the sum of the Transmission Customer's hourly amounts of Reserved Capacity for each day of the month (not curtailed by PJM) divided by the number of hours in the day.

Adjustment Factor is determined as the sum of the total monthly transmission use in the PJM Region, exclusive of such use by Transmission Customers serving Non-Zone Load, divided by the total monthly transmission use in the PJM Region on a megawatt basis.

In the event that a single customer is serving load in more than one Zone, or serving Non-Zone Load as well as load in one or more Zones, or is both a Network Customer and a Transmission Customer, the Monthly Charge for such a customer shall be the sum of the Monthly Charges determined by applying the appropriate formulae set forth in this Schedule 2 for each category of service.

Payment to Generation or Other Source Owners

Each month, the Transmission Provider shall pay each Generation Owner or other source owner an amount equal to the Generation Owner's or other source owner's monthly revenue requirement as accepted or approved by the Commission. In the event a Generation Owner or

other source owner sells a generator or other source which is included in its current effective monthly revenue requirement accepted or approved by the Commission, payments in that Generation Owner's or other source owner's Zone may be allocated as agreed to by the owners of the generator or other source in that Zone. Such Generation Owner or other source owners shall inform the Transmission Provider of any such agreement and submit either a filing to revise its cost-based rate or an informational filing in accordance with the requirements below in this Schedule 2. In the absence of agreement among such Generation Owners or other source owners, the Commission, upon application, shall establish the allocation. Generation Owners shall not be eligible for payment, pursuant to this Schedule 2, of monthly revenue requirement associated with those portions of generating units designated as Behind The Meter Generation. The Transmission Provider shall post on its website a list for each Zone of the annual revenue requirements for each Generation Owner receiving payment within such Zone and specify the total annual revenue requirement for all of the Transmission provider.

At least 90 days prior to the Deactivation Date or disposition date of a generator or other source receiving payment in accordance with a Commission accepted or approved revenue requirement for providing reactive supply and voltage control service under this Schedule 2, the Generation Owner or other source owner must either:

(1) submit to the Commission the appropriate filings to terminate or revise its cost-based revenue requirement for supplying reactive supply and voltage control service under this Schedule 2 to account for the deactivated or transferred generator or other source; or

(2) provide to the Transmission Provider and file with the Commission an informational filing that includes the following information:

- (i) the acquisition date, Deactivation Date, and transfer date of the generator or other source;
- (ii) an explanation of the basis for the decision by the Generation Owner or other source owner not to terminate or revise the cost-based rate approved or accepted by the Commission associated with the planned generator or other source deactivation or disposition;
- (iii) a list of all of the generators or other sources covered by the Generation Owner's or other source owner's cost-based tariff from the date the revenue requirement was first established until the date of the informational filing;
- (iv) the type (i.e., fuel type and prime mover) of each generator or other source;
- (v) the actual (site-rated) megavolt-ampere reactive ("MVAR") capability, megavolt-ampere ("MVA") capability, and megawatt capability of each generator or other source, as supported by test data; and
- (vi) the nameplate MVAR rating, nameplate MVA rating, nameplate megawatt rating, and nameplate power factor for each generator or other source.

The Generation Owner or other source owner must submit the informational filing in the docket in which its cost-based revenue requirement was approved or accepted by the Commission or as otherwise directed by the Commission.

The requirement to submit the filings at least 90 days prior to the Deactivation Date or disposition date of a generator or other source shall not apply to generators or other source deactivations or transfers occurring between June 18, 2015, and September 16, 2015. For generator or other source deactivations or transfers occurring between June 18, 2015, and September 16, 2015, the Generation Owner or other source owner shall submit the informational filing or filings to terminate or revise its cost-based revenue requirement by September 16, 2015.