

PJM 2222 FERC Order Compliance

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NEM/Double Counting – FERC Directive

P 44:

"We find that PJM's tariff proposal requires limited, additional clarification that its restriction applies only to injections and not load reductions, and accordingly, as PJM proposes in its Answer, we direct PJM to...revise its tariff to specify that Component DER that participate in a net energy metering retail program may only participate with grid injections in the PJM ancillary services markets, and may not participate with injections in PJM's energy or capacity markets."



NEM/Double Counting – PJM Proposal

 PJM proposes to revise Tariff, Attachment K-Appendix, Section 1.4B(b)(ii)(a) as follows:

Component DER that participate in a net energy metering retail program may only participate with grid injections in the PJM ancillary services markets, and may not participate with injections in PJM energy or capacity markets, unless...

- FERC's directive requested that PJM modify the Tariff in exactly this manner. As such,
 PJM cannot propose alternative language.
- PJM's intent is that Component DER that participate in a NEM program may
 participate with load reductions in all PJM markets if they otherwise meet all
 applicable requirements. The prohibition on participation in the capacity and energy
 markets is on injections only.
- This distinction will be clearly articulated in the Transmittal and PJM Manuals.

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Information & Data Requirements – FERC Directive

P 91, 92:

"The Commission in Order No. 2222 did not mandate that each RTO/ISO revise its tariff to require DER aggregators to provide the RTO/ISO with specific information about each of the distributed energy resources. If the RTO/ISO needs information about the individual distributed energy resources, however, then the RTO/ISO must first establish those information requirements in its tariff. Further details regarding such information requirements may be included in the relevant PJM Manuals. [W]e direct PJM to ...revis[e] its tariff to establish any necessary information that must be submitted for the individual Component DER and identifying and explaining the proposed information requirements for the individual distributed energy resources as directed in the First Compliance Order."



Information & Data Requirements – PJM Proposal

 PJM proposes to revise Tariff, Attachment K-Appendix, Section 1.4B(b) to include informational categories and examples:

In order to participate in the energy, capacity, and/or ancillary services markets of PJM through the DER Aggregator Participation Model, a DER Aggregator shall register each DER Aggregation Resource and DER Capacity Aggregation Resource with the Office of the Interconnection, in accordance with the procedures established under the PJM Manuals. For each Component DER in a DER Aggregation Resource, the DER Aggregator shall provide:

i. Identifying information, including the Electric Distribution Company account number and physical address;

<u>ii. Metering information, including meter type (e.g., Electric Distribution Company meter, other meter);</u>

iii. Capability information, including load reduction and injection capability.

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EDC Review Process – FERC Directive

P 129:

"We direct PJM to ... explain[] why PJM's proposal to trigger the 45-calendar day review on the DER Aggregator's designation decision, as opposed to the EDC's receipt of such designation, provides adequate and reasonable time for distribution utility review, consistent with Order No. 2222, or to propose alternative tariff language that complies with this requirement of Order No. 2222."



EDC Review Process - PJM Proposal

*No change from 9/9 DISRS

PJM proposes to revise Tariff, Attachment K-Appendix, Section 1.4B(b) as follows:

The second forty-five calendar day review period shall commence upon receipt by the Electric Distribution Company of notification of such designation by the DER Aggregator from the Office of the Interconnection, whereby the Electric Distribution Company shall review the DER Aggregation Resource and verify that the participation of the DER Aggregation Resource Component DER in the PJM energy, capacity, and/or ancillary service markets does not pose a threat to the reliable and safe operation of the distribution system, the public, or Electric Distribution Company personnel.

 Note that PJM considers the appearance of the applicable review item on the EDC's dashboard as "receipt of notification"; no additional acknowledgement of receipt will be required.



P 167:

"Although PJM states in its transmittal that 'the decision to override PJM dispatch should be communicated by the Electric Distribution Company directly to the DER Aggregator as soon as practicable,' the proposed tariff language states only that the EDC 'may communicate' the override decision to the DER Aggregator. Accordingly, we direct PJM to...clarify why its proposal is non-discriminatory and transparent, or alternatively to revise the tariff language to require the EDC to communicate overrides to the DER Aggregator."



EDC Overrides – PJM Proposal

*No change from 9/9 DISRS

- PJM proposes to revise Tariff, Attachment K-Appendix, Section 1.4B(f) as follows:
 - The Electric Distribution Company <u>should</u> <u>may</u> communicate the decision to override the physical operation of a DER Aggregation Resource or individual Component DER within a DER Aggregation Resource <u>directly</u> to the DER Aggregator.
- PJM can facilitate the communication of the override decision between the Electric
 Distribution Company and the DER Aggregator under existing tools and processes, to
 the extent possible.



Financial Obligations due to Overrides – FERC Directive

P 170:

"We find that PJM's proposed tariff revisions lack specificity regarding the financial obligations that would apply to a DER Aggregator when an EDC overrides PJM's dispatch. Accordingly, we direct PJM to...revise[] the tariff to specify the financial obligations that will apply when a DER Aggregation Resource does not perform due to a utility override.."



Financial Obligations due to Overrides – PJM Proposal

*No change from 9/9 DISRS

PJM proposes to revise Tariff, Attachment K-Appendix, Section 1.4B(f) as follows:

An Electric Distribution Company's override shall not excuse a DER Aggregator from any financial obligations for failure to perform under the PJM Governing Agreements for failure to perform any of the obligations established under the PJM Governing Agreements or PJM Manuals for the relevant PJM capacity, energy, and/or ancillary services markets Tariff Attachment K-Appendix, Operation Agreement, Schedule 1, or Tariff Attachment DD, including balancing Operating Reserve and other performance charges, and capacity resource non-performance and test failure charges.



Operational Coordination – FERC Directive

<u>P 171</u>:

"As to coordination between the distribution utility and the DER Aggregator, with respect to overrides during the Operating Day...we direct PJM to...clarify the inconsistency between its transmittal and its proposed tariff language. [←P 170] As to coordination between PJM and the distribution utility, **PJM's statement** that PJM and the EDC will maintain informal communications does not comply with the directive of the First Compliance Order. Order No. 2222 requires a process in the tariff for communication between the RTO/ISO and the distribution utility. Accordingly, we direct PJM to...revise[] its tariff to establish a process for ongoing coordination, including operational coordination, that addresses data flows and communication between PJM and the EDC."



Operational Coordination – PJM Proposal

*No change from 9/9 DISRS

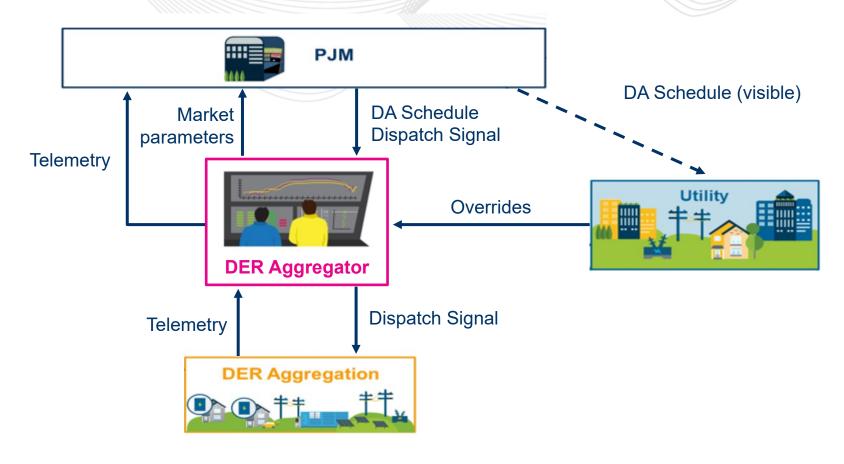
PJM proposes to revise Tariff, Attachment K-Appendix, Section 1.4B(f) as follows:

During the Operating Day, the Office of the Interconnection shall dispatch the DER Aggregation Resource, in accordance with the DER Aggregator's submitted bidding parameters. The Office of the Interconnection shall make available to the Electric Distribution Company the day ahead schedules for the DER Aggregation Resources in their territory.



Operational Coordination – PJM Proposal

*No change from 9/9 DISRS





P 101:

"we find that PJM does not adequately explain why the requirement to submit meter data within one business day is just and reasonable and does not pose an unnecessary and undue barrier to individual distributed energy resources joining a distributed energy resource aggregation. For instance, we note that PJM has not addressed Joint Utilities' assertion that EDC meter data may not be readily available and, therefore, it may not be feasible for DER Aggregators in PJM to meet this deadline."



Meter Data Deadline - Current Process

- PowerMeter: Tie & Generator RT MWh
 - Due on one business day lag, at 4PM EPT.
 - In turn calculates each fully metered EDC's RT Load.
- InSchedule: LSE RT Load MWh assignments and Internal Bilaterals
 - Due on two business day lag, at 4PM EPT.
 - EDC submissions of LSE assignments depend on total calculated by PowerMeter.
- Month-to-Date Weekly Invoicing
 - Issued on given Tuesday, for prior "week" Thursday-Wednesday.
- Monthly Invoicing: Issued on fifth PJM Business day of new month
 - Also accounts for the last few days of month that didn't have a weekly invoice. (aka Settlement A)
- Monthly Meter Correction: Ties and Gen in PowerMeter
 - Due on one month lag.
- Load Reconciliation: LSE RT Load InSchedules.
 - Due on two month lag. (aka Settlement B)

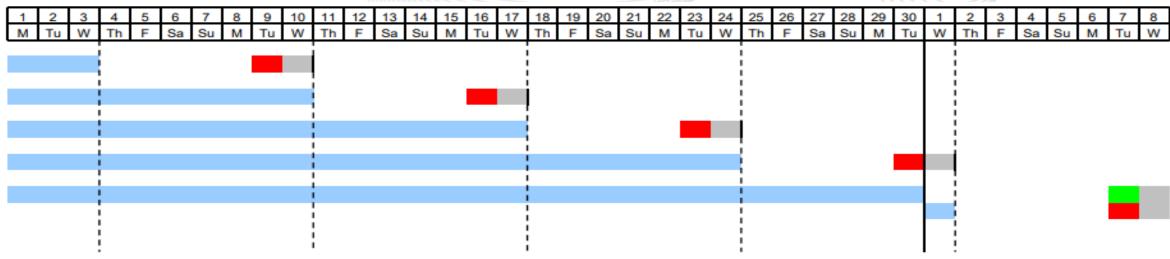


Meter Data Deadline – Impact Considerations

- With DER participating in the energy market, it cannot be easily segregated
- Weekly/monthly billing timelines are too compressed
- After the initial submissions, correction processes do not allow for other participants to be compensated in the same manner as with the original submission
- Other RTO/ISO kept deadlines for DER consistent with generation/load submissions
- Small generator deadlines have been considered prior
 - Net Energy Metering Senior Task Force: Stakeholders voted to remain consistent with generation/load submissions



Meter Data Deadline – Settlement Timelines



Weekly Month-to-Date Billing Statement: Issued Tuesday following the Wednesday that ends the month-to-date billing period, except for last (partial) week of month when it is issued as part of the monthly billing statement

Monthly Billing Statement: Issued fifth business day following the end of the month

Report Preservation Period: No new MSRS report versions will be created for days included in the most recent billing statement in order to allow participants time to retrieve the report versions that correspond to the weekly bill.

Example: Operating Day 10

Day 11 PowerMeter/Generation

- Day 15 Prep for weekly bill

- Day 12 Inschedule/Load

- Day 16 Bill issued

Key Takeaway: The weekly billing timeline does allow for later submissions.



Meter Data Deadline - Correction Process

- Financial settlement of monthly Meter Correction uses relative monthly rate.
 - Ties: Overall PJM Load Weighted Average RT LMP
 - Generators: Given unit's RT Generation Weighted Average RT LMP
- ~ Because a monthly rate is used, it is not true financial settlement of the specific intervals when the generator was or wasn't running.
- Ancillary service billing is not impacted as part of Meter Correction.
- ~ Balancing operating reserve deviations and Synchronized Reserve Penalties for generators are based on the interval level submissions initially provided for Settlement A.
- Meter Correction is independent of Load Reconciliation.
- ~ Generation that may be added or subtracted during the Meter Correction process does not alter the total zonal load for consideration in Load Reconciliation.

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- Load Reconciliation does not change the total zonal load, instead it mutually offsets the RT Load assignments between LSE and EDC/POLR.
- ~ EDCs may factor known Meter Corrections into their Load Reconciliation reporting: +/Load Recon for an LSE is automatically matched in the accounting by the equal opposite
 -/+ Load for EDC or applicable POLR.
- Majority of Load Reconciliation billing line items directly use the same Billing Determinant Rates as applied to original month's Bill (Settlement A):
 - Spot Market, Congestion, Losses, Inadvertent, Reactive Services, Bal Op Res for Reliability, and Schedules 1A, 9-1, 9-3, MMU, FERC, OPSI, CAPS, NERC, & RFC
- ~ Because the billing determinants are set with Settlement A, Market Participants do not have a rate reflective of the changes made during the Load Reconciliation process.

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Meter Data Deadline – PJM Proposal

- PJM proposes to:
 - Maintain the one business day meter data turnaround deadline.
 - Clarify in the Tariff that the responsibility to ensure that adequate metering equipment exists at a site and that meter data is submitted for settlement rests with the DER Aggregator (as the market participant), not the EDC.
 - Clarify in Transmittal Letter and Manuals that DER Aggregators may use EDC meters if/where the relevant data is available, but are not required to do so.
 - PJM maintains a list of metering equipment that satisfies PJM's standards for data accuracy.
 - Accepted metering equipment includes Pulse Data Recorders, which are typically used to settle Reserves, but may also be used for energy settlement.



Meter Data Deadline – PJM Proposal

PJM proposes to revise Tariff, Attachment K-Appendix, Section 1.4B(e) as follows:

Meter data shall be submitted by the DER Aggregator to the Office of Interconnection within one business day. The measurement systems shall comply with the applicable Electric Distribution Company accuracy requirements for meters, and/or as described in the PJM Manual 01. Additional details for the configuration of such measurement systems under various specific configurations are specified in PJM Manual 14D.

The <u>DER Aggregator shall ensure that the</u> metering equipment for settlement shall meet the Electric Distribution Company requirements for accuracy, or otherwise have has a maximum error of two percent over the full range of the metering equipment (including potential transformers and current transformers) and the metering equipment, metering configurations, and associated data shall-meets the requirements set forth herein and in the PJM Manuals.



Effective Dates

*No change from 9/9 DISRS

- Due to the length of time it has taken for PJM to receive clarity from FERC regarding the DER Aggregation Participation Model design, the February 2, 2026 effective date for the energy & A/S market model is no longer feasible.
- PJM proposes to move the effective date for the full DER Aggregation Participation Model from February 2, 2026 to **February 2, 2028** in order to coincide with the effective date for capacity market participation.



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