

FERC Order 881 Conforming Manual Changes

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PJM Operating Committee
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AREAS OF REFORM:	
1	Definition of Transmission Line Ratings
2	Ambient-Adjusted Ratings (AAR)
3	Seasonal Line Ratings
4	Exceptions and Alternate Ratings
5	Emergency Ratings
6	Transparency Requirements
7	Dynamic Line Ratings (DLR)

Revises
FERC regulations
and *pro forma*
Tariff to incorporate
new pro forma OATT
Attachment **M**

NOTE: To be Attachment
W in PJM's OATT

Compliance
Filings

[12 Jul 2022](#)

[18 Jul 2023](#)

[29 Sep 2023](#)

[16 Sep 2024](#)

[12 Nov 2024](#)

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Full
Compliance By
July 12, 2025

Not seeking endorsement, but providing language in advance:

1. To aid in self-servicing FAQ around PJM's FERC 881 framework;
2. To gain member feedback in advance of these FERC Order 881 Conforming First Read/Endorsement, for the purposes of informing same.

Additional PJM manual changes will be needed outside this set, but this set is intended to provide broad clarity around the input/output process around PJM FERC Order 881 Transmission Facility Ratings.

- ❑ Order 881 obligates use of hourly (minimum) and Seasonal (no fewer than 4) AAR Facility Ratings in congestion management.
 - Hourly:
 - To be derived using updated hourly forecasts.
 - To be utilized in congestion management over next 10 days.
 - Seasonal:
 - To be used beyond 10-day hourly and as a last resort rating.
 - PJM using monthly Seasonal approach, in alignment with end-use.
- ❑ Order 881 allows for use of AAR Exceptions, temporary conditional ratings and DLR.

- ❑ PJM and its members have a long-standing use of Ambient Condition Lookup Tables, which FERC Order 881 permits.
 - Practice to continue, expanded for Order 881.
- ❑ PJM has historically independently applied, use-case by use-case, weather forecasts to determine Ambient Condition (aka, Temp Set):
 - Moving Ambient Condition to a singular methodology, due to the specificity of the Order's requirements.
 - Facility Rating Sets will now be available per time-frame, rather than derived by each end-use.

To cover the FERC Order 881 concepts/construct, ***M-03A***, PJM's ***EMS Model Updates & QA*** manual, Section 3.3 section will be expanded.

Additionally, ***M-03***, PJM's ***Transmission Operations*** manual, will be expanded to incorporate the maintenance responsibilities around the new 881 framework as well as approaches to DLR and short term emergency ratings within the Thermal Operating Guidelines.

Details follow.

Section 3.3, PJM Transmission Facility Ratings Database [\[revised\]](#):

- *AAR* (includes the DLR subset) & *AAR Exception* Facility Types.
 - FERC Order 881 AAR 5°F bands, -55°F to 130°F, w/ day/night.
 - AAR Extreme Temp Set (-55°F, -50°F, 125°F & 130°F) use and M-03 1.5.6 process reference.
- PJM Default Durations by Rating Type, and TO obligation to provide deviations from same.
 - Example: PJM's default Long Term Emergency duration is 4hrs. If a TO deviates from that for a given facility, it should be communicated via eDART TERM.

Section 3.3.1, Conditional Ratings [NEW]:

- Evolution of M-03B MVA ratings into new Conditional Rating tables, where appropriate.
 - Used for safety and reliability. (Not as an alternative to AAR or AAR Exceptions.)
 - Ports all such ratings into PJM's Transmission Facility Ratings Database.
 - Dual maintenance, with PJM and the TO having a shared responsibility.
 - Requires the *nature and basis* and Rating Set to be distinguishable from other rating sets.
 - Examples include, directional ratings, common trench, loss of cooling, proxy stability limits, etc.

Section 3.3.2, TO SCADA Zone and AAR Transmission Facility Mapping [NEW]:

- TO SCADA Zones (i.e., AAR thermal regions) will be defined by their:
 - Stations (aka, B1 Substations)
 - Weather Stations
- AAR Ambient Conditions (Temp Sets) will be applied against all AAR Transmission Facilities that reside (in full or part) within the TO SCADA Zone.

Section 3.3.3, AAR Ambient Conditions [NEW]:

- TOs can opt to provide Hourly/Seasonal AAR Ambient Condition.
- PJM weather services to be the AAR Ambient Condition provider of last resort. [A widely-utilized one.]
 - Ambient Condition determined independently hourly/Seasonal for each TO SCADA Zone.
 - Hourly based on weather forecasting and Seasonal based on historic temperatures and in-use Temp Sets.

Section 3.3.4, Rating Set Hourly and Seasonal Derivation [NEW]:

- Hourly derived for 10-days. Seasonal derived for next 24 months.
- PJM shall derive Rating Sets in the following priority order, highest denoted first:
 1. Manual Overrides, as needed, at the Facility level.
 2. Projected Conditional Ratings, if applicable and known, at the Facility level.
 3. AAR Exceptions, where applicable, at the Facility level.
 4. DLR, where applicable, at the Facility level.
 5. AAR Ambient Condition Manual Overrides, as needed, at the TO SCADA Zone level.
 6. AAR, where applicable, at the Facility level, leveraging AAR Ambient Condition.

Section 3.3.5, Transmission Facility Rating Transparency [NEW]:

- All eDART users will have access to the data, regardless of role.
- Data includes:
 - TO Transmission Facility Rating Methodologies
 - TO SCADA Zone definitions
 - Transmission Facility Types and metadata.
 - Lookup Tables, including Conditional Ratings.
 - In-use and forecasted hourly/Seasonal Transmission Facility Rating Sets & AAR Ambient Conditions.
- Data will be available for 5 years, commencing with go-live.

Appendix A [\[TO BE revised\]](#):

- **Changes are not included at this time.**
- Conceptually, the constructs will remain unchanged.
- Temporary Ticket use should be substantively reduced, due to the addition of Conditional Ratings.
 - NOTE: Any real-time Temporary Ticket will require *the nature and basis* for its use to be documented by the owner to comply with FERC Order 881, paragraph 234.

We require that such postings document the nature of and basis for each such exception or alternate rating, as well as the date(s) and time(s) of initiation and (if applicable) withdrawal for the exception or the alternate rating.

Section 1.5.6, Monitored Transmission Facility [\[revised\]](#):

- Update maintenance responsibilities involved around Rating Set Lookup Tables.
 - AAR as the default type
 - AAR Exception designation option
 - Allowance for use of temporary Conditional Ratings, for safety and reliability
 - DLR obligations
- Temp Set 10°F Margin Requirements for new high/low actual temperatures.

Section 2.1.1.1, Ambient Condition: Temp Set [\[revised\]](#):

- FERC Order 881 5°F bands, -55°F to 130°F, w/ day/night.
- AAR (includes the DLR subset) & AAR Exception Facility Types.
- Tiering/Priority of Manual Overrides, Conditional Ratings, AAR Exceptions, DLR & AAR. (Reinforced in M-03A.)
- Move away from PJM Operator driven EMS ratings to consumption of hourly ratings.

Section 2.1.1.2, Ambient Condition: DLR [\[revised\]](#):

- DLR owners have the option to either expand to cover the entire 10-day hourly window or defer to AAR for hourly beyond existing DLR forecast obligation, up to the 10-day hourly window.
- For DLR outages: Now giving an option to defer to AAR or Seasonal, if appropriate.

Section 2.1.2, Short Term Emergency Ratings [\[revised\]](#):

- eDART TERM (PJM's Transmission Facility Ratings Database), instead of M-03 Attachment F as today, as the source for facilities with distinct STE and durations from that of LTE.

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FERC Order 881 Conforming Manual Changes

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Member Hotline

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eDART & eDART XML Forums

- Site [here](#).
- Speaking to our December 2023 release around Order 881 [here](#).
- eDART SCHEMA information [here](#), for those looking to test automation. (See FERC Order 881 section, available in eDART Train/Sandbox environment.)
- eDART 881-only presentation, focused around our overall expected eDART Changes (inputs & outputs), [here](#).

PJM Tech Change Forum

- Presentations on eDART-related product roadmap can be tracked at the [PJM Tech Change Forum](#).

PJM Operating Committee

- Majority of the presentations, working through the initial problem, were at PJM OC within Special Sessions.
- Final non-Tariff focused presentation (Special Sessions – Order 881 Compliance, Apr-Jun 2022) [here](#). OC update around telemetry and FTR impact [here](#).

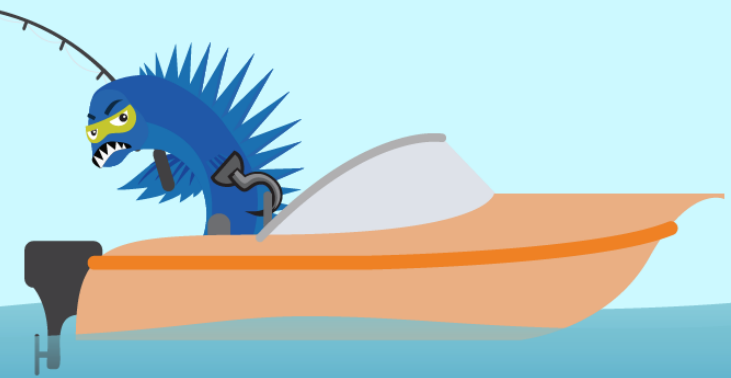
PJM Tariff Changes

- Filings can be found [here](#).
 - Searchable by *Docket Number*, typing in “ER22-2359”, and clicking *Apply*.

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