

# Ratings Survey Results

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# SRS Data Preparation Manual (DPM) Rating Survey

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- Ratings can be provided for branches, transformers, connectors (breaker, etc.), and DC transmission lines.
- DPM requires two ratings (Summer Normal and Emergency) for branches and the primary winding of transformers.
- DPM specifies what ratings 1–8 should represent for branches, primary windings on transformers, and connectors.
- Previous platforms did not support eight ratings for everyone—so, a caveat was in place for PTI users to only supply three ratings.
- Current platforms support 12 ratings for all users. Some of the converters were not updated to export or import all 12 ratings. Those are mostly sorted out now.
- Current submissions do not reflect all eight ratings, some only supply two, others supply data in different schema that don't align with the DPM.
- FERC Order 881—we do not know yet how or whether it will apply to the base cases.
- WECC staff has requested the SRS define the Ratings for everyone (regardless of platform) and specify what the 8 or 12 ratings all mean, so each Area's submission is consistent with the other Areas.

# SRS Data Preparation Manual (DPM) Rating Survey

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- Survey sent to all members of the SRS February 7, 2025
- 29 responses received

## Ratings Types

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- 65% of respondents establish seasonal ratings
- 90% of respondents said they establish Emergency and Continuous ratings—but not all do!
  - Some use Continuous for both; some only establish Emergency ratings for transformers
  - At least one entity has sets for different time frames (in hours), at least one entity is using Ratings 5–8 for some lines' special purpose ratings

**Proposed Action:** Continue using terms “Continuous” and “Emergency” but note in the DPM that “Emergency rating time definition varies from entity to entity”

## Emergency Time Frame

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- Emergency means anything from 15 minutes to more than 4 hours
- Some respondents mentioned that Planning never uses emergency ratings and that those are only considered in Operations

**Proposed Action:** See previous slide for note on definition of “Emergency.” Additionally, add a section to the Associated Materials where each entity lists out its definition for Emergency ratings. This could be a static file at WECC, updated as needed

# Rating Alignment with the DPM

- 77% of respondents said that their company establishes ratings that align with the DPM (Normal and Emergency ratings for four seasons)
- 81% of respondents said that their submissions align with the DPM (rating 1 = summer normal, etc.)

**Proposed Action:** Update the DPM to require eight ratings with the caveat that continuous ratings can be supplied when no Emergency rating is available. WECC staff to copy Ratings 1 and 2 into each blank sent (for example, if Ratings 7 and 8 are missing, then Ratings 1 and 2 would be copied into them).

<b>Rating 1</b>	Summer Normal	<b>Rating 5</b>	Spring Normal
<b>Rating 2</b>	Summer Emergency	<b>Rating 6</b>	Spring Emergency
<b>Rating 3</b>	Winter Normal	<b>Rating 7</b>	Fall Normal
<b>Rating 4</b>	Winter Emergency	<b>Rating 8</b>	Fall Emergency

# Ratings Concerns

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- Other entities have different methods and arrive at different ratings for the same conductors.
- Ratings don't align with the DPM.
- Concerns about obsolete/outdated ratings. Similarly, concerns about ratings being based on 30° C or some other maximum temperature that yields overly optimistic ratings.
- Inconsistency of Emergency ratings and no information on what time frame or assumptions feed into them—see suggestion on Emergency Time Frame slide.
- Inconsistency of Emergency Ratings for Tie lines—Whose definition is used? How would a user know?
- 0s. If a rating is not filled out it is possible that some scripts will fail on these 0s. 25% of respondents believe their scripts would return bad/erroneous data if others are not using the same ratings definitions.

## Other Areas' Overloads

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- Respondents say they consider overloads (especially of normal ratings) to be a concern—people are looking at each other's ratings and taking them into account.
- At least a few respondents, on the other hand, do not worry about it and report seeing the same facilities overloaded again and again. Their conclusion is that the owners must not be concerned.



## Other Topics

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- 25% of respondents said that their entity's preferred approach was to have just that season's ratings in the case
- FERC Order 881—some respondents say they expect this order to affect their ratings information. Most who do not anticipate it affecting their data stated it was because they are not a FERC Jurisdictional entity. A few entities stated it would only affect operations functions
- Temperature definitions—these varied widely, as expected. One entity mentioned 50° C for summer emergency (122° F) and another mentioned 104° F
- Many entities are evaluating their ratings and the temperature basis for them. At least one entity reviewed its data in 2010 and are not planning a new review

## Specific Concerns from the Survey (with direct quotes)

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- “Some entities are using 30° C for summer. This is highly suspect.”
  - Another specified one entity needs to move from 30° to 40° C.
- “Some entities re-evaluate their seasonal temperature used.”
  - Change to reflect "real" temperature. Are there any compliant that non-jurisdictional entities need to follow? What if utilities don't operate their system close to the "real" temperature?
- “For 881, we are required to create seasonal ratings.”
  - Using the WECC DPM season definitions. Is that acceptable? Will FERC 881 seasonal ratings be required in base cases, or are FAC-008 ratings enough?

## Specific Concerns from the Survey (with direct quotes)

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- “Consistency in ratings between entities matters to us ... there is a difference in how our case ratings are set and how bordering entities set their ratings.”
  - Respondent prefers:
    - no zeros on any ratings if all 12 are in use.
    - all seasonal ratings be in all cases, “so we can pick cases with path flow conditions in the proper state and modify our area to reflect a different season as necessary.”
- One respondent laid out its 12-rating system, grouped by season, and stated, “To us this makes the most sense, to keep each season grouped together. If an entity only has a long-term or short-term emergency rating, then rate 2 & 3, 5 & 6, 8 & 9, 11 & 12 will be the same, instead of one of them being blank. This will allow other entities to see issues on others’ systems regardless of the rate they use.”
- “Changes that deviate from the existing setup will cause massive re-alignment and confusion.”

## Specific Concerns from the Survey (with direct quotes)

- “The impact and coordination between FERC 881 and FAC-008 and how study groups that currently focus [on] 2 seasons should attempt to handle 4 seasons. Should additional studies be done or can the summer study apply for all other seasons as it does now for spring and fall for us? (This goes against what FERC 881 wants to do.)”
- Respondent had three concerns:
  1. “Preferred ratings set needs from a utility's perspective - what is the ideal?”
  2. Software limitations utilities are using for # of ratings.
  3. Could there be a means to capture temperature assumptions and limit duration as part of the WECC case build process, such that these limits attributes are 'embedded' in the WECC case and available for study engineer reference when performing studies?”
- “Flexibility to use Ratings 9–12 as specific in-house ratings and defined as such in the DPM (Utilities then can share with neighbors/other utilities the in-house definitions) i.e., using ratings 9/10 as a summer extreme temp rating”

# WECC Proposal

- Update the DPM to require eight ratings:

<b>Rating 1</b>	Summer Normal	<b>Rating 5</b>	Spring Normal
<b>Rating 2</b>	Summer Emergency	<b>Rating 6</b>	Spring Emergency
<b>Rating 3</b>	Winter Normal	<b>Rating 7</b>	Fall Normal
<b>Rating 4</b>	Winter Emergency	<b>Rating 8</b>	Fall Emergency

- WECC staff to copy Ratings 1 and 2 into each blank sent (for example, if Ratings 7 and 8 are missing, then Ratings 1 and 2 would be copied into them).
  - Ratings 9–12 reserved for each entity’s own use—but if any Rating 9–12 is populated, a definition must be submitted and included in the Associated Materials as discussed below.
- Continue using terms “Continuous” and “Emergency” but note in the DPM that “Emergency rating time definition varies from entity to entity.”
- Add a section to the Associated Materials in which each entity lists out its definition for Emergency ratings and any use of Ratings 9–12. This could be a static file at WECC, updated as needed.



# WECC



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