

FERC Order No. 881 Managing Transmission Line Ratings- Overview

NEPOOL Counsel Presentation to Transmission Committee
February 17, 2022



Order No. 881- What It Is

- FERC Final Rule in Rulemaking Proceeding, RM20-16-000 to improve accuracy of transmission line ratings
 - Issued December 16, 2021
 - Follows NOPR issued November 19, 2020
 - ISO-NE filed comments on the NOPR in this proceeding
 - Order No. 881 compliance filing due July 12, 2022
- Modifies the pro forma OATT- adds Attachment M, “Transmission Line Ratings”, with specific rules
- Requires compliance by all public utility transmission providers, including ISOs/RTOs

Background

- Transmission line ratings represent the maximum transfer capability of each transmission line. They determine the quantity of energy that can be transmitted from suppliers to load in any given moment.
- Transmission line ratings are used for several purposes by system operators, transmission providers, transmission planners, reliability coordinators, etc.
- Purposes include use in reliability models, market models, planning models, assessment of available transfer capability, and decisions about redispatch and curtailment of resources, and emergency conditions.
- Most transmission line ratings are also divided into normal and emergency ratings.

Background

- Transmission line ratings can affect many important aspects of reliability, markets, transmission service, and planning, including, among others:
 - prices of energy, operating reserves, and other ancillary services;
 - assessment of available transfer capability and transmission service offerings;
 - emergency energy interchange between regions; and
 - transmission planning and reliability determinations.
- Currently, transmission line rating methodologies vary across the country. Some transmission system operators use “static” ratings that are intended to reflect the worst-case conditions that equipment might face. These static ratings may remain unchanged, or may be seasonal and use different ambient condition assumptions for each season.

Background

- Other transmission system operators already use the type of rating the Commission advocates a move towards: a type of “real-time” or “dynamic” transmission line ratings, such as ambient-adjusted ratings (“AARs”) or dynamic line ratings (“DLRs”).
- In Order No. 881, Commission defines AARs as:
 - A transmission line rating that: (1) applies to a time period of not greater than one hour; (2) reflects an up-to-date forecast of ambient air temperature across the time period to which the rating applies; (3) reflects the absence of solar heating during nighttime periods where the local sunrise/sunset times used to determine daytime and nighttime periods are updated at least monthly, if not more frequently; and (4) is calculated at least each hour, if not more frequently.
- DLRs are more precise calculations of transfer capability than AARs. Updated in near real-time based on several factors. Not mandated yet. New DLR docket AD22-5-000; on today’s FERC agenda.

Need for Reform

- In Order No. 881 found that transmission line ratings and the rules by which they are established are practices that directly affect the cost of wholesale energy, capacity, and ancillary services, as well as the cost of delivering wholesale energy to transmission customers.
- The Commission found that current practices and methodologies regarding transmission line ratings and the degree of transparency regarding such practices and methodologies may result in unjust and unreasonable rates.
- Regarding emergency ratings, the Commission found that allowing certain transmission owners in RTO/ISO regions to opt out of creating unique emergency ratings may result in less accurate flow limits, and less accurate costs for delivering wholesale energy to customers.

Key Requirements

- The Final Rule requires the following main compliance activities:
 - Public utility transmission providers must implement ambient-adjusted ratings (“AARs”) on the transmission lines over which they provide transmission service;
 - RTOs/ISOs must establish and implement the systems and procedures necessary to allow transmission owners to electronically update transmission line ratings at least hourly;
 - Public utility transmission providers must use uniquely determined emergency ratings;

Key Requirements

- Transmission providers must define seasons to include not fewer than four seasons in each year, and to reasonably reflect portions of the year where expected high temperatures are relatively consistent.
- Public utility transmission owners must share transmission line ratings and transmission line rating methodologies with their respective transmission provider(s) and with market monitors in RTOs and ISOs; and

Key Requirements

- Public utility transmission providers must maintain a database of transmission owners' transmission line ratings and transmission line rating methodologies on the transmission provider's Open Access Same-Time Information System ("OASIS") site or other password-protected website.
- OATTs to be revised to include new *pro forma* attachment on transmission line ratings.
- DLRs not required now but could be in the future.

Compliance for New England

- Compliance filing due July 12, 2022, with implementation due no later than three years after filing due date. Expect votes at TC and NPC in May/June.
- The ISO is reviewing the order and considering its compliance obligations, and will probably discuss with the TC in March.
- Compliance will not involve major drafting effort but will require significant consideration of implementation.
- Will also require compliance from the PTOs, CSC, and the Schedule 20A Service Providers and/or Phase I/II asset owners.
- Could be a joint filing for New England.

Questions?