

Facility Ratings Problem Statement

Problem Statement

Recent years' audit and enforcement activities (including field verifications by the Regions and entities) have identified multiple instances of discrepancies between documented Equipment and/or Facility Ratings and actual field conditions. The information suggests generally that registered entities with strong controls and change management procedures, typically have better data that results in more accurate ratings, than those entities that have not taken meaningful steps to develop strong controls, change management focus, and/or validated field conditions with Facility Ratings databases. Those entities are most prone to discrepancies that may result in noncompliance. Because of this, and because of the recurring causes of the issues identified, the ERO Enterprise believes the issue is more widespread than what has been discovered to date.

Current Observations

The issues identified to date generally involve discrepancies between documented Equipment and/or Facility Ratings and current field conditions. Facility Rating calculations have been incorrect as a result of incorrect ratings for, or missing, multiple types of equipment. For example, the missing or incorrectly rated equipment includes jumpers and risers inside substations, bus bars, current transformers (including delta connected current transformers), circuit breakers, and transmission line conductors. The ERO Enterprise has observed multiple contributing causes related to insufficient processes and lack of controls to prevent these discrepancies. More specifically, the discrepancies tend to occur as the result of the following:

- Lack of processes and controls to ensure changes in the field (emergency or otherwise) are being properly documented and communicated in order to update the Facility Rating;
- Lack of communication between parties responsible for determining Facility Ratings (i.e. substation and transmission);
- Insufficient processes and controls to ensure Facility Rating are accurate when facilities are commissioned or when Facility Ratings are otherwise initially determined; and
- Insufficient processes and controls to ensure planned facility changes that resulted in updated Facility Ratings are either implemented as planned or, if not, that the Facility Ratings updated as a result of the planned changes are revised to reflect current conditions.

The ERO Enterprise is encouraging entities to perform their own self-assessments to identify and mitigate the Facility Rating issues that may be present on the system. In addition to performing a self-assessment, to further ensure FAC-008 programs are sustainable going forward, entities need to implement sufficient internal controls and, at a minimum, should consider implementing controls related to:

- Inventory & Change Management – Controls to track the Facility Rating, the equipment that comprises each Facility, and the Equipment Ratings, as well as controls to ensure newly commissioned facilities, changes made in the field to facilities, and changes to project plans are properly tracked and recorded in the Facility Rating database;

- Access Controls – Technical or procedural controls to limit and track who can and should change and edit prints, databases, etc.
- Contractor Management – Training to ensure contractors understand all relevant processes and sufficient oversight to identify and track changes to facilities made by contractors;
- Data Verification - Third party or peer reviews to ensure information is entered correctly in the entity’s Facility Rating database;
- Reconciliation - Process step to reconcile field prints with information in the entity’s databases and EMS and Planning Assessments; and
- Periodic Facility Reviews – Periodic comprehensive reviews, including facility walk downs, on a subset of facilities to ensure the documented Facility Rating matches the as-builds. This assessment should be risk based starting with the most critical and most impactful facilities.

Risk

Incorrect Facility Ratings can pose significant risk to the bulk electric system. In multiple instances, the Facility Ratings have not taken into account the most limiting series element, resulting in large derates in some cases. The discrepancies identified thus far include some significant and widespread discrepancies across the ERO Enterprise. When Facility Ratings are not determined correctly and applied consistently for all applicable Facilities, this can result in equipment operated beyond its capability, causing equipment damage or line sagging beyond its design, resulting in unplanned outages. It is for this reason that Facility Ratings issues were noted as one of the contributing factors to the August 2003 blackout and continues to be an ERO Area of Focus