

# NERC

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

## FAC Rating Alert (Recommendation) Webinar - May 12, 2011

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to ensure  
the reliability of the  
bulk power system

## **Background:**

- A vegetation contact by a Transmission Owner identified situations where actual field conditions varied significantly from design assumptions – to the point where some facility ratings were considered inaccurate or in question
- Subsequent follow-up resulted in the conclusion that this situation was not restricted to one entity or region

# FAC Rating Alert (Recommendation)

## FAC Alert information provided as follows:

- Oct 7, 2010 - Original Alert issued
- Oct 28<sup>th</sup> / Nov 29<sup>th</sup> 2010 – Informational webinars
- Nov 30, 2010 - Revised Alert / Cauley Letter
- Jan 14, 2011 - Q&A document issued
- Apr 26, 2011 – Assessment plan criteria
- May 12, 2011 – Webinar: Discuss assessment plan review criteria and reporting

# Assessment Plan Review Criteria

## **Objectives:**

- Provide guidance to Regional Entity (RE) staff in review of entity assessment plans.
- Provide further assistance to the registered entities in meeting the Recommendation intent
  - Includes specific feedback where entity assessment plans may need added detail or adjustment
- Respond to those issues NERC stated it would provide further guidance for in its Question and Answer (Q&A).

# Assessment Plan Reviews

- Most assessment plans reviewed to date were reasonable and contained appropriate content and detail. Those plans:
  - Provided detailed rationale for why its facilities were categorized into high, medium, or low priorities.
  - Provided specific information on the type of assessment technology being used.
  - Included a timelines for completing the assessments which met the Recommendation's intent.
- REs contact those entities to convey status
- For those entities, APRC is for “information only”



# Assessment Plan Reviews

Some entity assessment plans did not contain sufficient detail or are believed insufficient to verify actual conditions conform to design assumptions. Identified gaps included:

- Did not prioritize facilities into high, medium, and low categories
- Provided no rationale for facility prioritization.
- Did not provide details on how actual field conditions conform to ratings methodology
- Did not conform to the Alert timelines

Assessment plan review criteria is provided for use by entities that submitted an assessment plan which lacks detail or otherwise may need adjustment

- NERC and the REs recognize that these review criteria may not completely address all circumstances
- Individual entity assessment plans should be based on the characteristics and requirements of the entity's specific system / facilities

# Assessment Plan Reviews

- REs will contact those entities with plans that lack detail or are believed insufficient and provide further guidance
- If any entity believes its plan could be improved with the additional guidance, that entity is encouraged to provide the RE with the appropriate assessment plan revisions



What if an entity determines that its prioritization of its transmission lines does not match the priority categories detailed in the Alert?

- If an entity believes it has technically defensible risk-based prioritization approach, the entity should consult with its region(s) and provide documentation to support its prioritization plan

# Assessment Plan Review Summary

(as of April 30, 2011)

**NERC**

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Region	Reasonable Plan	Need more information	Plan needs rework
FRCC	32	11	6
MRO	13	26	3
NPCC	105	27	0
RFC	89	27	0
SERC	75	31	21
SPP	23	16	10
TRE	61	84	10
WECC	30	44	2
Total	428	266	52
Percent (%)	<b>57</b>	<b>36</b>	<b>7</b>

## TO / High Priority Assets

For Transmission Owners (TO), recommendations for assessing BES transmission lines are as follows:

**High** (to be completed by end of 2011)

- *Transmission facilities that are components of an identified IROL or key transfer paths*
- *Transmission Facilities identified by the Owner as critical to reliability*
- *Heavily loaded Transmission lines and/or 500 kV and above in the Eastern and Western Interconnections*

## TO / High Priority Assets (cont.)

- *Within NPCC, transmission lines defined as Bulk Power Supply (BPS) elements in accordance with NPCC Document A-10, "Classification of Bulk Power System Elements"*
- *Transmission lines of 345 kV in the ERCOT Region*

## TO / Medium Priority Assets

### **Medium** (to be completed by end of 2012)

- *Transmission lines 230 kV – 499 kV in the Eastern and Western Interconnections*
- *Within NPCC, transmission lines 230 kV and higher which are not defined as BPS elements*
- *For the ERCOT Region, transmission lines 138 kV originating from stations containing 345/138 kV auto transformers or generation facilities with a name plate rating exceeding 450 MW*

## Low (to be completed by end of 2013)

- *Transmission lines below 230 kV in the Eastern and Western Interconnections*
- *Within NPCC, transmission lines 115 kV and higher which are not defined as BPS elements*
- *For the ERCOT Region, transmission lines 138 kV or lower not meeting the “medium” criteria listed above*



# Generator Owner (GO) Assets

For **Generator Owners** , recommendations for assessing generator tie-lines are as follows:

## **High** (to be completed by end of 2011)

- *Units specified as “must run” for reliability or for BES voltage support*
- *Units specifically designated as part of a Special Protection System/Remedial Action Scheme for automated runback or ramp-up*
- *Units specifically identified as part of a documented plan for mitigating an IROL violation*
- *Blackstart Resources identified in the Transmission Operator's restoration plan.*

## Assessment Plan (Level of Detail)

It is recommended that each assessment performed by the entity be detailed enough to confirm the following information:

- Conductor-to-conductor and conductor distance to objects (including ground clearance) occupying rights-of-way meet minimum clearance requirements of design.
- Considered ambient conditions
- Considered operating limitations

# FAC Rating Alert (Reporting)

NERC requests each entity provide semi-annual updates on the work performed to complete their assessments, identified discrepancies, and associated corrective actions:

- High priority asset reports are due by July 15, 2011 and January 15, 2012
- Medium priority assets are due July 15, 2012 and January 15, 2013
- Low priority assets are due July 15, 2013 and January 14, 2014

# Discrepancies (Actual vs. Design)

**NOTE:** A Discrepancy is when the entity's assessment cannot verify that the actual conditions conform to the entity's design tolerances in accordance with its Facility Ratings Methodology and results in asset derating

# Discrepancy Communication

If an entity identifies a condition or conditions it believes are discrepancies, NERC recommends:

- Entity reports the discrepancy to its RC, TOP, and PA at the time the discrepancy is identified
- Entity includes the details of the condition causing the discrepancy in its next semi-annual update to its region(s)
- Entity refers to the unique identifier, such as the SDX common name, in both the report and in the next report / update

# Assessment Plan Reporting

- NERC recommends that the entity records the specific dates when assessments are performed
- Identifies each transmission line and generator tie-line by a unique identifier, such as the NERC SDX common name
- Uses technologies and techniques with adequate accuracy / precision to identify discrepancies that impact ratings



## Technology / Techniques

While LIDAR with PLS-CADD technology are appropriate and acceptable, these particular technologies are not required.

Other technologies can be utilized such as :

- PS Guard Wide Area Monitoring System
- Sagometer
- Thermal Line Monitor
- Dynamic Line Rating System

## Questions?

