Methods for Establishing IROLs
Joint Task Force
Scope Document

Purpose
The purpose of the joint task force is to develop technical reference documents that focus on the types of power system instabilities, simulation methods for assessing instability, determining interconnection reliability operating limits (IROLs), and assessing the impact of instabilities on bulk power system (BPS) reliability. The joint task force will consider the technical aspects of studying system stability as well as operational considerations of IROLs. The technical materials are intended to support the Project 2015-09 System Operating Limits (SOL) standard drafting team (SDT) as well as the utility industry with a technical basis and recommended guidance relating to aspects associated with establishing SOLs and IROLs.

Activities
The joint task force will focus primarily on system stability, the establishment of IROLs, and assessing the impact of different types of instabilities when establishing IROLs. These activities include:

1. Reviewing any gaps or discrepancies in the statutory definition of Reliable Operation, the existing definition of IROL, and current planning and operations practices;
2. Defining types of system and unit instabilities and their impacts on reliability;
3. Assessing existing methods for establishing IROLs and the reliability impacts of these differences across North America;
4. Developing a framework for assessing the impact of system instability, understanding the limitations of commonly used simulation methods, and the types of analysis to provide justification for quantifying impact of instability; and
5. Determining which aspects of system stability and assessment of impact should be considered as part of a continent-wide criteria for determining IROLs.
6. Working with subject matter experts, software vendors, and Transmission Planners and Operators who focus on system stability analysis; working with Reliability Coordinators who have expertise on operational and planning expertise for developing methodologies to establish and operate within IROLs.
7. Review the metric M-8 IROL Exceedances and modify as needed to align with the updated definition of IROL Exceedances.
Deliverables
The task force will provide the following deliverables:

1. Technical reference document addressing at least the topics identified by the Project 2015-09 SOL SDT and NERC Standards Committee.
2. Reliability Guideline on system stability analysis, assessing system instability, and determination of IROLs.
3. Webinars and technical workshops, as deemed beneficial, to support information sharing across North America.
4. Recommendation to the Performance Analysis Subcommittee (PAS) whether the M-8 metric is appropriate or needs to be modified and what the modifications will be.
5. Other activities as directed by the NERC Planning Committee (PC) and Operating Committee (OC) in coordination with the Standards Committee.

Membership
The task force will consist of members selected by the NERC PC and OC. Select members from the NERC System Analysis and Modeling Subcommittee (SAMS) and the NERC Operating Reliability Subcommittee (ORS) will constitute the majority of team. Members will have expertise related to:

- System stability analysis including transient, voltage, and small signal stability;
- Software and tools used for assessing instability and assessment of instability;
- Practices and methods for developing System Operating Limits (SOLs) and IROLs; and
- Operational considerations for ensuring real-time reliability of the BPS, and defining and operating to IROLs.

Two NERC staff members will be assigned as the Task Force Coordinators. The task force will consist of two co-chairs who will each be appointed by the PC and OC, respectively, for the duration of the task force. Task force decisions will be consensus-based led by the co-chairmen and staff coordinators. Any minority views will be included in an appendix.

Reporting & Duration
The task force will jointly report to the NERC PC and OC. The task force is expected to exist no more than 18 months to develop the deliverables outlined. The task force will submit a work plan at the December 2016 OC and PC meetings, which must be approved by the PC and OC.

Meetings
The task force is expected to have two to three in-person meetings, supplemented with monthly conference calls to continue workload throughout the year.