

## M-8

### Interconnection Reliability Operating Limits (IROLs)

#### Exceedance

<b>Submittal Date</b>	February 27, 2009		
<b>Proposal Type</b>	New <input type="checkbox"/>	Revision <input checked="" type="checkbox"/>	Metric Analysis <input type="checkbox"/>
<b>Definition</b>	Simple number count of how many times by interconnection an IROL (base case conditions or during a contingency) has been exceeded grouped into 2 time segments: 10 min to 20 min, and > 20 min		
<b>Rating Criteria</b>	<p><b>Proposed:</b></p> <ul style="list-style-type: none"> <li><b>Red (actionable):</b> Continued increase in count of IROLs &gt; 20 minutes or continued increase in count of IROLs between 10 and 20 minutes that is greater than the five year average</li> <li><b>Yellow (monitor):</b> First year increase in count of IROLs &gt; 20 minutes or the count is the same as the previous year, or the first year count of IROLs between 10 and 20 minutes is greater than the five year average</li> <li><b>Gray (stable):</b> Count of IROLs &gt; 20 minutes is decreasing, or count of IROLs between 10 and 20 minutes is less than or equal to the five year average.</li> <li><b>Green (good/improving):</b> No IROLs &gt; 20 minutes and count of IROLs between 10 and 20 minutes is less than the five year average or zero</li> </ul>		
<b>Purpose</b>	The metric supports analysis of trends in the amount of time required to restore operations of the BES to within established IROLs. This addresses instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by ensuring prompt action to prevent or mitigate instances of exceeding IROLs.		
<b>Formula or Type of Statistical Analysis</b>	To illustrate how quickly IROLs are returned to within normal limits, the data will be grouped into 3 time segments as follows: 10 sec to 10 min, 10 min to 20 min, and > 20 min. The PAS reviews all IROL exceedances greater than 10 seconds (not just those that exceed 10 minutes and contribute to the ratings) and may report on trends in the SOR, as deemed appropriate.		
<b>Time Horizon</b>	Rolling 5 year average		

## M-8

### Interconnection Reliability Operating Limits (IROLs)

#### Exceedance

Metric Start Time or Baseline	2002, or whenever data first became available					
Data Collection Interval and Roll Up	Presently, the Reliability Coordinator keeps the data or evidence to show compliance with IRO-009-1, the aggregated and anonymized interconnection level data is voluntarily supplied to NERC					
Ease of Collection	Data is available; Reportable Balancing Contingency Events (RBCEs)					
Aggregation	Interconnection level					
Links to NERC Standard	NERC Standard IRO-009-1 9 ( <a href="https://www.nerc.com/files/IRO-009-1.pdf">https://www.nerc.com/files/IRO-009-1.pdf</a> ).					
Data Source	Reliability Coordinators submit to NERC					
Revision History	Reviewed March 13, 2025 Revised March 16, 2022					
PAS and NERC Staff Use						
Need for Validation or Pilot	Need to validate completeness and consistency of reporting by entities					
SMART Rating PAS SMART rating of proposed metric, metric revision, or new metric analysis method	Total Score	Specific/Simple	Measurable	Attainable	Relevant	Tangible/ Timely
	15	3	3	3	3	3
Publications and Documentation	State of Reliability Report					