

M-8								
Interconnection Reliabi Exceedance	ity Operating Limits (IROLs)							
Submittal Date	February 27, 2009							
Proposal Type	New □	Revision ⊠ March 16, 2022	Metric Analysis					
Definition	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							
Rating Criteria	 Yellow (monitor): First year in previous year, or the first year average Gray (stable): Count of IROLs less than or equal to the five year. 	 Red (actionable): Continued increase in count of IROLs > 20 minutes or continued increase in count of IROLs between 10 and 20 minutes that is greater than the five year average Yellow (monitor): First year increase in count of IROLs > 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 Gray (stable): Count of IROLs > 20 minutes is decreasing, or count of IROLs between 10 and 20 minutes is less than or equal to the five year average. Green (good/improving): No IROLs > 20 minutes and count of IROLs between 10 and 20 minutes is less 						
Purpose	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 thatadversely impact the reliability of the interconnection by ensuring prompt action toprevent or mitigate instances of exceeding IROLs.							
Formula or Type of Statistical Analysis	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.							



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Time Horizon	Rolling 5 year average							
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 (https://www.nerc.com/files/IRO-009-1.pdf.)							
Data Source	Reliability Coordinators submit to NERC							
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	Total Score	Specific/Simple	Measurable	Attainable	Relevant	Tangible/ Timely		
metric analysis method	15	3	3	3	3	3		
Publications and Documentation	State of Reliability Report							