

M-13	
Automatic AC Transmission Outages Initiated by Human Error	
Submittal Date	December 01, 2014
Proposal Type	New <input type="checkbox"/> <div style="display: inline-block; vertical-align: top; margin-left: 20px;"> Revision <input checked="" type="checkbox"/> Revised March 16, 2022 Reviewed October 16, 2019, Revised December 2, 2015 </div> <div style="display: inline-block; vertical-align: top; margin-left: 20px;"> Metric Analysis <input type="checkbox"/> </div>
Definition	Normalized count on a per transmission element basis (ac circuit or transformer) of 100 kV and above ac transmission element sustained automatic outages initiated by Human Error.
Rating Criteria	<ul style="list-style-type: none"> • Red (actionable): The outage frequency statistically significantly increased compared to the previous four years. • Yellow (monitor): The outage frequency increased compared to the previous four years, but the increase is not statistically significant. • White (stable): The outage frequency did not change or decreased compared to the previous four years, and the decrease is not statistically significant. • Green (good/improving): The outage frequency statistically significantly decreased compared to the previous four years.
Purpose	Gauge Human Errors as a contributing factor to AC transmission system Automatic Outages.
Formula or Type of Statistical Analysis	100 kV and above Sustained Automatic AC Outages initiated by Human Error = Number of Sustained Automatic AC Element Outages occurring on 100 kV and above elements initiated by Human Error / Total Number of 100 kV and above AC Elements (AC Circuits or Transformers).
Time Horizon	Five year rolling average
Metric Start Time or Baseline	Historical time frame

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Data Collection Interval and Roll Up	The TADS data provides the total number of automatic sustained transmission system outages and the number of outages initiated by Human Error ¹ for 100 kV and above.					
Ease of Collection	Data collected via the NERC TADS process.					
Aggregation	Results available by normalized counts on a NERC wide basis.					
Links to NERC Standard	None					
Data Source	The NERC TADS definitions and data.					
Data to be Submitted By	Entities submitting NERC TADS data.					
PAS and NERC Staff Use						
Need for Validation or Pilot	No, the data and results reported via the TADS process.					
SMART Rating PAS SMART rating of proposed metric, metric revision, or new metric analysis method	Total Score	Specific/Simple	Measurable	Attainable	Relevant	Tangible/Timely
	14	3	3	3	3	2
Publications and Documentation	State of Reliability Report					

¹ TADS Data Reporting Instructions can be viewed at: [Transmission Availability Data System \(TADS\) \(nerc.com\)](https://www.nerc.com/Transmission-Availability-Data-System-(TADS)-(nerc.com))