

<b>M-14</b>	
<b>Automatic AC Transmission Outages Initiated by Failed AC Substation Equipment</b>	
<b>Submittal Date</b>	Submitted December 01, 2014
<b>Proposal Type</b>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">                     New <input type="checkbox"/> </div> <div style="width: 45%;">                     Revision <input checked="" type="checkbox"/>                      Revised March 16, 2022                      Reviewed October 16, 2019,                      Revised on December 2, 2015                 </div> </div> <div style="text-align: right; margin-top: 10px;">Metric Analysis <input type="checkbox"/></div>
<b>Definition</b>	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 Failed AC Substation Equipment.
<b>Rating Criteria</b>	<ul style="list-style-type: none"> <li>• <b>Red (actionable):</b> The outage frequency statistically significantly increased compared to the previous four years.</li> <li>• <b>Yellow (monitor):</b> The outage frequency increased compared to the previous four years, but the increase is not statistically significant.</li> <li>• <b>White (stable):</b> The outage frequency did not change or decrease compared to the previous four years, and the decrease is not statistically significant.</li> <li>• <b>Green (good/improving):</b> The outage frequency statistically significantly decreased compared to the previous four years.</li> </ul>
<b>Purpose</b>	Track Failed AC Substation Equipment as a contributing factor of Sustained Automatic Transmission Outages.
<b>Formula or Type of Statistical Analysis</b>	100 kV and above Sustained AC Outages initiated by Failed AC Substation Equipment = Number of Sustained Automatic AC Element Outages occurring on 100 kV and above elements initiated by Failed AC Substation Equipment / Total Number of 100 kV and above AC Elements (AC Circuits or Transformers).
<b>Time Horizon</b>	Five year rolling average
<b>Metric Start Time or Baseline</b>	Historical time frame

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

<sup>1</sup> TADS Data Reporting Instruction can be viewed at: [Transmission Availability Data System \(TADS\) \(nerc.com\)](https://www.nerc.com/Transmission%20Availability%20Data%20System%20(TADS)%20(nerc.com))