

ALR6-15 Element Availability Percentage (APC)

Metric Number	ALR 6-15
Submittal Date	May 8, 2009
Sponsor Group (OC, PC or subgroup name)	SERC Reliability Corporation
Short Title	Element Availability Percentage (APC)

Metric Description Overall percent of time the aggregate of transmission system facilities (i.e., AC lines and transformers operated at 200 kV and above) are available for service. This includes outages caused by both automatic and non-automatic events. Momentary outages are not included in this calculation.

Purpose To determine the percent of time that the transmission system operated at 200 kV and above is available when outages due to automatic and non-automatic events are considered.

How will it be suited to indicate performance? The overall availability is the percentage of time the transmission system is available (i.e., in service) for the transmission of electricity. The relative percentage provides an indication of the overall availability of the transmission system operated at 200 kV and above.

The percent of time the interconnected transmission system (AC circuits and transformers) operated at 200 kV and above is available due to sustained automatic and non-automatic outages, is calculated as follows:

Formula

$$APC \text{ (in \%)} = \left(1 - \frac{\text{Total Sustained Outage Hours}}{\text{Total Element Hours}}\right) \times 100$$

where,

The APC, the Total Sustained Outage Hours and the Total Element Hours are defined and calculated in the TADS report¹.

Time Horizon	Historical perspective
Metric Start Time or Baseline and Roll Up	Year 2010, the first year of TADS data collection that includes Non-automatic outages

¹ The APC is defined on page 20 of the 2009 TADS Phase II Final Report, available at http://www.nerc.com/docs/pc/tadstf/TADS_Phase_II_Final_Report_091108.pdf.

Data Collection Interval and Roll Up	Data collection is through the NERC TADS procedure. Metric calculation is one value for each Interconnection (Eastern, Western, Texas, and Québec) for the aggregate of facilities 200 kV and above. The metric would be reported on the same interval as TADS reports.					
Ease of Collection	The TADS database makes this metric easily reportable on a uniform basis.					
Aggregation	Reported on an aggregate basis by Regional Entity, Interconnection (Eastern, Western, Texas, and Québec) and NERC.					
Linkage to NERC Standard	None					
Linkage to Data Source	NERC TADS data base http://www.nerc.com/docs/pc/tadswg/Data_Reporting_Instr_Manual_09-29-09.pdf					
Need for Validation or Pilot	No, the data and results will be reported via the TADS process when it becomes available. [Note: The former ECAR, MAIN, and MAPP regions had collected and reported similar data and statistics in the past and could be used for reference.]					
Data Submitting Entity	Transmission Owner via TADS reporting procedure					
SMART Rating	Total Score	Specific/Simple	Measurable	Attainable	Relevant	Tangible/Timely
	13	3	3	3	2	2
Reporting						
Style (look and feel)	Bar charts, with possible trend lines added in the future					
Publications and Documentation	This metric is defined in TADS report as well and will be tracked in NERC metrics reports.					