

PowerSouth Energy Cooperative Performance Criteria

The transmission system voltage and thermal steady state criteria is based on the system conditions after events, and any 15 minute operating guide. Also, PowerSouth considers the initial impact of the event and its severity to assure that the event does not cause uncontrolled tripping.

A. Voltage Criteria

The transmission system is planned to support steady state system voltage in accordance with the following table.

Condition	Element	Criteria (pu)	Comments
Normal System (NERC Cat. A)	Generator Buses (HS)	Capable of meeting voltage schedule	
	Transmission Buses	.95-1.05	
	Delivery Point Buses (HS)	.95-1.05	
Loss of a Single Element (NERC Cat. B)	Generator Buses (HS)	Capable of meeting voltage schedule	
	Transmission Buses	.93-1.05	
	Delivery Point Buses (HS)	.93-1.05	A lower value may be acceptable at certain locations based on nominal transformer winding ratio and member requirements
Other Single Element Contingencies	Generator Buses (HS)	Capable of meeting voltage schedule	This category is reserved for single contingencies that might cause the loss of multiple elements such as the loss of a bus
	Transmission Buses	0.92-1.05	
	Delivery Point Buses (HS)	0.90-1.05	
Loss of Multiple Elements (NERC Cat. C)	Generator Buses (HS)	Capable of meeting voltage schedule	
	Transmission Buses	0.90-1.05	Networked buses
	Delivery Point Buses (HS)	0.88-1.05	Radially served

B. Thermal Criteria

The transmission system is planned according to the following thermal criteria. For specific thermal ratings of lines and equipment, the [Facility Rating Methodology](#) should be referenced.

Condition	Element	Criteria	Comments
Normal System (NERC Cat. A)	Transmission Lines	Not to exceed 100% of seasonal rating	Rate A
	Transmission Transformers	Not to exceed nameplate at 55°C rise	
	Generator Step Up Transformers	Units sized to not limit seasonal generator output	
Loss of a Single Element (NERC Cat. B)	Transmission Lines	Not to exceed 100% of seasonal rating	Rate A
	Transmission Transformers	Not to exceed nameplate at 65°C rise	Seasonal ratings based on ambient. Additional rating may be available based on loss of life calculation
	Generator Step Up Transformers and associated equipment	Units sized to not limit seasonal generator output	
Other Single Contingencies	Transmission Lines	Not to exceed 100% of seasonal rating	Rate B. This category is reserved for single contingencies that might cause the loss of multiple elements such as the loss of a bus. Add'n rating applies for Transmission Transf.
	Transmission Transformers	Not to exceed nameplate at 65°C rise. Seasonal ratings based on ambient.	
	Generator Step Up Transformers	Units sized to not limit seasonal generator output	
Loss of Multiple Elements (NERC Cat. C)	Transmission Lines	Not to exceed 100% of seasonal rating or emergency rating	Rate B. 15 minute Max time limit on emergency ratings
	Transmission Transformers	Not to exceed nameplate at 65°C rise. Seasonal ratings based on ambient.	Additional rating may be available based on loss of life calculation
	Generator Step Up Transformers and associated equipment	Units sized to not limit seasonal generator output	