Lonesome Pine Load Shed Event
July 18, 2018

Donnie Bielak
Manager, Reliability Engineering
Agenda

- Overview
- Sequence of Events
- PAI Analysis
Sequence of Events

• **Monday 7/16/18**
  – **06:35**: Buckhorn – Lonesome Pine 138 kV line removed from service to perform scheduled maintenance

• **Wednesday 7/18/18**
  – **09:37**: Glen Lyn 138 kV bus tripped creating load pocket
    • Load pocket fed radially from Wyoming (no violations)
  – **10:52**: South Bluefield 138 kV capacitor switches in service automatically and trips/locks with South Princeton 138 kV capacitor
    • Results in severe low voltages in the area 5 kV below load dump
    • PJM directs AEP to shed load to return voltages to acceptable levels
• **Wednesday 7/18/18**
  
  - **11:14**: AEP sheds approximately 32 MW of load
    - Approximately 11,860 customers in West Virginia and Virginia
  
  - **12:37**: South Princeton capacitor restored
  
  - **12:37**: All 32 MW of load restored
  
  - **12:54**: Glen Lyn 138 kV bus returned to service
  
  - **14:23**: Buckhorn – Lonesome Pine 138 kV line returned to service
• PAI Analysis
  – There are no Non-Performance Charges or Bonus Credits resulting from the event
  – There was no possible generation dispatch (online or offline units) that would have mitigated the voltage violations
  – The voltage violations were in a localized load pocket caused by the transmission outages