



Intro to PJM Emergency Procedures

PJM State & Member Training Dept.



Objectives



- Define an emergency by PJM standards

Emergency Procedures

- An emergency in PJM is defined as:
 - An abnormal system condition requiring manual or automatic action to:
 - Maintain system frequency
 - Prevent loss of firm load, equipment damage or tripping of system elements
 - Ensure the safety of persons or property
 - Maintain the reliability of the electric system
 - A fuel shortage requiring departure from normal operating procedures
 - Abnormal natural events or man-made threats to reliability
 - Including events external to PJM that may require PJM action

Emergency Procedures

- 3 levels of emergency procedures:



- Most Alerts, Warnings and Actions are communicated via:
 - PJM All-Call
 - Posted to various PJM websites
- Alerts are issued in advance of the operating day
- Warnings and actions are issued during the operating day

Emergency Procedures

- PJM is responsible for declaring the existence of an Emergency, and for directing the operations of the PJM Members as necessary to manage, alleviate, or end an Emergency. PJM also is responsible for transferring energy on the PJM Members' behalf to resolve an Emergency. PJM is also responsible for executing agreements with other Control Areas interconnected with the PJM RTO for the mutual provision of service to meet an Emergency

Emergency Procedures

- The PJM dispatcher has the flexibility to:
 - Implement emergency procedures in whatever order is required
 - Exit the emergency procedures in a different order than they are implemented when necessary
- PJM members are expected to implement all emergency procedures immediately
 - Desired relief expected within 30 minutes unless otherwise directed

Emergency Procedures

- Implementation of Emergency Procedures
 - During unconstrained operations:
 - Implemented jointly across all PJM Control Zones, with the exception of Manual Load Dump
 - Manual Load Dump
 - Capacity deficient zone sheds load
 - If all zones are deficient, load shed is implemented proportionally based on level of shortage
 - Transmission constraints:
 - May require implementation on a Control Zone basis