



# 2016 PJM SPRING RTO RESTORATION DRILL

February 22<sup>nd</sup>-24<sup>th</sup>, 2016


- The Spring RTO Drill is 3-day annual drill that requires 100% participation from all Transmission Owners for NERC compliance (GO's participated at TO request)
- PJM coordinates the drill with input from the SRCS membership
- NERC CEH's are given for all members who participate
- The drill provides an opportunity for members to validate their individual restoration plans and identify any issues that may need to be addressed.

- PJM staffed 26 employees at the Milford Dispatch Training Simulator Room. (Dispatchers, Training, Support Staff)
- Transmission Owners staffed their company simulators. No members were present at PJM
- PJM Dispatchers utilized the Dispatch Training Simulator to model each TO's progress and provide a wide area overview

- PJM provided a WebEx based class to review drill expectations, logistics, and answer any outstanding questions
- PJM reviewed the 2 required injects which were submitted by each Transmission Owner.
- PJM performed communication checks with each Transmission Owner to verify inbound/outgoing calls are received. No real-time phone numbers were used for the drill.

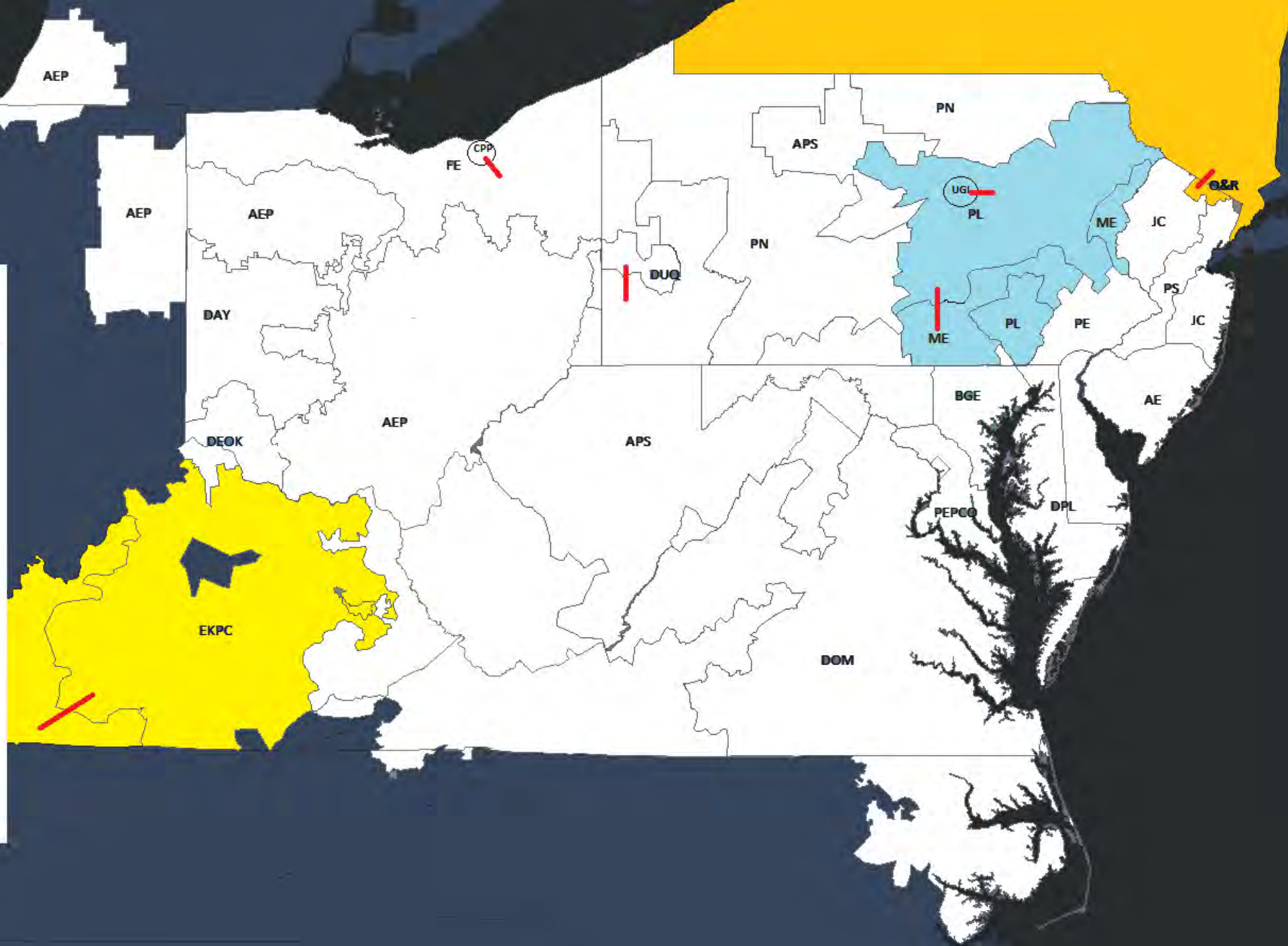
- Started with an SOS conference call stating the entire PJM RTO was blacked out with no outside assistance
- Members reported the status of their individual system to PJM (Utilizing verbal communications and Manual-36 documents)
- Members worked thru their individual restoration plans with a “bottom-up” restoration
- The initial focus was bringing on Black Start resources to establish cranking paths for safe shutdown at all nuclear stations.

DRILL TIME: 12:00 Day 1

Restored Tie-Line: 


LOAD RESTORED : 8115MW


AEP:	905MW
COMED:	300MW
FE-WEST:	453MW
DAY:	182MW
DEOK:	120MW
EKPC:	470MW
APS:	500MW
DUQ:	53MW
CPP:	10MW
FE-EAST:	304MW
PL:	580MW
PE:	426MW
PS:	30MW
AE:	400MW
BGE:	437MW
PEP:	350MW
DPL:	474MW
DOM:	2054MW
UGI:	30MW
RECO:	37MW



- SOS conference to discuss the previous days accomplishments and the plan to proceed
- Members informed that outside resources are available
- PJM worked with the members to identify possible tie opportunities
- 1230hrs PJM re-established ACE control via the Dispatch Training Simulator
- SOS conference call @ 1300 for final drill de-brief.

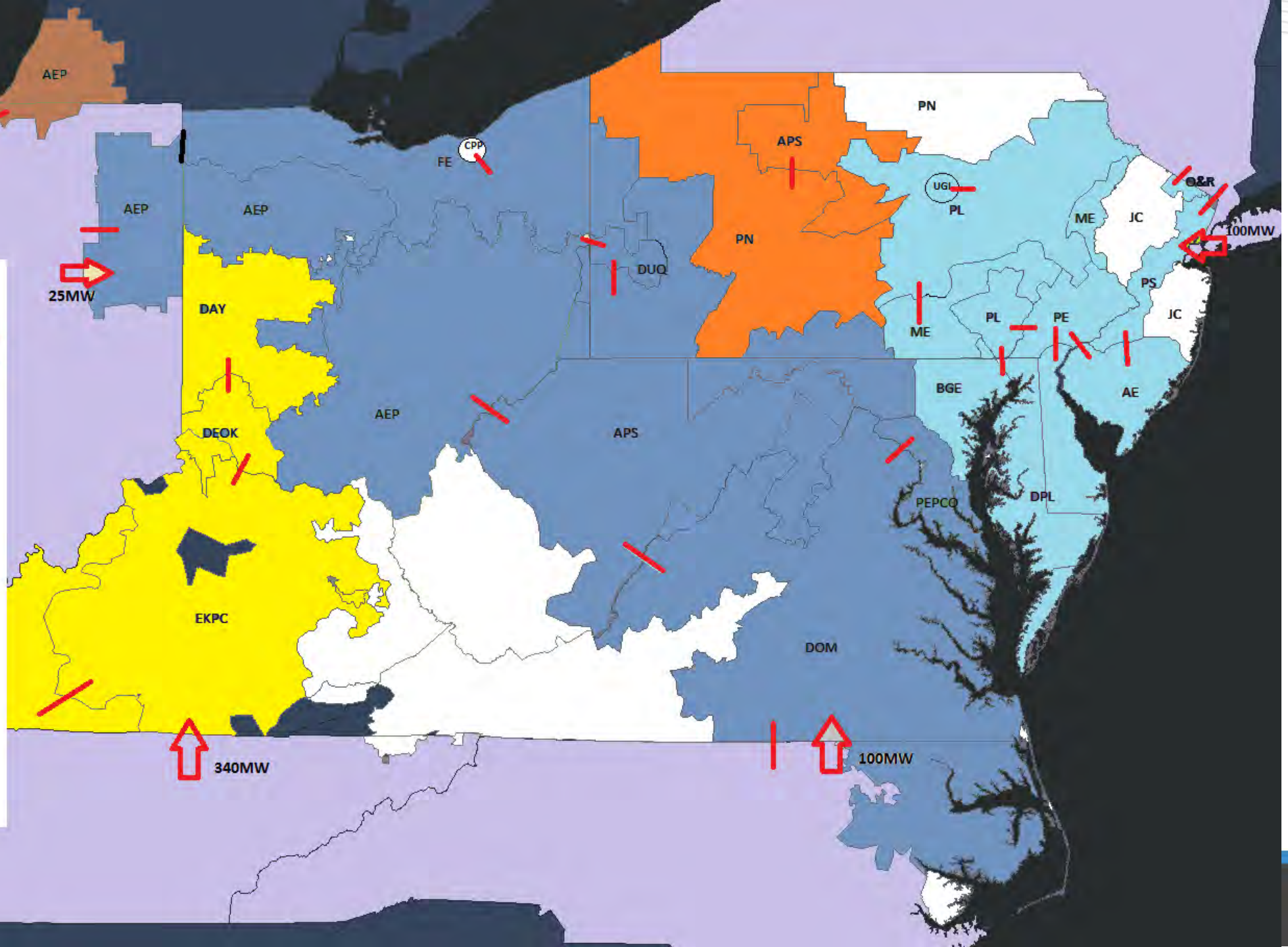
**DRILL TIME: 1300 DAY-2**

**Restored Tie-Line:** 

**Proposed Tie-Line:** 

**LOAD RESTORED: 26,742MW (30%)**

AEP:	1687MW
COMED:	925MW
FE-WEST:	2872MW
DAY:	528MW
DEOK:	638MW
EKPC:	1436MW
FE-SOUTH:	1639MW
DUQ:	1883MW
CPP:	200MW
FE-EAST:	710MW
PL:	1700MW
PE:	1050MW
PS:	1000MW
AE:	530MW
BGE:	1022MW
PEP:	2128MW
DPL:	921MW
DOM:	5700MW
UGI:	50MW
RECO:	123MW





- Day 1: 274 Participants
- Day 2: 266 Participants
- 2936 NERC CEH's awarded
- Overall satisfaction 4.4 – 5
- Final drill documents available at the next SRCS meeting later this month.