TO “Opt Out” and Cross Zonal Coordination Options

SRSTF Meeting
December 10, 2012
Scenario 1 – TO and PJM Agree to Unit Selection

In Selection Process:
- TO and PJM agree to select BS1, BS2 and BS3 to meet critical load requirements
  - These units would be compensated through PJM OATT
- BS4 is not selected for TO Zone A
  - Available for use in other zones

PJM expects this to be the most common situation.
PJM/TO collaboration is essential.
All scenarios assume an iterative approach to get PJM/TO agreement on BS unit selections.
Scenario 2- TO Desires Additional Black Start

In Selection Process:
- TO and PJM agree to select BS1, BS2 and BS3 to meet critical load requirements
  - These units would be compensated through PJM OATT
  - Must meet PJM testing requirements
- TO Zone A desires additional Black Start
  - TO Zone A contracts with BS4
  - Compensation between TO and BS4 and does not flow through PJM OATT
  - BS4 incorporated into System Restoration Plan for TO Zone A
    - BS4 must meet NERC Requirements for testing (not PJM requirements)
  - PJM would document BS4 in Black Start database
In Selection Process:
- TO and PJM agree to select BS1 and BS3 to meet critical load requirements
  - These units would be compensated through PJM OATT
  - Must meet PJM testing requirements
- PJM selects BS2 to meet TO Zone A critical load. TO desires BS4 to meet critical load.
- TO Zone A “opts out” of selection of BS2.
  - PJM Reliability criteria must still be met (critical load met, redundancy)
  - TO Zone A contracts with BS4
  - Compensation between TO and BS4 and does not flow through PJM OATT
  - BS4 incorporated into System Restoration Plan for TO Zone A
    - BS4 must meet NERC Requirements for testing (not PJM requirements)
  - PJM would document BS4 in Black Start database
Scenario 4- Selection Process “Opt Out”

In Selection Process:
- PJM selects BS1, BS2 and BS3 to meet critical load requirements
- TO desires BS4 and BS5 to meet critical load.
- TO Zone A “opts out” of selection of BS1, BS2 and BS3.
  - PJM Reliability criteria must still be met (critical load met, redundancy)
  - TO Zone A contracts with BS4 and BS5
  - Compensation between TO and BS4 and BS5 and does not flow through PJM OATT
  - BS4, BS5 incorporated into System Restoration Plan for TO Zone A
    - BS4 and BS5 must meet NERC Requirements for testing (not PJM requirements)
  - PJM would document BS4 and BS5 in Black Start database
Cross Zonal Coordination Level 1 – Black Start from a Different Zone

In Selection Process:
- TO and PJM agree to select BS1, BS2 to meet critical load requirements in TO Zone A
  - These units would be compensated through PJM OATT
  - BS2 black start costs would be allocated to TO Zone A (OATT allows this today)
- TO Zone B
  - Establish cranking path from BS2 to border of TO Zone A (Incorporate into Restoration Plan)
- TO Zone A
  - Establish cranking path from border of TO Zone B to critical load
  - Coordinate load restoration with TO Zone B (frequency control)
- PJM – In role of RC and TOP, PJM would coordinate restoration of cranking paths between zones.
Cross Zonal Coordination Level 2 – Load Restoration across Zones

In Selection Process:
- TO and PJM agree to select BS1, BS2 to meet critical load requirements in TO Zone A
  - These units would be compensated through PJM OATT
- TO Zone B
  - BS2 also supplies critical load and restores customer load in TO Zone B
  - Coordinate load restoration with TO Zone A (frequency control)
  - TO Zone B would pay pro-rata share of BS2 (with TO Zone A) based on critical load served (Need to add to proposal)
- TO Zone A
  - Establish cranking path from BS2 to TO Zone B border and TO Zone A critical load
  - Coordinate load restoration with TO Zone B (frequency control)
- TOs involved may refuse coordination unless reliability criteria in either zone can not be met otherwise.

- PJM – In role of RC and TOP, PJM would coordinate restoration of cranking paths between zones.
Cross Zonal Coordination Level 3 – Full Aggregation of TO zones into Restoration Regions

In Selection Process:
- PJM, TO Zone A, TO Zone B, TO Zone C agree to aggregate System Restoration Plans
  - BS1, BS2, BS3 selected to meet critical load requirements in Restoration Region
  - New Restoration Plan for Restoration Region A would need to be written with input from each involved TO
  - BS unit costs would be allocated to each TO on pro-rata basis based on critical load served. (Need to add to proposal)
- All involved TOs and PJM must agree to this level of aggregation for it to happen