

OM#	73	Rev#	0
Effective:	10/01/11		
Revise/Review By:	11/31/11		

1. PURPOSE / INTENT

The Powerton/Joliet SPS will trip Powerton Unit #5 and Joliet Unit #7 on the loss of the Dumont-Wilton Center 765 kV line. The SPS was put into service as a measure against frequent dispatch of area units on the loss of Dumont-Wilton Center. The SPS is a temporary solution until upgrades in the COMED and NIPSCO systems are completed. The specific conditions, which will arm the SPS to trip the units, are:

- COMED zonal load is less than 15,000 MW.
- Dumont-Wilton Center line flow is greater than 500 MW into Dumont prior to the trip.
- SPS is ARMED by Edison Mission at the direction of PJM.

All these conditions must exist for the SPS to operate. The SPS receives the COMED zonal load from a telemetered point. The Dumont-Wilton Center line status is determined from the line flow measures and breaker statuses from both the Wilton Center and Dumont stations. The line flow measurements from both stations must agree that there is a 0 MW flow to determine a trip condition. In addition, all four breakers for the line must be opened for a trip condition.

PJM shall direct that the SPS be set in an “ARMED” status when PJM Security Analysis is projecting congestion for the loss of Dumont-Wilton Center. The SPS will NOT be “ARMED” under the following conditions:

- Transmission outage(s) directly connected to the Dumont-Wilton Center 765 kV line at Dumont or Wilton Center.
- RTUs or telemetry work at Dumont or Wilton Center.
- Emergency procedures (Hot Weather Alert, Cold Weather Alert, capacity related alerts/warnings/actions, and conservative operations).
- COMED load is above 14,000 MW AND is trending higher.

Powerton Unit #5 and Joliet Unit #7 trips independently of one another. In addition, an outage of either unit will not inhibit the SPS.

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2. PROCEDURE

When the PJM Security Analysis package shows there is a thermal overload on the loss of Dumont-Wilton Center, PJM will study the arming of the SPS to determine whether the SPS will alleviate the overload. PJM will also determine whether the COMED load and Dumont-Wilton Center line flow conditions are also present before arming the SPS. If the arming of SPS does alleviate the overload, PJM will activate the SPS contingency for Dumont-Wilton Center and Powerton-Joliet Units and will direct Edison Mission to ARMED the SPS. PJM will notify Edison Mission, COMED, AEP, and MISO on the ARMING and UNARMING of the SPS.

PJM Actions:

- Study the loss of Dumont-Wilton Center and Powerton/Joliet Units (SPS). If the SPS alleviates thermal violations and the conditions for NOT ARMING above are met, PJM will ARMED the SPS:
 - Activate the “SPS Armed: DUM-WIL 11215 w/ PO-5 & JO-7 Trip” contingency and deactivate the “Dumont-Wilton Center 765kV Line” contingency in the Security Analysis package.
 - If Powerton #5 is offline, activate the “SPS Armed: DUM-WIL 11215 w/ JO-7 Trip” contingency.
 - If Joliet #7 is offline, activate the “SPS Armed: DUM-WIL 11215 w/ PO-5 Trip” contingency.
 - Direct Edison Mission to “ARMED” the SPS.
 - If one unit is offline, Direct Edison Mission to “ARMED” the SPS on the online unit.
 - Notify COMED, AEP, and MISO that the SPS is ARMED along with the unit name(s).
 - If additional relief is required with the SPS armed, ensure the Powerton/Joliet SPS corresponding contingencies and flowgates are employed should either off-cost or TLR be utilized.
- Assess the UNARMING of the SPS for ANY of the following conditions:
 - When COMED load is at (or above) 14,000 MW AND is trending higher. PJM will transition to monitor and to control for the loss of Dumont-Wilton Center (without the SPS):
 - Activate the “Dumont-Wilton Center 765kV Line” contingency in the Security Analysis package.
 - If relief is required, ensure the loss of Dumont-Wilton Center contingencies and flowgates are employed should either off-cost or TLR be utilized.
 - When COMED load is above 14,800 MW AND trending higher, PJM will UNARMED the SPS immediately:
 - Activate the “Dumont-Wilton Center 765kV Line” contingency and deactivate the SPS Armed contingency in the Security Analysis package.
 - Direct Edison Mission to “UNARMED” the SPS.

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- Notify COMED, AEP, and MISO that the SPS is UNARMED along with the unit name(s).
- If relief is required, utilize the loss of Dumont-Wilton Center contingency and flowgates for off-cost or TLR.
 - When the SPS is no longer needed for control.
 - When the telemetry at Dumont or Wilton Center are experiencing problems or of suspect quality.
 - When PJM is issuing Emergency procedures (Hot Weather Alert, Cold Weather Alert, capacity related alerts/warnings/actions, and conservative operations).
- When PJM UNARMED the SPS for any reason, PJM will:
 - Activate the “Dumont-Wilton Center 765kV Line” contingency and deactivate the “SPS Armed” contingency.
 - Direct Edison Mission to “UNARMED” the SPS.
 - Notify COMED, AEP, and MISO that the SPS is UNARMED.
- If the SPS is ARMED and operates on the loss of Dumont-Wilton Center but fails to trip the units after 60 seconds, PJM will direct Edison Mission to manually trip the ARMED unit(s), Powerton 5 and/or Joliet 7 units.

Edison Mission Actions:

- Notify PJM Dispatch of condition that may affect the operation of the SPS or the arming of the SPS.
- Place the SPS in an “ARMED” or “UNARMED” status as directed by PJM.
- If the SPS fails to operate, Edison Mission will immediately trip the ARMED unit(s), Powerton 5 and/or Joliet 7 units, without delay, upon the direction of PJM.

ComEd Actions:

- Notify PJM Dispatch of any work on the RTU or Telemetry at Wilton Center.

AEP Actions:

- Notify PJM Dispatch of any work on the RTU or Telemetry at Dumont.

3. REFERENCES

4. ASSOCIATED APPLICATIONS

EMS, SCED, IDC, IEP

IEP Procedure ID:	n/a	Event Name:	
Note:			

SCADA/EMS:	n/a	Display:	
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Note:	
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System Impacts:	n/a	Title:	
Note:			

5. REVISION HISTORY

Rev. #	Date	Author	Description
0	09/30/11	Liem Hoang	OM Creation