

System Operations Subcommittee
PJM Operations Summary
May 2011 (for April 2011 Operations)

PJM RTO CPS1 136.5%; BAAL 99.6% (NERC 100%); (CPS2 90.6%); DCS No Event

100% Spinning (5 Events)

4/26/2011	4/26/2011 21:22	4/26/2011 21:30	Spinning	Spinning in RFC for Unit Trip Mountaineer 1300 MW.
4/21/2011	4/21/2011 16:02	4/21/2011 16:08	Spinning	Spinning in MIDATL for Unit Trip Salem 1 tripped unit loaded at 1125 mw.
4/16/2011	4/16/2011 18:51	4/16/2011 19:00	Spinning	Spinning in PJM for Unit Trip Loss of Surry units 1 & 2 1,767MW gross.
4/10/2011	4/10/2011 20:28	4/10/2011 20:34	Spinning	Spinning in RFC for Belmont trnfmr east bus section loss- AES PLSN 1 and AES PLSN 2 tripped total mw 1285
4/2/2011	4/2/2011 9:13	4/2/2011 9:24	Spinning	Spinning in MIDATL for Unit Trip Lost Hatfield 2 loaded at 550 MW with regulation at full raise.

Shared Reserve (7 Events)

4/25/2011	4/25/2011 16:20	4/25/2011 16:40	Shared Reserve	-150 MW with NYISO - NEISO loss of Granite Ridge. 700 MW - Regulation
4/25/2011	4/25/2011 16:20	4/25/2011 16:40	Shared Reserve	-150 MW with NYISO - NEISO loss of Granite Ridge. 700 MW - Regulation
4/22/2011	4/22/2011 11:55	4/22/2011 12:24	Shared Reserve	-217 MW with NYISO - Mystic 8 & 9 - Regulation
4/21/2011	4/21/2011 16:06	4/21/2011 16:16	Shared Reserve	500 MW with NYISO - Salem 1
4/16/2011	4/16/2011 18:55	4/16/2011 20:00	Shared Reserve	500 MW with VACAR - Loss of Surry 1 & 2
4/16/2011	4/16/2011 18:53	4/16/2011 18:55	Shared Reserve	500 MW with NYISO - N/A
4/3/2011	4/3/2011 15:49	4/3/2011 16:10	Shared Reserve	-117 MW with NYISO - Bruce 3 - Regulation

PCLLRW's (22 Events: 1 Gen, 9 Switch, 12 Load)

4/18/11	4/18/2011 19:21	4/21/2011 13:42	Generic - Generation	Constellation ticket #780573 work at Calvert Cliffs #2 could cause both Calvert Cliffs #1 and #2 to trip(1700 mw). double spinning is required. Not allowed to start work until 2200 hrs on 4/18/2011, due to eve pick-up. Double spinning is required until 23 hrs on 4/20/2011.
4/28/2011	4/28/2011 8:28	4/28/2011 21:35	Non-Market Post Contingency Local Load Relief Warn	PCLLRW of 10 MW in the Huffman area of AEP has been issued for Transmission Contingency Control. Additional Comments: Issued for low voltage violation beyond load dump at Huffman and Pipers Gap 138kv stations for I/o Jacksons Ferry - Huffman 138kv line.
4/20/2011	4/20/2011 21:18	4/23/2011 18:55	Non-Market Post Contingency Local Load Relief Warn	PCLLRW of 50MW MW in the Enon area of APS has been issued for Transmission Contingency Control. Additional Comments: PCLLRW of 50 MW in the area of Enon for Post Contingency Low voltages at Enon for the loss of Dutch-Fork Windsor. APS has Scada control to dump load at Enon on the 1A and 1B transformers.
4/14/2011	4/14/2011 10:13	4/15/2011 10:08	Non-Market Post Contingency Local Load Relief Warn	PCLLRW of 15 mws MW in the MillCreek/Eldean area of DAYTON has been issued for Transmission Contingency Control. Additional Comments: For the loss of either Shelby-Sidney 138KV line or Shelby 345-138KV Transformer
4/14/2011	4/14/2011	4/14/2011	Non-Market	PCLLRW of 25 MW in the Huffman, Piper's Gap area of

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	7:33	10:27	Post Contingency Local Load Relief Warn	AEP has been issued for Transmission Contingency Control. AEP has 69kv caps at Galax that will switch in automatically if the contingency would occur Additional Comments: Post-Contingency low voltages below low dump in Huffman and Piper's Gap area I/o Jackson's Ferry-Huffman
4/13/2011	4/13/2011 6:49	4/13/2011 12:07	Non-Market Post Contingency Local Load Relief Warn	PCLLRW of 13 MW MW in the Pipersgap- Huffman area of AEP has been issued for Transmission Contingency Control. Additional Comments: Post contingency low voltages at Huffman and Pipersgap for I/o JacksonFerry Huffman. There are Capacitors in the area that would be placed in service post-Contingency. In the event the capacitors are unavailable or ineffective, this PCLLRW would be used to dump load at PipersGap. AEP Operator confirmed they have SCADA control of the loads at Pipersgap.
4/28/2011	4/28/2011 13:11	4/28/2011 23:18	Post Contingency Local Load Relief Warning	PCLLRW of 25 MW in the Cecil area of DPL (Delmarva) has been issued for Transmission Contingency Control. Additional Comments: Cecil T3 I/o 5014 line. Post contingency switching exists. Open 235CB at Cecil.
4/27/2011	4/27/2011 15:54	4/27/2011 18:13	Post Contingency Local Load Relief Warning	PCLLRW of 50 MW in the Barrack Rd area of Dominion has been issued for Transmission Contingency Control. Additional Comments: PCLLRW issued for 50 Mw's @ 15:35 for Crozet-Dooms 230Kv Line for L/O Meadowbrook-Greenland 500 KV Line. Post Contingency switching: Order one (1) bath County Generator off line. Reason: Post Contingency Switching available
4/27/2011	4/27/2011 15:13	4/27/2011 18:13	Post Contingency Local Load Relief Warning	PCLLRW of 35 MW in the dooms area of Dominion has been issued for Transmission Contingency Control. Additional Comments: PCLLRW issued at 15:10 for 35 MW's for Dooms TX #9 for L/O Valley 500/230KV transformer. Post contingency switching: No post contingency switching at this time. Reason: Generation - slow response
4/26/2011	4/26/2011 13:43	4/26/2011 18:03	Post Contingency Local Load Relief Warning	PCLLRW of 15 MW in the Dooms area of Dominion has been issued for Transmission Contingency Control. Additional Comments: PCLLRW ISSUED @ 1340 for 15 mw's on the Dooms #9 xfmr for the I/o Valley 500/230kv xfmr. Reason: Generation - slow response
4/26/2011	4/26/2011 13:42	4/26/2011 18:03	Post Contingency Local Load Relief Warning	PCLLRW of 15 MW in the Endless Cavern area of Dominion has been issued for Transmission Contingency Control. Additional Comments: PCLLRW ISSUED @ 1305 for 15 mw's on the Endless Cavern #4 Xfmr for the I/o Meadow Brook - Greenland Gap line. Reason: Load - no generation or switching available
4/26/2011	4/26/2011 8:07	4/26/2011 12:25	Post Contingency Local Load Relief Warning	PCLLRW of 5 MW in the Halifax area of Dominion has been issued for Transmission Contingency Control. Additional Comments: PCLLRW ISSUED @ 0749 for 5 mw's on the Halifax - Halifax 296 line for the I/o 570 Line: Carson - Wake line.
4/25/2011	4/25/2011 17:07	4/25/2011 21:48	Post Contingency Local Load Relief	PCLLRW of 14 MW in the Ivyhill / Reusens area of AEP has been issued for Transmission Contingency Control. Additional Comments: Post Contingency options: Order Smith Mountain generation on line to relieve the post

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			Warning	contingency overload. If Smith Mountain cannot provide sufficient generation to clear the overload, shed load in the Ivyhill / Reusens area of AEP. Reason: Post Contingency Switching available
4/25/2011	4/25/2011 13:48	4/25/2011 21:48	Post Contingency Local Load Relief Warning	PCLLRW of 60 MW in the Danville area of AEP has been issued for Transmission Contingency Control. Additional Comments: PCLLRW is for Danville-E. Danville I/o Jacksons-Antioch. Post-contingency switching solution: open 'N' CB @ Danville alleviates post-contingent violation. Reason: Post Contingency Switching available
4/16/2011	4/16/2011 19:55	4/16/2011 20:54	Post Contingency Local Load Relief Warning	PCLLRW of 50 MW in the Hopewell area of Dominion has been issued for Transmission Contingency Control. Additional Comments: For the loss of Carson-Septa or Septa-fentress 500 kv lines. Reason: Generation - slow response
4/14/2011	4/14/2011 19:01	4/14/2011 19:59	Post Contingency Local Load Relief Warning	PCLLRW of 4 MW in the England/Scull area of AE (Atlantic Elec) has been issued for Transmission Contingency Control. Additional Comments: England-Middle Tap FLO Oyster Creek Gen. Reason: Load - no generation or switching available
4/7/2011	4/7/2011 13:15	4/8/2011 0:03	Post Contingency Local Load Relief Warning	PCLLRW of 10 MW in the E Lima - New Liberty area of AEP has been issued for Transmission Contingency Control. Additional Comments: Post contingency switching solution - open the M CB at E Lima. Reason: Post Contingency Switching available
4/6/2011	4/6/2011 7:00	4/6/2011 9:45	Post Contingency Local Load Relief Warning	PCLLRW of 20 MW in the River Road area of Dominion has been issued for Transmission Contingency Control. Reason: Load - no generation or switching available
4/4/2011	4/4/2011 20:55	4/4/2011 20:55	Post Contingency Local Load Relief Warning	PCLLRW of 100 MW in the Alloy/CoalFork area of AEP has been issued for Transmission Contingency Control. Additional Comments: Overloads caused by storm tripping of 765kv lines in the AEP zone. Reason: Load - no generation or switching available
4/4/2011	4/4/2011 20:52	4/4/2011 20:55	Post Contingency Local Load Relief Warning	PCLLRW of 100 MW in the Ruth/Chester area of AEP has been issued for Transmission Contingency Control. Additional Comments: Overloads caused by storm trippings of 765kv lines in AEP zone Reason: Load - no generation or switching available

Emergency Procedures (11 Events)

4/30/2011	4/30/2011 1:38	4/30/2011 8:19	Emergency Procedure	Issued High System Voltage for Mid-Atlantic - Region, Dominion - Control Zone As of 01:35 New hours, all companies shall take the following actions on the Bulk Electric System: 1. Switch capacitors out of service. 2. Switch reactors in service. 3. Ensure all SVCs are absorbing reactive power. 4. Generation Owners coordinate reactive power adjustments with Transmission Owners (TOs). 5. Generation Owners communicate with PJM and TOs restrictions to their generators ability to
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4/29/2011	4/29/2011 2:06	4/29/2011 5:46	Emergency Procedure	absorb MVARs that vary from existing "D" curve. Target: Distribution Companies/Transmission Owners/Generation Issued High System Voltage for Mid-Atlantic - Region, Southern - Region As of 02:00 New hours, all companies shall take the following actions on the Bulk Electric System: 1. Switch capacitors out of service. 2. Switch reactors in service. 3. Ensure all SVCs are absorbing reactive power. 4. Generation Owners coordinate reactive power adjustments with Transmission Owners (TOs). 5. Generation Owners communicate with PJM and TOs restrictions to their generators ability to absorb MVARs that vary from existing "D" curve. Target: Distribution Companies/Transmission Owners/Generation
4/28/2011	4/28/2011 7:50	4/28/2011 7:59	Emergency Procedure	Issued Manual Load Dump Warning for PPL - Transmission Zone As of 07:30 hours, a Manual Load Dump Warning has been issued. Additional Comments: Issued a Manual Load Dump Warning for the Juniata area. For the L/O Juniata-Sunbury-Susqu. Post contingency switching is to open the #2 xfrm.
4/24/2011	4/24/2011 0:26	4/24/2011 9:35	Emergency Procedure	Issued High System Voltage for PJM - RTO As of 00:30 New hours, all companies shall take the following actions on the Bulk Electric System: 1. Switch capacitors out of service. 2. Switch reactors in service. 3. Ensure all SVCs are absorbing reactive power. 4. Generation Owners coordinate reactive power adjustments with Transmission Owners (TOs). 5. Generation Owners communicate with PJM and TOs restrictions to their generators ability to absorb MVARs that vary from existing "D" curve. Target: Distribution Companies/Transmission Owners/Generation
4/21/2011	4/21/2011 0:40	4/21/2011 7:02	Emergency Procedure	Issued High System Voltage for Mid-Atlantic - Region, Dominion - Control Zone As of 00:35 New hours, all companies shall take the following actions on the Bulk Electric System: 1. Switch capacitors out of service. 2. Switch reactors in service. 3. Ensure all SVCs are absorbing reactive power. 4. Generation Owners coordinate reactive power adjustments with Transmission Owners (TOs). 5. Generation Owners communicate with PJM and TOs restrictions to their generators ability to absorb MVARs that vary from existing "D" curve. Target: Distribution Companies/Transmission Owners/Generation
4/19/2011	4/19/2011 2:40	4/19/2011 5:45	Emergency Procedure	Issued High System Voltage for PJM - RTO As of 02:40 New hours, all companies shall take the following actions on the Bulk Electric System: 1. Switch capacitors out of service. 2. Switch reactors in service. 3. Ensure all SVCs are absorbing reactive power. 4. Generation Owners coordinate reactive power adjustments with Transmission Owners (TOs). 5. Generation Owners communicate with PJM and TOs restrictions to their generators ability to absorb MVARs that vary from existing "D" curve. Target: Distribution Companies/Transmission Owners/Generation
4/18/2011	4/18/2011 1:25	4/18/2011 5:15	Emergency Procedure	Issued High System Voltage for PJM - RTO As of 01:20 New hours, all companies shall take the following actions on the Bulk Electric System: 1. Switch capacitors out of service. 2. Switch reactors in service. 3. Ensure all SVCs

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4/16/2011	4/16/2011 1:45	4/16/2011 5:00	Emergency Procedure	<p>are absorbing reactive power. 4. Generation Owners coordinate reactive power adjustments with Transmission Owners (TOs). 5. Generation Owners communicate with PJM and TOs restrictions to their generators ability to absorb MVARs that vary from existing "D" curve. Target: Distribution Companies/Transmission Owners/Generation</p> <p>Issued High System Voltage for Mid-Atlantic - Region, Southern - Region As of 01:41 New hours, all companies shall take the following actions on the Bulk Electric System: 1. Switch capacitors out of service. 2. Switch reactors in service. 3. Ensure all SVCs are absorbing reactive power. 4. Generation Owners coordinate reactive power adjustments with Transmission Owners (TOs). 5. Generation Owners communicate with PJM and TOs restrictions to their generators ability to absorb MVARs that vary from existing "D" curve. Target: Distribution Companies/Transmission Owners/Generation</p>
4/15/2011	4/15/2011 1:11	4/15/2011 5:00	Emergency Procedure	<p>Issued High System Voltage for Mid-Atlantic - Region, Dominion - Control Zone As of 01:10 New hours, all companies shall take the following actions on the Bulk Electric System: 1. Switch capacitors out of service. 2. Switch reactors in service. 3. Ensure all SVCs are absorbing reactive power. 4. Generation Owners coordinate reactive power adjustments with Transmission Owners (TOs). 5. Generation Owners communicate with PJM and TOs restrictions to their generators ability to absorb MVARs that vary from existing "D" curve. Target: Distribution Companies/Transmission Owners/Generation</p>
4/14/2011	4/14/2011 1:36	4/14/2011 5:06	Emergency Procedure	<p>Issued High System Voltage for Mid-Atlantic - Region, Dominion - Control Zone As of 01:35 New hours, all companies shall take the following actions on the Bulk Electric System: 1. Switch capacitors out of service. 2. Switch reactors in service. 3. Ensure all SVCs are absorbing reactive power. 4. Generation Owners coordinate reactive power adjustments with Transmission Owners (TOs). 5. Generation Owners communicate with PJM and TOs restrictions to their generators ability to absorb MVARs that vary from existing "D" curve. Target: Distribution Companies/Transmission Owners/Generation</p>
4/12/2011	4/12/2011 23:24	4/13/2011 5:42	Emergency Procedure	<p>Issued High System Voltage for Mid-Atlantic - Region, Dominion - Control Zone As of 23:25 New hours, all companies shall take the following actions on the Bulk Electric System: 1. Switch capacitors out of service. 2. Switch reactors in service. 3. Ensure all SVCs are absorbing reactive power. 4. Generation Owners coordinate reactive power adjustments with Transmission Owners (TOs). 5. Generation Owners communicate with PJM and TOs restrictions to their generators ability to absorb MVARs that vary from existing "D" curve. Target: Distribution Companies/Transmission Owners/Generation</p>