

System Operations Subcommittee
PJM Operations Summary
March 2010 (for February 2010 Operations)

PJM RTO CPS1 139.5%; BAAL 99.6% (NERC 100%); (CPS2 90.3%); DCS 100%

DCS Event

- On 2/18/2010 @ 8:25 Calvert Cliffs #1 and #2 Tripped at 1691 MW 100% Spinning
- On 2/24/2010 @ 15:02 Keystone #2 Tripped at 844 MW 100% No Spinning or Shared Reserves

Reserve Sharing (3 Events)

2/3/2010	02/03/2010 20:22	02/03/2010 20:37	Emergency Procedures	Shared Reserve: -93 MW with NYISO - Loss NEPT 660mw
2/18/2010	02/18/2010 08:30	02/18/2010 08:40	Emergency Procedures	Shared Reserve: 876 MW with NYISO - Calvert Cliffs 1&2 trip
2/26/2010	02/26/2010 11:08	02/26/2010 11:20	Emergency Procedures	Shared Reserve: -146 MW with NYISO - Millstone 2, 873 MW - Regulation

100% Spinning (1 Event)

2/18/2010	02/18/2010 08:26	02/18/2010 08:46	Emergency Procedures	Spinning: Spinning in MIDATL for Unit Trip CALVERT CLIFFS 1 & 2 units tripped approx. 1750mws.
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PCLLRW 40 Events (Gen 0, Load 9, Switch 31)

2/1/2010	02/01/2010 11:31	02/01/2010 16:25	Transmission West Log	PN : PCLLRW (MP2 Facilities) Rocktown-Shawville 115kv for the I/o Warren #4 Transf. FE will shed 30MW's load at Dubois post contingency.
2/3/2010	02/03/2010 08:12	02/03/2010 12:17	Emergency Procedures	PCLLRW of 15 MW in the Bartonsville area of APS has been issued for Transmission Contingency Control. Additional Comments: Post Contingency switching lowering Mt Storm and Bath County. BES 2 facility, Notes: Stephens-Stonewall STE-STO L/O Doubs-Mt Storm.
2/4/2010	02/04/2010 07:03	02/04/2010 08:53	Emergency Procedures	PCLLRW of 10 MW in the Gore area of APS has been issued for Transmission Contingency Control. Additional Comments: Contingency is on the Stephenson-Stonewall 138 kV line for the loss of the Doubs-Mt Storm 500 kV line. Post Contingency Switching Solution: Upon contingency, open the 138 kV Kearneysville CB at Opequon. Reason: Post Contingency Switching available
2/7/2010	02/07/2010 17:40	02/07/2010 21:51	Emergency Procedures	PCLLRW of 44 MW in the Winchester area of APS has been issued for Transmission Contingency Control. Additional Comments: Post -contingency switching open the Opequon-Kearneysville 138KV line @ Opequon
2/8/2010	02/08/2010 08:13	02/08/2010 13:37	Emergency Procedures	PCLLRW of 15MW MW in the Opequon area of APS has been issued for Transmission Contingency Control. Additional Comments: Contingency is on the Stephenson-Stonewall 138 kV line for the loss of the Doubs-Mt Storm 500 kV line. Post Contingency Switching Solution: Upon contingency, open the 138 kV Kearneysville CB at Opequon Reason: Post Contingency Switching available
2/8/2010	02/08/2010 10:23	2/8/2010 11:47	Transmission West Log	PN : Opened Warren-Falconer CB for actual on the Warren-Falconer line, Notes: FE requested a PCLLRW for 12mw for Elm Street voltage for I/o Warren-Glade 230kv line. PJM issued a PCLLRW for Elm Street for 12mw @ 1049.
2/8/2010	02/08/2010 17:53	02/08/2010 23:58	Emergency Procedures	PCLLRW of 40 MW in the Opequon area of APS has been issued for Transmission Contingency Control. Additional Comments: PCLLRW for 40 MW in the Opequon area of APS has been issued for Transmission Contingency Control. Additional Comments: Contingency is on the

System Operations Subcommittee
PJM Operations Summary
March 2010 (for February 2010 Operations)

				Stephenson-Stonewall 138 kV line for the loss of the Doubs-Mt Storm 500 kV line. Post Contingency Switching Solution: Upon contingency, open the 138 kV Kearneysville CB at Opequon., Notes: Also fixes Millville-Old Chapel and Bartonsville-Stevens
2/9/2010	02/09/2010 05:39	02/09/2010 21:24	Emergency Procedures	PCLLRW of 40 MW in the Opequon area of APS has been issued for Transmission Contingency Control. Additional Comments: Contingency is on the Stephenson-Stonewall 138 kV line for the loss of the Doubs-Mt Storm 500 kV line. Post Contingency Switching Solution: Upon contingency, open the 138 kV Kearneysville CB at Opequon., Notes: Also fixes Bartonsville-Shepards (MP2), Millville-Old Chapel.
2/10/2010	02/10/2010 00:32	02/10/2010 06:34	Emergency Procedures	PCLLRW of 12 MW in the area of Dominion has been issued for Transmission Contingency Control. Additional Comments: Edinburg TX3 I/o Mt Storm-Valley. Post contingency action is trip Bath pump., Notes: Post contingency trip Bath pump
2/10/2010	02/10/2010 11:35	02/10/2010 23:14	Emergency Procedures	PCLLRW of 40mw MW in the Opequon area of APS has been issued for Transmission Contingency Control. Additional Comments: As of 11:00 hours, a Non-Market PCLLRW of 40 MW in the Opequon area of APS has been issued for Transmission Contingency Control. Additional Comments: Contingency is on the Stephenson-Stonewall 138 kV line for the loss of the Doubs-Mt Storm 500 kV line. Post Contingency Switching Solution: Upon contingency, open the 138 kV Kearneysville CB at Opequon. Reduce Mt.Stom, Bath County and Greenland Gap Wind as needed.
2/11/2010	02/11/2010 00:21	02/11/2010 04:58	Emergency Procedures	PCLLRW of 15 MW in the area of Dominion has been issued for Transmission Contingency Control. Additional Comments: Edinburg TX 3 I/o Mt Storm Valley. Post contingency is to remove Bath pump(s) from service. Reason: Post Contingency Switching available
2/11/2010	02/11/2010 17:39	02/11/2010 21:49	Emergency Procedures	PCLLRW of 15 MW in the Opequon area of APS has been issued for Transmission Contingency Control. Additional Comments: For Stephens-Stonewall on the loss of Doubs-Mt. Storm. Post contingency Switching of opening the Kearneysville CB at Opequon.
2/12/2010	02/12/2010 06:15	02/12/2010 22:00	Emergency Procedures	PCLLRW of 40 MW in the Opequon area of APS has been issued for Transmission Contingency Control. Additional Comments: Contingency is on the Stephenson-Stonewall 138 kV line for the loss of the Doubs-Mt Storm 500 kV line. Post Contingency Switching Solution: Upon contingency, open the 138 kV Kearneysville CB at Opequon. Reduce Mt.Stom, Bath County and Greenland Gap Wind as needed.
2/12/2010	02/12/2010 10:41	02/12/2010 15:16	Emergency Procedures	PCLLRW of 90 MW in the Crescent area of DLCO (Duquesne) has been issued for Transmission Contingency Control. Additional Comments: Crescent #2 transformer for the loss of Beaver Valley 1-3 345Kv/138Kv transformer. Post contingency switching will include opening Crescent Mansfeild 345Kv line and the Crescent- Montour Z-24 138Kv line. This provides approximately 35 Mva relief.
2/12/2010	02/12/2010 10:44	02/12/2010 15:16	Emergency Procedures	PCLLRW of 30 MW in the Elwyn area of DLCO (Duquesne) has been issued for Transmission Contingency Control. Additional Comments: Collier- Elwyn for the loss of Arsenal #1 345Kv/138Kv transformer Reason: Load - no generation or switching available
2/12/2010	02/12/2010 14:47	02/12/2010 16:59	Emergency Procedures	PCLLRW of 6 MW in the Crescent area of DLCO (Duquesne) has been issued for Transmission Contingency Control. Additional Comments: PCLLRW ISSUED @ 1430 for 6 mw's on the Crescent #1 xfmr for the I/o Crescent #2

System Operations Subcommittee
PJM Operations Summary
March 2010 (for February 2010 Operations)

				xfmr. Post-contingency switching option exists. Duq will open the Crescent - Montour (Z-24) 138kv line which alleviated the overload. Reason: Post Contingency Switching available
2/12/2010	02/12/2010 19:01	02/12/2010 20:21	Emergency Procedures	PCLLRW of 8 MW in the Crescent area of DLCO (Duquesne) has been issued for Transmission Contingency Control. Additional Comments: PCLLRW ISSUED @ 1858 for 6 mw's on the Crescent #1 xfmr for the l/o Crescent #2 xfmr. Post-contingency switching option exists. Duq will open the Crescent - Montour (Z-24) 138kv line which alleviated the overload.
2/14/2010	02/13/2010 09:25	02/14/2010 02:22	Emergency Procedures	PCLLRW of 10 MW in the Gore area of APS has been issued for Transmission Contingency Control. Additional Comments: Contingency is on the Stephenson-Stonewall 138 kV line for the loss of the Doubs-Mt Storm 500 kV line. Post Contingency Switching Solution: Upon contingency, open the 138 kV Kearneysville CB at Opequon Reason: Post Contingency Switching available
2/14/2010	02/14/2010 19:00	02/14/2010 22:57	Emergency Procedures	PCLLRW of 10 MW in the Phillipsburg area of FE (PN) has been issued for Transmission Contingency Control. PCLLRW 10mw for Philipsburg Shawville loss of Summit - Westfall. Reason: Load - no generation or switching available
2/15/2010	02/15/2010 06:53	02/15/2010 11:16	Emergency Procedures	PCLLRW of 10 MW in the Gore area of APS has been issued for Transmission Contingency Control. Additional Comments: Contingency is on the Stephenson-Stonewall 138 kV line for the loss of the Doubs-Mt Storm 500 kV line. Post Contingency Switching Solution: Upon contingency, open the 138 kV Kearneysville CB at Opequon.
2/15/2010	02/15/2010 07:21	02/15/2010 12:09	Emergency Procedures	PCLLRW of 12 MW in the Phillipsburg area of FE (PN) has been issued for Transmission Contingency Control. Additional Comments: PCLLRW issued for 12MWs for Phillipsburg for contingency Phillipsburg-Shawville for L/O Summitt-Westfall 115 kv Line,. Reason: Load - no generation or switching available
2/15/2010	02/15/2010 18:00	02/15/2010 21:41	Emergency Procedures	PCLLRW of 10MW's MW in the Phillipsburg area of FE (PN) has been issued for Transmission Contingency Control. Additional Comments: Phillips-Shawville 115kv line for the l/o Summit-WestFall. Reason: Load - no generation or switching available
2/15/2010	02/15/2010 18:15	02/15/2010 21:35	Emergency Procedures	PCLLRW of 10 MW in the Gore area of APS has been issued for Transmission Contingency Control. Additional Comments: Stephens-Stonewal L/O Doubs-Mt.Storm 500kV. Post Contingency Switching Solution: Upon contingency, open the 138 kV Kearneysville CB at Opequon.
2/16/2010	02/16/2010 17:51	02/16/2010 18:24	Emergency Procedures	PCLLRW of 10 MW in the Crescent area of DLCO (Duquesne) has been issued for Transmission Contingency Control. Additional Comments: Contingency is on the Cres DUQ T1 Xfmr for the loss of the Crescent (DUQ) 345/138 kv #2 Xfmr. Post Contingency Switching is unavailable. Reason: Load - no generation or switching available
2/16/2010	02/16/2010 17:56	02/16/2010 21:27	Emergency Procedures	PCLLRW of 10 MW in the Gore area of APS has been issued for Transmission Contingency Control. Additional Comments: Contingency is on the Stephenson-Stonewall 138 kV line for the loss of the Doubs-Mt Storm 500 kV line. Post Contingency Switching Solution: Upon contingency, open the 138 kV Kearneysville CB at Opequon.
2/16/2010	02/16/2010 18:04	02/16/2010 22:06	Emergency Procedures	PCLLRW of 10MW's MW in the Phillipsburg area of FE (PN) has been issued for Transmission Contingency Control.

System Operations Subcommittee
PJM Operations Summary
March 2010 (for February 2010 Operations)

2/17/2010	02/17/2010 02:30	02/17/2010 03:41	Emergency Procedures	Additional Comments: Phillisburg-Shawville 11079 115kv line for the l/o Summit-West Fall. Reason: Load - no generation or switching available PCLLRW of 10 MW in the Edinburg area of Dominion has been issued for Transmission Contingency Control. POST CONTINGENCY Switching solution - Take BATH pump off line. Additional Comments: PCLLRW 10 MW for Edinburg 3TX for loss of 550 line MT.STORM - VALLEY Reason: Post Contingency Switching available
2/17/2010	02/17/2010 07:24	02/17/2010 19:04	Emergency Procedures	PCLLRW of 13 MW in the Phillipsburg area of FE (PN) has been issued for Transmission Contingency Control. Additional Comments: PCLLRW issued for 13 MWs @ 07:20 in the Phillipsburg area for Phillipsburg-Shawville for L/O Summitt-West Fall 115kv Line. No post contingency switching available Reason: Load - no generation or switching available
2/17/2010	02/17/2010 18:09	02/17/2010 21:31	Emergency Procedures	PCLLRW of 10 MW in the Gore area of APS has been issued for Transmission Contingency Control. Post Contingency Switching Solution: Upon contingency, open the 138 kV Kearneysville CB at Opequon. Additional Comments: Stephenson-Stonewall 138 kV line l/o Doubs-Mt.Storm 500 kV line
2/18/2010	02/18/2010 01:35	02/18/2010 05:01	Emergency Procedures	PCLLRW of 17 MW in the Edinburg area of Dominion has been issued for Transmission Contingency Control. POST CONTINGENCY Switching solution - Take BATH pump off line. Additional Comments: Edinburg 3TX for loss of 550 line MT.STORM - VALLEY Reason: Post Contingency Switching available
2/18/2010	02/18/2010 18:00	02/18/2010 21:44	Emergency Procedures	PCLLRW of 10 MW in the Gore area of APS has been issued for Transmission Contingency Control. Additional Comments: Contingency is on the Stephenson-Stonewall 138 kV line for the loss of the Doubs-Mt Storm 500 kV line. Post Contingency Switching Solution: Upon contingency, open the 138 kV Kearneysville CB at Opequon.
2/19/2010	02/19/2010 02:15	02/19/2010 04:24	Emergency Procedures	PCLLRW of 10 MW in the Edinburg area of Dominion has been issued for Transmission Contingency Control. For Edinburg 3TX for loss of 550 line MT.STORM - VALLEY Additional Comments: POST CONTINGENCY Switching solution - Take off Bath Pumps Reason: Post Contingency Switching available
2/19/2010	02/19/2010 05:54	02/19/2010 14:26	Emergency Procedures	PCLLRW of 20 MW in the Springcreek area of DAYTON has been issued for Transmission Contingency Control. Additional Comments: Dayton will restore the Eldean1 - 13836 Tap line. Edart #398678 on a post-contingency basis
2/19/2010	02/19/2010 17:58	02/19/2010 21:12	Emergency Procedures	PCLLRW of 10 MW in the Gore area of APS has been issued for Transmission Contingency Control. Additional Comments: Contingency is on the Stephenson-Stonewall 138 kV line for the loss of the Doubs-Mt Storm 500 kV line. Post Contingency Switching Solution: Upon contingency, open the 138 kV Kearneysville CB at Opequon.
2/22/2010	02/22/2010 18:12	02/22/2010 21:16	Emergency Procedures	PCLLRW of 10 MW in the Gore area of APS has been issued for Transmission Contingency Control. Additional Comments: Post Contingency Switching Solution: Upon contingency, open the 138 kV Kearneysville CB at Opequon. Post Contingency Switching available
2/23/2010	02/23/2010 16:38	02/23/2010 20:42	Emergency Procedures	PCLLRW of 20 MW in the Gore area of APS has been issued for Transmission Contingency Control. PCLLRW 20mw for Stephens - Stonewall loss of Doubs - Mt. Storm. Additional Comments: Post contingency switching: During the outage of Meadowbrook-Morrisville 580 500KV Line,

System Operations Subcommittee
PJM Operations Summary
March 2010 (for February 2010 Operations)

<u>2/24/2010</u>	02/24/2010 09:29	02/24/2010 10:11	<u>Emergency Procedures</u>	upon contingency open the Corning Glass 34.5kV bkr. at Inwood and the JQ 34.5kV bkr at Kearneysville. Then open Opequon-Kearneysville OPS1 138kV Line. BES 2 facility PCLLRW of 55 MW in the Elwyn area of DLCO (Duquesne) has been issued for Transmission Contingency Control. Additional Comments: issued for Collier- Elwyn for the loss of Arsenal- Brunot island Reason: Load - no generation or switching available
<u>2/25/2010</u>	02/25/2010 18:01	02/25/2010 20:47	<u>Emergency Procedures</u>	PCLLRW of 15 MW in the Gore/Inwood area of APS has been issued for Transmission Contingency Control. Post contingency switching option: Open at Opequon 138KV Kearneys breaker. Additional Comments: PCLLRW 15MW for Stephens - Stonewal loss of Doubs - Mt. Storm
<u>2/25/2010</u>	02/25/2010 19:30	02/25/2010 20:47	<u>Emergency Procedures</u>	PCLLRW of 125 MW in the Pruntytown area of APS has been issued for Transmission Contingency Control. Post contingency switching: Close 138KV 3 breaker at Black Oak. Open 138KV Mt. Zion AFA breaker at Albright. Additional Comments: PCLLRW 125mw for Pruntytown 1 Transformer loss of Pruntytown 3 & 4 Transformers
<u>2/26/2010</u>	02/26/2010 18:18	02/26/2010 21:37	<u>Emergency Procedures</u>	PCLLRW of 10 MW in the Gore/Inwood area of APS has been issued for Transmission Contingency Control. Post contingency switching option: Open at Opequon 138KV Kearneys breaker. Additional Comments: PCLLRW 10MW for Stephens - Stonewal loss of Doubs - Mt. Storm