

System Operations Subcommittee
PJM Operations Summary
December 2016 Operations – Final

There were 21 PCLLRWs and 1 High System Voltage events in December

CPS1: 130.76%, BAAL: 99.77% PJM (NERC: 100%)¹, CPS2: (82.12%), DCS: 100%

¹PJM directly measures the total number of BAAL excursions in minutes compared to the total number of minutes within a month with a target value for this performance goal at 99% on a daily and monthly basis. NERC rules limit the recovery period to no more than 30 minutes for a single event.

Spinning (2 Event)

12.31.2016 05:10	12.31.2016 05:22	Gavin 2 @ 1350mw Tier 1 Total Resource Response (MW): 470.12 Tier 2 Total Resource Response (MW): 483.1
12.03.16 00:11	12.03.16 00:18	Spinning in PJM for Low ACE Low Ace. Tier 1 Total Resource Response (MW): 470.12 Tier 2 Total Resource Response (MW): 433.7

High System Voltage Action (1 Events)

12.25.2016 01:11	12.25.2016 07:00	A High System Voltage has been issued; all companies shall take the following actions on the Bulk Electric System: <ol style="list-style-type: none"> 1. All switchable capacitors are out of service. 2. All reactors are in service. 3. TOs are requested to review and adjust LTC settings as appropriate. All LTC (230 kV and above) and voltage schedule adjustments shall be coordinated with PJM Dispatch. 4. All SVCs are absorbing reactive power. 5. Generation Owners shall operate generators at the lower bandwidth of their voltage schedule when possible. 6. Generation Owners shall communicate with PJM and the TO restrictions to their generator's ability to absorb MVARs if that capability varies from the existing "D" curve. Target: Distribution Companies/Transmission Owners/Generation
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Manual Load Dump Warning (0 Events)

HLV Schedule Warning (0 Events)

HLV Schedule Action (0 Events)

Hot/Cold Weather Alert (2 Events)

12.16.16 10:10	12.20.16 00:00	WESTERN-Region - A Cold Weather Alert has been issued from 00:00 on 12.19.2016 through 23:59 on 12.19.2016 Per M-13, members are expected to perform the following actions: TRANSMISSION/GEN DISPATCHERS review plans to determine if any maintenance/testing, scheduled/being performed, on any monitoring, control, transmission/generating equipment can be deferred/canceled. GENERATION DISPATCHERS: -- Review & update unit parameters in Markets Gateway through the Cold Weather Alert period paying particular attention to accurate Start-up & Notification, Min/Max Run Time, Eco Min/Max and Emergency Min/Max information. -- Submit alternate fuel capability & alternate fuel restrictions via Markets Gateway. -- Review fuel supply/delivery schedules in anticipation of greater than normal operation of units. - - Provide PJM with estimate of time needed to return any unit on a Planned Outage. This 'Early Return Time' should be updated via eDART & will not affect the Planned Outage est. end date. -- For dual fuel units, confirm the equipment is functional & amount of alternate fuel available.
12.13.16 09:08	12.17.16 04:15	COMED-Control Area, RMU-Transmission Zone, DAY-Control Area, FE-AP-Control Area, AEP-Control Area, WESTERN-Region, FE-ATSI-Control Area, DEOK-Control Area, DUQ-Control Area - A Cold Weather Alert has been issued from 00:00 on 12.15.2016 through 04:15 on 12.17.2016 Per M-13, members are expected to perform the following actions: TRANSMISSION/GEN DISPATCHERS review plans to determine if any maintenance/testing, scheduled/being performed, on any monitoring, control, transmission/generating equipment can be deferred/canceled. GENERATION DISPATCHERS: -- Review & update unit parameters in

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		Markets Gateway through the Cold Weather Alert period paying particular attention to accurate Start-up & Notification, Min/Max Run Time, Eco Min/Max and Emergency Min/Max information. -- Submit alternate fuel capability & alternate fuel restrictions via Markets Gateway. -- Review fuel supply/delivery schedules in anticipation of greater than normal operation of units. - - Provide PJM with estimate of time needed to return any unit on a Planned Outage. This 'Early Return Time' should be updated via eDART & will not affect the Planned Outage est. end date. -- For dual fuel units, confirm the equipment is functional & amount of alternate fuel available. Additional Comments: For AEP, FE South, FE West, Duquesne, Dayton, CPP, DEOK. Com-ED ITCI, RMU Forecasted temperatures 0 degrees and below
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Primary Reserve Warning (0 Events)

Voltage Reduction Warning (0 Events)

Voltage Reduction (0 Events)

Emergency Energy Request (0 Events)

Max Emergency Gen Alert (0 Events)

Max Emergency Generation (0 Events)

Shared Reserve (5 Events)

12.18.16 20:59	12.18.16 21:20	117 MW with NYISO - Phase 2 - Regulation
12.12.16 18:27	12.12.16 18:45	67 MW with NYISO - Bruce G7 - Regulation
12.11.16 15:42	12.11.16 15:55	117 MW with NYISO - Bruce 800mw - Regulation
12.10.16 08:50	12.10.16 09:10	80 MW with NYISO - 9 Mile 1 - Regulation
12.01.16 14:59	12.01.16 15:10	117 MW with NYISO - Phase 2 - Regulation

Min Gen Alert (1 Events)

12.26.2016 22:50	12.27.2016 05:00	A Minimum Generation Alert has been issued for the Midnight of 12.27.2016 Expected generation level is within 1585 MW of normal minimum energy limits.
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Emergency Procedure (0 Events)

PCLLRW (21 Events)

12.27.16 17:57	12.27.16 18:11	A Post Contingency Local Load Relief Warning has been issued to maintain WILKSVIL 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.18.16 21:17	12.22.16 19:46	A Post Contingency Local Load Relief Warning has been issued to maintain THAYER 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.20.16 07:02	12.20.16 09:30	- A PCLLRW has been issued to maintain LAKVEW-GREENFOE at 361 MVA in the ATSI for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.20.16 03:44	12.20.16 12:34	- A PCLLRW has been issued to maintain CAPITOLH-CHEMICAL at 278 MVA in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.20.16 03:40	12.20.16 12:34	- A PCLLRW has been issued to maintain CAPITOLH-CHEMICAL at 278 MVA in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.16.16 04:03	12.18.16 13:11	- A PCLLRW has been issued to maintain THAYER 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.17.16 09:19	12.17.16 09:36	- A PCLLRW has been issued to maintain CHURCH-NEWMERED 6704-1 at 105 MVA in the DPL (Delmarva) for Transmission Contingency Control. Additional Comments: Generation - slow response
12.16.16 07:35	12.16.16 08:06	A PCLLRW has been issued to maintain LAKVEW-GREENFOE at 361 MVA in the ATSI for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.15.16 17:51	12.15.16 19:30	- A PCLLRW has been issued to maintain INDIANRI AT-22 XFORMER at 413 MVA in the DPL (Delmarva) for Transmission Contingency Control. Additional

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		Comments: Generation - slow response
12.15.16 07:47	12.15.2016 9:02	A PCLLRW has been issued to maintain SUMSHADE-SUMMER TIE at 385 MVA in the EKPC for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.12.16 06:44	12.15.16 20:52	A PCLLRW has been issued to maintain THAYER 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.12.16 05:19	12.12.16 21:15	- A PCLLRW has been issued to maintain COREY 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.09.16 20:33	12.10.16 22:54	A PCLLRW has been issued to maintain COREY 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.09.16 10:12	12.09.16 21:22	A PCLLRW has been issued to maintain CNTRLHAR 138 KV at 127.7 KV in the EKPC for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.08.16 23:44	12.10.16 22:54	A PCLLRW has been issued to maintain THAYER 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.08.16 08:45	12.08.16 13:04	A PCLLRW has been issued to maintain STACY 138 KV at 127 KV in the ATSI for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.08.16 06:36	12.08.16 23:06	A PCLLRW has been issued to maintain THAYER 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.07.2016 6:13	12.07.2016 23:00	A PCLLRW has been issued to maintain THAYER 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.06.2016 7:38	12.06.2016 22:46	A PCLLRW has been issued to maintain THAYER 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.05.2016 16:05	12.05.2016 22.34	A Post Contingency Local Load Relief Warning has been issued to maintain THAYER 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching

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		available
12.01.16 18:36	12.01.16 20:23	A PCLLRW has been issued to maintain 15518 -132 GARD 15518 2 at 202 MVA in the COMED for Transmission Contingency Control. Additional Comments: distribution switching in prog to split TR77/76 on low side prior to opening 138kV 1-2 CB.

Non-PCLLRW (32 Events)

12.28.2016 06:06	01.01.2017 18:40	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain ROSS 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.17.2016 18:41	12.17.2016 19:05	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain ROSS 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.16.2016 06:21	12.16.2016 20:28	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain ROSS 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.15.2016 07:42	12.15.2016 17:50	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain WMILTON-09GRNVIL at 165 MVA in the DAYTON for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.15.2016 06:41	12.15.2016 07:39	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain HARRISCS-ZUBER at 207 MVA in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.15.2016 06:12	12.15.2016 19:39	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain RNYVILEK 69 KV at 63.5 KV in the EKPC for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.15.2016 05:30	12.15.2016 19:38	A Non-Market Post Contingency Local Load Relief Warn

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		has been issued to maintain BULLITCO BULC 161_69 XFR at 139 MVA in the EKPC for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.14.2016 23:19	12.18.2016 00:36	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain WKINGSPO 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: BES 2 Facility
12.14.2016 11:47	12.14.2016 23:56	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain HORSCV_T 69 KV at 63.5 KV in the EKPC for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.14.2016 07:14	12.14.2016 23:56	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain RNYVILEK 69 KV at 63.5 KV in the EKPC for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.14.2016 07:03	12.15.2016 20:52	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain ROSS 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.14.2016 05:32	12.14.2016 23:55	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain PLUMVILL 69 KV at 63.5 KV in the EKPC for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.13.2016 12:36	12.14.2016 17:22	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain JAY 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.13.2016 06:52	12.13.2016 21:13	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain MOTTVILL 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.13.2016 06:03	12.15.2016 15:10	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain PARKWAY1 69 KV at 63.5 KV in the EKPC for Transmission Contingency Control. Additional Comments: Post Contingency Switching available

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12.12.2016 10:41	12.12.2016 21:14	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain MOTTVILL 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.12.2016 07:19	12.13.2016 03:14	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain PARKWAY1 69 KV at 63.5 KV in the EKPC for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.11.2016 17:18	12.11.2016 23:24	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain 09AMSTRD 138 KV at 127 KV in the DAYTON for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.10.2016 05:29	12.10.2016 16:38	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain BULLITCO BULC 161_69 XFR at 139 MVA in the EKPC for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.10.2016 04:19	12.10.2016 16:37	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain GLNDL_EK 69 KV at 63.5 KV in the EKPC for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.10.2016 00:06	12.10.2016 04:20	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain THARPJCT 69 KV at 63.5 KV in the EKPC for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.08.2016 10:16	12.08.2016 23:05	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain MULBERRY 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
12.07.2016 06:32	12.07.2016 22:59	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain MULBERRY 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: BES 2 Facility
12.06.2016 18:23	12.06.2016 22:46	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain MULBERRY 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: BES 2 Facility
12.06.2016 14:53	12.06.2016 21:47	A Non-Market Post Contingency Local Load Relief Warn

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		has been issued to maintain INDUSTRI-SUMMIT at 374 MVA in the AEP for Transmission Contingency Control. Additional Comments: BES 2 Facility
12.05.2016 09:26	12.05.2016 12:57	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain PARKWAY1 69 KV at 63.5 KV in the EKPC for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.02.2016 17:33	12.02.2016 23:48	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain MULBERRY 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.02.2016 08:22	12.02.2016 20:22	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain PARKWAY1 69 KV at 63.5 KV in the EKPC for Transmission Contingency Control. Additional Comments: BES 2 Facility
12.02.2016 06:27	12.02.2016 20:22	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain BULLITCO BULC 161_69 XFR at 139 MVA in the EKPC for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.01.2016 10:51	12.01.2016 21:26	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain MULBERRY 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
12.01.2016 07:18	12.01.2016 12:15	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain PARKWAY1 69 KV at 63.5 KV in the EKPC for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
11.27.2016 20:03	12.02.2016 19:13	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain JAY 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: BES 2 Facility