

System Operations Subcommittee

PJM Operations Summary

May 2017 Operations – Final

There were 18 PCLLRWs and 7 High System Voltage events in May

CPS1: 136.32%

BAAL: 99.80%¹

CPS2: 86.94%

DCS: There were no DCS reportable events in May.

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 (1 Event)

05.08.2017 04:18	05.08.2017 04:28	Spinning in PJM for Unit Trip Lose of Brunswick CC Loaded at 990mw Tier 1 Estimate (MW): 1,295.60 Tier 1 Total Resource Response (MW): 1,009.25* Tier 2 Total Resource Response (MW): 123.5
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High System Voltage Action (7 Events)

05.29.2017 00:40	05.29.2017 09:00	A High System Voltage has been issued; all companies shall take the following actions on the Bulk Electric System: 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
05.28.2017 02:05	05.28.2017 09:03	A High System Voltage has been issued; all companies shall take the following actions on the Bulk Electric System: 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

* Response MWs are preliminary and based on State Estimated data, not Settlement data.

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		from the existing "D" curve. Target: Distribution Companies/Transmission Owners/Generation
05.27.2017 01:20	05.27.2017 08:15	A High System Voltage has been issued; all companies shall take the following actions on the Bulk Electric System: 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
05.21.2017 01:30	05.21.2017 09:20	A High System Voltage has been issued; all companies shall take the following actions on the Bulk Electric System: 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
05.14.2017 23:45	05.15.2017 05:01	A High System Voltage has been issued; all companies shall take the following actions on the Bulk Electric System: 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
05.13.2017 23:35	05.14.2017 09:05	A High System Voltage has been issued; all companies shall take the following actions on the Bulk Electric System: 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

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		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
05.13.2017 00:00	05.13.2017 07:40	A High System Voltage has been issued; all companies shall take the following actions on the Bulk Electric System: 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

Manual Load Dump Warning (0 Events)

HLV Schedule Warning (0 Events)

HLV Schedule Action (0 Events)

Hot/Cold Weather Alert (1 Event)

05.15.2017 09:05	05.18.2017 22:25	A Hot Weather Alert has been issued from 00:00 on 05.17.2017 through 22:25 on 05.18.2017 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 Hot 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.
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Primary Reserve Warning (0 Events)

Voltage Reduction Warning (0 Events)

Voltage Reduction (0 Events)

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Emergency Energy Request (0 Events)

Max Emergency Gen Alert (0 Events)

Max Emergency Generation (0 Events)

Shared Reserve (5 Events)

05.24.2017 13:20	05.24.2017 13:35	-190 MW with NYISO - Q 7040 - Spinning & Regulation
05.21.2017 17:19	05.21.2017 17:34	-144 MW with NYISO - Loss of Phase 2 at Sandy Pond - Regulation
05.12.2017 22:19	05.12.2017 22:35	-125 MW with NYISO - Bruce 4 - Spinning
05.06.2017 08:16	05.06.2017 08:35	-158 MW with NYISO - Darlington 2 945 MW - Spinning
05.05.2017 20:37	05.05.2017 20:46	-98 MW with NYISO - NEISO Phase 2 tripped. - Regulation

Min Gen Alert (2 Events)

05.30.2017 20:35	05.31.2017 05:25	A Minimum Generation Alert has been issued for the MIDNIGHT of 05.31.2017 Expected generation level is within -1090 MW of normal minimum energy limits.
05.21.2017 19:01	05.22.2017 06:04	A Minimum Generation Alert has been issued for the Midnight of 05.22.2017 Expected generation level is within -1911 MW of normal minimum energy limits.

Emergency Procedure (3 Events)

05.28.2017 00:19	05.28.2017 05:00	A Geomagnetic Disturbance Warning has been issued for 00:19 on 05.28.2017 through 05:00 on 05.28.2017 . A GMD warning of K-7 or greater is in effect for this period.
05.27.2017 00:00	05.29.2017 09:00	A Minimum Generation Advisory is being issued for the valley periods 05.27.2017 through 05.29.2017 . This advisory is being issued to provide advanced warning that due to mild weather and light loads, PJM may be entering into Min Gen Alerts and possibly Min Gen Actions during these periods. No action is required from the members at this time. This is an informational notice only. As we approach these valley periods, PJM will implement Min Gen Alerts/Actions on an as needed basis.
05.12.2017 05:48	05.15.2017 05:01	A Minimum Generation Advisory is being issued for the valley periods 05.13.2017 through 05.15.2017 . This advisory is being issued to provide advanced warning that due to mild weather and light loads, PJM may be entering into Min Gen Alerts and possibly Min Gen Actions during these periods. No action is required from the members at this time. This is an informational notice only. As we approach these valley periods, PJM will implement Min Gen Alerts/Actions on an as needed basis.

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PCLLRW (18 Events)

05.26.2017 10:51	05.26.2017 11:08	A Post Contingency Local Load Relief Warning has been issued to maintain PAWNEETP-LEROYCEN PAW-LER2 at 115 MVA in the ATSI for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
05.22.2017 16:01	05.22.2017 19:45	A Post Contingency Local Load Relief Warning has been issued to maintain MYSVL_EK 138 KV at 127.7 KV in the EKPC for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
05.22.2017 12:38	05.22.2017 20:14	A Post Contingency Local Load Relief Warning has been issued to maintain BMF 138 KV at 127 KV in the ATSI for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
05.19.2017 14:19	05.19.2017 15:36	A Post Contingency Local Load Relief Warning has been issued to maintain ASTORFE-AVONTAP Q1 at 215 MVA in the ATSI for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
05.19.2017 13:48	05.19.2017 14:20	A Post Contingency Local Load Relief Warning has been issued to maintain WESTFALL 115 KV at 105.8 KV in the PN for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
05.19.2017 13:35	05.19.2017 13:50	A Post Contingency Local Load Relief Warning has been issued to maintain WESTFALL 115 KV at 105.8 KV in the PN for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
05.19.2017 13:11	05.19.2017 18:46	A Post Contingency Local Load Relief Warning has been issued to maintain LAKVEW-GREENFOE at 334 MVA in the ATSI for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
05.19.2017 13:04	05.19.2017 23:23	A Post Contingency Local Load Relief Warning has been issued to maintain LAYMAN-WOLFCREE 86 at 290 MVA in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available - At Muskingum River AEP has agreed to open the 138 kV 'HS' CB.
05.18.2017 23:00	05.18.2017 23:13	A Post Contingency Local Load Relief Warning has been issued to maintain CHALKPT T1 XFORMER at 73 MVA in the PEPCO for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
05.18.2017 12:23	05.18.2017 19:14	A Post Contingency Local Load Relief Warning has been issued to maintain IRWIN 138 KV at 127 KV in the ATSI for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
05.18.2017	05.18.2017	A Post Contingency Local Load Relief Warning has been issued to

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10:57	13:43	maintain BERWICK-KOONSVIL at 54 MVA in the PPL for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
05.17.2017 23:42	05.17.2017 23:52	A Post Contingency Local Load Relief Warning has been issued to maintain CHALKPT T1 XFORMER at 73 MVA in the PEPCO for Transmission Contingency Control. Additional Comments: Generation - slow response
05.12.2017 01:46	05.12.2017 05:07	A Post Contingency Local Load Relief Warning has been issued to maintain MEADOWBR-STRASBUR MST at 229 MVA in the APS for Transmission Contingency Control. Additional Comments: Post Contingency Generation redispatch available
05.12.2017 01:42	05.12.2017 06:55	A Post Contingency Local Load Relief Warning has been issued to maintain MEADOWBR-STRASBUR MST at 229 MVA in the APS for Transmission Contingency Control. Additional Comments: Post Contingency Generation redispatch available
05.11.2017 16:00	05.11.2017 21:04	A Post Contingency Local Load Relief Warning has been issued to maintain LAKVEW-GREENFOE at 334 MVA in the ATSI for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
05.02.2017 21:14	05.02.2017 22:29	A Post Contingency Local Load Relief Warning has been issued to maintain MAPLEOE B22 CB at 306 MVA in the ATSI for Transmission Contingency Control. Additional Comments: Generation - slow response - Post contingency switching is opening the B22 at Maple. PCLLRW issued due to extended SE failure.
05.01.2017 20:27	05.01.2017 20:52	A Post Contingency Local Load Relief Warning has been issued to maintain SUNBURY 69 KV at 61.6 KV in the PPL for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
05.01.2017 16:13	05.01.2017 17:16	A Post Contingency Local Load Relief Warning has been issued to maintain TITUSVIL-UNIONCIT DU 1083 at 120 MVA in the PN for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available

Non-PCLLRW (4 Events)

05.26.2017 06:16	05.26.2017 07:05	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain CROOKSVJ 69 KV at 63.5 KV in the EKPC for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
05.10.2017 16:19	05.10.2017 23:01	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain DELAWAIM-WESDEL at 181 MVA in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
05.05.2017 06:54	05.05.2017 10:43	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain SKIMMER 115 KV at 105.8 KV in the AEP for

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		Transmission Contingency Control. Additional Comments: Post Contingency Switching available
05.01.2017 19:45	05.02.2017 00:05	A Non-Market Post Contingency Local Load Relief Warn has been issued to maintain SLYNCHBU 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available