

**System Operations Subcommittee**  
**PJM Operations Summary**  
**July 2016 Operations – Partial**

**There were 14 PCLLRWs and 0 High System Voltage events in June**

**Spinning** (1 Event)

Date	Start Time	End Time	Duration ( min )	Region
07/06/2016	12:40:36	12:45:26	4	RTO
Tier 1 Estimate (MW)	Tire 1 Response (MW)	Tire 2 Assigned (MW)	Tier 2 Response (MW)	Tire 2 Penalty (MW)
2223.90*	259.36*	0* <sup>1</sup>	0* <sup>1</sup>	0* <sup>1</sup>
Description				
CONST Limerick 2 SCRAM due to internal plant issues.				

\* These are preliminary numbers and may change upon final review

<sup>1</sup> For the Tier 2 Compliance Check, if a synchronized reserve event did not last at least 10 minutes in duration, not penalties are evaluated for Tier 2 resources. The color coding of true and false was left in so that it is easier to see which resources provided response

**High System Voltage Action** (0 Events)

**Manual Load Dump Warning** ( 0 Events)

**HLV Schedule Warning** (0 Events)

**HLV Schedule Action** (0 Events)

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**Hot/Cold Weather Alert** (9 Events)

7/5/2016 11:00	7/7/2016 22:37	<p>- MIDATL-Region A Hot Weather Alert has been issued from 08:00 on 07.07.2016 through 22:30 on 07.07.2016 . As indicated in M-13, members are expected to perform the following actions: - Generation (Gen) dispatchers review &amp; update their unit parameters in Markets Gateway through the Hot Weather Alert period paying particular attention to accurate Start-up &amp; Notification, Min Run Time, Max Run Time, Eco Min/Max and Emergency Min/Max information. - Gen dispatchers with dual fuel units confirm the equipment is functional &amp; amount of alternate fuel available - Outages to the alternate fuel capability will be submitted to PJM via Markets Gateway. - Alternate fuel restrictions will also be communicated via Markets Gateway. - Gen dispatchers review fuel supply/delivery schedules in anticipation of greater than normal operation of units. - 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. Additional Comments: For Thursday, July 7, 2016. A Hot Weather Alert is NOT a trigger for a Performance Assesment Hour.</p>
7/6/2016 11:00	7/8/2016 21:37	<p>- MIDATL-Region, DOM-Control Area A Hot Weather Alert has been issued from 07:00 on 07.08.2016 through 21:37 on 07.08.2016 . As indicated in M-13, members are expected to perform the following actions: - Generation (Gen) dispatchers review &amp; update their unit parameters in Markets Gateway through the Hot Weather Alert period paying particular attention to accurate Start-up &amp; Notification, Min Run Time, Max Run Time, Eco Min/Max and Emergency Min/Max information. - Gen dispatchers with dual fuel units confirm the equipment is functional &amp; amount of alternate fuel available - Outages to the alternate fuel capability will be submitted to PJM via Markets Gateway. - Alternate fuel restrictions will also be communicated via Markets Gateway. - Gen dispatchers review fuel supply/delivery schedules in anticipation of greater than normal operation of units. - 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. Additional Comments: For Friday, July 8 2016. A Hot Weather Alert is NOT a trigger for a Performance Assesment Hour.</p>

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<p><b>7/12/2016 13:00</b></p>	<p><b>7/15/2016 0:44</b></p>	<p>- DOM-Control Area, MIDATL-Region A Hot Weather Alert has been issued from 08:00 on 07.14.2016 through 22:00 on 07.14.2016 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 &amp; update unit parameters in Markets Gateway through the Cold Weather Alert period paying particular attention to accurate Start-up &amp; Notification, Min/Max Run Time, Eco Min/Max and Emergency Min/Max information. -- Submit alternate fuel capability &amp; 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 &amp; will not affect the Planned Outage est. end date. -- For dual fuel units, confirm the equipment is functional &amp; amount of alternate fuel available.</p>
<p><b>7/12/2016 13:00</b></p>	<p><b>7/15/2016 22:01</b></p>	<p>- MIDATL-Region, DOM-Control Area A Hot Weather Alert has been issued from 08:00 on 07.15.2016 through 22:00 on 07.15.2016 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 &amp; update unit parameters in Markets Gateway through the Hot Weather Alert period paying particular attention to accurate Start-up &amp; Notification, Min/Max Run Time, Eco Min/Max and Emergency Min/Max information. -- Submit alternate fuel capability &amp; 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 &amp; will not affect the Planned Outage est. end date. -- For dual fuel units, confirm the equipment is functional &amp; amount of alternate fuel available.</p>

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<p><b>7/15/2016 10:00</b></p>	<p><b>7/18/2016 22:34</b></p>	<p>- DOM-Control Area, MIDATL-Region A Hot Weather Alert has been issued from 08:00 on 07.18.2016 through 22:00 on 07.18.2016 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 &amp; update unit parameters in Markets Gateway through the Hot Weather Alert period paying particular attention to accurate Start-up &amp; Notification, Min/Max Run Time, Eco Min/Max and Emergency Min/Max information. -- Submit alternate fuel capability &amp; 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 &amp; will not affect the Planned Outage est. end date. -- For dual fuel units, confirm the equipment is functional &amp; amount of alternate fuel available.</p>
<p><b>7/19/2016 13:00</b></p>	<p><b>7/21/2016 23:07</b></p>	<p>- COMED-Control Area A Hot Weather Alert has been issued from 07:00 on 07.21.2016 through 23:00 on 07.21.2016 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 &amp; update unit parameters in Markets Gateway through the Hot Weather Alert period paying particular attention to accurate Start-up &amp; Notification, Min/Max Run Time, Eco Min/Max and Emergency Min/Max information. -- Submit alternate fuel capability &amp; 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 &amp; will not affect the Planned Outage est. end date. -- For dual fuel units, confirm the equipment is functional &amp; amount of alternate fuel available.</p>

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<p><b>7/20/2016 8:00</b></p>	<p><b>7/22/2016 23:07</b></p>	<p>- PJM-RTO-RTO A Hot Weather Alert has been issued from 07:00 on 07.22.2016 through 23:00 on 07.22.2016 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 &amp; update unit parameters in Markets Gateway through the Hot Weather Alert period paying particular attention to accurate Start-up &amp; Notification, Min/Max Run Time, Eco Min/Max and Emergency Min/Max information. -- Submit alternate fuel capability &amp; 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 &amp; will not affect the Planned Outage est. end date. -- For dual fuel units, confirm the equipment is functional &amp; amount of alternate fuel available.</p>
<p><b>7/20/2016 8:00</b></p>	<p><b>7/23/2016 23:00</b></p>	<p>- PJM-RTO-RTO A Hot Weather Alert has been issued from 07:00 on 07.23.2016 through 23:00 on 07.23.2016 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 &amp; update unit parameters in Markets Gateway through the Hot Weather Alert period paying particular attention to accurate Start-up &amp; Notification, Min/Max Run Time, Eco Min/Max and Emergency Min/Max information. -- Submit alternate fuel capability &amp; 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 &amp; will not affect the Planned Outage est. end date. -- For dual fuel units, confirm the equipment is functional &amp; amount of alternate fuel available.</p>

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7/20/2016 8:00	7/24/2016 23:01	<p>- PJM-RTO-RTO A Hot Weather Alert has been issued from 07:00 on 07.24.2016 through 23:01 on 07.24.2016 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 &amp; update unit parameters in Markets Gateway through the Hot Weather Alert period paying particular attention to accurate Start-up &amp; Notification, Min/Max Run Time, Eco Min/Max and Emergency Min/Max information. -- Submit alternate fuel capability &amp; 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 &amp; will not affect the Planned Outage est. end date. -- For dual fuel units, confirm the equipment is functional &amp; amount of alternate fuel available.</p>
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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** (3 Events)

7/6/2016 9:40	7/6/2016 10:10	-150 MW with NYISO - INDIAN POINT 2 - Regulation
7/13/2016 13:13	7/13/2016 13:40	-73 MW with NYISO - Bowline 540 MW
7/23/2016 0:56	7/23/2016 1:15	-141 MW with NYISO - IESO Darlington #1 Loaded at 941 MWs - Regulation

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**Min Gen Alert** (5 events)

7/2/2016 20:33	7/3/2016 8:57	- A Minimum Generation Alert has been issued for the Midnight period of 07.03.2016 Expected generation level is within -1633 MW of normal minimum energy limits.
7/3/2016 19:14	7/4/2016 8:29	- A Minimum Generation Alert has been issued for the Midnight Period of 07.04.2016 Expected generation level is within 1162 MW of normal minimum energy limits.
7/4/2016 20:55	7/5/2016 5:05	- A Minimum Generation Alert has been issued for the Midnight of 07.05.2016 Expected generation level is within 645 MW of normal minimum energy limits.
7/9/2016 21:31	7/10/2016 7:51	- A Minimum Generation Alert has been issued for the Midnight of 07.10.2016 Expected generation level is within -1727 MW of normal minimum energy limits.
7/16/2016 20:35	7/17/2016 7:30	- A Minimum Generation Alert has been issued for the Midnight of 07.17.2016 Expected generation level is within -3832 MW of normal minimum energy limits.

**Emergency Procedure** (0 Events)

**PCLLRW** (14 Events)

7/6/2016 16:29	7/6/2016 18:18	- A PCLLRW has been issued to maintain LANHAM 115 KV at 106 KV in the PEPCO for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
7/7/2016 13:23	7/7/2016 18:48	- A PCLLRW has been issued to maintain MILLWOO2-NBELLVIL MIL-NBE at 134 MVA in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available

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<b>7/11/2016 12:38</b>	<b>7/11/2016 21:20</b>	- A PCLLRW has been issued to maintain CNTRLHAR 138 KV at 127 KV in the EKPC for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
<b>7/11/2016 12:39</b>	<b>7/11/2016 21:20</b>	- A PCLLRW has been issued to maintain NELSON_C 138 KV at 127 KV in the EKPC for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
<b>7/11/2016 13:10</b>	<b>7/11/2016 15:13</b>	- A PCLLRW has been issued to maintain MILLWOO2-NBELLVIL MIL-NBE at 134 MVA in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
<b>7/11/2016 17:03</b>	<b>7/11/2016 19:10</b>	- A PCLLRW has been issued to maintain BELMONT TRAN 3 XFORMER at 607 MVA in the APS for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
<b>7/11/2016 18:59</b>	<b>7/11/2016 20:15</b>	- A PCLLRW has been issued to maintain BOSSERMN-OLIVE BOS-OLI at 156 MVA in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
<b>7/13/2016 12:56</b>	<b>7/13/2016 17:22</b>	- A PCLLRW has been issued to maintain NELSON_C 138 KV at 127 KV in the EKPC for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
<b>7/13/2016 20:39</b>	<b>7/13/2016 22:45</b>	- A PCLLRW has been issued to maintain JACK ME-NHANOVER 968 at 131 MVA in the FE (ME) for Transmission Contingency Control. Additional Comments: Generation - slow response
<b>7/14/2016 11:21</b>	<b>7/14/2016 12:49</b>	- A PCLLRW has been issued to maintain JACK ME-NHANOVER 968 at 131 MVA in the FE (ME) for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
<b>7/14/2016 16:41</b>	<b>7/14/2016 17:00</b>	- A PCLLRW has been issued to maintain NEWBERRY-ROUNDTOP 975-1 at 147 MVA in the FE (PN) for Transmission Contingency Control. Additional Comments: Generation - slow response
<b>7/14/2016 17:00</b>	<b>7/14/2016 19:00</b>	- A PCLLRW has been issued to maintain MIDDLEJCT 115 5 TX RE REACT at 104 MVA in the FE (PN) for Transmission Contingency Control. Additional Comments: Generation - slow response



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<b>7/19/2016 13:00</b>	<b>7/19/2016 20:48</b>	- A PCLLRW has been issued to maintain CNTRLHAR 138 KV at 127 KV in the EKPC for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
<b>7/19/2016 17:33</b>	<b>7/19/2016 19:41</b>	- A PCLLRW has been issued to maintain YOUNGWOO-YUKON YU-YO at 287 MVA in the APS for Transmission Contingency Control. Additional Comments: Post Contingency Switching available

**Non-PCLLRW** (24 events)

<b>7/5/2016 15:37</b>	<b>7/6/2016 0:18</b>	- A PCLLRW has been issued to maintain COUNTYLI 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
<b>7/6/2016 13:55</b>	<b>7/6/2016 20:41</b>	- A PCLLRW has been issued to maintain COUNTYLI 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
<b>7/7/2016 7:58</b>	<b>7/7/2016 9:10</b>	- A PCLLRW has been issued to maintain FIELDALE-THORNTON at 157 MVA in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
<b>7/7/2016 15:45</b>	<b>7/7/2016 21:33</b>	- A PCLLRW has been issued to maintain COUNTYLI 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
<b>7/8/2016 9:07</b>	<b>7/8/2016 14:02</b>	- A PCLLRW has been issued to maintain COBURG 69 KV at 61.5 KV in the EKPC for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
<b>7/11/2016 15:15</b>	<b>7/11/2016 19:38</b>	- A PCLLRW has been issued to maintain THELMA 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
<b>7/11/2016 16:08</b>	<b>7/11/2016 20:15</b>	- 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
<b>7/12/2016 11:31</b>	<b>7/12/2016 19:21</b>	- 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
<b>7/12/2016 14:04</b>	<b>7/12/2016 15:22</b>	- A PCLLRW has been issued to maintain EELKHART-MOTTVTAP at 192 MVA in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available

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7/13/2016 13:27	7/15/2016 7:04	- 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
7/13/2016 14:25	7/13/2016 20:48	- A PCLLRW has been issued to maintain HIGHLND2-MARTIDPL HIG-09M1 at 68 MVA in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
7/13/2016 16:17	7/13/2016 17:19	- A PCLLRW has been issued to maintain BULLITCO BULC 161_69 XFR at 117 MVA in the EKPC for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
7/18/2016 10:31	7/18/2016 11:55	- A PCLLRW has been issued to maintain BAKER1 138 KV at 127 KV in the APS for Transmission Contingency Control. Additional Comments: BES 2 Facility
7/18/2016 11:23	7/18/2016 23:20	- A PCLLRW has been issued to maintain EHUNTING 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: BES 2 Facility
7/18/2016 12:00	7/18/2016 15:29	- External Lagrange - N Langrange 69 kV for I/o E Elkhart - Mottville - Post Cont AEP will open Strugis A 69 kV CB
7/18/2016 15:55	7/18/2016 21:00	- A PCLLRW has been issued to maintain HUNTINGT-SORENSEN at 138 MVA in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
7/19/2016 11:53	7/19/2016 23:59	- A PCLLRW has been issued to maintain MOTTVILL 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: BES 2 Facility
7/19/2016 13:26	7/19/2016 16:01	- A PCLLRW has been issued to maintain HUNTINGT-SORENSEN at 138 MVA in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available
7/20/2016 12:16	7/20/2016 23:04	- A PCLLRW 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
7/21/2016 11:22	7/21/2016 22:33	- A PCLLRW 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
7/22/2016 8:28	7/22/2016 9:50	- A PCLLRW has been issued to maintain HUNTINGT-SORENSEN at 138 MVA in the AEP for Transmission Contingency Control. Additional Comments: BES 2 Facility
7/22/2016 12:46	7/22/2016 21:03	- A PCLLRW has been issued to maintain MOTTVTAP 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available

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<b>7/23/2016 12:19</b>	<b>Not closed</b>	- A PCLLRW has been issued to maintain HIGHLND2-MARTIDPL HIG-09M1 at 68 MVA in the AEP for Transmission Contingency Control. Additional Comments: Load -No Generation or Switching available
<b>7/23/2016 14:21</b>	<b>7/24/2016 5:13</b>	- A PCLLRW has been issued to maintain CARROLLT 138 KV at 127 KV in the AEP for Transmission Contingency Control. Additional Comments: Post Contingency Switching available