

**Duke Energy Kentucky**  
**Case No. 2014-00454**  
**Post Hearing Set Data Requests**  
**Date Received: April 8, 2015**

**POST HEARING-DR-01-005**

**REQUEST:**

Provide the dollar amount of each hedging transaction and the effect on the fuel adjustment clause from November 1, 2012 through October 31, 2014.

**RESPONSE:**

See Post Hearing-DR-01-005 Attachment, column E, for the realized gain or loss of the hedging transactions included in the FAC for the expense months November 2012 through October 2014. The amounts in column E are included in the FAC filings on Schedule 6—Regional Transmission Organization Resettlements or Schedule 7—Prior Period Corrections (if applicable) in Section B—Purchases, Line—Economy Purchases. The Purchased Power, column A of the attachment, is the amount of purchased power whether there was a hedging transaction or not.

The impact of the hedging transactions for the period November 2012 through October 2014 is a benefit to the ratepayer of \$99,421.16.

**PERSON RESPONSIBLE:** Lisa Steinkuhl / John Swez

Duke Energy Kentucky

Expense Month	Purchased Power	Financial Hedges				Total FAC Filing			
	PJM Interconnection, L.L.C. (A)	ICAP Energy L.L.C. (B)	Intercontinental Exchange, L.L.C. (C)	Jefferies Bache, L.L.C. (D)	Total Financial Hedges (E)=(B)+(C)+(D)	Total Purchased Power per FAC Filing (a) (F)=(A)+(E)	Date Filed	Rates Effective	FAC Filing Schedule (a)
November 2012	1,881,944.19	0.00	2,400.00	0.00	2,400.00	1,884,344.19	May 20, 2013	June 2013	Schedule 6
December 2012	2,004,843.65	0.00	2,400.00	0.00	2,400.00	2,007,243.65	May 20, 2013	June 2013	Schedule 6
January 2013	1,871,033.30	0.00	2,398.00	8.58	2,406.58	1,873,439.88	June 20, 2013	July 2013	Schedule 6
February 2013	2,475,513.12	0.00	2,392.00	15.84	2,407.84	2,477,920.96	July 18, 2013	August 2013	Schedule 6
March 2013	1,381,108.87	0.00	2,400.00	0.00	2,400.00	1,383,508.87	August 16, 2013	September 2013	Schedule 6
April 2013	6,069,285.68	0.00	2,376.00	(4,728.71)	(2,352.71)	6,066,932.97	September 19, 2013	October 2013	Schedule 6
May 2013	1,717,059.20	0.00	3,600.00	0.00	3,600.00	1,720,659.20	October 17, 2013	November 2013	Schedule 6
June 2013	4,023,905.48	0.00	3,556.00	(3,074.93)	481.07	4,024,386.55	November 21, 2013	December 2013	Schedule 6
July 2013	6,016,477.40	0.00	2,380.00	0.00	2,380.00	6,018,857.40	December 20, 2013	January 2014	Schedule 6
August 2013	2,927,143.84	0.00	2,380.00	(195.44)	2,184.56	2,929,328.40	January 20, 2014	February 2014	Schedule 6
September 2013	1,585,380.21	0.00	0.00	(5,274.56)	(5,274.56)	1,580,105.65	February 20, 2014	March 2014	Schedule 6
October 2013	452,875.96	0.00	2,392.00	6.42	2,398.42	455,274.38	March 20, 2014	April 2014	Schedule 6
November 2013	1,489,374.04	0.00	2,382.00	0.00	2,382.00	1,491,756.04	April 17, 2014	May 2014	Schedule 6
December 2013	3,238,364.65	0.00	2,324.00	7,746.20	10,070.20	3,248,434.85	October 17, 2014	November 2014	Schedule 7
January 2014	13,292,403.57	0.00	2,362.00	0.00	2,362.00	13,294,765.57	August 18, 2014	September 2014	Schedule 7
February 2014	5,078,063.34	0.00	2,372.00	(43,118.96)	(40,746.96)	5,037,316.38	August 18, 2014	September 2014	Schedule 7
March 2014	12,709,481.06	448.00	2,324.00	(46,219.23)	(43,447.23)	12,666,033.83	September 19, 2014	October 2014	Schedule 7
April 2014	8,000,067.81	0.00	2,396.00	(164,087.77)	(161,691.77)	7,838,376.04	September 19, 2014	October 2014	Schedule 6
May 2014	12,796,464.62	0.00	2,310.00	17,317.81	19,627.81	12,816,092.43	October 17, 2014	November 2014	Schedule 6
June 2014	11,815,700.91	0.00	2,284.00	73,274.14	75,558.14	11,891,259.05	November 21, 2014	December 2014	Schedule 6
July 2014	2,712,504.50	0.00	2,388.00	120.68	2,508.68	2,715,013.18	December 15, 2014	January 2015	Schedule 6
August 2014	3,995,283.90	0.00	2,364.00	1,934.23	4,298.23	3,999,582.13	January 19, 2015	February 2015	Schedule 6
September 2014	4,548,285.33	0.00	2,316.00	9,496.90	11,812.90	4,560,098.23	February 20, 2015	March 2015	Schedule 6
October 2014	254,782.66		2,396.00	17.64	2,413.64	257,196.30	March 20, 2015	April 2015	Schedule 6
					<b>(99,421.16)</b>				

(a) - Section B. Purchases, Economy Purchases

**POST HEARING-DR-01-006**

**REQUEST:**

Provide definitions for the following:

- a. Pre-Emergency Load Management Reduction Action
- b. Emergency Load Management Reduction Action
- c. Primary Reserve Warning & reduction of Non-Critical Plant Load
- d. Maximum Emergency Generation, Maximum Emergency Generation Action  
Trans
- e. Emergency Voluntary Energy Only Demand Response
- f. Voltage Reduction Warning & Reduction of Non-Critical Plant Load
- g. Voltage Reduction Action & Curtailment of Non-Essential Building Load
- h. Manual Load Dump Warning
- i. Manual Load Dump Action

**RESPONSE:**

**a.**

**Step 1: Pre-Emergency Mandatory Load Management Reduction Action (30, 60 or 120-minute)**

Applicability: Any site registered in the PJM Demand Response program as a demand resource (a.k.a. DR) type that needs 30, 60 or 120 minute lead-time to make its reductions. These reductions are mandatory when dispatched during the product availability window.

**NOTE:** The minimum dispatch duration is 1-hr.

***PJM Actions:***

- PJM dispatcher notifies PJM management, PJM public information personnel, and members. PJM dispatcher advises members to consider the use of public appeals to conserve electricity usage. PJM dispatcher notifies other Control Areas through the RCIS.
- PJM dispatcher, via the eLRS System and Emergency Procedures website, will post detailed instructions to the Curtailment Service Providers (CSP) to dispatch 30, 60 and/or 120 minute Pre-Emergency Mandatory Load Management Reductions. An Action can be issued for the entire PJM RTO, specific Transmission Zone(s) or a Transmission Sub-zone(s) if transmission limitations exist. PJM dispatcher will also issue an All-Call informing the Members and CSPs to check the eLRS and Emergency Procedures postings for the detailed information pertaining to the Pre-Emergency Mandatory Load Management that has been called.
- PJM dispatcher cancels the Action, when appropriate.

***PJM Member Actions:***

- Member Curtailment Service Providers implement load management reductions as requested by PJM dispatchers.

b.

**Step 2: Emergency Mandatory Load Management Reduction Action ( 30, 60 or 120-minute)**

Applicability: Any site registered in the PJM Demand Response program as a demand resource (a.k.a. DR) type that needs 30, 60 or 120 minute lead time to make its reductions. These reductions are mandatory when dispatched during the product availability window.

**NOTE:** The minimum dispatch duration is 1-hr.

The purpose of the Load Management Reduction Action is to provide additional load relief by using PJM controllable load management programs. Load relief is expected to be required after initiating Maximum Emergency Generation.

***PJM Actions:***

- PJM dispatcher notifies PJM management, PJM public information personnel, and members. PJM dispatcher advises members to consider the use of public appeals to conserve electricity usage. PJM dispatcher notifies other Control Areas through the RCIS.
- PJM dispatcher, via the eLRS System and Emergency Procedures website, will post detailed instructions to the Curtailment Service Providers (CSP) to implement dispatch 30, 60 and/or 120 minute Emergency Mandatory Load Management Reductions. An Action can be issued for the entire PJM RTO, specific Transmission Zone(s) or a Transmission Sub-zone(s) if transmission limitations exist. PJM dispatcher will also issue an All-Call informing the Members and CSPs to check the eLRS and Emergency Procedures postings for

the detailed information pertaining to the Emergency Mandatory Load Management that has been called.

- PJM dispatcher issues a NERC Energy Emergency Alert Level 2 (EEA2 = ALERT LEVEL 2) via the RCIS to ensure all Reliability Authorities clearly understand potential and actual PJM system emergencies if one has not already been issued concurrent with the issuance of Emergency Mandatory Load Management Reductions. NERC EEA2 is issued when the following has occurred: Public appeals to reduce demand, voltage reduction, and interruption of non-firm load in accordance with applicable contracts, demand side management, or utility load conservation measures.
- PJM dispatcher cancels the Action, when appropriate.

c.

### **Step 3 (Real-time): Primary Reserve Warning**

The purpose of the Primary Reserve Warning is to warn members that the available primary reserve is less than required and present operations are becoming critical. It is implemented when available primary reserve capacity is less than the primary reserve requirement, but greater than the synchronized reserve requirement.

#### ***PJM Actions:***

- PJM dispatch issues a warning to members and PJM management stating the amount of adjusted primary reserve capacity and the requirement. A Warning can be issued for the entire PJM RTO or for specific Control Zone(s) based on the projected location of transmission constraints.
- PJM dispatch notifies PJM public information personnel.

- PJM dispatch rechecks with members to assure that all available equipment is scheduled and that requested secondary reserve is brought to primary reserve status.
- PJM dispatch ensures that all deferrable maintenance or testing on the control and communications systems has halted at PJM Control Center. PJM dispatch should provide as much advance notification as possible to ensure maintenance/testing does not impact operations. This notification may occur prior to declaration of Primary Reserve Warning.
- PJM dispatch cancels the warning, when appropriate.

***PJM Member Actions:***

- Transmission/Generation dispatchers notify management of the warning.
- Transmission/Generation dispatchers advise all stations and key personnel.
- Generation dispatchers prepare to load all available primary reserve, if requested.
- Transmission/Generation dispatchers ensure that all deferrable maintenance or testing affecting capacity or critical transmission is halted. Any monitoring or control maintenance work that may impact operation of the system is halted.
- Generation Dispatchers are to inform PJM of any environmentally restricted units and may consider the need to obtain a temporary variance from environmental regulators for specific generators in accordance with Attachment M to assist in preventing load shed. PJM is not responsible for obtaining a temporary variance from environmental regulations but will assist the member company if requested.
- PJM marketers remain on heightened awareness regarding PJM system conditions and the potential need for Emergency Energy Purchases.

d.

**Step 4 A (Real-time): Maximum Emergency Generation**

The purpose of the Maximum Emergency Generation is to increase the PJM RTO generation above the maximum economic level. It is implemented whenever generation is needed that is greater than the highest incremental cost level.

***PJM Actions:***

- PJM dispatch issues Maximum Emergency Generation. An Action can be issued for the entire PJM RTO, specific Control Zone(s) or a subset of a Control Zone if transmission limitations exist.
- PJM dispatch notifies PJM management, PJM public information personnel, and member dispatchers.
- PJM dispatch implements the Emergency Bid-Process, requesting Emergency bids by posting messages to selected PJM web-sites, RCIS, and contacting the neighboring control areas.
- PJM dispatch instructs members to suspend Regulation on all resources, except hydro generation.
- PJM dispatch determines the feasibility recalling off-system capacity sales that are recallable (network resources).
- PJM dispatch will determine any limiting transmission constraints internal to PJM that would impact the ability to cut transactions to a specific interface.
  - PJM dispatch will identify off-system capacity sales associated with the identified interfaces.



- PJM dispatch will contact the sink Balancing Authority to determine the impact of transaction curtailment.
  - If the net result of cutting off-system capacity sales would put the sink Balancing Authority into load shed then PJM will not curtail the transactions unless it would prevent load shedding within PJM.
  - If the net result of cutting off-system capacity sales would put PJM in a more severe capacity emergency than it is in currently in due to reciprocal transaction curtailments from the sink Balancing Authority, PJM will not initiate curtailing the transactions.
- PJM dispatch declares Maximum Emergency Generation and begins to load Maximum Emergency Generation or purchase available emergency energy from PJM Members (Emergency Bid Process) and from neighboring Control Areas based on economics and availability.
- PJM dispatch loads Maximum Emergency Generation incrementally as required, if the entire amount of Maximum Emergency Generation is not needed. PJM dispatchers generally load Maximum Emergency CTs prior to loading Maximum Emergency Steam in order to preserve synchronized reserve.
- PJM dispatch cancels, when appropriate.
- The PJM Member is responsible for delivering (i.e., securing all transmission service) of the energy to one of PJM's borders with a neighboring control area. To ensure deliverability, firm transmission service may be required if external Reliability Authorities have issued TLRs.

- PJM attempts to provide 60-minutes notice before the energy is required by posting on selected PJM web-sites an emergency procedure message stating that PJM anticipates requiring emergency energy purchases beginning at a specific time.
- Once PJM posts the request for emergency purchases all PJM Members can submit “bids” to make emergency energy sales to PJM. PJM Members should submit bids via email. If email is unavailable PJM Members can fax in their bids. PJM Members then call PJM dispatch to confirm receipt. The Emergency Bid form is found in Attachment D along with the rules for submitting. Bids may also be called into a pre-assigned, recorded voice line. They should be structured as follows:
  - Time – of energy available
  - Amount – of energy available
  - Price of energy
  - Duration (hours) energy is available and limits on minimum time required to take
  - Notification time to cancel/accept
  - PJM Member identification
  - Interface and contract path
- PJM accepts the offers and schedules the energy using the following guidelines:
  - Energy is accepted based on economics (least cost offers will be accepted first based on energy price and minimum hours) if more energy is offered than required.

- Energy is accepted as required based on economics from the available bids (i.e., if PJM requires 500 MW immediately it takes the cheapest 500 MW bid at the time). PJM adjusts current schedules to correct economics if time permits (i.e., if a cheaper scheduled is bid after a more expensive schedule is loaded PJM only cancels the first if reasonable time exists to cancel one and load the other).
- Similarly priced offers are selected based on timestamps (i.e., first in first selected).

Bids accepted by PJM are Emergency Purchases by PJM and are eligible to set the Locational Marginal Price. The energy received is accounted for according to the current Emergency Energy accounting procedures. See the *PJM Manual for Operating Agreement Accounting (M28)* for more details.

PJM reserves the right to load maximum emergency equipment as required to control the system regardless of whether any bids were/were not accepted (i.e., sudden unit loss may not allow time to accept bids).

PJM implements and curtails emergency purchase transactions with as much notice as practical to allow for a reliable transition into and out of emergency conditions.

PJM requests emergency energy from neighboring Control Areas (under current Control Area agreements) after all energy offered by the PJM Members is accepted, unless there is an immediate need for the energy.

PJM can deviate from or change the order of the above actions as/if necessary.

***PJM Member Actions:***

- Transmission/Generation dispatchers notify management of the emergency procedure.
- PJM Marketers recall off-system capacity sales that are recallable as directed by PJM dispatchers.
- Generation dispatchers suspend regulation, as requested, and load all units to the Maximum Emergency Generation level, as required.
- Generation dispatchers notify PJM dispatching of any Maximum Emergency (ME) generation loaded prior to PJM requesting ME generation is loaded.

**Step 4 B (Real-time): Emergency Voluntary Energy Only Demand Response**

**Reductions**

Applicability: Any site registered in the PJM Demand Response program as an emergency energy only resource. These reductions are voluntary.

The purpose of this Load Reduction Action is to request end-use customers, who participate in the Emergency Voluntary Energy Only Demand Response Program, to reduce load during emergency conditions.

***PJM Actions:***

- PJM dispatch issues Action via the PJM All-call and post message to selected PJM Web-sites and the NERC RCIS. An Action can be issued for the entire PJM RTO, specific Control Zone(s) or a subset of a Control Zone if transmission limitations exist.
- PJM dispatch notifies PJM management, PJM public information personnel, and PJM Markets personnel.

***PJM Member Actions:***

- Curtailment Service Providers with Demand Resource(s) registered in the Energy Only Option of Emergency Load Response reduce load.
- Transmission / Generation dispatchers notify management of the emergency procedure.

e.

**Step 5 (Real-time): Voltage Reduction Warning & Reduction of Non-Critical Plant Load**

The purpose of the Voltage Reduction Warning & Reduction of Non-Critical Plant Load is to warn members that the available synchronized reserve is less than the Synchronized Reserve Requirement and that present operations have deteriorated such that a voltage reduction may be required. It is implemented when the available synchronized reserve capacity is less than the synchronized reserve requirement, after all available secondary and primary reserve capacity (except restricted maximum emergency capacity) is brought to a synchronized reserve status and emergency operating capacity is scheduled from adjacent systems.

***PJM Actions:***

- PJM dispatch issues a warning to members and PJM management, stating the amount of adjusted synchronized reserve capacity and the requirement. A Warning can be issued for the entire PJM RTO or for specific Control Zone(s) based on the projected location of transmission constraints.
- PJM dispatch notifies PJM public information personnel.
- PJM notifies the Department of Energy (DOE).
- PJM dispatch cancels the warning, when appropriate.

***PJM Member Actions:***

- Transmission / Generation dispatchers notify management of the warning.
- Transmission / Generation dispatchers notify governmental agencies, as applicable.
- Transmission / Generation dispatchers advise all stations and key personnel.
- Generation dispatchers order all generating stations to curtail non-essential station light and power.
- Transmission dispatchers / LSEs prepare to reduce voltage, if requested.
- Transmission dispatchers / LSEs and Curtailment Service Providers notify appropriate personnel that there is a potential need to implement load management programs, in addition to interrupting their interruptible/curtailable customers in the manner prescribed by each policy, if it has not already been implemented previously.
- PJM marketers remain on heightened awareness regarding PJM system conditions and the potential need for Emergency Energy Purchases.

**f.**

**Step 6 (Real-time): Curtailment of Non-Essential Building Load**

The purpose of the Curtailment of Non-Essential Building Load is to provide additional load relief, to be expedited prior to, but no later than the same time as a voltage reduction.

***PJM Actions:***

PJM dispatch notifies PJM management, PJM public information personnel, and members. PJM dispatcher advises members to consider the use of public appeals to conserve electricity usage. PJM dispatcher notifies outside systems through the RCIS.

- PJM dispatch issues a request to curtail non-essential building load. An Action can be issued for the entire PJM RTO, specific Control Zone(s) or a subset of a Control Zone if transmission limitations exist.
- PJM dispatch cancels the request, when appropriate.

***PJM Member Actions:***

- Transmission/Generation dispatchers notify management of the emergency procedure and to consider the use of public appeals to conserve electricity usage.
- Transmission dispatchers notify governmental agencies, as applicable.
- Transmission/Generation dispatchers/LSEs switch off all non-essential light and power in LSE-owned commercial, operations, and administration offices.

**g.**

**Step 7 (Real-time): Manual Load Dump Warning**

The purpose of the Manual Load Dump Warning is to warn members of the increasingly critical condition of present operations that may require manually dumping load. It is issued when available primary reserve capacity is less than the largest operating generator or the loss of a transmission facility jeopardizes reliable operations after all other possible measures are taken to increase reserve. The amount of load and the location of areas(s) are specified.

***PJM Actions:***

- PJM dispatch issues the warning to members and PJM management, stating the estimated amount of load relief that is required (if applicable). A Warning can be issued for the entire PJM RTO or for specific Control Zone(s) based on the projected location of transmission constraints.
- PJM dispatch notifies PJM public information personnel.
- PJM dispatch notifies FERC via the FERC Division of Reliability's electronic pager system, consistent with FERC Order No. 659.
- PJM dispatch establishes a mutual awareness with the appropriate member dispatchers of the need to address the occurrence of a serious contingency with minimum delay.
- PJM dispatch examines bulk power bus voltages and alerts the appropriate member dispatchers of the situation.
- PJM dispatch cancels the warning, when appropriate.

***PJM Member Actions:***

- Transmission/Generation dispatchers notify management of the warning.
- Transmission dispatchers notify governmental agencies, as applicable.
- Transmission/Generation dispatchers advise all station and key personnel.
- Transmission dispatchers/LSEs review local procedures and prepare to dump load in the amount requested.
- Transmission dispatchers/LSEs reinforce internal communications so that load dumping can occur with minimum delay.
- PJM marketers remain on heightened awareness regarding PJM system conditions and the potential need for Emergency Energy Purchases.



**h.**

**Step 8 (Real-time): Voltage Reduction**

The purpose of Voltage Reduction during capacity deficient conditions is to reduce load to provide a sufficient amount of reserve to maintain tie flow schedules and preserve limited energy sources. A curtailment of non-essential building load is implemented prior to or at this same time as a Voltage Reduction Action. It is implemented when load relief is still needed to maintain tie schedules.

***PJM Actions:***

- PJM dispatch notifies PJM management, PJM public information personnel, and members. PJM dispatch advises members to consider the use of public appeals to conserve electricity usage. PJM dispatch notifies outside systems through the RCIS. PJM dispatch notifies DOE. An Action can be issued for the entire PJM RTO, specific Control Zone(s) or a subset of a Control Zone if transmission limitations exist.
- PJM Management may issue system-wide or Control Zone-specific Public/Media Notification Message C-3 or H-3, (whichever is applicable). See Attachment A.
- PJM dispatch investigates loading of shared reserves with neighboring systems prior to implementation of a voltage reduction, recognizing the impact on transmission limits.
- PJM dispatch issues the order for a 5% voltage reduction.
- PJM dispatch issues a NERC Energy Emergency Alert Level 2 (EEA2 = ALERT LEVEL 2) via the RCIS to ensure all Reliability Authorities clearly understand potential and actual PJM system emergencies if one has not already been issued

concurrent with the issuance of Active Load Management Curtailables / Full Emergency Load Response (formerly known as ALM). NERC EEA2 is issued when the following has occurred: Public appeals to reduce demand, voltage reduction, and interruption of non-firm load in accordance with applicable contracts, demand side management/active load management, or utility load conservation measures.

- If it has not already begun, the PJM dispatch will initiate Shortage Pricing if the region where the voltage reduction action has been initiated corresponds with an entire Synchronized Reserve Zone or Sub-Zone.
- PJM dispatch cancels the reduction, when appropriate.

***PJM Member Actions:***

- Transmission/Generation dispatchers notify management of the emergency procedure and to consider the use of public appeals to conserve electricity usage.
- Member Transmission dispatchers notify governmental agencies, as applicable.
- Member Transmission dispatchers/LSEs take steps to implement the voltage reduction.

i.

**Step 9 (Real-time): Manual Load Dump**

The purpose of the Manual Load Dump is to provide load relief when all other possible means of supplying internal PJM RTO load have been used to prevent a catastrophe within the PJM RTO or to maintain tie schedules so as not to jeopardize the reliability of the other interconnected regions. It is implemented when the PJM RTO cannot provide adequate capacity to meet the PJM RTO's load or critically overloaded

transmission lines or equipment cannot be relieved in any other way and/or low frequency operation occurs in the PJM RTO, parts of the PJM RTO, or PJM RTO and adjacent Control Areas that may be separated as an island.

Under capacity deficient conditions, the PJM EMS load dump calculator was modified to institute changes to the Operating Agreement set forth in Schedule 1, Section 1.7.11 that states that "...the Office of Interconnection may not order a manual load dump in a Control Zone solely to address capacity deficiencies in another Control Zone."

The load dump calculation determines which Control Zone(s) is short based on real-time load and energy values from EMS and capacity values received daily from the Capacity Adequacy Planning Department. Real-time energy values are used as a surrogate for available capacity, because in a capacity shortage situation all available generation should be loaded to full capacity. Since most of the values used in the load dump calculation are real-time dynamic numbers, the calculation is performed in the PJM EMS. Load Serving Entities will be able to designate within eCapacity that capacity resources are being used to serve load in a specific Control Zone. Similarly EES users will be able to specify that an external energy schedule is designated for a specific Control Zone. Resources that are not designated for a specific Control Zone will be considered an RTO resource for load dump calculation purposes and allocated across all Control Zones according to load ratio share. Only Control Zones that are determined to be deficient will be assigned a share of a load dump request initiated due to RTO capacity deficiencies. If the PJM Mid-Atlantic Region is determined to be deficient, its share will be further allocated according to Attachment E.

***PJM Actions:***

- PJM dispatch verifies that separations have not occurred and that load dumping is desirable on the system being controlled (i.e., make sure that a load dump will help, not aggravate the condition).
- PJM dispatch instructs members to suspend all remaining regulation, if not already suspended previously.
- PJM dispatch determines which Control Zone (s) are capacity deficient and the relative proportion of deficiency. PJM dispatch estimates the total amount of load to be dumped and utilizes the PJM EMS to determine deficient Control Zones and their share of load dump required.
- PJM dispatch orders the appropriate member dispatchers to dump load according to PJM EMS calculations. The PJM Mid-Atlantic Region share will be further allocated according to Attachment E.
- PJM dispatch will implement load shedding in controlled step sizes to minimize system impact and further uncontrolled separation.
- PJM dispatch notifies PJM management, PJM public information personnel, and members. PJM dispatch advises members to consider the use of public appeals to conserve electricity usage and public announcements of the emergency. PJM dispatch notifies other Control Areas through the RCIS, and notifies DOE, FEMA, and NERC offices, using established procedures.
- PJM dispatch notifies FERC via the FERC Division of Reliability's electronic pager system, consistent with FERC Order No. 659.

- PJM dispatch issues a NERC Energy Emergency Alert Level 3 (EEA3 = ALERT LEVEL 3) via the RCIS to ensure all Reliability Authorities clearly understand potential and actual level of PJM System Emergencies.
- PJM Management issues a system-wide or Control Zone specific Public/Media Notification Message C-4 or H-4, (whichever is applicable). Typically, this would be issued prior to a Manual Load Dump. See Attachment A.
- If it has not already begun, the PJM dispatch will initiate Shortage Pricing if the region where the manual load dump action has been initiated corresponds with an entire Synchronized Reserve Zone or Sub-Zone.
- PJM dispatch cancels the load dump order and restores required regulation, when appropriate.

***PJM Member Actions:***

- Generation dispatchers suspend remaining regulation, when directed by PJM prior to dumping load.
- Transmission dispatchers/LSEs promptly dump an amount of load equal to or in excess of the amount requested by PJM dispatcher (Mid-Atlantic Region operators refer to Attachment E for specific allocation). The load dump plan should consider/recognize priority/critical load.
- Transmission/Generation dispatchers notify management of the emergency procedure.
- Transmission dispatchers/LSEs consider the use (or continued use) of public appeals to conserve electricity usage and consider the use of public announcements of the emergency.

- Transmission dispatchers notify governmental agencies, as applicable.
- Transmission dispatchers/LSEs maintain the requested amount of load relief until the load dump order is cancelled by PJM dispatcher.
- Transmission dispatchers report the amount of load curtailed/restored upon implementation to the PJM Power Dispatcher.

**PERSON RESPONSIBLE:** John Verderame