PJM Demand Response Activity
July 15-19, 2013

February 3, 2014
Following charts depict:

- All economically scheduled demand response across PJM for all dates.

- All emergency demand response (known as “load management” or “DR”) capacity resources called by PJM to reduce load that had not already reduced economically.

- July 15 and July 16 – Long Lead Emergency (DR) resources dispatched in ATSI Zone for total DR of 690 MW on each day.*

- July 18 – Long Lead Emergency (DR) resources dispatched in ATSI, PECO, PPL, and AEP Canton sub-zone for total DR of 1735 MW.*
  - AEP Canton sub-zone did not require Mandatory Compliance.

*See following link for specific deployment time for each zone and lead time:
http://www.pjm.com/planning/resource-adequacy-planning/~/media/planning/res-adeq/load-forecast/alm-history.ashx
Demand Response in PJM: July 15, 2013

- Actual Emergency DR
- Estimated Emergency DR*
- Economic DR
- PJM Eastern Hub LMP
- PJM RTO LMP

*PJM does not measure compliance for partial clock hours and therefore estimated reduction based on compliance from full clock hour performance.
Actual\(^1\) vs Committed Reductions\(^2\) During Compliance Period
July 15, 2013

1. Actual Emergency DR values are Emergency Compliance reductions (which may be different than reductions from Emergency Energy Settlements).
2. Committed Emergency DR values are final RPM commitment values.
Demand Response in PJM: July 16, 2013

- Actual Emergency DR
- Estimated Emergency DR*
- Economic DR
- PJM Eastern Hub LMP
- PJM RTO LMP

*PJM does not measure compliance for partial clock hours and therefore estimated reduction based on compliance from full clock hour performance.
Actual¹ vs Committed Reductions² During Compliance Period
July 16, 2013

1. Actual Emergency DR values are Emergency Compliance reductions (which may be different than reductions from Emergency Energy Settlements).
2. Committed Emergency DR values are final RPM commitment values.
Demand Response in PJM: July 18, 2013

- Actual Emergency DR
- Estimated Emergency DR*
- Economic DR
- PJM Eastern Hub LMP
- PJM RTO LMP

*PJM does not measure compliance for partial clock hours and therefore estimated reduction based on compliance from full clock hour performance.
Actual\(^1\) vs Committed Reductions\(^2\) During Compliance Period
July 18, 2013

1. Actual Emergency DR values are Emergency Compliance reductions (which may be different than reductions from Emergency Energy Settlements).
2. Committed Emergency DR values are final RPM commitment values.
Demand Response in PJM: July 19, 2013

- Economic DR
- PJM Eastern Hub LMP
- PJM RTO LMP

MW Reduction vs. Hour

- LMP ($/Mwh)

Hourly MW Reduction and LMP for July 19, 2013 in PJM, showing the economic impact of demand response.
ATSI Zone Instantaneous Load July 15, 2013

- Emergency DR Event Period
- 13:50 - ATSI Zone Long Lead Notified
- 15:50 - ATSI Zone Long Lead Activated
- 18:22 - ATSI Zone Long Lead Released

MW

PECO Zone Instantaneous Load July 18, 2013

Emergency DR Event Period

12:00 - PECO Zone Long Lead Notified
14:40 - PECO Zone Long Lead Activated
17:00 - PECO Zone Long Lead Released