2011 Preliminary Emergency Load Management (ILR/DR) and Economic Demand Response summary

DRS
October 27, 2011
PJM declared 3 emergency events in 2011
- 10/11 DY events called after 2010 summer mandatory capacity compliance period
  - 5/26/11 (235 MW of nominated capacity) – sub zonal event for Norfolk area of Dominion zone
    - 41% of nominated capacity realized
    - 81% of expected reductions realized
  - 5/31/11 (3,500 MW of nominated capacity) - Midatlantic and Dom zones (Long lead time only)
    - 41% of nominated capacity realized
    - 83% of expected reductions realized
- 11/12 events called during mandatory summer capacity compliance period
  - 7/22/11 (2,361 MW of nominated capacity) – BGE (short and long lead) and JCPL, Meted, PECO, DPL and DLCO (long lead)
    - PRELIMINARY RESULT - 90% of nominated capacity realized

Comprehensive Load Management Performance report is published on annual basis by Jan of each year
- Includes final event and test performance results

PJM had very limited Economic Demand Response activity
• 10/11 DY Emergency Events (5/26, 5/31) after mandatory summer 2010 compliance period
• 11/12 DY Emergency Event (7/22)
• 7/21/11 economic activity (no emergency events but very high load day)
Actual Demand Response in PJM
May 26, 2011

MW Reduction

LMP ($/MWh)

Hour

Economic DR (RTO)  Actual Emergency DR (Norfolk Subzone)  RTO LMP
Emergency Event reductions (non-summer period)

Actual¹, Expected² and Mandatory³ Load Reductions
May 26, 2011 Emergency Load Management Event
Norfolk area of Dominion Zone

2. Expected values are based on CSP reported availability prior to event of 50% of Mandatory Load Reduction values.
3. Mandatory Load Reduction are the load reduction values required during mandatory compliance period for 6/1 through 9/30 and exclude Capacity Only registration.
Actual Demand Response in Mid-Atlantic and Dominion Zones
May 31, 2011

MW Reduction

LMP ($/MWh)

0 100 200 300 400 500 600 700 800 900 1000

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Hour

Economic DR (RTD) Actual Emergency DR PJM Eastern Hub LMP
Emergency Event reductions
(non-summer period)

Actual\textsuperscript{1}, Expected\textsuperscript{2} and Mandatory\textsuperscript{3} Load Reductions
May 31, 2011 Emergency Load Management Event
Mid-Atlantic & Dominion zones

2. Expected values are based on CSP reported availability prior to event of 50% of Mandatory Load Reduction values.
3. Mandatory Load Reduction are the load reduction values required during mandatory compliance period for 6/2 through 9/30 and actual Capacity Only registration.
• 10/11 DY Emergency Events (5/26, 5/31) after mandatory summer 2010 compliance period

• **11/12 DY Emergency Event (7/22)**

• 7/21/11 economic activity (no emergency events but very high load day)
Estimated Demand Response in PJM
July 22, 2011

MW Reduction

Hour

LMP ($/MWh)

$600

$500

$400

$300

$200

$100

$0

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Economic DR (RTO)  Emergency DR  PJM Eastern Hub LMP
Preliminary Emergency event load reductions

Preliminary Reductions Submitted for Compliance vs Nominated Reductions
July 22, 2011
Preliminary Emergency event load reductions by zone

Preliminary Reductions Submitted for Compliance vs Nominated Reductions
July 22, 2011

MW

Zone

Preliminary Reduction, Nominated ICAP
PJM Mid-Atlantic Region Load and LM Events on 7/22/11

10:00 – BGE Zone Long Lead Notified

11:00 – BGE Zone Short Lead Notified

11:30 – PECO JCPL Meted DPL and DUQ Zones Long Lead Notified

12:00 – BGE Zone Long and Short Lead Activated

13:30 – PECO JCPL Meted DPL and DUQ Zones Long Lead Activated

17:30 – BGE Zone Short Lead Released

18:00 – BGE Zone Long Lead Released

18:30 – JCPL and Meted Zones Long Lead Released

19:00 – PECO Zone Long Lead Released

19:30 – DPL and DUQ Zones Long Lead Released
Load pickup stops and reverses direction when load management invoked.
Load pickup stops and reverses direction when load management invoked
Load pickup stops and reverses direction when load management invoked.
• 10/11 DY Emergency Events (5/26, 5/31) after mandatory summer 2010 compliance period
• 11/12 DY Emergency Event (7/22)
• 7/21/11 economic activity (no emergency events but very high load day)