



PJM SUMMER 2008 RELIABILITY ASSESSMENT

Maryland Public Service Commission
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Operations



PJM Load and Capacity Comparison: 2008 vs. 2007

2008

	Forecast Load (MW) total	Load Mgt and Contractually Interruptible (MW)	Forecast Load (MW) Less Load Mgmt & Contractually Interruptible	Installed Generation Capacity (MW)	Reserve (MW)	Capacity Margin	Reserve Margin	Required Reserve Margin
RTO	137,950	4,460 (est.)	133,490	165,300	31,810	19.2%	23.8%	15.0%
Maryland	13,970 (est.)	523 (est.)	13,447	12,050	NA	NA	NA	NA

2007

	Forecast Load (MW) total	Load Mgt and Contractually Interruptible (MW)	Forecast Load (MW) Less Load Mgmt & Contractually Interruptible	Installed Generation Capacity (MW)	Reserve (MW)	Capacity Margin	Reserve Margin	Required Reserve Margin
RTO	136,961	1,620 (est.)	135,341	165,886	30,545	18.4%	22.5%	15.0%
Maryland	13,800 (est.)	285	13,515	11,920	NA	NA	NA	NA

Forecast Load – Expected peak demand, based on normal weather (Total Internal Demand-TID)

Load Management and Contractually Interruptible – Demand Response and other customer load willing to be interrupted

Forecast Load Less Load Management – Expected peak demand after demand response has been implemented (Net Internal Demand-NID)

Installed Generation Capacity – Total MW output of all of the generators within the PJM Balancing Area (Installed Capacity—ICAP)

Reserve (MW) – Installed Generation Capacity minus Net Internal Demand

Capacity Margin (%) -- Reserve expressed as a percent of Installed Capacity

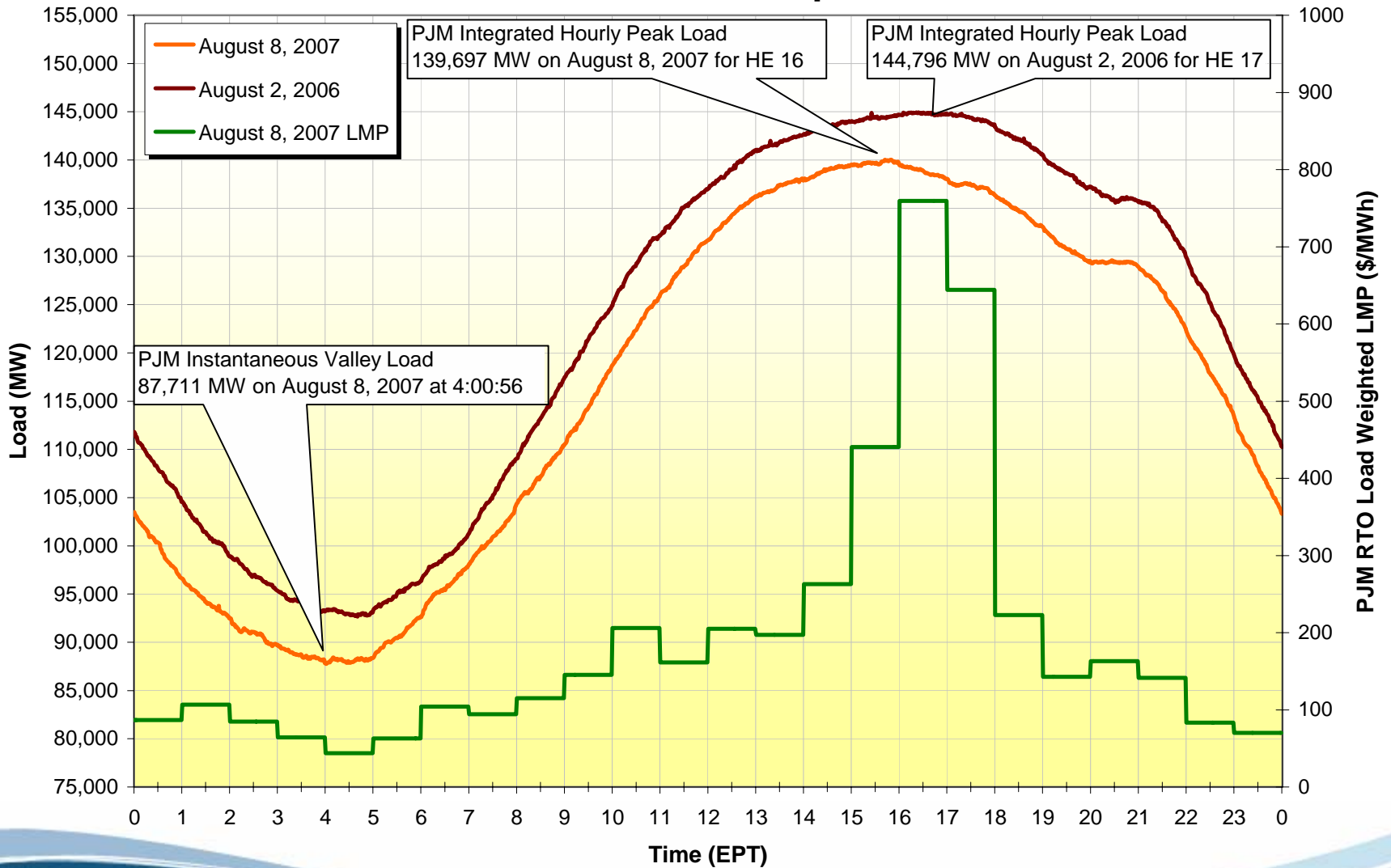
Reserve Margin (%) – Reserve expressed as a percent of Net Internal Demand

Required Reserve Margin (%) – PJM required planning reserve, as determined by the RPM process (Installed Reserve Margin-IRM)

Daily High Temperature					
Date	Baltimore	Chicago	Philadelphia	Richmond	Washington
7/9/2007	97°F	94°F	96°F	96°F	98°F
8/7/2007	97°F	91°F	92°F	97°F	96°F
8/8/2007	102°F	87°F	97°F	104°F	102°F
8/9/2007	94°F	84°F	93°F	100°F	94°F
Departure From Normal					
Date	Baltimore	Chicago	Philadelphia	Richmond	Washington
7/9/2007	10°F	11°F	11°F	9°F	10°F
8/7/2007	11°F	8°F	7°F	10°F	8°F
8/8/2007	16°F	4°F	12°F	17°F	14°F
8/9/2007	8°F	2°F	8°F	13°F	7°F

Peak Load Day 8/8/07 – Extreme heat in the East, cooler in the Midwest—most problematic operating scenario for PJM.

PJM RTO Load Comparison



Long Term Load Management in BC/PEPCO –11:44 (Dominion, Mid-Atlantic – 12:08)

Short Term Load Management in BC/PEPCO –12:20 (Mid-Atlantic – 15:50)

Load Maximum Emergency Generation in BC/PEPCO – 12:33 (Dominion – 15:05)

Implemented Scarcity Pricing–15:05 – 18:12

NERC TEA 1 –15:06-17:34 – Black Oak – Bedington IROL Interface

Shared Reserves –15:21-15:33 – due to NYISO loss of Poletti unit

5% Voltage Reduction –15:55-17:09 - Mid-Atlantic

Shared Reserves –15:57-16:07 – PJM requested from NPCC, for the loss of the Bethlehem Power units (>1,000 MW lost at 15:53)

Maximum Emergency Generation Action (Loaded available) –15:57-17:33 – Mid-Atlantic

Manual Load Dump Warning –16:09-17:42 – Mid-Atlantic

Voltage Reduction Warning –16:16-18:53 – Dominion

- PJM Operating Analysis Task Force (OATF) Summer Operating Study
- Reliability *First* Summer Assessment
- Joint MISO/PJM Operations Coordination Meeting
- Joint NYISO/PJM Operations Coordination Meeting
- Table top Summer Exercise with Progress Energy and Duke Energy (VACAR south)
- PJM Spring Operator Seminar (9 sessions – over 500 operators attended)
- PJM Emergency Procedures Drill (May 20)

Normal Sequence of Emergency Procedures

- Alerts – Usually, issued the day before the operating day
- Warnings – Usually, issued the morning of the operating day or when the event is imminent
- Actions – At the onset of the event

Communications to PSC

- Alerts, Warnings, and Actions communicated to Messrs. Schafer and Taborsky via e-mail, all-call message, and personal outreach



- BGE transmission circuit and transformer ratings:
 - Revised ratings (Operating Limits) based on a comprehensive review of their facility ratings process.
 - PJM & BGE analyzed & reviewed the impacts and took the following actions :
 - BGE reduced ratings on most 230kV and 115kV lines
 - 230 kV and 115 kV circuits with critical impact mitigated by BGE during May/June
 - Remainder of rating changes to be analyzed & reviewed as part of annual process
 - No reliability issues or significant increase in congestion are expected from the rating changes with the mitigating measures completed on the critical circuits
- Normal congestion anticipated in BG&E and PEPCO based on load and generation availability.
- Significant Middle Atlantic area transmission upgrades:
 - Orchard 500/230-kV substation in Atlantic Electric (in –service)
 - Hunterstown 500-kV CB, 230-kV ring bus, series reactor, and two 100-MVAR capacitors (in service except for Capacitors)
 - North Lancaster Reinforcement Project (in service)
 - Blackoak 500 KV Static Var Compensator (in service)

Gould St plant (101 MW) reactivated from mothball status for commercial operation on 6/01/08

Doubs-Lime Kiln 138kV to 230kV conversion (in service)




Doubs-Dickerson 230kV circuits raised (6/08)

Legend

-  Substation Upgrade
-  Line Upgrade




Substations

Voltage


-  500kV
-  230kV
-  138kV

Transmission Lines


Voltage

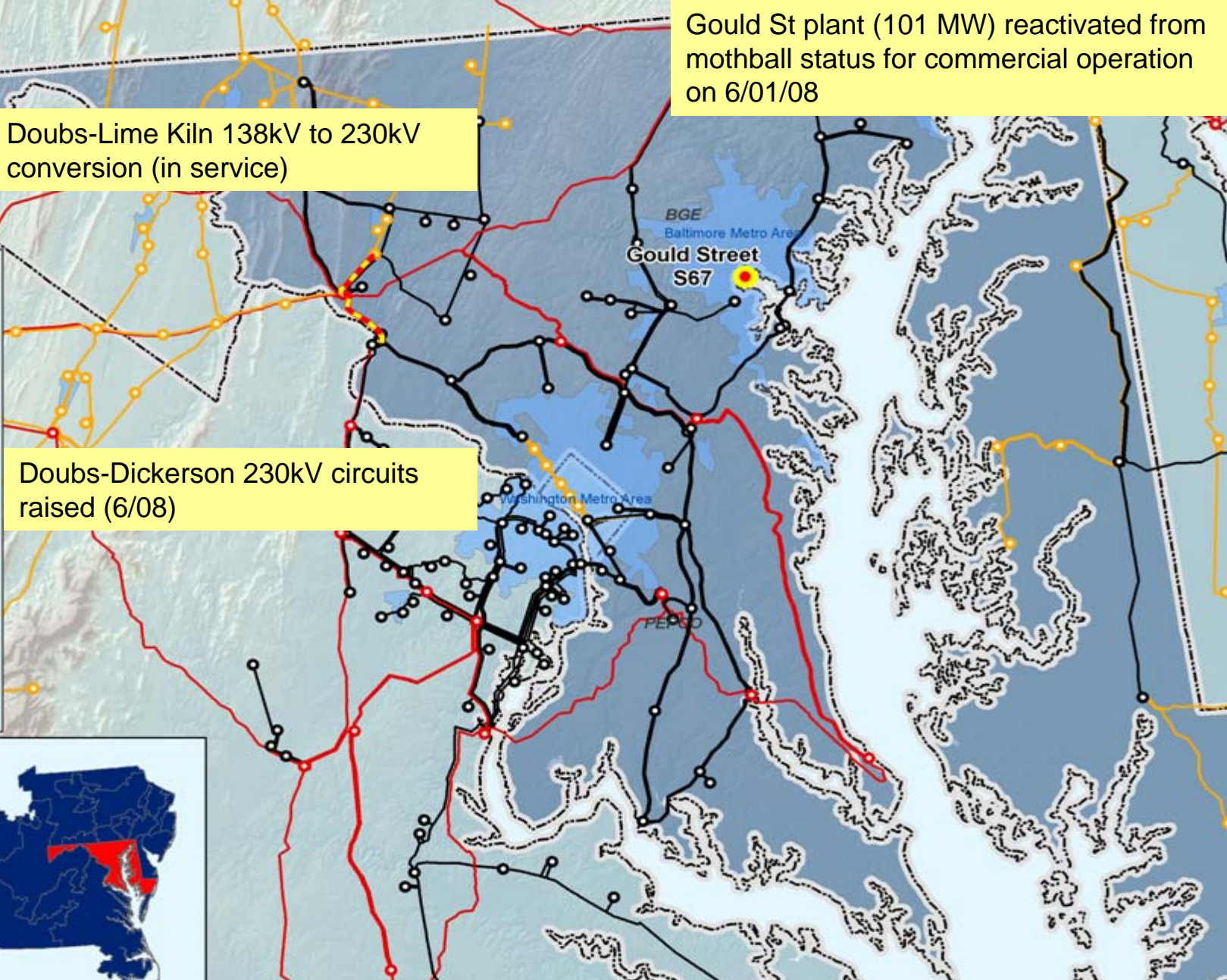
-  500
-  230
-  138

Urban Areas

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PJM Zones

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- PJM expects to be able to reliably serve expected peak loads
- Congestion will be highly dependent on load and generation availability
- The Baltimore/Washington area will continue to be a significant concern until new transmission, generation or demand response is built in the area