



# **Summer 2006 PJM Reliability Assessment**

May 24, 2006  
Pennsylvania Public Utility Commission



- Projected Peak Demand and Capacity
- Bulk Power Purchases/Sales
- Reserves
- Unavailable Capacity
- PJM Load Response Programs
- Transmission Adequacy



# PJM Load and Capacity Summary

## 2006 (Projected as of May 5, 2006)

Forecast Load (MW)	Active Load Management (MW)	Forecast Load Less ALM (MW)	Installed Generation Capacity (MW)	Reserve Margin (MW)	Capacity Margin	Reserve Margin	Required Reserve Margin
133,500	2,061	131,439	164,994	33,555	20.3%	25.5%	15.0%

## 2005

Forecast Load (MW)	Active Load Management (MW)	Forecast Load Less ALM (MW)	Installed Generation Capacity (MW)	Reserve Margin (MW)	Capacity Margin	Reserve Margin	Required Reserve Margin
132,983	1,653	131,330	165,640	34,310	20.7%	26.1%	15.0%

- Projected peak of **133,500** MW compares to all-time PJM peak of **133,761** MW on 7/26/05.
- PJM “90/10” peak is estimated to be about 6% above “50/50” peak or **141,500** MW.
- Capacity Projection of **164,994** is based on “Iron-in-the Ground” Capacity Resources and excludes the impact of external purchases and sales.
- Total wind capacity in PJM: 340 MW
- Total wind capacity in PA: 168 MW
- Total wind projects in Queues: 10,560 MW

- Currently, PJM has 12,026 MW of firm transmission service in place for net energy sales out of PJM through the summer peak period
- Current transactions out of PJM are not capacity backed
  - Transactions can be curtailed in the event of a PJM capacity emergency

- Historically 6.3% of PJM capacity is “forced out” of service during the peak summer period
- All nuclear units are expected to be in service and at full capacity (31,200 MW) at the time of the peak
- Scheduled generator maintenance is coordinated to minimize peak period impacts
- Planned generator outages are generally not permitted during peak periods



- 2,061 MW of ALM for Summer 2006
- Operational control turned over to PJM
- Requirements regarding number of interruptions, duration of interruptions, lead time, etc.
- PJM verifies compliance

<u>Year</u>	<u># of ALM Events</u>	<u>Year</u>	<u># of ALM Events</u>
2000	2	2003	0
2001	4	2004	0
2002	3	2005	2

## **EMERGENCY**

Designed to provide a method by which end-use customers may be compensated by PJM for voluntarily reducing load during an emergency event.

As of 4/17/06:  
1,140 MW  
3,657 Sites

## **ECONOMIC**

Designed to provide an incentive to customers or curtailment service providers to reduce consumption when PJM LMP prices are high.

Two options:  
Day-Ahead Option  
Real-Time Option  
As of 4/17/06  
900 MW  
234 Sites



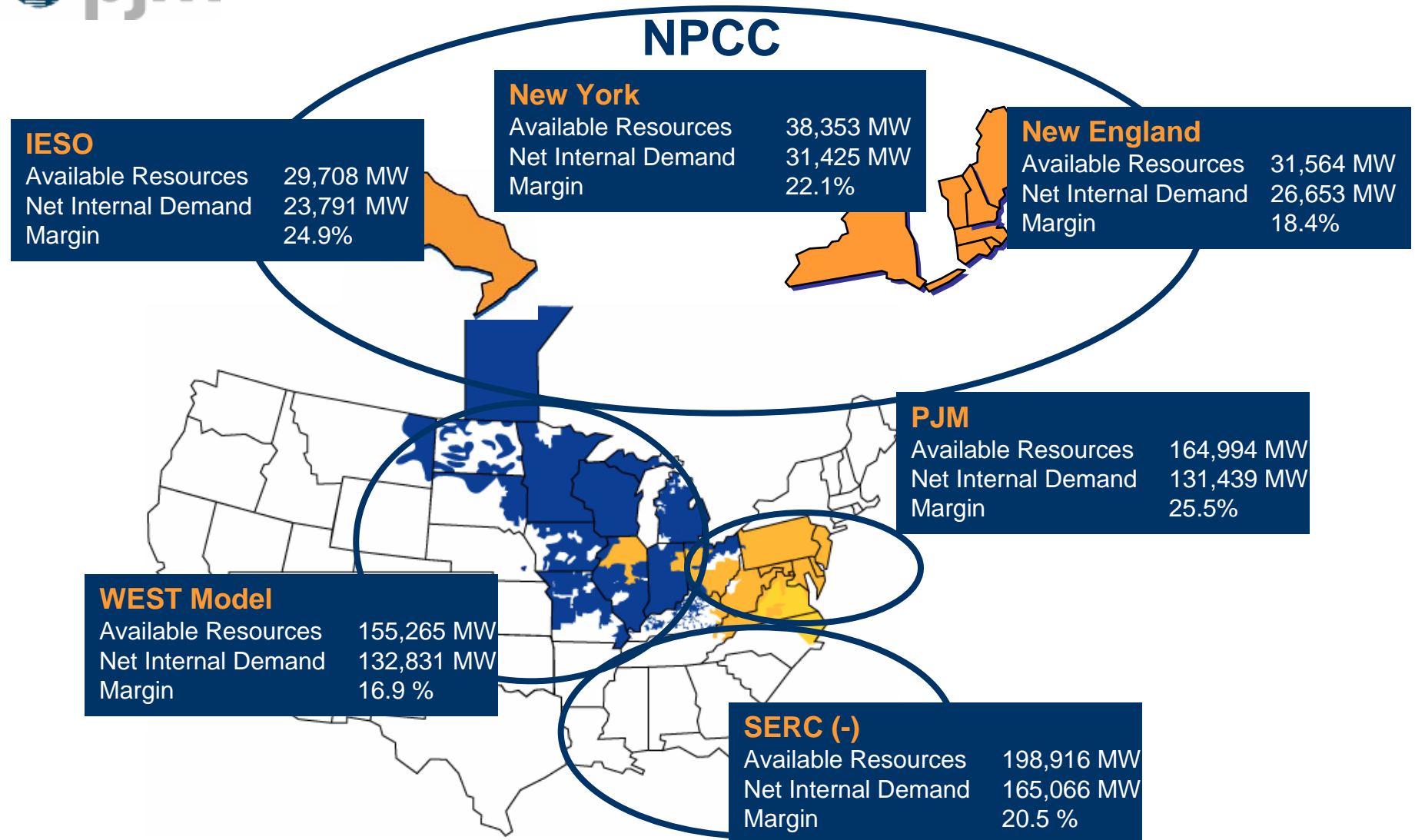


- On Feb. 24, 2006, FERC accepted filing to make programs permanent
- Effective May 1, 2006, demand response can participate in PJM ancillary service markets

- The PJM Mid-Atlantic Region and Western Region bulk transmission systems are expected to perform adequately in Summer 2006 based on RFC\* criteria.
- The PJM Southern Region (Dominion Virginia Power) bulk transmission system is expected to perform adequately in Summer 2006 based on SERC criteria.

\*RFC (Reliability First Corporation) commenced operations on January 1, 2006. It replaces all of ECAR and MAAC, and portions of MAIN with a single regional entity.

- Integral part of bulk power supply reliability
- Allows lower installed reserve margins (~2%)
- Assistance not required this summer if:
  - Weather is normal
  - Units perform as expected
- If required, assistance from neighboring systems should be available



(-) refers to areas outside of PJM

- **Expected Peak Demand and Reserves**
  - Peak demand slightly lower than 2005 record peak
  - Projected capacity slightly less than summer 2005
  - Reserves exceed required margin of 15%
- **Load Response Resources**
  - 3.1% of total demand is in load response programs
- **Bulk Power Purchases/Sales**
  - Energy sales out of PJM are recallable under PJM emergency conditions
- **Transmission Adequacy**
  - Expected to perform per criteria