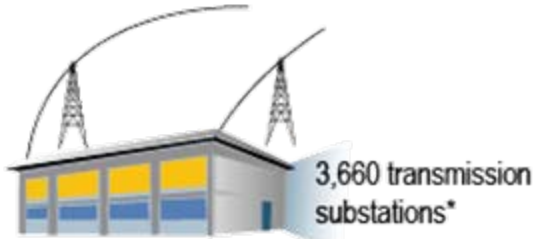


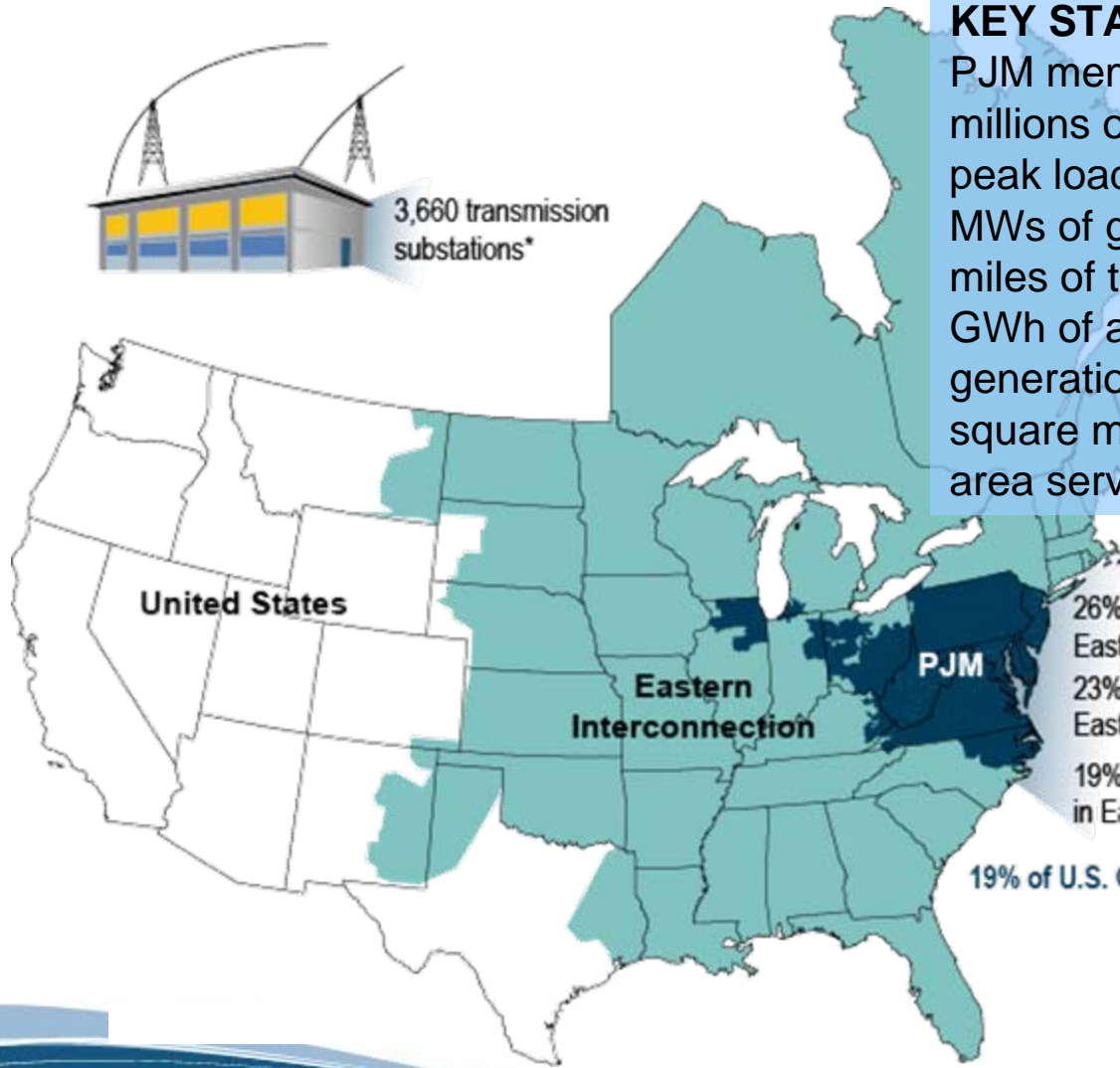


PJM Market Support for Investment

Tom Welch
PJM Interconnection
NARUC
San Francisco 2006



KEY STATISTICS	
PJM member companies	400+
millions of people served	51
peak load in megawatts	139,746
MW of generating capacity	165,738
miles of transmission lines	56,070
GWh of annual energy generation sources	700,000
square miles of territory	164,260
area served	13 states + DC

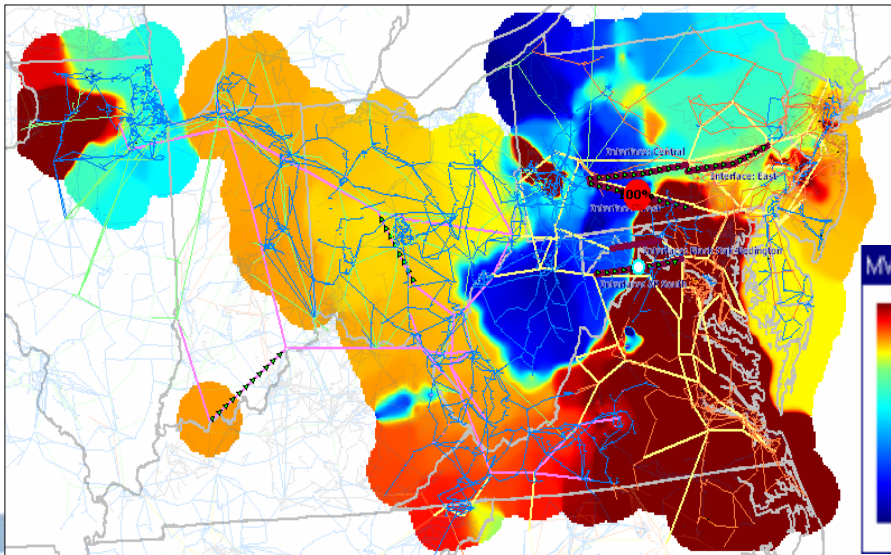


26% of generation in Eastern Interconnection*
 23% of load in Eastern Interconnection*
 19% of transmission assets in Eastern Interconnection*
 19% of U.S. GDP produced in PJM*

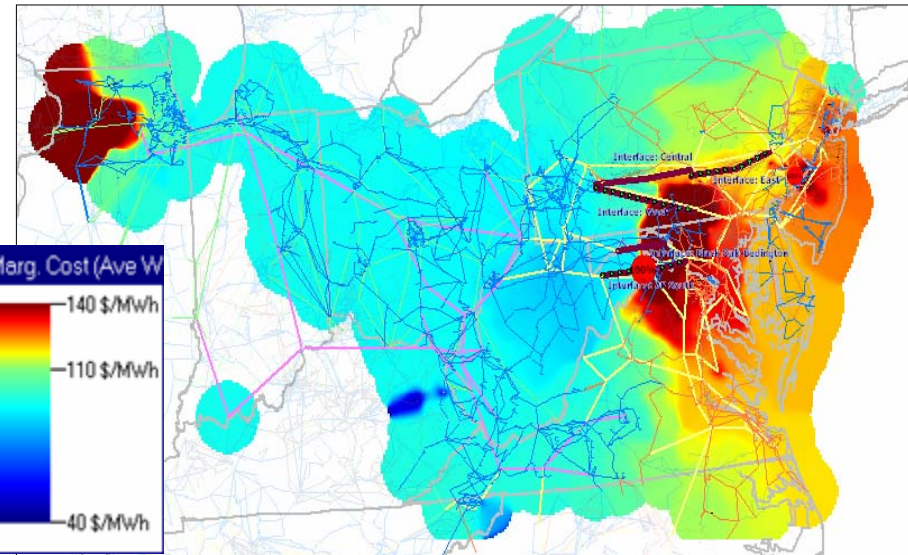
- A system that is reliable, but also ...
 - is based on transparent and robust information
 - is efficient
 - brings competitive forces to bear
 - identifies where and when resources are needed
 - encourages and accommodates a variety of resources
 - wind interconnection
 - DSR
 - GATS
 - allocates risks appropriately

- Lower energy prices across the expanded PJM region
 - ESAI's technical study: region-wide energy price without integration would be \$0.78/MWh higher in 2005 than with integration.
 - Spreading these savings over the total PJM RTO's energy demand of 700 terawatt-hours (TWh) per year yields aggregate savings of over **\$500 million per year.**

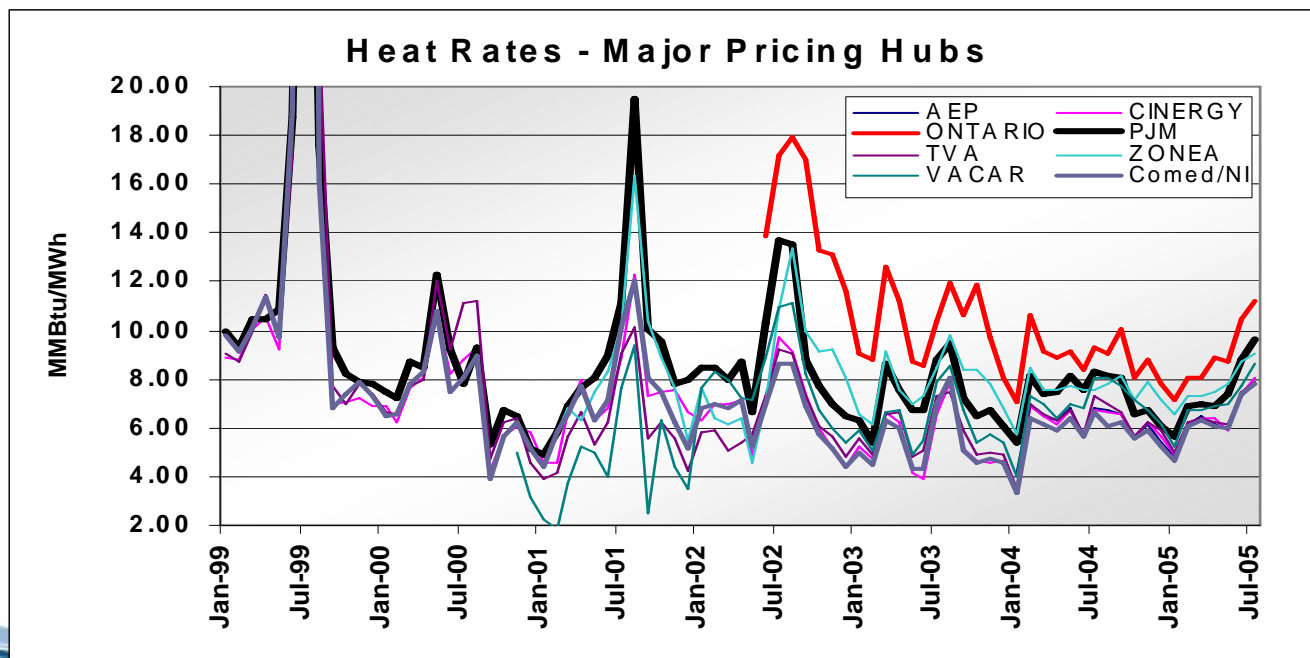
Pre-Integration Price Pattern



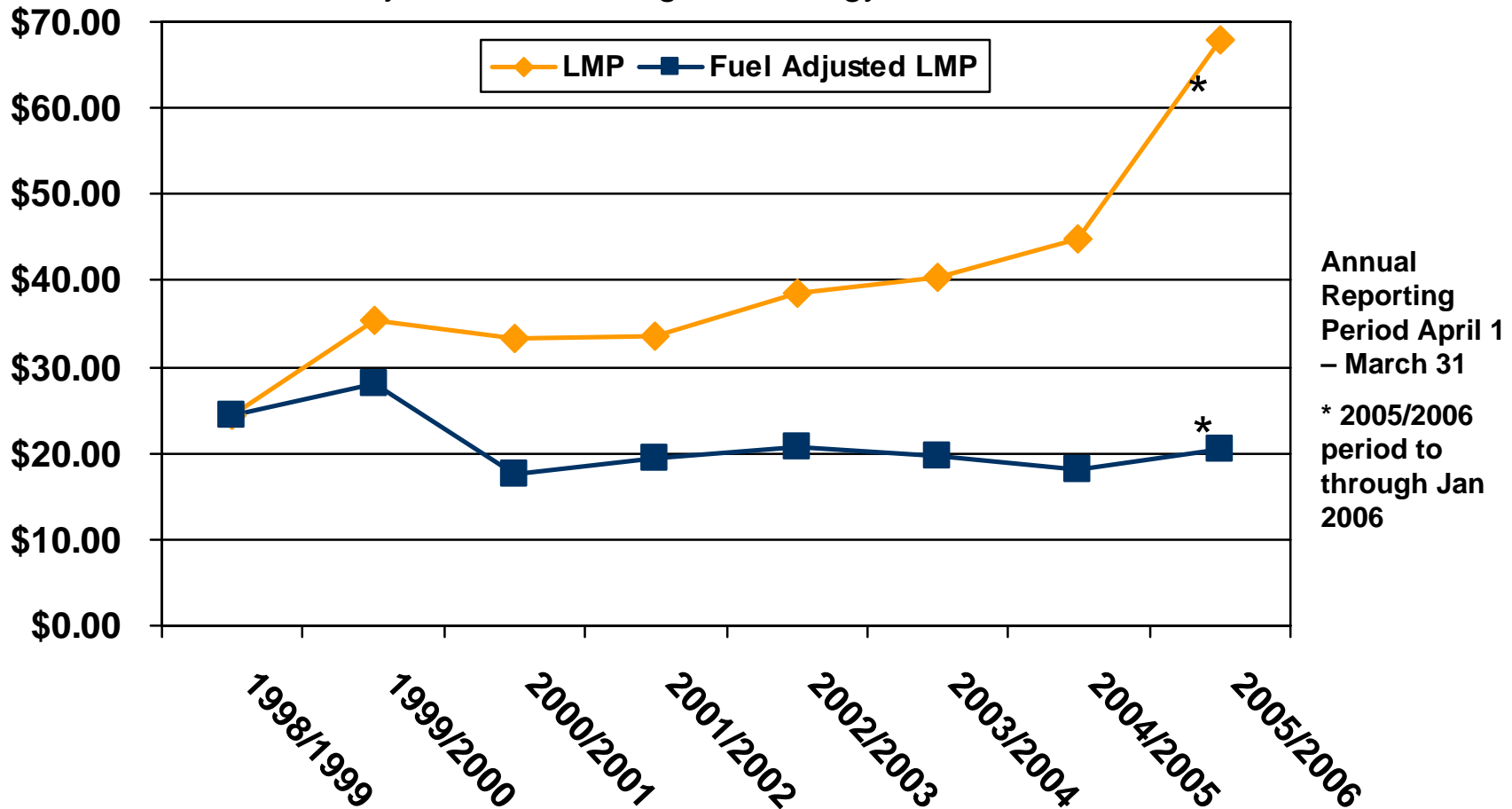
Post-integration Energy Price Pattern



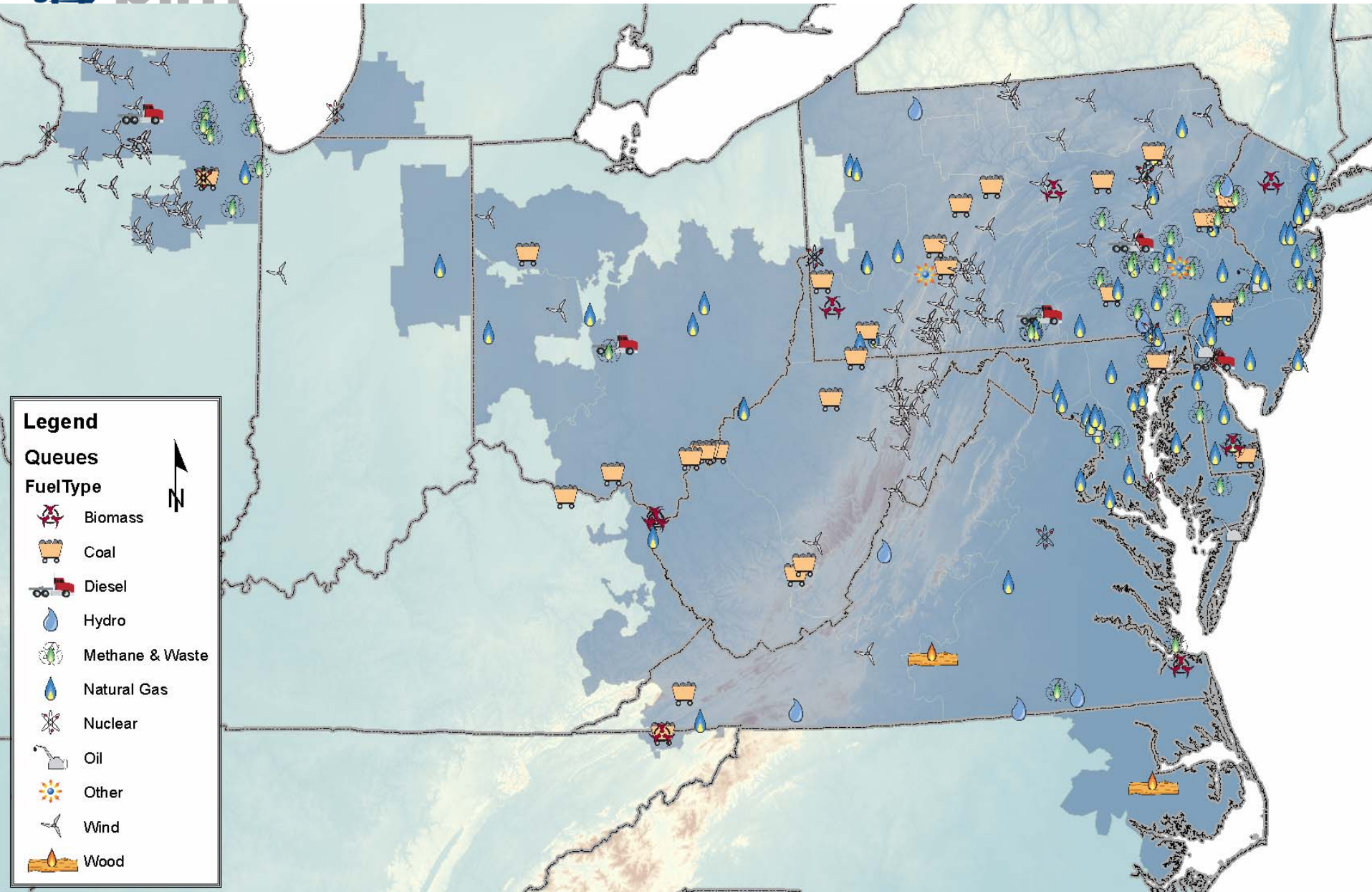
- Heat rates decline
 - Provides fuel adjusted measure of efficiency
 - Equivalent heat rate at Western Hub reduced from 11 MMBTU/ MWh in 1999 to 7.3 MMBTU/MWh in 2004



Comparison of Load Weighted Energy Prices to Fuel-cost Adjusted Load Weighted Energy Prices














Note: Fuel-cost adjustment performed based on 1998-1999 reference period. Fuel-adjustment based on hourly marginal fuel type

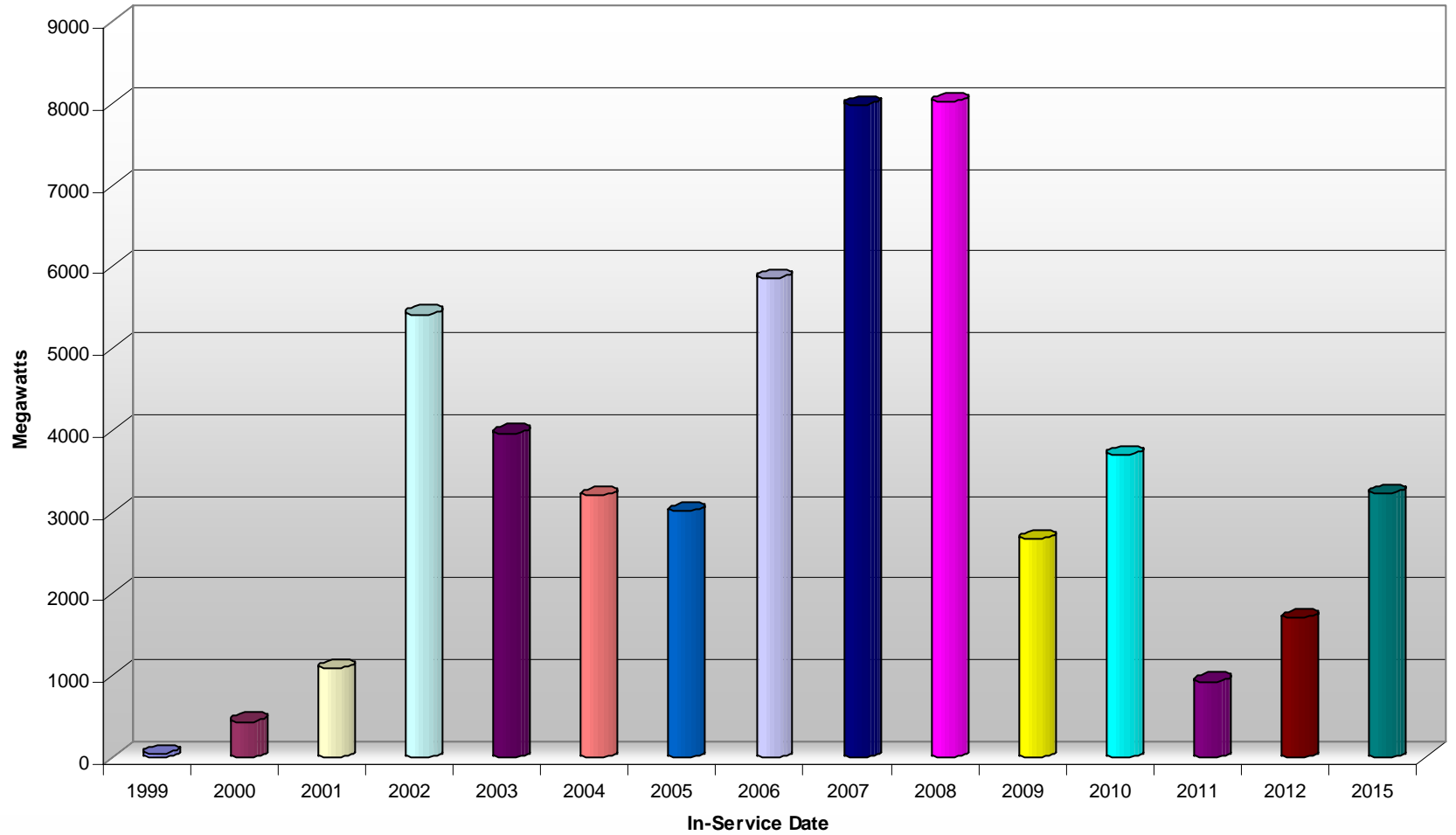


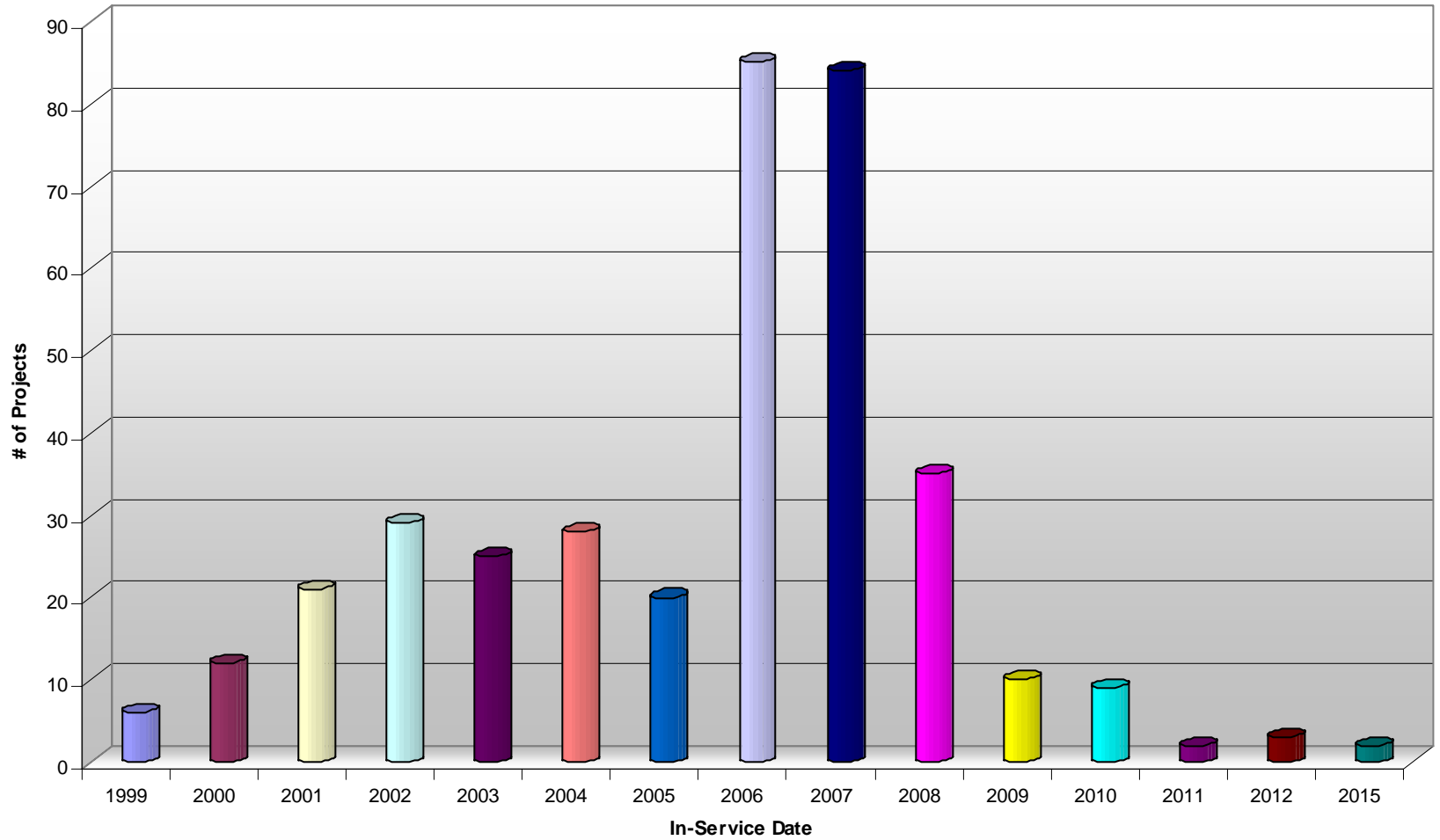
Legend

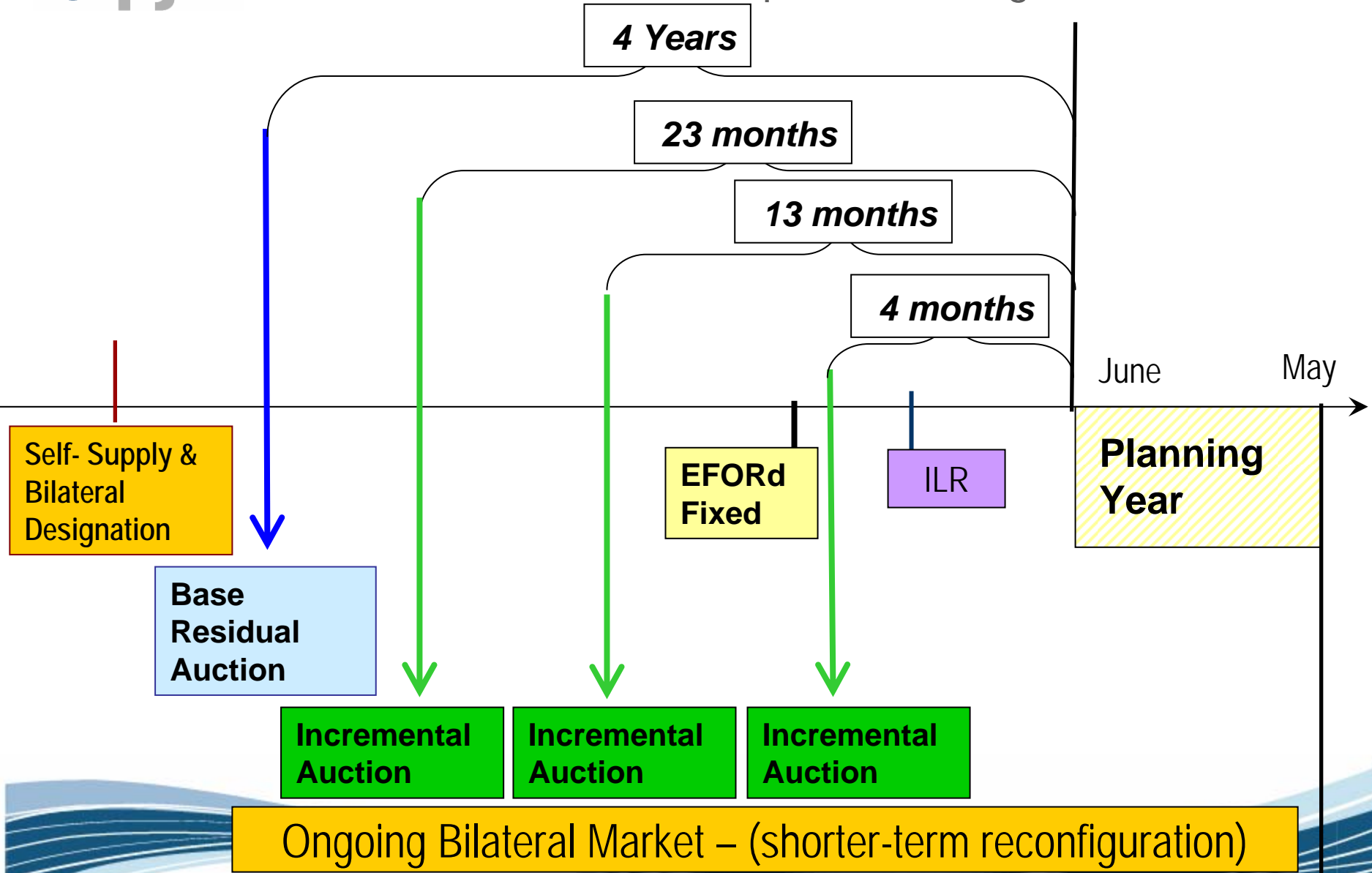
Queues

FuelType

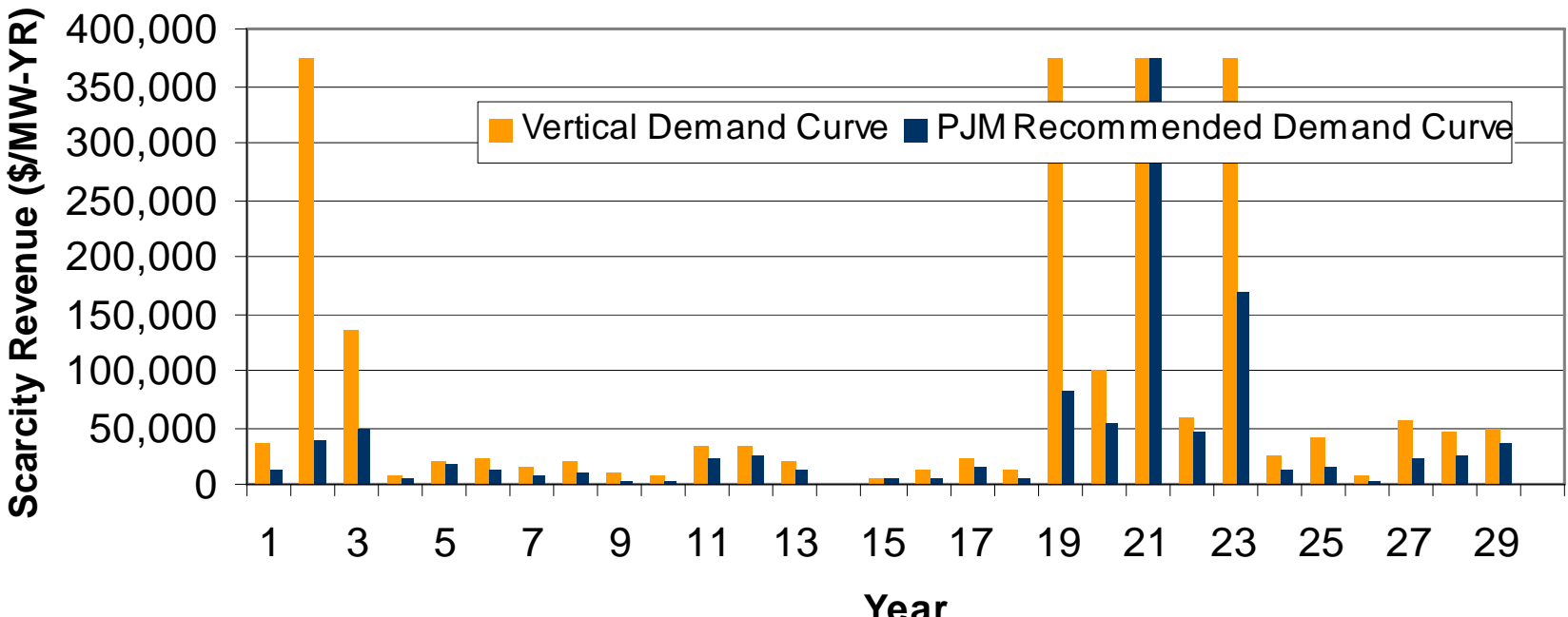
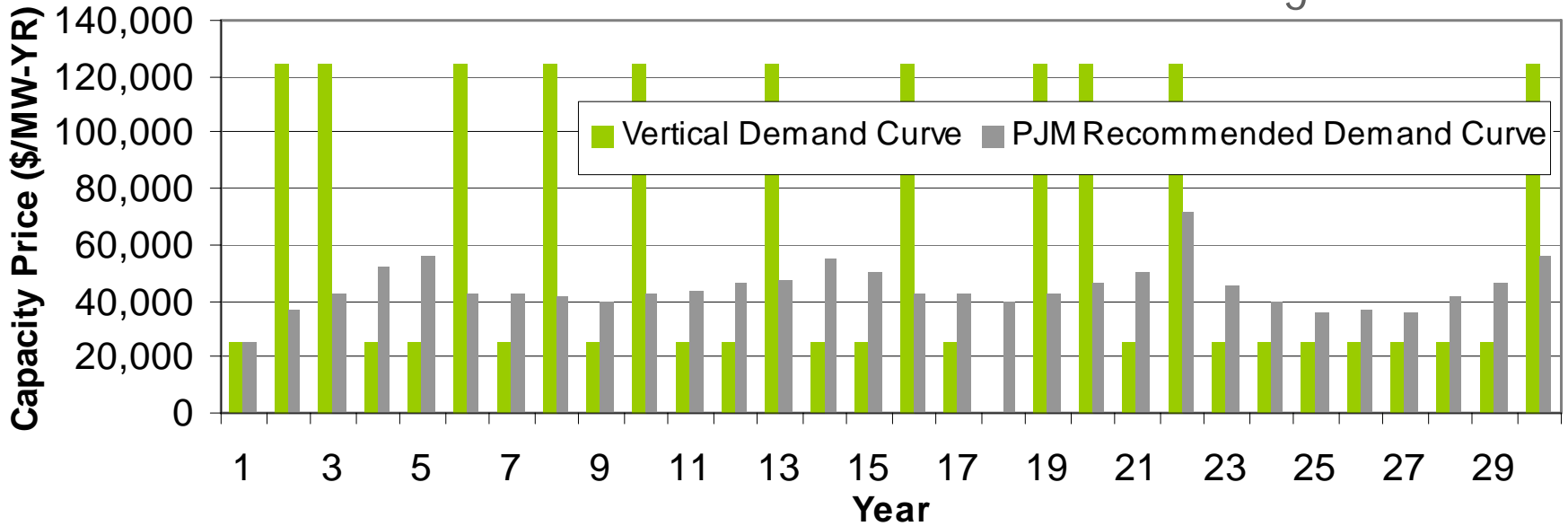
-  Biomass
-  Coal
-  Diesel
-  Hydro
-  Methane & Waste
-  Natural Gas
-  Nuclear
-  Oil
-  Other
-  Wind
-  Wood

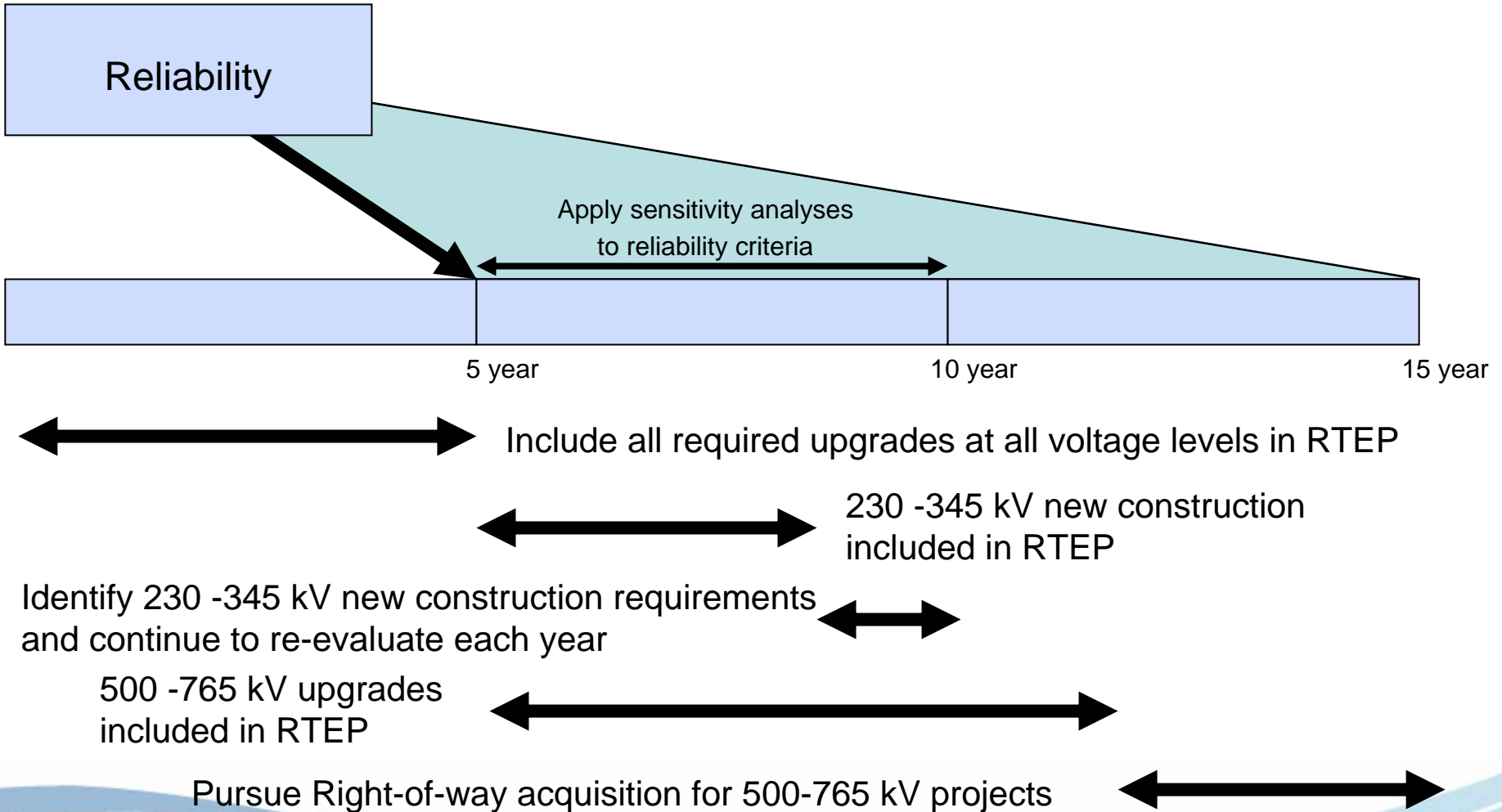


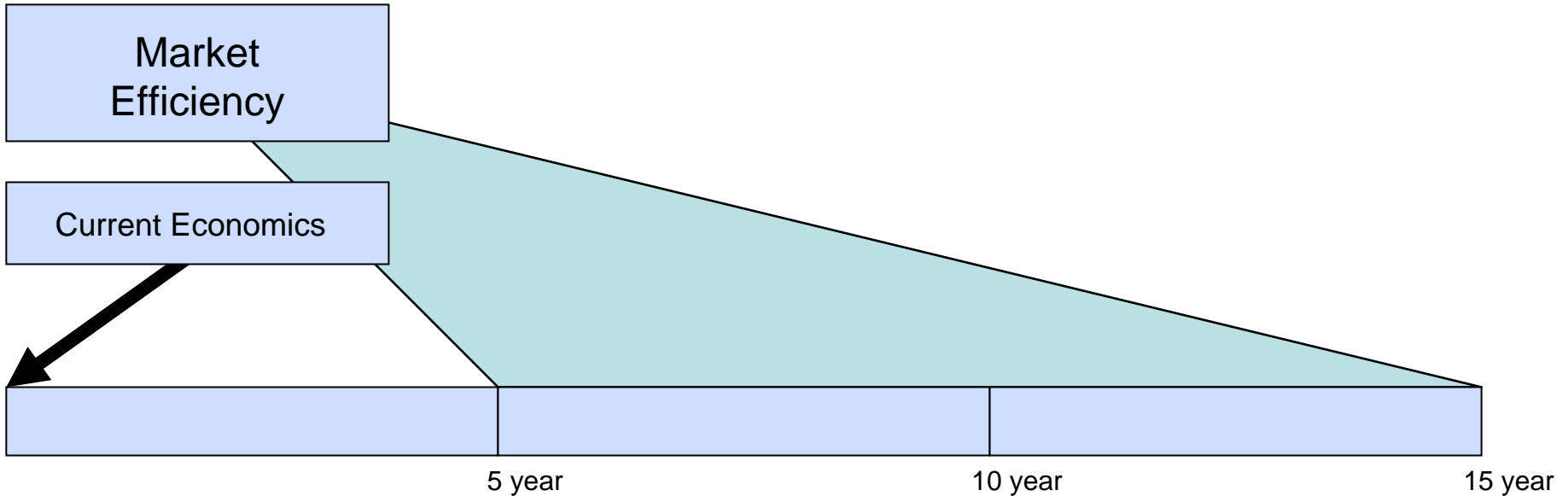




Scarcity Prices: PJM Recommended Demand Curve vs. Vertical Demand Curve at Target Reserve





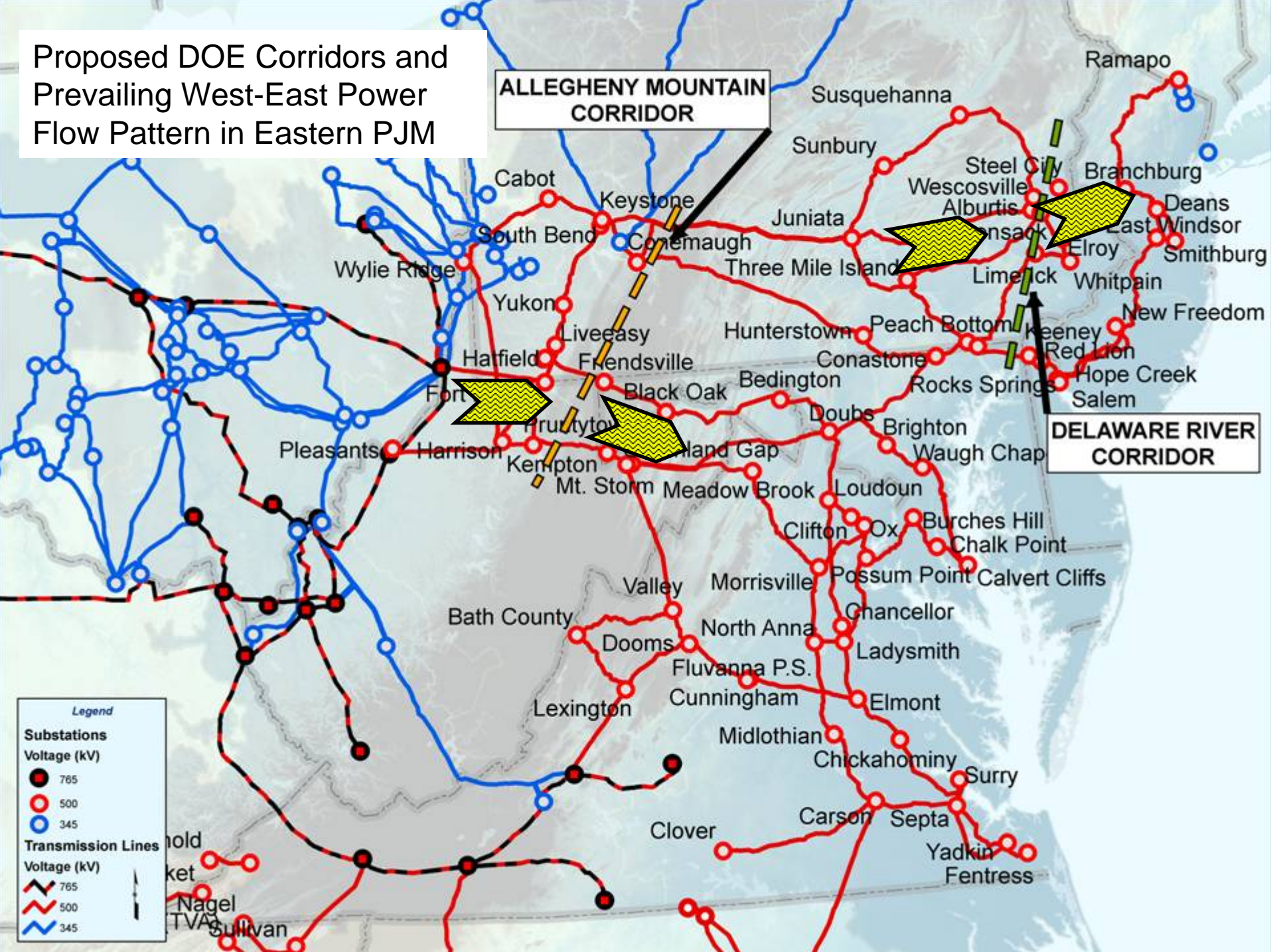


Core economic analyses related to:

- Production cost
- Transmission congestion
- Other econometric factors

- Evaluate additional infrastructure requirements based on impact of market efficiency analysis assumptions
- Establish stakeholder committee to recommend scope of analysis and assumptions, as well as to review results and make upgrade recommendations to the Board

Proposed DOE Corridors and Prevailing West-East Power Flow Pattern in Eastern PJM



ALLEGHENY MOUNTAIN CORRIDOR

DELAWARE RIVER CORRIDOR

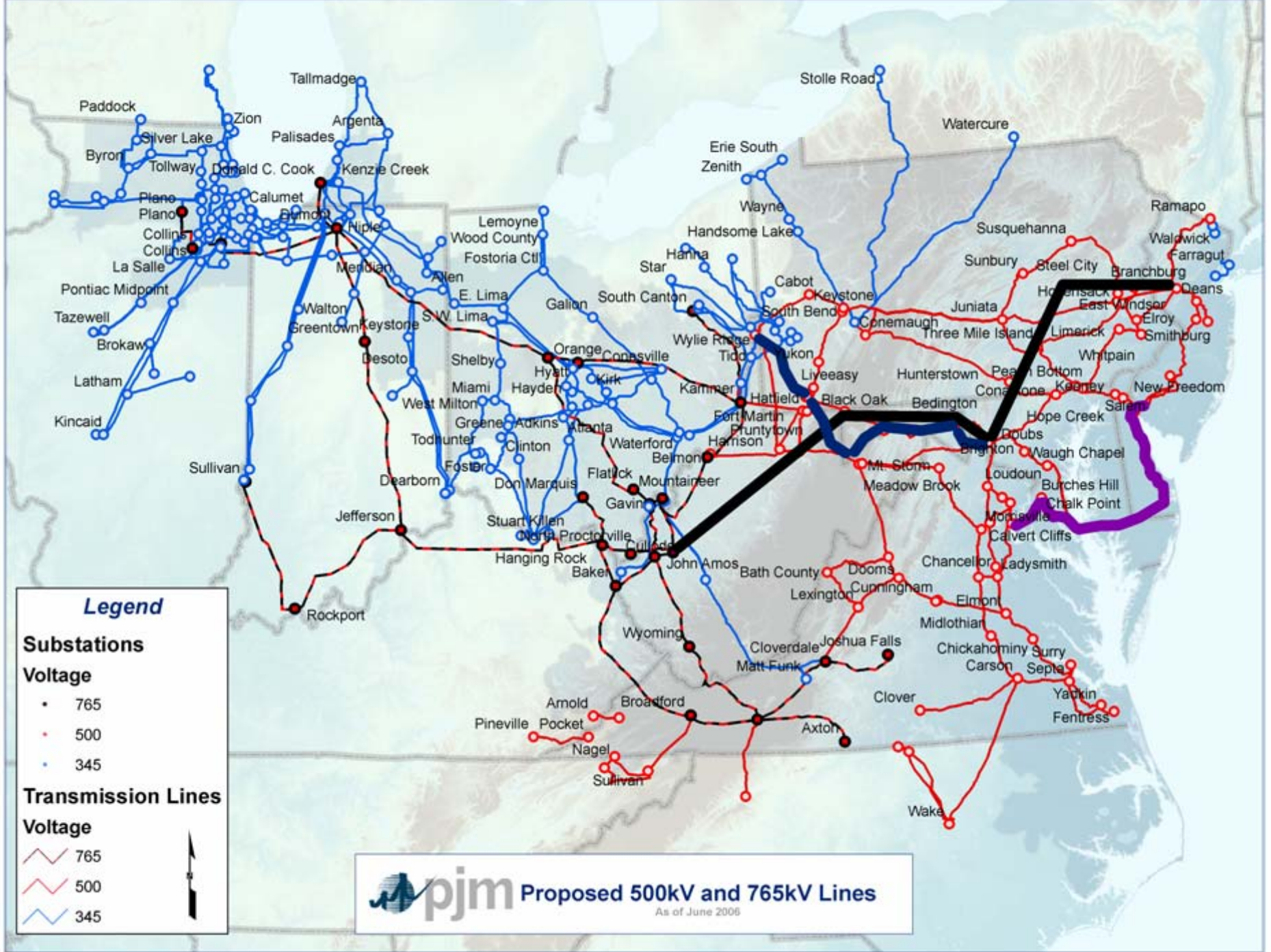
Legend

Substations
Voltage (kV)

- 765 (Black circle)
- 500 (Red circle)
- 345 (Blue circle)

Transmission Lines
Voltage (kV)

- 765 (Black line)
- 500 (Red line)
- 345 (Blue line)



Legend

Substations

Voltage

- 765
- 500
- 345

Transmission Lines

Voltage

- 765
- 500
- 345




pjm Proposed 500kV and 765kV Lines
 As of June 2006