

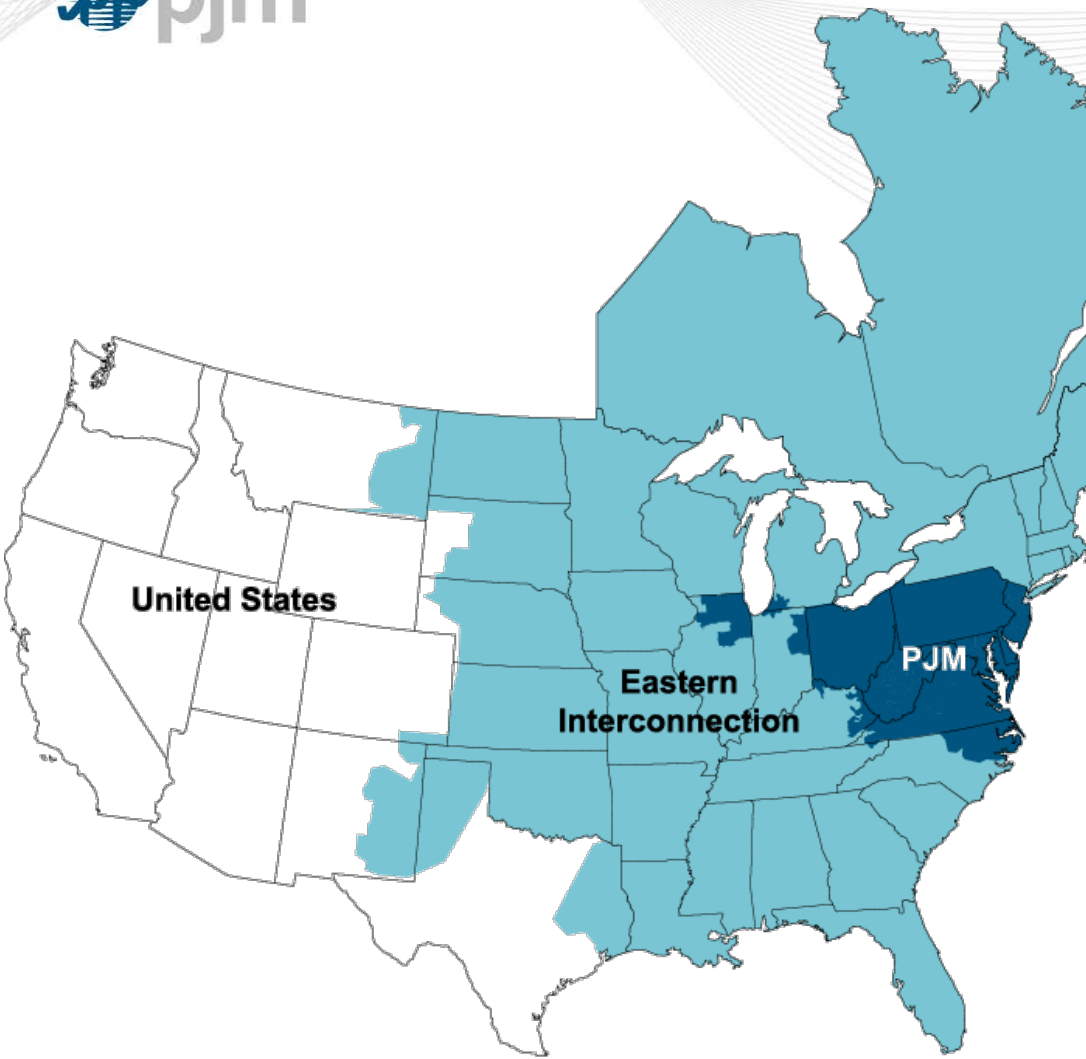
Integrating Energy Efficiency into System Planning

NEEP Annual EM&V Forum

October 12, 2011

Albany, New York

PJM as Part of the Eastern Interconnection with ATSI & Duke Integration



KEY STATISTICS

PJM member companies	710+
millions of people served	61
peak load in megawatts	162,230
MWs of generating capacity	184,992
miles of transmission lines	62,214
GWh of annual energy generation sources	832,331
square miles of territory area served	213,900
Internal/external tie lines	13 states + DC 247

- 26% of generation in Eastern Interconnection
- 28% of load in Eastern Interconnection
- 19% of transmission assets in Eastern Interconnection

21% of U.S. GDP produced in PJM

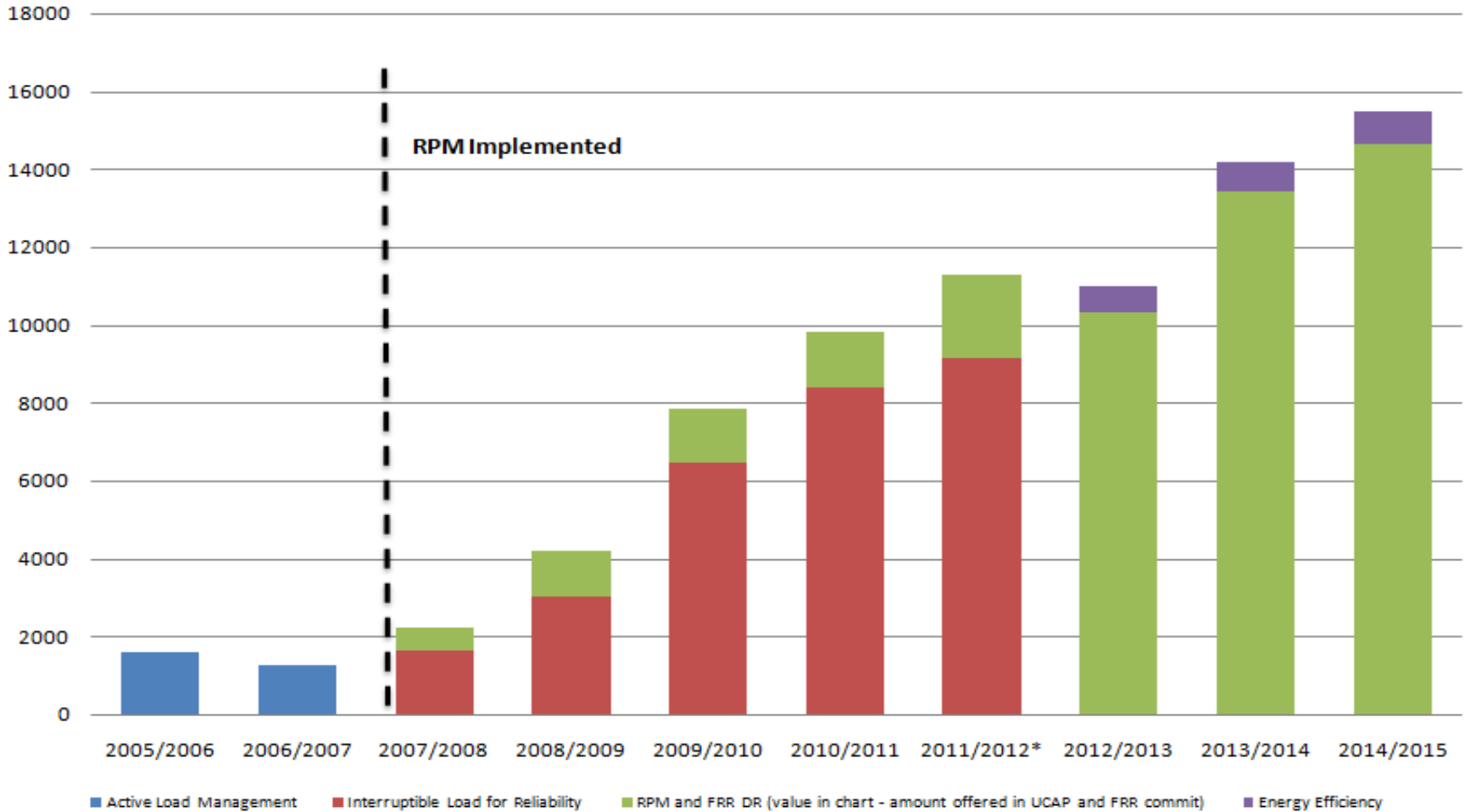
As of 4/1/2011

- Energy Efficiency (EE) Programs may participate as a Resource in the PJM 3-Year Forward Capacity Market
- Requirements to participate
 - Submit Initial M&V Plan (capacity value is based on performance over defined peak summer hours)
 - M&V protocols designed to capture load drop that would not otherwise have occurred or would have occurred at later date
 - May participate for up to 4 consecutive years
 - Resources that clear in the auction incur a firm commitment and are subject to financial penalty for non-compliance

- PJM produces an “unrestricted” load forecast and separate assumptions for Demand Resources (DR) and Energy Efficiency (EE)
 - Existing energy efficiency is in the unrestricted load forecast to the extent it is captured in historical metered loads
- DR and EE “forecasts” are based on amounts cleared in forward capacity auctions
- DR and EE are not part of the load model
- DR and EE assumptions held constant beyond Year 3

- PJM planning studies set
Study Load = Unrestricted load – EE
- Planning studies that examine summer capacity emergency conditions further reduce load by DR
- Procedures in place to ensure DR and EE are not counted as both a load reducer and a resource

Demand Side Participation in Capacity Market



- In addition to the baseline study, PJM performed sensitivity analyses to assess potential impact of three public policy initiatives:
 - Renewable Portfolio Standards
 - Environmental Regulations
 - State Goals for DR and EE
- Results were for informational purposes only

- Regional Planning Process Task Force:
 - Formed in late 2010
 - The RPPWG will evaluate the need to expand transmission planning criteria, or existing scenario planning procedures to include a broader range of assumptions.
 - EE has not been addressed yet
- FERC Order No. 1000:
 - Among other things, requires Transmission Planners to “consider” transmission needs driven by Public Policy Requirements. This may include EE.