

# *Edison Mission Energy*



**EDISON**  
MISSION ENERGY

An EDISON INTERNATIONAL<sup>SM</sup> Company

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# Edison Mission Energy

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Edison Mission Energy operates six coal-fired power plants and two peaker sites in Illinois, and operates the Homer City coal-fired plant in Pennsylvania totaling approximately 7,500 MWs

# Major Expansion Accomplishment

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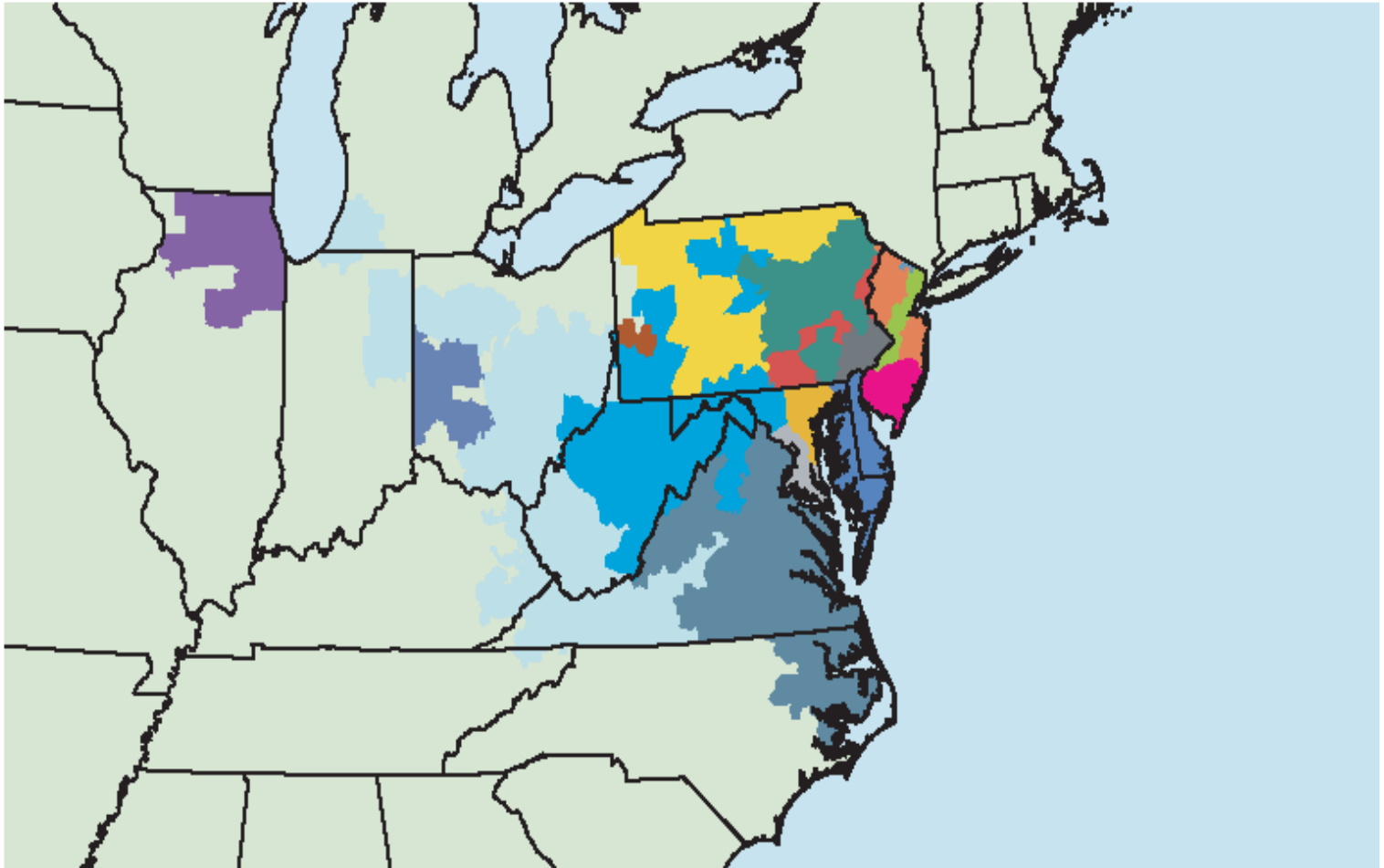
- Successful integration of ComEd in May 2004, AEP & Dayton in October 2004, and Dominion in May 2005
- More than doubled the size of the market
- Expanded the PJM footprint to create the largest energy market in the world
  - PJM Market - 130,000 MWs
  - France (EDF) – 80,000 MWs
  - California - 43,000 MWs

# PJM Expansion Statistics

<b>Key Statistics</b>	<b>PJM Pre-Integration 1993</b>	<b>PJM Post-Integration with Dominion</b>
Millions of People Served	22	51
Peak Load (MW)	46,429	131,330
Generation Capacity (MW)	55,575	163,806
Miles of Transmission Lines	6,821	56,070
Generation Sources	540	1,082
Area Served	5 states + D.C.	13 states + D.C.



# Major Expansion of the PJM Service Territory

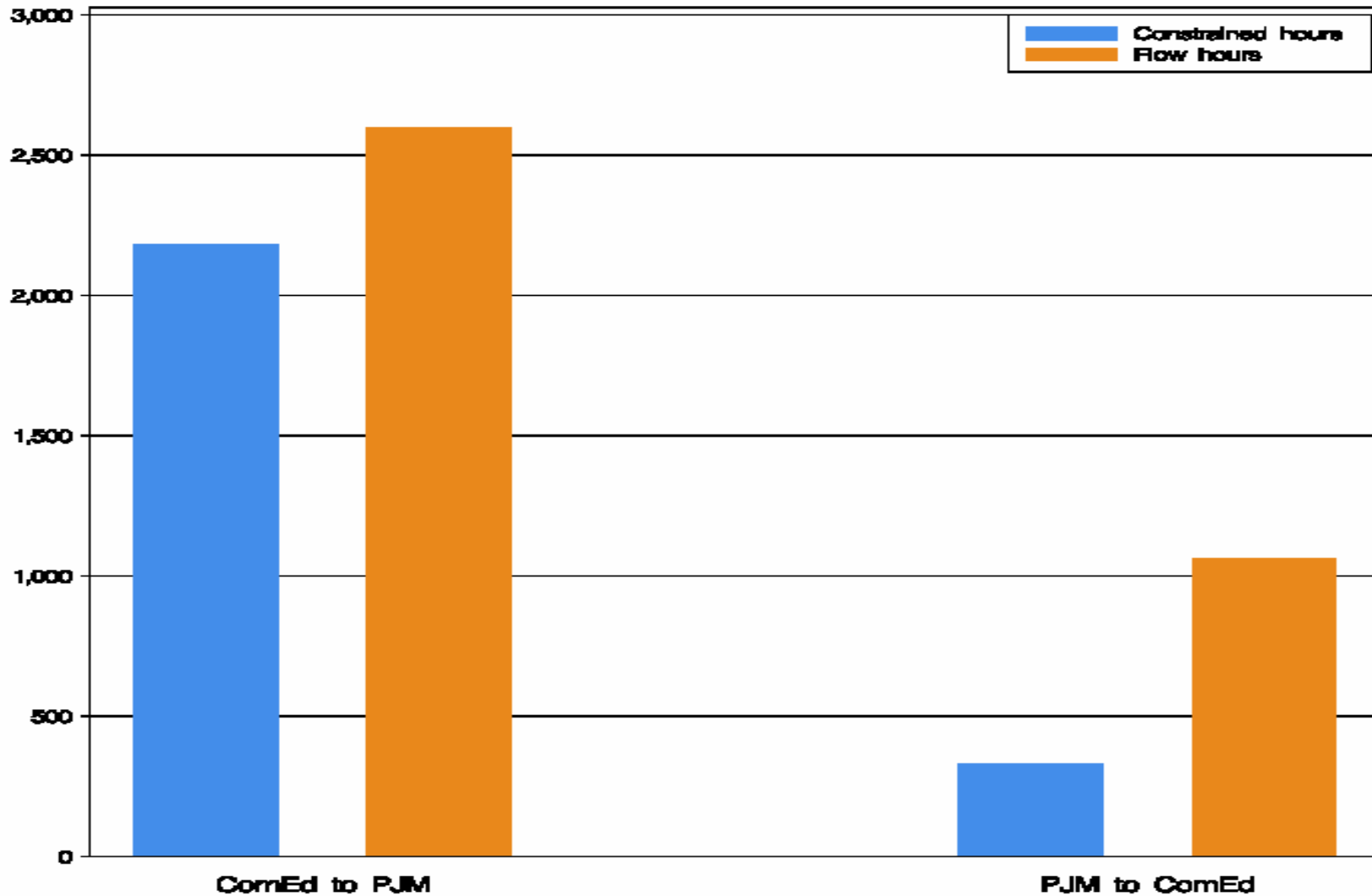


# ComEd Stand-Alone Integration

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- ComEd integrated into PJM ahead of AEP
  - May 1, 2004 thru September 30, 2004
- Pathway Integration
  - 500 MWs of bidirectional transmission service through AEP
- When Pathway flow was at a directional limit, price separation occurred between ComEd and Classic PJM
- Pathway flow was predominately into PJM reflecting the fact that marginal prices were typically higher in the PJM control area than in ComEd

# Pathway Flow and Congestion



# ComEd Stand-Alone Integration

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- Separate Capacity Market
  - ICAP versus UCAP
- Limited Ancillary Services Market
  - Regulation
  - Spinning
  - Voltage Support
- Limited number of physical players
- Fortunately, after the AEP integration, the market is contiguous, highly competitive, and the market expansion is resulting in consumer benefits across the expanded PJM footprint

# Impact of Expansion on Market Performance

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- Energy Market Prices
- Price-Cost Mark-up
  - Measure of Market Power
- Net Revenue
  - Indicator of generation investment profitability
  - Price signal for new generation interconnection
  - Price signal to generation retirement

# Energy Market Statistics

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- There were no price spikes during 2004 due to moderate demand and the market was relatively long
  - highest price reached \$180/MWh for one hour
  - price above \$150/MWh for only 5 hours
- Average monthly load-weighted LMPs did not exceed \$60/MWh
- Decrease of 4.2% of fuel-adjusted Load-weighted LMP
  - Fuel-adjusted Load-weighted LMP for 2004 was \$39.49/MWh compared to \$41.23/MWh for 2003
- Average energy bid load-weighted mark-up range : 2% to 10%
  - Average annual mark-up index for steam units decreased to 5% in 2004 from 10% in 2003

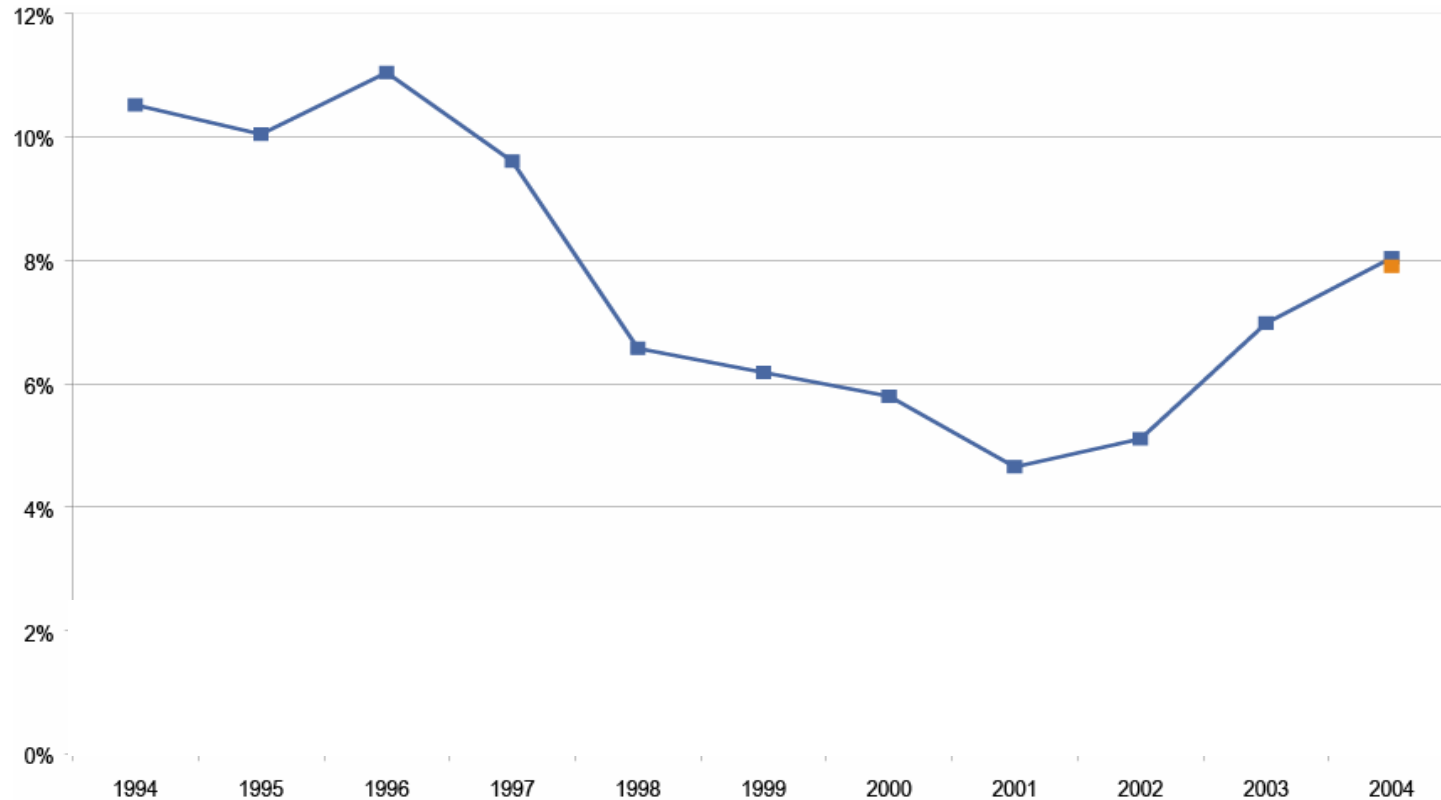
# New Entry Net Revenue (\$/MW)

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<b>Unit Type</b>	<b>20 Year Levelized Fixed Cost</b>	<b>Realistic Dispatch Average Net Revenue 1999 to 2004</b>
Combustion Turbine (CT)	\$72,207	\$36,195
Combined Cycle (CC)	\$93,549	\$52,243
Pulverized Coal (CP)	\$208,247	\$137,015



# Trends in EFOR



# PJM 2005/2006 Challenges

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- Address market structural flaws in the capacity market
  - Uncertainty as to implementation timing of Reliability Pricing Model (RPM)
- Implementation of PJM/MISO Joint and Common Market
- Scarcity Pricing - Mitigation

# Reliability Pricing Model (RPM)

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- Current capacity structure is flawed – allows for daily capacity procurement
- 7,200 MWs of generation either already retired or requested to retire (EME's share 3,200 MWs)
- Vanishing interconnection queue
  - In 2002, PJM interconnected an all time high of 5,400 MWs
  - in 2004, only 2,600 MWs interconnected
  - In 2005, PJM only expects 950 MWs to interconnect

# Highlights of the RPM Proposal

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- Proposal would eliminate the daily capacity market and replace it with an annual capacity procurement, four years forward
  - compensate existing generation within PJM for their contribution of capacity towards enhanced system reliability - potential premium for load following and 30 minute start capability
  - Generators would receive predictable prices for four years
  - Capacity prices will be locational to address power needs in load pockets
- Capacity revenue would be in addition to revenue realized from the energy and ancillary services markets
- RPM proposal has strong support among the generation owners and some PJM utilities and faces opposition among industrial customers, consumer advocates and certain state commissions

# PJM/MISO Joint and Common Market

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- Transmission Service coordination
- Daily outage coordination
- FTR coordination
- Market-to-Market coordination
- Allocation of costs for transmission upgrades that benefit load in both RTOs