

SERC and BPU Partnership

The BPU's Experience in Ensuring Quality and Security of Energy Supplies

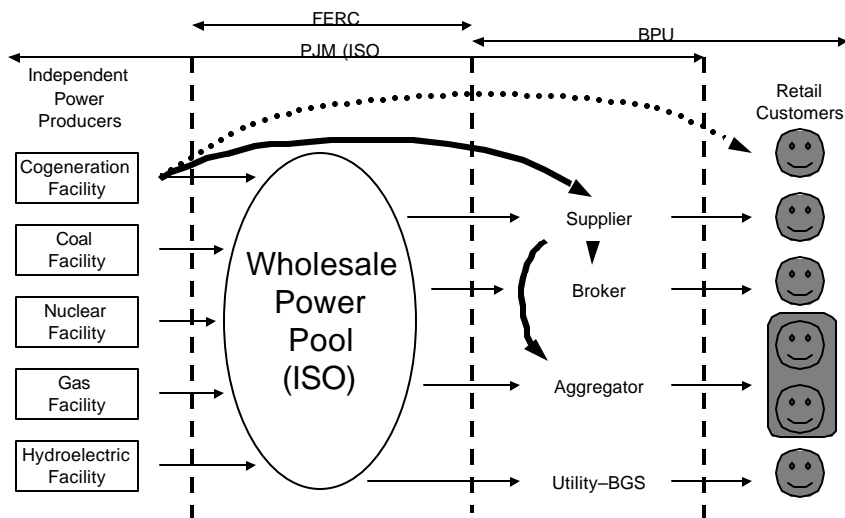
George Riepe
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New Jersey's Wholesale Energy Market



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FERC

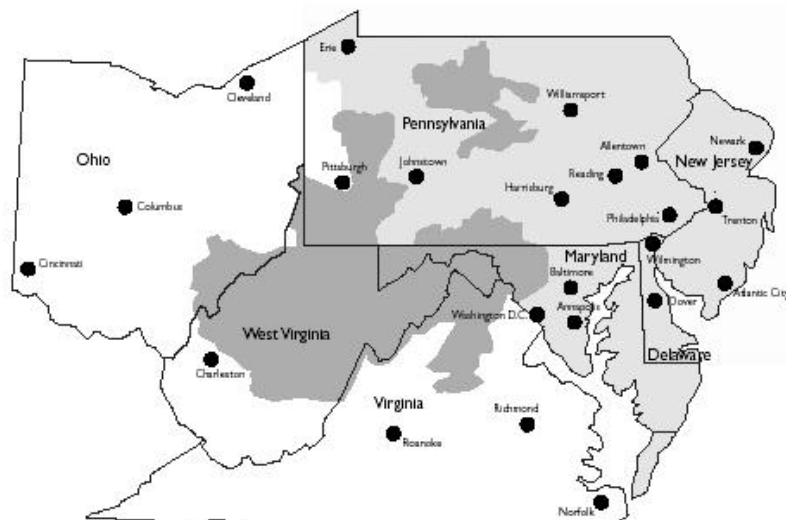
- Regulates the operation of PJM as the independent system operator
- Approves wholesale interstate rates and tariffs
- Resolves issues among ISO members and PJM
- Ensures nondiscriminatory access to transmission system

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PJM Electric System



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PJM

- Coordinates the transmission of energy throughout the mid-Atlantic states
 - In operation for 75 years
 - Opened first wholesale market in 1997
 - Fully functioning regional transmission organization
- Ensures the reliability of one of the largest electric systems in North America
- Administers the largest wholesale electric market in the world
- Provides real-time pricing information to its member
- Operates independently and neutrally

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PJM (cont'd)

- Manages access to transmission facilities
 - Provides nondiscriminatory access to all members
 - Plans transmission and generation maintenance and expansion
 - Reduce “congestion” resulting from increased customer demand
 - Allow for addition of new generation facilities
- Balances energy availability with demand
 - Initiates emergency purchases from other ISOs
 - Recalls energy sold outside the system
 - Initiates load reduction measures
 - Voluntary customer load reduction programs
 - Mandatory load shedding

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PJM (cont'd)

- Requires all members to adhere to a Reliability Assurance Agreement (RAA)
 - Members must maintain $\cong 18\%$ -20% capacity reserve margin through the availability of generation or through capacity contracts

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PJM Statistics

(Statistics include recent addition of PJM West)

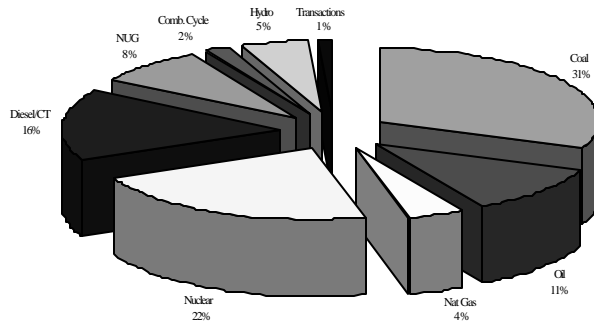
- 25.1 million people in its control area
- 614 generation facilities
- 298,011 gigawatts of annual energy
- 13,100 miles of transmission lines
- Over 67,000 megawatts of capacity
- Over 200 members
 - Transmission owners
 - Distributors (utilities)
 - Generators
 - Suppliers
 - Large Customers

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PJM Installed Capacity - 2000



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BPU

- Regulates the retail distribution of energy by utilities to customers
- Licenses alternate energy suppliers
- Approves distribution rates and tariffs
- Resolves issues among utilities, suppliers and customers
- Ensures nondiscriminatory practices by utilities and energy suppliers
- Encourages load reduction programs by utilities

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BPU (cont'd)

- Conducts ongoing reviews of reliability for each utility
 - Ensures that utilities have adequate funding to maintain and improve distribution system
 - Investigates service interruptions and initiates corrective action when necessary
- Implements energy efficiency and renewable energy programs
 - \$1 billion in funding over eight years
 - Promotes distributed generation
- Encourages utilities to uncover and reduce theft of electric service

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New Jersey Electric System

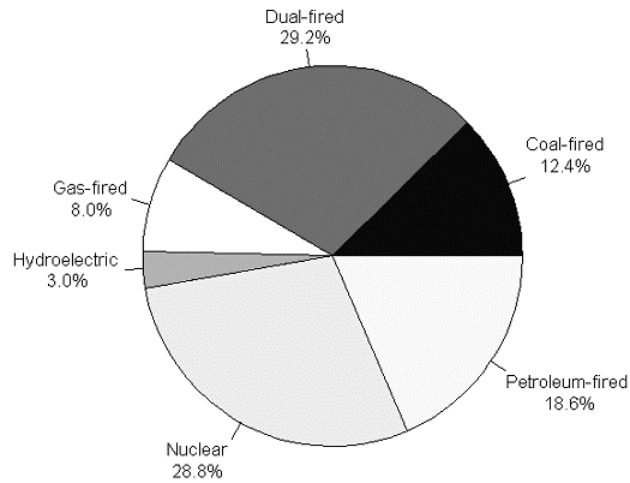


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New Jersey Capacity - 1999

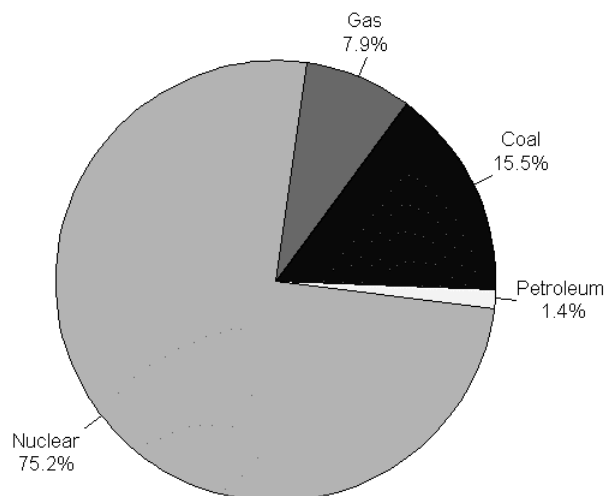


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New Jersey Generation - 1999



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Utility

- Maintains and upgrades transmission system as required by PJM
- Maintains and upgrades distribution system to ensure the continuous provision of safe, adequate and reliable energy to all customers
- Responds to emergencies affecting availability of service
- Implements voluntary customer load reduction programs to maintain quality of energy

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Theft of Service

- Utilities enforce BPU-approved rules against theft of service by customers
 - Rewards to employees who uncover theft
 - Bills customer for theft amount calculated to last meter change or beginning of service
 - Customer can petition the BPU to review any dispute with the utility
 - Prosecutes customer if unwilling to pay
 - Terminates service for nonpayment

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Theft of Service (cont'd)

- New Jersey law prohibits the theft of any utility service
 - Customer can be fined \$500
 - Customer can be imprisoned
- BPU authorizes utilities to discontinue service in case where illegal use is determined

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Theft of Service (cont'd)

- Utility can demand immediate payment for all costs
 - Investigations
 - Inspections
 - Prosecution
 - Installation of protective equipment
 - Energy illegally used

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Theft of Service (cont'd)

- Utilities prevent theft through various means
 - Meter readers report meter tampering
 - Broken seal on meter
 - Unusual wiring
 - Damage to meter
 - Utilities monitor customer usage and identify deviations from normal usage patterns

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BPU Experiences

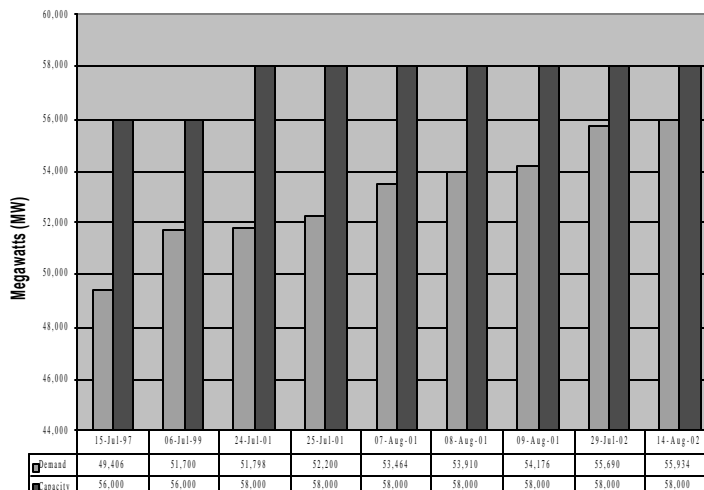
- PJM provides reliable system operation even during times of significant stress
 - Recent record peak demands were met without disruption of service
 - Load shedding has been minimal
 - Voluntary customer load reduction programs at the transmission level have been successful
- PJM recently added “PJM West”, further expanding the availability of additional generation and transmission facilities
 - Increase of system area and greater diversification of regional demands provide for a higher level of reliability throughout system

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PJM Demand vs. Capacity



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BPU Experiences (cont'd)

- New Jersey's utilities provide reliable service at the distribution level
 - Utilities continue to experience occasional local disruptions due to storms and excessive heat
 - Corrective actions have been initiated

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BPU Experiences (cont'd)

- Customer theft is not a significant problem
 - Utilities' efforts are largely successful
 - Limited problems exist in apartment buildings
 - Tenants sometimes attempt to avoid payment through use of different names
 - Landlords sometimes divert tenant service for general building use

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Additional Information

- Energy Information Administration
 - www.eia.doe.gov
- Federal Energy Regulatory Commission
 - www.ferc.fed.us
- PJM Interconnection, LLC
 - www.pjm.org
- BPU Division of Energy
 - www.bpu.state.nj.us, or
 - george.riepe@bpu.state.nj.us

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