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ELECTRICITY MARKETS DEVELOPMENT PROGRAM- GEMTP II



Transmission Planning

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Key Transmission Policy Questions

- When should regulators intervene in the market to provide additional transmission resources?
 - Economic upgrades
 - Reliability upgrades
- Who should pay for such upgrades?
- Should other types of resources be procured to meet “transmission needs”?



Economic Characteristics of Transmission

- Large, lumpy (i.e., large economies of scale), sunk investments
- Difficult to define property rights
- Issues of free-ridership due to positive externalities
- Cannot separate generation from transmission; that is what LMPs are all about

Fundamental Conflict

- Transmission is both a complement and a competitor to generation and load resources
 - Complements are products tend to be used together
 - e.g., cameras and film
- Generation and load management are procured competitively but transmission, for the most part, is procured via regulation
- How to connect markets with transmission expansion policies?



Planning Process Principles

- Holistic Integrated Regional Planning Process
 - Integrate all needs and all solutions
 - Involve stakeholders
 - Stay focused on the states
- Fully Integrated Planning, Markets, and Operations
- Infrastructure Management as an Integrated System – Single Entity Decision-Making
 - Well defined cost allocation / cost recovery
 - Perform risk assessments
 - Develop an aging infrastructure strategy

Transmission Planning

Integrated Resource Planning

- Weighing costs and benefits of alternative solutions
- Predetermined criteria
- Overall societal benefits vs. ratepayer benefits
- Reliability, Operations, Regulatory Approvals Tied to IRP Approval

Transmission Planning

Transmission Planning for Reliability

- Solving for Reliability Violations
- Transmission as Primary Resource vs. Transmission as a Competitive Alternative
- Long Term Planning Horizon---15-20 Years

Transmission Planning

Generator Interconnection

- “First Come/First Served”
- Identification of Most Needed Projects
- “Build It and They Will Come” Model

Transmission Planning

Transmission Planning for Economics

- Accelerating/Right Sizing Reliability Projects
- Consideration of Alternatives
- Importance of Assumptions and Revisiting the Plan

Transmission Rate Recovery

Cost Allocation Tools

- Power Flow Based methodology
- Socialization of High Voltage Facilities
- License Plate Rates
- Highway/Byway Plans

Transmission Rate Recovery

- Cost plus Investment
- Incentive Rates of Return
- Valuation Based on Shared Savings
- Mixed Public/Private Partnerships

Public Involvement in the Planning Process

- Openness
- Transparency
- Regulatory Review
- Customer Participation