Evolving the Regional Planning Process

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Balance
certainty
vs.
flexibility
Planning Process Principles

• Holistic Integrated Regional Planning Process
  • Integrate all needs and all solutions
  • Stakeholder involvement
  • State focus

• Fully Integrated Planning, Markets, and Operations

• Infrastructure Management as an Integrated System – Single Entity Decision-Making
  • Well defined cost allocation / cost recovery
  • Risk assessment, aging infrastructure
Initial Transmission Expansion Drivers

• Generation interconnection requests
  – Many large generators in New Jersey and eastern Pennsylvania

• Load deliverability criteria violations
  – A few limited problems, primarily on the Delmarva Peninsula
A/B/C Queue Generation Projects

52,357 MW of proposed projects
11,436 MW proposed in New Jersey
Early Transmission Expansion Plan Results

• Approx. 2/3 of planned investment to support generation interconnection requests
  – Some eastern generation projects withdrawing from queue based on high cost of transmission to deliver energy from New Jersey

• Numerous upgrades to existing infrastructure to mitigate load deliverability criteria violations
  – Primarily additions of transformers, and upgraded conductors and station equipment
Recent Transmission Expansion Drivers

• Generation interconnection requests
  – Larger projects in west, many wind projects

• Transmission congestion
  – Significant west to east congestion costs based on access to western baseload resources

• Operational performance issues
  – Exacerbated by west to east transfers

• Load deliverability criteria violations
  – High load growth plus generation retirements plus few new generation projects in east
24,097 MW of proposed projects
1,736 MW proposed in New Jersey
12,858 MW proposed in the west
Congestion per year:
Gross - $750 Million
Unhedgeable - $60 Million
PJ M Load Deliverability Criteria Violations

Violations identified in recent baseline analyses
Recent Transmission Expansion Plan Results

• Approx. 2/3 of planned investment to mitigate baseline violations of reliability criteria
  – New construction and significant upgrades to existing infrastructure
  – RMR contracts required for retiring generators due to transmission construction times

• Required (reliability-based) upgrades for western generators may not ensure economic deliverability – congestion issues
Direction of Planning Process

- Extended Planning Horizon
- Reliability Criteria Establishes Baseline
- Sensitivity Analysis Around Reliability Criteria Assumptions
- Market Efficiency Analysis
• Extension of Planning Horizon
  • Impact of uncertainty
  • Integration with Interconnection Process, RPM, and other processes
• Expansion of Criteria Driving Planning Process
  • Scenario Planning, e.g. at-risk generation
  • Econometric Valuation of Projects
• Cost Allocation and Investment Recovery