

Order 890 Regional Planning Strawman

FERC Transmission Planning
Regional Technical Conference
Pittsburgh, PA
June 28, 2007

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What's needed for transmission investment to occur?

1. A plan to identify system needs and solution
2. Clear price signals where investment is needed most
3. Regulatory certainty of a mechanism to promote investment

ISO New England Planning Process

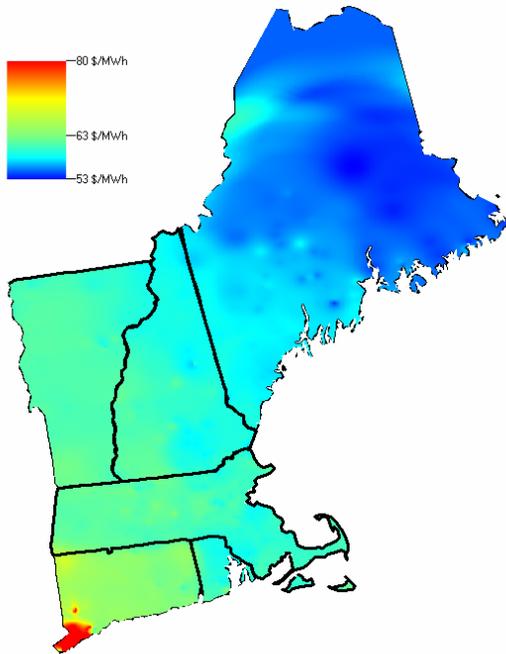
- **ISO-NE is responsible for regional system planning for the six-state region**
 - Mandatory reliability standards – *now in effect* – reinforce importance of planning for the region
- **Planning process is open and ongoing**
 - Regional System Plan (RSP) published annually
 - Ten-year planning horizon
 - Regular updates on status of transmission projects in the plan
 - Stakeholders provide input through the Planning Advisory Committee (PAC), including needs assessment, development of RSP, study results, transmission alternatives
- **RSP identifies system needs**
 - Provides opportunities for market solutions (e.g. resources, including generation, demand-side measures, and merchant transmission)
 - Transmission Owners make regulated transmission proposals as backstop for regional reliability and market efficiency needs

Reliability and Economics

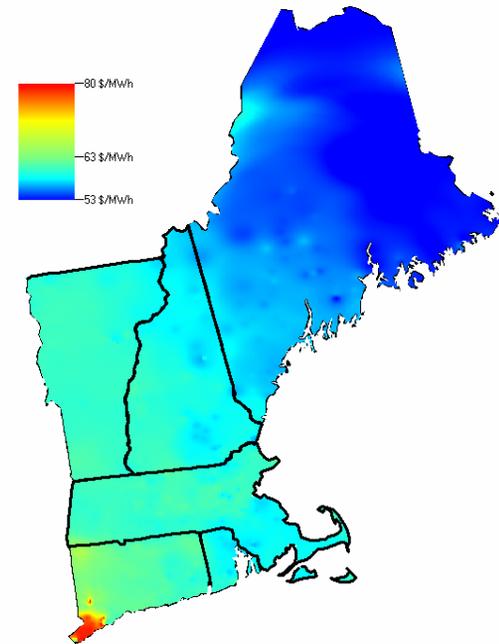
- Development of wholesale markets highlights economic benefits of transmission upgrades and demand resources
 - Locational pricing reveals true cost to deliver power throughout the system
 - Demand resources can compete with generation in the markets and are included in the regional planning process
- Reliability upgrades provide economic benefits as well
 - Northeast Reliability Interconnect project (a/k/a 2nd New Brunswick tie) improves ability to import/export power from/to eastern Canada
 - 345-kV upgrades reduce system losses
 - RSP identifies transmission projects that
 - reduce need for reliability agreements (*i.e.* RMRs)
 - reduce local congestion by improving transfer limits

Continued Price Separation

Day Ahead



Real Time



2006 Average Nodal Prices (\$/MWh)

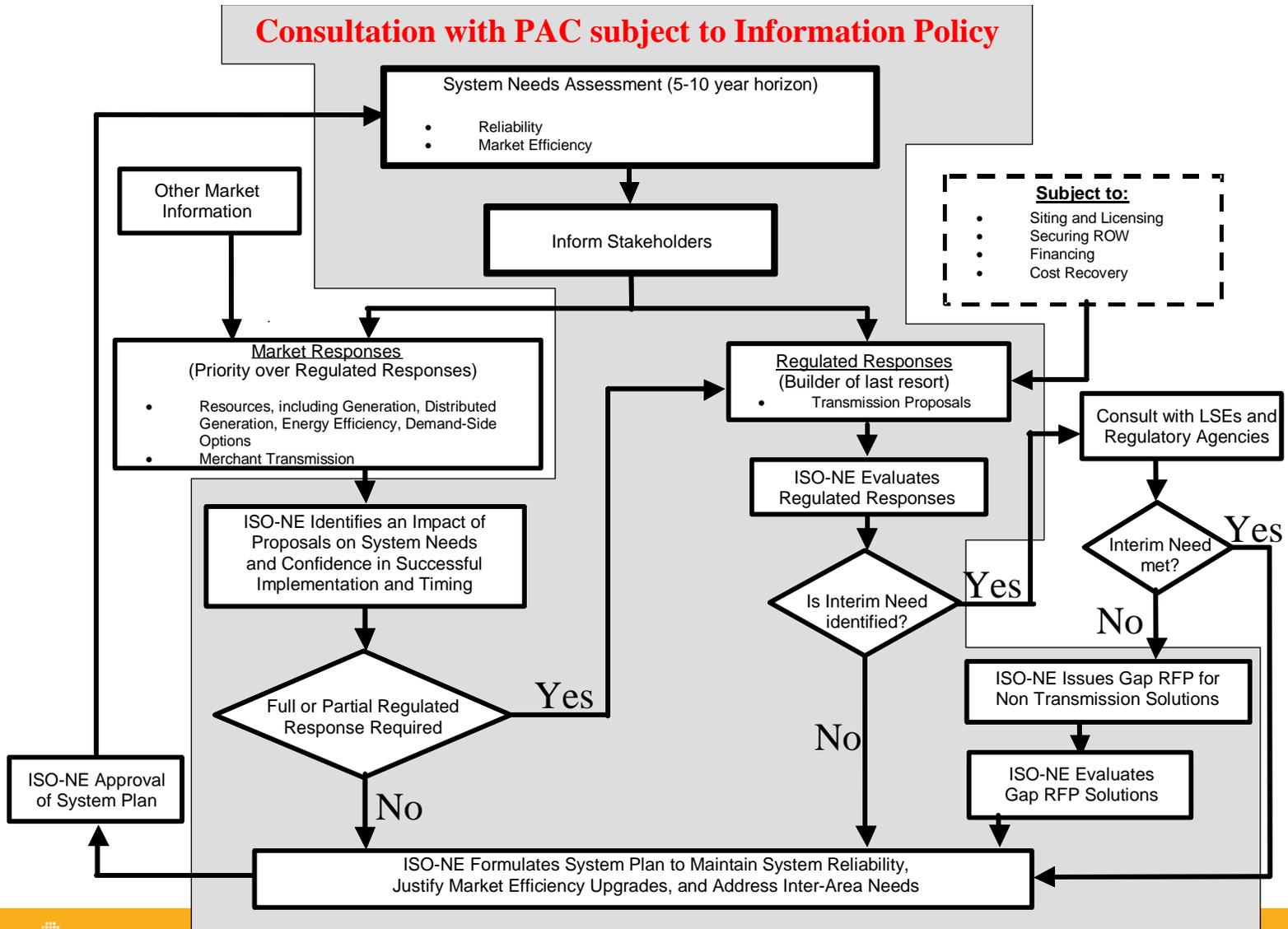
Order 890: Transmission Planning Process Requirements

- Implement coordinated, open and transparent transmission planning process, following nine principles:
 - Coordination
 - Openness
 - Transparency
 - Information Exchange
 - Comparability
 - Dispute Resolution
 - Regional Coordination
 - Economic Planning Studies
 - Cost Allocation

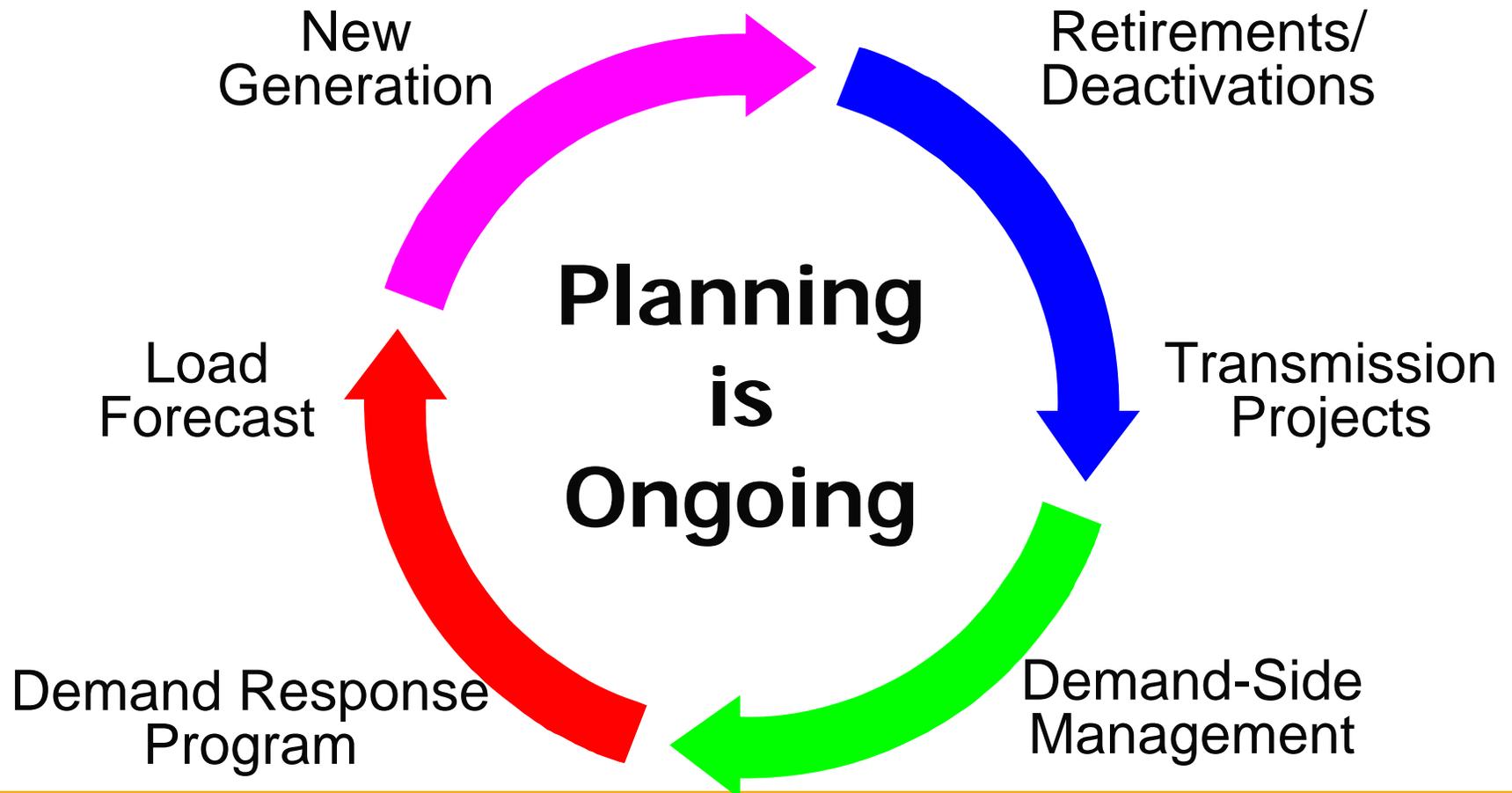
Overview of ISO-NE Strawman: Regional Planning

- Description of open stakeholder process used to develop and review the “Strawman” for regional planning
- Description of ISO-NE regional planning process following Order 890 principles
 - Existing planning process review and description
 - Existing Tariff provisions that support regional planning
 - Existing stakeholder interaction, including NEPOOL, state regulators and other interested parties
 - Existing inter-regional planning forums
- Description of how Transmission Owners in New England will comply
- Listing of comments, concerns and questions raised by stakeholders, state regulators and other interested parties
- Working draft of the new Attachment K for planning process

Regional System Planning Process Flow



Planning Process Cycle



Current Planning Process

- ISO-NE's planning process has led to significant improvements to transmission infrastructure in all six states, following a process that is consistent with Order 890 principles
- Active participation of New England states and other stakeholders in an open planning process has been instrumental in this success
- FERC-approved cost allocation process increases the certainty that planned projects will proceed
- Economic and environmental discussions bring enhanced value to regional stakeholders in evaluating planning alternatives
- New generation has helped to defer the need for certain transmission upgrades or other emergency measures, such as Gap RFP's

ISO-NE's Review of Proposed Transmission Projects

- ISO-NE, in consultation with Transmission Owners (TOs), reviews and analyzes regulated transmission projects proposed in response to needs identified in RSP
- ISO-NE Reliability Review
 - Review and approval of all additions to the bulk power system pursuant to FERC-approved Tariff (§ 1.3.9)
 - Advisory input from NEPOOL Reliability Committee
 - Participation of state representatives
 - Precursor to cost review
- ISO-NE Cost Allocation Review
 - Review costs proposed for inclusion in the regional rate for “Localized Costs” exceeding reasonable regional requirements standards (Sch. 12C)
 - Advisory input from NEPOOL Reliability Committee
 - Open stakeholder meetings to review large projects
 - Participation of state representatives

§ I.3.9 ISO-NE Review of Proposed Plans

- ISO-NE with stakeholder input, evaluates:
 - New or materially changed plan for additions to, retirements of, or changes in the capacity of any supply and demand-side resources or transmission facilities rated 69 kV or above, and
 - New or materially changed plan for any other action which may have a significant effect on the stability, reliability or operating characteristics of the TO's transmission facilities, the transmission facilities of another TO, or the system of a Market Participant
- ISO-NE conducts independent evaluation of proposed plans to determine the potential for significant adverse impact on the stability, reliability, or operating characteristics of the interconnected system.
- ISO-NE refers proposed application to appropriate Task Force(s) of Reliability Committee
- ISO-NE obtains advisory input from Reliability Committee

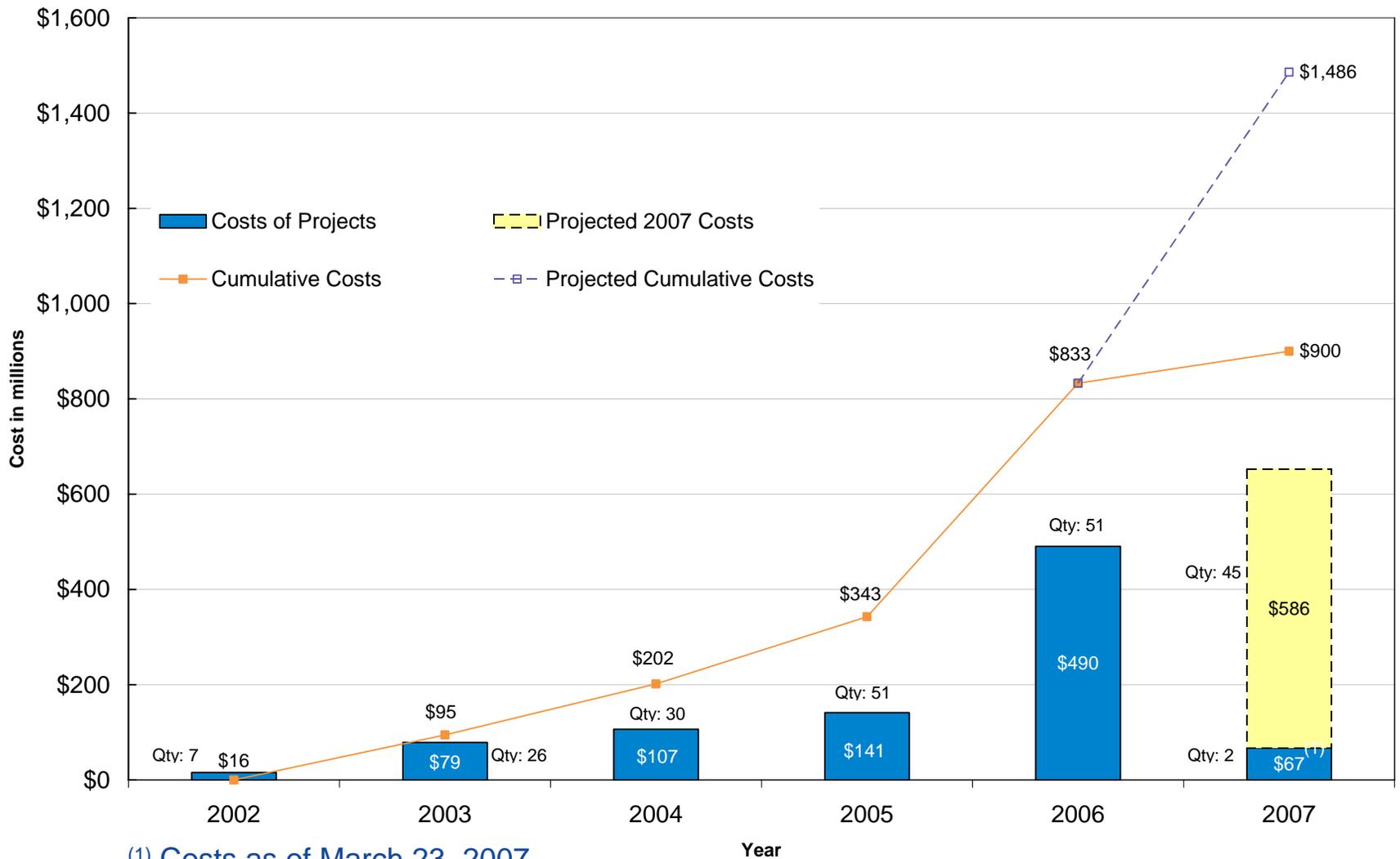
Cost Allocation Process in New England

- ISO-NE provides an independent review of all Transmission Cost Allocation applications
- ISO-NE, with stakeholder input, determines if any costs of projects should be “localized” because they exceed reasonable regional requirements/standards
- To date, ISO-NE has reviewed \$1.3B of transmission cost allocation applications and has determined nearly \$200M of localized costs, impacting three states and four transmission owners

Highlights of Transmission Planning and Development

- Major investment in transmission
 - 212 projects representing an investment of about \$1.5 billion will have been placed in-service since ISO-NE developed and implemented the RSP (2002 thru 2007)
 - \$3 - \$4 billion of active transmission projects in RSP
- States actively siting projects identified in the RSP
 - Five major new 345-kV projects have been approved and sited in four different states, three of which are now in-service
- New studies are underway for all areas of New England, including Maine, southeastern Massachusetts, and central New England

Investment In New England Transmission

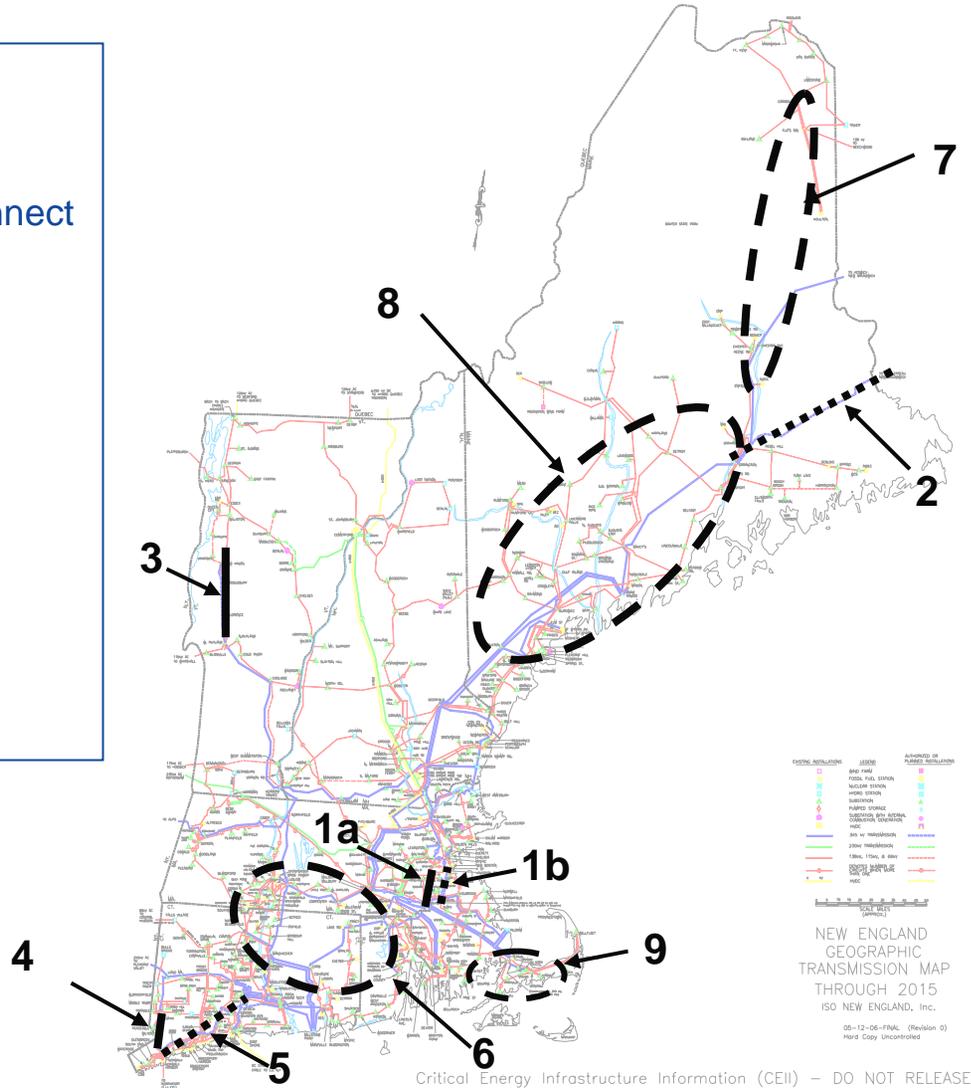


(1) Costs as of March 23, 2007

Major Transmission Projects and Studies

1. NSTAR 345 kV Project
 - a. Phase I
 - b. Phase II
2. Northeast Reliability Interconnect
3. Northwest Vermont
4. SWCT Phase I
5. SWCT Phase II
- 6a. NEEWS
- 6b. Greater Rhode Island
- 6c. Springfield 115 kV Reinforcements
7. Maine Power Connection
8. Maine Power Reliability Program
9. Southeast Massachusetts

-  In service
-  Under construction
-  Under study



Additional Planning Considerations

- ISO-NE annual RSP expands beyond regional transmission needs
 - Resource adequacy and other system needs
 - Fuel diversity challenges and progress
 - Environmental challenges and requirements
- “Scenario Analysis” - a new regional activity
 - Evaluate impact of resource alternatives for the future – 2020+
 - Market costs and economics of new investment
 - Impact of Energy Efficiency and Demand Response
 - Environmental impacts
 - Infrastructure requirements

ISO-NE Participation In Broader Region: Inter-regional Planning

- Northeast ISO/RTO Planning Coordination Protocol
 - Provides coordinated planning in across Northeast region (NY, NE, PJM, Ontario, Quebec and Maritimes)
 - Established Joint Inter-regional Planning Committee
 - Established Inter-area Planning Stakeholder Advisory Committee
 - Consultation with neighboring systems on possible inter-area impacts
- NERC and NPCC Planning Forums
 - Facilitate RTO/ISO coordinated planning function

Conclusions

- Existing regional planning process in New England follows Order 890 principles and has been successful at getting new transmission built
- Existing transmission cost allocation methodology is providing certainty to TOs as well as excluding from regional rate recovery non-essential, locally driven costs
- Market mechanisms and the planning process are more fully incorporating demand resources
- Inter-regional planning structure is in place across the northeast region

Next Steps...

- **Improvements based on stakeholders' and other interested parties' input**
 - Continue to develop regional economic analysis to provide greater insight to stakeholders and policymakers
 - Add clarity and transparency to the method for evaluating whether proposed regulated transmission solution meets the identified need and can be included in the RSP project list
 - Explain method for evaluating proposed market solution response to determine whether response meets identified need
 - Provide more information on how demand resources can solve (wholly or partially) regional reliability needs
 - Investigate use of Forward Capacity Auction results as a “demand resource queue”

Improvements, cont'd...

- Define mechanism for selecting and prioritizing transmission customer economic planning study requests
- Clarify application of Dispute Resolution Process to planning-related disputes, particularly define disputable issues and parties subject to the process
- Clarify and improve process for handling of and sharing CEII
- Expand current PAC process and reformat RSP project list to accommodate local planning issues and indicate status of local projects
- Continue to develop our inter-regional planning process to look across borders for local or regional solutions

Questions?