

New England Transmission Update

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Grid Week 2007
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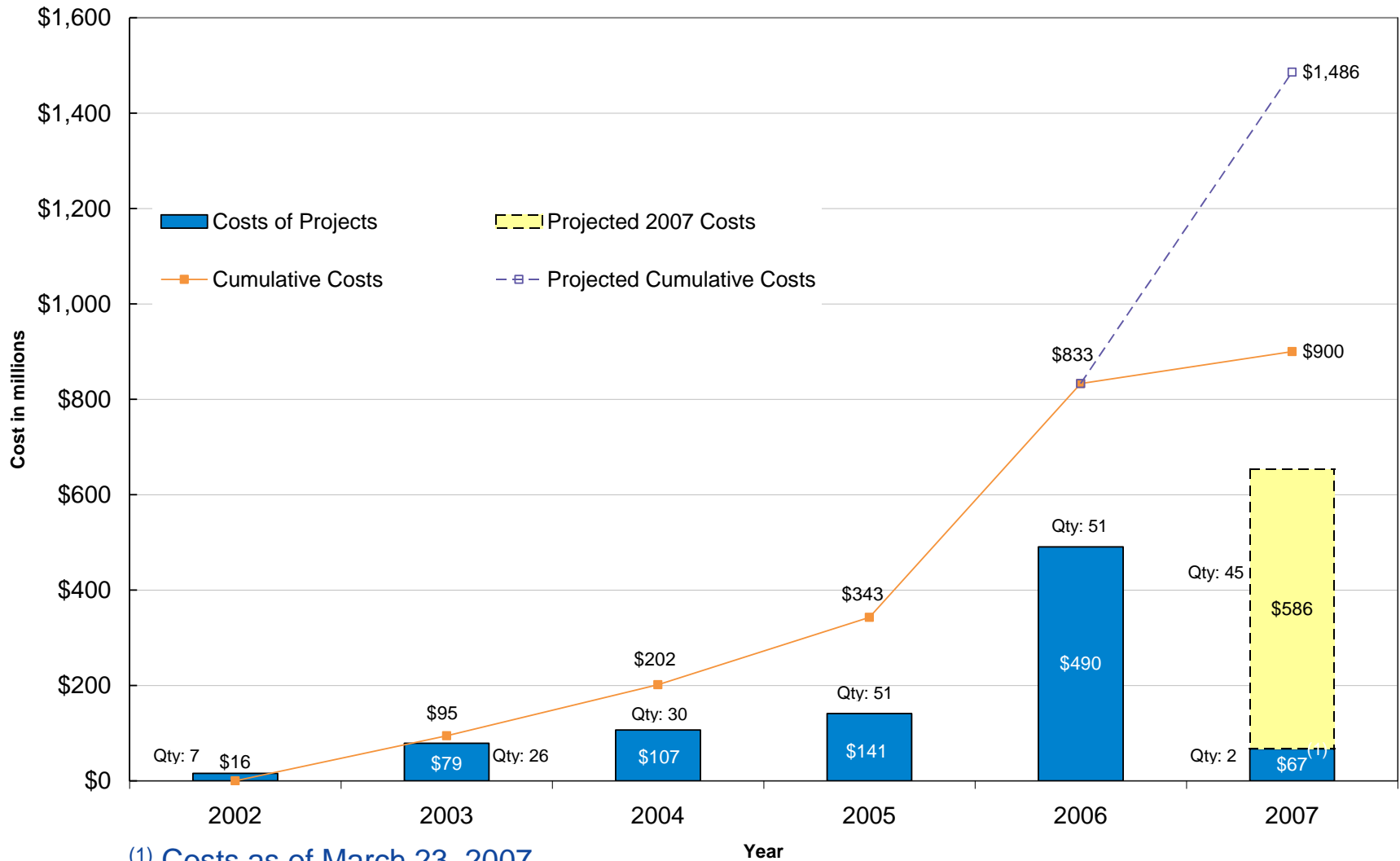
Highlights

- **Key Drivers for Transmission Expansion in New England**
 - Peak demand growth
 - Mandatory NERC Reliability Standards
 - Limited bulk transmission investment for 20 years prior to 2000
 - Need for greater interconnection capability/importing renewables
 - Market efficiency within the region

Highlights, cont.

- **Getting Transmission Built in New England**
 - 212 projects developed through ISO's Regional Planning Process have been put in service
 - An investment of \$1.5 billion (2002 thru 2007)
 - Five major new 345-kV projects have been sited in four states
 - Major new studies are underway for other areas of New England
- **Scenario Analysis Initiative to look at alternatives to meet future system needs**

Investment In New England Transmission



(1) Costs as of March 23, 2007

Major Transmission Progressing in New England




<u>Project</u>	<u>Estimated Costs¹</u>
1. NSTAR 345 kV Transmission Reliability Project	\$225.6
a. Phase I	
b. Phase II	
2. Northeast Interconnect Project (NRI)	\$109.9
3. Northwest Vermont Reliability Project (NRP)	\$210.1
4. Southwest Connecticut (SWCT) Reliability Project Phase I	\$343.2
5. Southwest Connecticut Reliability Project Phase II	\$1,303.0
6a. New England East-West Solution (NEEWS)	\$1,100.0 ²
6b. Greater Rhode Island Transmission Reinforcements (GRI)	\$195.0 ²
6c. Springfield 115 kV Reinforcements	\$250.0 ²
	\$3,737 Total

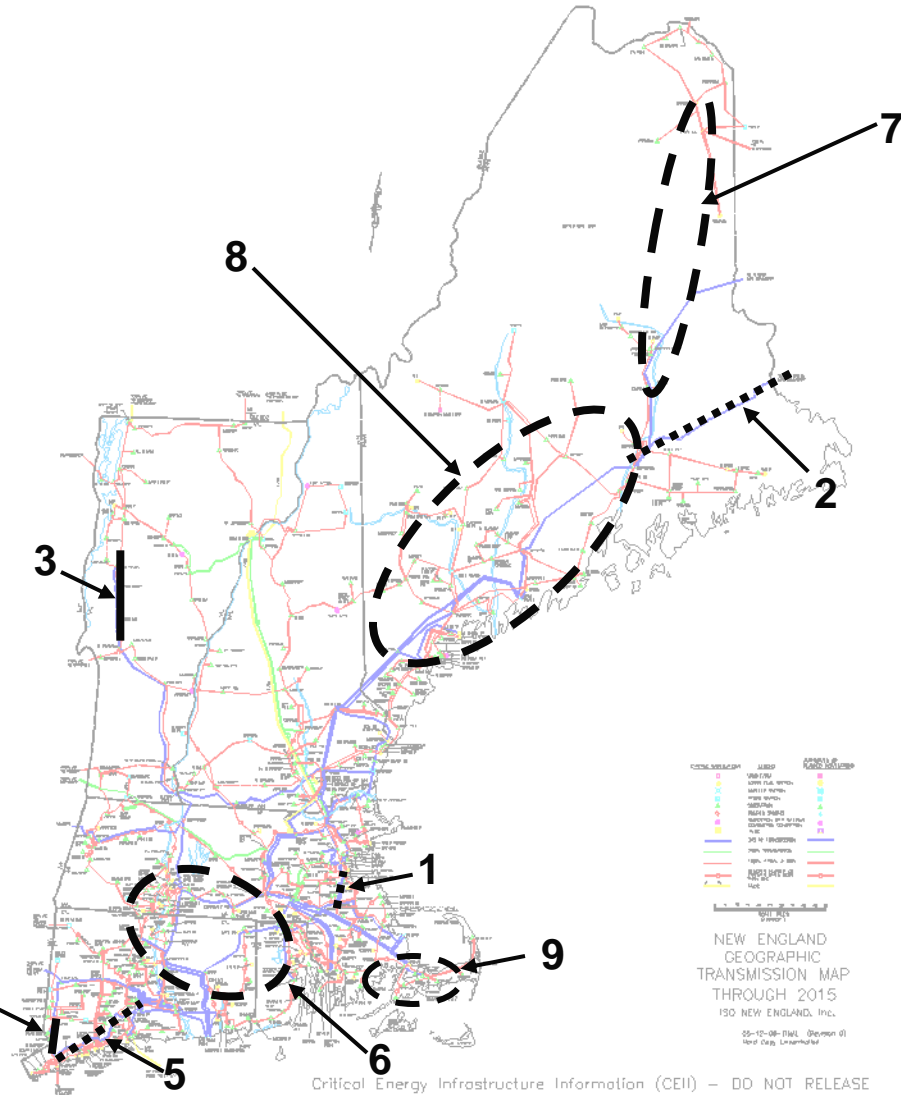
¹ Estimated costs in millions of dollars

² Estimated costs are very preliminary

Major Transmission in New England

1. NSTAR 345 kV Project
 - a. Phase I
 - b. Phase II
2. NRI
3. NRP
4. SWCT Phase I
5. SWCT Phase II
- 6a. NEEWS
- 6b. GRI
- 6c. Springfield 115 kV Reinforcements
7. Maine Power Connection
8. Maine Power Reliability Program
9. SEMA Upgrades

-  In service
-  Under construction
-  Under study



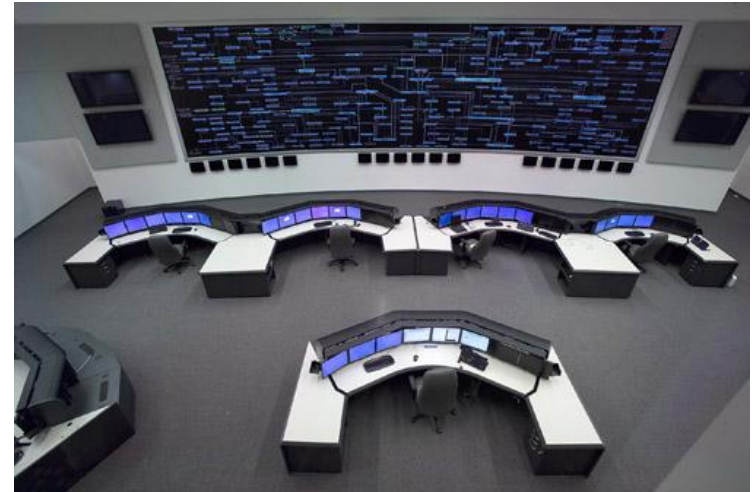
Scenario Analysis

Identifying the Range of Outcomes for Alternative Resources

- Examining seven scenarios to meet the next 8,000 MW of system needs
 - Including supply-side, energy efficiency, and imports
 - Some scenarios include large amounts of Canadian imports (wind and hydro)
- Metrics to quantify outcomes
 - Economic, reliability, and environmental
- Identify interconnection and other generic transmission costs
- Preliminary results to stakeholders April 30, 2007

Advanced Monitoring/Control of the Grid

- **State-of-the-art Control Room**
 - 12' x 47' dynamic display board
 - Wide-area view of neighboring areas in the Northeast
 - Dynamic visualization tools for monitoring the state of the power system (Power World)



Questions?