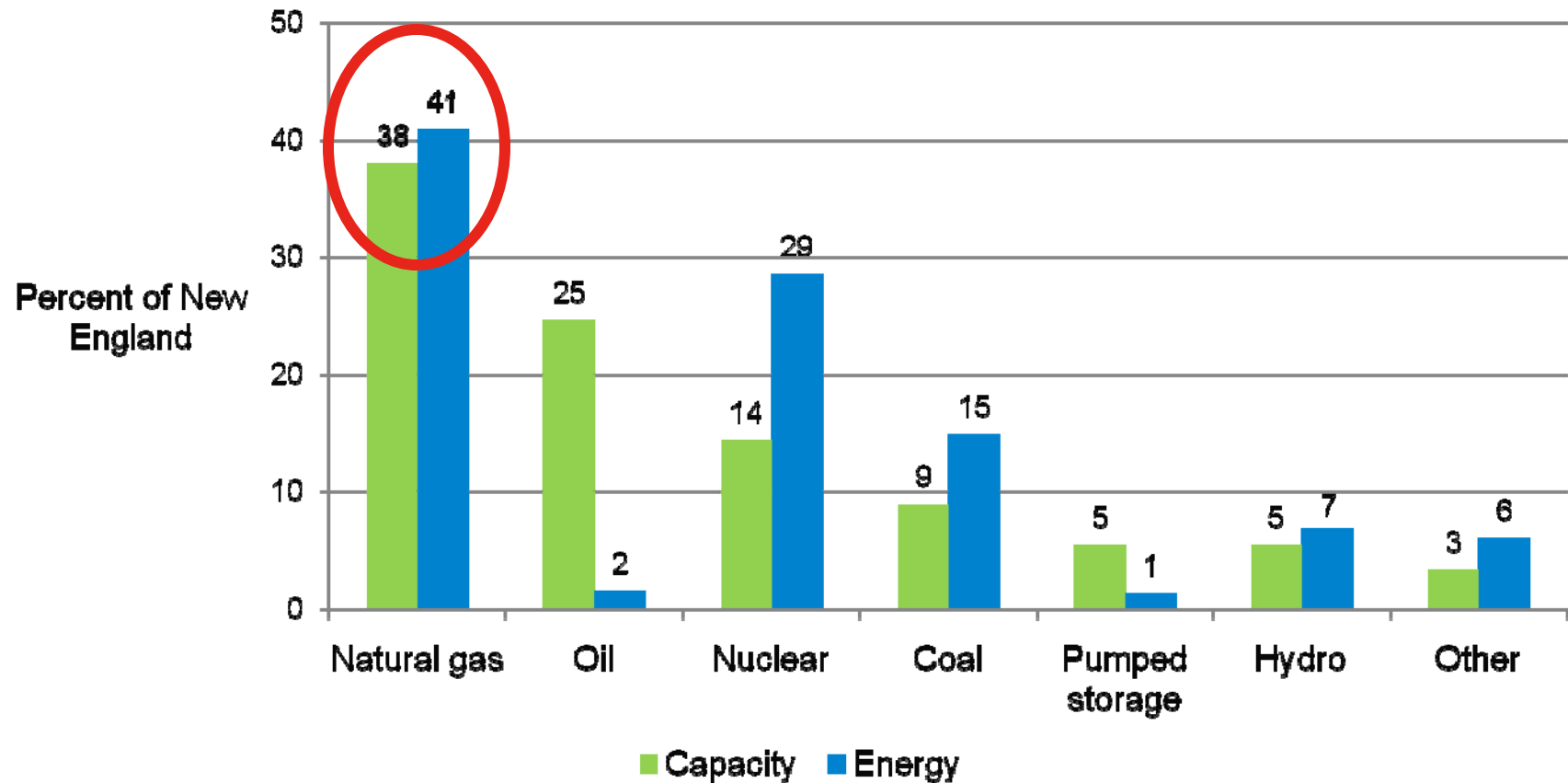


Natural Gas Use in New England's Power Sector

New England Conference of Public Utilities Commissioners
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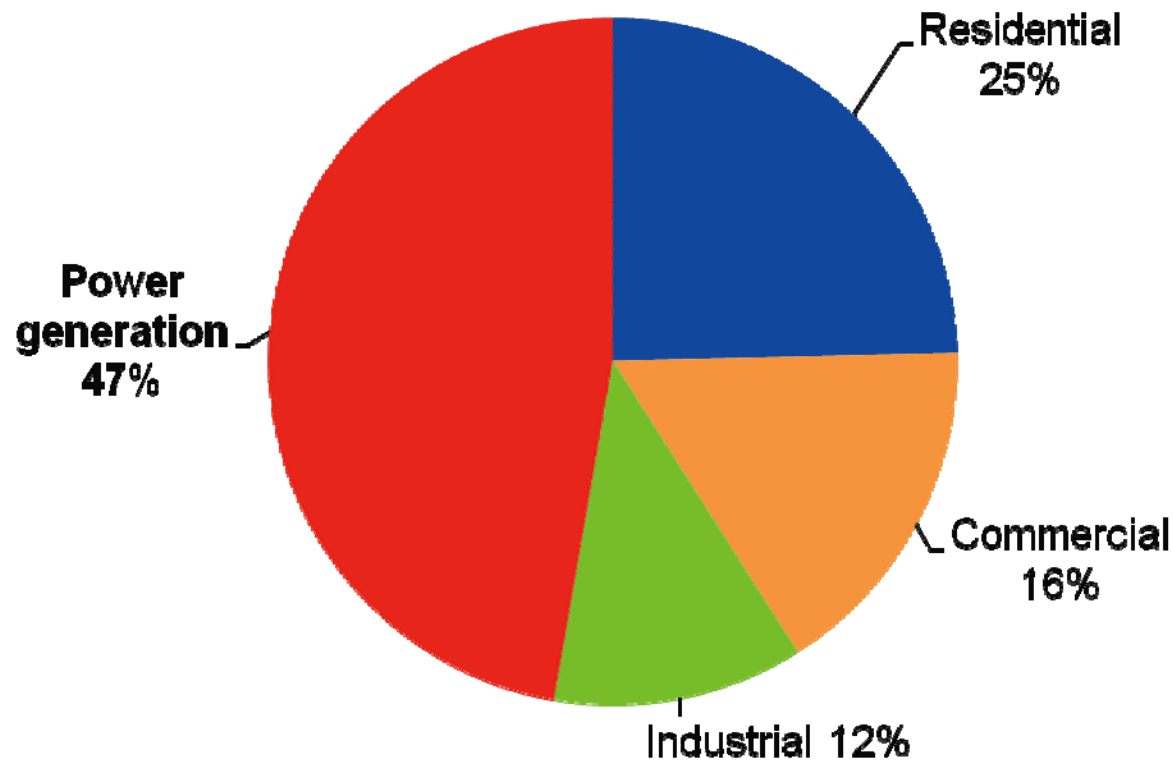
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New England is Heavily Reliant on Natural Gas for Capacity and Energy



Nearly Half of Natural Gas Consumed in New England is for Power Generation

2008 Gas Volume (Bcf)



Power Supply and Gas Supply Diversity in New England

- State *Renewable Portfolio Standards* (RPS) promote diversity of generation
- Diversification of the regional natural gas supply and delivery system is in progress
 - New natural gas delivery infrastructure
 - Northeast Gateway & Neptune Deepwater Ports
 - Canaport LNG
 - Rockies Express
 - Enhanced storage capability and ability to flow gas bi-directionally
 - New natural gas supply sources
 - Global LNG
 - Rocky Mountain gas
 - Shale gas (Marcellus & others)

New and Improved Tools to Improve Electric System Operators' Visibility of Gas System

- Electric/Gas Operations Committee (EGOC) facilitates education, understanding, communications and coordination
- Access to all regional pipeline Electronic Bulletin Boards (EBBs)
- Software tool that compiles information from EBBs: maps, gas flows, notices, etc. (Bentek Energy)
- FERC Order No. 698 provides ISO with authority to obtain fuel supply information from individual gas-fired generators

Communications is Key

- Electric system operators need advance notice of events on the gas system that may impact fuel deliveries to gas-fired generators
 - *Electric/Gas Operations Communications Protocol* provides real-time gas system information to ISO control room
 - Northeast Gas Association (NGA) supports ISO-NE, NYISO & PJM
 - Winter Gas Supply Manual
 - Gas Supply Task Force (GSTF) debriefing notes
 - Any other pertinent gas sector information
- ISO-NE and regional pipelines are now coordinating maintenance outages to ensure both electric & gas system reliability

Mitigating Reliability Issues

- **Completed actions:**
 - Improvements to market rules and procedures
 - New inter-industry coordination and communications protocols
 - Prominent infrastructure additions within both sectors
- **Continued challenges:**
 - Mismatch between the wholesale natural gas and electric markets
 - Resource commitment uncertainties
 - Unforeseen events in real-time operations
 - LNG supply risks
 - Natural gas quality/interchangeability
 - Price exposure
 - Others

What's Next on the Horizon?

- Significant interest in renewable projects
 - Wind, biomass, small hydro, fuel cells, other projects
 - Imports from Eastern Canada
- System will need resources with quick-start, fast-ramping characteristics
 - Newer gas-fired generators can balance output from intermittent resources
- *New England's power sector will continue to rely on natural gas for many years to come*