An Overview of the Electric Industry in New Hampshire

Presentation to the House Science, Technology and Energy Committee

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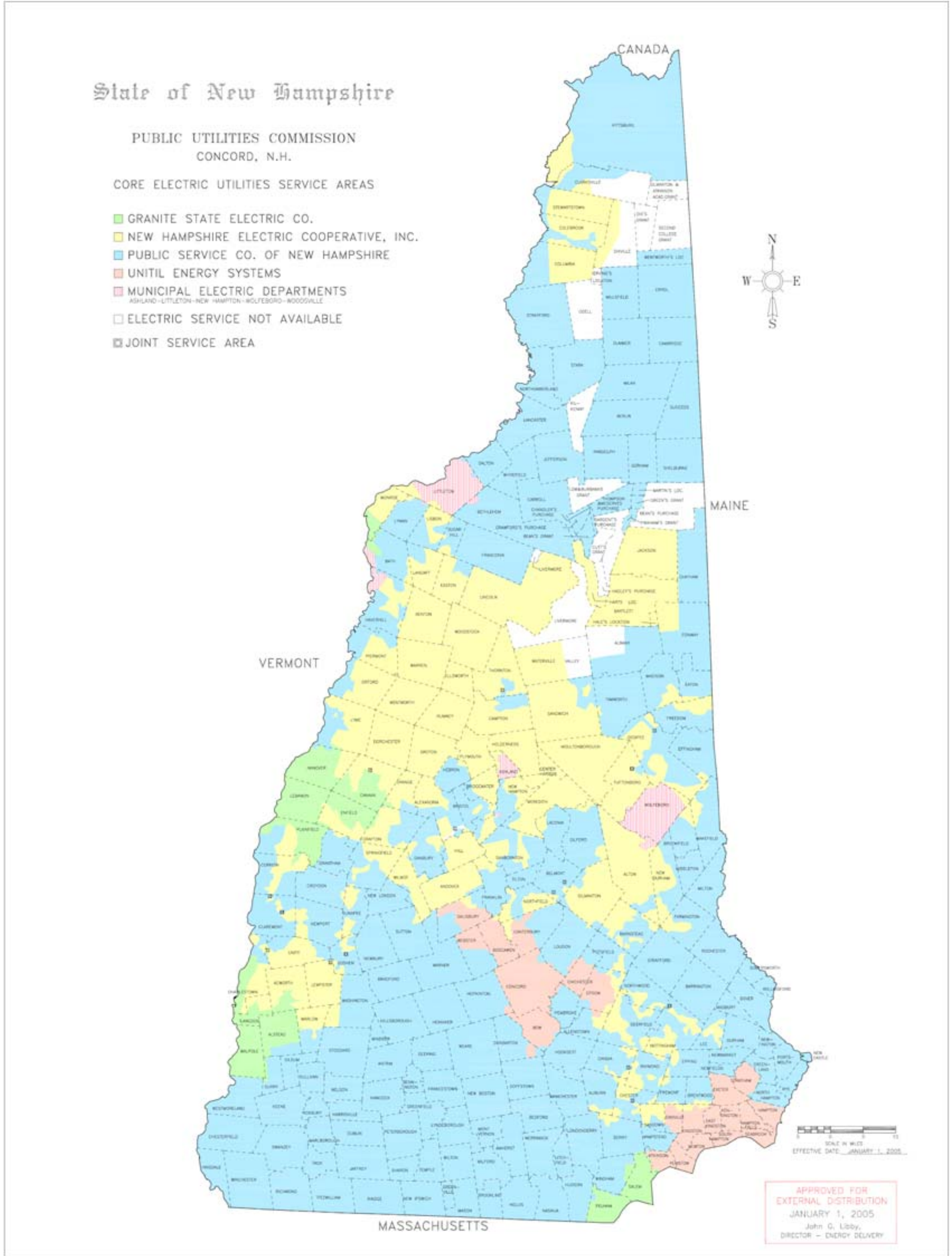
Outline of Presentation

- Overview of Electric Industry in NH
- Brief Overview of Restructuring
- Basics of Rate-of-Return Regulation
- A look at rates in NH and NE
- A short look back and a peek at 2009

The Basics

- NH has 4 franchised electric distribution utilities: NHEC, NGrid, PSNH and Unitil
  - It also has 5 small municipal utilities (Ashland, Littleton, New Hampton, Wolfeboro and Woodsville)
- ~ 700,000 electric customers
- Annual Retail Revenue ~ $1.5 Billion
- Annual Retail Sales ~11,000,000 MWHs
  - Forecasted by ISO-NE to grow at 1.7% per year
  - NH represents ~ 9% of New England’s electricity sales
- Peak Demand was 2,331 MW in 2007
  - NH is a summer peaking state as is New England
  - Record peak was 2,475 MW in August 2006
  - Forecasted to grow at 2.3% per year
- NH’s existing capacity is ~ 4,200 MW
  - Very diverse mix of resources


State of New Hampshire
PUBLIC UTILITIES COMMISSION
CONCORD, N.H.
CORE ELECTRIC UTILITIES SERVICE AREAS
GRANITE STATE ELECTRIC CO.
NEW HAMPSHIRE ELECTRIC COOPERATIVE, INC.
PUBLIC SERVICE CO. OF NEW HAMPSHIRE
UNITIL ENERGY SYSTEMS
MUNICIPAL ELECTRIC DEPARTMENTS
ELECTRIC SERVICE NOT AVAILABLE
JOINT SERVICE AREA
CANADA
MAINE
VERMONT
MASSACHUSETTS
N
S
E
W
EFFECTIVE DATE: JANUARY 1, 2005
APPROVED FOR
EXTERNAL DISTRIBUTION
JANUARY 1, 2005
John G. Libby,
DIRECTOR – ENERGY DELIVERY

Public Service of New Hampshire

- Subsidiary of Northeast Utilities
  - Result of the PSNH bankruptcy in 1988
  - Affiliate of CL&P in CT and WMECo in MA
- NH's Largest Electric Utility
  - Serves over 70% of NH (~ 490,000 customers)
  - Retail Revenue of ~ $1Billion
  - Annual Retail Sales of ~8.1million MWHs
  - 1,500 large C&I customers w/ $350 million in sales revenue
  - Owns ~1,150 MW of F/H generation

Other NH Electric Companies

- Granite State Electric Company (d/b/a National Grid)
  - Part of large multi-state utility with affiliates in NY, MA, and RI
  - ~41,000 customers located in Salem and Derry area and in Lebanon and Hanover area
  - Affiliate, New England Power Company, divested generation and purchased power contracts as part of restructuring in 1997
  - GSEC procures its default power through auction process
  - Recently NGrid, GSEC's parent company, merged with KeySpan

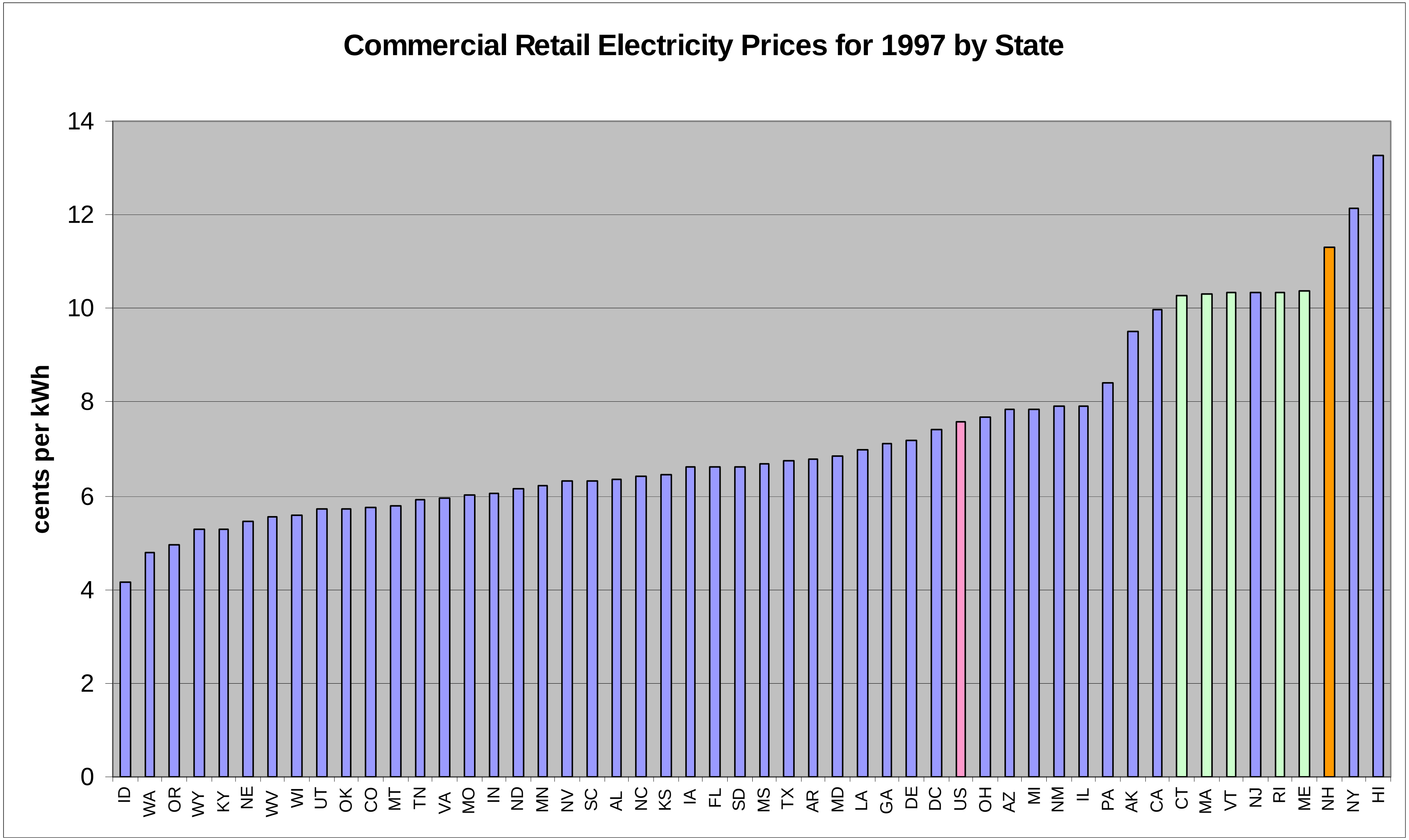
- UES (merger of Concord Electric and Exeter & Hampton Electric Companies)
  - ~75,000 customers located in the Concord area and in the Seacoast
  - Affiliate of Fitchburg Gas and Electric in MA which Unitil purchased in early 90s
  - Procures its power through auction process
  - Unitil Corp., the parent company, recently acquired Northern Utilities and Granite State Gas Transmission

- New Hampshire Electric Cooperative
  - ~84,000 customers located in mostly rural areas throughout NH
  - Headquarters in Plymouth
  - PUC has limited regulatory oversight of NHEC
    - PUC doesn't regulate rates of NHEC, except for stranded costs

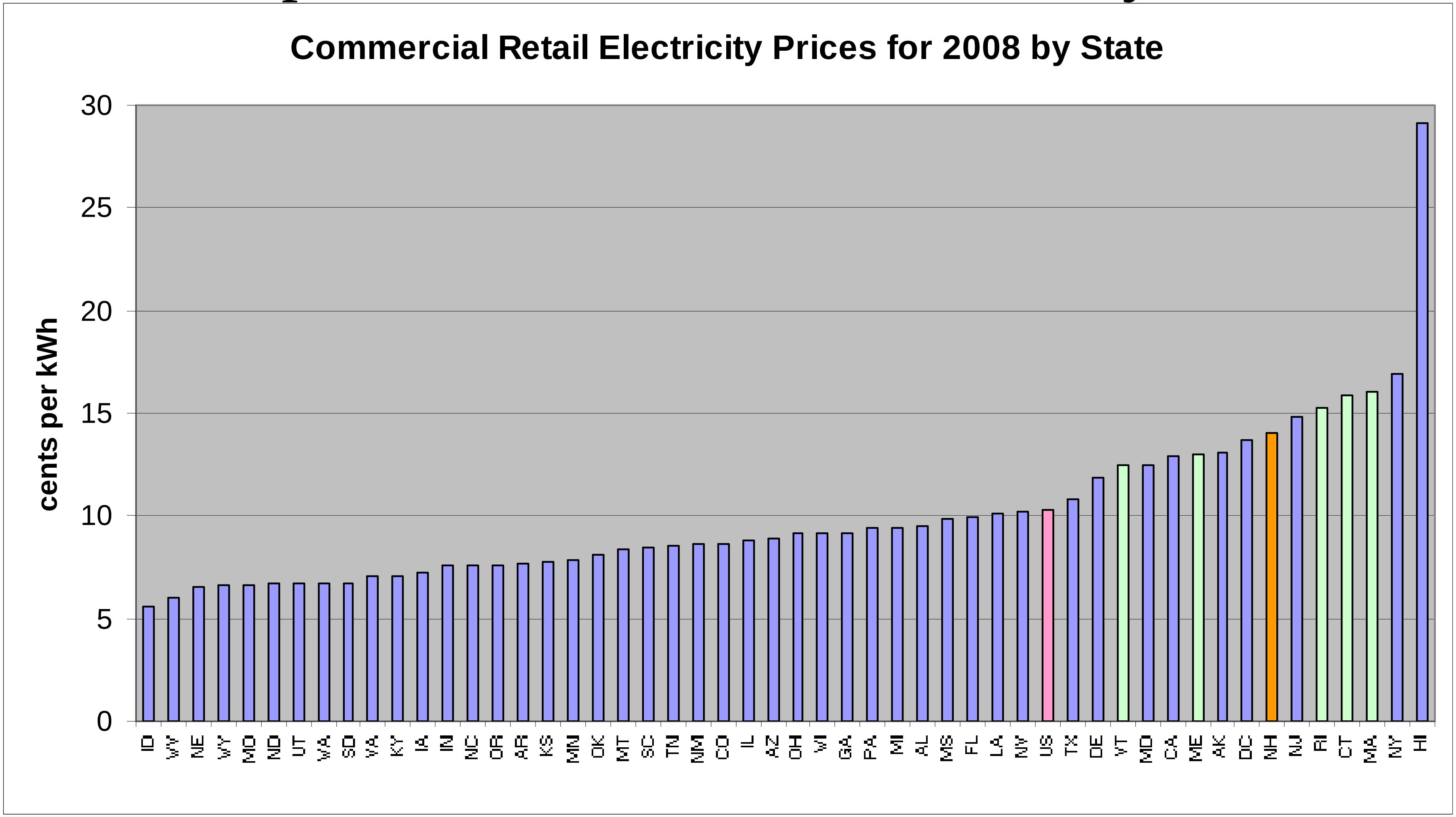
RSA 374-F – NH’s Electric Restructuring Statute

- Open All Retail Markets by January 1998
- Mandated Generic Proceeding to Develop Statewide Restructuring Plan by Feb. 28, 1997
- Contains Broad, Interdependent Policy Principles
- Reduce Costs For All Consumers
- Harness the Power of Competitive Markets
- Develop a More Efficient Industry Structure and Regulatory Framework

Comparison of Commercial Rates by State

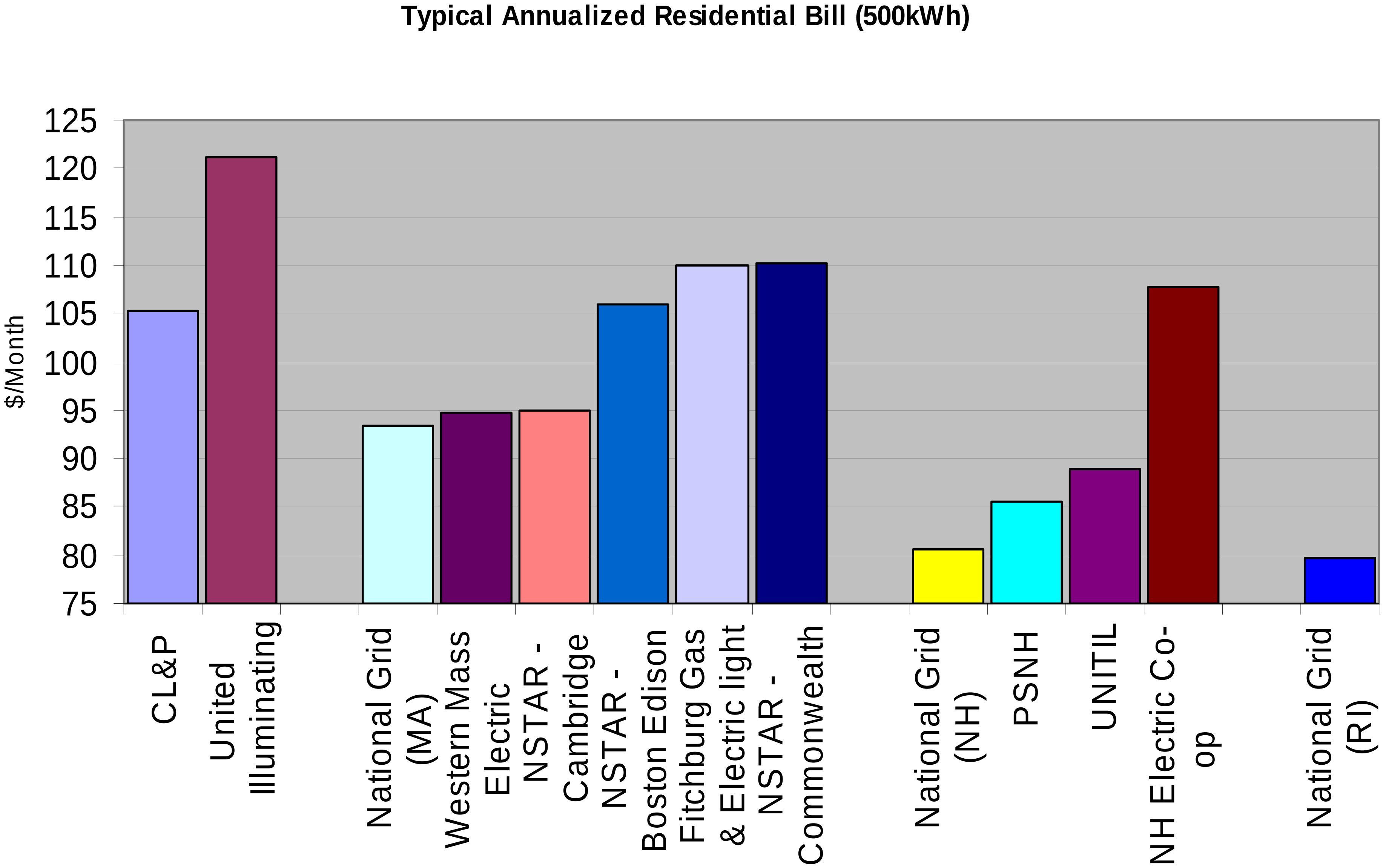


Comparison of Commercial Rates by State



source: www.eia.doe.gov

New England Typical Monthly Bills - January 2009

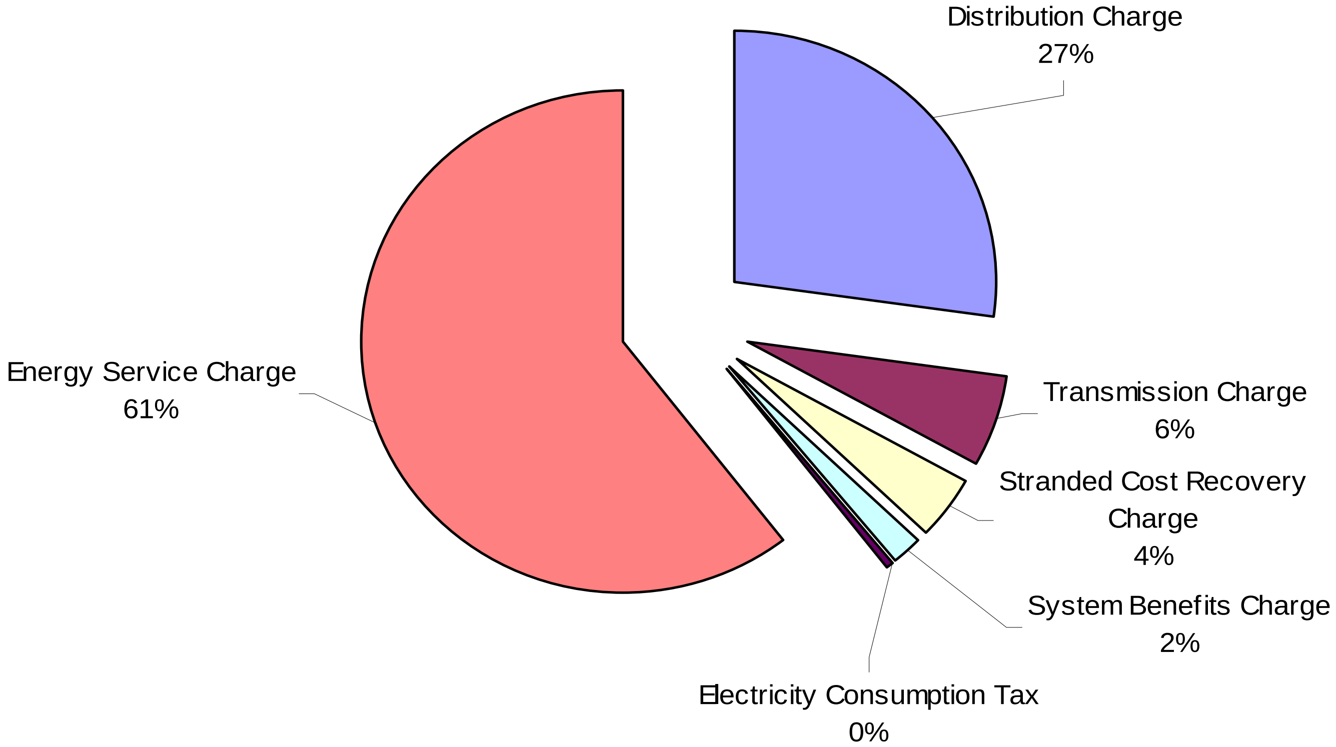


A Short Overview of the 3 Key Components of the Electric Industry and Its Regulation

- 3 Main Components of the Industry
  - Generation
    - Usually classified by primary energy driver (i.e., coal, oil, natural gas, hydro, nuclear, biomass or wind)
    - Base, Intermediate or Peaking
    - Coal is by far #1 fuel used to produce electricity in United States though not in New England
    - Historically, large central stations due to economies of scale and cheap fuel sources such as hydro, coal and uranium (high capital costs with low operating costs)
    - Natural gas has been the recent fuel of choice due to the technology, low expected fuel cost, short construction time and low level of emissions
    - Now a competitive wholesale industry
  - Transmission
    - Moving the electrical energy via high voltage lines (usually 69 kV or higher) from generation stations to the substations for conversion back to voltages used to distribute the electricity to customers
    - Regulated by the FERC
  - Distribution
    - Transforming the high voltage electricity to voltages that are delivered to the various classes of end-use customers (residential, commercial and industrial)

PSNH Total Rate Breakdown

(% of Total Bill using 2009 ES Rate)

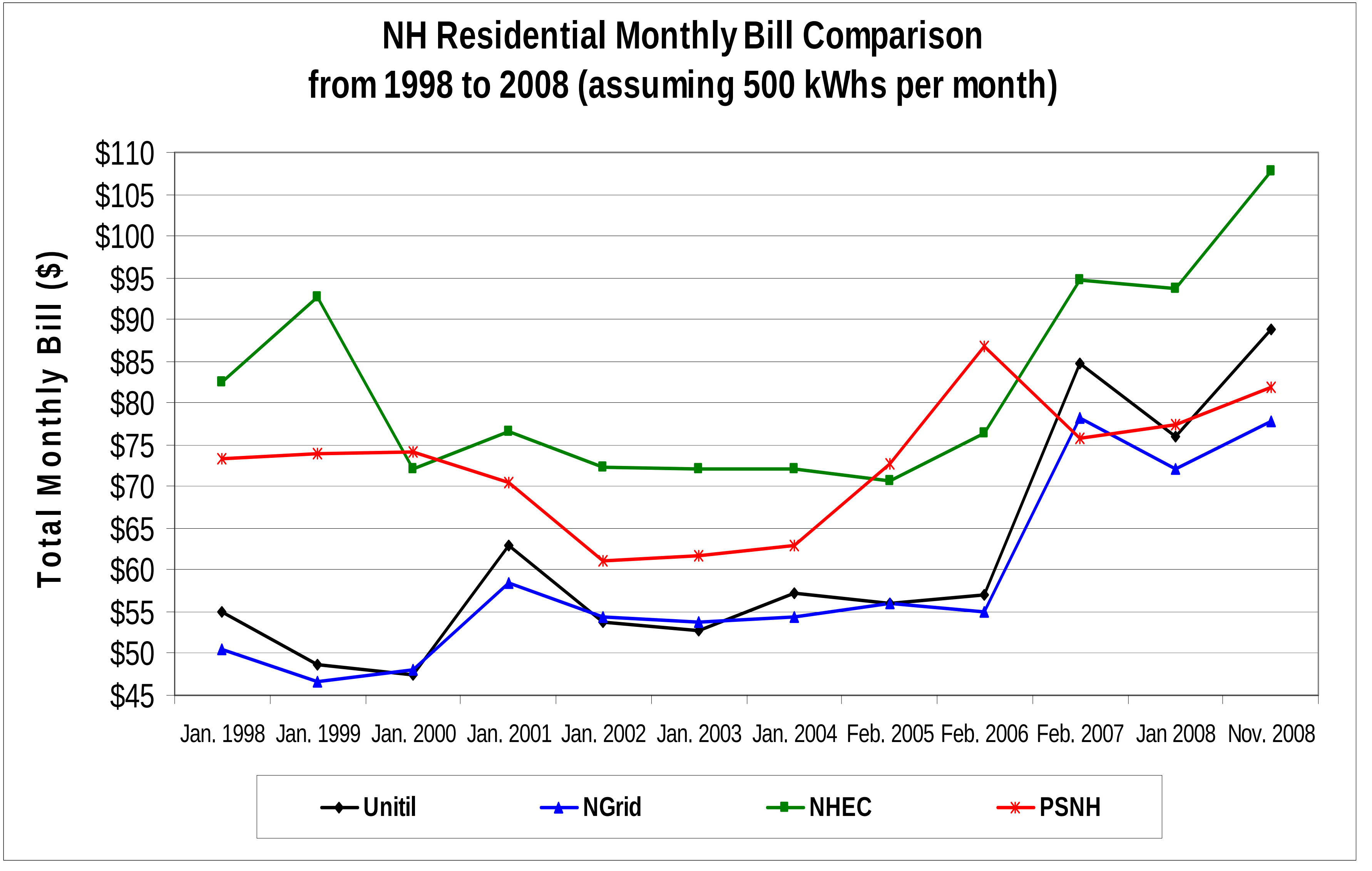


Rate-of-Return Regulation – the traditional regulatory method

- Determining the Revenue Requirement
  - RR = (Rate Base x WACC) + Operating Expenses
  - Rate Base includes undepreciated plant, incl. poles, wires, transformers, substations and buildings
  - WACC = Weighted Average Cost-of-Capital is based on the cost and percentage of equity and debt in the capital structure (e.g., 40% equity and 60% debt)
  - Operating Expenses include depreciation, taxes, labor, fuel, etc.

Rate-of-Return Regulation

- Cost-of-Service Studies are used to apportion the Revenue Requirements to the various classes of customers:
  - Residential
  - Small General Service
  - Medium General Service or Small C&I
  - Large General Service or Large C&I
- Rates are designed for each class based on usage and cost information

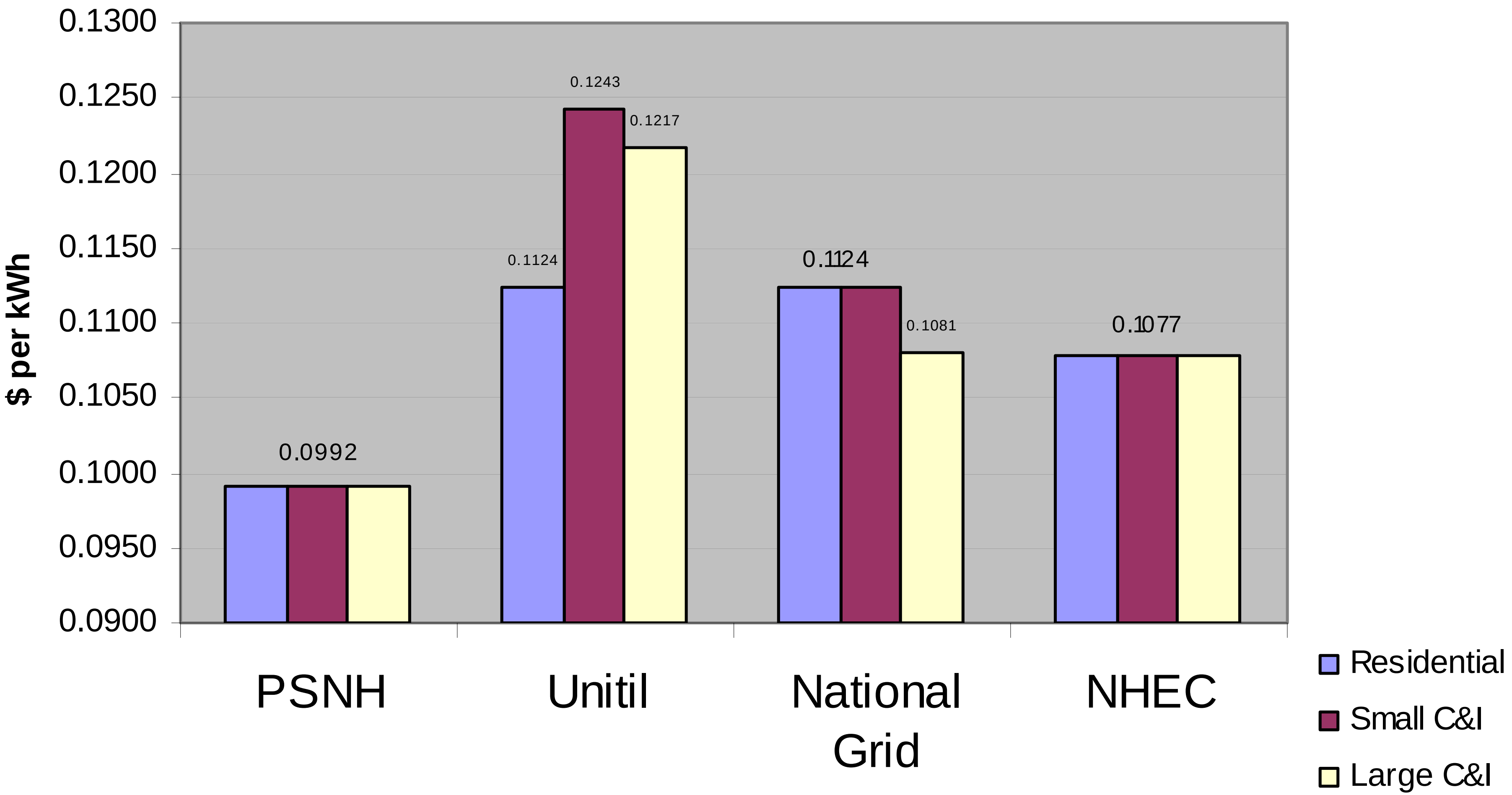

NH Residential Monthly Bill Comparison
from 1998 to 2008 (assuming 500 kWhs per month)
Total Monthly Bill ($)
$110
$105
$100
$95
$90
$85
$80
$75
$70
$65
$60
$55
$50
$45
Jan. 1998
Jan. 1999
Jan. 2000
Jan. 2001
Jan. 2002
Jan. 2003
Jan. 2004
Feb. 2005
Feb. 2006
Feb. 2007
Jan 2008
Nov. 2008
Unitil
NGrid
NHEC
PSNH

PSNH Energy Service Rates from May 2001 to January 2009

Cents per kWh

Date of Service		Residential, Small C&I	Large C&I
May 2001 - January 2003		4.40	4.40
February 2003 - January 2004		4.60	4.67
February 2004 - July 2004		5.36	5.36
August 2004 - January 2005		5.79	5.79
February 2005 - July 2005		6.49	6.49
August 2005 - January 2006		7.24	7.24
February 2006 - June 2006		9.13	9.13
July 2006 - December 2006		8.18	8.18
January 2007 - June 2007		8.59	8.59
July 2007 – December 2007		7.83	7.83
January 2008 - June 2008		8.82	8.82
July 2008 – December 2008		9.57	9.57
2009 ES Rate subject to mid-year review		9.92	9.92

NH Default Service Rates, January 2009



Recently Completed and Ongoing Electric Proceedings

- Puc 300 Rules (Electric Rules) and PUC 900 Rules (net metering)
- National Grid/KeySpan merger (with Gas/Water Division)
- PSNH Rate Case (DE 06-028)
  - Expect a new distribution rate case in 2009
- Investigation into PSNH Coal Procurement Practices
- December 1, 2007 Background Report on NH Transmission Infrastructure
  - Pursuant to SB 140
  - PUC continues to meet with potential renewable developers to discuss options for building transmission
- 2009 CORE Energy Efficiency Programs (DE 08-120)
- Investigation into 5 New Standards as part of Energy Policy Act of 2005 (DE 06-061)
  - Time-based metering and communication
    - – investigation of "smart metering and smart grid" still ongoing
  - Interconnection
  - Net Metering
  - Fuel Sources
  - Generation Efficiency
- Default Service Rates
  - Auctions for DS by UES and NGrid
  - Annual cost-based review for PSNH with mid-year review
- Stranded Cost Rates
  - PSNH's stranded costs have decreased significantly over last few years as QF contracts ended
- Review with PUC's Safety Division of the December 2008 Ice Storm
- Merrimack "scrubber" review?