

An Overview of Energy Resource Issues in NH

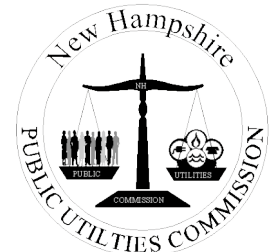
For Energy in the Northeast
Hilton Boston Back Bay Hotel
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Overview of Presentation

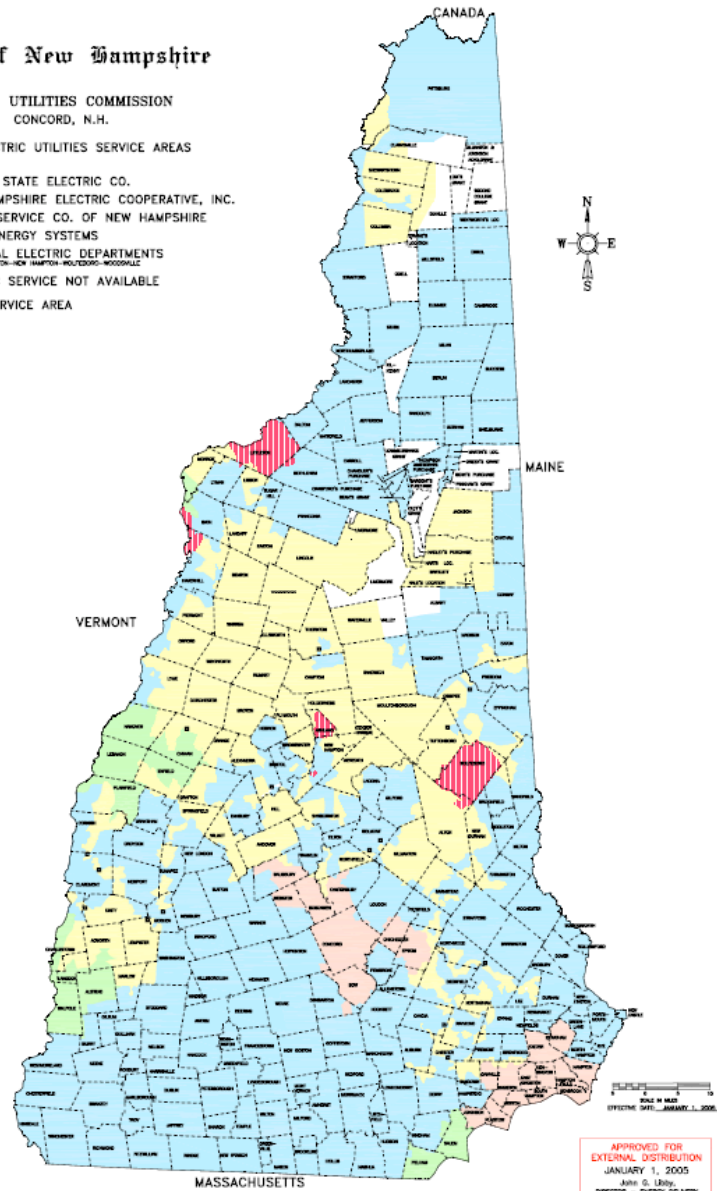
- Brief Description of the Electricity Industry in NH
 - Utility overview
 - Service territories, revenues, sales, peak loads and rates
 - Generation
- NH's Restructuring Experience
- Restructuring Today
- The Site Evaluation Committee
- Important Energy and Environmental Policy Decisions
- What's ahead for NH with Resource Adequacy and Competitive Markets

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
- UNITAL ENERGY SYSTEMS
- MUNICIPAL ELECTRIC DEPARTMENTS
ASLAND - UTILITY OF HAMPTON ROADS; WOODBURY
- ELECTRIC SERVICE NOT AVAILABLE
- JOINT SERVICE AREA



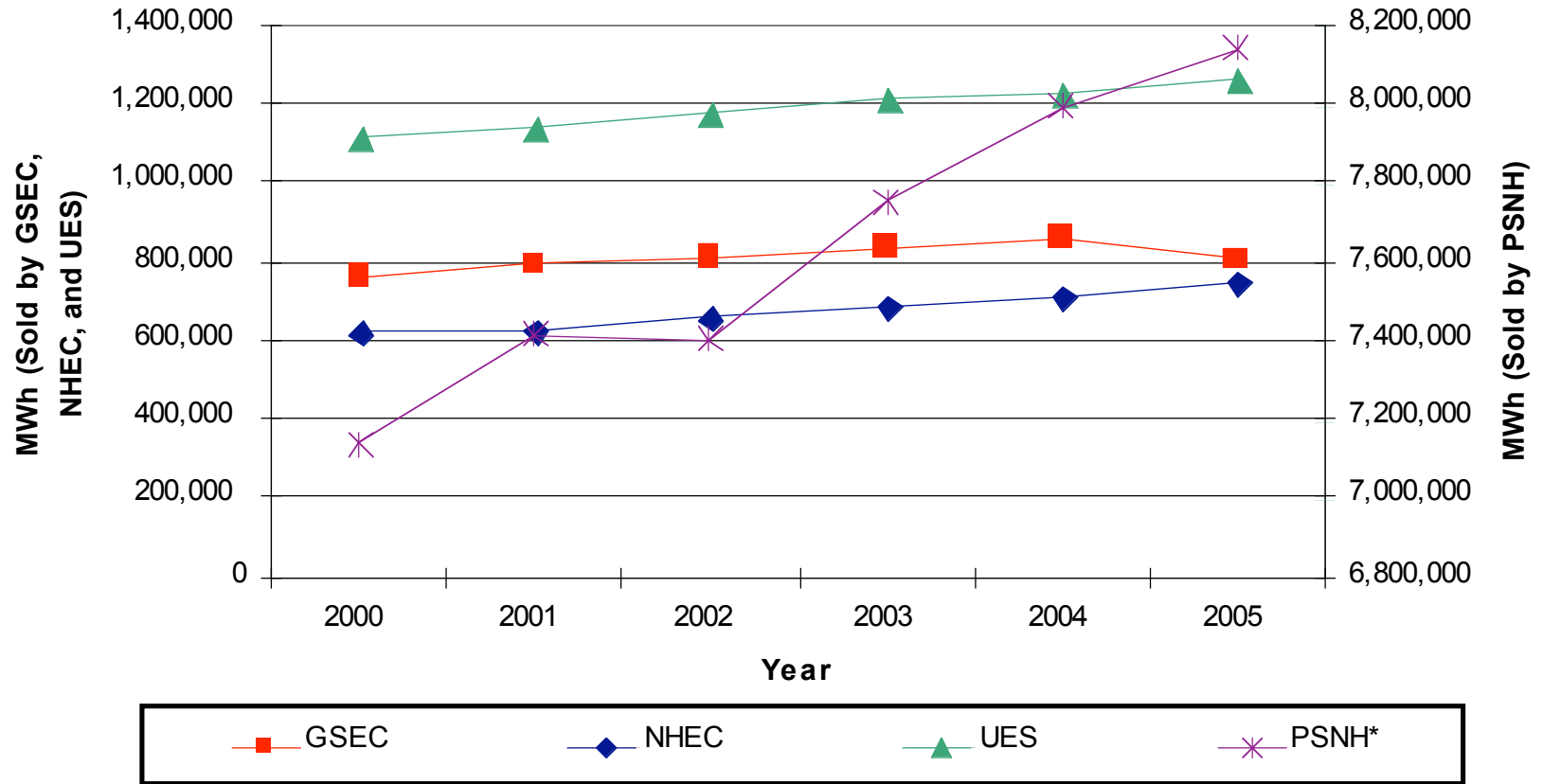
Total Revenues, MWhs Sold to Retail Customers and Total Customers in NH by Franchise Distribution Area, 2005						
	Operating Revenues	MWH Sold	Ave. # of customers	Peak Load (MW)	Date	Hour
PSNH	\$1,070,098,103	8,140,352	480,522	1,697	7/27/2005	2:00 PM
UES	\$133,957,657	1,259,553	74,194	290	7/27/2005	4:00 PM
NGrid	\$43,850,996	804,074	40,388	192	7/19/2005	2:00 PM
NHEC	\$102,431,880	747,260	76,121	170	12/31/2005	6:00 PM
NH Total	\$1,350,338,636	10,951,239	671,225			

Source: FERC Form 1 Annual Reports, 2005

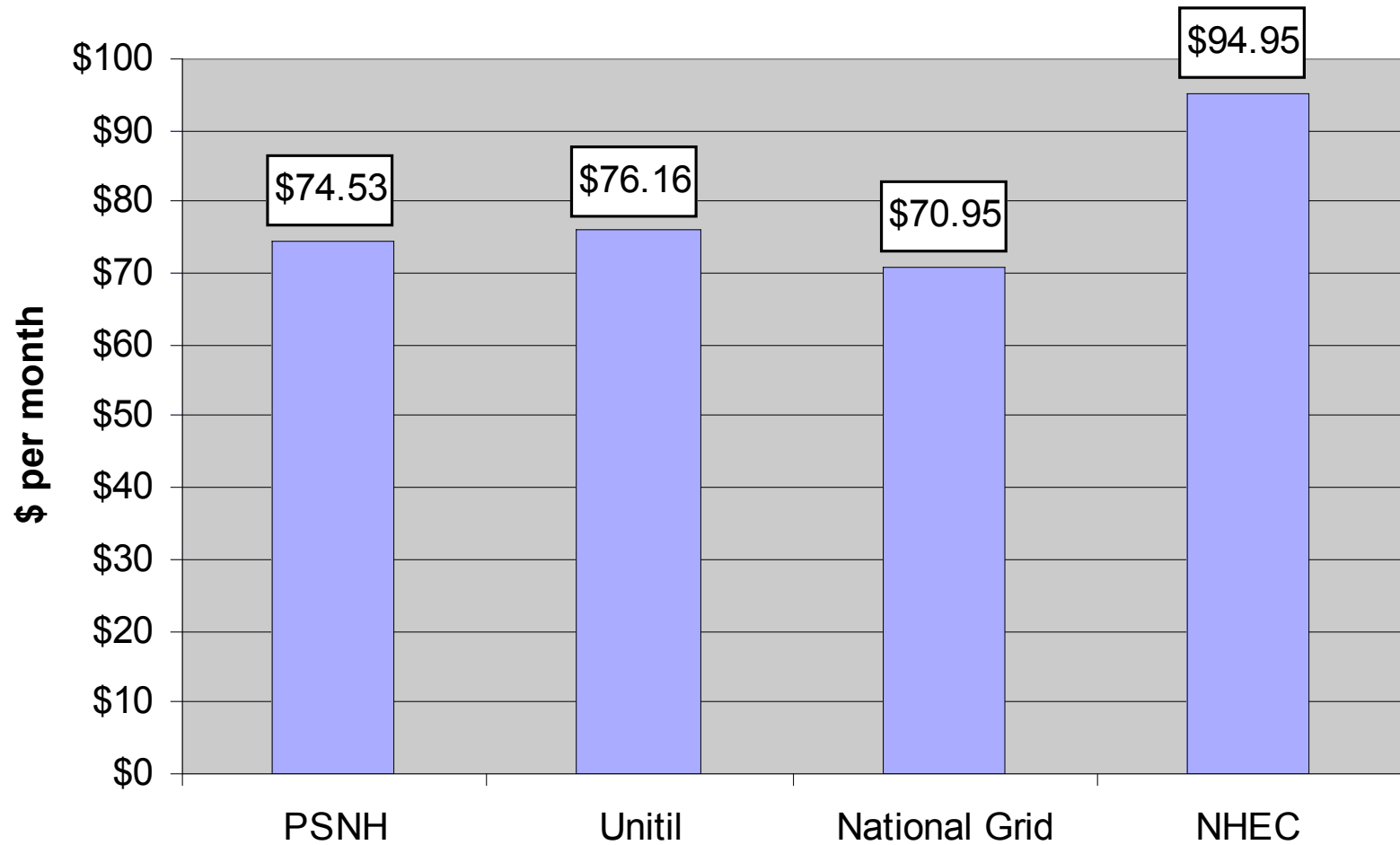
Percent of NH Total by Distribution Company, 2005			
	Operating Revenues	MWH Sold	Ave. # of customers
PSNH	79%	74%	72%
UES	10%	12%	11%
NGrid	3%	7%	6%
NHEC	8%	7%	11%
NH Total	100%	100%	100%

Total MWh Sold to Retail Customers in New Hampshire

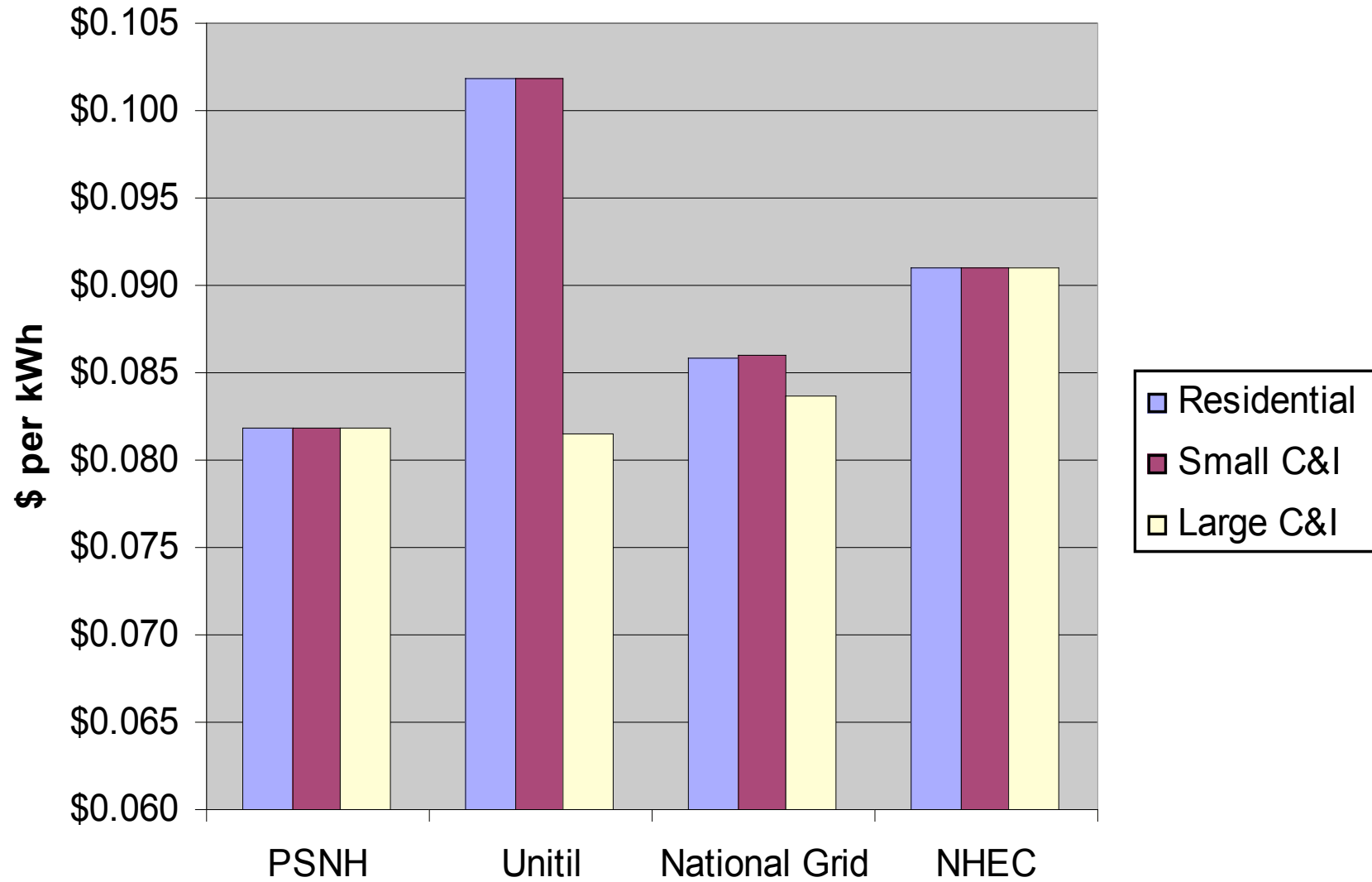
* As of January 1, 2004, PSNH acquired CVEC and, as a result, the MWhs sold in CVEC's former franchise area included in PSNH's figures for 2004 and 2005. For 2004, CVEC load equals 155,263 MWhs.



NH Residential Customer Monthly Bill Comparison, October 2006 (500 kWh Usage)



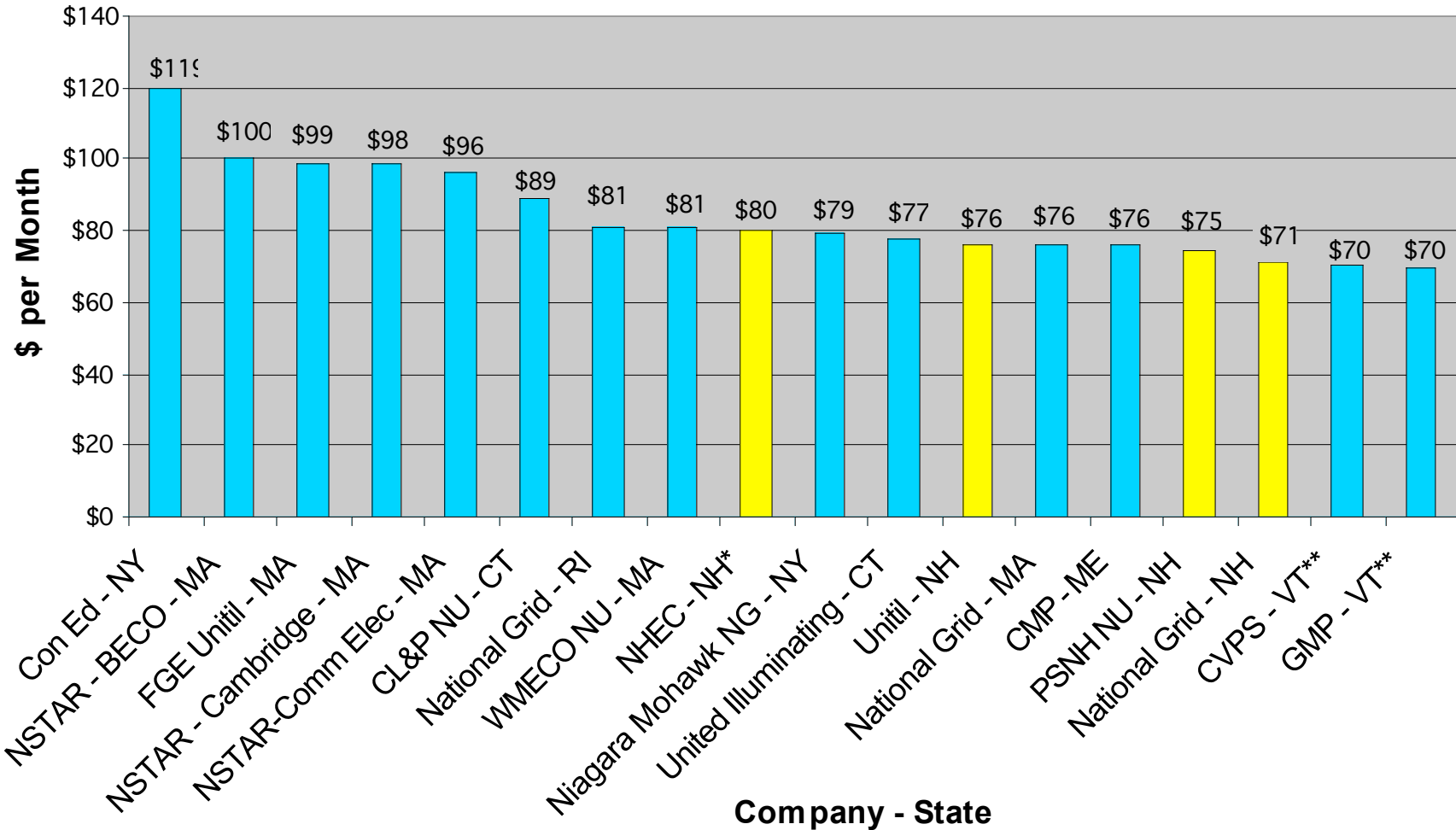
Default Service Rates, October 2006



PSNH Default Service Rates from May 2001 to Dec. 2006

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

Illustrative Monthly Residential Electric Bill Comparison as of July 1, 2006 For 500 kWh per Month, Rounded to Nearest Whole Dollar



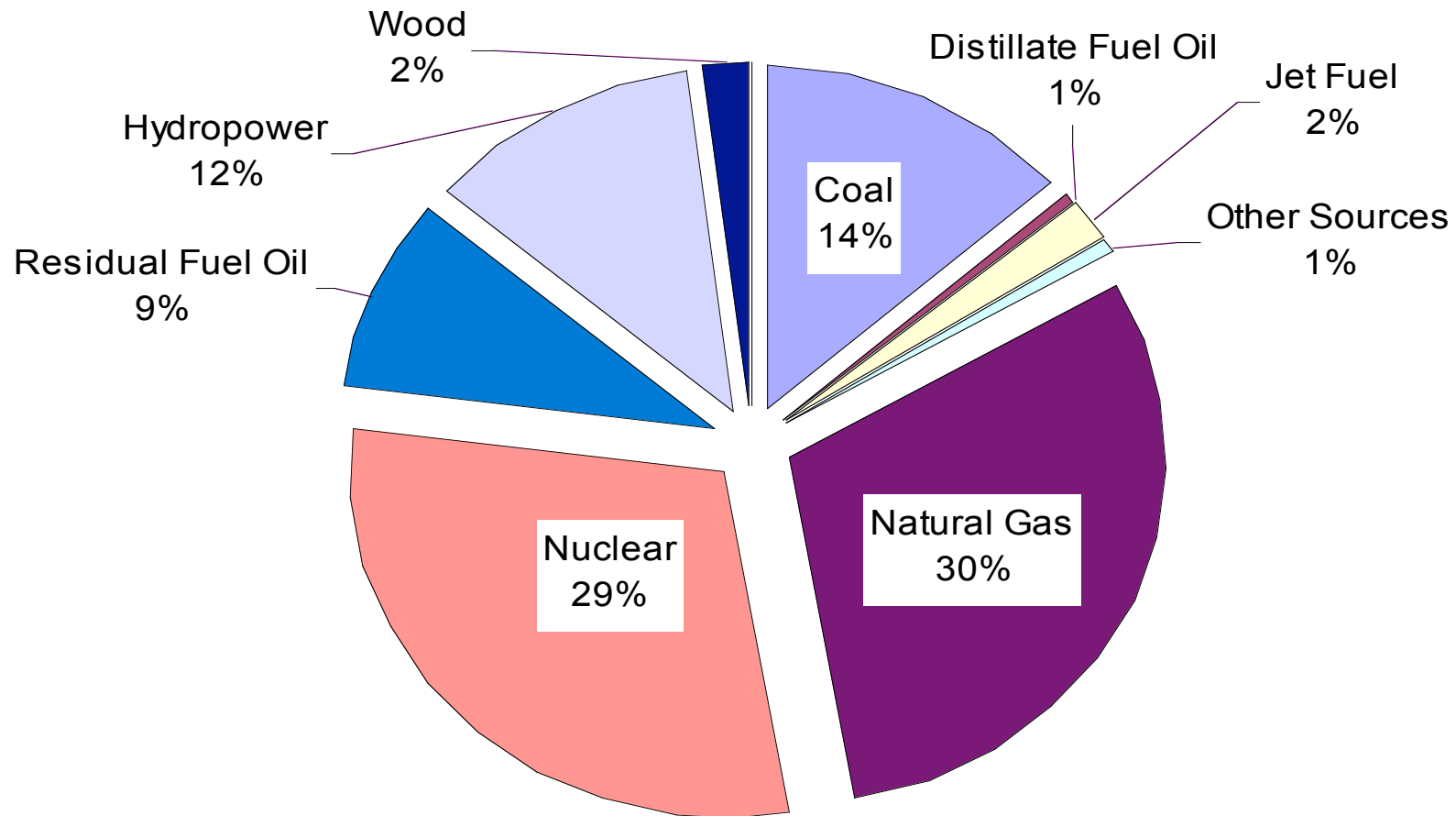
*NHEC's rates are seasonal. Their winter rate equivalent would be \$73 for 500 kWh.

**CVPS has a 6% rate increase pending and Green Mountain Power has a 12% increase pending.

NHPUC, 8/01/06

Electric Generation Resources in NH as a Percent of Total, 2006

Other Sources includes Land Fill Gas, Municipal Solid Waste and Biomass Waste
Capacity is approximately 4,270 MWs
Source: ISO-NEELT Report, 2006



Electricity Generation Capacity within New Hampshire 2006

Resource	Station	Operation	Nameplate Capacity (MW)	% of Total Capacity
Nuclear	Seabrook	Base Load	1260.0	29.53
Coal	Merrimack	Base Load	434.0	10.17
	Schiller	Base Load	146.2	3.43
	Total Coal		580.2	13.60
Oil/Gas	Newington**	Intermediate	430.0	10.08
Gas	AES Granite Ridge	Base Load	782.2	18.33
	Newington Energy	Base Load	522.0	12.23
	Total Gas		1304.2	30.56
Internal	Merrimack	Peak Load	43.0	1.01
Combustion	Schiller	Peak Load	18.0	0.42
	Lost Nation	Peak Load	18.0	0.42
	White Lake	Peak Load	22.4	0.52
	Total Int. Comb.		101.4	2.38
Hydro	Amoskeag	Base Load	17.5	0.41
	Ayers Island	Base Load	9.1	0.21
	Canaan	Base Load	1.1	0.03
	Comerford	Base Load	162.3	3.80
	Eastman Falls	Base Load	6.5	0.15
	Garvins	Base Load	14.0	0.33
	Gorham	Base Load	2.1	0.05
	Jackman	Base Load	3.5	0.08
	McIndoes	Base Load	10.6	0.25
	Moore	Base Load	190.7	4.47
	Smith	Base Load	14.2	0.33
	Total Hydro		431.5	10.11
	Methane	Rochester Landfill	Base Load	4.9
Electricity Generation Capacity in NH by Qualifying Facilities				
Hydro		Base Load	54.4	1.27
Methane/REF		Base Load	33.5	0.79
Wood		Base Load	66.9	1.57
Total QF Gen. Capacity			154.8	3.63
Total Gen. Capacity in New Hampshire			4267.0	100.00

Restructuring in NH

A Long and Tortured History

- Spurred by high electric rates in NH and general move toward retail choice
 - RSA 374-F “NH has highest average electric rates in nation” “electric rates for most citizens may further increase during ... PSNH rate agreement” “extraordinarily high electric rates disadvantage all classes of customers ...are significant impediment to economic growth and new job creation in state.”
 - “...introduction of retail customer choice...market forces can ...play the principle role in organizing electricity supply for all customers instead of monopoly regulation.” “The most compelling reason to restructure ... is to reduce costs for all customers by harnessing the power of competitive markets.”
- February 28, 1997 NHPUC issues restructuring orders
- Which led to – lots of lawsuits and, finally, settlements
- Everyone divested or was supposed to
 - NGrid (Granite State Electric Company)
 - Unitil
 - CVEC
 - PSNH

The Unique Case of PSNH or What happened on the way to Divestiture

- Seabrook is sold, Fossil/Hydro is not
 - FP&L acquires 88.2% for ~\$800 million (Nov. 2002)
 - Divestiture of F/H is supposed to follow but does not occur due to passage of SB 170 (see RSA 369-B:3a)
 - “not before February 1, 2004” becomes “not before April 30, 2006” only if “it is in the public interest of retail customers of PSNH to do so, and [PUC] provides for cost recovery ...”
 - Key policy issue has been and continues to be, “Should PSNH divest or retain its generating assets?”
 - The debate last year over who should build a wood-fired generator in the north country

The Energy Facility Site Evaluation Committee - One Stop Siting

- Statutory Authority – R.S.A. 162-H
- SEC composed of 14 senior state officials from 7 state agencies
- Committee has jurisdiction under R.S.A. 162-H:4 over “bulk power facilities” and “energy facilities”
- Jurisdiction limited and complicated by the distinction between “energy facility” and “bulk power facility” and deregulation
- SEC jurisdiction over electric generators designed for or capable of generating 30MW or more; minimum size for “bulk power facilities” can be waived.

“Energy Facility” Definition

- “any industrial structure, other than bulk power supply facilities, ..., that may be used substantially to extract, produce, manufacture, transport, or refine sources of energy, including ancillary facilities as may be used or useful in transporting, storing, or otherwise providing for the raw materials or products of any such industrial structure. This shall include ...oil refineries, gas plants, equipment and associated facilities designed to use any, or combination of, natural gas, propane gas, and LNG, which store on site a quantity to provide 7 days or continuous operation at a rate equivalent to the energy requirements of a 30 megawatt electric generating station ... shall also include energy transmission pipelines, storage tanks, or any other facility which the applicant or 2 or more petition categories ... request and the committee agrees or determines requires a certificate consistent with ... RSA 162-H:1. Energy facility shall include electric generating station equipment and associated facilities only if they are designed for, or capable of, operation at a capacity of greater than 30 megawatts.”

“Bulk Power” Definition

- “Electric generating station equipment and associated facilities designed for, or capable of, operation at any capacity of 30 megawatts or more, or electric generating equipment ... which the applicant or 2 or more petition categories as defined in RSA 162-H:2,XI request and the committee agrees ... consistent with the findings and purposes set forth in RSA 162-H:1.”
- RSA 162-H:5,IV refined the definitions for the move to a deregulated electricity market.

Lempster Wind Project

- Currently before the SEC
- Complicated SEC jurisdictional history
- 24 MW \$40 million proposed project in Lempster, NH – would be NH's first major wind project
- Lempster is a small, rural town of 1,000 with no zoning
- Developer – Community Energy, Inc.
- 12 turbines (2-MW each)
- Timeframe for decision important to qualify for federal tax credits that expire end of 2007
- SEC can take up to nine months for review

Regional Greenhouse Gas Initiative (RGGI) Efforts in NH

- 2-Phase CO₂ Caps
 - 1) stabilization 2009 – 2014 (no absolute reductions)
 - **Phase I Regional Cap = 121,253,550 tons**
 - **Phase I NH Cap = 8,620,460 tons**
 - 2) 10% reduction 2015 - 2018
 - **(2.5% per year for 4 years)**
- Built-in Review of Program in 2012
- Compliance Options
 - Reduce Emissions through Energy efficiency, Fuel switching, Changes in dispatch and Emerging control technologies (i.e., GreenFuel *Emissions-to-Biofuels* system and CO₂ capture & underground injection)
 - Buy allowances or offsets
 - Banking and Early reduction Credits
- HB 1531 study bill was voted ITL.
- NH Stakeholder meeting in October to develop NH specific allocation scenarios and next meeting will discuss economic impact of RGGI.
- Legislation to be proposed in the 2008 legislation session.

Renewable Portfolio Standards (RPS) Efforts in NH (cont.)

- Utilizes NEPOOL GIS
- NHPUC responsibilities
 - Establish procedures to track off-grid, behind the meter and customer-sited sources
 - Designate NH eligible renewable sources
- Certificate Banking limited to 30 percent of previous 2 year vintage certificates.
- House informal request to NHDES to work with NHPUC and third parties to assess fiscal impact.

HB 1673 - Mercury Reductions Bill

- Requires PSNH to reduce mercury by at least 80 percent by July 1, 2013.
- Only allows on-site reductions, requiring PSNH to install wet scrubber technology to reduce mercury and sulfur oxides that will be tested to achieve early reductions of mercury prior to July 1, 2013.
- PSNH can also reduce mercury via activated carbon injection and the current DOE program (sorbent injection and coal blending).
- Cost of the Project and Cost Recovery
 - PSNH capital investment of up to \$250 million (2013 dollars).
 - Next year, PSNH will have to buy upwards of \$20 million in sulfur dioxide allowances.
 - Prudently incurred costs of this project are passed onto PSNH ratepayers.
- Early reduction credits: 1.5 credits per pound of mercury reduced by July 1, 2008; 1.25 credits per pound of mercury between July 1, 2008 and December 31, 2010; and 1.1 credits per pound for reductions between January 1, 2011 and July 1, 2013.
- For each pound of mercury reduction achieved, PSNH will receive 55 sulfur dioxide allowances that can be used to offset the cost of complying with the NH Clean Power Act's limit of 7,289 tons of sulfur dioxide emissions per year.

Key Points About NH Resource Adequacy and Generation Siting

- **Plentiful Supply in NH Compared to NH Load**
 - Adequate Baseload Supply, Need for Intermediate and Peaking in Future
- **Diverse Resource Mix**
- **Strong Load Growth, Historically, but**
 - declining load factor
 - sales weak in 2006
- **Significant New T&D Construction**
- **Restructuring Policy Continues to Evolve**
 - PSNH ownership of generation a major issue
 - role of IRP? Long-term Purchased Power Contracts?
- **One Stop Siting through Site Evaluation Committee**
- **New Environmental Laws and Initiatives**
 - NH Clean Power Act (HB 284) passed in 2002 – compliance Dec. 31, 2006
 - Hg (HB1673) legislation passed in 2006
 - NH is signatory to RGGI MOU
- **Increased Interest in Renewable Power**
 - PSNH converts Schiller 5 (50MW coal/oil) to wood
 - Gov. Lynch issues goal of “25 in 2025”
 - RPS bill killed last legislative session, but new legislation expected this year
 - Lempster Wind project now before SEC
 - Small wood-fired QF rate orders end in 2006/2007
 - A new wood-fired plant in the north country? Or wind?
- **Rates are still the Key Issue**