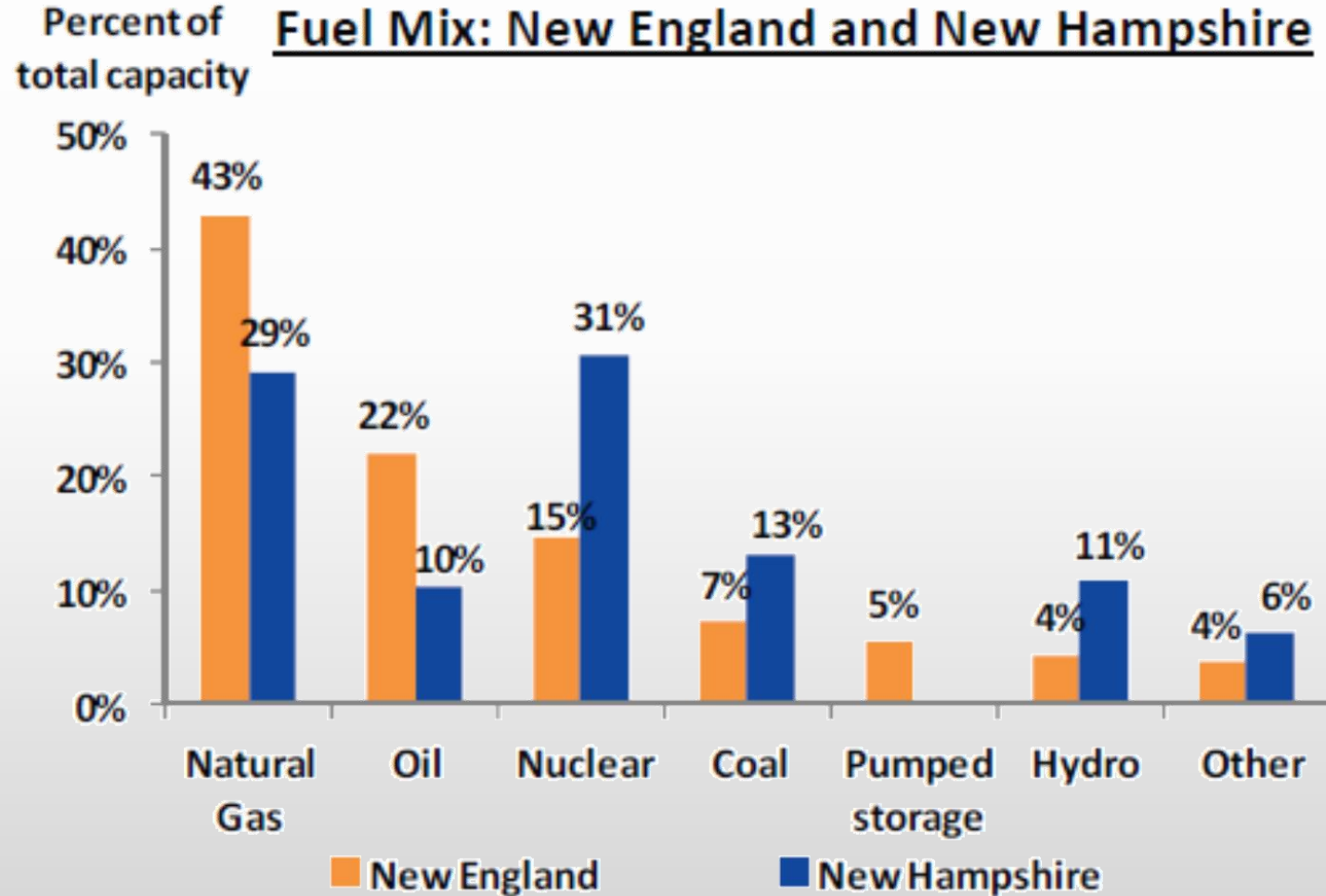


The New Hampshire [Clean] Energy Landscape



Great Bay Discovery Center | June 9, 2016

NH's Electric Profile



NH's Thermal & Transportation Profile

- *“Petroleum products dominate New Hampshire's energy consumption, and the state's residential consumption per capita is among the highest in the nation, in part because of heavy dependence on heating oil during the frigid winters.”*
 - **1 in 12 households depend on wood as primary heating source.**
- Transportation sector relies 97% on petroleum.
 - Limited passenger rail, extensions under consideration
- **NH is 2nd only to Maine in percentage of forested land. (EIA)**

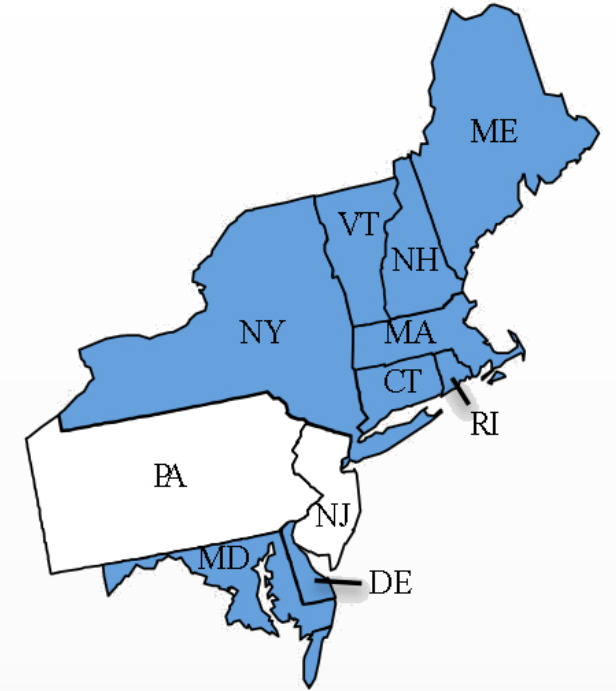


Energy Efficiency—RGGI + CORE

- The Regional Greenhouse Gas Initiative (RGGI) is a market-based regulatory program started in 2008 to reduce CO₂ emissions from the power sector.
- NH only uses first \$1 (out of ~\$5/ton CO₂) of auction proceeds on energy efficiency. Special efficiency carve-out program for municipalities. (available to ALL 234 NH munis)

+

- NH's Utilities' CORE EE programs: www.nhsaves.com
 - Available through your local gas and/or electric utility



By the Numbers: Programs Funded By Cumulative RGGI Investments



Participating Households
To date: 3.7 million



Energy Bill Savings
To date: \$395 million
Lifetime: \$2.9 billion



Short Tons CO₂ Avoided
To date: 1.3 million
Lifetime: 10.3 million



Participating Businesses
To date: 17,800



Megawatt Hours Saved
To date: 1.8 million
Lifetime: 11.5 million



Equiv. Cars off Road
To date: 245,000
Lifetime: 1.9 million



Workers Trained
To date: 3,700



mmBTU Saved
To date: 2.9 million
Lifetime: 48.7 million

Energy Efficiency Resource Standard

- Open docket at PUC on establishing an Energy Efficiency Resource Standard for NH.
 - Current EE programs are limited to \$20M of funding per year, run by the utilities.
- Proposed EERS for NH would increase savings from 0.5% per year to 1.3% per year in 2020. Increase savings thereafter toward all cost-effective efficiency



Renewables—RPS & REF

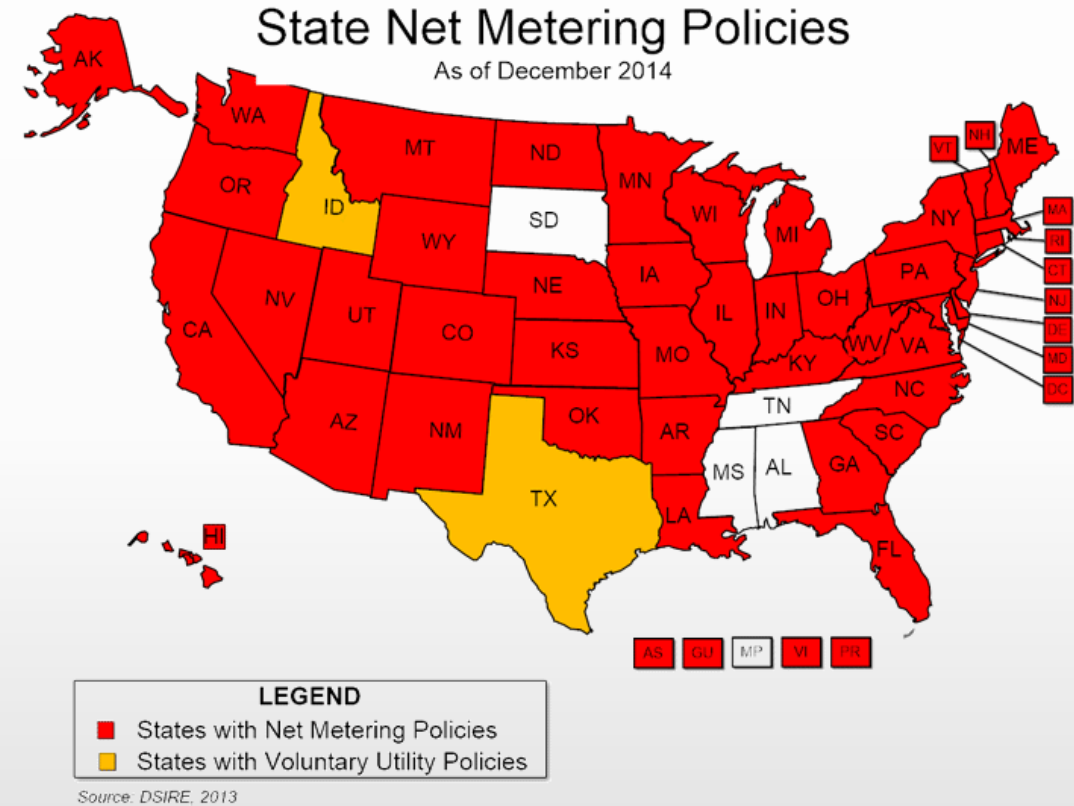
- Initially ('08) the NH RPS required 4% renewable energy. The requirement increases each year until it reaches 25% in 2025
- Four classes of RPS Resources:
 - New (wind, etc.), **THERMAL**
 - Solar Electric,
 - Existing Biomass,
 - Existing Small Hydro



- **REF (Renewable Energy Fund)** comes from the RPS and funds the rebate and grant programs managed at the PUC
- **RECs** are monetized, tradable attributes for renewable power.

Renewables—Net Metering

- NEM was first passed in NH in 1998 & expanded in 2009.
 - Group/virtual NEM was passed in 2013.
- **Statewide cap is now 100 MW ([HB1116](#))**
- Retail versus default energy reimbursement system based on size.
- Ongoing policy discussion at PUC to make changes post-100 MW cap ([DE 16-576](#))



Energy Siting, Permitting, etc: Large and Small

- The [Site Evaluation Committee](#) has jurisdiction over projects larger than 30 megawatts (some smaller projects in limited cases).
- Municipalities have significant control over small-medium siting.
 - Zoning ordinances ([OEP Guide](#))
 - Taxation (e.g. [RSA 72:61](#))
 - Local Permitting



Transportation

- Granite State Clean Cities:
<http://www.granitestatecleancities.nh.gov/>
- Smart Traffic technologies (rotaries, smart traffic lights, bike friendly roads, anti-idling initiatives etc.)
- Alternative Fuel Vehicles & Infrastructure
 - Electric Vehicles
 - Trains

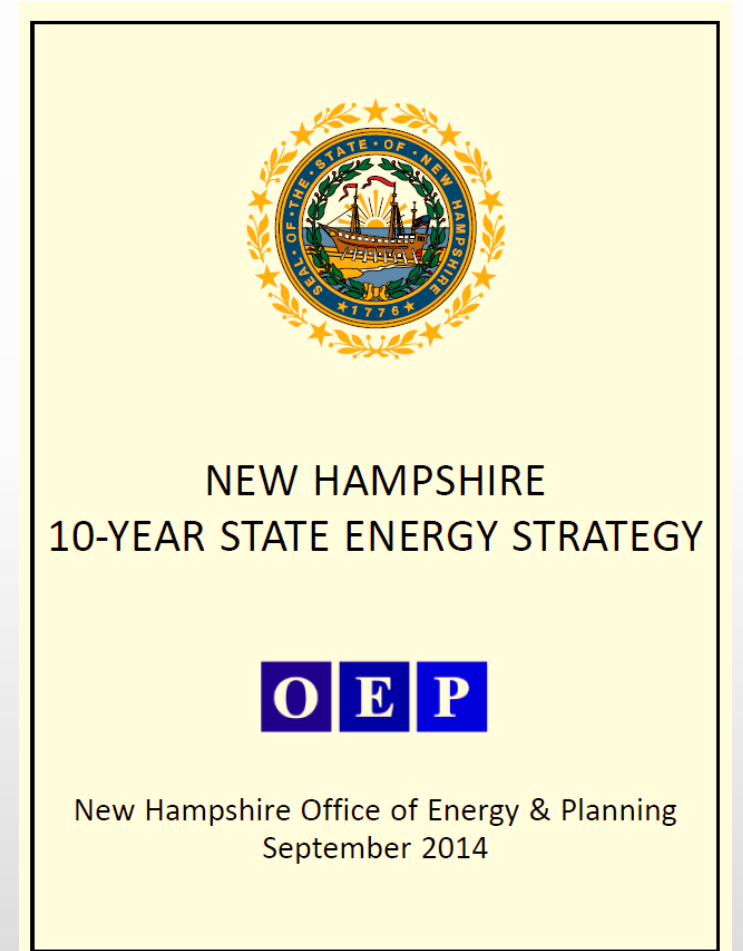


Unhealthy air pollution obstructs this view of Mt. Washington



State Energy Strategy

- The State Energy Strategy is a 10-year plan developed by the Office of Energy and Planning and the Energy Advisory Council in 2014. Read it [HERE](https://www.nh.gov/oep/energy/programs/SB191.htm):
(<https://www.nh.gov/oep/energy/programs/SB191.htm>)
- The intent is to provide forward-looking guidance on our electric, gas and thermal, and transportation energy strategy to improve:
 - Energy reliability
 - Affordability,
 - Promote energy efficiency and renewables,
 - Consider positive and negative economic & environmental impacts.



Resources & Incentive \$\$\$

- ✓ *NH Public Utilities Commission*
(<https://www.puc.nh.gov/Sustainable%20Energy/SustainableEnergy.htm>)
- ✓ *Community Development Finance Authority* (<http://www.nhcdfa.org/energy/>)
- ✓ *Utility-funded programs* (www.nhsaves.com)
- ✓ *USDA REAP Grants* (<http://www.rd.usda.gov/programs-services/rural-energy-america-program-renewable-energy-systems-energy-efficiency>)
- ✓ *NH Thermal-REC Enterprise Fund* (<http://www.t-recsfund.org/>)
- ✓ *NH Wood Energy Council* (<http://www.nhwoodenergycouncil.org/>)
- ✓ *New England Grassroots Environment Fund* (<https://grassrootsfund.org/>)
- ✓ *EPA Cash Flow Opportunity Calculator*
(https://www.energystar.gov/ia/business/downloads/A_Look_Inside_the_Cash_Flow_Opportunity_Calculator_FINAL.pdf?61b9-4fca)

Questions?

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