

Northeast Biomass Thermal Vision: *Accomplishments and Strategies*

2nd Annual Heating the Midwest

April 25th, 2013

Carlton, Minnesota

Adam Sherman

Biomass Energy Resource Center at VEIC

Biomass Energy Resource Center (BERC)

Advancing Community-scale Biomass Energy in North America



Technical Consulting

- Project feasibility studies
- Fuel supply assessments and procurement
- Third-party expert review
- Develop and review of standards
- Whitepapers



Program Design & Implementation

- Expansion potential assessments
- Roadmaps
- Program management
- Training, and advisory support services



Advocacy

- Showcasing “best practices” and case studies of successful projects
- Maintaining database

BERC is a program of the Vermont Energy Investment Corporation

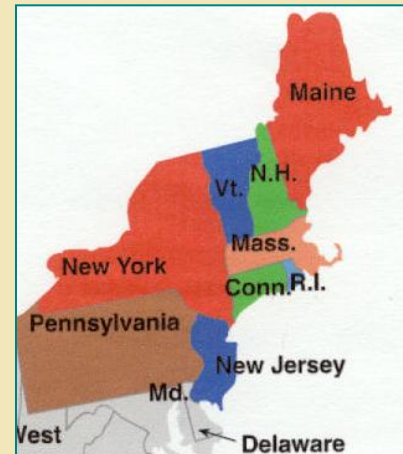
A mission-driven non-for-profit whose mission is to reduce the economic and environmental impacts of energy production and consumption

Northeast Biomass Thermal Working Group (NEBTWG)

- ❑ Informal network of biomass heating advocates across New England, New York, Pennsylvania and Maryland started in 2008.
- ❑ Its purpose is to identify and implement strategies to accelerate growth and adoption of biomass heating in the northeastern U.S.
- ❑ All volunteer steering committee; small admin support contract with TTC (BTEC)
- ❑ NEBTWG is not a membership organization; regional cooperator with BTEC
- ❑ 5th Annual Heat the Northeast Conference

Northeast

BIOMASS THERMAL WORKING GROUP



Heating Oil Use in the Northeastern US

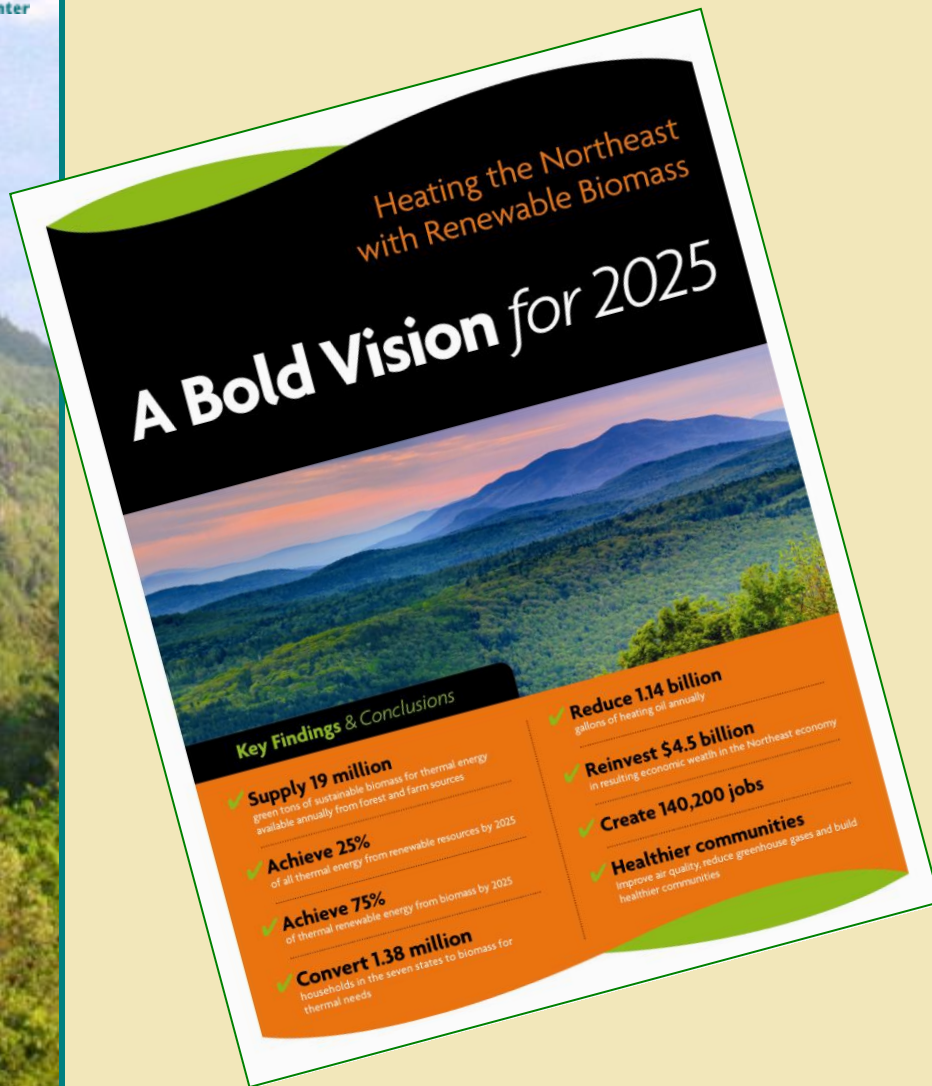
	Annual Gallons of Heating Oil ¹	Population ²	Gallons Oil/ Capita
Connecticut	562,944,000	3,500,000	160
Maine	358,142,000	1,300,000	275
Massachusetts	612,397,000	6,646,000	92
New Hampshire	278,342,000	1,320,000	210
New York	1,612,532,000	19,570,000	82
Pennsylvania	651,820,000	12,763,000	51
Rhode Island	161,455,000	1,050,000	153
Vermont	186,640,000	626,000	298
Total/Average	4,424,272,000	46,775,000	165

= 86% of US heating oil demand!

¹ Source: US EIA 2011

² Source: 2010 US Census Bureau

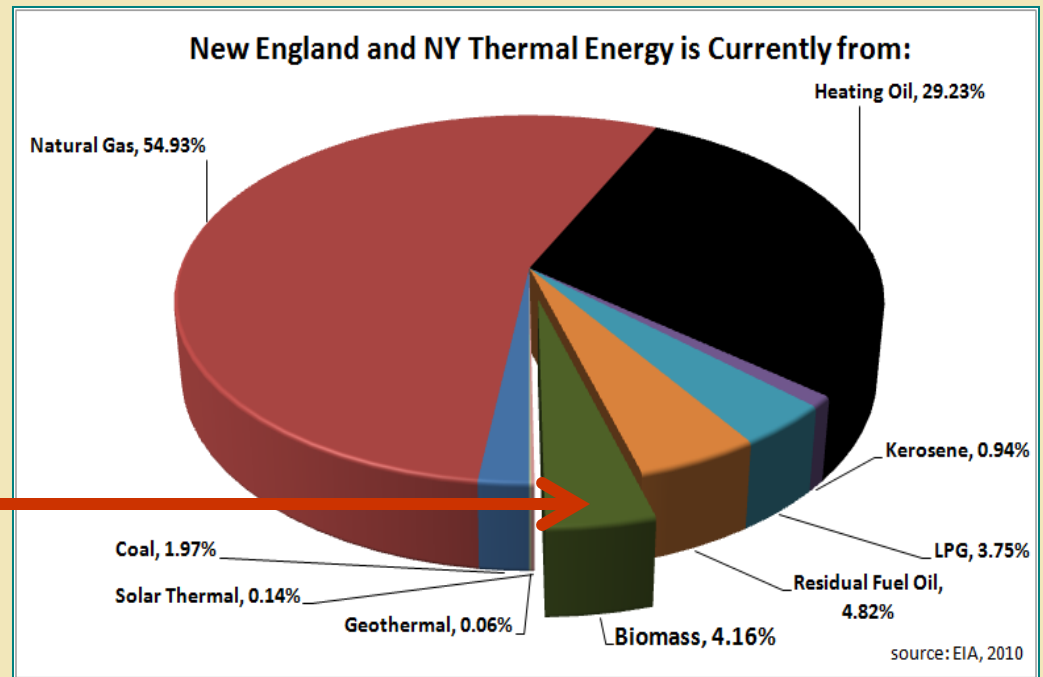
The Vision



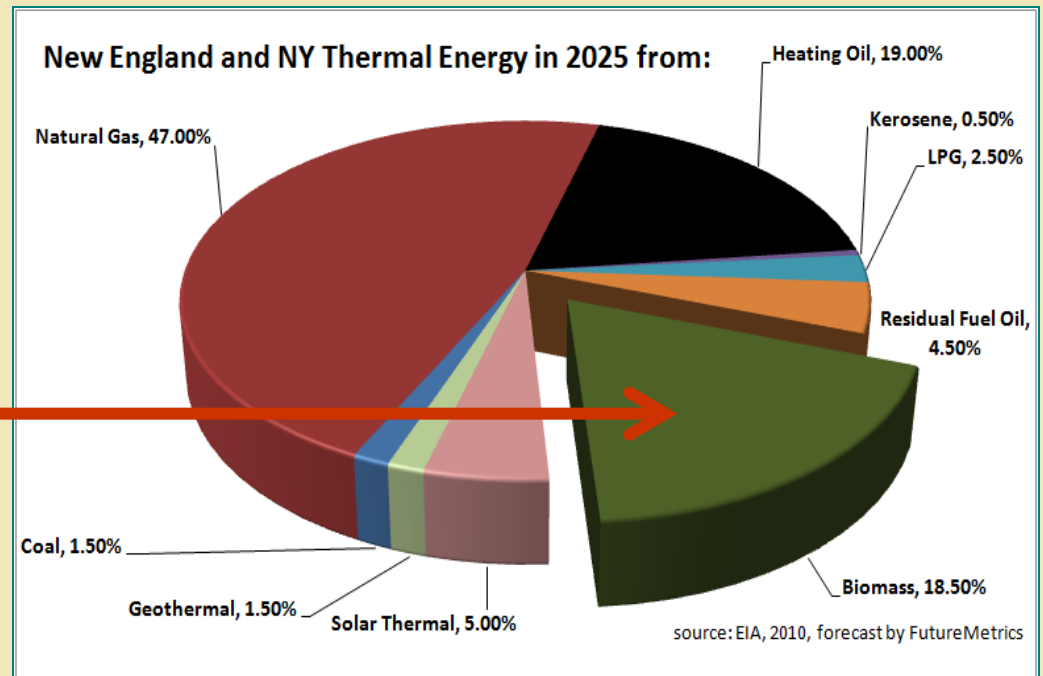
- ❑ An American Revolution in thermal renewable energy, to start in the Northeast
- ❑ 25% of all thermal energy in Northeast from renewable energy by 2025
- ❑ 75% of renewable thermal energy from sustainably-sourced forest and agricultural biomass by 2025 (balance from solar thermal and geothermal)

The Vision

2010
Biomass = 4.16%
of thermal energy



2025
Biomass = 18.50%
of thermal energy



Programmatic Strategies

1. Recognition Programs

Recognize and promote “best practices” and “best in class” projects

2. Subsidy Programs

Subsidize biomass thermal with rebates & tax incentives on capital costs and on-going payments through thermal RECs






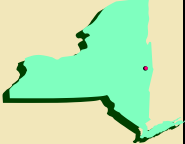

3. Investment Programs

Programs that make new forms of financing available to cover the first-costs of biomass systems

4. Requirement Programs

Regulatory and voluntary industry standards for fuel quality, heat meters, boiler efficiency and safety, building codes.

Biomass Thermal Policy Update for Northeast

State	Policy Activities
Connecticut 	Thermal RPS legislation introduced recently; including biomass
Maine 	\$11Milion ARRA for 22 demonstration projects, possible thermal addition to the Maine RPS
Maryland 	Wood appliance rebate program
Massachusetts 	Just released \$3 million for aggressive rebate for residential pellet boilers, DOER studying adding thermal to APS
New Hampshire 	Aggressive pellet boiler rebate, boiler regulations allow non-ASME, thermal addition to RPS in 2013, passed legislation making thermal utilities exempt from PUC oversight
New York 	NYSERDA Biomass Thermal Road Map, RGGI funds for demonstration projects
Vermont 	Fuels for Schools, Efficiency Vermont \$1,000 pellet boiler rebate, regulations allowing non-ASME biomass boilers, push toward comprehensive energy standards, new state buildings heated with biomass

Other Indicators of Progress is Being Made in the Northeast

- More projects
- Increased woodchip availability – commodity production of “bole” chips
- Development of regional woodchip fuel quality specifications
- Increased availability of pellets in bulk
- Advancements in bulk pellet delivery, storage, and automated feeding
- Advancements in combustion technology
- More sophisticated approach to proper boiler sizing
- Advancements in boiler integration with thermal storage, solar hot water, etc.
- Advancements in PM emissions control technologies
- Progress toward broad spread biomass district energy
- More packaged solutions (equipment lease/financing, heat sales, etc.)

Parting Comments

- Need unified voice as an industry regionally and nationally
- Work to develop pro biomass thermal policies and develop clear and consistent standards at state and national level
- Get involved with HTMW and join BTEC
- Many similarities between Northeast and Midwest
- Help transition biomass thermal to achieve “new normal” recognition – not a “primitive” technology and not a “fringe” concept

Contact Information

Adam Sherman
Biomass Energy Resource Center at VEIC
128 Lakeside Ave. Suite 401
Burlington, VT 05401
[\(802\) 540-7863](tel:(802)540-7863)
asherman@biomasscenter.org
www.biomasscenter.org

And NEBTWG
<http://www.nebioheat.org/>

New Pneumatic Bulk Pellet Delivery

Newton Pellets



Vermont Renewable Fuels



Maine Energy Systems



Sandri Energy

