



The Maine State Legislature
Utilities and Technology Committee
100 State House Station
Augusta, ME 04333

Regarding: LD 1212, SP 501 Resolve, to Study Opportunities for the Efficiency Maine Trust to Support the Promotion and Use of Modern Wood Heating

To the Committee:

Wood pellets and wood chips are positively the lowest cost heating fuels available in Maine by a significant margin, including heat pumps, and their cost stability cannot be matched by either electricity or any fossil fuel.

Maine school districts, company management and municipalities need these advantages. The state forestry industry also needs many more users of the abundant low grade wood that is available in Maine's huge tracts of forest.

When a heating fuel originates Maine, then most of the money spent on it stays in Maine. And the **ONLY** heating fuels that originate in Maine are wood chips and wood pellets!!

Wood fuels support a wide range of jobs in Maine from loggers and foresters to truck drivers and service technicians. The only aspect of their work that does not originate in Maine is the diesel fuel and gasoline that they use to cut down, process and deliver wood fuels.

With Oil, LP and Electricity, just 20% or less of the money spent on them stays in the state—with the remaining 80% or more going to Canada, Pennsylvania or somewhere else far away from Maine.

Wood fuels are very good for Maine's economy!

Maine Thermal RECs add another significant financial advantage that should be taken advantage of by school districts, manufacturers and other big building owners. Maine Thermal RECs are generated by using wood fuels or other sustainable sources for heat. Once verified, they can be sold to bring in income—further reducing heating costs. Power companies operating in Maine are required to purchase Thermal RECs each year, so users of approved wood boiler systems can generate income year after year as a result of consuming wood fuels for heat. This gives a big benefit to large fuel users such as schools,

hospitals and nursing homes. See the chart below that compares the cost per million BTU of delivered heat of various fuels.

Trees are Maine’s number one agricultural product. Why aren’t more people in Maine using Maine sourced wood pellets and chips to heat their buildings? Why isn’t the State of Maine touting the use of these locally sourced fuels?

Froling Energy recommends that Efficiency Maine be tasked to better support the state’s forest-related industries by creating a new campaign to promote the broad use of the state’s awesome wood resources for heating the state’s buildings. This campaign should encourage the wide adoption and deployment of high quality wood-fueled boilers to offset the use of fossil fuels in as many buildings as possible.

Net Cost of Delivered Heat... \$ per MMBTU

With Maine Thermal RECs!!
at \$16 net income

	Propane at \$2.75/gal = \$35.95
	Heat Pump at \$.29/kwh = \$28.41 @3 COP
	Oil at \$3.00/gal = \$27.02
	Propane at \$2.00/gal = 26.14
	Oil at \$2.50/gal = \$22.52
	Propane at \$1.50/gal = \$19.61
	Heat Pump at \$.20/kwh = \$19.59 @3 COP
	Oil at \$2.00/gal = \$18.02
PELLETS	...Wood Pellets at \$295/ton = \$14.87
	Oil at \$1.50/gal = \$13.59
Dry Chips	Propane at \$1.00/gal = \$13.07
	...Dry Chips at \$160/ton = \$10.13
GREEN CHIPS	Oil at \$1.00/gal = \$9.06
	...Green Chips at \$75/ton = \$4.37

Calculations use HHV energy content of Hardwood burned at 84% efficiency, Oil at 80% and Propane at 85% efficiency



Froling Energy is a mechanical contractor based in Keene, NH that, for the last 15 years has been focused on the design, installation and maintenance of biomass boilers that are offsetting the use of heating oil with wood pellets and wood chips. Our company employs

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20 people including licensed plumbers, mechanics, welders, pipe fitters, truck drivers, office staff and managers.

During most of that time, we were outside observers of Maine as we were busy doing biomass boiler installations in New Hampshire, Vermont and Massachusetts. Ten years ago we observed that a good number of wood chip and pellet boilers were being installed in schools, businesses and homes, spurred on by incentives provided by Efficiency Maine, with support from the Maine Forest Service. Unfortunately, we understand that momentum has slowed to a crawl in recent years.

In 2024 Froling Energy made our first commercial biomass boiler system installation in Maine, to heat the new High School in Skowhegan. It is a large, state of the art boiler that has very low particulate emissions with very high thermal efficiency. This new boiler will be providing around 90% of the new school's heat using locally sourced wood pellets. This is a big win for the school district and local taxpayers, lowering operational costs and adding long term price stability for heating the new school building.

The technology of wood-fired boilers has made many advances since those first boilers were installed in Maine a decade and more ago. Today's boilers are self-cleaning which has made them more efficient and has significantly reduced the amount of labor that is required for maintenance. Remote Monitoring and Management capabilities have made the boilers much easier to observe and control. Froling Energy only installs biomass boilers that have been tested to be highly efficient and meet all of each state's particulate emission regulations

Thank you for accepting this testimony for your consideration.

Sincerely,



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President

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See my letter submitted here as a file.