

# Integrated Energy Systems, PLLC

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Committee on Energy, Utilities and Technology  
Cross Building Room 208  
100 State House Station  
Augusta, ME 04333

Testimony of Integrated Energy Systems in Favor of LD 1212 “Resolve, to Study Opportunities for the Efficiency Maine Trust to Support the Promotion and Use of Modern Wood Heating”

Dear Committee Members:

My name is Richard Grondin. I am president of the mechanical engineering firm Integrated Energy Systems. I have been designing heating and air conditioning systems for schools and commercial buildings for 35 years. These systems have included fossil fuels, air source heat pumps, air-to-water heat pumps, geothermal, solar, wood chips and wood pellets. Over the years, I have performed many life cycle costs for these systems. Wood chips and wood pellets (also referred to as biomass or modern wood heating) have been the most economical choice for many of the projects. I have had great success with wood chip and pellet boiler systems for projects in Maine, New Hampshire and Vermont. LD1212 would help in educating, selecting and promoting more renewable biomass energy heating systems in Maine.

Below are examples of woodchip and pellet boiler projects that I have worked on:

Mount View School, Thorndike, ME  
Energy North, Yellowknife, Northwest Territories, Canada  
Groveton Housing, Groveton, NH  
Oxford County Courthouse, Oxford, ME  
SAD4 Elementary School, Guilford, ME  
SAD4 Secondary School, Guilford, ME  
Burke Town School, West Burke, VT  
Lake Region High School, Naples, ME  
Crescent Park Elementary School, Bethel, ME  
Newark Elementary School, Newark, VT  
Miller’s Run School, Sheffield, VT  
Lyndon Town School, Lyndon, VT

Many of the projects above are schools which are typically one of the largest buildings in the community. Schools can have a major impact on the environment and the local budget. This bill

would be a great step forward in promoting renewable energy, reducing energy costs, improving the local economy by encouraging locally sourced fuels, and reducing the carbon footprint for schools, municipalities, commercial businesses and residences. Below are some facts of biomass boiler systems:

- Biomass boilers are well suited to replace existing hot water and steam boilers. Other renewable energy systems require substantial mechanical system renovation or replacement.
- Wood chip and pellet fuel prices are very stable.
- Wood chips and pellets are produced locally, thereby providing local employment and keeping energy dollars close to home.
- Biomass boiler efficiency is about the same or higher than existing oil boilers and gas boilers.
- Minor additional maintenance is required compared to fossil fuels, but the energy savings offset the additional cost. Features such as self-cleaning firetubes and automated ash removal simplifies maintenance.
- More than 30% of Vermont public school students attend a wood heated school. Vermont started heating schools with biomass boilers in 1986.
- The wood chip and pellet systems can be a teaching opportunity in schools and for the communities that they are in.

Wood biomass may not be the best solution for every project, but a majority of the communities, businesses and residences would benefit from wood biomass heating systems. I am in favor of LD1212 because I believe it would help Maine reduce its dependency on fossil fuels, promote a local energy source, and help sustain the forest industry.

I would be glad to provide additional information in regards to biomass boiler systems or integrating biomass systems into projects.

Sincerely,

A handwritten signature in blue ink that reads "Richard Grondin". The signature is written in a cursive style with a large initial "R".

Richard Grondin, PE, CEM, CBCP