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L.D. 1549: An Act to Direct the Public Utilities Commission to Seek Informational Bids Regarding Small Modular Nuclear Reactors in the State

Dear Chairs and members of the Committee,

My name is Jim LaBrecque, I am from Bangor Maine and here to testify in Favor of L.D. 1549.

- 1) About 345,000 homes heat with oil. At 80% efficiency 1 gal. of #2 oil equals 110,800Btu
- 2) If the average Maine home only used a half gallon/hour oil nozzle on a design winter night, those homes would require 19 billion Btuh
- 3) 1 Watt equals 3.41214163Btu/hr.
- 4) To heat only those homes on a design winter night, it would take 5.6 one thousand-megawatt nuclear power plants or 730 Farmington Maine 500-acre 76.5MW size solar farms (plus batteries) or 16 times the capacity of the proposed Aroostook County power project.
- 5) When considering the total BTU demand for all electric heat on a design winter night for all Maine homes, commercial business, industry, institutions, you can multiply the demand for heat for those 345,000 homes by approximately seven.

- 6) Seven times 730 Farmington solar farms is 5,110, this would require 319 of the 500-acre solar farms/county or 112 Aroostook County proposed power projects.
- 7) Energy density of a 275-gallon oil tank is equal to 1,269 Leaf automobile battery packs at a total weight of 850,620 pounds. (Note: This is based on the older Leaf auto battery packs, new battery improvements will weigh less but this is an issue of magnitude.)
- 8) Maine is the most heavily oil dependent state per capita in the nation and is in the **top 4 states for cleanest electricity**. Our CO2 problem is oil **not** electricity, our solution is not to overly subsidize solar projects, but to look for systems with greater energy densities than oil, I know of no alternative better than nuclear.
- 9) Note: These numbers are based on winter design loads using all resistant electric heat
- 10) Conclusion: Wind and solar panels are not going to get Maine off oil!

James C. LaBrecque