



# FutureMetrics™ LLC

8 Airport Road  
Bethel, ME 04217, USA

## A Win-Win-Win Strategy for Maine

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By William Strauss, PhD

Maine is a leader in the use of renewable fuels for energy. It is on track to meet CO<sub>2</sub> emissions goals<sup>1</sup>. A major contributor to that success is Maine's reliance on woody bioresources for heat and power.

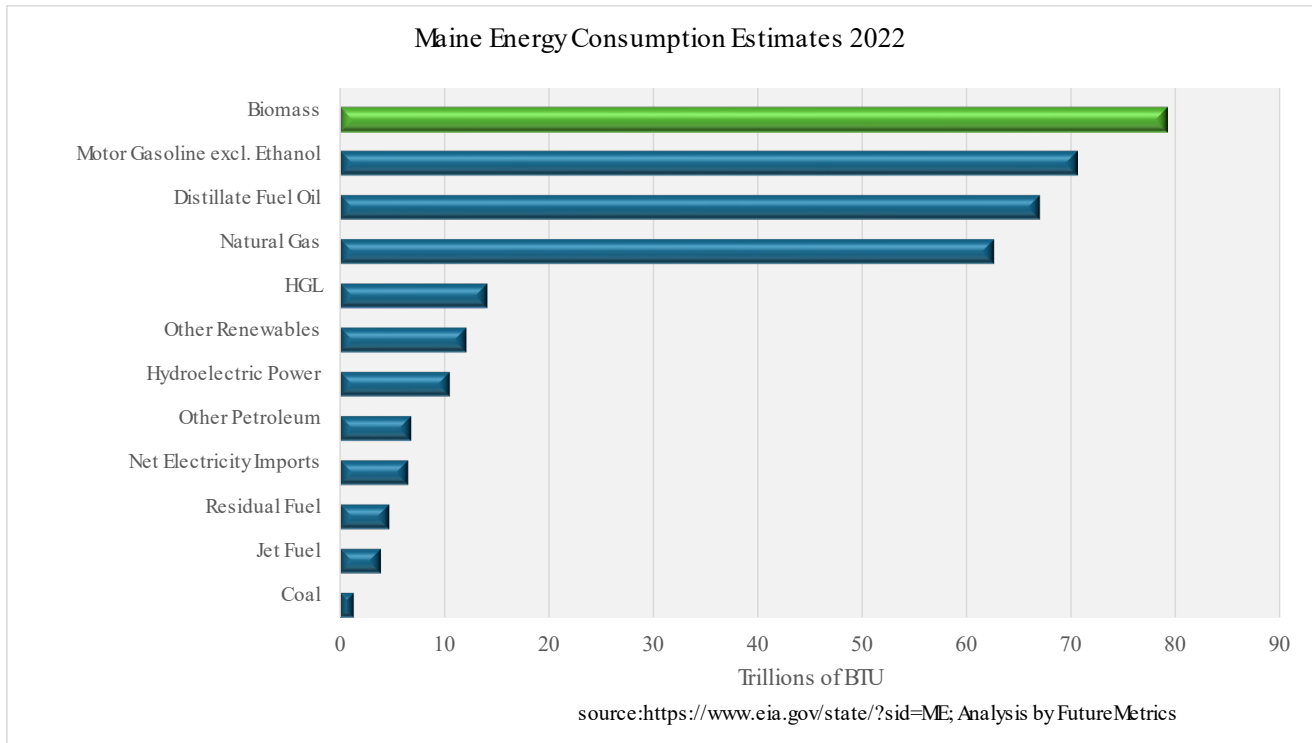


Figure 1 - Maine Energy Consumption

Sustainably sourced<sup>2</sup> bioresources used for energy offer significant carbon emissions benefits over any fossil fuel, including methane (the hydrocarbon commonly called natural gas).

Maine has the foundation to sustain its success with GHG emissions in the heating sector by recognizing the value that biomass has as an energy source.

The volume of wood in Maine's forests is increasing<sup>3</sup>. The demand for the non-sawlog portions of harvested trees has decreased significantly over the past decade with changes in pulp mill demand. Not only would Maine benefit from a continued use of its own natural resources for energy from the point of view of

<sup>1</sup> See <https://www.maine.gov/tools/whatsnew/attach.php?id=12796425&an=1>

<sup>2</sup> See numerous free to download FutureMetrics white papers describing the carbon emissions benefits of sustainably sourced biomass at the [FutureMetrics website](https://www.futuremetrics.com).

<sup>3</sup> [https://www.fs.usda.gov/foresthealth/docs/fhh/ME\\_FHH\\_2022.pdf](https://www.fs.usda.gov/foresthealth/docs/fhh/ME_FHH_2022.pdf)



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reaching its GHG emissions targets, but it would also benefit the Maine economy by supporting Maine's forest products industry.



Figure 2 - Forestry and Logging Jobs in Maine

Heat pumps are great, until they are not<sup>4</sup>. The shift from heating oil to heat pumps should be supported. But as the paper referenced in footnote 4 notes, in many locations in Maine that experience very cold winter temperatures, heat pumps lose their efficiency for home heating in the dead of winter, and on very cold days they cease to provide heat.

Heat pumps should not replace a central heating system in many locations in Maine. They are a very good way to supplement heat demand and lower the demand on the central heating system.

However, heat pumps use electricity, the highest proportion of which in Maine is generated from fossil fuel. The highest proportion of Maine's power is from natural gas (see Figure 3).

As power demand in Maine increases, the use of natural gas is likely to increase as well. This will work against the GHG emissions goals.

<sup>4</sup> See the FutureMetrics white paper on this topic [HERE](#).

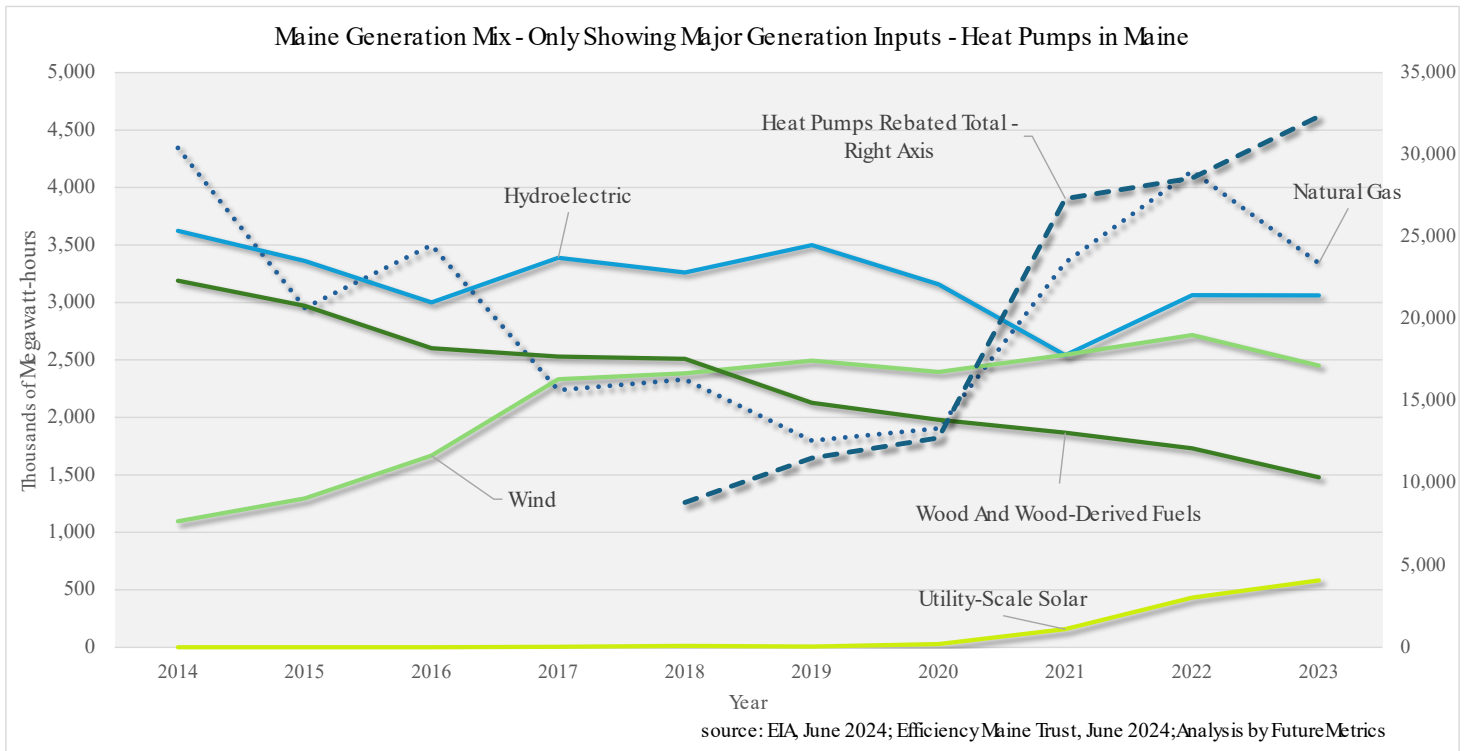


Figure 3 - Where Maine Gets its Electricity

The rise in natural gas use appears to correlate with the increase in heat pumps (with the exception of the relatively mild winter of 2023<sup>5</sup>).

**A rational strategy would support heat pumps as supplemental heat for most homes.**

**But as the heating oil fueled central heating systems in Maine homes reach their end of life after 30 or so years, they should be replaced with central heating systems that are fueled with Maine made wood pellets for the next 30 or more years.**

**This would be a win-win-win:**

- **CO<sub>2</sub> emissions in the heating sector would be lowered,**
- **Significant numbers of Maine jobs would be sustained and created (the use of natural gas has almost no job creation benefits in Maine), and**
- **Homeowners would stay warm all winter.**

<sup>5</sup> Heating degree days Maine average Oct-May 2022= 7,011, Oct-May 2023 = 6,550. Source: National Weather Service. Data from [HERE](#).