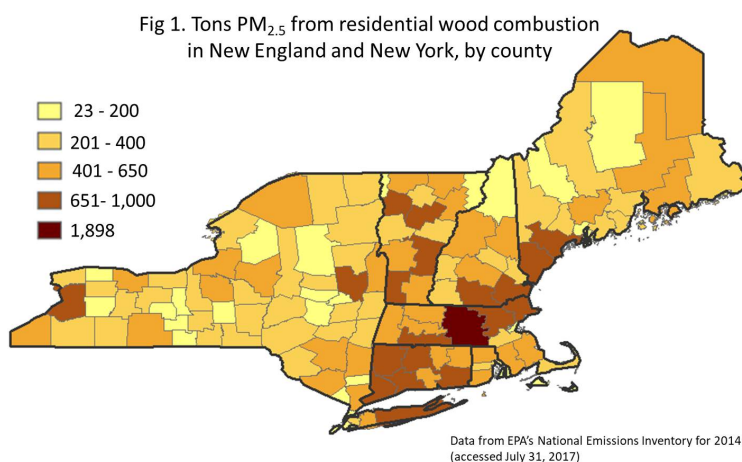


Partnership for Policy Integrity Analysis, August 2017 – Submitted to DOER under APS Rulemaking Process
Massachusetts Tops New England in Air Pollution from Residential Wood Burning

Massachusetts has more air pollution from wood combustion than any other state in New England. Wood-burning is a major source of fine particulate emissions, a serious health hazard. Fine particles (particulate matter of 2.5 microns diameter or smaller, known as PM_{2.5}) are easily inhaled and can lodge deep in the lungs, where they can cause chronic heart and lung disease and trigger asthma attacks, heart attacks, and premature death. Wood boilers are also major contributors of greenhouse gas emissions. PFPI mapped the most recent data available from the EPA's National Emissions Inventory (NEI) on PM_{2.5} emissions from wood heating (woodburning stoves, fireplaces, and furnaces, including outdoor wood boilers) (see Figure 1). The NEI, a comprehensive and detailed set of air pollution data, was updated with the 2014 emissions data in April 2017. These data indicate that:

- Worcester County had the greatest county-level emissions in the Northeast from residential woodburning, with 1,898 tons of PM_{2.5} released into the air in 2014. Worcester was the eighth highest county in the entire nation for residential wood-burning pollution.
- Three counties (Hampden, Essex, and Middlesex) had between 700 and 1,000 tons of PM_{2.5} emissions in 2014 from residential wood burning.



PFPI also analyzed the relative contribution of biomass combustion to PM_{2.5} emissions in Massachusetts and surrounding states. Among the key findings:

- In New York and New England, wood-burning is overwhelmingly the largest source of PM_{2.5} emissions from heating homes and commercial enterprises, ranging from 82% to 98% per state.
- In Massachusetts, biomass combustion accounted for 83% of all PM_{2.5} emissions from heating (residential and commercial/industrial) and a quarter of the state's total PM_{2.5} emissions (see Figure 2).

Fig 2. Wood Heating Accounts for 83% of PM_{2.5} Emissions from all Commercial, Industrial and Residential Heating in Massachusetts

