

Emissions



Particulate Matter: What is It?

A complex mixture of extremely small particles and liquid droplets

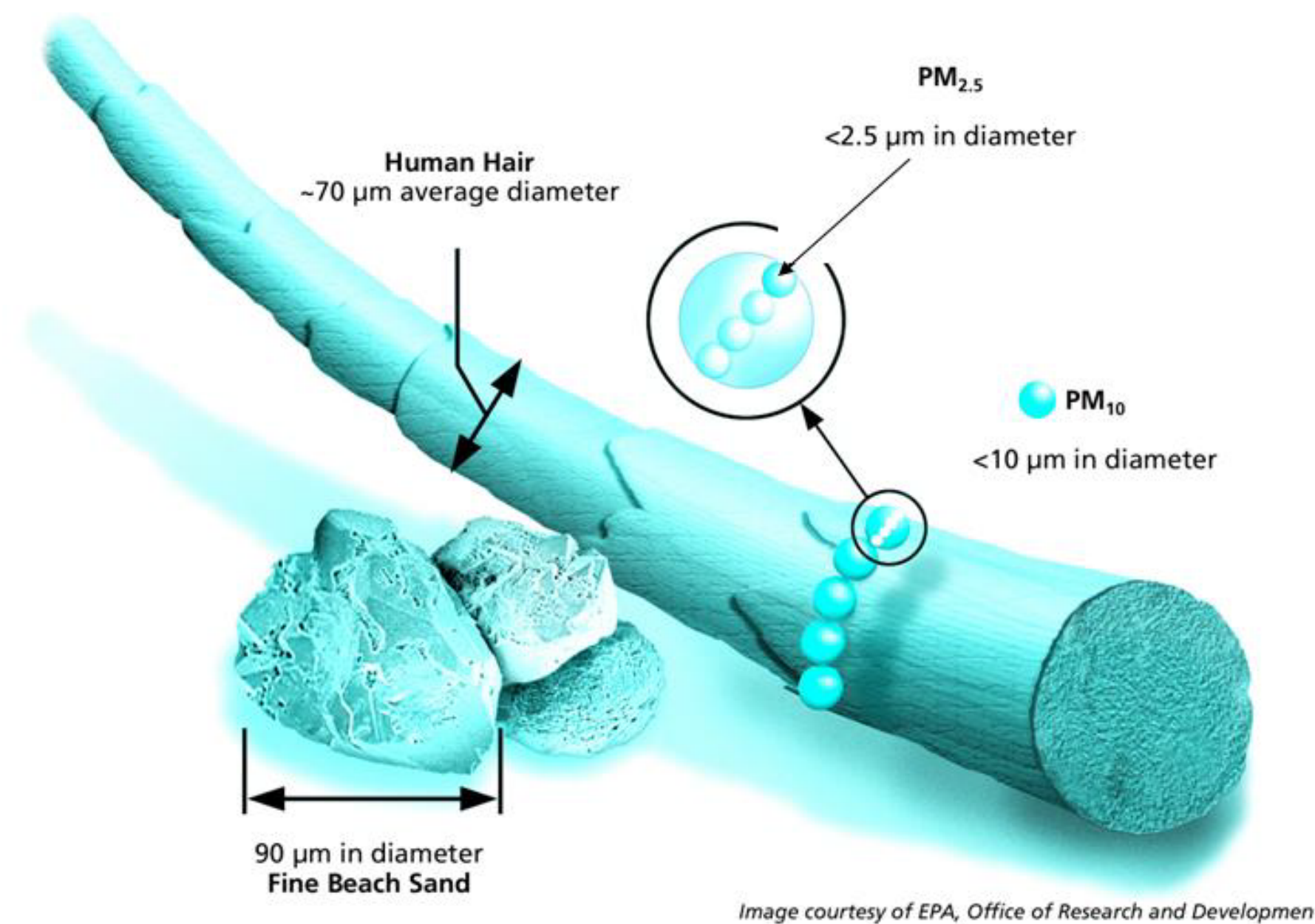


Image courtesy of EPA, Office of Research and Development

Table 2: Carbon Emissions for Fuel Combustion

Fuel	lbs carbon per Million BTU
Biomass (wood)	0
Hydro	0
Solar	0
Wind	0
Coal	55
Residential Oil	47
Propane	38
Natural Gas	32

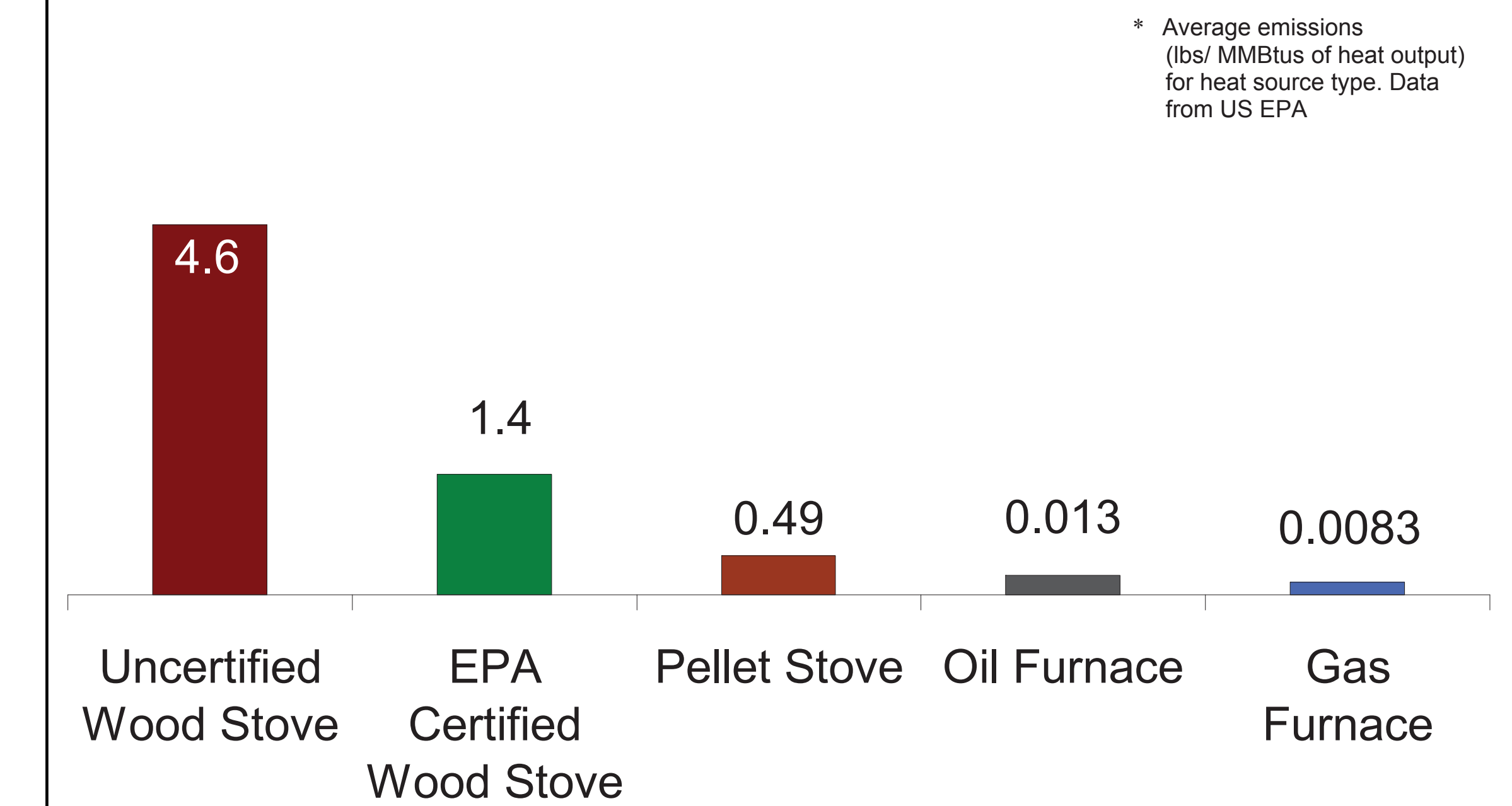
In the last 20 years, wood stove manufacturers have made dramatic reductions in emission levels in their appliances. From the earliest days of the Oregon wood stove certification program in 1985, which began with a passing grade of 15 grams/hour, to the current day, when most new wood stoves are approved with levels of 4.5 grams or less, the hearth industry has dramatically improved the way residential wood heaters work.

When wood is not completely burned, a complex mixture of gases and particles – wood smoke – is created. Smoke from improperly burned wood contains many chemical substances that are considered harmful, such as fine particle pollution (organic carbon) and volatile organic compounds (VOC). Because EPA-certified wood stoves are designed with better insulation and improved air flow, more of these gases and particles are burned inside the stove, which results in less smoke emissions and a much cleaner burning product.

Also, wood burning does not release any more carbon dioxide than its eventual biodegradation (decay) if it was not burned. Wood burning is therefore considered carbon neutral, since the CO₂ released into the atmosphere by combustion is recycled continuously into new plant growth as part of the carbon cycle, while the energy released during combustion is simply a form of stored solar energy.

With today's EPA-certified wood stoves generating substantially lower emissions and using at least 1/3 less wood than traditional wood stoves, we can present a cleaner, Greener footprint in every way.

Relative Emissions of Fine Particles



Did you know?

Approximately 9 million of the U.S. wood stoves in use today are older, inefficient and highly polluting non-certified stoves that should be replaced with cleaner EPA-certified units.