2010 Census Shows Wood is Fastest Growing Heating Fuel in U.S.

Rural low-income families the new growth leaders in renewable energy production

October 10, 2011 - Recently released US Census figures show the number of households heating with wood grew 34% between 2000 and 2010, faster than any other heating fuel. Electricity showed the second fastest growth, with a 24% increase over the last decade.

In two states, households using wood as a primary heat source more than doubled - Michigan (135%) and Connecticut (122%). And in six other states, wood heating grew by more than 90% - New Hampshire (99%), Massachusetts (99%), Maine (96%), Rhode Island (96%), Ohio (95%) and Nevada (91%).

Census data also shows that low and middle-income households are much more likely to use wood as a primary heating fuel, making low and middle-income families growth leaders of the residential renewable energy movement. According to the EIA, residential wood heat accounts for 80% of residential renewable energy, solar 15% and geothermal 5%.

“Heating with wood may not be hip like solar, but it’s proving to be the workhorse of residential renewable energy production,” said John Ackerly, President of the Alliance for Green Heat, a non-profit organization based in Maryland.

The rise of wood and wood pellets in home heating is driven by the climbing cost of oil, the economic downturn and the movement to use renewable energy. The Census Bureau does not track the reason people switch fuels but in states like Maine and New Hampshire where rising oil prices are squeezing household budgets, it is clear that many families simply feel the need to cut heating costs.

“The rise of wood heat is good news for offsetting fossil fuels, achieving energy independence, creating jobs and helping families affordably heat their homes,” said Mr. Ackerly.

[Graph: 2000 - 2010 Residential Heat Change]

“However, Wood heat’s rapid rise is not just from people using clean pellet and EPA certified wood stoves. Many people are also dusting off old and inefficient stoves and in some states installing outdoor boilers that create too much smoke,” cautions Ackerly.

(More)
Over the last decade, the number of households using two of the most expensive heating fuels significantly declined: propane dropped 16% and oil heat dropped 21%. Some of those homes undoubtedly switched to wood. Switching from fossil fuels to commercially purchased wood heat can reduce a home’s heating bills by half or more. Those who cut or collect their own wood save much more, using their labor to zero out heating bills.

Currently about 25-30% of the 12 million stoves in the U.S. are clean burning pellet stoves or EPA certified wood stoves, according to the EPA and other sources. Americans have installed about one million pellet stoves since the 1980s when they were invented.

Wood now ranks third in the most common heating fuels after gas and electricity for both primary and secondary heating fuel use, but ranks fifth, after oil and propane as well, when only primary heat fuel is considered. As of 2010, 2.1% of American homes, or 2,382,737 households, use wood as a primary heat source, up from 1.6% in 2000. About 10 - 12% of American households use wood when secondary heating is counted, according to the US Census Bureau and the Energy Information Agency (EIA).

The rapid rise in wood heat as a primary heating fuel is mainly a rural phenomenon, and to a lesser extent a suburban trend. According to the US census, 57% of households who primarily heat with wood live in rural areas, 40% in suburban areas and only 3% in urban areas.

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The Alliance for Green Heat promotes wood and pellet heat as a low-carbon, sustainable and affordable energy solution. The Alliance works toward cleaner and more efficient wood heating appliances, particularly for low and middle-income families. The Alliance is a 510c3 non-profit organization based in Maryland.
Additional Facts and Analysis on 2010 Census Heating Fuel Data

Alliance for Green Heat, October 2011

• The top ten states of per capita primary wood heating are: Vermont (15%), Maine (12%), Montana (8%), New Hampshire (8%), Oregon (7%), Idaho (7%), West Virginia (6%), Alaska (5%) and Wyoming (5%).
• Four of the eight most populous states - New York, Pennsylvania, Ohio and Michigan - experienced increases in wood heat of at least 65%.
• Rapid rise in wood heat is not just confined to states with very high use of heating oil. In Michigan and Ohio, for example, where the relatively inexpensive natural gas is dominant, wood heat still soared.
• West Coast states, where laws regulating wood heating tend to be stronger, had modest increases in wood heating (6 – 12%) but it is unclear to what extent those regulations kept wood heat growth in check and to what extent other factors were responsible.
• The only part of the country where wood fell as a primary heating fuel was the Deep South, where states experienced a 2 – 13% decline with the exception of Florida that declined 21%.
• In a significant milestone, since 2000 wood has overtaken propane as a primary heating fuel in three eastern states: Maine, Vermont and West Virginia. This is the first time that wood has topped propane in an eastern state since 1970.
• In Europe there has also been a rapid rise in wood and pellet heating, which has more to do with generous government incentives to help homes reduce fossil fuel use. Many European countries have had 25 to 50% incentives for much of the previous decade.
• The US had a 30% tax credit up to $1,500 for only two years, 2009 and 2010. Currently the tax credit is only for 10% with a maximum of $300.
• The number of homes heating with wood fluctuates much more quickly than other fuels because most families who use wood as a primary heat source also have a fossil fuel back-up which they use more of when or if that fossil fuel is more affordable.
• According to the US Forest Service reports, a majority of Americans who heat with wood cut or collect their wood.
• Some states with a more than 90% rise in wood heat have very high unemployment, such as Michigan and Nevada, ranked 1 and 3 for highest unemployment rates. But in New Hampshire, which also had more than 90% rise, unemployment is among the lowest in the US.
• A disturbing trend is that in some of the states with the greatest increase in wood heat, inefficient traditional outdoor hydronic heaters that often create excessive smoke are still allowed to be installed, such as Ohio, Michigan, Wisconsin and Minnesota. These four states have more than half of all such outdoor heaters in the US according to a 2006 NESCAUM report. (13 states, mainly from the Northeast and the West Coast, ban the installation of these devices but most allow cleaner, EPA qualified ones to be installed.)

Sources:
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