



Low Heating Oil Prices Depress Domestic Wood Pellet Market

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[By Bruce Dorminey](#)

Plunging crude oil prices continue to depress the domestic [wood pellet market](#), with residential consumers both in the U.S. and Canada finding themselves opting for conventional heating oil rather than their pellet stoves, say industry experts. With crude oil prices hovering around \$30 a barrel, however, domestic wood pellet producers have been hard-pressed to profit from an unusually cold winter in much of the Northeast.

Almost all industrial wood pellet production in the U.S. takes place in the Southeast. And when used for industrial power production, the cost for pellets per BTU is still cheaper than any other renewable energy source, according to Gordon Murray, executive director of the Wood Pellet Association of Canada.

In fact, most of the industrial pellets originating in the Southeast are derived from Southern Yellow Pine plantations that were originally meant as pulp for paper, says William Strauss, a U.S.-based economist and wood pellet consultant at FutureMetrics in Maine.

“Yet paper is a dying industry and so these trees are now going to pellet mills,” he said. From there, the pellets head to [Europe](#) to be co-fired in coal-burning electrical plants in order for European utilities to meet government carbon emissions standards. These pellets, Strauss said, are going to utilities that are already engaged with some sort of policy that supports the use of wood pellets in their plants.

As a result, the price of oil on the global industrial wood pellet market has little or no effect.

Growth in the industrial wood pellet market is all policy based; it’s all about carbon mitigation policies, Strauss said. He noted that whenever new CO₂-limiting policies come into play, they open up the possibility of using wood pellets either in some co-firing blend ratio, or even 100 percent pellets in some power stations.

Worldwide, Murray said, about half of wood pellets are used to make power and about half are used for heat in residential and commercial institutional heating. In North America, he noted, some 95 percent of pellets are used for heat production.

In 2016, the U.S. is projected to export about 7.3 million tons of wood pellets; add Canada, and that figure comes to some 9.5 million tons, Strauss said. He noted that the spot price for industrial pellets is about \$160 FOB (freight on board) per metric ton. That price doesn’t include transatlantic shipping costs, which can also benefit from lower oil prices.

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In contrast, the domestic wood pellet heating market in the U.S. only amounts to about 3-4 million metric tons per year.

Not surprisingly, Murray said that heating oil still has the vast majority of the market in the Northeast and Atlantic provinces of Canada.

“In the residential market, in the Northeast U.S., low crude oil prices have translated into low costs for heating oil,” Murray said.

So for the first time in many years, he said, it has actually become less expensive to buy heating oil than wood pellets, which, in turn, has slowed down the number of households totally converting from heating oil to wood pellets.

That change would reduce new conversions from heating oil to pellet stoves, but it wouldn't necessarily result in a reverse conversion, contends Michele Rebiere, CFO at Viridis Energy, a Canadian company that also operates a U.S. division. Meanwhile, she said there are a small percentage of households who have access to both and may opt out of use of pellets during this period.

Even so, Murray noted that for residential domestic heating, natural gas remains the cheapest alternative, most recently followed by heating oil and wood pellets, then propane. Although coal is still co-fired in power plants, it has been outlawed for home heating across most sectors of the globe.

As for the residential pellet market in the U.S.?

“This has been a very challenging winter,” Strauss said. “In Maine, some 65 percent of households are using heating oil right now because it's 20 percent cheaper than pellets. A year ago, heating oil was \$4 a gallon. Now it's \$1.5 a gallon.”

Strauss said that when heating oil hits a \$2-per-gallon price point it means that in terms of BTUs per dollar spent, pellets and heating oil are at parity. At the moment, however, the average price for residential pellets in Maine is hovering around \$250 per ton.

Ninety percent of wood pellets for residential heating are used in wood pellet stoves, Strauss said, noting that a typical pellet stove user in the U.S. Northeast goes through about 3.5-4.5 tons of pellets per year. He said that owners who opt to use cheaper heating oil simply revert to using their existing heating oil boilers in their basements.

Strauss said crude would have to be at \$55 a barrel before pellets would be cheaper than heating oil.

Yet even though the domestic markets is under stress at the moment, Rebiere said the most important thing to keep in mind is that pellets have a fairly stable price when compared with the long-term volatility associated with heating oil. She also pointed out that many residential pellet buyers are as motivated by environmental consciousness as they are by price, and as such, want clean fuel that the pellets provide.

“However, unless the pellet prices are going up, [consumers] will continue to buy,” Rebiere said. “And another segment of [consumers] are looking for the ambience the pellet stove provides.”

If pellets are used for heat instead of power generation, Murray said, there is a net gain in energy conversion efficiencies. The conversion efficiency for electricity generated for power is only about 35 percent. That's in contrast to pellets for heat conversion, which have efficiencies of 85-95 percent, he said. Either way, he added, the pellets are carbon neutral.

Even so, in the U.S. more aggressive conversion to power generation via industrial wood pellets is on hold until the Obama Administration's [Clean Power Plan can clear its own legal hurdles](#). Initially, the plan was to go into effect by 2022 in order to reach target carbon dioxide reduction values in all 50 states by 2030.

“But the plan has a long haul, so we'll see what happens to it after the presidential election,” Strauss said.



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Regardless of CO2 emissions, Murray noted, when it comes to electricity generation, coal remains the cheapest fuel. It's followed by natural gas, with environmentally friendly wood pellets as the most expensive option. However, there's more at stake than mere economics.

One need only look to China's increasingly polluted cities to understand why. Murray said that although the pellet industry has recently been more focused on trying to develop markets in Japan, South Korea and Europe, everyone recognizes that China is the next pellet frontier. "China is just now realizing that they have all these polluted cities due to fossil fuel emissions and they have to fix it," Murray said. "So, some parts of China are already converting coals plants over to wood pellets."

Meanwhile, back in the U.S., Strauss said that despite this year's bumpy ride, the long-term outlook for the domestic wood pellet market should still be quite bright. "I think pellet costs will come down over the next year," Strauss said. "But if the price per barrel of crude oil stays in the twenties then pellets will not be competitive in the future."

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