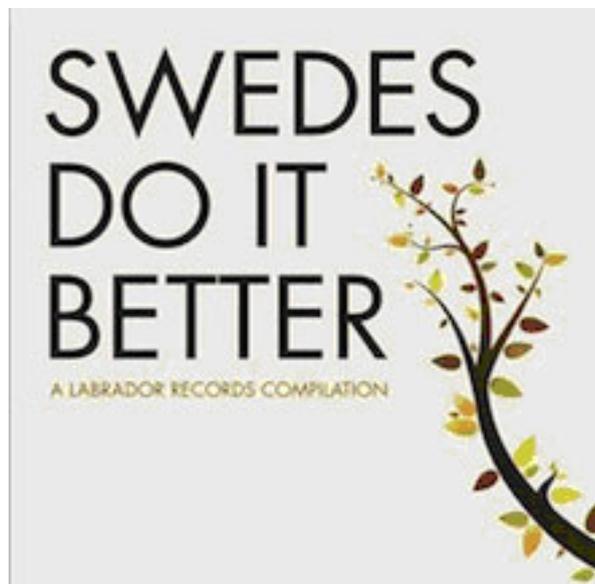


## Swedes do Biomass Better



In Sweden, biomass power is estimated to represent 32% of all energy consumption and demand is leading to competition for pulp resources between paper and energy producers, pushing pulp prices to new highs, according to a new study.

Between 2000 and 2009, biomass power consumption grew from 88TWh to 115TWh. During the same period, oil-based power consumption fell to 112TWh from 142TWh. Demand by competing sectors for biomass is steadily increasing prices. Q1 2010 saw pulplog prices up 20% from five years ago and 36% higher than 10 years ago.

According to Hakan Ekstrom of Wood Resource Quarterly, "Sawmills in Central and Northern Europe continue to have the highest wood costs in regions producing softwood lumber. These are also regions that have experienced the biggest price increases the past year. In Sweden and Germany, spruce sawlog prices were 28% and 15%, respectively, higher in the 1Q/10 than in early 2009."

"Sweden is currently the biggest consumer of wood pellets in the world, consuming over 20% of the world's production of wood pellets," said Ekstrom. "In order to meet the demand from a fast growing market, the country produced almost 1.6 million tons in 2008 and imported another 300,000 tons mainly from other countries in Europe but also from Canada. There are no signs portending any slowdown in demand for wood pellets, and the annual growth is expected to be between 8% and 10% in the coming years."

### **Why? Access to feedstock or high energy prices?**

What makes Sweden so successful in converting to biomass? There are four factors.

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First, a commitment to renewables, centered around general European plans to be at 20 percent renewable content by 2020 in terms of power generation. Two, available infrastructure for wood. Three, high energy prices. Four, well, solar and wind do not work as well in Sweden. Brrr!

But there's another factor – Scandinavians have far more experience in integration of facilities – symbiosis, as they call it – co-location as it is known in the US. According to Smurfit-Stone's Tim Rowden: "The USDA estimates the cost of starting up a new biomass facility to be upward of \$320 million. Leveraging existing assets and infrastructure from closed mills could drastically reduce that initial investment. Pulp mills have woodyards, boilers, wastewater treatment, rail and truck access, tanks and piping – all of which could be used in a biomass facility. These mills have access to fiber supply chains, including logging forces and nearby biomass supply."

But there is competition from the higher-cost, but higher yielding biofuels arena. Biofuel company Chemrec AB is integrating a biodiesel facility into Domsjö Fabriker's pulp mill in Örnsködsvik, Sweden. The proposed 40-million-gallon per year (MMgy) plant will utilize a black liquor gasification process to produce BioDME(dimethyl ether) and BioMethanol.

### Fortum's Swedish venture

In Finland, [Reuters is reporting that the Finnish utility, Fortum, has announced that it is investigating](#) [1] a \$1.49 billion investment to construct a biomass-based combined heat and power plant in the Stockholm area, and increase the share of biomass (compared to coal) at its giant Vartan plant by 45 percent to 70 percent by 2015.

### Sweden by the numbers

Wood Resources Quarterly [is reporting that demand for wood pellet demand is expected to grow in Europe by 8 to 10 percent per year](#) [2] in the near-term, as Europe begins to turn towards its 20 percent renewables target for 2020 in power generation. Wood pellets., compressed from bark, sawdust and other forest residues, burn more efficiently than wood chips.

According to WRQ, Sweden, Germany, Denmark and Britain are leading the sharp uptick in demand — Sweden used nearly 2 million tonnes in 2008, and 450 plants are now in operation in Europe. In the US, a \$1500 consumer tax credit is available to those who install high-efficiency pellet stoves and heaters.

[More on the story.](#) [3]

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### Links:

[1] <http://uk.reuters.com/article/idUKGEE5AO0XK20091125>

[2] <http://www.carbonpositive.net/viewarticle.aspx?articleID=1716>

[3] <http://www.webwire.com/ViewPressRel.asp?ald=118171>

[4] <http://biomassdigest.net/blog/2010/06/10/swedes-do-it-better-a-biomass-digest-profile/>