

More from every log

Seneca will turn wood waste to power source

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There was a time not long ago when wood waste at sawmills was so much worse than worthless that bark and sawdust was piled inside conical furnaces called wigwam burners and set afire. The burners looked like upended shuttlecocks on Paul Bunyan's badminton court, and they glowed red after sundown as tons of the unwanted byproducts of lumber milling went up in smoke.

Wigwam burners have been phased out, partly under pressure of air-quality rules but mainly because sawmill managers now find value in material that once had none. They've learned ways to mill more lumber from each log, which means there's less waste to deal with. Markets have developed for what wood waste remains, either as landscape amendments or as feedstock for other products. Burning bark and sawdust now seems antiquated, inefficient, polluting and wasteful.

But the wood products industry still has some distance to go before it can claim to make full use of its raw material. Logging operations leave limbs and treetops that are bulldozed into stacks the size of houses and burned. One day this practice of slash burning may stand alongside the wigwam burner as a relic of a bygone era. Seneca Sawmill Co. of Eugene is bringing that day closer.

Seneca plans to build a \$45 million, 18.8-megawatt biomass power plant on its northwest Eugene industrial site. The plant will generate electricity by burning sawdust and other waste from Seneca's sawmills, along with slash from the company's timberlands. Seneca will use less than half of the electricity it produces to run its own operations and displace the natural gas that now heats its kilns. The rest will be sold to an electric utility or wholesaler.

The wood products industry has long marketed itself as reliant on a renewable resource. Now it can present itself as a producer of renewable energy. Each megawatt generated by Seneca is one that won't have to be generated by burning fossil fuels. It's a welcome addition to the Northwest's growing portfolio of renewable energy sources. Because biomass can be stored, it's a valuable complement to intermittent sources such as wind and solar. It can be counted upon to produce power during periods of peak demand, reducing a reliance on natural gas for that purpose.

Oregon is rich in forest biomass. But though the potential reservoir of fuel is large, much depends on the economics of transportation. The cost of trucking slash from logging or thinning operations to a biomass plant may remain prohibitive, depending on the distances involved. But Seneca is well-positioned to supply its own fuel from its sawmills and nearby timberlands. The costs of fuel transportation will be offset at least partly by a steep reduction in the need to truck sawmill byproducts to offsite buyers.

Though the Seneca project enjoys a number of advantages, biomass will be an important part of Oregon's energy future. Plants similar to Seneca's have been installed by half a dozen wood products companies in Oregon. More can be expected as the pioneers learn from their mistakes and as fuel-supply chains develop. Biomass is regarded as carbon-neutral, and the process of combustion produces far less air pollution than burning slash in open fires. State and federal tax incentives are available, and a market for the power should be easy to find — Oregon law requires that large utilities rely on renewable energy sources for 25 percent of their electricity by 2025.

A few rusting wigwam burners remain in Western Oregon, their last fires having died decades ago. Slash fires may be headed in the same direction, as the material left over from milling and logging operations comes to be exploited as a power source. Maybe there's no such thing as wood waste — only resources whose uses have not yet been discovered and developed.