

## **Biomass** fuel hotly debated

"A January 2010 Energy Commission PIER study concluded biomass fuels are one of the most cost-effective ways to produce environmental benefits in the forests, which provide a beneficial use of the forest treatment residues," according to the alliance.

But at least half of the top 10 sources of pollution in Shasta County are plants that produce electricity by burning biomass material. And

See POWER, SA



about half of the material burned there is from forest thinning efforts.

Mary Booth, director of the Partnership for Policy Integrity, said biomass plants are anything but dean. Creating electricity by burning forest materials, wood and agricultural waste is dirtier than generating power with natural gas, she said.

"It's just dirtier all around. And compared with coal, it's about the same," she said.

Booth said one of the biggest myths about biomass plants is that they are neutral for emitting greenhouse rases. Carbon dioxide is the main component of greenhouse gases.

While greenhouse gases are regulated in California, biomass plants are

of greenhouse gases. The California Air Resources Board and alliance officials say that if forest materials weren't burned at biomass plants they would rot or burn in the woods anyway, creating the same amount of greenhouse gases.

Carbon also would be stored in forest regrowth, a process called carbon sequestration.

It turns out that much of the forest fuel collected in thinning operations remains in the forest anyway. While thinning brush and small trees improves forest health and reduces fire danger, it isn't always profitable for private timber land owners to haul debris out of the forest, said Mark Pawlicki, a spokesman for Sierra Pacific Industries of Anderson. which operates two plants in Shasta County that generate electricity by burning forest and mill waste.

not considered generators Julee Malinowski Ball, executive director of the California Biomass Energy Alliance, said biomass generating facilities face collection, processing and transportation costs. Transportation costs eat too deeply into profits if generators have to travel too far away from their plants to gather

wood for burning, she said. Generally, whenever a generator has to collect material from farther away than 30 miles, it is not going to make enough from the sale of electricity to make a profit, she said.

Instead, most of the fuel used in local biomass plants comes from lumber mills, Pawlicki and Malinowski Ball said. Mill residues accounted for 1.2 million "bone dry tons" burned in the state's biomass plants, compared with 650,000 tons of forest residues, Malinowski Ball said. Even so, environmental

impact reports for such plants continue to compare the amount of greenhouse gases released from biomass plants to how much would be released if the material was left in the forest.

Take for example a new 32-megawatt biomass plant proposed by Sierra Pacific Internet States of Autorer Southan would generate 330.000 tons of greenhouses gases annually. A report assessing the environmental impacts of the plant said the amount of greenhouse gases produced by the plant annually would not exceed the amount the material would produce if it was left to rot or burn in the forest.

Booth said that argument doesn't take into account the decades it takes for materials to naturally break down versus the hours or minutes it takes to burn a tree in a biomass plant boiler, Carbon emissions also could not be neutral because the aim of thinning is to reduce the density of trees and brush in the forest, leaving less biomass in the forest to hold carbon. Booth said.

Malinowski Ball, executive director of the Biomass Energy Alliance, said the science of the greenhouse gas argument is on her side.

"The Air Resources Board has come to the conclusion that it is a carbon-neutral technology," Malinowski Ball said.

Biomass plants also produce a variety of other pollutants, though, according to the Shasta County Air Quality Management District.

Shasta County has the second-highest level of carbon monoxide pollution from stationary sources in the state. Stationary sources are all sources that are not vehicles. Only Los Angeles County produces

more carbon monoxide than Shasta County, ac cording to the California Air Resources Board.

Most of the county's carbon monoxide comes from biomass plants, said Ross Bell, the county's air quality district manager.

In 2008, the 9,490 tons of carbon monoxide produced from all stationary sources - not just biomass plants - did not exceed state or federal standards for carbon monoxide, Bell said.

By comparison, in 2008 all mobile sources in the county - from cars to tractors, trucks and trains - produced 76,650 tons of carbon monoxide.

In 2011, the county had no "unhealthful air days," according to a report last week by the California Air Pollution Control Officers Association. The county also did not on any day exceed the state standard for ozone, the report says.

