

When you're the third largest producer of fiberboard in North America, you have a long-term business plan in place. Planning for the future, however, has become increasingly difficult for the Medford Medite division of SierraPine because of the energy situation.

"We use a lot of energy in making medium density fiberboard," said SierraPine Oregon Engineering Manager Kreg Sturman.

It was hard for company management to plan when they didn't know if there would be available energy. The Medford plant is one of nine owned by SierraPine. The energy crisis had already impacted the company's Rocklin, Calif., plant. It doesn't operate from noon to 8 p.m. because of the high

"co-gen," and is much more energy efficient. It would eliminate the need to burn natural gas previously used to supply heat for the dryers.

It was a very attractive solution — its own power source and a way to use less overall energy — without compromising productivity.

There was just one problem. The energy crisis created an increased demand for natural gas-burning turbine generators. The ones the company wanted were back-ordered for nearly a year.

Fortunately, two generators became available unexpectedly when another customer could not take delivery. Sturman jumped into action.

He called the Oregon Office of Energy to fast-track the firm's application for a Business Energy

**SierraPine Oregon Engineering Manager Kreg Sturman with the company's two new natural gas-burning turbine generators. The Medford company earned a 35 percent tax credit from the Oregon Office of Energy for its investment in the energy-efficient co-generation project. SierraPine also participates in Pacific Power's Energy Exchange Service that allows them to benefit financially by curtailing energy usage during high demand periods and provides energy to others in the region.**



Photo by Bill McClain.

# SierraPine:

## Planning for the future

cost of energy during times of highest power demand.

The Medford plant produces 110 million square feet of fiberboard each year, about 15 percent of the company's production. Sturman and the company management looked at their options for finding a reliable energy source. Two possibilities — diesel burning generators and sawdust burners — were both ruled out because of environmental concerns.

SierraPine decided to purchase two natural gas-burning turbine generators to supply 6,000 kilowatts of electricity, about half of what it takes to run the plant. Natural gas, a cleaner fuel, came with a big bonus. The company could use the heat produced during the generation process in its flash-tube dryers. Using the heat byproduct of generating electricity is called co-generation, or

Tax Credit for the \$4.4 million project. "A 35 percent savings in this investment was significant to us," Sturman said. "The Office of Energy was great to work with and promptly reviewed our application when we explained our situation."

"Just buying new generating equipment doesn't qualify you for a tax credit," said Evan Elias, energy analyst for the Oregon Office of Energy. "Businesses need to calculate the efficiencies gained by their equipment. For co-gen projects, the Office of Energy uses the standard of 6,800 British thermal units per kilowatt produced. If it doesn't show at least a 10 percent gain in energy efficiency, we can't

award a tax credit."

SierraPine was able to show a 15 percent gain in energy efficiency by using the gas turbine generators for electricity and directing the heat they produce to the plant's flash-tube dryers.

SierraPine's energy savings are estimated to be 3.5 million therms of natural gas at a cost saving of more than \$682,000 per year. The tax credit is projected to be about \$1.5 million. The pay back period for the generators should be about five years.

"There is a certain elegance in the simplicity of this project," said Elias. "By appropriately sizing for their needs, SierraPine did not need all

the equipment such as heat recovery steam generators commonly seen in co-gen projects."

Incorporating the new generators into SierraPine's operations did not affect the processes it had in place. The plant continues its 24/7 production schedule. The entire project from approval to operation took just 90 days to complete.

"Our business is competitive," said Dan Sickler, SierraPine general manager. "We have to be as energy efficient as possible to stay in business. This project puts us in a good strategic position for the future."

It also means that SierraPine can do some long-term planning with confidence.