



# SIERRAPINE SLASHES ITS ENERGY COSTS BY 12 PERCENT

**STRATEGIC ENERGY MANAGEMENT HELPS THE FIBERBOARD MANUFACTURER SAVE AN ESTIMATED \$588,700 ANNUALLY**

SierraPine Composite Solutions, a leading manufacturer of innovative and environmentally superior medium-density fiberboard and particleboard, knows about reducing waste. The Medford company's product line revolves around combining recycled wood content with low-formaldehyde adhesives to produce sustainable building products. As stated by Wayne Ralph, SierraPine's electrical supervisor, "We're good at using raw materials wisely so there's very little waste."

Although SierraPine had participated in capital energy-saving projects, company personnel were skeptical about finding much energy waste in the operations and maintenance of plant equipment. That was before SierraPine participated in Energy Trust of Oregon's Strategic Energy Management initiative, which shows companies how behavioral changes and operations and maintenance improvements can deliver significant and persistent savings. "Strategic Energy Management helped us set aside time to give energy efficiency more attention," said Ralph. "Doing that paid off by reducing our annual energy costs by \$588,700."

SierraPine's employees worked closely with industrial energy experts from Energy Trust for 11 months, receiving training and tools and developing long-term skills. Together they walked through all areas of the facility to examine equipment, review operating schedules and procedures and look for energy-saving opportunities. The resulting detailed list of potential operation and maintenance improvements helped SierraPine prioritize ongoing energy-saving efforts. The company also established an energy team with representatives from throughout the facility who meet regularly to discuss, implement and review energy-efficiency strategies. As the team's Energy Champion, Ralph coordinated and monitored the team's efforts.

## STRATEGIC ENERGY MANAGEMENT OFFERS

- Technical support, training, state-of-the-art tools and templates, and coaching from experienced energy experts
- Energy savings of up to 20 percent
- Cash incentives of \$0.02/annual kilowatt hour and \$0.20/annual therm saved through operational and behavioral improvements

## SEM ESTIMATED SAVINGS

- 11.3 million annual kWh per year
- \$588,700 in annual energy costs
- \$226,000 Energy Trust cash incentive
- 4,302 tons of carbon dioxide offset

## SEM IMPROVEMENTS

During Strategic Energy Management, SierraPine:

- Replaced 54-inch refiner plates with 50-inch plates
- Increased water injection rate on refiner plates
- Refined shive (quality control) testing so it also serves as an indicator of energy use
- Shut down an underused and unneeded 350-horsepower hog system
- Adjusted equipment schedules to minimize idle operation
- Adopted an energy policy, established an energy team, engaged employees in energy-saving actions and tracked progress

Strategic Energy Management helped SierraPine uncover significant energy savings by improving operation of its two 6,000-horsepower refiners. The large refiner plates are at the heart of the company's production, churning and grinding wood chips for the manufacturing process and requiring replacement about every 10 days. Because of a vendor issue, SierraPine had switched to a different plate design than what they had used previously. Unbeknownst to plant personnel, the modified plates consumed millions of unnecessary kilowatt hours annually. As a result of Strategic Energy Management, the company switched to a new plate design and also increased the plates' water injection rate, cutting annual energy costs by an estimated \$400,000 with no impact on product quality. "Had it not been for Strategic Energy Management, we might not have seen the enormous penalty of using the previous design," said Ralph.

The company found additional savings by shutting down an underused 350-horsepower hog system, adjusting equipment schedules to minimize idle operation and refining its fiber quality testing so it could serve as an indicator of energy use.

SierraPine involved all employees in Strategic Energy Management—not just those on the energy team. The company adopted and communicated a corporate energy policy and set a first-year energy-savings goal of 5 percent. SierraPine engaged employees in the overall effort by hosting energy roundtable meetings, providing training relevant to specific jobs and launching a contest for the best energy program slogan: "Energy is deserving of conserving."

Energy Trust provided SierraPine with cash incentives to help achieve its goals and with web-based tools to track energy use in real time, enabling employees to monitor results and quickly act on unexplained spikes in energy use.

The company proudly displays its progress on a board in the plant's lunchroom, where employees can see how their efforts have reduced plant energy use by a whopping 12 percent.



Get more from your energy. Visit [www.energytrust.org](http://www.energytrust.org) or call **1.866.368.7878**.



**The technical assistance and cash incentives provided by Energy Trust not only benefit SierraPine, but the entire state of Oregon and our environment.**



**Wayne Ralph**  
electrical supervisor