

one business profile



International Bildrite

Businesses demonstrating the Power of One®—with effective energy choices

June 2011

Fiberboard Manufacturer Builds on Energy Efficiency

Home construction materials must be resilient to the harshest conditions. The same is true of companies that manufacture home-building products. In this volatile housing market and unstable economy, manufacturers that are braced to withstand tremendous pressure have the best chance of survival.

One company determined to remain standing through the current economic storm is International Bildrite, Inc., a fiberboard manufacturer headquartered in International Falls, Minn. It produces high-density roof board, fiberboard wall sheathing, and sound-deadening board for home construction. The company has been a stable, committed employer in this northern Minnesota community for nearly a century and currently employs more than 60 people.

"Margins are tight in our industry, and it is challenging to stay competitive. Raising revenues is not enough. We continually look for ways to make better products at a lower cost, and using energy more effectively is a key strategy."

*Frank Orsi, Co-owner
International Bildrite*

International Bildrite's history of fiberboard production dates back to 1914. The privately owned business has succeeded by operating efficiently, responding to market demands, and staying true to its heritage of high-quality, innovative products. Owners are attuned to the bottom line and research ways to improve efficiency and productivity.

Processing wood fiber, recycled paper, and other raw materials into fiberboard is energy intensive. At International Bildrite, ash, elm and poplar fiber—much of it harvested in northern Minnesota—is refined into pulp and combined with additional ingredients. This wood stock is run through a forming machine, then dried in a kiln and trimmed. The plant operates 24 hours a day, up to seven days a week.

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Minnesota Power's commercial energy conservation team worked closely with company personnel to identify energy-effective opportunities that are the right fit for International Bildrite, calculate potential energy savings and drive down the cost of projects through avoided energy use and rebate incentives.



Top to bottom: International Bildrite co-owner Frank Orsi with VFD controls; raw materials used to make fiberboard include native wood and recycled newspaper; the company has been an employer in International Falls for nearly a century.



“Minnesota Power is eager to help industrial customers make energy-effective facility upgrades and process improvements. These are tough economic times, and we want to do our part to keep important manufacturers like International Bildrite competitive.”

Tim Gallagher, Commercial Program Manager, Minnesota Power

Recent improvements include converting the plant and warehouse to mixed energy-efficient fluorescent lighting with lighting controls. Some production areas required vapor tight lamps and fixtures to accommodate high humidity. Minnesota Power energy consultants helped identify the right combination of lighting. Annual energy savings from lighting improvements are predicted to exceed 345,000 kWh.

The utility's energy professionals also introduced company owners to the energy-saving benefits of variable frequency drive (VFD) motor controls. VFDs significantly

improve the efficiency of motor-driven equipment by matching speed to actual load requirements. To date, International Bildrite has installed VFD controls on motors that power a water pump, two stock flow pumps, and a kiln exhaust fan. These four VFDs are expected to save more than 800,000 kWh per year. The VFD on the exhaust fan motor also will result in gas savings. The company plans to install VFD motor controls on additional kiln fans.

“The kilowatt savings are undeniable,” Orsi said. “VFD technology lets us do more with less energy.”

Another recent project converted the plant's hydro-pulper drive from a belt driven system to a high efficiency motor with a gearbox direct driven system. It will result in estimated energy savings of more than 370,000 kWh per year.

Rigorous analysis and **POWERGrant** rebates from Minnesota Power helped drive these industrial projects by bringing down the upfront costs. Combined, the improvements qualified for more than \$41,000 in rebates, based on anticipated energy savings.

“We would not have had the knowledge or capital to get these projects done without technical assistance and rebates from Minnesota Power,” Orsi said. “They also brought payback to less than two or three years.”

International Bildrite continues to experience the Power of One® by exploring other technologies and behavioral changes that could make its operations more energy effective. Minnesota Power's conservation team is committed to helping International Bildrite identify energy-related strategies that are the right fit—that meet the fiberboard manufacturer's needs to lower costs and stay competitive while delivering quality products.

Clockwise from top left: Key products made are fiberboard wall sheathing and roof board; energy-efficient light in the warehouse uses controls such as motion sensors; (left to right) Frank Orsi of International Bildrite, Matt Haley of Energy Management Solutions (EMS), Tim Gallagher of Minnesota Power, and Tanuj Gulati of EMS.

For more information:

Take the first steps toward managing energy use and costs at your business. Learn more about **POWERGrant**, Minnesota Power's commercial, agricultural and industrial energy conservation program, and fill out your free online pre-application form.

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