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HVAC Firm Sees Lighting Costs Drop by More than Half

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A recent upgrade brought a dramatically downward drop in lighting costs recently at Kurth Sheet Metal Inc., of Chippewa Falls — and at the same time produced a tangible benefit to the local environment.

Richard Engel, Kurth owner, said he had been researching alternatives for the heating-ventilating shop on County OO even before coming in contact with representatives of Orion Energy Systems, Inc., of Plymouth WI. "I looked at a couple other types of fluorescent lights and got some preliminary pricing but no firm quotes," Engel said. "But when the Orion people looked at it, everything fell in line and we decided to go with it."

In the renovation project, Kurth replaced 33 outmoded 400-watt high-intensity discharge lights and two existing fluorescent fixtures in two buildings with 35 Illuminator fixtures from Orion Energy Systems Inc., of Plymouth WI.

As a result, the electric power Kurth used for lighting fell from 42,782 kilowatt-hours (kWh) per year to 20,721 — a 52 percent drop of 22,061 kWh per year. Lighting system costs fell by a corresponding amount. "I know up front that I'm saving \$200 a month," Engel said. With a return on investment of 35.6 percent, the upgrade will pay for itself in less than three years — and provide a contin-

ued economic benefit from then on.

"Orion's is better lighting at half the energy costs," Engel said. "There are several other things we like about it. If we have a momentary power outage we have light back right away — but if they're hot, the HID fixtures would sometimes take ten minutes to come back on."

"The guys in the shop also say it's easier to work under the Orion lights, especially in one particular area. It's nice lighting."

The 22,061 kWh saved annually by the lighting retrofit will have a beneficial effect on the local environment because that amount of power now no longer needs to be generated at all. This means that according to Federal EPA calculations, over the 20-year estimated life of the Orion fixtures, 331 tons of carbon dioxide, 90 tons of carbon, one ton of silicon dioxide and three tons of nitrogen oxides will not enter the atmosphere.

To state this benefit another way, over the same 20-year span, EPA figures indicate it is the environmental equivalent of planting 81 acres of trees or removing 62 cars from the road — and it is the conservation equivalent of saving 40,111 gallons of gasoline or 955 barrels of fuel oil.

The savings and environmental benefits are possible because Orion Illuminator fixtures have been engineered to use a specially formed, highly reflective surface to 'harvest' light emitted from all sides of a fluorescent tube and direct it downward to where it is usable. As a result, The Illu-

minator provides more light from far less energy than standard fixtures.

The Illuminator is typically used with T8 full-spectrum fluorescent tubes and electronic ballasts. As a result, Orion systems turn on instantly, provide a much more natural type of light than older fluorescent types, and are more popular with employees in the typical workplace.

The Illuminator has been awarded several U.S. patents and recently won for Orion Wisconsin's prestigious Spirit of Ecology and Manufacturer of the Year awards, as well. The Illuminator also helped Orion founder and president Neal Verfuert earn the prestigious Ernst & Young 'Manufacturing Entrepreneur of the Year' award in June 2004. Previous winners of this award include Herbert Kohler of the Kohler Co., and Samuel Johnson of the S.C. Johnson Co.

"We're always glad to see a chunk of power like Kurth's 22,061 kWh per year come off the state's power grid," said Neal Verfuert, Orion president. "Besides the financial and environmental benefits involved, it means less power is being demanded on the grid — and stabilization of electric power supplies is an issue we're all facing."

"Best of all, Kurth didn't have to 'do without' or give up something to get these benefits because the Orion lights will pay for themselves relatively quickly. And that is the way we think things should work."

