

## Orion Shines in Manitowoc



Company shines green light on corporate USA

By Jim Lundstrom

A lot of business owners would love to have Neal Verfuert's problem – his company, Orion Energy Systems, seems too good to be true.

The Manitowoc-based Orion makes energy-efficient lighting systems that are illuminating commercial and industrial buildings for 108 Fortune 500 companies across the country.

The company's claim to preeminence in the lighting field is simple: Using 20th century lighting technology in the form of high-intensity discharge lamps is like flushing money down the toilet, while lighting with Orion products will cut your lighting costs in half while providing 50 percent more light. And the company guarantees it.

"I think we're all raised to be cynical. If it looks too good to be true, it probably is. Well," Verfuert said, "we're the one exception to that. In these times, it still has to be cost effective when you do business. Orion really exemplifies is two things – energy savings without compromise and being fiscally responsible to our customers. We can say, OK, you want to be green. We can show you how to make money doing it."

The math is simple, he says. A single metal halide lamp runs on 465 watts of energy while a single Orion unit runs on 221 watts. Used watts are money.

"Try to think of any other technology that hasn't changed in 120 years," Verfuert says disdainfully of standard lighting technology.

When he started Orion a dozen years ago, the entire company could sit around a single conference table.

"Now we're up to 270 people," Verfuert said. "To date we've done some 4,000 facilities, from a McDonald's Playland to a GE aircraft facility to a Toyota plant that's 6 million square feet – that's almost like a city under one roof – and everything in between."

Six-term Manitowoc Mayor Kevin Crawford has been one of Verfuert's and Orion's biggest boosters since the company moved into the 266,00-square-foot plant that until 2003 was the Mirro distribution plant.

"It's always amazing when I say it out loud – 50% percent more light at 50% less cost and energy consumption," said Crawford, a Manitowoc native who has served two decades as mayor.

"It was really big to have Orion come to Manitowoc," he said. "Here we have a CEO who is really dedicated to the brilliant American vertically integrated company, who loves beating the pants off Pacific Rim and other types of competition, who really believes that employees are his greatest asset, and believes also in the wicked smart young people of our community and our state. He's been huge in terms of expanding views and horizons for many



people in this city.”

That includes expanding Crawford's horizons.

When he steps down as Manitowoc's longest-serving mayor on April 20, Crawford will take a day to collect himself before joining the Orion team on April 22 as vice president of business development, “responsible for working with local, state and national governments, regulatory agencies, utilities, industry associations, communities and other organizations in the United States to further the role of energy efficiency as a clean, low-cost and effective energy solution.”

Crawford is an excellent choice as governmental point man because he knows the issues and the players.

“The city of Manitowoc is an eco-municipality and we've been involved in energy conservation and clean coal technology since I came to office,” he said. “We have the state's largest municipally owned generating facility here. We use CFB circulating fluidized bed boilers to reduce the amount of coal we need and burn petroleum coke, which is a mercury-free fuel.”

Crawford has also served as a state role model for overseeing an eco-municipality.

“We've got a pretty good story to tell,” he said. “I've gone to other city halls to explain how green works in terms of eco-municipality. We use bio-fuel in our transit fleets. We have a blue bike program, where you can take a blue bike, ride it wherever you want, and return it to a blue bike stand. Those things were all-important and visible signals to the community.”

It's also a good match because Crawford envisions a future where more green collar jobs like those at Orion will become available.

“While America's businesses are facing tough times right now, manufacturing has become the new dot.com,” he said. “If you're a green manufacturer with green collar jobs available, you're ahead of the pack. Companies are looking for a gazillion ways to make themselves green, because that's what people are demanding.”

Verfuert, of course, took note of Crawford's experience and leadership.

“Kevin transformed the City of Manitowoc from ‘down and out’ to ‘up and coming’ during his six terms in office, demonstrating that he is not afraid to put his helmet on, get in the game and effect positive change,” he said in announcing Crawford's recruitment. “Moreover, his years overseeing Manitowoc Public Utilities afford him deep utility and energy industry experience. We continue to believe that energy efficiency is the lynchpin for solving this nation's energy and environmental challenges and we are confident that Kevin will bring his experience, reputation and energy to bear on this important issue.”

Verfuert has been in the energy efficiency business for more than 20 years and has come up with a number of products and systems over the years, but it was only 10 years ago when he was struck with the idea that has propelled Orion as an industry leader in green technology.

“It's been an evolutionary process, but it literally just did come to me in little bits and bites along the way,” Verfuert said. “One night I just got a “Eureka!” moment, came in very early – almost the middle of the night – and laid out a fixture. My one and only engineer came in the next morning and built one for me.”

That fluorescent lighting platform and other innovative ideas and designs Orion has come up with since have already garnered a lot of attention, most recently when the little company in Manitowoc beat out major competitors such as Royal Dutch Shell and Edison International for the prestigious 2008 Platts Global Energy Award for Sustainable Technology Innovation of the Year. The Platt Award is described as the Academy Awards and World Series of the energy industry. The judges cited Orion's integrated technology as "an extremely hard-nosed, clearly effective technological solution to an everyday problem – lighting efficiency."

"Way back when, this technology was more of a hunch," Verfuertth said. "Now, seven years later since the original product was introduced, now it's understanding the science and physics behind it. It's way out in front, but its really stuff we all learned back in the 8th grade, that energy can't be created or destroyed. It's converted to heat, vibration, work or light output. With our latest designs, we have figured out a way to optimize optical and thermal efficiency."

Orion needed a way to overcome the good-to-be-true syndrome and show potential customers what their savings could be with Orion systems. Verfuertth calls this speaking in the "universal language – the language of dollars and cents."

"We've developed a proprietary metering system that measures their technology and the Orion technology and shows them the costs of each in real time. It's quite a thing to see your money being thrown away in real time," Verfuertth said. "We guarantee our savings. We now even developed our own financing model. We have a patent pending on it. We install technology without any financial risk."

The Orion integrated system includes the fluorescent lighting platform, wireless touch screen control system and the Solar Light Pipe that replaces electrical lighting with daylight in a commercial or industrial facility.

"It's just a different way of doing things," Verfuertth said. Since 2001, Orion technology has displaced more than 386 megawatts, saving customers more than \$455 million, reducing indirect carbon dioxide emissions by 4 million tons and indirect sulfur dioxide by more than 16,000 tons.

"We've done some high level studies just in Wisconsin," Verfuertth said. "If you were take HIDs and replace with our standard offering, you could shut off a nuclear plant. It's a way of easing shortcomings on the grid, which could be an even bigger problem down the road. Instead of building more power plants we should be building around the power grid."

Mayor Crawford has already floated an idea to consider the energy savings and employment boost if there were funding to replace outdated public school gym lighting with Orion technology.

"There are 12,000 schools in the state of Wisconsin," he said. "Each of them has at least one gym, many of them – or most of them – lit with metal halide lamping, that produce more heat and vibration than they do light. If we could replace all those metal halide lamps with Orion's integrated system, education is served because the money saved could be reinvested in the schools. For employment it would be incredible because there are schools in all 72 counties. And the environment is saved because you reduce emissions. The costs savings would go on perpetually. I've shopped that idea around in Madison and it's caught fire with a couple of people."

"You can't be a prophet in your own land," Verfuertth said. "We do a lot more business – by far and away – out of state than in state."

All he and his company can do is keep plugging away, so to speak.

"It's a work in progress," Verfueth said. "I'm very mindful of what competitors are doing, but the biggest competitor we have is ourselves. We're constantly raising the bar to make the product better, faster, cheaper. And looking for additional solutions."

#### ORION AWARDS & RECOGNITION

2001: Manufacturer of the Year Award, emerging company category, Wisconsin Manufacturers and Commerce Association.

2004: Manufacturer of the Year Award, small company category, Wisconsin Manufacturers and Commerce Association.

2004 & 2008: Wisconsin Partners for Clean Air Award, Wisconsin Department of Natural Resources.

2005: Ernst & Young Manufacturing Entrepreneur of the Year, Neal Verfueth.

2006: Orion recognized as one of the 500 fastest growing companies by Inc. magazine.

First place award in the 35th Annual Governor's New Product Awards in Wisconsin.

2007: New Product of the Year, National Professional Society of Engineers.  
Star of Energy Efficiency, Alliance to Save Energy.

2008: Innovation of the Year, Platts Global Energy Award for Sustainable Technology.

2009: Inspiring Efficiency Impact Award, Midwest Energy Efficiency Alliance.  
Innovation Award, Wisconsin Business Development Finance Corporation.

In addition to the awards, Orion has received 18 U.S. patents and has 10 others pending.