

**The Register-Guard**

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**[Seeing the world through solar glasses](#)****Advanced Energy Systems in Eugene designs and installs photovoltaic panels**

**BY JANE BUREK  
FOR THE REGISTER-GUARD**

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Look up.

If you're a business with a south facing, sloped roof you may have a nonperforming asset above your head.

Since 2002, Advanced Energy Systems has been helping commercial and residential building owners harvest the clean, noiseless power of the sun. The firm designs and installs photovoltaic solar panels that generate electric power, as well as thermal systems that heat water. Advanced Energy Systems also designs and installs high performance lighting.

"Half the businesses that approach us want to 'go green' and have a sustainable business," says Eric Nill, vice president of finance.

Of course, it takes more than good intentions for a business to commit to an outlay of \$100,000 to \$3 million for a major commercial-size solar project, Nill said.

"In our experience, well more than three-quarters of those folks who go through with it do so because it's a financially viable investment."

(Residential solar power installations average about \$35,000.)

Advanced Energy Systems has designed and installed solar panels for more than a dozen local and regional businesses in the past two years.

Companies such as Pepsi Cola of Eugene, Industrial Finishes, Kendall Toyota and Market of Choice have invested in energy-generating solar panels that spin the electric meter backwards. In many cases, excess electricity generated by the solar units is sold to utility companies at above-market rates, Nill said.

And the company recently partnered with other companies — including Good Company of Eugene — on the first solar highway project in the United States, an approximately 5,000-square-foot solar panel installed in December at the interchange between Interstate

5 and Interstate 205. As cars and trucks speed by, the \$1 million installation silently generates 111,100 kilowatt-hours (kWh) of electricity annually.

Current politics and consumer trends seem to be catching up to the solar view of the world envisioned decades ago by David Parker, a solar engineer and Advanced Energy Systems' founder and current president. In 1978, Parker founded a company that made copper "solar crickets" for homeowners who wanted to heat water through a thermal device.

"In those days solar was limited to hot water heating," Parker says. "The early adopters were individuals who did it out of their own determination regardless of the cost."

The explosion in consumer cell phone and satellite use created demand for photovoltaic solar generators to power "off-the-grid" radio and telecommunication towers in remote areas in the 1990s, he says. Over time, manufacturing costs have steadily lowered and kWh capacity has increased.

"Until about seven years ago photovoltaic electricity generation was not economically viable for grid-connected installations. I used to have to spell photovoltaic. I don't anymore," Parker says.

Nill says that, since joining Advanced Energy Systems in August 2008, he also sees the world through solar glasses. "I drive down the highway or see a sloped, south facing roof and think about the panels we could put there."

Funding continues to be the greatest obstacle to building a robust solar infrastructure along highways and on rooftops, Advanced Energy Systems officers say.

With more than 40 public utilities in Oregon — each with their own incentive and grant programs — project managers at Advanced Energy Systems have learned to provide clients with an additional service: navigating local, state and federal energy programs that will absorb costs associated with going solar.

"It's difficult to say 'this is what everyone is doing' to go solar because there's a myriad of programs," says Nill who can list more than a dozen cash grant and incentive programs in one breath, including the ones that cover construction cost of building or replacing roofs that hold solar panels.

To slash through the thicket of incentives, Advanced Energy Systems manages the paperwork and submissions to the departments of energy, public trusts and various utilities.

To further fill in the financial gaps, Nill says, the company also make introductions to loan officers who understand solar investment.

Still, transitioning to a state-wide solar infrastructure is, by all accounts, a slow, expensive and politically charged process.

The future of companies like Advanced Energy Systems is tied to a willingness of decision-makers to make projects like the Oregon Solar Highway a reality.

“Allison Hamilton at ODOT got it going,” Nill says. “ODOT needs electricity. Allison saw an episode on NOVA about solar highways being built in Germany and some parts of Switzerland and pushed it through.”

Both he and Parker have made numerous trips to Salem to present the case for solar installations and keep the Business Energy Tax Credit at current levels, they say.

In April, U.S. Sen. Jeff Merkley stopped by Advanced Energy Systems while he was in Eugene to see its seven types of solar panels actively at work on the company’s roof.

“There’s a direct relationship between government subsidies, initiatives, building code mandates — and the prevalence of solar generators,” Parker says. “Take away the government subsidy on oil, and solar is less expensive and has greater benefits.”

However, these days his argument for solar goes beyond dollars and budget concerns.

“Dependency on fossil fuel is an issue of public safety,” he says. “Another Hurricane Katrina could cripple our nation. Countries like Germany recognize that it’s better to depend on a solar infrastructure that’s built by their own countrymen than depend on foreign oil.”

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## **ADVANCED ENERGY SYSTEMS**

Address: 65 Centennial Loop, Eugene

President: David Parker

Employees: 20

Annual revenue: More than \$10 million

Secret to Success: Early insight that the solar market would head toward commercial and municipal installations

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