

# Finding greener solutions

Residents changing lifestyles, building careers with alternative energy

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**P**eter Arendovich knows what it means to be green when it comes to electrical use. George Hamstra, John Halbleib and Dennis Bieschke have built a company around creating more fuel efficiency.

These Lemont residents are working away from traditional energy sources.

For about five years, Arendovich has had a panel of 1,600 solar cells on his property.

"I would like to be independent of ComEd. Let them push me a little bit more (with higher prices) and I will buy more (solar cells)," Arendovich said. "Otherwise they're going to gouge you more and more."

He set up in his basement his system in which the solar cells, sometimes called photovoltaic cells, charge batteries. He runs various electrical equipment in his house off the batteries.

He said it takes about \$600 worth of solar cells to generate 100 watts of electricity.

Although he is not off the ComEd electrical grid, his system does save him some money, although he did not know how much. He said if he added more solar panels and a bank of batteries, "then I would be independent" of the electric utility.

Arendovich said homeowners could, for example, put up 10 to 15 solar panels to charge batteries, which could light a house's outdoor decorative lights.

Although a cost/savings ratio may not justify the initial expense of a solar cell array in the short term, Arendovich encourages people to try it at least in a small way.

"It's not the point of savings," he said. "It's just getting into it."

He said there are less expensive ways to save energy in a house.

"In my house, 95 percent of my bulbs are those florescent bulbs," he said. People should use bulbs of lower wattage than the common 60 or 75 watt bulb, he added.

## Hobby turned business

Hamstra, Halbleib and Bieschke, along with Mel Gehrs of Downers Grove and David Cloud of Chicago, in 1998 formed NetGain Technologies, a company that has developed a gasoline-electric hybrid power system for vehicles.

The team first built a dragster using the hybrid retrofit system, in which the vehicle's drive shaft is taken out and an electric motor is placed behind the transmission.

The company sells a system that is targeted to delivery trucks, he said. A UPS truck gets about 7 miles per gallon.

Hamstra said the key to the system was



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Staff photo by Ron Koopmann

**Peter Arendovich of Lemont, who is conscientious about the environment and conserving energy, uses solar panels in his yard to make electricity. The electricity charges batteries and is converted to AC for use in his house.**

"when to apply strategic amounts of electrical assist (to the gasoline engine)," he said.

The company, which has an office in Lockport and a garage in Lemont, is now selling the system for between \$4,000 and \$4,500 for rear-wheel drive vehicles, especially delivery trucks. Those vehicles start and stop many times during a typical day, which makes the hybrid retrofit system more economical, Hamstra said.

"What we are seeing is a 30 percent increase in fuel economy," he said.

"This started out as a hobby and it's rapidly becoming a big business," Hamstra said.

## Eco-friendly village

As for the public sector going green, the village of Lemont may have its first environmentally designed building, otherwise known as a green building, within a year when it builds a new police facility.

The new Lemont police station may include green features. Village Trustee Jeanette Virgilio said village officials are looking into options of constructing the building to make it more energy efficient.

The Lemont Public Works Department

follows federal regulations in setting the thermostat in buildings, according to Dan Fielding, director of public works.

"As far as cleaning products, we use environmentally friendly products," Fielding said.

He said the village complies when ComEd asks it to lower energy consumption — as during a spike in electricity use during a hot spells — in its water wells and public buildings.

"We do things like make sure lights are turned off when not needed," he said. Lights are programmed to go off, leaving only enough lights on for security purposes.

At Lemont High School, temperatures inside the building and the ventilation system are controlled electronically.

"We have an automated building management system that controls heating," said Tony Hamilton, director of school and community relations. He added the overhead lights in the hallways switch off when students are in class, and come back on for the 5-minute period when they change classes.

"Our bathroom lights are off. They have a sensor that detects when someone comes into the room," Hamilton said.

The high school also has an active recycling club, he said.

A building in the Forest Preserve District of Will County represents a prime example of governmental bodies thinking green.

Bruce Hodgdon, the media liaison for the Forest Preserve District, explained a green building basically is, "a building that reduces energy use and makes use of recycled materials in its construction."

The Forest Preserve District's Sugar Creek Administration Center in Joliet opened in 2003 and was constructed as a green building.

The building's electricity runs partially from power generated by 46 solar panels, which provide 20 percent of the building's energy on sunny days. This energy is then used to run their computer and communication systems, in a clean and nonwasteful manner, according to a pamphlet from the Forest Preserve District.

Another feature of this green building is its outer wall construction. Mimicking limestone or flagstone, stained and molded concrete is formed. Compared to natural stones, the use of concrete costs four times less, according to the district's pamphlet.