

Valley News Dispatch

Homeowners aim to curb energy costs with solar panels

By Rossilynne Skena
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Nick Mudrinich likens solar energy to the country song "Take This Job and Shove It."

If more people used solar, he said, they "could tell OPEC to take their oil and shove it."

Mudrinich had 10-kilowatt solar panels installed behind his Upper Burrell home at the beginning of the year, making him a solar pioneer in the Alle-Kiski Valley.

Joe Morinville, COO of Energy Independent Solutions, has coordinated the installation of a handful of solar panels at homes in the Alle-Kiski Valley, including Mudrinich's.

Government programs lowering the cost for solar energy stimulated Morinville's business during the past 18 months.

State energy standards mandate that by 2020, 18 percent of all energy must be created by alternative means. Of that, Morinville said, a half-percent must be solar.

Once homeowners capture solar energy to produce electricity, they can sell the rights to utility companies, like selling natural gas rights.

"You get to clean up the environment," Morinville said. "You get to generate your own energy, and it turns out to be a good investment at the same time."

It's impossible to say what a solar panel array will produce tomorrow, Morinville said, but it is possible to tell with accuracy what it will produce over three years.

His company gives customers estimates of what their systems will produce, based upon 10 years of national weather data.

GROUND-MOUNTED SOLAR

Since Mudrinich's panels were installed at the beginning of the year, they've already produced 11,361 kilowatt-hours of electricity, and he expects that will increase to 13,000 kwh by year's end.

Typical estimates point panels like his at producing 11,000 kwh per year.

Mudrinich's panels are beating estimates because they're optimized, meaning they face south and are slanted at 30 degrees, helping them produce as much electricity as possible.

From the front of his home, the panels are hidden from view. But go around back, past a small garden of sunflowers, and the panels come into view like an ultra-modern art installation sprouting from the Earth.

Two panels -- called an array -- are about 12 feet tall by 60 feet in length.

The solar panels power anything that uses electricity in the house. The home's electrical system doesn't notice a difference between solar power and power brought in from the power company.

In a way, the system is like a mini power-plant.

The panels crank out electricity all day, and if more energy is being pumped out than is used, it goes to the power line for use by the nearest neighbor.

Typical houses use as much as 1,000 kwh of electricity per month, Mudrinich said.

He said that, so far, he has only had to buy 1,700 kwh for the year.

The system cost \$68,000, he said, defrayed by state and federal money, plus a monthly check for Solar Renewable Energy Certificates.

"This is paying for itself right now," Mudrinich said.

Mudrinich, owner of Ac-Cel Windows and Siding in Lower Burrell, said he's always wanted to get solar panels.

"I want to be as energy efficient as I possibly can," he said.

To add to that, he said, seeing zero on his electric bill isn't bad, either.

Mudrinich has big dreams for solar energy, saying electric cars can be charged with solar power, eliminating fossil fuels from the equation.

He sees a future for solar energy and hopes more homeowners will take note.

"That sun's not going anywhere," he said. "It if does, we're all up the creek."

ROOF-MOUNTED SOLAR

The other option for homeowners looking to use solar energy is roof-mounted panels, such as the ones Jon Love installed at his Natrona Heights home.

Love's panels were turned on in the beginning of September, and a special meter was installed that can go both forward and backward for energy

consumption.

Like Mudrinich's ground-mounted panels, excess energy is pushed out to power lines for use by neighbors.

"My personal motivation for doing this was probably 50-50, financial versus environmental," he said.

The system has generated about 1,162 kwh so far, and he's only had to buy 237 kwh.

It reduces the power the Love family consumes by 83 percent.

There are 3-foot by 5-foot panels on his roof, making for a total of 96 by 160 square feet.

Four panels face east, four west and 24 south at a pitch of about 20 degrees.

Part of his decision-making was having a southward facing roof, the best direction for solar, with a close-to-optimal pitch.

Love can monitor each panel online in real-time. The online program charts system output for each day and shows how much each panel is outputting.

"It's cool to reduce the amount of coal," Love said, referring to coal-fired power plants.

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