

Case Study: Residential Solar Energy

Be president of your own utility

In March 1999, “Taso’s Electric Company” became reality. Taso Karas is the president of the firm. He has one customer — himself.



Taso Karas uses solar power to heat his Willamette Valley home.

Taso Karas invested in his solar electric system for its environmental benefits. Karas left his native Greece 40 years ago and settled in the Los Angeles area. After 20 years there, he saw that the life style, pollution and climate were taking a toll on his health. He made a commitment to change his environment. He wanted clean water, clean air and organically-grown foods. He also decided to move to Oregon.

When building his new home in the Southern Willamette Valley, Taso Karas decided to invest in solar. A local solar contractor installed the system with batteries for back up during times of power outages. Most of the time, his excess solar energy is fed into the local utility power grid. He also had a solar water heater installed.

“I received financing for the solar systems with the State’s Small Scale Energy Loan Program,” Karas said. “If it hadn’t been for the state program with only 7 percent interest, I would not have been able to afford it.”



Taso Karas is president of Taso’s Electric Company.

Karas also received a tax credit for installing a solar electric system and solar water heater. Tax credits are available from the Oregon Office of Energy’s Residential Energy Tax Credit Program.

His photovoltaic system produces electricity that goes back to the utility when he collects more than he can use. Even when it isn’t

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sunny, the solar electric system produces some energy. His solar water heater provides a little more than half of his annual hot water needs.

“Even if it costs extra, it’s worth it. People think it costs lots of money, but it saves you in the long run,” Karas said. “My electric bill use to be \$100, but last month it was only \$16.”



Taso Karas says solar is a good investment.

With the investment in solar comes an added benefit. You become president of your very own electric company.

System Details

System type: Solar electric and water heating
 Array size: 1,600 Watts-peak (under standard test conditions)
 Solar modules: (16) Siemens SR 100 modules
 20-year warranty
 Inverter: Trace 4048 with 72 hours of back-up battery power
 House: Built in 1996
 Propane heated
 Energy-efficient lighting, appliances

State Tax Credits for Solar

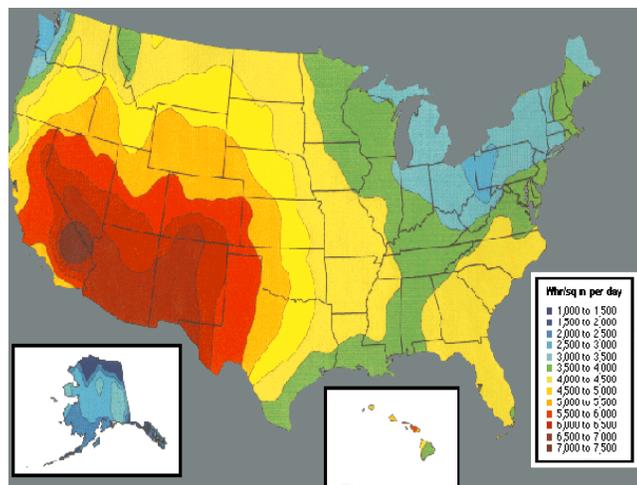
The state of Oregon provides tax credits for homeowners and businesses that invest in renewable energy sources, energy conservation and recycling.

Consumers can receive a tax credit for installing solar electric or solar water heating systems in their homes. The tax credit is based on system performance and is a maximum of \$1,500.

Businesses can receive a tax credit of up to 35 percent of the cost of the system. The credit is over five years. Unlike the residential tax credit, an application must be submitted **prior** to financially committing to the project.

Performance and Economic Details

Energy produced: 1,700 kWh per year (estimated)
 Energy value: \$260 per year (water, electricity)
 Equipment cost: \$18,000 (before \$3,000 tax credit)
 Installation cost: \$3,500



Oregon’s Solar Resource

Oregon’s solar resource varies substantially with the season. On an annual basis, however, Northwestern Oregon gets as much sun as the national average. Southern and Eastern Oregon get as much or more than Florida. Because of our cooler temperatures, solar collectors in Oregon are more efficient, and also have greater opportunity to collect the sun’s energy.

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