You're planting the seeds for solar.

Please accept this ready-to-plant, seeded paper card as a token of our appreciation for your support of SNAP.

2018 SNAP Purchaser Annual Statement

Dear SNAP Supporter,

Your support of the **S**ustainable **N**atural **A**lternative **P**ower program is helping create more renewable power in our communities.

We hope you will continue to support this worthwhile program.

Thank you.

WELCOME to your 2018 SNAP Annual Report

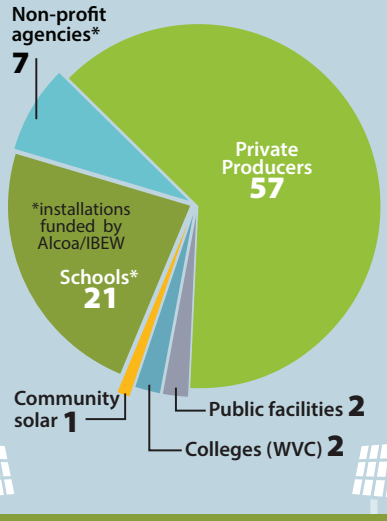
Inside:

- **Meet the Morgan family and their energy-saving AND -producing home**
- **Welcome new producers**

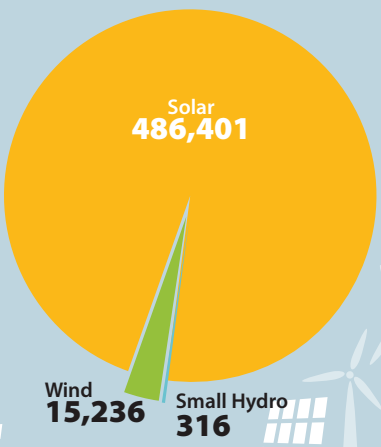
Continued inside

A SNAPshot of 2018

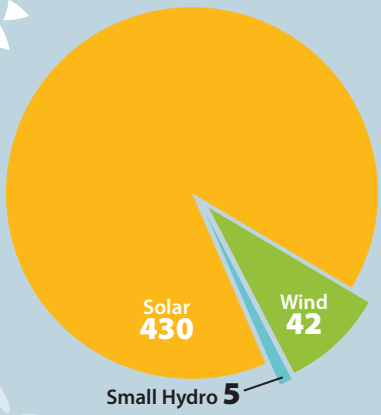
Number of SNAP Sites: 90



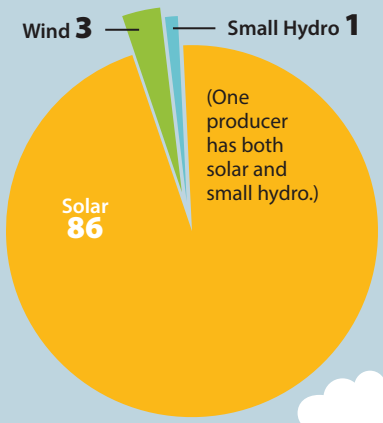
Generation: 501,953
(kilowatt hours in year ending 3/31/18)



Capacity: 477 (in kilowatts)



SNAP Producers by type



Note:
An average home in Chelan County uses approximately 22,000 kilowatt hours of electricity per year.

Left: Solar panels at the Morgan home generate enough electricity to meet the energy-conscious family's needs. Right: David and Christine Morgan with daughters Sasha, 15, and Amelia, 7.

Meet David Morgan:

Watershed coordinator for the Chelan-Douglas Land Trust, electric car owner, energy conscious consumer and solar energy producer. To say that David walks the talk is an understatement.

Still, it seems somewhat surprising that in Chelan County, where hydropower is abundant and inexpensive, the solar panels at the Morgan house are producing about as much energy as the family of four consumes. Even with charging a plug-in vehicle.

"We're weirdos, I guess," David said.

Not weirdos. Just **laser-focused on the future** and doing everything possible to prevent climate change.

David and Christine Morgan live with their two children in a 1,300-square-foot home in Aldea Village in Leavenworth. They started with 20 rooftop solar panels two years ago, then added six more last year.

Over the past year, the Morgans have **produced as much energy as they have consumed.** Their system generates more than enough energy to meet their needs, except during the coldest winter months.

A combination of factors are at work here. The home is small. The solar panels are newer and produce more power — up to 300 watts per module, compared to 165 watts at the small solar structure installed in Aldea Village by the Alcoa Solar Endowment in 2005.

The home uses wall heaters. Up until last winter, the Morgans supplemented the heaters by burning wood. However, since they installed a ductless heat pump last July (and **received a $1,000 PUD rebate**), the wood stove hasn't been necessary, David said.

The ductless unit can also provide cooling in the summer, if the Morgans choose to use it. In the past, they have foregone air conditioning.

They're super-pleased with the ductless heat pump. "We had lived in Denmark for a while where they had these (ductless units). **It's been really good for us."**

One ductless unit keeps the open-floor-plan home cozy. The efficient **ductless system is a big improvement** over noisy wall heaters and the messy wood stove, David said.

The Morgans also installed an **energy-saving heat pump water heater,** taking advantage of the PUD's **$500 rebate.** It's a little louder than expected, David said, and it releases cold air. That's fine in the summer, but creates a need for more ambient heat in the winter. (PUD experts suggest David try setting the water heater to operate in traditional mode when the cool air becomes an issue, then switch back to energy-saving heat pump mode at other times. And David says the water heater — a GE GeoSpring no longer manufactured — is "not perfect but I would still recommend it." Newer models are quieter, he notes.)

The Morgans line-dry their laundry, too.

But back to the solar panels.

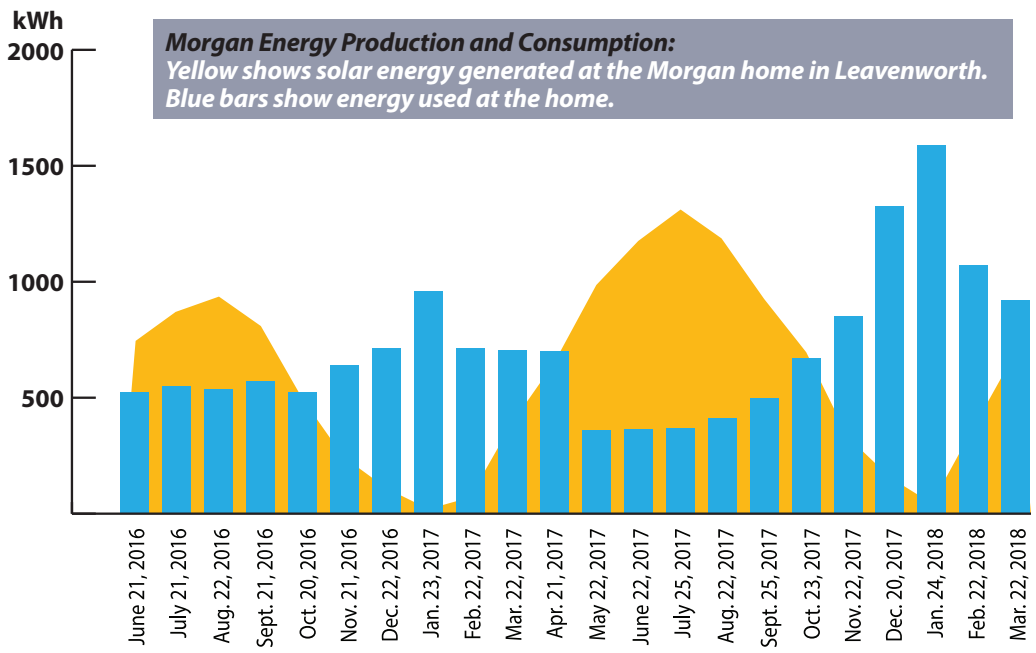
Jim White, senior energy efficiency engineer, said the Morgans are the first SNAP producers — and possibly the first PUD customers in the county — effectively to achieve net zero. At times they use more energy than they produce; at other times they produce more than they consume.

That was the idea, David said.

"This is something we wanted to do for long time," he said. "We had to save up the money, and with the state program (which incentivizes solar installations and sunsets in 2020), thinking about the math, we knew if we didn't do it, the payback would be prolonged.

"Although the payback is not that important," he added. "This was primarily to **do something for the environment.**

"Every year is the hottest year in history," he said, adding that he'd like to see faster action to reduce climate impacts on the local, national and global level. But "ultimately you can only be responsible for your own behavior," he said. "We're happy to be able to do this and **we have made it a priority."**



Morgan Energy Production and Consumption:
Yellow shows solar energy generated at the Morgan home in Leavenworth. Blue bars show energy used at the home.

Welcome, new producers!

Three solar producers joined Chelan PUD's Sustainable Natural Alternative Power (SNAP) program in the past year. Together they added 35.6 kilowatts of capacity to SNAP, which is now in its 17th year. Generation for 2017-18 totaled 501,953 kilowatt hours, enough to power 23 homes.

P.U.D. CHELAN COUNTY

Find more on solar and wind energy at **chelanpud.org/about-snap**

New producers and their kilowatt capacity are:

- Matthew Crane, Wenatchee, **5.4**
- Jerry Rowe, Wenatchee, **2.25**
- Stemilt Growers' new facility, **28**