

RACE FOR GEORGETOWN UNIVERSITY ENERGY PRIZE ENTERS HOME STRETCH

Summit County is among 50 semifinalist communities competing for the \$5 million Georgetown University Energy Prize. The competition encourages the development and implementation of plans for a replicable, scalable and continual reduction in the per-capita energy consumed from local natural gas and electric utilities. The competition measures reductions from June 2015 to December 2016.

Communities are being judged in part on their ability to:

- Spur innovative approaches for communities to decrease their per-capita energy usage
- Highlight best practices for communities working with utilities, businesses and their local governments to create and implement inventive plans for sustained energy efficiency
- Educate the public and engage students in energy-efficiency issues including methods, benefits and the environmental costs of the full fuel cycle

With only two months left in the competition, Summit County is officially in fourth place (according to the GUEP's database). But Mary Christa Smith, project manager for Summit Community Power Works, thinks those numbers don't tell the whole story.

"The GUEP database has not been updated to reflect the most recent efforts that our

community has put into making our homes, schools, and businesses more energy efficient," said Smith. "We've made such huge strides, especially in switching our bulbs to LEDs and installing solar panels. Our own data show a pretty impressive picture."

Smith shared the following statistics (with equivalencies) from SCPW's tracking efforts. These numbers represent the first 18 months of data (for residential properties only), from January 2015 through June 2016:

Electricity (+/- 10 percent):

- 35-million kw-hours
- 3-million in fees
- 50,000 tons of CO₂ not released
- 17,000 tons of coal not burned = enough to fill 170 railroad coal cars
- 10 million gallons of water not used for cooling purposes at coal-fired power plants

Natural Gas (for space heating, culinary and hot water, etc.: +/- 10 percent):

3-million therms
 \$2-million in fees
 3.3-million cubic feet not burned = enough gas to fill 130 hot air balloons

These impressive savings are possible because of the collective efforts of residents across Summit County—from the East Side, to the Snyderville Basin, to downtown Park City. "Everywhere



I've gone, people and their communities have been so receptive to the idea of making a switch—whether to LEDs, a smart thermostat, or solar panels," said Smith. I think people just understand that it makes sense—from a fiscal, comfort, environmental, and community perspective."

Below are four stories of Park City community members who have made the switches:

LED Switch: Katy Wang & Canice Harte

When Canice Harte opened the Park City Running Company in Quarry Village a year-and-a-half ago, he immediately starting noticing something irritating. "Once or twice a week, I would come in the store and notice one of the lights had burned out," he said. "Because we are a retail space, I needed to change them right away." After about six months of this, he decided to switch over the entire store to LEDs, which last much longer. Working with Danny Conway of Parley's Electric, Harte specified and replaced all of the fixtures. One thing he noticed after the switch was that the store remained cooler during the hot summer months (LEDs run on DC power, which means they don't create waste heat). "Not having to run the air conditioning as much was a

welcome and unexpected benefit," he said. Harte added that the LED lights also allow for more precision in the retail display. "The LEDs provide brighter, more concentrated lighting, which means a better overall retail presentation. Their light quality is much nicer than that of compact-fluorescent light bulbs, but it's also comparable to or even nicer than halogen bulbs."



The switch-out at the store went so smoothly that Harte and his wife Katy Wang decided to do the same for their home. "We worked again with Danny of Parley's Electric, which just made sourcing and installing everything that much easier," said Wang. "Of course, I would suggest folks try to make the switch by themselves, and if they run into issues, contact an electrician who has a good understanding of LEDs." Wang said

the biggest hiccup was installing the bulbs in fixtures with dimmers. "This was just a matter of trouble-shooting. We ended up switching out a few dimmer switches and making a handful of other adjustments." Wang said she noticed right away how much brighter the LEDs are, which has improved the lighting quality of their entire home. "I didn't realize until after we'd made the switch that our house had had a lot of dark pockets and corners. Our home feels so much



more inviting, simply because of the quality of the light." And although she and Harte said others should expect incremental decreases in their electric bills, she said they did see a 200-watt drop in their average bill—from 550 watts a month to 350. "Part of this can be attributed to the fact that our girls are getting older, so we aren't doing as much laundry," she said. "But a big chunk is definitely the LED switch."

**CONTROL SWITCH: Chris Eggleton
Managing Director of Operations
Destination Hotels Utah**

Chris Eggleton and his team at Destination Hotels Utah considered installing programmable thermostats at Newport Resort long before the county joined the Georgetown University Energy competition. "Smart thermostats were part of our initial master planning and design process in 2006," Eggleton said. "They are very much in keeping with the philosophy of Newport's two master developers—Jim Doilney and Marc Wangsgard." Eggleton explained the shared ethos of the Newport team: "Compassionate people and smart leaders look to the future first," he said. "You can make short-sighted decisions

to make a profit, or you can make long-term investments that reap rewards indefinitely. Jim, Mark, Chris Retzer (President of the Hotel's Commercial Association) and I all subscribe to the latter. And we've found that if you do the right thing, the business case usually follows."

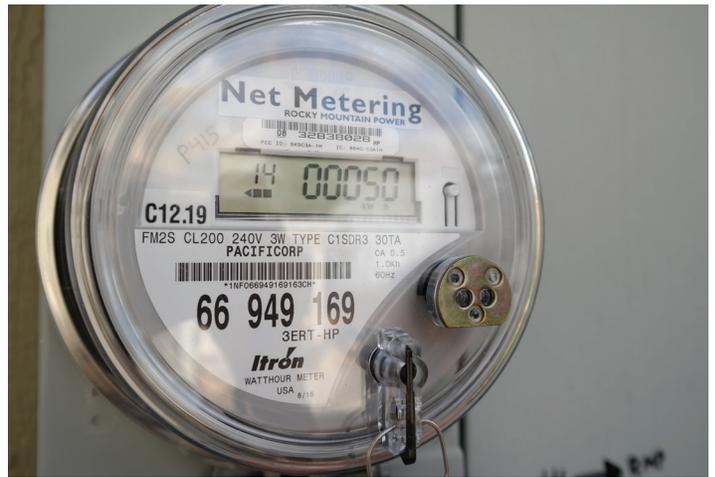
Between 2006 and 2016, the business case became a lot stronger. The cost of the system decreased by two-thirds, "but we also moved to a fiber-optic cabling, which enabled a wireless system," Eggleton said. "The increased bandwidth allows us to run the system without having to hard-wire the entire building."

The entire smart-thermostat system cost \$62,000 for the residential spaces and \$8000 for the retail tenants. The project analysis forecasted \$17,000 in savings in the first year alone, which would mean the project's return on investment would be a speedy four years! "But the other metric that drove our decision was manpower," he said. "Before the switch, our guests were



constantly having problems controlling their own systems. A substantial amount of work order calls were due to lack of understanding. Our ability to permit all associates to control the system remotely—via computer, tablet or mobile device—has cut down way down on these calls, reduced energy consumption dramatically and made our guests a lot happier.”

The system relies on sensors to gauge occupancy. “Each of our guest rooms has up to three sensors—one in the bedroom, one in the living room, and one on the private balcony,” Eggleton said. He said the single biggest source of savings has come from vacant rooms. “Now we are confident that a room—which may be vacant for several consecutive days in the off-season—isn’t being needlessly conditioned.”



based data analytics company. “But the biggest motivator is my family’s comfort. The main living space of our house has cathedral ceilings and lots of windows, including two large picture windows on the second story. This room of the house is always chilly in the winter, to the point where I sometimes walk into the room and wonder if one of my children has left the window open.”



COMFORT SWITCH: Michael Dowling & Family

As a member of the SCPW board, Michael Dowling wants to make sure the comfort switch—a home energy-efficiency assessment—is as easy and effective as possible. So he signed up to be the guinea pig for the program. The assessment is based on the Department of Energy’s Home Energy Score, a 10-point scale that tells you how your home measures up in efficiency, and also provides tips and strategies for improvement. “Of course I want to save money and reduce energy derived from fossil fuels,” said Dowling, CEO of Klerede, a Park City-

By going through the DOE home energy assessment, Dowling learned that the windows—because they are so inefficient—draw heat away from the center of the room, creating micro-climates that chill the entire space. The home energy audit provided one very simple suggestion: covering the two second-story windows with window treatments will dramatically improve their efficiency—bringing them from an R3 to an R38. (The R-value of a window indicates its level of insulation.) “This simple fix will make such a positive difference in the comfort of our main living area.” Dowling said that he and SCPW wanted to dispel a few myths about home weatherization: that it’s difficult and disruptive. “Many of the key fixes aren’t intrusive, and will just make your home so much more livable,” he said. Right now, the county is offering discounted home energy assessments to the first 100 people for a 75-percent discount. Visit the SCPW website for details.

POWER SWITCH: Jill & Ed Orschel

Ed Orschel, who describes himself as a “small footprint kind of guy,” had been wanting to put solar panels on his house for 25 years, but the technology never seemed advanced enough and the price always seemed too high. Happily, the time is finally right from both aspects; the technology has matured enough, and with the Mountain Town Community Solar program, the Orschels said it would have been fiscally imprudent not to switch. “I can make the same monthly payment, but instead of paying it to some faraway company, I’m adding value to my house,” Ed said. “And the panels have gotten more productive, which means you need fewer panels to produce the same amount of power.”

The Orschels said the conversion process was surprisingly straightforward and relatively fast. “We started by filling out the questionnaire on the SCPW website,” Ed said. “Once we completed that, Alpenglow Solar conducted a home evaluation using Google Earth to determine the home’s orientation and whether the tree lines would be an issue.” Representatives from Alpenglow then conducted a home inspection to figure out where the power would be connected to the panels and other details. Once Alpenglow had all of the information, they presented the Orschels with a proposal, “and we agreed to their terms,” Ed said. “Then we got going!” The installation itself took only a few days.

When asked why he didn’t wait until battery technology is available that will enable on-site storage, Ed responded, “When the batteries come online, we’ll add them to the system. That way, we won’t have to pay the \$10 monthly charge to Rocky Mountain Power to stay attached to the grid. We’ll be able to be fully off the grid. But the panels by themselves still make sense as an investment today, especially with the competitive

pricing offered through the community solar program.”

The Orshels paid \$10,000 for their 3200-watt system, which will provide about 90 percent of the power for their 2400-sf home. This price tag does not include nearly \$4000 they can deduct from their federal and state tax returns.

Jill said that the most heartening aspect of making the switch was the community conversation that accompanied it. “It’s been so much fun talking to our neighbors about the process and the benefits,” Jill said. “The groundswell of enthusiasm that’s been generated by SCPW has been absolutely infectious! And that’s what it’s really been about for me—being part of something bigger to collectively improve our community and our world.”

Visit [Summit Community Power Works](#) to learn more about the switch programs and to share your switch story.



