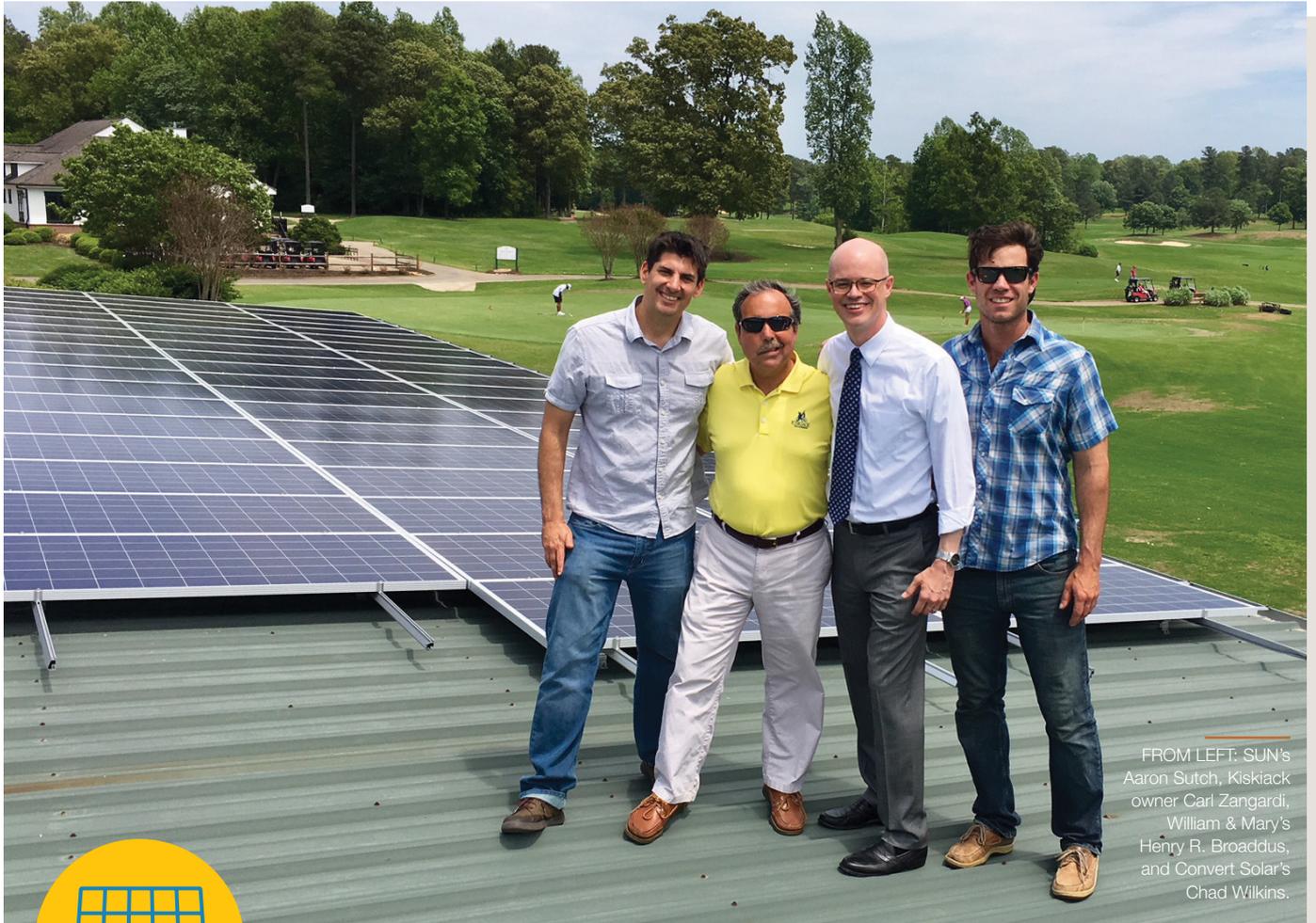
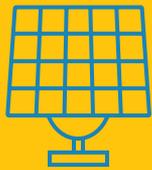


Sunny Days Ahead



FROM LEFT: SUN's Aaron Sutch, Kiskiack owner Carl Zangardi, William & Mary's Henry R. Broaddus, and Convert Solar's Chad Wilkins.



KISKIACK GOLF CLUB IS PROVING A VOCAL PROponent OF USING RENEWABLE ENERGY TO POWER GOLF COURSES // by ARTHUR UTLEY

Bright, sunny days are always welcome by golfers wherever they play.

Those sunny days are especially welcome at Kiskiack Golf Club where solar panels installed on the maintenance building roof are soaking up rays and producing sustainable electricity for the club's physical plant.

Kiskiack, located a quarter mile north of Interstate 64 at exit 231 near Williams-

burg, has gone green thanks to a pioneering effort by owner Carl Zangardi.

The golf course is the first in Virginia to tap into solar energy production. The 88 rooftop solar panels were introduced in a ceremony in mid-May. Kiskiack went online June 1, and 53 days into production, they had generated about 3,600 watts of power.

Over time in the current setup, the panels are expected to offset between 20

and 25 percent of the club's power usage, including charging the fleet of electric carts, and save around \$5,000 annually on the electric bill.

A WISE INVESTMENT

Zangardi, an investment professional for more than 25 years, earned a master's degree from William & Mary and is an executive partner at the W&M's Raymond A. Mason School of Business. He and his



Sun-soaked days are great for more than golf at Kiskiack, the first Virginia course to use solar power.

wife, Cindy, took ownership of Kiskiack in 2016. He has been a member at the semi-private club, which opened in 1997, since the early 2000s.

“I’ve always liked Kiskiack because there are no houses on it. It is a spectacular walk, especially in the evening,” Zangardi said.

Zangardi is a vocal proponent of green energy as a method for reducing costs.

“I’ve done solar at this stage. I’m probably going to add panels by the end of the year, and then I’m probably going to look at something wind-wise within the next couple of years,” he said. “We’re really blessed because we have our own water so we don’t have to use city water, and [we’re] producing about 20 percent of the electricity with the initial panel. ... I thought solar was a very good thing to have.”

Shortly after becoming Kiskiack’s owner, Zangardi contacted Dominion Energy about green energy, but, “They weren’t interested in talking at my scale. ... I couldn’t get anybody to help me with this,” he said.

“I would like to have a screen display showing what we are producing. I get a kick out of it.”

-Carl Zangardi

Zangardi called around looking for contractors who were doing solar. “Along comes William & Mary, where they knew I had an interest in sustainability, and SUN and we created the relationship with Aaron,” he said.

SUN is Solar United Neighbors, a non-profit organization that helps communities go solar through programs, fights for energy rights and advocates for non-partisan legislation that is going to help build solar in the commonwealth.

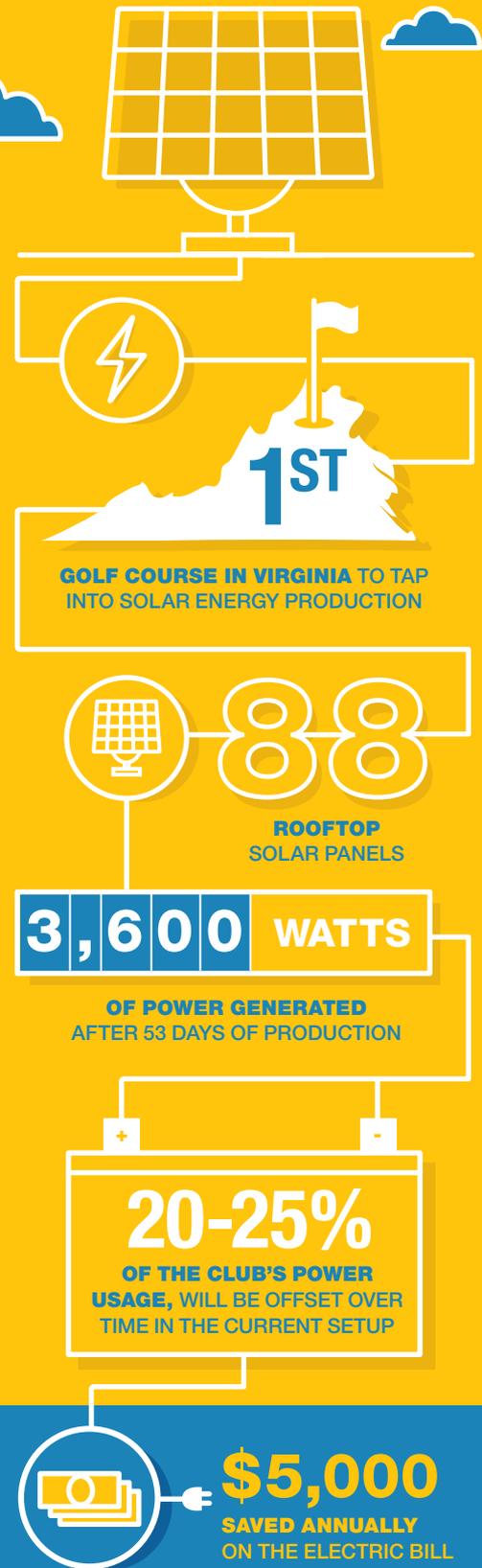
Aaron Sutch is the Virginia program director for Solar United Neighbors, which launched the Hampton Roads Solar Co-Op that Kiskiack joined.

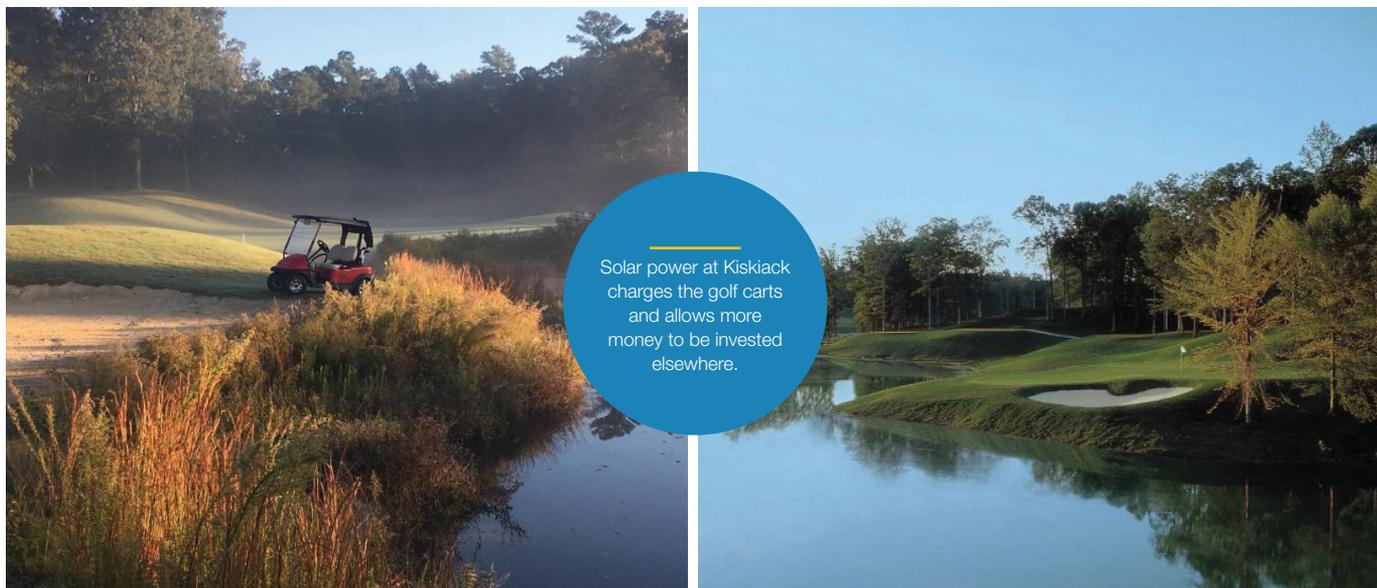
“Solar is a relatively new technology, at least here in Virginia,” Sutch said. “Our main program focus is on solar co-ops which the Hampton Roads Solar Co-Op is an example. [The co-op] is a loose-knit community group that helps communities go solar.”

COMMON BARRIERS AND GETTING STARTED

Two of the common barriers to solar are cost and education.

SOLAR SAVINGS





Solar power at Kiskiack charges the golf carts and allows more money to be invested elsewhere.

“We guide [co-op members] through the process to see if it’s a good fit then leverage the numbers of the group to bid out to a single installer. The group selects the installer and through the group economics of scale, the participants are able to get a pretty substantial discount,” Sutch said.

“From the time we started, Carl really had an interest in it from a business angle. ... He obviously wanted to get some environmental benefits. He saw the value in solar technology and the value of the group—he was looking into it for a while. A lot of folks have similar stories: I’ve been looking into this, but where do I start? How do I know about the technology? How do I know about vendors? I think that was really the value of the co-op to him.”

The Kiskiack project cost \$54,000. The payback time is seven years but, “I could see that being accelerated over time. That’s assuming rates don’t go up,” Zangardi said.

The second panel array Zangardi is pondering would double the first and could

“You don’t have to go all or nothing with solar systems, you can get into relatively small systems to start out.”

–Carl Zangardi



increase the percentage of production to 35 or 40 percent at peak performance.

“I always like to err on the conservative side,” he said. “Even if I’m doing 15 to 20, it’s still worthwhile over time because it’s a 30-year life on these things.”

TRENDSETTERS?

Zangardi was in Ireland earlier this year and visited a shop, The Burren Perfumery in County Clare—“In the middle of nowhere,” he said—where they have solar. “[They] had a neat display in the shop that shows what they are generating, and we have the same capability, I just haven’t gotten to it. I think the [Kiskiack] members think it’s kind of cool.”

During the unveiling in May, attendees had the opportunity to climb on the maintenance-building roof to see the solar panels up close.

“I would like to have a screen display showing what we are producing,” said Zangardi, who doesn’t miss a day checking on the output. “I get a kick out of it.”

Solar United Neighbors has facilitated more than 700 installations in Virginia since 2014. One of those installations is the Rising Silo Brewery in Blacksburg, the only one in the Commonwealth using solar power.

Sutch said he would like to see more golf courses go solar. Zangardi suggested the VSGA could form its own co-op and help owners throughout the state with a co-op program.

“What we see is a lot of people over-estimating the cost. You don’t have to go all or nothing with solar systems,” Sutch said. “You can get into relatively small systems to start out. There is certainly a value producing clean, local energy. Carl essentially is becoming an energy producer.”

KISKIACK GOLF CLUB

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