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Solar panels present challenges to firefighters

Education, training program develops as arrays pop up on more homes

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It surprised longtime Calvert County fireman Tim Delehanty when he found out that lighting up a nighttime fire scene with floodlights could put his fellow firefighters in danger. The lights and strobes on the trucks can energize the solar panels popping up on Southern Maryland rooftops.

"Who would have thought it?" the Prince Frederick Volunteer Fire Department assistant fire chief said. "What's one of the first things we do when we show up at a fire at nighttime? We light the place up. Here we are placing ourselves in greater jeopardy. We didn't know. You have to cover [the panels]. It's unreal as to the position it places you in. You just don't know."

It's one of several things he's learned about solar panel installations in the last two years or so working with Brian Lazarchick, safety director at Southern Maryland Electric Cooperative. The two met when Lazarchick was going through Leadership Maryland training in 2014 and Delehanty gave a presentation to the group in his role as facilities supervisor and logistical support at the Maryland Fire and Rescue Institute at the University of Maryland, College Park. Since then, they have been working on a training and education program to inform first responders, and homeowners, of the dangers of working around solar panels



Prince Frederick Volunteer Fire Department Assistant Fire Chief Tim Delehanty has been riding fire trucks for more than 44 years. He is also the facilities supervisor and logistical support for the Maryland Fire and Rescue Institute at the University of Maryland, College Park.

and active electric grid connections.

"We saw there was a huge problem and we didn't really have all the answers of what the St. Mary's, Calvert and Charles county fire departments were supposed to be doing around these situations," Lazarchick said during an interview last week at his Hughesville office. He said more than 3,000 homes in the SMECO service area now have solar panels.

"If you drive through pretty much any part of the Southern Maryland anymore, you're finding these systems popping up on people's roofs right and left," Delehanty said. "Everybody was talking about it but nobody was gleaning any information, nobody was putting anything out there."

Lazarchick and his utility company colleagues starting getting an increasing amount of questions after the solar installation market began heating up in 2013, particularly when they were giving "Hot Line" demonstrations to firefighters around the region. The Hot Line Demonstration is a trailer with a "mini-neighborhood" electric grid that can be energized to

show first responders and others the dangers of touching parts of the system.

"We noticed as we were going out to the different fire departments, we would give our Hot Line Demonstration and the fire departments would be asking us what they need to do when they come across these houses that have all these solar cells on the roofs," he said. "Honestly, at the time, we didn't know much about it. We didn't have answers. We just gave the failsafe response to stay away from it; treat it as if it's energized and it can cause significant injury to you."

Their research brought up issues of "slip, trip and fall" hazards from the panels themselves and the conduit the electric cables run through, Lazarchick said, as well as issues with added rooftop weight — 4 ½ pounds per square inch — which leads to quicker roof failures in fires. There's also the concern of toxic and volatile fumes from both the panels burning and lead acid batteries overheating in systems with stored energy capability — hydrogen gas and hydrogen sulfide, to name



Brian Lazarchick, safety director at Southern Maryland Electric Cooperative, poses in front of on the large solar panel arrays at the SMECO Solar farm in Hughesville. The 5.5 megawatt installation has 23,700 panels sitting on 33 acres.

two. Few systems in the region have battery storage but that could change in the future.

But the biggest concern was the electricity flowing out of the panels in the daytime and at night with enough floodlights aimed at them. The danger exists on the rooftop as well as in the home where the power is designed to flow.

While SMECO has no regulatory role in whether someone installs solar panels, it is informed of the installation and inspects the required grid disconnect — that's the switch that allows two-way power flow between SMECO's electric lines and the home. It's also the only sure way to stop the power flow from the solar panels into the home or onto the grid.

The panel arrays can generate up to 240 volts and typically generate one amp of power, Lazarchick said. "One amp is more than sufficient to cause human injury," he said. "It takes less than half an amp to stop your heart."

The training program shows the type of disconnect switch used in the SMECO service area and where they are typically located so they can simply be turned off, cutting power to the home's fuse box. To render the panels inert, firefighters will have to cover them with black plastic or a tarp to staunch the flow of electrons.

"It goes over everything they need to do and it gives a background of solar installations," Lazarchick said of the training presentation. "It's not 100 percent done yet but I expect they're going to start training this summer. In our Hot Line Demonstration since [doing the research], we've been providing the fire departments and first responders with the information that we've learned through this [project]."

Both Lazarchick and Delehanty said the fruits of their labor will be available to anyone with an interest in these systems and those that work around them. Both

SMECO and MFRI will host the presentation on their websites, along with any other utility company or firefighting organization that wishes to do so.

"We already have some training that's in place that's based on information that we already gathered," Delehanty said. "By the end of the year, we might be able to offer the online component that would be available to everybody — anyone who would want to access it. The online component is the greatest way for us to reach the largest audience."

So far, Delehanty said he hasn't heard of any firefighters injured by rooftop solar arrays, either here or anywhere else in the country, though it's not a reason to be complacent.

"At the same time, you understand in the back of your mind that sooner or later it's going to happen," he said. "When that eventuality occurs, you want to have informed people who are prepared to deal with it."

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Business briefs

Domino's relocating 'pizza theater'

Domino's in Waldorf is celebrating its newly relocated "pizza theater" store by throwing a grand opening celebration 11 a.m. to 4 p.m. Saturday, Aug. 13.

The store will have a prize wheel that customers can spin for the chance to win free pizza, wings, Cinna Stix and brownies, in addition to a bounce house and face painter for the kids. There will also be giveaways such as Frisbees, cups and sunglasses, as well as a large one-topping hand-tossed pizza carryout special for \$4.99, valid on Aug. 13 only, according to a press release.

The new store, located at 2215 Crain Highway, features the new pizza theater store design which allows flexibil-

ity for a number of elements otherwise unheard of when it comes to the traditional Domino's store. Highlights include a comfortable lobby, indoor seating, open-area viewing of the food preparation process and the ability to track carryout orders electronically on a lobby screen. The store also has chalkboards to allow customers to express their creativity or leave feedback for the store team members.

"We are dedicated to the Waldorf area and are excited to bring yet another pizza theater to local residents," Adrian De Jesus, Domino's manager of corporate operations in Maryland, said in the release. "Our newly designed stores are open-concept and allow customers to watch their pizza being made, each step of the way."

Welburns help So. Md. Community Foundation with August sales

Get your caffeine fix while giving back to the Community Foundation of Southern Maryland during the month of August through the McDonald's McCafe For A Cause initiative.

The Welburn Family-owned McDonald's restaurants located in La Plata and the one on route 301 in Waldorf (next to Outback) selected the foundation to be this month's recipient and will donate 50 percent of Monday coffee sales, according to a press release.

McDonald's offers its coffee in many forms, hot or cold, iced, as a latte, frappe or espresso.

Like the Welburns, the Community Foundation believes

in a strong community. The foundation acts as a conduit for charitable donations to scholarships, endowments, corporate philanthropy and family foundations.

For more information about the Community Foundation, call 240-670-4483 or go to www.cfsomd.org.

Burke named president at Community Bank

Community Bank of the Chesapeake, headquartered in Waldorf, announced the appointment of James M. Burke as president and chief risk officer.

Burke most recently served as executive vice president and chief risk officer of the bank. As president, he will assume leadership for accelerating business development, brand

visibility and delivering targeted growth, while continuing to focus on the risk environment, according to a press release.

"Jimmy has been an integral part of our management team since joining the bank in 2005" CEO William Pasenelli said in the release. "It has been an honor to work with him. His expansive knowledge and understanding of the local banking industry, finance and corporate management will lead the Bank into the future."

Burke has over 20 years of experience in banking and prior to joining Community Bank he served as the executive vice president at Mercantile Southern Maryland Bank in Leonardtown.

Headquartered in Waldorf, Community Bank of the Chesapeake is a full-service commercial bank.

Business calendar

Friday-Sunday, Aug. 5-7

Roy Rogers hosting Law Enforcement Week with free combo meals for law enforcement Friday-Sunday, Aug. 5-7, Roy Rogers, 2690 Crain Highway, Waldorf.

Friday, Aug. 5

Town of La Plata hosts FOX 5 News Zip Trip 6-11 a.m. Friday, Aug. 5, La Plata Town Hall, 305 Queen Anne St., La Plata. Music, festivities, giveaways. Free. Parking in back lot of Sacred Heart Church only.

Thursday, Aug. 18

College of Southern Maryland Golf Classic and Sip & Swing set for Thursday Aug. 18, Swan Point Yacht & Country Club, Issue. Check-in begins 7:30 a.m., shotgun start 9 a.m. For more information, go to <http://foundation.csm.edu/news-events/golf-classic> or call 301-934-7647. Registration deadline is Aug. 5.

Sunday, Aug. 28

Community Foundation for Southern Maryland is hosting its sixth annual Kick Ball Tournament 1:30 p.m. Sun-

day, Aug. 28, Hallowing Point Park, 4755 Hallowing Point Road, Prince Frederick. For registration and sponsorships, go to <http://www.cfsomd.org/> or call Lisa McKinnon at 240-6704483.

Thursday, Sept. 1

Calvert County Job Fair is from 1-5 p.m. Thursday, Sept. 1, College of Southern Maryland Prince Frederick Campus. Employers can register by calling 410-535-4583, emailing slaglekr@co.cal.md.us or go to www.ealvert.com.