Solar Instructor Training Network (SITN) Partner Spotlight: Greater Lawrence Technical School

Last June, when most high school teachers were turning in their final grades and preparing for a summer break from their students, SITN instructor Charlie Kennedy was busier than ever. He’d just learned that his school—Greater Lawrence Technical School (GLTS) in Andover, MA—had won an award from the Massachusetts Clean Energy Center enabling them to give higher education opportunities to students in clean energy.

Kennedy set to work leading a team of five other instructors to develop a summer solar photovoltaic (PV) ‘Learn and Earn’ opportunity. Kennedy said, ‘On short notice we put together… an excellent group of teachers who helped develop engaging PV lessons including theory and hands on work’. Students were taught about the physics of how sunlight is converted to electricity as well as the math needed to perform a residential energy analysis to properly size a PV system. Students were given electrical lessons, safety training and practice installing solar panels on the school’s new mock roofs. The culmination of the program was installing solar on an Andover home built the previous year by GLTS building trades students and sold to some local residents. (continues p. 2)

KVCC holds ‘Best Practices Workshop’ as Capstone of SITN experience

The friendly Canton campus of Massasoit Community College in the Boston area was the perfect place to wrap up the Solar Instructor Training Network (SITN) experience. April 16 & 17 we held the capstone of the KVCC SITN program—the ‘Best Practices for Solar PV Instruction’ workshop. Instructors from both KVCC and Hudson Valley Community Colleges’ SITN program were able to get together to break bread, learn from each other and guest speakers, and share the excitement and challenges of teaching solar photovoltaic (PV) technology. (continues p. 3)
‘Greater Lawrence Tech.’ continued

Students worked with the company Astrum Solar and the local Solarize Andover representatives while completing the solar installation which went live in October 2014. After the training program, many of the students were able to complete internships with some local solar companies—putting the ‘earn’ into the ‘Learn and Earn’ program.

Charlie Kennedy has also worked to increase the solar content in his electrical program during the school year. Though the Massachusetts electrical curriculum does not yet include solar PV, Kennedy has found creative ways to fit the subject in amongst standard residential and commercial wiring. GLTS is currently working on upgrading its onsite PV training facilities. ‘Our plan is to have a working array on campus, along with an outdoor training location where students will design and install PV on a small roof and some simulated commercial roof top mounts as part of our electrical curriculum every year’ says Kennedy. ‘We want our students to gain knowledge and experience in all aspects of the electrical field that may help them acquire an entry level position as an electrical apprentice’.

2014 Another Year of Solar Job Growth

The solar industry added workers at a rate 20x the overall U.S. economy, and 1.3% of all new jobs in 2014 were solar jobs. These were the headlines that caught my eye from the Solar Foundation’s yearly report called ‘National Solar Job Census’. Using e-mail and phone surveys of solar employers, the ‘National Solar Jobs Census 2014’, hereinafter ‘the Census’, reports on the continued explosive growth of solar jobs as well as some cautionary information on employers’ outlook for the future.

There are 173,807 solar workers in the U.S. In our Northeast region, the leaders in solar jobs continue to be Massachusetts and New York which rank 2nd and 4th in the U.S. respectively in number of solar jobs. Vermont ranks 2nd in solar jobs per capita.

The Census tells us the majority of solar jobs are in installation (55.8%), with manufacturing at 18.7%, sales and distribution at 11.6% and project development at 8.7%. The installation sector is primarily composed of small companies—more than half employ 10 or fewer people. However, the number of companies with more than 100 employees has doubled since 2010. Increasing numbers of companies are now ‘pure play’ solar—half of them work exclusively in solar. Trends in future employment are upbeat—it is projected there will be 210,060 U.S. solar workers by the end of 2015. The Census projects wages will rise as employers are reporting increasing difficulty finding solar employees. Recent solar growth coincided with an economic recession when many workers experienced unemployment—including salespeople, electricians, roofers and construction workers. (continues p. 3)
**‘Best Practices Workshop’ continued**

Panel discussions included SITN instructors sharing successes and obstacles in integrating solar in their curricula and building their PV training facilities. What struck me while moderating these panels was the variety of situations the instructors face, from colleges with million dollar grants for solar training to rural high schools who use MacGyver-like ingenuity and student sweat equity to build solar training equipment. Some have institutional support for teaching solar, while others struggle to fit solar in while still meeting state electrical curriculum requirements. Having a variety of panelists meant each instructor could hear from a panelist whose situation they could relate to.

National SITN manager Joe Sarubbi shared successes the SITN has collectively achieved and also led a discussion with two solar employers—SolarCity and ReVision Energy. Instructors learned about hiring practices of solar employers and their outlook for future employment. This was the highlight of the workshop for Massasoit host Larry Wasko, who said ‘having actual business reps was very beneficial to understanding the needs of industry from their perspective related to new hires’.

Sharing ideas with other instructors was the workshop’s highlight for many. Joanne Coons said it was ‘inspirational to be around professionals who are dedicated and knowledgeable and touch the lives of our youth’. In this modern busy world, electronic communication seems to serve as a permanent stand in for face to face interaction. Not so for two days in Canton, MA where a group of instructors were able to really sit down and talk, share and learn as part of a community teaching solar.

**‘Solar Job Growth’ continued**

Solar employers had the luxury of an experienced pool of candidates. As the economy improves, solar employers must search harder and offer higher wages to find qualified people. More opportunity exists for young people seeking entry-level positions to compete in the job market.

Unfortunately, 62% of installation companies reported to the Census they would likely lay off staff or contractors if the federal solar tax credit expires as scheduled in 2017. What can SITN instructors do to help students prepare for this potential outcome? Nationally, SITN has promoted teaching solar as a ‘stackable skill’ incorporated into diverse programs; in the Northeast we’ve embraced this philosophy by bringing solar to electrical, building trades and engineering instructors. Instructors prepare students to have many tools in their toolboxes and be adaptable to the ever-changing economy. Many hold on to hope the solar tax credit will be renewed or solar will stand strong without it. It’s hard to imagine solar going away given its public support, record of job creation, and ability to fight climate change. The solar industry is full of innovative people who have made panels more efficient, marketing more effective, and developed financing options to make it affordable to many. The genie is out of the bottle and I don’t believe he’s going back.

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