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—Patrick L. Smallwood
NBCT, Clean Energy Technology Instructor

Green Power 101:

Studying Renewable Energy at The Center for Advanced Technical Studies—Now Purchasing Green Power

As more and more businesses, schools and other public facilities across South Carolina continue to embrace renewable energy, an innovative technical educational program is going one step further and making Green Power part of its student curriculum.

Located in Chapin, S.C., The Center for Advanced Technical Studies (CATS) is an innovative educational initiative that serves students from district five in Lexington and Richland counties. With its mission statement of “Creating the future by challenging the impossible,” the center is dedicated to fostering innovation in the classroom and to preparing students for advanced technological careers.

Students enrolled at any of the district’s four high schools are given the opportunity to take elective courses in 17 different highly specialized career and technology programs that include biomedical science, cyber security and aerospace engineering as well as many other program choices.

As part of its Clean Energy Technology (CET) program—one of the school’s advanced career courses—the center was able to install a Solar Demonstration Project as part of its Green Power partnership through Mid-Carolina Electric Cooperative and Santee Cooper.

“Our Clean Energy Technology program allows students to explore engineering and environmental science projects that focus on global implementation of clean and renewable energy,” said Patrick L. Smallwood, NBCT (National Board Certified Teacher), Clean Energy Technology Instructor. “We are very proud to have been the first school in the nation to offer this particular program that has now been adopted in other South Carolina schools as well as many other high schools and career centers in other states.”

With the installation of a dual-axis solar array at CATS, students in the Clean Energy Technology program can observe solar energy up close and interpret important data that will allow the Electric Cooperatives and Santee Cooper—as well as its residential and commercial members—to make more informed decisions related to future solar installations in our state.

Smallwood said that his students are excited about utilizing solar technology and that they are not only serving as great tour guides to explain the installation to visitors but they are also becoming renewable energy advocates—sharing their excitement with friends, relatives and neighbors.

“I believe having students actively involved in this technology is key to seeing future growth for the solar power industry in South Carolina and future careers for Clean Energy students,” said Smallwood. “We are very thankful to our donors for their contributions to the successful implementation of this solar project and to the Electric Cooperatives and Santee Cooper for supporting Clean Energy initiatives like Green Power in South Carolina.”

If you would like information about becoming a Green Power Partner and purchasing 100 percent renewable energy resources such as methane, solar and wind power, visit www.scgreenpower.com.
This Winter Let The Force Be With You

❖ Ward Off High Energy Bills. Programmable thermostats are a smart investment, and unlike the Force, they don’t have a dark side. These thermostats can turn the heat down when no one is home and turn it back up at a pre-set time so the temperature is comfortable when you return. A programmable thermostat can reduce energy use by 20 percent to 30 percent, which allows you to possibly save as much as $180 annually on utility bills. Experts suggest the most efficient temperature range is 68 °F to 72 °F during the day in winter when you are home, and 55 °F to 65 °F at night.

❖ Banish the Dark Side. The days are getting shorter, but with new LED lights you won’t have to worry about the approaching dark side—or about big energy bills. These bulbs use about one-fifth the energy of the old incandescent bulbs that Edison invented a century ago. And depending on the bulb you pick, you can save over $100 in energy costs over their lifetime.

❖ The Phantom Energy Menace. Computers, cable boxes, game consoles and other household electronics can be a phantom menace to your energy bill. They often drain down energy even when they’re not being used and you think they’re “off.” This phantom usage of energy drives up your energy bills. NRDC’s report found the average annual cost of all wasted idly or standby power is $165 per U.S. household. Make sure your electronic devices are either in energy-saving mode or completely powered down via a power strip or a timer when no one is using them.

SOURCE: Natural Resources Defense Council

Clemson University Celebrates Sustainability Milestone

Clemson University’s Ravenel District, served by Blue Ridge Electric Cooperative, is celebrating its 10th year of being a Green Power Legacy Partner and an EPA Green Power Partner. Over the past decade, Clemson University has embraced many renewable/sustainability initiatives, including the following:

❖ Clemson has increasingly utilized more and more solar energy to power buildings throughout its campus. Currently, solar panels provide electricity to the Fluor Daniel and the Life Sciences buildings, and there are plans to install solar panels to power Lee Hall III.

❖ Clemson has built the Clemson University Restoration Institute’s (CURI) campus in Charleston, South Carolina. The center houses the world’s most advanced wind-turbine drivetrain testing facility, capable of full-scale highly accelerated mechanical and electrical testing of advanced drivetrain systems for wind turbines.

❖ Clemson also created a sustainable environment minor, open to all majors and one of the first of its kind. The program is designed to familiarize students with the core values of sustainability, and gain an in-depth knowledge of why and how sustainability is approached.

Congratulations to Clemson University for 10 years of loyal support of renewables and sustainability for the state of South Carolina!

For more information visit http://ftpis.org/, http://www.clemson.edu/restoration/ and https://www.clemson.edu/sustainability/academics.html.