The Center for Renewable Energy (CRE) and the Center for Mathematics, Science, and Technology (CeMaST) hosted a conference entitled “Teachers in the Lead: New Illinois Learning Standards for Science” at Illinois State. The conference was part of the U.S. Department of Education and Illinois State Board of Education funded Illinois Mathematics and Science Partnership Workshop Institute Grant Program (WIP 5) created to organize teacher workshops around relevant classroom topics. Teachers that participated in WIP 5 workshops were invited to attend the conference, and the event was open to all teachers in Illinois.

Several of the teachers from the NGSS workshop presented at the Teachers in the Lead Conference, including those pictured below. Karie Brown-Tess of Urbana Middle School (at right) shared her curriculum for “Solar Reflection and Energy,” and Debbie Gaffney of Southwestern High School (at left) presented “Meeting New ILS for Science Standards through Engineering Putt Putt Boats.” All of the curriculum developed through the WIP 5 programs are being finalized and will be made available for teachers across the state to access via online sources.

The “Teaching Next Generation Energy Concepts with Next Generation Science Standards” WIP 5 workshop was coordinated by CRE and CeMaST to provide intense training and field trips for Illinois teachers instructing energy-related lessons to middle and high school students. The workshop ran for two weeks during each of the last two summer breaks, with one-day follow-up seminars during the school year. Workshop field trips included visiting Invenergy’s Grand Ridge Energy Center, E.ON Climate & Renewable’s Pioneer Trail Wind Farm, Illinois State University’s Renewable Energy Lab and Team Mercury Solar Car, Danville Area Community College’s Wind Technician Program, and a Solar House in Urbana. The teachers also attended The Illinois Renewable Energy Conference at Illinois State.

If you would like to become a member of the Center for Renewable Energy at Illinois State University, please contact Dr. David Loomis for details, by phone 309-438-7979, or by email dloomis@ilstu.edu.
Center Welcomes Jeritt Williams as STEM Education Coordinator

Jeritt Williams assists in the implementation of the Energy Learning Exchange, delivers professional development for teachers, and provides public and educational outreach. He has seven years of experience teaching Middle and High School Technology Engineering. Jeritt earned his B.S. in Technology Education at Illinois State University in 2007 and M.S. in Training and Development in 2012.

CRE and CeMaST Provide Smart Grid for Schools Training

The Center for Renewable Energy (CRE) and the Center for Mathematics, Science, and Technology (CeMaST) designed and implemented a Smart Grid for Schools program, offering teachers and students the opportunity to learn about the new Smart Grid technology being rolled out by utility companies in the state. The program is designed to engage K-12 students with Smart Grid concepts in a fun, hands-on way, while incorporating Next Generation Science Standards.

Professional development training sessions have been coordinated for teachers to become Certified Smart Grid Educators. Sessions included instruction on implementing Smart Grid lesson plans and curriculum. Interactive, hands-on exhibits are now visiting schools for optimal student learning, with tabletop models of an electric grid with smart grid functionality, plus life-sized models of rooms in a house (kitchen/dining room, bedroom/bathroom, and utility room model) to explain how smart grid works and its benefits.

CRE staff are shown demonstrating Smart Grid models. In the first photo, Matt Aldeman explains the tabletop model to teachers attending a Smart Grid for Schools workshop at the recent Teachers in the Lead Conference. The other two photos are from the 8th Grade Career Expo in Bloomington last week. Student intern Isaac Stroup shows students the benefits of Smart Grid with kitchen appliances, and Jeritt Williams engages students with a tabletop demonstration.

Center Staff Explains Renewable Energy Concepts at Schools

Dr. David Loomis, Matt Aldeman, and Jeritt Williams visited Pembroke Community Consolidated School District #249 to provide 130 students with challenges relating to harnessing and conversion of energy, power transmission, and careers in energy. Students in grades 4-5 made model turbines they could then take home for further experimentation. Students in grades 6-8 received a classroom set of model turbines, generators, solar PV cells, and other equipment to expand their learning throughout the year. More than a dozen teachers, from several disciplines for 2nd through 8th grade, also attended a half-day professional development workshop that included STEM breakout sessions. Plans are being made to further enrich the energy curriculum and after school programs at the school.

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Careers in Energy Week Celebrated October 13-19

The Center for Renewable Energy, Institute for Regulatory Policy Studies, and Center for Mathematics, Science and Technology work together to administer the Energy Learning Exchange (ELE) for Illinois. For Careers in Energy Week, an event led nationally by the Center for Energy Workforce Development, ELE mailed school kits to 300 middle and high school teachers that had participated in energy education workshops by Illinois State. Kits included Careers in Energy Week posters, a Get Into Energy flyer and notebook, a t-shirt for the teacher, and pencils and pencil sharpeners for students. Through ELE’s involvement in the Illinois Energy Workforce Consortium, ELE also coordinated a mailing of 1,000 packets to high school principals. The ELE website shared energy careers data plus powerpoint presentations, videos, and curriculum links for teachers to utilize during the week, and industry representatives were scheduled to speak in classrooms.

Photo provided by Pembroke CCSD #249.