Energy office receives $500,000 wind energy grant

The South Carolina Energy Office (SCEO) was awarded nearly $500,000 in funding in October from the U.S. Department of Energy (DOE) to study coastal clean energy potential in South Carolina over the next several years.

The SCEO will work alongside Santee Cooper, Clemson University, Coastal Carolina University, Savannah River National Lab, EcoEnergy LLC, and North Carolina State University to overcome existing barriers for coastal clean energy development for wind, wave and tidal energy projects.

“We’re tremendously excited about this opportunity to study and plan ahead for a potentially significant renewable energy resource for the state,” said SCEO Director John Clark. “We’re honored to work with these outstanding stakeholders to support efforts already underway.”

The three-year grant will be used to understand how coastal clean energy can be effectively transmitted to users, obtain data for a pilot offshore wind project in state waters and form the South Carolina Coastal Clean Energy Task Force to recommend a regulatory environment conducive to coastal clean energy development.

The grant will be used to study the feasibility of placing wind turbines up to 10 miles off the South Carolina coast.

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Volatile energy prices, energy security concerns, global warming and other environmental considerations, and the drain on our economy resulting from huge expenditures for external energy purchases have all combined to cause many observers to advocate a fresh look at state energy policy and where South Carolina needs to go in the future. A fresh look is an excellent idea, but we are fortunate to have a sound foundation upon which to build.

In 1991, when energy was far from the front-burner issue that it is today, a far-sighted legislator from Beaufort, Representative Harriet Keyserling, decided that the state needed a long-range vision of where we need to go, and she decided to do something to achieve that vision. As Chair of the Joint Legislative Committee on Energy, she appointed a high-powered, bi-partisan South Carolina Energy Policy Panel to examine needs and make recommendations. Chaired by Bill Verity, a Palmetto State resident who had served as Secretary of Commerce under President Reagan, the panel and its working committees met 65 times over a five-month period and issued a report that has stood the test of time surprisingly well.

Consider, if you will, the vision of the State Energy Policy enacted in 1992:

(a) ensure access to energy supplies at the lowest practical environmental and economic cost;
(b) ensure long-term access to adequate, reliable energy supplies;
(c) ensure that demand-side options are pursued wherever economically and environmentally practical;
(d) encourage the development and use of indigenous, renewable energy resources;
(e) ensure that basic energy needs of all citizens, including low income citizens, are met;
(f) ensure that energy vulnerability to international events is minimized;
(g) ensure that energy-related decisions promote the economic and environmental well-being of the State and maximize the ability of South Carolina to attract retirees, tourists, and industrial and service-related jobs;
(h) ensure that short-term energy decisions do not conflict with long-range energy needs;
(i) ensure that internal governmental energy use patterns are consistent with the State’s long-range interests;
(j) ensure that state government is organized appropriately to handle energy matters in the best public interest;
(k) ensure that governmental energy-related tax, expenditure, and regulatory policies are appropriate, and, wherever possible, maximize the long-range benefits of competition.

Specific results of the 1992 legislation included the first statewide residential energy building code; creation of a professional, non-political state energy office; mandatory energy use and cost reporting by state agencies, colleges and universities and public school districts; used oil recycling; tax incentives for energy efficient manufactured housing; integrated resource planning by power generating utilities; demand-side management reporting by electricity distribution utilities; energy efficiency performance contracting by public entities; and much more. Since then, new statutes consistent with the State Energy Policy have widened and improved the initial legislative results.

Now that we are 16 years down the road, a holistic update of the State Energy Policy and related legislation is certainly due, but I am pleased at how well the broad policies developed through the wisdom, leadership and vision of Keyserling and Verity have stood the test of time.

Old energy policy was remarkably far-sighted

John F. Clark
Director, South Carolina Energy Office

New biomass facility to be first source of commercial renewable energy

Santee Cooper, South Carolina’s state-owned public power agency, has agreed to purchase 50 megawatts of energy from wood waste biomass beginning in 2011 from Rollcast Energy, Inc., which is partnering with the South Carolina Department of Commerce, Newberry County and the Central South Carolina Alliance to build a new biomass facility in Newberry County.

The $170 million investment will be the first biomass facility in South Carolina generating commercial renewable power and is expected to generate 27 new permanent jobs, with up to 200 additional jobs that could be created as a result of contractor services and construction.

Biomass is the oldest form of renewable energy and provides a cost-competitive alternative to fossil fuel-fired plants. Other benefits include reduced emissions, retention of fuel expenditures within the state (South Carolina produces no fossil fuels), increased energy security and reduced waste, as biomass currently buried in landfills can be recycled to generate electricity.

The 50 megawatts of biomass energy, generated from area logging residues and urban wood debris, will be enough to power 25,000 homes. Construction is scheduled to begin in June 2009, and the plant is scheduled for energy production by 2011.
Residential tax credits on the way thanks to new federal legislation

When Congress passed the “Emergency Economic Stabilization Act of 2008” in October, the bill didn’t just provide relief to the troubled financial markets; it also extended tax credits for energy efficient home improvements including windows, doors, roofs, insulation, HVAC and non-solar water heaters. Tax credits for these residential products, which had expired at the end of 2007, will now be available for improvements made during 2009. Improvements made during 2008 are not eligible for a tax credit.

South Carolina Energy Office Program Manager Ralph Jenkins said that the tax credits will be beneficial in several ways.

“Given that one quarter of our nation’s energy is expended in the residential sector, the extension of these credits should have an impact on energy independence as well as reducing operational costs for the life of the home,” he noted.

The tax credit breakdown is as follows:

- Efficient windows and doors — 10 percent of cost, subject to either a $200 or $500 maximum depending on the level of energy efficiency
- Efficient roofing — 10 percent of cost, up to $500
- Insulation — 10 percent of cost, up to $500
- Heating and cooling systems — $50-$300
- Water heaters — $300

The maximum credit allowed is $500 (for all improvements combined) and all tax credits are available for home improvements “placed in service” from January 1, 2009 through December 31, 2009.

For further details on these tax credits and eligibility requirements for energy-efficiency home improvements, please visit the ENERGY STAR® Web site at www. energystar.gov and click on the tax credits button near the bottom of the page.

In order to claim the credit, you must fill out and attach IRS Form 5695 to your federal income tax filing. Just visit www.irs.gov and use the search function to find form 5695.

Senate reaches out on energy, water

The Senate Agriculture and Natural Resources Committee, chaired by Senator Danny Verdin, held three public hearings on energy and water in September. The hearings, held in Florence, Bluffton and Clemson, were intended to let senators hear from those who may not have been able to travel to Columbia and participate in the legislative process.

The hearings allowed committee members to gather feedback as they plan the next legislative session, which will undoubtedly include bills focused on both water and energy.

Each hearing began with an overview of energy and water issues presented by the South Carolina Energy Office and by the South Carolina Department of Natural Resources (DNR), respectively. Citizens then were given an opportunity to voice their concerns or interests about each of the topics. Altogether, around 300 people participated in the meetings.

“We received excellent feedback regarding vital resource issues from the people who are actually flipping the light switches and turning the faucets” said Gene Hogan, research director for the Senate Agriculture and Natural Resources Committee.

The Florence meeting drew more comments about the proposed Santee Cooper coal plant, while comments at Clemson focused more on the water quality in nearby lakes.

South Carolina considers natural gas exploration

A State-commissioned group instructed to study natural gas exploration off the coast of South Carolina continues to make steady progress.

The lease of federally-owned offshore land was made more feasible at the end of September, making the deliberations of the group more important than ever. Accordingly, representatives of the U.S. Department of Interior Minerals Management Service (MMS), the leasing authority for offshore mineral resources, explained to the committee the many layers of planning and assessment required before a lease can be granted. MMS representatives also reported that there may be as many as 14 million barrels of oil and 3.86 trillion cubic feet of natural gas off the South Carolina coast. Furthermore, they reminded committee members that federal legislation does not specifically permit revenue sharing with states in the South Atlantic, although such authority has been granted elsewhere.

In 2007, a Joint Resolution of the General Assembly created the 20-member committee, which includes legislators, representatives of utilities, environmental organizations, tourism interests and scientists. It was charged to “consider comprehensive implications relating to energy, economic development, tourism, commercial and recreational fishing, the environment, agriculture, manufacturing, public safety, national security, employment, and possible impacts on state and local economies and...seek expertise in order to consider these comprehensive effects.”

The South Carolina Energy Office was asked at the first meeting to present an overview of the state’s energy outlook to the committee, which was charged at the time of its inception to seek input from a variety of sources, including state agencies.
Charleston stadium undergoes major changes in the name of energy efficiency

Grass isn’t the only thing that’s green inside Charleston’s Blackbaud Stadium.

Eighteen months ago, officials representing the Charleston Battery, one of 11 professional men’s soccer teams that currently play in the United Soccer Leagues (USL) First Division, decided that it was time to start getting serious about going green. So they turned to Charleston-based non-profit Sustainability Institute for an energy audit. Now, a year-and-a-half later, the changes are startling.

Gone are the old appliances and energy-draining ice machines. In is a renewed focus on energy efficiency: water heaters are turned off after games and light bulbs have been replaced with more efficient models. On a grander scale, the team has installed an 11 kWh solar array as well as a geothermal heat pump.

And the team didn’t stop there.

“We’ve eliminated bottled water from the stadium completely. We now give away filtered tap water instead,” said team President Andrew Bell. “We also switched to 100% organics for our fertilizers and mow our grass with an electric lawnmower, which we think is a big benefit.”

The team’s goals and reasons for undertaking this initiative are explained via a statement on its Web site: “The Charleston Battery is committed to reducing its carbon footprint and minimizing its impact on the environment by becoming more energy efficient; by conserving natural resources; and by reducing pollution. The Charleston Battery is also committed to creating public awareness of the problems of climate change and to use Blackbaud Stadium as a case study for energy efficient and sustainable design.”

“At every game, we put up our message across the PA system. We’re telling people, ‘This is what we’re doing. It’s not impossible,’” said Bell.

The team president said the plan is to do more, if possible. Stadiums are notorious for their high energy use, something Bell doesn’t deny. “It’s shocking how much energy we use despite all of the changes we’ve made. We’re always looking to improve,” he said.

At the very least, they’re off to a good start.

CECAC recommendations

Following the 51 CECAC recommendations could lower emissions to below 1990 levels. Highlights include:

- **Carbon footprint:** A voluntary reduction in state carbon emissions to five percent below the 1990 level by 2020.
- **Energy supply:** A Renewable Energy Portfolio Standard of at least 10 percent of power supply from renewable resources and energy efficiency, including the encouragement of electric utilities to increase use of nuclear energy.
- **Transportation:** Increased use of biofuels and other alternative energy sources, along with expanded bike and pedestrian opportunities, and more mass transit and carpooling options.
- **Agriculture, forestry and waste management:** Expanded use of biomass for energy, along with sequestration of carbon in forests and farmlands.
- **Residential, commercial and industrial:** Increase in energy efficiency incentives and programs, improvement in building codes and appliance efficiency, and requirement that state and local governmental lead by example and incorporate energy efficiency into long-range community planning.
- **Substantial public education and outreach.**

The full 653-page report is available at www.scclimatetech.us
Hydrogen and fuel cell development in South Carolina: A look back at 2008 and a glance at 2009

By Mark Sieckman
South Carolina Hydrogen and Fuel Cell Alliance

Hydrogen and fuel cell development in South Carolina saw big gains during the past year. From the unveiling of the state’s first registered hydrogen vehicle in February to the arrival of the Hydrogen Road Tour in August, the Palmetto State’s emerging hydrogen industry continues to show no signs of slowing down.

It’s been more than two years since the birth of the South Carolina Hydrogen and Fuel Cell Alliance (SCHFCA), a non-profit group dedicated to the promotion of hydrogen and fuel cell technologies. It’s also been more than two years since the National Hydrogen Association (NHA) announced plans to hold its 20th Annual Conference in Columbia next March, a sure sign that South Carolina is quickly becoming a major player when it comes to renewable energy development.

Since the announcement, state and local organizations have come together to ensure South Carolina makes a big splash at the meeting, our nation’s largest annual gathering of the hydrogen industry. Columbia’s first hydrogen fueling station will be operational by February 2009 and will fuel a hydrogen hybrid bus provided by the Federal Transit Administration’s National Fuel Cell Bus Program. Another fueling facility will open in Aiken.

Federal awards have made 2008 a landmark year. In September, the SCHFCA received a $188,000 grant from the U.S. Department of Energy for hydrogen education initiatives. The South Carolina Research Authority was selected in October to implement the U.S. Department of Energy’s H-Prize, which competitively awards cash prizes to advance the research, development, demonstration and commercial applications of hydrogen technology.

In addition to the national attention our state is receiving, we have also made significant strides when it comes to industry involvement, attributed in part to the effectiveness of the USC Columbia Fuel Cell Challenge. In February, Millennium Cell/Gecko Energy Technologies announced plans to open a branch in Columbia to test manufacturing capabilities for fuel cell devices. In the spring, both Trulite and Boroscience received funding from the Fuel Cell Challenge to begin work on manufacturing for portable power generation and fuel cell components.

With the 2009 National Hydrogen Association conference right around the corner, our state’s government, business community and citizens will have the opportunity to see firsthand all the technologies that are reshaping the way we view energy and perhaps make next year a period of even greater achievements.

For more information...

South Carolina Hydrogen and Fuel Cell Alliance
www.schydrogen.org
National Hydrogen Association
www.hydrogenassociation.org
Hydrogen Hybrid Bus
www.hydrogenhybridbus.com

LEFT and BELOW: Visitors flocked to the Hydrogen Road Tour at the Bridgestone Firestone plant in Aiken. Those who signed up were given a chance to drive one of the hydrogen-powered vehicles on a short circuit.
The South Carolina Energy Office spreads the word

Catherine Vanden Houten speaks to children about the benefits of compact fluorescent lights at Bible Way Church in Columbia in September. SCEO was asked to join the church’s kick-off of their Genesis Project, an initiative designed to assist the church and its members to reduce their environmental footprint. Every family in the congregation received a notebook of information about lifestyle changes to help conserve water, energy and resources.

Elwood Hamilton speaks to a group of builders, realtors and homeowners at a conference in Spartanburg, S.C. that focused on green building practices.

Daniel Owen speaks to Columbia residents at the city’s second annual Green is Good for Business conference in September. The event was focused on drawing attention to the city’s efforts to combat global warming. The South Carolina Energy Office has been and will continue to be a partner in these efforts.

Ralph Jenkins and Catherine Vanden Houten discuss the new energy efficiency legislation at ASCEM’s fall conference. The legislation requires that public facilities cut their energy usage by 20 percent by 2020.
South Carolina hosts first solar tour and workshops

In October, the South Carolina Energy Office (SCEO) and the South Carolina Solar Council (SCSC) teamed up to coordinate the first state-wide solar tour and workshop series to educate homeowners and businesses about the benefits and application of solar energy in South Carolina in response to growing public interest.

Nearly 100 people attended the workshops, and approximately 150 people attended the solar tour. Separate events were held in Charleston, Greenville and Columbia. The events were also featured in publications such as The State newspaper and the Free Times in Columbia.

The SCSC was created in 2004 as a state chapter of the American Solar Energy Society (ASES), an advocacy and education non-profit organization. The SCEO has provided staff support and services to the organization, and energy office employees have chaired the SCSC since 2006.

Solar tour stops:

Argand Energy Solutions - Columbia
Residence of Viji and Bala Sashikant - Columbia
Residence of Brett Parks - Lexington
Residence of K.C. Stiglbauer - Columbia
Blackbaud Stadium - Charleston
Residence of Libby Smith and Charlie Sneed - Charleston
Auto Sound Specialists - North Charleston
Residence of Matthew Drake - Givhans
Cliff’s Cottage - Greenville

Joe James wins $100,000 prize for work with biomass energy

Joseph J. James, a South Carolina businessman and one of the founders of the South Carolina Biomass Council, has been named one of 15 nationwide winners of the 2008 Purpose Prize®. Funded by the John Templeton Foundation and the Atlantic Philanthropies, The Purpose Prize is part of the Encore Careers campaign (www.encore.org), which aims to engage millions of people in encore careers. James was one of six $100,000 winners.

James is working to ensure that black farmers and rural communities in the South are included in the new “green” economy. In 2004, he launched the Corporation for Economic Opportunity (CEO) to help improve the economic conditions of economically and socially disadvantaged communities and individuals. James became concerned that the nation’s black community would be left behind, unless an effort is made to inform and involve it in the nation’s growing “green” economy.

Last spring, he created a new initiative called “The Greening of Black America - A Rural Development Opportunity.” The Greening of Black America initiative works to create new jobs, revitalize rural communities, help black farmers retain their land and improve nutrition and health in inner-city neighborhoods.

The Purpose Prize challenges prevailing perceptions by investing in accomplished social innovators over the age of 60. Each year, up to six people who have demonstrated uncommon vision, determination and entrepreneurialism in addressing community, national and international problems win $100,000 each.

South Carolina Energy Office Director John Clark said, “We have been working with Joe for several years, and I am extremely impressed with his vision and his ability to bring together diverse parties for the common good.”
Over a hundred energy professionals from across the state attended the 2008 Association of South Carolina Energy Managers (ASCEM) Fall Conference, held on November 20 at the Saluda Shoals Park River Center in Columbia, S.C.

The theme for the conference was “New Energy Legislation and How to Deal With It” and featured presentations and panels of experts covering a wide range of topics.

Catherine Vanden Houten and Ralph Jenkins of the South Carolina Energy Office gave an overview of energy-related legislation resulting from the 2008 legislative session, which included laws pertaining to renewable energy, transportation and alternative fuels, and energy efficiency. They also discussed ways in which the SCEO can further assist energy officials in understanding this new legislation in the future.

There were also presentations and panel discussions regarding performance contracting, where perspectives were given from both the contracting side and the client side. Many state officials view performance contracting as one of the things public facility managers will be looking at to help fund energy efficiency building improvements.

The conference was also an opportunity to look back on the year that was. Two awards were announced: Energy Manager of the Year and Energy Project of the Year.

Jack Thompson was named Energy Manager of the Year; Mr. Thompson is energy manager for the Beaufort County School District. He was responsible for the overhaul of the district’s computerized energy management program. He oversees all HVAC maintenance and operations, and is closely involved with all new building operations to ensure maximum energy efficiency.

The Energy Project of the Year was awarded to Newberry School District, which performed HVAC renovations in three of its schools, saving over two million kWh of electricity and 47,880 therms of natural gas for a combined savings of $320,000 of taxpayer money. The renovations also prevented 3.5 million pounds of carbon dioxide from going into the atmosphere.

About ASCEM

ASCEM provides a consolidation of experience, knowledge and interest in the field of energy management; serves as an instrument for the dissemination of information; and shares strategies for the funding and implementation of energy efficiency projects.

If you have any questions about ASCEM or would like to join, please contact ASCEM Secretary Julia Parris at jparris@energy.sc.gov or (803) 737-9825.
Governor Sanford signs Pickens pledge

Governor Mark Sanford signed a pledge in late October to join T. Boone Pickens’ campaign to reduce America’s addiction to foreign oil.

“I am a conservative’s conservative, and as such believe in not just the sustainable use of financial assets, but in stewardship and the sustainable - or ‘conservative’ - use of natural resources. When you look at the numbers, the current trend lines are completely unsustainable with regard to our dependence on foreign oil,” Gov. Sanford said. “We believe the Pickens Plan not only recognizes that, but also recognizes that the only sustainable path for our country is to aggressively pursue alternative energies to meet our needs now and in the future.”

“Governor Sanford has a long track record of fighting hard for solutions to problems that are of the greatest concern to those he’s elected to serve,” said Pickens. “South Carolinians have come out in droves supporting the Pickens Plan. Sanford’s at the helm of a state full of patriots who are going to demand that the next President adopt an energy policy that makes use of American resources, creates American jobs and enables us to stop sending billions of dollars annually overseas.”

You can find the text of the Pickens Pledge and details on the plan at www.pickensplan.com. More than 1,300,000 people have joined the Pickens Army through the Web site, which has registered over 11,000,000 hits.

Unveiled on July 8, the Pickens Plan is a detailed solution for ending the country’s growing dependence on foreign oil. The plan calls for investing in power generation from domestic renewable resources such as wind and using our abundant supplies of natural gas as a transportation fuel, replacing more than one-third of our imported fuel and saving more than $230 billion a year.

Drive smarter!

How you drive and maintain your vehicle affects your vehicle’s fuel efficiency and gas costs. These simple tips can help savings add up quickly.

- **Drive more slowly** - Gas mileage usually decreases rapidly above 60 mph. Each five miles per hour over 60 mph is like paying an additional 20 cents per gallon for gas.
- **Inflate your tires** - Keeping your tires properly inflated improves your gas mileage by around three percent.
- **Empty your trunk** - An extra 100 pounds in the trunk cuts a typical vehicle’s fuel economy by up to two percent.
- **Buy smart** - When buying a new or used vehicle, consider its gas mileage. Even better, consider a hybrid!
- **Avoid drive-through windows and other unneeded idling** - Idling gets zero MPG.

Source: The Drive Smarter Challenge

We’ve moved!

Our new address is:

**South Carolina Energy Office**
1200 Senate Street
408 Wade Hampton Building
Columbia, S.C. 29201

Our fax and phone numbers are the same.
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If you aren’t already receiving this copy via email, just send your name and email address to energy@energy.sc.gov and mention that you’d like to replace your paper subscription with an electronic one. It’s that easy.

Upcoming Events

Energy Plan Development Workshops

Energy plan development workshops are being held by the South Carolina Energy Office to assist state agencies, public schools and public colleges and universities to develop energy plans in accordance with the new energy use reduction legislation (H.4766).

Cost of participation in this workshop will be $50 per person. This will include lunch and workshop materials. (Please note: We hope to secure sponsors to underwrite the cost of the workshops. In that case, the fee will be waived.)

For any questions, please contact Catherine Vanden Houten at (803) 737-9852 or cvandenhouten@energy.sc.gov.

The following three workshops are currently scheduled:

Tuesday, January 20, 2009
Trane Office
2011 Clements Ferry Road
Charleston, S.C. 29492
8:30 am - 4:30 pm

Tuesday, February 3, 2009
Marion School District One
719 North Main Street
Marion, S.C. 29571
8:30 am - 4:30 pm

Friday, February 20, 2009
Trane Office
288 Fairforest Way
Greenville, S.C. 29607
8:30 am - 4:30 pm

Check our calendar at www.energy.sc.gov for a full listing of upcoming events.

South Carolina Energy Office
1200 Senate Street
408 Wade Hampton Building
Columbia, S.C. 29201

State Budget and Control Board

Mark Sanford, Chairman
Governor

Converse A. Chellis III, CPA
State Treasurer

Richard Eckstrom, CPA
Comptroller General

Hugh K. Leatherman, Sr.
Chairman, Senate Finance Committee

Daniel T. Cooper
Chairman, House Ways and Means Committee

Frank Fusco
Executive Director

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