

A Corporate Publication of Santee Cooper

# POWER SOURCE

FALL 2009

“Highest in  
Customer  
Satisfaction  
Among Midsize  
Utilities in the  
South”



# from the CEO

## Why Santee Cooper is Suspending the Pee Dee Energy Campus Permit Process

Santee Cooper's board of directors recently approved a management recommendation to suspend permitting activities on the proposed Pee Dee Energy Campus in Florence County.

The facility has broad-based support—from local and state elected officials, business and civic leaders and people from throughout the Pee Dee community, not only because of the economic boost it would have on the region, but also because of its environmentally responsible design.

It has successfully received an air permit from the South Carolina Department of Health and Environmental Control and was nearing the final stages on the water and land permit process with the U.S. Army Corps of Engineers.

Why, then, has Santee Cooper announced the suspension of the permitting process of this model facility?

The answer is, for the same reason we proposed the facility in the first place: need.

We have repeatedly said we would only build what is required to meet the needs of our customers. There have been three recent and significant changes that could diminish the need for power, which has led to the business decision of suspending the permit process.

The first reason is the prolonged recession. While its initial impact on sales was forecast to be short term, the recession

has now created a longer-term diminished power load. Our sales are down 5 percent from last year. Unfortunately, we anticipate continued lower sales with this extended economic downturn and projected slow recovery.



Secondly, proposed federal government regulations, specifically the cap and trade legislation that recently passed in the House, could have tremendous cost implications for Santee Cooper customers. The American Clean Energy and Security Act calls for carbon capture and sequestration technology to be placed on new power plants by 2025, and there currently exists no technology to do that. The cost of this and the carbon tax are unknown but expected to be high, and we must carefully weigh this uncertainty as we plan for the future.

Lastly, Central Electric Power Cooperative, our largest customer, intends to reduce a portion of its power supplied by Santee Cooper and acquire that power from another supplier, beginning in 2013. The 1,000-megawatt reduction equates to the power requirements of the five Upstate Cooperatives. Reducing Central's power load requirement from Santee Cooper by approximately 1,000 MWs

*continued on page 35*



santee cooper



FSC

Mixed Sources  
Product group from well-managed  
forests and other controlled sources

Cert no. SW-COC-003080  
www.fsc.org  
© 1996 Forest Stewardship Council

Mollie Gore—Editor

Jim Huff—Photo Editor/Photographer

Willard Strong—Senior Writer

Kevin F. Langston—Writer

Tom Galmarini—Designer

Morgan Howard—Intern

**Fall 2009— Vol. 9, No. 4**

*PowerSource* is published by Santee

Cooper Corporate Communications.

Use of materials is not authorized  
without permission of the editor.

Address all correspondence to:

Corporate Communications,

Santee Cooper

One Riverwood Drive

Moncks Corner, SC 29461-2901

Phone: (843) 761-7093

e-mail: [mrgore@santeecooper.com](mailto:mrgore@santeecooper.com)



## Much More Than Electricity

By Morgan Howard and  
Kevin F. Langston

Photography by Jim Huff

# 12

### 4 Santee Cooper Customers Speak

By Mollie Gore  
Photography by Jim Huff

### Reduce The Use

Photography by Jim Huff

### Palmetto Wind Sets Sail

Photography by Jim Huff

### Electric Vehicles Charging Ahead

By Willard Strong  
Photography by Jim Huff

### NewSource

# FALL 09

**About the cover:** J.D. Power and Associates recently announced that Santee Cooper received its “Highest in Customer Satisfaction Among Midsize Utilities in the South” in its annual customers’ satisfaction study. Santee Cooper received the highest numerical score among midsize utilities in the South region in the proprietary J.D. Power and Associates 2009 Electric Utility Residential Customers Satisfaction Study<sup>SM</sup>. Study based on 79,552 online interviews ranking 27 providers in the South (Ala., Ark., Fla., Ga., La., Miss., N.M., N.C., Okla., S.C., Tenn., Texas and Va.). Proprietary study results are based on experiences and perceptions of consumers surveyed in July 2008-May 2009. Your experiences may vary. Visit [jdpower.com](http://jdpower.com).

# Santee Cooper Customers Speak

By Mollie Gore    Photos by Jim Huff



Representatives from J.D. Power and Associates made it official Aug. 10, presenting Santee Cooper President and Chief Executive Officer Lonnie Carter with a trophy for “Highest in Customer Satisfaction Among Midsize Utilities in the South”. J.D. Power and Associates had announced the utility’s ranking in July.

Al Destribats, vice president of energy practice at J.D. Power and Associates, commended Santee Cooper for its top score of 706 among midsized utilities in the South. More than that, “this 706

**Santee Cooper President and Chief Executive Officer Lonnie Carter and Vice President of Retail Operations Zack Dusenbury accept the J.D. Power and Associates award from Al Destribats.**

is the highest score in the whole country, of 121 electric utilities,” Destribats said. “That’s outstanding.”

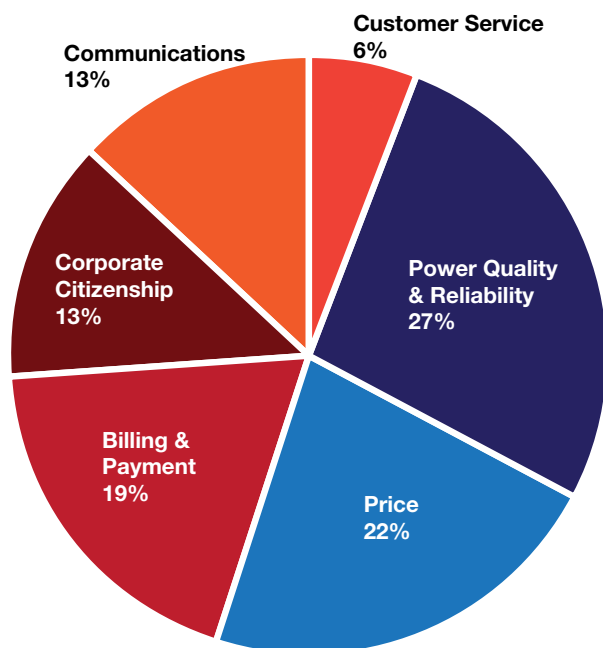
The customer satisfaction designation reflects residential customers’ ratings of Santee Cooper on measures including power quality and reliability, price, billing and payment, corporate citizenship, communications, and customer service.

“I get to accept this on behalf of the 1,840 employees who earned it,” Carter said as he received the trophy from Destribats. “I’ve known for a long time that we were a world-class company. This certainly confirms it.”

Carter continued, “Everything that we do has a customer focus. This will just encourage us to work even harder. Thank you to all of our customers who made this possible.”

Executive Vice President and Chief Operating Officer Bill McCall added, “This is a big award and moment for Santee Cooper. I extend my appreciation to all the employees. You made Santee Cooper shine for our customers.”

Zack Dusenbury, vice president of retail operations, said that in addition to the benefit of earning the award, Santee Cooper also benefits by the data that accompanies it. “We will use the data from this survey to provide even better customer service,” Dusenbury said. **PS**



# REDUCETHEUSE

## South Carolina!

*A comprehensive campaign to move the needle on energy efficiency Photos by Jim Huff*

Santee Cooper has just launched a decade-long energy efficiency effort — focused on rebates — to significantly reduce the use of electricity and to make our homes and businesses more energy efficient.

Dubbed “Reduce the Use South Carolina,” this energy efficiency program was approved in concept by the Santee Cooper Board

of Directors in February 2009 and includes 42 initiatives to help achieve the energy efficiency portion of its 2020 goal — an energy reduction of 209 million kilowatt hours. That 2020 goal states the utility will generate 40 percent of its energy from non-greenhouse gas emitting resources, biomass fuels, conservation and energy efficiency by that year.



The \$113 million program is an aggressive campaign designed to get customers to rethink the way they use energy, to reduce the amount they use, to replace old appliances with more efficient models and ensure that new and existing homes are as energy-efficient as possible.

“Providing enough energy to meet customers’ needs, while also providing the power to attract new businesses, jobs and families to our state, is a complex issue with multifaceted solutions,” said Marc Tye, vice president of conservation and renewable energy. “Achieving energy savings of this magnitude will involve everyone at Santee Cooper as well as each

**Point-of-purchase signage helps customers easily identify the benefits of this refrigerator rebate program.**



# Cool ReBATES Inside

Santee Cooper Customers  
Ask About Our Refrigerator Rebates

**REDUCETHEUSE.com**

of our customers. We must work together to change habits when it comes to energy efficiency.”

Consider, for example, how much energy you consume on a daily basis in your home and in your business. By taking small steps to become more energy efficient, you reduce the amount of electricity you use. Over time, these small changes add up to significant savings.

The campaign’s marketing communications are designed to affect change. By participating in the various programs, customers will realize financial and energy savings and Santee Cooper will diversify its energy mix.

**LIGHTING:** For the commercial lighting program, Santee Cooper will assess the lighting needs and distribute compact fluorescent light bulbs to businesses that typically use a lot of incandescent bulbs. CFLs use up to 75 percent less energy and last 10 times

longer than incandescent bulbs. The newer CFLs come in various shapes and sizes and are available in warm-light color temperatures that many businesses prefer. In addition, CFLs do not create as much heat when in use and that helps reduce cooling requirements associated with heat bloom from incandescent bulbs.

Homeowners should also consider the energy savings associated with CFLs,



## REDUCE THE USE INCLUDES 42 INITIATIVES

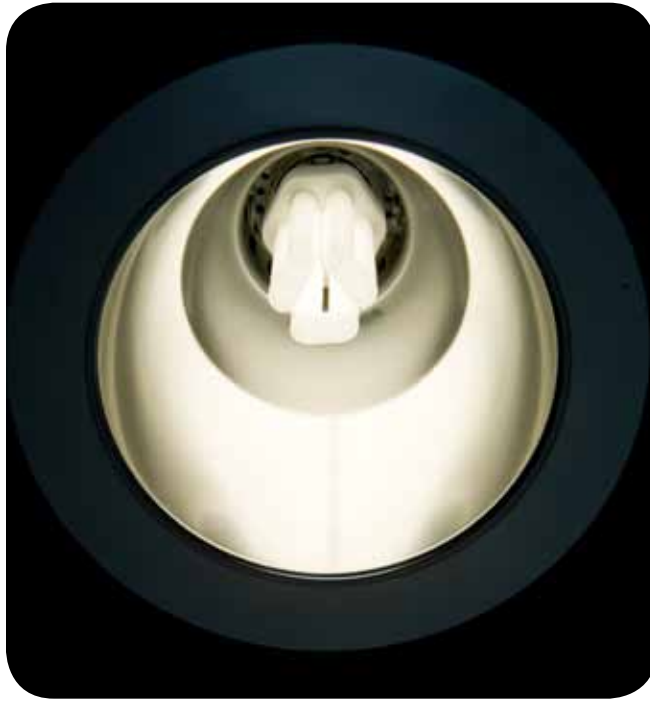
### Residential:

- Home Weatherization / Retrofit
- Water Heater Pipe Wrap
- Attic Insulation
- Heat Pump Change-out SEER 14+
- Heat Pump Tune-Up
- Duct Sealing
- Replacement Water Heater
- Energy Star Refrigerator / Turn-In
- Compact Fluorescent Light Bulbs
- Energy Consumption Monitor
- Device Cycling-Water Heater
- Device Cycling-Pump Cycling
- Energy Efficient New Home
- Low Income Weatherization

### Commercial:

- Heat Pump Tune-Up (2 programs)
- Heat Pump Change-Out (3 programs)
- Commercial Duct Inspection
- Variable Speed Drive on Air Handler
- Commercial Lighting T12-T8
- Commercial Lighting T8-T5
- Commercial Lighting LED
- Commercial Lighting CFL
- Area Day Lighting Controls
- Building Lighting Controls
- Roof Insulation
- Cool Roof
- Reflective Window Film
- Energy Star Refrigerator / Turn-In
- High Efficiency Motors
- Vending Machine
- Commercial Refrigeration
- Chillers
- Key Account Commissioning
- Thermal Storage
- Smaller Account Energy Monitoring
- Retrocommissioning
- Device Cycling-Water Heater
- Device Cycling-Heat Pump Cycling





**Compact fluorescent light bulbs, such as this one for a recessed light fixture, can help business save energy and money.**

**Below: These rebate stickers mark qualifying Energy Star refrigerators at participating Reduce The Use retailers.**



and replace incandescent bulbs in the most often used fixtures throughout their homes. Santee Cooper is continuing its successful CFL residential distribution program by offering a dozen free CFL bulbs to new residential customers.

**REFRIGERATORS:** Since they run constantly, refrigerators typically use more electricity than any other kitchen appliance. Our Refrigerator Rebate program provides incentives for business and homeowners to replace their older residential-style refrigerators with more efficient Energy Star qualified models. The older, less efficient refrigerators will be recycled.

Customers will receive a rebate of \$75 by turning in a refrigerator for recycling and by purchasing an Energy Star refrigerator. For those just looking to turn in an older refrigerator, a \$35 rebate will be their reward.

**HOME EFFICIENCY:** Reduce the Use also includes the new Energy Star Home program. This program sets energy efficiency and performance standards for new and existing homes and offers incentives and low-interest South Carolina Smart



Energy Loans to help builders and owners make qualified energy-efficient home improvements.

More energy-efficient programs are scheduled to launch in 2010 and 2011 and will continue to focus on big energy users for homes and businesses.

“We have a very different business model: paying rebates to encourage customers to use less of our product. We are serious about energy efficiency, and serious about helping our customers save money for the long term,” said Tye. **PS**



Energy-efficient fluorescent tubing is a lighting staple in many commercial facilities.

**Left: Rethink. Reduce. Renew.** For energy saving tips and information on the many energy efficient programs and incentives, visit [www.ReduceTheUse.com](http://www.ReduceTheUse.com)

# Breaking down **REDUCETHEUSE**

The initiatives launched in 2009 are:

- a Compact Fluorescent Light (CFL) bulb distribution program for residential customers
- a Compact Fluorescent Light (CFL) bulb distribution program for commercial customers
- a Refrigerator Rebate program for residential customers
- a Refrigerator Rebate program for commercial customers
- an Energy Star New Home program for residential customers
- an Energy Efficient Existing Home program for residential customers

**Reduce**

REDUCETHEUSE.com





# Much more than electricity

Powering South Carolina forward



*April 7 marked the 75th anniversary of the enabling act that created the South Carolina Public Service Authority, known as Santee Cooper. PowerSource has observed this anniversary in each issue throughout 2009.*

*This issue completes the series with a focus on the many ways that Santee Cooper adds value to the state beyond generating affordable, reliable electricity and water. Previous issues have detailed Santee Cooper's beginnings, its generating station lineup and its response to and lessons learned from Hurricane Hugo.*



As written in its enabling legislation, the South Carolina Public Service Authority (commonly called Santee Cooper) was created by the General Assembly “for the benefit of all the people of the state, for the improvement of their health and welfare and material prosperity.” Seventy-five years later, these words are at the very heart of Santee Cooper’s mission to be the state’s leading resource for improving the quality of life for the people of South Carolina.

To fulfill this mission, Santee Cooper commits itself first and foremost to being a low-cost producer and distributor of reliable electricity and water. But the state-owned utility also satisfies this responsibility in a multitude of other, less obvious ways.

### Preserving Santee Cooper’s Historical and Natural Roots

The Old Santee Canal Park in Moncks Corner opened in the spring of 1989, and by June 1999 Santee Cooper had assumed its operations and management.

The 200-acre park celebrates South Carolina’s natural resources as well as the historical significance of the Santee Canal — the predecessor to the Santee Cooper project. Located on the site of historic Stony Landing, the park houses an 11,000-square-foot interpretive center featuring exhibits and films that chronicle the area’s cultural and natural history, as well as the Berkeley County Museum and Heritage Center.

By Morgan Howard and Kevin F. Langston

Photos by Jim Huff

**Above:** The enabling legislation authorizing Santee Cooper was signed 75 years ago.

**Right and Top of Page 14:** Some four miles of boardwalk guide visitors through the Old Santee Canal Park and its Interpretive Center.





Four miles of walking trails and a three-mile paddle trail traverse the park's land and water (Biggin Creek and a portion of the original Santee Canal.)

Educational programs and camps are offered throughout the year and cover the wide range of historical events that occurred on or around Stony Landing. Meanwhile, environmental programs study the diverse flora and fauna found throughout the park. All programs meet state curriculum standards.

“The Old Santee Canal Park is instrumental in our efforts to preserve an important component of Berkeley County’s natural history,” says Park Director Troy Diel. “More than that, we also have a unique opportunity to educate the younger generations about nature and about South Carolina history.”



## Caring for the Santee Cooper Lakes

The creation of the Santee Cooper Lakes entailed the excavation of more than 42 million cubic yards of earth and the clearing of 171,000 acres of swamp and timberland. The goal in the 1930s was to bring affordable electricity to the rural reaches of South Carolina in the form of hydroelectric power, and the byproduct quickly became a treasured natural resource.



**Left and Above:** Workers cleared 171,000 acres of swamp and timberland to make way for the Santee Cooper Lakes, which today are enjoyed by boaters, anglers and tourists.

**Black and white photos from Santee Cooper archives.**

Today, lakes Marion and Moultrie occupy 156,000 acres of South Carolina's coastal plain. They are South Carolina's largest freshwater resource and home to the world's first land-locked striped bass fishery.

Santee Cooper maintains more than 20 public boat ramps along the lakes' 450-mile shoreline, and there are nearly 50 marinas, campgrounds and other lakeside facilities as well. The lakes are also the source of drinking water for more than 137,000 customers served by the Lake Moultrie Water Agency and the Lake Marion Regional Water Agency.

It is the responsibility of Santee Cooper's analytical and biological services (ABS) unit to help preserve the Santee Cooper Lakes' quality through a network of monitoring stations throughout the lakes and major tributaries feeding them.

"We have about 50 routine sampling locations throughout the lake system. Water samples are collected monthly and analyzed in the ABS laboratory. There are other locations where samples are collected quarterly and biannually," says ABS supervisor Larry McCord.

ABS also routinely works on habitat enhancement and preservation, which includes aquatic weed management



## Beating Back Disease

When construction began on the Santee Cooper Lakes in 1939, malaria was still a major disease in South Carolina that afflicted more than 1,300 people and killed 46 that year. Through the efforts employed then by Santee Cooper's Health and Sanitation Division, there was not a single reported case of malaria in any of the counties around the lakes by 1948.

Santee Cooper helped eradicate a disease that had plagued the Palmetto State since the 17th century, and today it's the responsibility of Santee Cooper's vector management department to make sure malaria doesn't make a comeback.

"Mosquito eradication is still a large part of what our department does at Santee Cooper," says John Inabinet, administrator of environmental resources.

In addition to spraying areas around the lakes annually, vector management has also performed sweeps of neighborhoods to educate residents about ways they can help reduce the mosquito population.

**Through successful mosquito eradication efforts such as spraying (left) and sampling (above), Santee Cooper has helped battle malaria and other diseases since the lakes' creation and continuing today.**





## Living and Giving United

Santee Cooper has always advocated community involvement from its employees, and leads by example in encouraging them to give to their local United Way and then matching those donations at the corporate level.

In 2008, with South Carolina's unemployment rate rapidly increasing, Santee Cooper contributed nearly \$800,000 to United Way campaigns in Anderson, Berkeley, Charleston, Dorchester, Georgetown and Horry counties. Because of employees' generosity, Santee Cooper was the top corporate donor to the Horry and Trident United Way campaigns, and was one of the largest contributors in Georgetown and Anderson counties.

Employees also participate in their local United Way Day of Caring, in which they assist several local nonprofit organizations with a variety of projects, ranging from painting to construction and landscaping.

"Every year, Santee Cooper employees step up and put their skills to work in so many locations and in so many ways," says Mark Pilgrim, director of local government and community programs. "Their hard work makes Santee Cooper a great utility, and their compassion and generosity make South Carolina a great state."

## Educating the Educators

Each July, Santee Cooper sponsors the Energy Educators Institute, a graduate-level course for certified kindergarten through 12th grade teachers and administrators accredited through Charleston Southern University. Santee Cooper holds three institutes every summer.



**Above left:** Results Supervisor Debra Guerry is one of more than 100 Santee Cooper employees who participate in the annual Trident United Way Day of Caring.

**Above:** A Power Line Hazard Awareness Demonstration team helps teachers across South Carolina learn about electrical safety.

**Below:** A group of teachers hits the marsh as part of Santee Cooper's Energy Educators Institute.





Participants explore the scientific concepts of energy, its sources, and its use and impact on the environment, economy and society. A real-world understanding of the power and purpose of electricity is offered through presentations by energy experts, discussions, field experiences and hands-on activities. Educators complete the program armed with materials relevant to the curriculum and correlated to state standards.

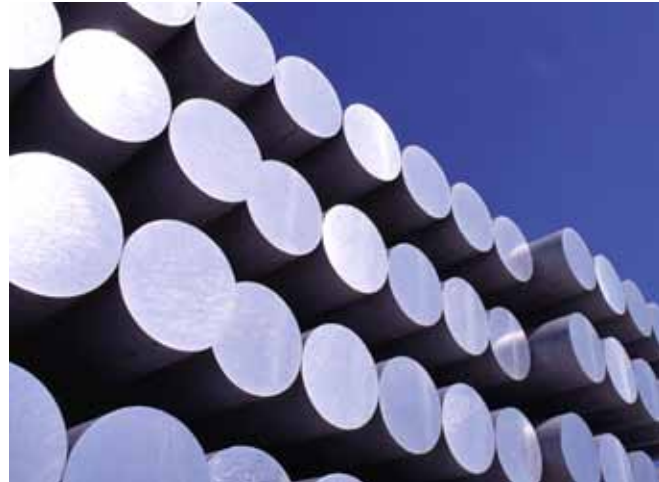
“The Energy Educators Institute provides engaging standards-based lesson plans in an environment that promotes networking and problem solving with fellow educators. Not only do teachers learn from the curriculum, but they learn from each other,” says Barbara Allen, Santee Cooper’s director of educational programs. “Teachers leave the Energy Educators Institute equipped with the knowledge and tools they need to understand the energy issues prominent in our world today.”

Santee Cooper also offers training to teachers from Green Power Solar Schools throughout the state on a specially designed renewable-energy curriculum that meets S.C. Department of Education science standards.

These programs typify Santee Cooper’s commitment to educational outreach, which also includes tours of Santee Cooper facilities, the [www.santeecooperkids.com](http://www.santeecooperkids.com) educational Web site for teachers and students, an array of teacher and parent resources available through [www.santeecooper.com](http://www.santeecooper.com), and the Power Line Hazard Awareness Demonstration team that travels across the state teaching students about electrical safety.

## Energizing the Economy

As soon as Santee Cooper produced its first electricity in 1942, it became a catalyst for economic development throughout all of South Carolina, largely because of its relationship with the state’s electric cooperatives. Throughout their shared history, Santee Cooper and the cooperatives have worked in tandem to bring businesses large



**These aluminum billets are produced by Alcoa-Mt. Holly in Berkeley county.**

and small to the state, including industries like International Paper, Alcoa Inc., Nucor Steel, AVX, Georgia-Pacific, Builders FirstSource, BPAmoco, American Gypsum, Starbucks and Google.

In September 1988, representatives of Santee Cooper and the electric cooperatives jointly created the Palmetto Economic Development Corp., known today as the South Carolina Power Team. In the 20 years since, the Power Team has been part of 580 industrial relocation or expansion projects resulting in \$8.1 billion in capital investments, 43,500 new jobs and \$1.3 billion in annual payrolls.

When the Power Team was created, there was an implicit mandate to support the efforts of South Carolina’s local and regional economic developers as well as the S.C. Department of Commerce. Among the Power Team’s efforts in this arena is its Economic Development Review where electric cooperative and economic development communities meet annually to create the relationships that power more effective economic development efforts. The Power Team has also funded statewide work force studies that address labor availability issues and give local developers an additional recruitment tool.



In 2006, the Power Team introduced three new initiatives to further support economic development. It awards scholarships for economic development professionals to take accredited courses to improve their skill sets and also assists in the development of strategic marketing plans for county and regional economic development corporations. Furthermore, the Power Team works to certify industrial sites in all 46 counties. Through 2008 the Power Team has awarded 36 scholarships, completed or begun 23 strategic plans and certified 11 sites.

“Santee Cooper was created by the state in 1934 as a vehicle for economic development, and the Power Team has been a huge part of that these last 20 years,” says Manager of Economic Development Mike Brown. “They are just an outstanding organization and a delight to work with.”

Santee Cooper’s mission is to be the state’s leading resource for improving the lives of all South Carolinians. Its efforts in economic development, education, lake stewardship, mosquito control, community involvement and protecting historical and natural resources all help the state-owned utility achieve that goal. **PS**

**Opposite:** Pine trees dot much of the state’s Palmetto Trail. Santee Cooper helped build three sections of the planned 162 mile trail.

**Below:** Franklin Delano Roosevelt approved the federal funding necessary to build the Santee Cooper Hydroelectric and Navigation Project. A byproduct of the project was Lake Moultrie, shown here at sunset.



# Palmetto Wind Sets Sail

photo essay  
by Jim Huff



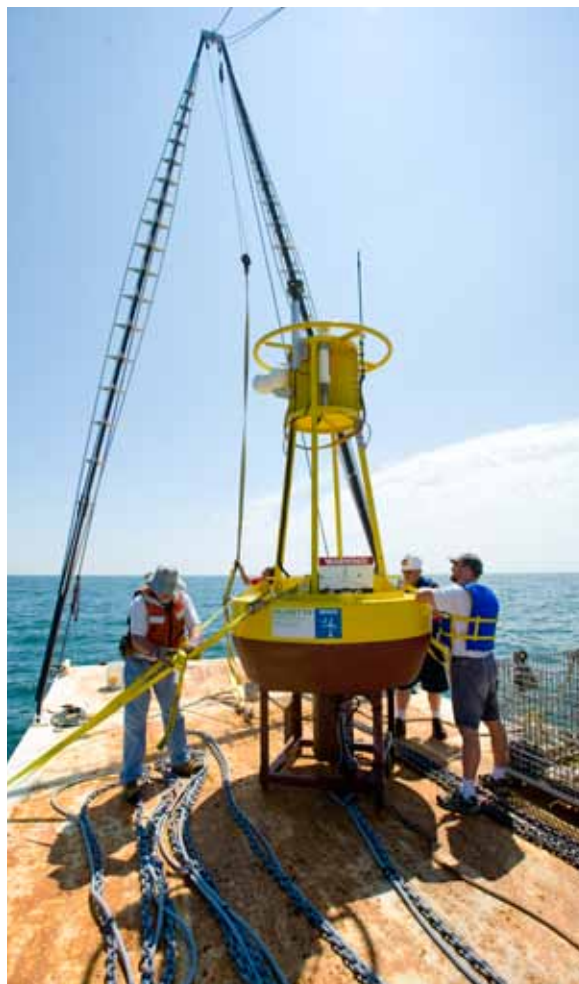
On July 14, scientists from Coastal Carolina University and N.C. State boarded a barge at the Silver Coast Marina in Little River, loaded with a large instrumentation buoy and instructions to begin the Southeast's first offshore research investigating the potential for wind energy at sea. The barge launched under relatively calm winds, and project followers are hoping the buoys will document offshore winds that are anything but.

This series of photographs chronicle the team's deployment of the first barge to be placed off the coast of North Myrtle Beach, at roughly one-and-a-half miles offshore. Other buoys followed and are gathering data now at three and six miles out. A similar line of buoys stretches off the southern end of the Grand Strand, near Winyah Bay, all part of the









larger Palmetto Wind Research Project.

Palmetto Wind is a loosely knit but sharply focused set of projects that, taken together, seek to validate the feasibility of offshore wind farms. As part of that, Santee Cooper is helping pay for the buoy study and will build its own anemometer station offshore in a few months, using buoy data to help select the station's location.

Santee Cooper has been studying the









potential for wind energy for years, and the buoy project is an extension of that research, which has also partnered the state-owned utility with Clemson University's Restoration Institute and South Carolina Institute for Energy Studies, the South Carolina Energy Office, the Savannah River National Lab and Eco Energy LLC.

The effort is gaining momentum, with a legislative study committee following the research and looking at how the state can complement ongoing efforts and help grow new ones. **PS**



# Of plug-ins and hybrids

*Electric vehicles  
charging ahead*

*by Willard Strong    Photos by Jim Huff*







**Santee Cooper and the state's investor-owned utilities support the non-profit Plug-In Carolina and its signature Toyota Prius.**

Imagine owning a car that gets between 75 and 100 miles per gallon — and can run on the equivalent of \$1 per gallon for gas, a price not seen in the U.S. for over a decade.

Real transportation possibilities like this are taking shape in the slowly evolving electric vehicle movement, in response to concerns over this country's dependence on foreign oil and the impact of vehicle emissions on the environment. Far beyond science project status, electric vehicles of two basic types have emerged, hybrids and plug-in hybrids, with "pure" electric vehicles using no gasoline in production at a couple of major manufacturers. Here's a basic primer:

- Hybrid electric vehicles have been available from car manufacturers for several years now. They get better fuel efficiency by utilizing an electric motor and an internal combustion engine. A hybrid captures energy that is normally lost through braking and coasting to recharge the batteries (regenerative braking), which in turn powers the electric motor without a need for plugging it in.
- Plug-in hybrid electric vehicles, or PHEVs, go a step beyond, utilizing a lithium-ion setup for increased fuel mileage and more punch. The plug-in hybrid's larger battery packs can be recharged by plugging into household electrical outlets, and they can be

driven for up to 40 miles without using any gasoline. A recharge typically takes four hours, consuming about 4 kilowatt-hours, or about 40 cents worth of electricity.

A typical Toyota Prius hybrid averages 45 to 50 miles per gallon. A PHEV can get 75 to 90 mpg.

James Poch, executive director of Plug-in Carolina, touts the benefits of electric vehicles through his non-profit organization, which is supported by Santee Cooper and the state's investor-owned electric utilities.

"The conventional hybrid vehicle entered the marketplace about 10 years ago," Poch says. "Yet it still represents less than 3 percent market share." Widespread acceptance is still decades away, Poch believes.

Santee Cooper and other utilities are supporting the concept of electric vehicles and the education of the marketplace to the efficiencies the vehicles could offer consumers and electric utilities. They are beginning to anticipate the day when electric vehicles sit in many garages across America and to plan for serving the associated electrical

demand required to charge the vehicles. Utilities hope to steer as much of that demand to off-peak times as possible, to lessen the need for building new generation.

Major car manufacturers are introducing variations on the electric vehicle as early as next year, and federal incentives will help spur gradual consumer acceptance in spite of today's relatively low gasoline prices.

Poch and others believe that oil prices will inevitably spike again as the economy recovers. He says there's merit to acting now to purchase a hybrid or pure electric vehicle, instead of panicking should gas prices again hover around \$4 a gallon or higher and fossil-fuel fallout results in even more drivers look to trade in SUVs.



**Jim Poch, executive director of Plug-in Carolina, envisions a not-too-distant future where plug-ins and electric cars are commonplace on South Carolina roads.**





The U.S. Department of Energy believes there is adequate off-peak electric capacity to provide enough power for nearly 70 percent of cars on the road today. The idea is that car owners could drive the vehicles during the day and charge them in garages at night, using existing electric capacity typically available when most customers are sleeping.

“Santee Cooper is committed to doing its part to educate consumers about the benefits of off-peak charging,” says Marc Tye, the utility’s vice president of conservation and natural resources. “However, we know that will be easier said than done. Our experience with other time-of-use and renewable energy incentives has been that a core group of customers will participate, and others will care more about convenience. If their lifestyle dictates daytime charging, it will be difficult to convince them otherwise.

“That’s our concern moving forward,” Tye continued. “Santee Cooper has to supply our customers electricity when they want it, not when we think they should use it. Electric vehicles will add somewhat to our electric load, and we must plan for that even while we are encouraging off-peak charging.”

Poch believes a hybrid, PHEV or electric car can soon be practical and affordable to the average car buyer. He envisions these vehicles being “household second cars,” driven on relatively short trips in urban or suburban settings. He cited a Natural Resource Defense

Council study forecasting that a widespread deployment of PHEVs could eliminate 450 million

tons of carbon dioxide emissions every year, and the country could cut as much as 4 million barrels of daily oil use.

## Back to the Future

Before Henry Ford perfected mass production of the iconic Model T in 1908, electric cars using standard storage batteries (some designed by Thomas Edison) were popular and in use on American streets. They were found mainly in cities and favored by upper crust women and their drivers. Many women enjoyed driving themselves because the cars were easy to start and quiet to operate. Early electrics resembled buggies.

The Baker Motor Vehicle Co., based in Cleveland, Ohio, produced pure electrics from 1889 to 1914. In 1907, the firm produced 17 different models. Baker even offered a 5-ton truck, very telling of electric vehicle capabilities a century ago. Comedian Jay Leno, a world-class car buff, owns a 1909 Baker.

But Ford’s eventual \$350 Tin Lizzie, last produced in 1926, coupled with a world awash in cheap oil but without electrical service in rural areas, doomed the large-scale acceptance of electric vehicles that sold for around \$1,500. The Bakers of the world became a footnote in America’s early transportation history.

Today the old cliché certainly applies: what is old is new again. The federal government is literally pouring billions of dollars of stimulus money into advancing the development of electric vehicles and battery technology.

On Aug. 6, the Obama administration announced \$2.4 billion in grants to American firms, intended to accelerate developments in these areas. According to Energy Secretary Steven Chu, the projects “will help achieve the president’s goal of putting one million plug-in hybrid vehicles on the road by 2015.”

Major automakers are also moving fairly quickly with their new models. The Chevrolet Volt is a PHEV that GM plans to launch in 2010 as a 2011 model. It’s expected to cost \$40,000 (with an expected \$7,500 tax credit) and get 230 mpg, besting the Toyota Prius hybrid’s 51 mpg in city driving. A Prius goes for around \$22,000. Introduced in the U.S. in 2001, 1.2 million have been sold. Other popular hybrids include the Honda’s Civic and Insight.

GM Chief Executive Frederick “Fritz” Henderson stated at an Aug. 12 Volt media event that “having a car that gets triple-digit fuel economy can and will be a game-changer for us.” It can go 40 miles on a charge (using a standard outlet) and its small gas engine powers up on long trips.

Buick has a hybrid Enclave SUV in the works. Next year, Nissan plans to introduce the Leaf, a pure-electric hatchback with a 100-mile range. Ford’s also coming to the party, touting an electric Focus subcompact on sale by 2011 and the Transit Connect commercial van, also an electric, in showrooms next year.

As for existing technology, Santee Cooper owns three Toyota Prius cars, which are about the size of the company’s popular Corolla compact.

“Two of our Prius cars have been converted to a plug-in hybrid that accepts a charge from a standard 110-120 volt outlet,” Tye says. He noted that one arrived in May 2008 and his department has driven it so far over 11,000 miles.

The technology offers hope of revitalizing profits to car manufacturers. It offers potential for reducing vehicle emissions and oil dependence at least partially by consuming off-peak excess energy capacity utilities already have in stock. There are certainly issues to be worked out associated with these new high-tech vehicles, and Poch and his counterparts are leading the charge to help ensure the country is ready. Stay tuned: our electric motoring future is just beginning. **PS**

**Right: The 1911 Baker Electric could travel up to 100 miles at speeds of up to 23 mph. Photo provided by Conceptcarz.com.**

**Below: A pre-production Chevrolet Volt is loaded with its 16 kWh lithium ion battery at General Motors’ Pre-Production Operations facility in Warren, Michigan, Wednesday, August 5, 2009. About 80 Volts will be hand-built at PPO. Once built, the vehicles undergo a series of road, crash and other engineering validation tests in preparation for the launch of the extended-range electric vehicle next year. (Photo by Jeffrey Sauger for General Motors) © GM Corp.**



## Tesla tantalizes as real muscle car

*Imagine riding in the Batmobile. That's the image conjured up as one climbs into a Tesla Roadster.*

It's that impressive. From neck-snapping acceleration to the English heritage of its Lotus styling, the Tesla Roadster is not what the future of "pure electric" car technology can soon be. It is here today, all 6,000 or so battery cells of high-powered sports car.

This is one of two Teslas that prowl Daniel Island, S.C. Jim Poch, South Carolina's leading advocate for electric vehicles (it's his job), borrowed one to demonstrate its capabilities to the PowerSource staff. It features all-carbon sheet metal and a \$100,000 price tag, which helps explain its exotic status. Only about 500 have been made.

You step down and the vehicle wraps around you. With its zero-to-60 capability in 3.9 seconds, Tesla proves electric propulsion doesn't have to be boring. The air conditioning works fine this steamy August morning, an important consideration for South Carolina drivers.

Tesla owners pay for style, not storage space. A set of golf clubs is about all this two-seater can handle, but hey, the old Volkswagen Beetle didn't do much better.

The California-based Tesla manufacturer reported profits of \$1 million in July and also plans to offer a similarly sporty four-door sedan in 2011, priced at about \$50,000.







## Santee Cooper Board approves first phase of rate adjustment

The Santee Cooper Board of Directors on Aug. 24 approved an overall average 3.4 percent base rate increase beginning Nov. 1, 2009 to offset rising costs of operating and maintaining the utility's generation, transmission and distribution facilities.

In its vote, the board also postponed adopting a second rate adjustment proposed for 2010, pending further evaluation of the level and timing of that adjustment. The board's action supports recommendations by Santee Cooper management on the implementation of new rates in light of a separate board vote to suspend the efforts to permit a planned 600-megawatt power plant in Florence County.

The 2009 rate adjustment is Santee Cooper's first base rate increase since 1996. The new rates feature consolidation of similar rate categories and introduce a seasonal rate that is one cent per kWh higher in the summer months, when it costs more to generate power. Santee Cooper has also launched an aggressive set of energy efficiency initiatives that can help customers save energy and offset the impact of higher rates; the board approved the efficiency initiatives in February.

Since last increasing base rates in 1996, Santee Cooper has nearly doubled its generating capacity and invested more than \$3 billion in new generation, transmission and distribution — all to serve a customer base that has grown by nearly 60 percent.

"The 2009 rate increase will provide necessary revenues for Santee Cooper to meet the increasing costs to generate and distribute electricity," said Santee Cooper board Chairman O.L. Thompson. "We have carefully reviewed management's proposal and the many thoughtful comments we received from our customers and other members of the public. I know that we are in some extremely difficult economic times, and Santee Cooper has delayed this rate increase as long as possible."

The Aug. 24 board vote followed a period of public comment that began in April and continued through July 5. More than 130 people submitted written comments, and about 100 people offered oral comments during a series of meetings in Berkeley, Georgetown and Horry counties, which concluded with a board of directors public comment meeting on July 27. The rates approved by the board reflect changes made in response to some of the public comments.

"Affordable, reliable and environmentally protective electricity will be key to South Carolina's successful emergence from this protracted recession. Santee Cooper has delivered such electricity throughout our 75-year history, and we are committed to continuing to do so for the next 75 years," said Lonnie Carter, Santee Cooper president and chief executive officer. "Management weighed the need for the second rate increase, in light of changes in the recession, potential federal climate legislation and reduced power load requirements. It makes sound business sense to take another look at next year's potential rate adjustment, and if we can modify our request, we will do so."

## Santee Cooper expands renewable power generation in Lee County

Santee Cooper had doubled the generating capacity of renewable Green Power at its Lee County Generating Station through the installation of a 5-MW turbine generator. The \$8 million project increases total capacity at the Lee County Generating Station to 10 MWs, making it Santee Cooper's largest renewable Green Power Station.

The expanded Lee County Generating Station brings Santee Cooper's renewable generating capacity statewide to 21 MWs.

Santee Cooper opened the Lee County Generating Station in 2005 with three 1.8-MW engines, which are fueled by methane gas that is naturally produced by decaying garbage at the adjacent Lee County Landfill.

The state-owned utility also operates the 3-MW Horry County Landfill Generating Station, as well as a 5-MW biogas station at the Richland County Landfill and a 3-MW station at the Anderson Regional Landfill. **PS**

# from the CEO

*from page 2*

obviously affects the need for the 600-MW Pee Dee Energy Campus.

Our customers could benefit from this suspension decision, because they may not need to bear the capital costs of constructing the facility.

The energy industry is facing unprecedented economic and legislative challenges. Throughout, we have—and will—stay focused on what is best for our customers. This includes making sure we have enough power to meet customer needs and that the cost is as low as possible. As a non-profit entity, our aim is to do what is right for our customers and the state. Our mission is to be the state's leading resource for improving the lives of all South Carolinians; that rests on our ability to constantly evaluate our plans and maintain flexibility to change now and in the future and do what is best for the system.

We are deeply grateful to all who have worked so very hard thus far on behalf of the Pee Dee Energy Campus, and we pledge to always make the decisions that we think best serve our bondholders, customers and the state, as we continue our efforts to fulfill our mission to improve the quality of life for all South Carolinians.



**Lonnie N. Carter**  
President and Chief Executive Officer

santee cooper



POWERING  
GENERATIONS