

Combined Heat and Power Newsletter

Happy holidays! This winter we are pleased to bring you the latest issue of our quarterly newsletter Combined Heat and Power. This free newsletter will highlight stories and events of interest to the CHP community, and will occasionally provide insight into the latest “hot topics.”

While our focus is primarily upon the Southeast region, we will also incorporate news from across North America. You can link directly to our sources by clicking “more details” at the bottom of each item. This newsletter will be prepared by the Southeast Clean Energy Application Center and published at the end of each quarter. We welcome your thoughts and contributions.

To subscribe to the electronic version of this newsletter, please [click here](#). For questions or to provide comments, please send an email to Maureen Quinlan at mequinla@ncsu.edu.

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**Compiled by
Maureen Quinlan**



We are now the U.S. DOE's Southeast Clean Energy Application Center!

Thanks to a recent grant from the U.S. Department of Energy, the Southeast CHP Regional Application Center is getting a new name, and an expanded mission!

In addition to promoting Combined Heat and Power in the Southeast, we will also be promoting District Energy and Waste Heat Recovery Systems. To reflect our new scope, going forward we'll be known as the Southeast Clean Energy Application Center, and the content of this newsletter will expand to include these new technologies. Our website address will remain the same- www.chpcenterse.org.

Energy Secretary Chu Attends Biomass CHP Groundbreaking in S.C.

On November 30, Secretary of Energy Steven Chu was joined by South Carolina and Georgia Congressional delegation members to break ground on a new biomass cogeneration facility at the US DOE's Savannah River Site (SRS). The new facility replaces a deteriorating, inefficient coal powerhouse and oil-fired boilers at a savings of approximately \$35 million a year in energy and operation and maintenance costs and reduces air emissions, including 100,000 tons per year of greenhouse gas emissions.

Slated for completion in 2011, this project will result in jobs for approximately 800 people during construction and 125 permanent positions in plant operations and maintenance and in the local forestry and logging industries. The project will be primarily fueled with forestry residues that are currently left in the forest to rot when the timber is harvested.

Under the Department's largest ever Energy Savings Performance Contract, DOE contracted with Ameresco Federal Solutions, Inc. to finance, design, construct, operate, maintain and fuel the new biomass facility over the term of the 20-year contract valued at \$795 million.

[More Details](#)

Florida Cancer Hospital Powered By New CHP Plant

A new 4.3 Megawatt combined heat and power plant is providing all of the electric cooling, heating and medical gas needs of Shands Cancer Hospital at the University of Florida. Operating since November, the CHP plant is one of the few in the Southeast capable of providing 100% of a hospital's energy needs.

Called the GRU South Energy Center, the facility is the result of a partnership between Shands Healthcare, Gainesville Regional Utilities (GRU), and Burns & McDonnell, the firm who designed and built the energy center. GRU will own and operate the facility for 50 years.

The plant utilizes a Mercury 50 natural-gas-fired combustion turbine and is estimated to be 75% efficient, as opposed to conventional power generation plants that are about 30% efficient. The projected annual energy savings is equal to the power needed to run more than 3,000 homes. This CHP project is expected to aid the hospital in their pursuit of Leadership in Energy and Environmental Design (LEED) certification.

[More Details](#)

NC Green Business Fund Grants Awarded

In November, North Carolina Governor Bev Perdue announced the latest round of NC Green Business Fund grant recipients. Over \$1.3 M of federal Recovery Act funds were awarded to 18 small North Carolina companies, including Biomass Marketing Associates, LLC of Hobgood, NC.

The gasifier manufacturing company was awarded \$100,000 to develop a system to capture heat produced from the gasification of biological waste, and use that energy to heat water.

[More Details](#)

Perennial Power Acquires Georgia CHP Plant

Perennial Power Holdings, Inc., a subsidiary of Sumitomo Corporation, announced in November that it had acquired 100% of the ownership interests in the Mid-Georgia Cogeneration facility. Located in Kathleen, GA, the plant was previously owned by Atlantic Power Corporation and Northern Star Generation, LLC.

The 300 MW plant provides steam to the nearby Frito-Lay food manufacturing facility and sells electricity to the local utility, Georgia Power.

[More Details](#)

Report Highlights South Carolina's CHP Opportunities

South Carolina isn't doing enough to encourage the deployment of Combined Heat and Power, according to a new report by the American Council for an Energy-Efficient Economy (ACEEE). South Carolina's Energy Future: Minding its Efficiency Resources, released in November, examines the electricity savings that could be realized through the implementation of a suite of eleven energy policy recommendations, including increased use of CHP.

ACEEE recommends that South Carolina modify its interconnection standards to allow larger CHP systems to hook up to the grid, establish direct financial incentive programs for CHP, implement an Energy Efficiency Resource Standard, adopt output-based air emissions regulations, and remove unfavorable standby rates. Analysis shows that with the right incentives, South Carolina could potentially see 900 MW of new CHP capacity.

[More Details](#)

Sierra Club Anti-Coal Campaign Singles Out UNC

Campuses Beyond Coal is a joint effort between the Sierra Club and the Sierra Student Coalition to move universities from coal power to clean energy sources. The campaign targets schools in eleven states which currently rely on coal power, including UNC Chapel Hill. The UNC Cogeneration Facility is fueled primarily by coal, with natural gas and fuel oil as a backup.

The facility produces steam for the campus' heating and hot water needs, as well as a portion of its electricity. The simultaneous production of heat and power allows the UNC plant to operate at very high efficiencies, which has yielded a number of national accolades.

The Sierra Club's report [*Breaking Coal's Grip On Our Future: Moving Campuses Beyond Coal*](#) acknowledges the positive steps that UNC has already taken to reduce its global warming emissions, and encourages them to make eliminating coal the next step.

[More Details](#)

Florida Receives \$30M in Federal Funds for Energy Efficiency Programs

Energy Secretary Steven Chu announced in November that DOE awarded \$30.4 million to the state of Florida through the Energy Efficiency and Conservation Block Grant Program to support clean transportation and energy efficiency projects such as combined heat and power. This funding is expected to create hundreds of jobs in the state.

The funding will be used to promote energy efficiency across the state, including competitive grants to local cities and counties, energy retrofits for existing state buildings, rebates for plug-in electric vehicles, and education and training initiatives that will help reduce energy use and save money statewide. This will reduce energy bills for tax payers, while helping the state meet its goal of reducing greenhouse gas emissions 10 percent by 2012.

[More Details](#)

Cyclone Power Technologies Seeks Patent for Waste Heat Engine

Florida-based Cyclone Power Technologies announced in November that it filed an international patent application under the Patent Cooperation Treaty on its production prototype Waste Heat Engine (WHE). The award-winning WHE is able to convert wasted heat from sources such as ovens, furnaces and engine exhaust into mechanical energy and electricity. This process can result in substantial savings to the end user and help reduce greenhouse gas emissions.

The WHE can also run on heat obtained from renewable fuel sources such as biomass and solar energy. Currently, the company is completing its Biomass-to-Power prototype system, which burns dry vegetation and uses the WHE to convert thermal energy into usable electricity.

[More Details](#)

News from across North America

Secretary Chu Announces \$150M for Industrial Energy Efficiency Projects

Energy Secretary Steven Chu announced in November that the Department of Energy is awarding approximately \$150 million to nine projects that will promote the use of combined heat and power, district energy systems, waste energy recovery systems, and energy efficiency initiatives in hospitals, utilities, and industrial sites across the country.

Combined Heat and Power and District Energy Systems generate both the heat and power needed for industrial processes on-site, instead of using electricity from the grid, and can be nearly twice as efficient as conventional heat and power production.

These awards will be leveraged with \$634 million in private industry cost share for a total project value of up to \$785 million. These industrial efficiency projects will result in almost 14 trillion Btu in estimated energy savings, which is equivalent to over 112 million gallons of gasoline per year.

[More Details](#)

U.S. and China Partner on CHP, Clean Energy Projects

In November, President Barack Obama and President Hu Jintao announced a far-reaching package of measures to strengthen cooperation between the United States and China on clean energy. One of these measures is the establishment of the U.S.-China Energy Cooperation Program (ECP).

The program will leverage private sector resources for project development work in China across a broad array of clean energy projects, to the benefit of both nations. More than 22 companies are founding members of the program. The ECP will include collaborative projects on renewable energy, smart grid, clean transportation, green building, clean coal, combined heat and power, and energy efficiency.

[More Details](#)

IREC Publishes Connecting to the Grid Guide

The sixth edition of the Interstate Renewable Energy Council's (IREC) *Connecting to the Grid* Guide is now available on the [IREC website](#). This guide provides a comprehensive introduction to a span of topics that relate to grid-tied distributed energy sources.

The sixth edition has been revised to include information on IREC's recently updated model procedures, alternative billing arrangements for net metering, energy storage and several other emerging issues in the field. This guide is designed for state regulators and other policymakers, utilities, industry representatives and consumers interested in the development of state-level interconnection and net metering policies.

IREC will be hosting a [webinar](#) on Jan. 26 to hit the highlights of this document and discuss current issues surrounding the connection of renewable and clean energy resources to the grid. Participants will gain an understanding of the prevailing trends in net metering and interconnection policy and how IREC approaches its work in advocating best practices.

[More Details](#)

2009 ENERGY STAR CHP Award Winners Announced

In October, the US EPA's Combined Heat and Power Partnership announced four new recipients of their ENERGY STAR CHP Awards. This award recognizes CHP systems that have demonstrated considerable fuel and emissions savings over comparable, state-of-the-art separate heat and power generation.

The winners include systems installed at a New York City office building, a dairy farm, a power plant in Louisiana, and a Massachusetts correctional facility. The systems sizes range from 200 kW to 449 MW.

[More Details](#)

CityCenter Las Vegas Opens

With six LEED Gold certifications from the U.S. Green Building Council, CityCenter is one of the largest sustainable developments in the world. Located on the Las Vegas Strip, CityCenter is a \$8.4 billion state of the art hotel, entertainment, and retail complex. In December, the first three CityCenter hotels opened their doors, as well as the retail and entertainment district.

CityCenter boasts the first onsite power production on The Strip- a 8.5 MW cogeneration plant that provides electricity to the site and captures enough waste heat to meet all of their hot water needs. Other sustainability initiatives include recycling of construction waste, energy efficiency measures, water conservation, and a compressed natural gas vehicle fleet.

[More Details](#)

State Scorecard for Interconnection and Net Metering Released

In November, the Network for New Energy Choices released the 2009 Edition of *Freeing the Grid*, a policy guide that grades states on their current net metering and interconnection practices. Together these two policies empower energy customers to use solar and other renewables to meet their own electricity needs.

This third edition of the report finds that, although net metering and interconnection policies still vary widely, states have made significant strides in adopting the best practices that drive renewable energy market growth and job creation. According to the report, the states with the best net metering policies are Colorado, Delaware, and Maryland. The highest scores for interconnection go to Virginia, Illinois, and Oregon.

[More Details](#)

Manufacturers Urge Obama to Provide More Incentives for Efficiency, CHP

In December, the Industrial Energy Consumers of America submitted a letter to President Obama outlining a number of energy-related policies that its members would like to see enacted. The purpose of the proposed policies is to provide more incentives for energy efficiency and ultimately create more manufacturing jobs. The letter implores the President to establish a manufacturing sector low-cost loan program, cost-shared grants, and a 30% tax credit for efficiency technologies. IECA also asked that utilities be required to purchase power from combined heat and power systems at manufacturing facilities.

IECA is a 501 (C) (6) nonprofit member-led organization created to promote the interests of manufacturing companies for which the availability, use and cost of energy, power or feedstock play a significant role in their ability to compete in domestic and world markets. Its members include BASF Corporation, Dow Corning, Goodyear Tire, and Tyson Foods.

[More Details](#)

ACEEE Releases State Energy Efficiency Scorecard

In October, the American Council for an Energy-Efficiency Economy (ACEEE) released the third edition of its annual state-by-state ranking on the adoption and implementation of energy efficiency policies, which aims to recognize leadership among the states and identify best practices. *The 2009 State Energy Efficiency Scorecard* examines six state energy efficiency policy areas: (1) utility-sector and public benefits programs and policies; (2) transportation policies; (3) building energy codes; (4) combined heat and power; (5) state government initiatives; and (6) appliance efficiency standards.

The states that received the highest scores for encouraging combined heat and power deployment were Connecticut, Ohio, Texas, California, and Oregon. The highest overall scores went to California, Massachusetts, Connecticut, Oregon, and New York.

[More Details](#)

Upcoming Events

[EPA's Clean DG Policy and CHP Webinar Series](#)

CHP: Opportunities at Wastewater Treatment Facilities

Jan. 21, 2010

[ASHRAE Winter Conference– Building Sustainability from the Inside Out](#)

American Society of Heating, Refrigerating, and Air-Conditioning Engineers

Orlando, FL

Jan. 23-27, 2010

[IREC Webinar: Connecting to the Grid Guide](#)

Interstate Renewable Energy Council

Jan. 26, 2010

[RETECH 2010](#)

Washington, D.C.

Feb. 3-5, 2010

[23rd Annual Campus Energy Conference](#)

International District Energy Association

Reno, NV

Feb. 9-12, 2010

[2010 National Air Quality Conferences](#)

U.S. EPA, NACAA

Raleigh, NC

Mar. 15-18, 2010

[2010 National Symposium on Market Transformation](#)

American Council for an Energy Efficient Economy

Washington, D.C.

April 11-13, 2010

[National Green Building Conference](#)

National Association of Home Builders

Raleigh, NC

May 16-18, 2010

[Clean Technology Conference & Expo](#)

TechConnect World

Anaheim, CA

June 21-25, 2010

About Us

The Southeast Clean Energy Application Center (previously the Southeast CHP Regional Application Center) was established in 2004 for the US Dept. of Energy. Our mission is to provide application assistance, technology information, and educational support for CHP, district energy, and waste heat recovery in the Southeastern U.S. The Center is co-located at [Mississippi State University](#) and [North Carolina State University](#).

We encourage you to visit our website, www.chpcenterse.org, for more information.
