Georgia's Energy Outlook

January 2009 to August 2009

January 2009

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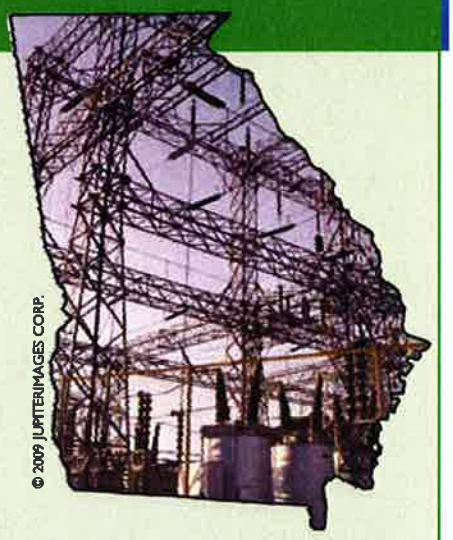
Georgia's need for power will continue to grow



Despite the recent economic downturn, Georgia is expected to remain one of the fastest-growing states in the nation in the years ahead. The state's mild weather, favorable business climate and overall quality of life will continue to draw new residents here.

For electricity providers, this population growth, plus an increase in home appliances such as big-screen televisions, computers and security systems, means that a larger supply of electricity will be a necessity. This growing need for electric power will be felt especially in many areas served by Georgia's electric membership corporations (EMCs), whose territories include high-growth suburban areas surrounding Georgia's cities and towns. Historically, the state's EMCs as a whole have grown at a faster pace than all other electric utilities in the state, and this trend is expected to continue.

To meet this growth, the EMCs are already taking action to obtain new sources of electric power. In 2008, 38 EMCs committed to invest through Oglethorpe Power Corp., their primary power supplier, a 30 percent interest in the two proposed new units at Plant Vogtle, a nuclear power plant near Waynesboro. The Nuclear Regulatory Commission (NRC) is currently considering an application by Georgia Power Co. and Southern Nuclear, acting as agents for the other co-owners, for a construction and operating license for these new units, which would go into operation beginning around 2016.

But, even though the planned nuclear units will be sizable, the EMCs' share of power will not be enough to meet their members' power needs. That is why a number of other activities are also under way.

Late last year, Oglethorpe Power and its 38 member EMCs announced plans to construct two and possibly three 100-megwatt biomass plants that will use Georgia's home-grown fuel—wood chips—to generate clean and renewable electric power. A series of clean-burning, natural gas-fueled plants are also on the drawing board and will likely be constructed over the next 10 to 15 years.

In determining the best way to meet the growing need for electric power among their members, the state's EMCs will continue to maintain fuel diversity in their power plants to limit exposure to price increases, shortages or other adverse market conditions. Currently, EMCs generate power using water, nuclear, coal, natural gas and oil.

EMCs are also working to meet the growing need for power by promoting and encouraging energy efficiency and conservation.

More than any other utilities in Georgia, the state's EMCs have championed conservation and efficiency, but these concepts have taken on even more importance. A new statewide EMC program now under development will focus on helping Georgians use electricity more wisely, thus allowing some additional power plants to be postponed.

There is no single answer for ensuring that EMC members around the state have the power they need for the future. Rest assured, however, the EMCs are hard at work every day to make sure that Georgia's future is a very bright one.

—Greg Jones, Oglethorpe Power Corp., Tucker

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High Voltage Safety Act protects Georgians and their property

The next time you plan for work to be done near high-voltage power lines, look up. Are the limbs you plan to trim within 10 feet of an overhead line? Will the job you're contracting be performed under a high-voltage wire?

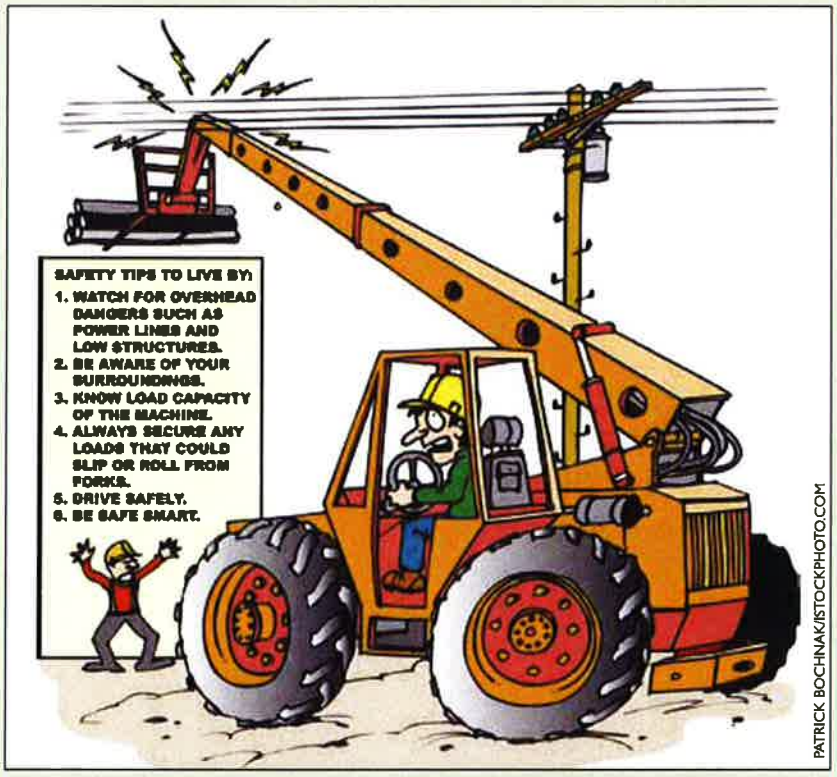
If so, you'll need to call the Utilities Protection Center (UPC) three days before starting the job.

It's the law, according to Georgia's High Voltage Safety Act, which was designed to protect people and property. Just as Georgians are required to call the UPC before digging to protect the public and ensure no underground utilities are damaged, they also are required to notify the UPC at least 72 hours before work begins within 10 feet of overhead high-voltage lines (more than 750 volts). The number to call is 811.

The UPC encourages property owners and contract workers to consider the duties they perform near high-voltage lines, whether it's pruning, harvesting or unloading feed. If uncertain whether work is within 10 feet of overhead lines, or if the lines are high-voltage, call the UPC at 811. The three-day notification gives them time to ensure safety precautions are in place.

Penalties for not notifying the UPC when working near overhead power lines include a misdemeanor charge that carries a fine of $1,000 for a first offense and $3,000 for subsequent offenses. If property damage or personal injury results from noncompliance, those responsible can be held liable for the damage or injuries, according to Georgia Code Section 46-3-33.

The UPC number to call when working near overhead lines is 811. Remember: "Stay 10 feet away, work another day." For more, visit *www.gaupc.com/laws_ga_overhead.asp*.



Georgia's Energy Outlook

More nuclear power in Georgia's future

Be honest. When you woke this morning and reached for the bedside lamp, did you consider, for even one second, that it might not come on? Did you wonder whether your electric razor would be charged and ready to go? Or, whether there would be hot water for that much-anticipated shower?

Chances are it probably never entered your mind. Except in rare cases or an extreme weather event, we generally take for granted that electric power will be available to light our homes, power our appliances and make our lives easier.

But, electric power does not magically appear out of the air. Like other commodities, it must be manufactured and shipped into our homes, schools or businesses.

One of the most reliable and affordable ways we generate round-the-clock electricity in Georgia is with the state's two nuclear plants, Plant Vogtle near Waynesboro and Plant Hatch near Baxley. These facilities, which were placed into service in the 1970s and 1980s, have operated effectively and safely since they went on-line, pumping out millions of kilowatt-hours of electric power for our use 24 hours a day.

Most EMC (electric membership corporation) consumers in the state are able to benefit from these plants because Oglethorpe Power Corp., an EMC-owned power supply cooperative, is one of the owners of both plants. Oglethorpe Power, which serves 38 Georgia EMCs, owns a 30-percent interest in the Vogtle and Hatch facilities and receives 30 percent of the power they produce. This power is then supplied to Oglethorpe Power's EMC owners.

The impact of these nuclear plants is considerable. In 2007, for example, Hatch and Vogtle produced nearly 40 percent of all the electricity supplied by Oglethorpe Power to its member EMCs.

Now, plans are under way to expand Plant Vogtle and roughly double its output. The operator of the plant, Southern Nuclear (a Southern Co. subsidiary) has applied to the Nuclear Regulatory Commission (NRC) for a combined construction and operating license. If granted, this would allow Southern Nuclear to begin construction, with plans to bring these new nuclear units into service around 2016.

Water vapor coming out of cooling towers at nuclear power plants is completely safe.

Like the existing generating units at Plant Vogtle, these new units will be owned by Oglethorpe Power, Georgia Power Co., MEAG Power (supplier to municipal utilities in Georgia) and City of Dalton Utilities.

Plant Vogtle's planned expansion is part of a nuclear power revival in the U.S. that is being encouraged by several factors. First, the regulatory process has now been streamlined, making it easier to anticipate and control costs and schedules. Second, the NRC will review and preapprove standardized equipment designs that can be used across the industry. Finally, anticipated climate change regulations are likely to severely restrict carbon emissions from fossil-based plants in the future, making no-emission nuclear plants even more attractive.

Alternative forms of power generation, conservation and energy-efficiency measures will all be a part of our energy future in Georgia. However, as Georgia continues to grow, the new Vogtle units will play a vital role in producing the steady supply of electric power necessary to help make sure that we can all enjoy our computers, flat-screen TVs and, someday soon, maybe even our electric cars.

Georgia's energy outlook

Celebrate Earth Day 2009: Take action on the small *somethings*

On the first Earth Day, April 22, 1970, millions of Americans demonstrated, rallied and protested against the deterioration of their country's environment from oil spills, polluted factories, pesticides and toxic dumps. It was an unprecedented political alignment, which led to the creation of the Environmental Protection Agency and the passage of the Clean Air, Clean Water and Endangered Species acts.

Today, Earth Day expands beyond U.S. borders as people around the world continue to petition for a healthy, sustainable environment. Yet rather than protests and rallies, the Earth Day of recent years calls for citizens to take action, to put into practice the changes needed to protect our planet. They need not be sweeping, wholesale changes. Indeed, doing several small *somethings* is much more beneficial than waiting to make one big change. Here are some small *somethings* you can do that will add up to big benefits for the environment.

Plant a tree. Planting a tree is one simple act that produces many benefits. Trees absorb carbon dioxide and filter the air we breathe. They help reduce storm runoff and flooding. And in the summer, their cooling properties help cut back on the need for air conditioning—not to mention the natural beauty of trees makes life more pleasant.

Change a lightbulb. Replacing burned-out bulbs with energy-efficient compact fluorescent bulbs raises a fixture's efficiency by up to 30 percent and saves up to $30 per year. If every household in the U.S. did just this, the cumulative effect would prevent greenhouse gas emissions equivalent to that from nearly 800,000 cars and would save enough energy to light 2.5 million homes for a year.

Adjust the thermostat. About 42 percent of an average household's energy costs goes toward just two things: heating and cooling. Buy a programmable thermostat to regulate different temperatures at different times of the day. These thermostats reduce energy use by 5 percent to 30 percent and save you $100 to $150 in energy costs each year.

Support green power. Green Power EMC (Electric Membership Corp.) offers renewable energy from a variety of resources including landfill projects, a low-impact hydro facility and solar education projects, and is the largest green power program in Georgia. Green Power EMC's members include 38 of Georgia's electric cooperatives, representing more than 1.6 million homes, businesses, factories and farms. Several other Georgia EMCs are part of the green power program called Green Power Switch, through the Tennessee Valley Authority. Visit *www.greenpoweremc.com*, *www.tva.gov* or your electric cooperative's Web site for more information.

By doing the small *somethings* and living with heightened environmental awareness, you contribute to a clean and sustainable future and make every day Earth Day.

What's it all about?

"Our Energy, Our Future" is a campaign to build a dialogue between America's electricity consumers and elected officials. It's about our nation's pressing capacity crisis, the technological hurdles we face in developing new, less carbon-intensive power generation, and the need to keep electricity affordable while achieving climate change goals.

We need to begin a conversation now to prompt bipartisan political action, set achievable goals and prepare for what this will mean to our monthly electric bills. As co-op members, we are consumers and owners of our local electric utility. It's our responsibility to make our voices heard before decisions are made that affect our energy and our future.

Now is the time to have a candid conversation with your elected officials. Together, we can find answers and take action. Start the conversation today at *www.ourenergy.coop*.

Our Energy, Our Future
A Dialogue With America

For additional information and resources about the electric co-op industry and issues in Georgia, please visit *www.georgiaemc.com*. We welcome your ideas for this column at *energyoutlook@georgiaemc.com*.

May 2009

Georgia's energy outlook

Fat Spaniel and the PV modules

If your teen came home talking about "Fat Spaniel and the PV modules," would you a) call a counselor; b) wonder what ever happened to Hootie and the Blowfish; or c) ask the audience?

If you chose "c," the right audience to ask would be students in the 25 middle and high schools throughout Georgia who participate in Sun Power for Schools, an innovative program designed to educate students about renewable energy and its impact on the environment.

The students will tell you that PV (photovoltaic) modules make up the solar panels used for their school's 1-kW, grid-tied PV system. The system harnesses solar energy to generate electricity that is then fed into the school's electrical system. Fat Spaniel measures voltage, current and power produced by the system. Students have online access to Fat Spaniel to see daily and historical data for their school and even for other schools participating in the program. (To take a look, click on Sun Power for Schools at *www.greenpoweremc.com*.)

Introduced in 2005, Sun Power for Schools was the first program to highlight the benefits of solar energy and is the largest statewide renewable education program with a network of PV installations. Green Power Electric Membership Corp. (EMC) manages the initiative and partners with local electric cooperatives and schools to implement the program throughout the state.

Sun Power for Schools also offers an exciting way to bring math and science to life. For example, students can measure how much energy the photovoltaic cells produce and determine if the system generated enough energy to light a classroom on a particular day. Plus, because the energy the schools generate becomes part of a mix of renewable energy used by Green Power EMC, each school contributes to reducing pollution and preserving natural resources—more valuable lessons for students.

The photovoltaic system at Oconee County High School in Watkinsville was installed as part of Green Power EMC's Sun Power for Schools program in partnership with Monroe-based Walton EMC and the Oconee County school system.

Sun Power for Schools also demonstrates one major disadvantage—no one has been able to develop the technology to a point where it makes economical sense as a replacement for other types of generation. (It costs about $16,000 to install the 1-kW systems, primarily paid for through a Green Power EMC grant and participating cooperative contributions.) Those involved with the program hope that by teaching students about today's technology, they will become leaders in developing innovative ideas that transform solar energy into a practical, cost-effective energy source.

To hear teens talking about Fat Spaniel and PV modules, visit *www.greenpoweremc.com*.

Georgia's energy outlook

Making it happen

Georgia EMCs lead state in growth and conservation

Georgia is one of the fastest-growing states in the nation, and the Georgia cooperatives' demand for energy—expected to double by 2025—is growing twice as fast as that of the local investor-owned utility and three times as fast as that of municipal utilities. Meeting that demand will require significant investment in new resources.

At a time when the nation is exploring all energy options, there is renewed state and national focus on the potential for conservation, energy efficiency and demand-side management programs as well as renewable resources. Georgia's electric membership corporations (EMCs) are already aggressively pursuing those options to meet future energy needs.

The 2009 EMC Demand Side Management, Energy Conservation & Energy Efficient Report, the third annual study by Georgia Electric Membership Corp. (GEMC), found that cooperative initiatives reduced demand by 173 megawatts (mw) and saved 34,580,000 kilowatt-hours (kwh) of electricity in 2008 at a cost of $17.2 million. The systems offered energy audits, electric appliance incentives and financing plans, load control options, rate options, weatherization programs and compact-fluorescent lightbulb distribution. In addition, the cooperatives have renewable capacity of 24 mw and the potential for an additional 100 mw of demand reduction through interruptible rates for commercial/industrial accounts.

"In quantifying the results of the cooperatives' efforts, we hope to communicate to consumers and public officials that we are deploying every tool in our tool kit as part of our resource planning," says Bill Verner, GEMC's vice president of government relations and communications. "We are first looking to energy efficiency, demand-side management and conservation as we plan for meeting future needs."

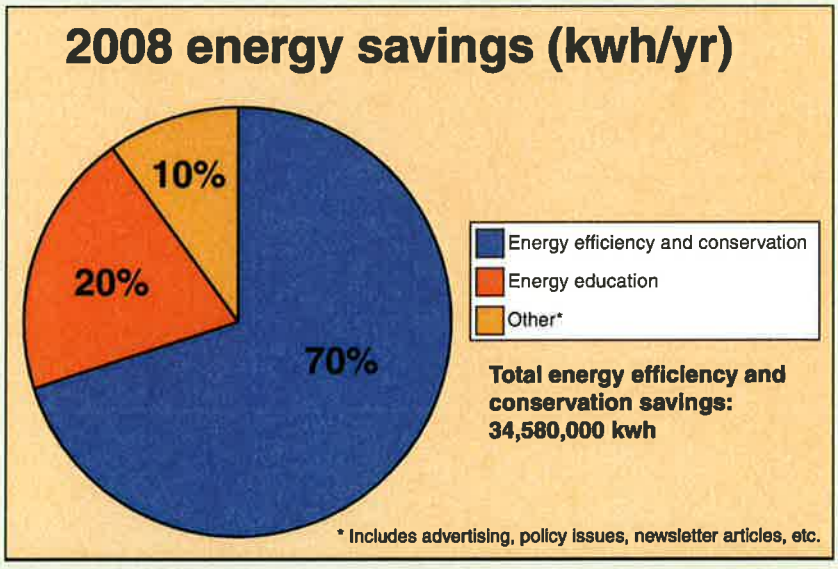
Energy innovation and renewable resources good but not enough

While impressive, the 300 mw saved is small compared to the forecast peak of more than 9,000 mw for the summer of 2009. "We are not going to be able to meet our future needs through efficiency alone," Verner says. EMCs are actively pursuing expansion of nuclear generating facilities, a new baseload coal plant, gas-fired intermediate and peaking facilities and baseload biomass capacity. The cooperatives voluntarily provide resource planning information to state agencies and are promoting the Governor's Energy Challenge to reduce overall energy use by 15 percent by 2020.

Georgia EMC also provides an internal report to member EMCs showing detailed results for each system. "We have good feedback that board members and management are using the internal report to evaluate energy-efficiency programs and to compare what they are offering with what other cooperatives are offering to either affirm that they are on the right track or decide to incorporate additional or different programs," Verner says.

Verner notes that cooperatives have long been advocates for the wise use of energy. "Because of advertising budgets and mass-media communications, there is a perception that the investor-owned utilities of the world are doing all the great things with energy conservation programs," he says. "In fact, we were the leaders in that early on, and we continue to be."

For more information about what Georgia's EMCs are doing in light of today's energy issues, please see page 16.



Through the implementation of the state's EMCs' energy conservation, energy efficiency and demand-side management (DSM) programs, more than 34,580,000 kwh in estimated energy savings occurred during 2008. This amount of energy would serve more than 2,200 homes for an entire year, or put another way, it equals the energy required to serve the population of a community the size of Adel (population 5,399) for 2008.

August 2009

Georgia's energy outlook

Peak demand

It influences our energy picture this year and beyond

As temperatures rise in summer, power use by Georgia's electric cooperative members goes up. And on those scorching-hot afternoons and evenings when air conditioners are running all-out we often reach our highest level of electricity use, known as peak demand.

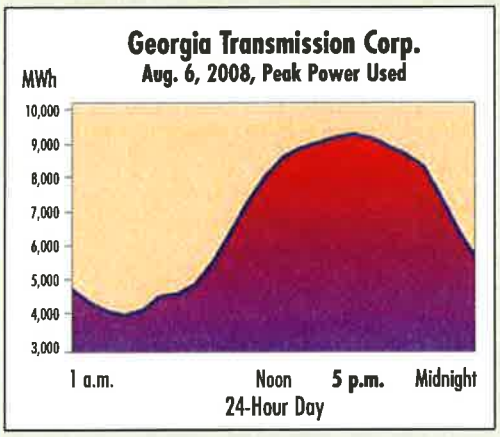
Peak demand periods help determine the amount of electric generating resources required during periods of highest use. Although not every power plant's output is needed all of the time, electric suppliers must have adequate generating capability in place to keep the power flowing during those high-use periods.

These peaks in electricity grow bigger nearly every year, driven, in part, by Georgia's rapid population growth, which, despite the economic slowdown, is among the top 10 states in the country. In addition, electricity use per household continues to rise as consumers add more computers, large-screen TVs and other appliances. Moreover, because they serve some of Georgia's fastest-growing areas, the state's electric co-ops as a whole are experiencing annual peak growth that is higher than any other electricity suppliers in the state.

Rapid and steady peak demand growth means that cooperatives must use every available resource to ensure an adequate supply of electricity. Among the tools available to electric cooperatives are conservation and energy-efficiency programs, which have been an integral part of the co-op business model for more than 30 years. Cooperative programs such as load-management switches, household weatherization, energy-efficient appliances and others saved more than 34,580,000 kilowatt-hours of energy in 2008, enough to power nearly 2,200 homes, about the size of a small city like Bremen.

Cooperative members can help by setting household thermostats at 78 degrees or higher, keeping curtains closed during the day, turning off unneeded lights and appliances, and postponing heat-producing chores like drying clothes to times other than the hottest part of the day.

Energy efficiency and conservation are certainly part of the solution to rising electricity use, but these efforts alone are not sufficient to meet the growing need for electric power among cooperative members. More generating plants will be needed over the coming decades. And, since new plants take from five to 10 years to be sited and operational, decisions on the numbers and types of generating facilities to be constructed must be made today. Continued member support and involvement will help cooperatives ensure a reliable and affordable supply of electricity into the future.



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