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Sustainability Focus - Georgia



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3.1 Drivers – Georgia

ARRA

A major driver for the State of Georgia is to responsibly execute the projects supporting the allotment of ARRA funds to the state.

Georgia Governor's Energy Challenge 2020

In April 2008, Governor Sonny Perdue signed an executive order requiring state government agencies and departments to reduce energy use. This executive order created the Governor's Energy Challenge 2020 as part of "Conserve Georgia." State agencies and departments must reduce energy consumption 15% by 2020, using 2007 energy use as a baseline. Reductions in energy use must come from energy efficiency measures and can also come from renewable energy development.

Funding from the American Recovery and Reinvestment Act of 2009 (ARRA) is being used by the Georgia Environmental Finance Authority (GEFA) to fund state agency retrofit projects. These projects will help state government entities meet the goal set by the Governor's Energy Challenge. The challenge is mandatory for state entities, but local governments, schools, businesses, and individuals are also encouraged to participate. An interactive tool is available on the Challenge website that helps building owners find energy efficiency options. All Georgians are encouraged to accept the program's 15 percent goal by visiting www.GovernorsEnergyChallenge.org. Interactive energy modeling tools at the website are available for businesses to reduce energy use with proven no-cost, low-cost, and longer-term energy-saving options.

Energy Efficiency and Sustainable Construction Act of 2008 (EESCA)

Georgia passed this law which creates a set of energy efficiency and construction standards. These new standards apply to any state facility project that enters into a design agreement on or after July 1, 2010 that meets any one of the following criteria:

- New construction building projects exceeding 10,000 square feet;
- A renovation project that is more than 50 percent of the replacement value of the facility;
- A change in occupancy;
- Any roof replacement project exceeding 10,000 square feet; or
- A commercial interior tenant fit-out project exceeding 10,000 square feet of leasable area where the state is intended to be the lessor of such property.

The Energy Efficiency and Sustainable Construction Standards for State Buildings in accordance with the Energy Efficiency and Sustainable Construction Act of 2008 provide a resource for state agencies, design professionals, contractors, and building operators. The Standards were developed by the 2008 Energy Efficiency and Sustainable Construction Task Force. The Task Force was authorized under Senate Bill 130 to develop policies, procedures and guidelines to provide more stringent energy efficiency requirements for future buildings that will be constructed by the State.

All state-funded buildings must use the state-mandated code from - January 1, 2011 and built on ASHRAE 90.1-2007 with Georgia state amendments

<http://www.dca.state.ga.us/development/constructioncodes/programs/codeAmendments.asp>

Performance Contracting

On November 2, 2010, Georgia voters approved Constitutional Amendment 4, "Multiyear contracts for energy efficiency or conservation improvement" ("Amendment 4"), which provides for "guaranteed cost savings for the state by authorizing a state entity to enter into multiyear contracts which obligate state funds for energy efficiency or conservation improvement projects." Ratification of Amendment 4 allows the state of Georgia and its local governments to enter into multiyear Energy Saving Performance Contracts (ESPCs) to fund energy efficiency and conservation improvements for state and local government-owned buildings.

The state of Georgia is also one step closer to realizing significant energy savings with the signing of Senate Bill 194 by Governor Sonny Perdue. SB194 is companion legislation to Senate Resolution 1231, which is a constitutional amendment allowing state agencies to finance multi-year energy and conservation improvement projects. SB194 defines energy performance contracting and designates the Georgia Environmental Facilities Authority (GEFA) as the lead agency for state government participation.

This means that improvements to state-owned buildings, of which there are approximately 15,000, can happen, beginning January 1, 2011, with no upfront costs to the state. ESCOs will pay the upfront costs and bear the accompanying risks of these improvements.

An Energy Performance Contract is an agreement between a customer and an energy services company (ESCO) that uses future energy savings to pay the cost of a building's energy and water infrastructure improvements. The ESCO guarantees that the savings will pay for all of the project costs. GEFA's State Utility Program (SUP) will be responsible for helping state agencies purchase and use energy more economically and efficiently through performance contracting. Georgia spends at least \$200 million each year on electricity and natural gas utilities. As a result of performance contracting, energy cost avoidance to state agencies is projected to be \$30 million annually by

- Replacing lighting and electrical equipment,
- Modifying or replacing boilers and chillers,
- Installing state-of-the-art energy management control systems, or
- Replacing motors or water system devices.

The cost avoidance savings will finance the energy improvement projects.

Energy performance contracting will allow state agencies to finance much needed multi-year energy and water infrastructure improvement projects. According to GEFA estimates, state agencies have the ability to finance approximately \$212 million in energy improvement projects.

Georgia Peach Green Building Rating System

Beyond the requirements of the EESCA, building owners can also apply for the Georgia Peach Green Building Rating System, indicating higher and higher levels of commitment to environmental stewardship.

Conserve Georgia Program

The Conserve Georgia program was developed to foster a culture of conservation throughout the state of Georgia. Nine state agencies and authorities are working together with businesses, civic leaders, educational institutions, non-profit organizations and residents to make Georgia's air, land, water, energy and wildlife resources more sustainable now and for generations to come.

The program's website – www.ConserveGeorgia.org – serves as a portal to help Georgians find information on a wide range of conservation resources and programs.

Partnership for a Sustainable Georgia

Free and open to any business, the Partnership for a Sustainable Georgia was established by the Sustainability Division of the Georgia Department of Natural Resources to foster environmental leadership and recognize superior environmental performance. The Partnership offers a variety of incentives, including cost savings through increased efficiencies, potential regulatory flexibility, free technical assistance and training, and access to networking and mentoring among peers, state and local officials. For more information, visit www.GASustainability.org.

3.2 City – Sustainability Focus

- **Atlanta**

Sustainability Strategic Plan

Atlanta's Strategic plan includes the following goals in order to ensure that the City of Atlanta becomes one of the top ten sustainable cities in the US

http://www.atlantaga.gov/client_resources/mayorsoffice/sustainability/coa2010%20sustainability%20plan.pdf

- **Climate Change**
Reduce greenhouse gas emissions within the City of Atlanta's jurisdiction by 25% by 2020, 40% by 2030, and 80% by 2050
- **Water Conservation**
Reduce system leakage by 50% by 2015
- **Air quality**
Improve Atlanta's air quality such that over 50% of days qualify as good according to the EPA's Air Quality Index by 2015, 60% by 2020, 75% by 2030, and 100% by 2050.
- **Waste**
Reduce, reuse and recycle 30% of the city residential waste by 2013, 50% by 2015, 90% by 2020
- **Energy**
Reduce the total energy use for existing municipal operations by 15% by 2020, 40% by 2030, and 80% by 2050; renewable energy 5% of total municipal use by 2015
- **Atlanta's Division of Sustainability**
Launched in 2008, the City of Atlanta's Division of Sustainability has been focused on instituting sustainability practices into Atlanta city government. The Division of Sustainability is working with departments across city government to improve current programs and policies and implement new ones in addition to becoming early adopters of national accountability initiatives designed to promote more sustainable municipal practices. In the past year, the city has expanded its scope to include community-wide initiatives.
- **Climate Change and Energy**
In the U.S. Mayors Climate Protection Agreement, the city pledged to reduce its emissions by 7% below 1990 levels by 2012. In December 2009 the Division of Sustainability announced that Atlanta city government had reduced carbon emissions by 5.6% between 2007 and 2008. Emissions were tracked through the city's performance management system, ATLStat.
The City of Atlanta has undertaken a range of energy and water use efficiency initiatives to drive these reductions. Building efficiency practices are mandating lighting sensors, improving the maintenance system, installing automatic sensory faucets and setting citywide policies on temperature settings. Specific reductions achieved include the following:
 - 9.5% reduction in electricity use by Department of Watershed Management (related to 11% reduction in volume of drinking water and wastewater treated)
 - 58% reduction in natural gas use at Hartsfield Jackson International Airport due to replacement of gas chillers with electric chillers; and
 - 4% reduction in electricity use in other departments, including 10% savings in City Hall due to 4-5 months of aggressive savings measures undertaken by the Office of Enterprise Assets ManagementIn 2011 the city intends to take its energy and climate change programs to the broader community. This year it plans to launch energy efficiency incentive programs for the commercial sectors. It will also kick off a city-wide Climate

Action Plan through support from ICLEI local governments for Sustainability, Georgia Tech, and range of local stakeholders.

- **Major Business Oriented Sustainability Initiatives**
 - Green Building – The City has passed an ordinance requiring all new city construction and major renovations to be Silver-LEED (Leadership in Energy and Environmental Design) certified. One example is the new LEED Gold Certified Public Safety Headquarters.
 - Green Business Development- The City of Atlanta's development authority works to attract and incubate green businesses. The range of incentives are offered and administered including Solid Waste Facility Bonds, Industrial Revenue Bonds, Clean Renewable Energy Bonds, New Market Tax Credits, Renewal Community Commercial Revitalization Deduction, Renewal Community Environmental Clean-Up Cost Deduction, and tax increment financing.

- **Sustainable Development Design Standards**

In December 2003, the City of Atlanta passed a green building ordinance that applies to city-owned facilities and city-funded projects. This green building ordinance applies to all new construction and renovation projects in which the building has 5,000 square feet of occupied space or the total project cost exceeds \$2 million. These projects must incorporate sustainable design principles and must meet the Leadership in Energy and Environmental Design (LEED) Silver rating. Departments must submit an annual report to the City's environmental manager to demonstrate compliance with this standard.

- **Chamblee - LEED Requirement for Public and Commercial Buildings**

In March 2008, the Chamblee City Council voted unanimously to require all private development 20,000 square feet or greater to become LEED certified. Additionally, all future municipal buildings regardless of size must also be LEED certified. Green Globes certification is also allowed in lieu of LEED certification. Chamblee is the first city in the State of Georgia to mandate LEED certification for private development. In addition to public buildings, this requirement applies to commercial buildings, offices, industrial buildings, multiple residences and senior citizen multiple residences. LEED certification is mandatory for commercial building permit applications received by the City on or after April 1, 2009.

3.3. Partners

- Green Chamber of the South (<http://www.greencs.org/about-us>)
- SEEA (<http://www.seealliance.org/>)
- Southface - Since 1978, has worked with the construction and development industry, government agencies and communities to promote sustainable homes, workplaces and communities - <http://www.southface.org/>
- GEFA Partners
<http://www.gefa.org/Index.aspx?page=64>

3.4 Best Practices

- **2010 Conserve Georgia Awards and the 2010 Partnership for a Sustainable Georgia Awards**

In October 2010, Governor Perdue honored businesses and organizations for creating a culture of conservation. He announced the winners of the 2010 *Conserve Georgia Awards* and the 2010 *Partnership for a Sustainable Georgia Awards* to recognize initiatives that have produced outstanding conservation achievements. The Conserve Georgia Awards will recognize those helping to create a culture of conservation through energy, land, and water conservation and the promotion of

recycling. The Partnership for a Sustainable Georgia Awards, meanwhile, recognize Partners, including businesses, organizations and municipalities, for excellence in leading the way to a sustainable Georgia.

The 2010 Conserve Georgia Award winners included:

- **Energy Conservation Award - Ecolink, Inc. (Tucker)**
Ecolink has reduced their energy use by 35% since taking the Governor's Energy Challenge just one year ago. They now help others reduce their energy consumption by encouraging employees to conserve and educating other organizations.
- **Natural Resource Stewardship Award - Georgia Tech (Atlanta)**
Through reforestation projects, nearly waste-neutral dining halls, reducing energy use by 15% since 2007, and collecting millions of gallons of water in cisterns across the campus, Georgia Tech is taking a comprehensive approach to conservation and is a hallmark of environmental stewardship.
- **Recycling Award - Keep Cobb Beautiful (Marietta)**
Cobb County Government extended its single-stream recycling program and now recycles 15 percent of its waste while saving the county \$41,000 a year. Keep Cobb Beautiful also started battery recycling, collecting 900 pounds of batteries in just six months.
- **Water Conservation Award - TOTO USA (Morrow)**
TOTO is leading the way in water conservation by developing more efficient plumbing fixtures, ensuring the highest levels of efficiency in their Morrow facility, and educating their employees, community and fellow businesses on water conservation.

The 2010 Partnership for a Sustainable Georgia Award winners are as follows:

- **Advocate of the Year - Design That Works (Atlanta)**
Company president Linda McCullough provided significant assistance to the Partnership for a Sustainable Georgia's communications efforts while also recruiting new members to the Partnership.
- **Outreach and Employee Involvement Award - Atlanta Regional Commission**
ARC engages staff through an environmental team and by conducting environmental education at every agency staff meeting. ARC also established the "Green Communities Program," a voluntary certification designed to help local governments in the 10-county Atlanta Region reduce their overall environmental impact.
- **Rising Environmental Steward Award - Ecolink, Inc. (Tucker)**
In just one year, Ecolink aggressively pursued development of their Environmental Management System. They reduced their waste to landfill by almost 30,000 pounds, and reduced over 6,000 pounds of packaging materials annually.
- **Rising Environmental Steward Award - ignition, Inc. (Atlanta)**
In just one year, ignition reduced their energy use from lighting by 47 percent, diverted almost 28,000 pounds of waste from a landfill, and worked with clients to reduce their impacts on the environment.
- **Environmental Performance Award - John Deere (Augusta)**
John Deere exceeded all of their performance commitments with nearly a 30% reduction in waste to landfill, 30% reduction in total energy use, and worked to conserve and enhance 6 acres of nesting habitat.

- **Innovation Award - Unicoi State Park (Helen)**
Unicoi State Park coined the phrase “Being Green on a Dime,” and implemented several environmental programs with little or no funding that include converting old oil drums to recycling bins; installing a rainwater harvesting system made from reclaimed materials; and even using lint from their laundry to teach a fire building class.
- **Partner of the Year - TDK Corporation - Duluth and Peachtree City**
Over the past year, they have decreased their discharge of toxics to water by nearly 6%, hazardous material use by nearly 10%, energy consumption by about 10% and total water use by 27%. They also implemented an environmental purchasing program that drives sustainability into their supply chain.

3.5 Support to Business

3.5.1 Assessments

The following plant assessments were performed in Georgia within the DOE's Industrial Technologies Program

http://apps1.eere.energy.gov/industry/saveenergynow/partners/by_state_list.cfm/state=GA)

3.5.2 Tax Incentives, Grants, Utility Rebates and Real-Time Pricing

The Department of Energy's (DOE) Federal Energy Management Program (FEMP) facilitates the Federal Government's implementation of sound, cost-effective energy management and investment practices and provides the following on energy incentive programs in Georgia:

http://www1.eere.energy.gov/femp/financing/eip_ga.html

DSIRE – Database of State Incentives for Renewables and Efficiency

DSIRE is a comprehensive source of information on state, local, utility and federal incentives and policies that promote renewable energy and energy efficiency.

<http://www.dsireusa.org/incentives/index.cfm?re=1&ee=1&spv=0&st=0&srp=1&state=GA>

3.5.4 Useful Resources for the Commercial and Industrial Sectors

- Center of Innovation for Energy
<http://energy.georgiainnovation.org/documents/list>
- Conserve Georgia - the www.ConserveGeorgia.org website serves as an information portal with links to dozens of conservation programs that are implemented by state agencies and additional resources.
- DoE – South-East Industrial Resource Book -
http://www1.eere.energy.gov/industry/utilities/pdfs/southeast_resource_handbook.pdf
- DoE – State Incentives and Resource Database -
http://www1.eere.energy.gov/industry/states/state_activities/incentive_search.aspx
- Environmental Protection Agency – Georgia Division - <http://www.gaepd.org/>
- GEFA - <http://www.gefa.org/Index.aspx?page=51> and
<http://www.gefa.org/Index.aspx?page=192>
- GEFA Case Studies (Georgia State)SEEA -
<http://www.seealliance.org/database.php?value=ga>
- Georgia Department of Natural Resources – Sustainability Division – Resources for Commercial Business & Institutions
http://p2ad.org/documents/ci_home.html
- Georgia Department of Natural Resources – Sustainability Division – Resources for Manufacturing & Industry
http://p2ad.org/documents/ma_home.html

- Georgia Department of Natural Resources – Sustainability Division – The Sustainable Office Toolkit
<http://www.gasustainability.org/toolkit/>
- Southface - <http://www.southface.org/learning-center/library/>
- The Governor’s Challenge
<http://www.governorsenergychallenge.org/Resources.aspx#Links>