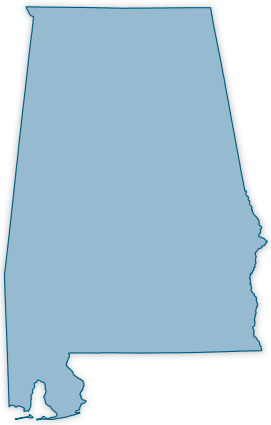
Department of Energy

Recovery Act State Memos

Alabama



For questions about DOE's Recovery Act activities, please contact the DOE Recovery Act Clearinghouse:
1-888-DOE-RCVY (888-363-7289), Monday through Friday, 9 a.m. to 7 p.m. Eastern Time

https://recoveryclearinghouse.energy.gov/contactUs.htm.

All numbers and projects listed as of June 1, 2010

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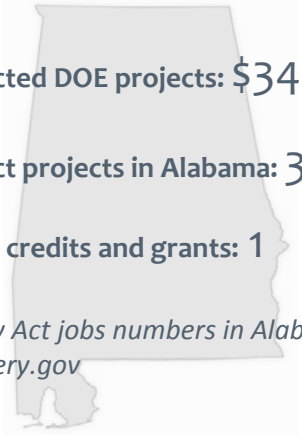
American Recovery and Reinvestment Act

U.S. DEPARTMENT OF ENERGY • ALABAMA RECOVERY ACT SNAPSHOT



Funding for selected DOE projects: $342.4 million

DOE Recovery Act projects in Alabama: 38

Clean energy tax credits and grants: 1

For total Recovery Act jobs numbers in Alabama go to www.recovery.gov

Alabama has substantial natural resources, including gas, coal, biomass, geothermal, and hydroelectric power. The **American Recovery & Reinvestment Act (ARRA)** is making a meaningful down payment on the nation's energy and environmental future. The Recovery Act investments in Alabama are supporting a broad range of clean energy projects, from energy efficiency and the electric grid to renewable energy and carbon capture and storage. Through these investments, Alabama's businesses, universities, non-profits, and local governments are creating quality jobs today and positioning Alabama to play an important role in the new energy economy of the future.

EXAMPLES OF ALABAMA FORMULA GRANTS

Program	State Energy Program	Weatherization Assistance Program	Energy Efficiency Conservation Block Grants	Energy Efficiency Appliance Rebate Program
Award (in millions)	$55.6	$71.8	$31.7	$4.5
	The Alabama Department of Economic and Community Affairs has received $55.6 million in State Energy Program funds to invest in state-level energy efficiency and renewable energy priorities.	The Alabama Department of Economic and Community Affairs has received $71.8 million in Weatherization Assistance Program funds to scale-up existing weatherization efforts in the state, creating jobs, reducing carbon emissions, and saving money for Alabama's low-income families. Over the course of the Recovery Act, Alabama expects to weatherize approximately 6,650 homes. The program also includes workforce training and education as part of the state's efforts to develop a green workforce.	Twenty-four communities in Alabama received a total of $31.7 million for Energy Efficiency and Conservation Block Grants (EECBG) to develop, promote, implement, and manage local energy efficiency programs.	The Alabama Department of Economic and Community Affairs has received $4.5 million for the Energy Efficient Appliance Rebate Program, which offers consumer rebates for purchasing certain ENERGY STAR® appliances. These energy efficient appliances reduce energy use and save money for families, while helping the environment and supporting the local economy.

EXAMPLES OF ALABAMA COMPETITIVE GRANTS AND TAX CREDITS

Award

$164.5 million

Southern Company Services, Inc. in Birmingham was awarded a **Smart Grid Investment Grant** of **$164.5 million** to deploy smart grid technologies on transmission and distribution systems to improve the electricity and reliability of the electrical system and help consumers reduce their energy use and save money.

$6.5 million

GE Consumer & Industrial in Decatur was awarded a clean energy manufacturing tax credit for **$6.5 million** to purchase machinery and equipment for energy efficient refrigerators.

$6 million

Alabama Power Company was awarded **$6 million** for hydroelectric facility modernization in Birmingham. They will upgrade four units at three different hydroelectric plants located on the Coosa River.

Funding Allocation Table (Figure 1)

Total dollar amounts in this document are accurate as of June 1, 2010. Please note that Recovery Act Programs are ongoing and the dollar amounts are subject to change. Recipient locations are based on project sites rather than recipients' headquarters locations.

Recovery Act Pillar	Flagship Program Names & Funding Type[1]	Number of Selections	Selected Amount (in millions)[2]
Energy Efficiency	*Weatherization Assistance Program (F)*	1	$71.8
	State Energy Program (F)	1	$55.6
	Energy Efficiency and Conservation Block Grant (F)	24	$31.7
	Energy Efficient Appliance Rebate (F)	1	$4.5
	Industrial Energy Efficiency (CM)	3	$1.0
	TOTAL Energy Efficiency	31	$169.6
Renewable Energy	*Additional Programs (F & CM)*	1	$6.0
	TOTAL Renewable Energy	1	$6.0
Electric Grid	*Smart Grid Investment and Demonstrations Project (CM)[3]*	1	$164.5
	State and Local Energy Assurance and Regulatory Assistance (F)	2	$1.5
	TOTAL Electric Grid	3	$166.0
Carbon Capture and Storage	*Geologic Characterization Projects (CM)*	1	$4.8
	Research and Training (CM)	3	$0.9
	TOTAL Carbon Capture and Storage	4	$5.7
TOTAL - DOE Programs[4]		**38**	**$342.4**
Tax Credits/ Payments[5]	*Clean Energy Manufacturing Tax Credits (48C)*	1	$6.5
	TOTAL Tax Incentives	**1**	**$6.5**
TOTAL - DOE/Treasury + DOE		**39**	**$348.9**

[1]F=Formula Grant, CM=Competitive Grant, C=Contract

[2]""Selected" indicates DOE has selected a potential funding recipient, which begins the process of negotiating an agreement. This does not necessarily indicate that a final agreement has been reached.

[3]Projects may cross state boundaries, signifies HQ location.

[4]Total does not include administrative funds.

[5]Jointly administered by DOE and the U.S. Department of Treasury.

ENERGY EFFICIENCY – 31 projects totaling $169.6 million

Helping millions of American families cut utility bills by making homes and appliances more energy efficient, expanding the home efficiency industry in sales and manufacturing. For more information, visit http://www.energy.gov/recovery/energyefficiency.htm.

Award(s): $71.8 million, Weatherization Assistance Program (WAP)
Location: Statewide
The Alabama Department of Economic and Community Affairs (ADECA) received $71.8 in Weatherization Assistance Program funds to scale-up existing weatherization efforts in the state, creating jobs, reducing carbon emissions and saving money for Alabama's low-income families. Over the course of the Recovery Act, Alabama expects to weatherize approximately 6,650 homes. The program also includes workforce training and education as part of the state's efforts to develop a green workforce. ADECA is delivering weatherization assistance to low-income households in all 67 counties across the state. WAP's mission is to reduce energy costs for low-income households, particularly for the elderly, people with disabilities and families with children, by improving the energy efficiency of their homes while ensuring their health and safety. Alabama weatherization assistance typically includes mitigating outside air infiltration into the conditioned space of the home, installing attic, wall and floor insulation, sealing duct work, performing HVAC system tune-ups, repairing leaky windows and doors and replacing incandescent light bulbs with highly efficient compact fluorescent light bulbs. Health and safety checks are also performed on the home.

Award(s): $55.6 million, State Energy Program (SEP)
Location: Statewide
The Alabama Department of Economic and Community Affairs received $55.6 million in State Energy Program funds to invest in state-level energy efficiency and renewable energy priorities. Alabama is using this funding to promote energy efficiency in businesses, schools and correctional facilities, as well as develop renewable energy resources throughout the state. Alabama is working closely with the automotive supplier industry to improve the energy efficiency of their processes by identifying aspects of the process that reduce energy demand, carbon output and waste stream output. The state also is also using funds to create a new energy revolving loan fund designed to provide low-interest loans for new and existing industries in the state. These loans are being used for the installation of renewable energy systems and the implementation of energy efficiency measures. Alabama is also directing SEP funds toward energy efficiency retrofits in correctional facilities and K-12 schools. The state is expanding its existing Energy-Efficient Retrofit of Schools Program to assist in the purchase and installation of energy-efficient equipment for an estimated 30 K-12 school districts.

Award(s): 24 totaling $31.7 million, Energy Efficiency and Conservation Block Grant Program (EECBG)
Locations: Statewide
Recipients: Alabama State Energy Office, Jefferson County, Birmingham, Montgomery, Mobile County, Mobile, Huntsville, Tuscaloosa, Baldwin County, Shelby County, Dothan, Hoover, Decatur, Auburn, Calhoun County, Madison County, Marshall County, Tuscaloosa County, Talladega County, Cullman County, Florence, Poarch Band of Creek Indians of Alabama, Gadsden, Madison

Twenty-four communities in Alabama received a total of $31.7 million for the Energy Efficiency and Conservation Block Grants Program (EECBG) to develop, promote, implement and manage local energy efficiency programs.
These grants are supporting financial incentive programs in energy savings, energy-efficient building retrofits, and the reduction and capture of Methane and GHG. The program is also supporting the replacement of outdated, inefficient traffic and street lighting with LED's and the installation of renewable energy technology applications such as solar and biomass. Examples of EECBGs include:

- **City of Tuscaloosa - $916,000**
  The City of Tuscaloosa is installing up to 815 energy-saving LED streetlights on major thoroughfares throughout the city.

- **City of Auburn - $528,000**
  The objectives of the City of Auburn's EECBG projects include congestion mitigation, reduction of vehicle emissions, long-term reduction in energy consumption, operating and maintenance costs, and continued reduction of solid waste streams and energy consumption associated with disposal. Projects being implemented include pedestrian, bicycle and transit improvements in the downtown area, traffic signal coordination, alternative transportation promotional and safety campaign, energy efficiency audits and retrofits to existing facilities, LED street light retrofits and expansion of the recycling program.

Award(s): $4.5 million, Energy Efficient Appliance Rebate Programs
Location: Statewide
The Alabama Department of Economic and Community Affairs received $4.5 million for the Energy Efficient Appliance Rebate Program, which offers consumer rebates for purchasing certain ENERGY STAR® appliances. These energy efficient appliances reduce energy use and save money for families, while helping the environment and supporting the local economy. This funding assists state-level rebate programs by paying up to 50 percent of the administrative costs of establishing and executing these types of programs. Though states and territories determine the appliances which apply, typically those include clothes washers, dishwashers, refrigerators, freezers, room air conditioners and water heaters.

Award(s): $502,000, Advanced Materials RD&D in Support of EERE Needs to Advance Clean Energy Technologies and Energy-Intensive Process R&D
Location: Birmingham

The University of Alabama in Birmingham is investing in emissions burner technology for the metal processing industry using by-products and biomass derived liquid fuels.

Award(s): 2 totaling $470,000, Industrial Assessment Centers and Plant Best Practices
Locations: Montgomery, Tuscaloosa

- **Alabama Department of Economic and Community Affairs, Montgomery - $350,000**
  The Alabama Department of Economic and Community Affairs in Montgomery received $350,000 to perform energy assessments at small, medium and large energy-using manufacturing sites, providing concurrent, lean manufacturing evaluations.

- **University of Alabama, Tuscaloosa - $120,000**

The University of Alabama in Tuscaloosa received $120,000 to provide eligible small and medium-sized manufacturers with no-cost energy assessments and serve as a training ground for the next generation of energy-savvy engineers.

RENEWABLE ENERGY – 2 projects totaling $12.5 million

Developing the clean renewable resources in order to double our supply of renewable energy and boost domestic renewable manufacturing capacity. For more information, visit http://www.energy.gov/recovery/renewableenergy.htm.

Award(s): $6.5 million from DOE / Treasury, Clean Energy Manufacturing Tax Credit (48C)
Location: Decatur
GE Consumer & Industrial in Decatur received $6.5 million to purchase machinery and equipment for energy efficient refrigerators.

Award(s): $6 million, Hydroelectric Facility Modernization Program
Location: Birmingham
Alabama Power Company in Birmingham received $6 million for hydroelectric facility modernization. They are upgrading four units at three different hydroelectric plants located on the Coosa River.

MODERNIZING THE ELECTRIC GRID – 3 projects totaling $166 million

Harnessing clean energy sources and integrating them onto a modernized electric grid, while giving consumers better choices and more control over their energy use. For more information, visit http://www.energy.gov/recovery/smartgrid.htm.

Award(s): $628,000, Enhancing State and Local Governments' Energy Assurance
Location: Statewide
Alabama Department of Economic and Community Affairs received $628,000 for State Energy Assurance Planning. This project focuses on building regional energy assurance capability by enhancing inter- and intra- state coordination and cooperation during energy emergencies. The project funds states to update or develop State Energy Assurance Plans incorporating new energy portfolios such as wind, renewables and biofuels. The project also funds cities to update or develop Local Energy Assurance Plans. The two sets of funding are used to hire or retrain staff to build in-house expertise in dealing with Smart Grid technologies, critical energy infrastructure interdependencies and cyber-security.

Award(s): $164.5 million, Smart Grid Investment Grant Program (EISA 1306)
Location: Birmingham
Southern Company Services, Inc., in Birmingham received a Smart Grid Investment Grant of $164.5 million to deploy Smart Grid technologies on transmission and distribution systems to improve the electricity and reliability of the electrical system. This project is helping consumers reduce their energy use and save money.

Award(s): $869,000, State Assistance on Electricity Policies
Location: Statewide
The Alabama Public Service Commission received $869,000 to assist in addressing its Recovery Act electricity workload by hiring staff trained to facilitate the review of time-sensitive requests approving electric utility expenditures.

CARBON CAPTURE & STORAGE – 4 projects totaling $5.7 million

Developing clean coal technologies so we can utilize America's coal resources sustainably. For more information, visit http://www.energy.gov/recovery/ccs.htm.

Award(s): $4.8 million, Geologic Sequestration Site Characterization
Location: Tuscaloosa
The University of Alabama in Tuscaloosa received $4.8 million to conduct site characterization of the Black Warrior Basin. This project includes drilling and coring a test well, quantifying capacity and injectivity use an array of advanced petrophysical and geophysical techniques and analyzing seal integrity and containment using petro physical, geophysical, well testing and simulation techniques. The results of these activities will be used to develop a regional plan for the application of carbon storage technologies.

Award(s): 3 totaling $896,000, Geologic Sequestration Training and Research Grant Program
Location: Tuscaloosa, Birmingham, Tuskegee

- **University of Alabama, Tuscaloosa - $300,000**
  The University of Alabama in Tuscaloosa received $300,000 for a three-year study of the Citronelle Oil Field to determine the diagenetic alteration of reservoir rock and formation fluid properties due to injection of supercritical carbon dioxide into mature, conventional hydrocarbon reservoirs. Research methods are using widely-available and low-cost technologies to assess the geochemical composition of reservoir rock and fluids and use the MULKOM / TOUGH family of reservoir simulation programs to perform reactive transport modeling of carbon dioxide-fluid-rock interactions. This project is supporting graduate and undergraduate students during the research effort.

- **University of Alabama at Birmingham, Birmingham - $300,000**
  The University of Alabama in Birmingham received $300,000 for a project that focuses on the sealing capacity of geologic formations and the analysis of cap rock samples from geologic formations under consideration for the sequestration of carbon dioxide. The project also supports the development of an advanced undergraduate / graduate level course on coal combustion, gasification, climate change and carbon sequestration. In addition, this funding is supporting six graduate students as they conduct research on the development of protocols for assessment of seal layer integrity as well as undergraduate honors research on geologic sequestration.

- **Tuskegee University, Tuskegee - $297,000**
  Tuskegee University in Tuskegee received $297,000 to provide fundamental research, hands-on training and networking opportunities to undergraduate students studying carbon capture and transport. This program focuses the development of the most economical separation method for carbon dioxide capture. This project is supporting at least two graduate students throughout its duration.

ENERGYEMPOWERS.GOV

Recovery Act Success Stories

Energy Empowers is a U.S. Department of Energy clean energy information service. Our team produces stories featuring the people and businesses that are fueling the energy transformation and economic recovery in America.
For more stories from your state, go to energyempowers.gov/Alabama

Montgomery's horizontal grinder has normal handling capacity of 108 tons per hour. | Photo Courtesy of Lynda Wool

MONTGOMERY

Hurricanes, tornadoes, jobs and energy efficiency in Montgomery, Alabama

Warm, humid climate and proximity to the Gulf of Mexico produce turbulent weather patterns that regularly bring tornadoes and hurricanes to Montgomery, Ala. As a result, each year the state's capitol city must manage tons of construction waste and storm debris. City officials realized there was potential for using quality debree.

Now, thanks to a $2.5 million Energy Efficiency Conservation Block Grant (EECBG) from the U.S. Department of Energy, Montgomery will revamp its landfill sorting efforts and retrofit its historical city.

"We really wanted to use the [grant] toward something that could save money over a long range of time," says Lynda Wool, a senior planner in Montgomery's Planning and Development Office. The city purchased an excavator and horizontal grinder for the landfill. "The excavator and grinder will really help us manage this type of waste."

The grinder can move across the landfill and separates nails, heavy staples, door knobs and other metallic material from waste wood. The waste wood is then sent through the grinder, and comes out as wood chips.

These wood chips have a variety of uses in the city. Some go to the Parks and Recreation department, which lines area playgrounds and parks with chips. Another portion of the chips are used to line animal habitats and tree beds at the Montgomery Zoo.

In addition to the horizontal grinder and excavator, the city purchased more recycling bins for the city, and plans to invest in a recycling campaign on local TV and radio.

New windows brighten the building

With only half of their EECBG funds spent on the landfill maintenance, city officials also decided to give City Hall a much needed facelift.

As the capital of Alabama, Montgomery has a very old, historical city hall. In order to maintain the integrity of the building, special precautions had to be taken during the retrofitting process.

"We have a company that specializes in old building restoration, and they're responsible for refurbishing and reglazing windows," Wool says. "The windows really needed to be fixed up. This group is going through inside and out and repairing all of the damage to the frames."

So far, the city is happy with the new look. "When people come downtown, it's obvious that something is different. A lot of people have made comments about how great the windows look. The best part is that it's not only aesthetic, there are energy savings too!" Anticipating a fall completion, the city's next project will be a solar array on top of City Hall's parking garage.

"We really and truly think that while the solar isn't going to solely power our city hall, it will have some capacity for buyback and will generate electricity that could be sent around the city," says Wool.

As the state capital, Wool hopes that Montgomery would set an example for other cities around the state.

"We would be the first city hall in the state to do this. This would be a great way to say that we—as a state—need to really start thinking about this," Wool says. "We're trying to be a good role model, and of course, we're trying to save money."

Local work – local jobs

Not only is Montgomery doing work on City Hall, they're also hiring local unemployed citizens to help out. About seven workers have been hired to assist with the windows project at City Hall. Before they can begin working, they receive restoration training and learn the ropes of the contracting business.

"They're seeing different skills and learning those. It's about giving people an opportunity," Wool says.

Overall, Wool says the city seems to be happy with the changes.

LED Lights = More Savings

In addition to the landfill project and retrofitting city hall, Montgomery was able to finish changing their traffic signals to LED bulbs, savings thousands a year in energy usage.

Talladega

Thanks to Recovery Act, Alabama family staying nice and cozy this fall

In the winter months, Mary Taylor felt a chilly draft billowing through her Talladega, Ala., home. The energy bills were mounting up higher and higher. In the summer, the sweltering southern heat was too much for her air conditioner to handle, as the cool air leaked out of house as quickly as the AC could work.

That was before weatherization workers from the Community Action Agency of Talladega, Clay, Calhoun, Randolph and Cleburne Counties received about $1.8 million in Recovery Act money to weatherize homes, including Mary's, which has lowered her energy bills to an affordable amount while keeping her home toasty this winter.

"The house was tremendously cold, and I just kept the thermostat up as high as it would go trying to stay warm — it was awful," Mary says. "The underpinning and insulation under the house was all messed up."

Mary lives on a fixed income because of a disability, and because her energy bills were sometimes a whopping $500 a month, she says, it's no wonder she struggled to keep up with them.

Mary says the weatherization team from the community action agency's Talladega branch worked wonders for her home. Her energy bill costs about $200 now, and she no longer has to take extreme measures to keep her and her three children and grandchild warm.

"It makes it a lot easier for me to pay the rest of my bills," Mary says. "My kids were so happy, they said, 'Oh, Mama, we don't have put all those covers on the bed anymore.' It was a worry to me, too, having to leave electric space heaters plugged up in their rooms trying to keep them warm."

With their lives made a little bit easier and more comfortable, families such as Mary's are telling the agency how thankful they are.

"I went up there and told them how amazing it is and how wonderful of a job they did," Mary says. "Right now everybody I think of who could benefit from the program, I tell them about the difference it made in my life and in my home."

Kim Pickett, weatherization coordinator assistant at the agency, says the group has been able to hire seven new contractors and two in-house staff members with stimulus money. The contractors employ anywhere from one to five workers each, she says.

According to the agency, it is assessing 60 to 70 homes each month and is well on-track to use its stimulus funds within the two-year time frame it was given, so families just like Mary's throughout the area will soon experience what it's like to be warm on frigid winter nights.

The roof-mounted solar array at the T.K. Davis Justice Center in Opelika, Ala. | Photo courtesy of Lee County Commission

Opelika

Alabama justice center expands its solar capabilities

At the T.K. Davis Justice Center in Opelika, Ala., the county is making an effort to reduce costs and help the environment by installing solar panels on the center's roof and on poles around the property.

In addition to the existing array of panels at the center, a $162,000 Energy Efficiency and Conservation Block Grant awarded to Lee County through the Recovery Act is helping add at least another 36 panels. The power will the heat water at the detention facility.

"Alabama isn't really known for solar energy yet, but we really want to be a model for other communities and government agencies in the state to let them see what's possible," Wendy Swann, Lee County's government relations coordinator, says. "We've already received a lot of attention from across the state and region, and there are several communities looking at solar panels for their facilities — we just want to make the benefits renewable energy more well-known in the area."

The EECBG-funded project will be the second phase in the center's goal: significantly reduce operational expenses and generate enough electricity to sell back into the grid.

"This absolutely yields taxpayer savings in the long run, which is one of the other reasons we wanted to do it," Wendy says. "With this being a detention facility, we are running it 24 hours a day, so we wanted to see what we could do to help pass along some savings, and we hope to save even more as we expand our renewable energy systems."