



Department of Energy Recovery Act State Memos

Florida



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

TABLE OF CONTENTS

RECOVERY ACT SNAPSHOT..... 1

FUNDING ALLOCATION TABLE..... 2

ENERGY EFFICIENCY 3

RENEWABLE ENERGY 5

ELECTRIC GRID..... 8

TRANSPORTATION 10

CARBON CAPTURE AND STORAGE..... 10

SCIENCE AND INNOVATION 11

RECOVERY ACT SUCCESS STORIES – ENERGY EMPOWERS

- *Battery factory bringing jobs to Jacksonville 12*
- *Tallahassee program encourages residents to build green 12*
- *E-Shelters to teach a valuable lesson on energy 13*
- *Florida residents see energy bill reductions 13*
- *Hopeful astronaut goes next-generation car designer 14*



American Recovery and Reinvestment Act



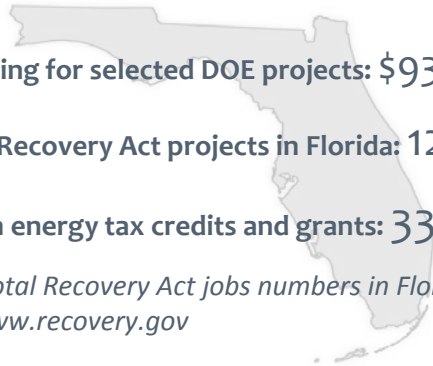
U.S. DEPARTMENT OF ENERGY • FLORIDA RECOVERY ACT SNAPSHOT

Funding for selected DOE projects: **\$935.5 million**

DOE Recovery Act projects in Florida: **123**

Clean energy tax credits and grants: **33**

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



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 Florida are supporting a broad range of clean energy projects, from energy efficiency and the smart grid to solar power and biofuels. Through these investments, Florida's businesses, universities, non-profits, and local governments are creating quality jobs today and positioning Florida to play an important role in the new energy economy of the future.

EXAMPLES OF FLORIDA FORMULA GRANTS

Program	State Energy Program	Weatherization Assistance Program	Energy Efficiency Conservation Block Grants	Energy Efficiency Appliance Rebate Program
Award (in millions)	\$126.1	\$176	\$168.6	\$17.6
	The Executive Office of the Governor of Florida has received \$126.1 million to invest in state-level energy efficiency and renewable energy priorities.	The State of Florida has received \$176 million to scale-up existing weatherization efforts in the state, creating jobs, reducing carbon emissions and saving money for Florida's low-income families. Over the course of the Recovery Act, Florida expects to weatherize nearly 19,100 homes.	Eighty-seven communities in Florida have received a total of \$168.6 million to develop, promote, implement, and manage local energy efficiency programs.	The Executive Office of the Governor of Florida has received \$17.6 million to offer consumer rebates for purchasing certain ENERGY STAR® appliances, which reduce energy use and save money for families, while helping the environment and supporting the local economy.

EXAMPLES OF FLORIDA COMPETITIVE GRANTS AND TAX CREDITS

Award	\$200 million	\$95.5 million	\$50 million	\$47.9 million	\$20.4 million	\$14.9 million
	Florida Power & Light Company was awarded \$200 million under the Smart Grid Investment Grant program for a comprehensive project to advance smart grid functionalities across the state.	Saft in Jacksonville was awarded \$95.5 million to build advanced lithium-ion batteries for electric vehicles.	INEOS New Planet BioEnergy, LLC in Vero Beach was awarded \$50 million to produce ethanol and electricity from wood and vegetative residues and construction and demolition materials.	Florida received thirty-two 1603 payments for renewable energy generation totaling \$47.8 million , which include solar and biomass projects. For example, Florida Power & Light Company received \$43.9 million for a photovoltaic facility project.	Jabil Circuit in St. Petersburg was awarded a clean energy manufacturing tax credit for \$20.4 million to retrofit an existing plant to offer solar photovoltaic panel assembly, logistics, procurement, and certification services for mono- and multi-crystalline photovoltaic cell manufacturers.	Lakeland Electric was awarded a \$14.9 million Smart Grid Investment Grant to install a smart meter network for more than 125,000 residential, commercial and industrial electric customers across the utility's service area.

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	<i>Weatherization Assistance Program (F)</i>	1	\$176.0
	<i>State Energy Program (F)</i>	1	\$126.1
	<i>Energy Efficiency and Conservation Block Grant (F)</i>	87	\$168.6
	<i>Energy Efficient Appliance Rebate (F)</i>	1	\$17.6
	<i>Building Energy Efficiency</i>	1	\$0.0005
	<i>Additional Programs (CM & C)</i>	1	\$0.3
	TOTAL Energy Efficiency	92	\$488.6
Renewable Energy	<i>Solar (CM)</i>	2	\$1.6
	TOTAL Renewable Energy	2	\$1.6
Electric Grid	<i>Smart Grid Investment and Demonstrations Project (CM)³</i>	8	\$261.6
	<i>State and Local Energy Assurance and Regulatory Assistance (F)</i>	5	\$3.5
	<i>Smart Grid Workforce Training (CM)</i>	1	\$5.0
	TOTAL Electric Grid	14	\$270.1
Transportation	<i>Advanced Battery Manufacturing (CM)</i>	1	\$95.5
	<i>Advanced Fuels (CM)</i>	2	\$74.3
	<i>Additional Programs (CM)</i>	1	\$2.4
	TOTAL Transportation	4	\$172.2
Carbon Capture and Storage	<i>Research and Training (CM)</i>	1	\$0.3
	TOTAL Carbon Capture and Storage	1	\$0.3
Science and Innovation	<i>Small Business Research (SBIR/STTR) (CM)</i>	8	\$1.2
	<i>National Laboratory Facilities (C)</i>	1	\$0.6
	<i>Additional Programs</i>	1	\$0.9
	TOTAL Science and Innovation	10	\$2.7
TOTAL - DOE Programs⁴		123	\$935.5
Tax Credits/ Programs ⁵	<i>Grants for Energy Property in Lieu of Tax Credits (1603)</i>	32	\$47.8
	<i>Clean Energy Manufacturing (48C)</i>	1	\$20.4
	TOTAL Tax Incentives	33	\$68.2
TOTAL - DOE/Treasury + DOE		156	\$1,003.7
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 – 92 projects totaling \$488.6 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): \$176 million, Weatherization Assistance Program (WAP)

Location: Statewide

Florida has received \$176 million to scale-up existing weatherization efforts in the state, creating jobs, reducing carbon emissions and saving money for Florida's low-income families. Over the course of the Recovery Act, Florida expects to weatherize nearly 19,100 homes. The Weatherization Assistance Program annually provides grant funds to community action agencies, local governments, Indian tribes and non-profit agencies to provide specific program services for low-income families of Florida. These entities provide program services throughout the state. The mission of the program is to reduce the monthly energy burden on low-income households by improving the energy efficiency of the home.

Award(s): \$126.1 million, State Energy Program (SEP)

Location: Statewide

The Executive Office of the Governor of Florida has received \$126.1 million to invest in state-level energy efficiency and renewable energy priorities. These funds will be allocated towards a variety of projects statewide, including the Florida Clean Energy Opportunity Fund, created to increase the availability of seed capital and early state venture capital for emerging clean technology companies in Florida. Examples of other projects include Solar for Schools & Shelters, Solar Energy (Water Heating) Loan, the Florida Energy Opportunity Fund and the Florida Residential Retrofit Program.

Award(s): 87 totaling \$168.6 million, Energy Efficiency and Conservation Block Grant Program (EECBG)

Location: Statewide

Recipients: Florida State Energy Office, Miami-Dade County, Jacksonville, Hillsborough County, Orange County, Palm Beach County, Miami, Polk County, Pasco County, Pinellas County, Tampa, Lee County, Collier County, Brevard County, Seminole County, Lake County, Orlando, Sarasota County, Marion County, Volusia County, Manatee County, St. Petersburg, Escambia County, Fort Lauderdale, Hialeah, Tallahassee, Cape Coral, Hollywood, Port St. Lucie, Pembroke Pines, Gainesville, Coral Springs, West Palm Beach, Clearwater, Pompano Beach, Boca Raton, Miami Gardens, Lakeland, Miramar, Palm Bay, Davie, Sunrise, Miami Beach, Melbourne, Plantation, Fort Myers, Deltona, Largo, Deerfield Beach, Daytona Beach, Boynton Beach, Palm Coast, Delray Beach, Ocala, Pensacola, Kissimmee, Sarasota, Lauderhill, Weston, Tamarac, Bradenton, Homestead, Sanford, North Miami, Margate, Port Orange, Wellington, North Port, Coconut Creek, Palm Beach Gardens, Pinellas Park, Coral Gables, Jupiter, Titusville, Fort Pierce, Oakland Park, Bonita Springs, Panama, Altamonte Springs, Ormond Beach, Hallandale Beach, North Lauderdale, Riviera Beach, North Miami Beach, Apopka, Lake Worth, Dunedin

Eighty-seven communities in Florida received a total of \$168.6 million to develop, promote, implement and manage local energy efficiency programs.

The EECBG funding will support energy reviews and efficiency modifications in residential and commercial buildings, advanced building codes and inspections and financial incentive programs for

energy efficiency improvements. Other activities eligible for use of grant funds include transportation programs that conserve energy, projects to reduce and capture methane and other greenhouse gas emissions from landfills, renewable energy installations on government buildings, energy efficient lighting for traffic signals and street lights and other actions that conserve energy. Examples of EECBGs include:

- **City of Boca Raton - \$990,000**

The City of Boca Raton will buy eleven new hybrid vehicles, the first step in a seven-project green initiative that will spend \$990,000 in federal stimulus dollars. The fleet will replace vehicles due for a change using hybrids is estimated to save the city \$8,000 per year. Some of the other green projects will retrofit the florescent, illuminated street signs at sixteen intersections downtown to LED (light-emitting diodes). Some 1,000 incandescent streetlight heads will be replaced with LED fixtures and 320 outdoor lights at city buildings and parking lots will be replaced with more energy-efficient LEDs.

- **City of Largo - \$719,000**

The City of Largo is undertaking a variety of projects with \$719,000 in EECBG funds including energy efficiency studies and a roof retrofit for City Hall, an energy efficiency sub-grant program for homeowners (up to \$5,000), retrofits to 180 streetlights with LED lighting technology and the conversion of the Community Center to a green building to include a complete photovoltaic system.

Award(s): \$17.6 million, Energy Efficient Appliance Rebate Programs

Location: Statewide

The Executive Office of the Governor of Florida has received \$17.6 million to offer consumer rebates for purchasing certain ENERGY STAR® appliances. ENERGY STAR appliances reduce energy use, thereby saving money for families, helping the environment and supporting the local economy. The Florida ENERGY STAR Appliance Rebate Program provides rebates on approximately 68,000 ENERGY STAR appliances purchased from Florida retailers. These rebates bring at least \$62 million into Florida's economy, in addition to generating at least \$4 million in tax revenues. Retailers must provide a sales receipt which includes the retailer's name, address and purchase date and product information such as type of appliance, model number and price.

Award(s): \$491, Buildings and Appliance Market Transformation

Location: Miami

The Buildings and Appliance Market Transformation project expands building codes, accelerates the pace of Appliance Standard test procedure development and improves the efficiency of commercial buildings' operations by training building operators and commissioning agents. Miami received \$491 to focus on expanding ENERGY STAR to accelerate development of energy efficient products and expand the ENERGY STAR brand into new areas. These areas include preparing the design, construction and enforcement communities to implement commercial building energy codes requiring a 30 percent improvement over the 2004 codes by 2010. Additional ENERGY STAR benefits include accelerating and expanding DOE's appliance standards program to evaluate innovative technologies and develop new test procedures. These procedures will be more representative of today's energy use trends and equipment standards. EOS Trading Company, Inc., will lead this project.

Award(s): \$250,000, Ground Source Heat Pumps

Location: Miami

Florida International University in Miami received \$250,000 to gather and analyze data to improve GHP loop design and efficiency in systems intended for use in hot and humid regions of the country.

RENEWABLE ENERGY – 35 projects totaling \$69.8 million

Developing 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): 32 payments totaling \$47.8 million from DOE / Treasury, 1603 Payments for Renewable Energy Generation

Location: Statewide

*For current number of 1603 awards, see the weekly update at <http://www.treas.gov/recovery/1603.shtml>

Florida received thirty-two 1603 payments for renewable energy generation totaling \$47.8 million, which include solar and biomass projects.

- **Florida Power & Light Company, Arcadia - \$43.9 million**
Florida Power & Light Company in Arcadia received \$43.9 million for a solar electricity project.
- **Multirade Telogia, LLC, Telogia - \$3 million**
Multirade Telogia Power, LLC, in Telogia received \$3 million for a solar electricity project.
- **Triple J. Ranch of Sarasota, Inc., Sarasota - \$150,000**
The Triple J. Ranch of Sarasota, Inc., received \$150,000 for a solar electricity project.
- **All Stat Home Health, Sarasota - \$54,000**
All Stat Home Health in Sarasota received \$54,000 for a solar electricity project.
- **Weikert Ford, Inc., Lake Wales - \$51,000**
Weikert Ford, Inc., in Lake Wales received \$51,000 for a solar electricity project.
- **Conditioned Air Corporation of Naples, Inc., Naples - \$50,000**
Conditioned Air Corporation of Naples, Inc., received \$50,000 for a solar electricity project.
- **Pecan Patch, LLC, Alachua - \$48,000**
Pecan Patch, LLC, in Alachua received \$48,000 for a solar electricity project.
- **Island Grove, LLC, Arcadia - \$46,000**
Island Grove, LLC, Blueberry Farm in Arcadia received \$46,000 for a solar electricity project.
- **Mirror Image Studios, Inc., Gainesville - \$45,000**
Mirror Image Studios, Inc., in Gainesville received \$45,000 for a solar electricity project.
- **Bella Solar Power Company, LLC, Gainesville - \$45,000**

Bella Solar Power Company, LLC, in Gainesville received \$45,000 for a solar electricity project.

- **Marlin Solar, LLC, Gainesville - \$45,000**
Marlin Solar, LLC, in Gainesville received \$45,000 for a solar electricity project.
- **Rufus Solar, LLC, Gainesville - \$45,000**
Rufus Solar, LLC, in Gainesville received \$45,000 for a solar electricity project.
- **Superior Solar Systems ,LLC, Longwood - \$45,000**
Superior Solar Systems, LLC, in Longwood received \$45,000 for a solar electricity project.
- **La Poco Vizio, Inc., Havana - \$45,000**
La Poco Vizio, Inc., in Havana received \$45,000 for a solar electricity project.
- **Pure Energy Solar International, Inc, Gainesville - \$40,000**
Pure Energy Solar International, Inc., in Gainesville received \$40,000 for a solar electricity project.
- **Southern Accent Farm, Inc., Okeechobee - \$34,000**
Southern Accent Farm, Inc., in Okeechobee received \$34,000 for a solar electricity project.
- **Palm Tree Villas, Holmes Beach - \$26,000**
Palm Tree Villas in Holmes Beach received \$26,000 for a solar electricity project.
- **Oertel, Skelding Interest, Tallahassee - \$23,000**
Oertel, Skelding Interest in Tallahassee received \$23,000 for a solar electricity project.
- **Willis A. Smith Construction, Inc., Sarasota - \$23,000**
Willis A. Smith Construction, Inc., in Sarasota received \$23,000 for a solar electricity project.
- **Bell, Griffith & Assoc., Inc., Tallahassee - \$21,000**
Bell, Griffith & Assoc., Inc., in Tallahassee received \$21,000 for a solar electricity project.
- **Jean Renoux Designs, Inc., Sarasota - \$17,000**
Jean Renoux Designs, Inc., in Sarasota received \$17,000 for a solar electricity project.
- **Bonita Grande Dressage , LLC, Bonita Springs - \$17,000**
Bonita Grande Dressage, LLC, in Bonita Springs received \$17,000 for a solar electricity project.
- **Tanglewood Apartments, LLC, Tallahassee - \$16,000**
Tanglewood Apartments, LLC, in Tallahassee received \$16,000 for a solar electricity project.
- **Osprey Leisure, LLC, Osprey - \$14,000**
Osprey Leisure, LLC, in Osprey received \$14,000 for a solar electricity project.
- **Capital Business Center, Tallahassee - \$12,000**
Capital Business Center in Tallahassee received \$12,000 for a solar electricity project.

- **Puja Laxmi, LLC, Vero Beach - \$9,000**
Puja Laxmi, LLC, in Vero Beach received \$9,000 for a solar electricity project.
- **Gretanjim Properties, Inc., Jacksonville - \$7,000**
The Gretanjim Properties, Inc., in Jacksonville received \$7,000 for a solar electricity project.
- **Seville Apartments, LLC, Tallahassee - \$7,000**
Seville Apartments, LLC, in Tallahassee received \$7,000 for a solar electricity project.
- **Beachcomber Properties, LLLP, Nokomis - \$6,000**
Beachcomber Properties, LLLP, in Nokomis received \$6,000 for a solar electricity project.
- **Cutter Corp. of Sarasota, Sarasota - \$3,000**
Cutter Corp. of Sarasota received \$3,000 for a solar electricity project.
- **Shell Mar, LLC, Sanibel - \$3,000**
Shell Mar, LLC, in Sanibel received \$3,000 for a solar electricity project.
- **Niceville Animal Clinic, Niceville - \$2,000**
Niceville Animal Clinic in Niceville received \$2,000 for a solar electricity project.

Award(s): \$20.4 million, Clean Energy Manufacturing Tax Credits (48C)

Location: St. Petersburg

Jabil Circuit in St. Petersburg received \$20.4 million to retrofit an existing plant to offer solar photovoltaic panel assembly, logistics and procurement and certification services for mono- and multi-crystalline photovoltaic cell manufacturers.

Award(s): 2 totaling \$1.6 million, High-Penetration Solar Deployment

Location: Orlando, Tallahassee

- **University of Central Florida, Orlando - \$981,000**
The University of Central Florida in Orlando received \$981,000 for the creation of the Southern Alternative Energy Training Network, which in turn will create industry recognized and quality staffed alternative energy training centers throughout the southern U.S. and its territories. The Southern Alternative Energy Training Network will enhance the South's economic development efforts by responding to projected market and industry demands for solar technologies.
- **Florida State University, Tallahassee - \$600,000**
Florida State University in Tallahassee received \$600,000 for a project that will characterize the variation and impact of solar power as a function of system size (both kilowatt and megawatt), location, installation type and technology, including examination of variation within larger systems. The result will be technical solutions, from protection and control strategies and technologies, to converter, converter control and photovoltaic system technologies, to address any issues identified with high-penetration levels of grid-connected photovoltaics.

MODERNIZING THE ELECTRIC GRID – 14 projects totaling \$270.1 million

Harnessing clean energy sources and integrating them on to 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): 4 totaling \$2.3 million, Enhancing State and Local Governments' Energy Assurance

Location: Statewide

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.

- **Executive Office of the Governor of Florida, Tallahassee - \$1.9 million**
The Executive Office of the Governor of Florida received \$1.9 million to procure consulting services to examine Florida's energy assurance plans and policies separately and as a whole to strengthen the system. In addition, this program will design an automated computer-based system to track the duration, response, restoration and recovery time of energy supply disruptions, including the capability of mapping areas of the state experiencing outages.
- **City Of Delray Beach - \$130,000**
The City of Delray Beach received \$130,000 for the Local Energy Assurance Planning (LEAP) Initiative.
- **City of Lake Worth - \$130,000**
The City of Lake Worth received \$130,000 for the Local Energy Assurance Planning (LEAP) Initiative.
- **City of Palm Beach Gardens - \$130,000**
The City of Palm Beach Gardens received \$130,000 for the Local Energy Assurance Planning (LEAP) Initiative.

Award(s): 8 totaling \$261.6 million, Smart Grid Investment Grant Program (EISA 1306)

Location: Statewide

- **Florida Power & Light Company (FPL), Multiple Locations - \$200 million**
Florida Power & Light Company (FPL) received \$200 million to advance Smart Grid functionalities through end-to-end integration and cross-cutting automation of FPL's grid.
- **Lakeland Electric, Multiple Locations - \$14.9 million**
Lakeland Electric received \$14.9 million for the installation of an AMI infrastructure for all 120,000+ electric residential and 5,900 commercial and industrial customers in a 258 square mile service area.

- **JEA, Multiple Locations - \$13 million**
JEA received \$13 million to perform an upgrade of the metering infrastructure from one-way to two-way.
- **City of Leesburg - \$9.7 million**
The City of Leesburg received \$9.7 million for the deployment of AMI and MDMS, Home Area Networks (energy management for municipal buildings, integrated distributed generation and integrated Volt / VAR Control and Outage Management).
- **City of Tallahassee - \$8.9 million**
The City of Tallahassee received \$8.9 million to implement a next-generation, “Auto-DR” system that seeks to reduce 35 MW of peak power from its customer base.
- **Talquin Electric Cooperative, Inc., Multiple Locations - \$8.1 million**
Talquin Electric Cooperative, Inc., received \$8.1 million to implement an AMI system for 56,000 residential and commercial accounts in a predominantly rural, 2,600 square mile, four-county service area in North Florida.
- **Atheros Communications, Inc., Orlando - \$4.6 million**
Atheros Communications, Inc., in Orlando received \$4.6 million for project that involves the modification of existing power line communications equipment including the INT6400 integrated circuit and reference design to enhance Smart Grid functionality.
- **City of Quincy - \$2.5 million**
The City of Quincy received \$2.5 million to deploy an AMI system with two-way communication across the entire customer base.

Award(s): \$5 million, Smart Grid Workforce Training

Location: Juno Beach

Florida Power & Light Company (FPL) received \$5 million to transform the traditional approach to electric power workforce training by bringing industry and academia together to design and execute workforce training initiatives aimed at producing multidisciplinary standards in power systems that address Smart Grid technologies. Through FPL's Energy Smart Florida project, over 6,000 new jobs will be created for which workforce training may be necessary.

Award(s): \$1.2 million, State Assistance on Electricity Policies

Location: Tallahassee

The Florida Public Service Commission (FPSC) in Tallahassee received \$1.2 million for a staff training program is designed to prepare staff to expeditiously respond to electricity related issues such as developing technologies in renewable energy, energy transmission and Smart Grid technology.

TRANSPORTATION – 4 projects totaling \$147.9 million

Investing in a new generation of advanced fuels and vehicles to reduce our dependence on foreign oil and revitalize domestic manufacturing. For more information, visit <http://www.energy.gov/recovery/vehicles.htm>.

Award(s): \$95.5 million, Advanced Battery Manufacturing

Location: Jacksonville

Saft in Jacksonville received \$95.5 million to build a lithium-ion (Li-ion) battery manufacturing plant. The factory will build advanced Li-ion cells and batteries for military hybrid vehicles, aviation, Smart Grid support, broadband back-up power and energy storage for renewable energy. The high-volume factory will begin production during the second half of 2011, providing additional capacity needed to meet growing customer demand, particularly in renewable energy storage.

Award(s): \$2.4 million, Enabling Fuel Cell Market Transformation

Location: Jacksonville

The University of North Florida received \$2.4 million for advanced direct methanol fuel cell for mobile commuting.

Award(s): 2 totaling \$74.3 million, Modify Integrated Biorefinery Solicitation Program for Pilot and Demonstration Scale Biorefineries

Location: Vero Beach, Bonita Springs

- **Ineos New Planet Bioenergy, LLC, Vero Beach - \$50 million**
Ineos New Planet Bioenergy, LLC, in Vero Beach received \$50 million to produce ethanol and electricity from wood and vegetative residues, as well as construction and demolition materials. The facility combines biomass gasification and fermentation and has the capacity to produce eight million gallons of ethanol and 2 MW of electricity per year by the end of 2011.
- **Algenol Biofuels, Inc., Bonita Springs - \$24.3 million**
Algenol Biofuels, Inc., in Bonita Springs received \$24.3 million for a pilot-scale biorefinery that produced ethanol from hybrid algae.

CARBON CAPTURE AND STORAGE – 1 project totaling \$300,000

Developing clean coal technologies in order to utilize America's coal resources sustainably. For more information, visit <http://www.energy.gov/recovery/ccs.htm>.

Award(s): \$300,000, Geologic Sequestration Training and Research Grant Program

Location: Key Biscayne

The University of Miami in Key Biscayne received \$300,000 for an integrated geochemical and remote sensing approach to the monitoring, verification and accounting of carbon dioxide sequestered in deep geologic repositories. This approach uses high-precision space geodesy (GPS and InSAR) to measure subtle surface displacements associated with pressure and volume changes at depth due to pumping of carbon dioxide. This methodology can be implemented at relatively low cost at proposed sequestration sites, requiring only the installation of a sparse network of GPS, seismic and geochemical stations, as well as low cost, commercial satellite imagery. This project supports at least two graduate students during research efforts.

SCIENCE AND INNOVATION – 10 projects totaling \$2.7 million

Renewing the United States' commitment to science and innovation to ensure future global competitiveness. For more information, visit <http://www.energy.gov/recovery/innovation.htm>.

Award(s): \$873,000, Energy Sciences Fellowships and Early Career Research Program

Location: Gainesville

Received funds are allocated for systems biology, whole-genome association analysis of the molecular regulation of biomass growth and composition in populous deltoids.

Award(s): \$565,000, Research and Infrastructure Augmentation at Universities in the Hispanic Employment Plan (HEP) Program

Location: Gainesville

This project renews and improves HEP program infrastructure so universities can remain competitive by developing future detector and accelerator technologies and provide world-class training for the next generation of experimental scientists.

Award(s): 8 totaling \$1.2 million, Small Business Innovation Research (SBIR) / Small Business Technology Transfer (STTR) Round 1

Location: Statewide

- **Fieldmetrics, Inc., Seminole - \$150,000**
Fieldmetrics, Inc., in Seminole received \$150,000 for a multi-function sensor platform for real-time Smart Grid power line measurements.
- **Florida Turbine Technologies, Inc., Jupiter - \$150,000**
Florida Turbine Technologies, Inc., in Jupiter received \$150,000 for spar-shell cooling technology verification, manufacturing and development.
- **Fractal Systems, Inc., Belleair Beach - \$150,000**
Fractal Systems, Inc., in Belleair Beach received \$150,000 for enhanced charge transport towards high-efficiency organic photovoltaics.
- **Mainstream Engineering Corporation, Rockledge - \$150,000**
Mainstream Engineering Corporation in Rockledge received \$150,000 for phase change slurries for residential thermal energy storage.
- **Mainstream Engineering Corporation, Rockledge - \$150,000**
Mainstream Engineering Corporation in Rockledge received \$150,000 for an organic rankine cycle waste heat recovery system that utilizes an environmentally-sustainable working fluid.
- **Mainstream Engineering Corporation, Rockledge - \$150,000**
Mainstream Engineering Corporation in Rockledge received \$150,000 for a web-based, plug & play, wireless remote monitoring, diagnostic and system health prediction system for residential A / C and heat pump applications.
- **Mainstream Engineering Corporation, Rockledge - \$150,000**

Mainstream Engineering Corporation in Rockledge received \$150,000 for the development of composite refractory materials with radiant barriers to improve the thermal efficiency of kiln operations.

- **Cobb Design, Inc., St. Petersburg - \$145,000**

Cobb Design, Inc., in St. Petersburg received \$145,000 for the design and demonstration of a solar array for a modular distributed concentrating solar power (CSP) system.

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/Florida

JACKSONVILLE

Battery factory bringing jobs to Jacksonville

The Saft lithium-ion battery plant under construction in Jacksonville, Fla., is expected to pump hundreds of high-paying jobs into the city's economy while boosting its green credentials.

Construction on the factory is expected to wrap up in 2012 and cost \$191 million. Saft was awarded \$95.5 million in Recovery Act funds and \$20.2 million in financial incentives from Jacksonville and the state.

The new 235,000 square-foot factory will create 279 jobs paying an average of \$44,800 a year, or 115 percent above the state average.

The plan "hit a lot of key sweet spots for our community," says Lindsey Ballas, business development chief for the Jacksonville Economic Development Commission. "We have a lot of folks in manufacturing here with the right skill sets."

Production of the first round of advanced lithium-ion batteries is targeted for the middle of next year. The batteries will be used in military and other specialty hybrid-electric vehicles.

"We also plan to offer batteries for energy storage in renewable energy systems such a photovoltaic and wind energy, for broadband backup power, as well as aviation systems," says Saft America program manager Peter Denoncourt.

The battery systems built at the factory will be "based on large format cylindrical cells," Peter says. "We are building in the flexibility to also offer batteries based on prismatic cell designs in the future."

Peter said Jacksonville's pool of well-trained military workers was among many factors that lured the company to the city, which is near Mayport Naval Air Station.

The city's transportation network was another factor.

"Saft will address a global market, and Jacksonville has an excellent infrastructure for this, with good seaport facilities, air and rail transportation and excellent access to the interstate highway system."

The facility is being built at Cecil Commerce Center, where a naval air field once stood, and provides hope to an area devastated by the base's closure.

"The factory will be situated on an industrial site that Jacksonville has been trying to develop for 10 years," Peter says. "So it is economically very significant to the Jacksonville community."

Lindsey said Jacksonville lost "about 10,000 jobs during the base closure," and the factory will help the former base transition to private ownership. "We have made a lot of progress."

The factory will help Saft contribute to the clean energy economy, Peter says. "For Saft, the factory represents its largest production facility for lithium-ion batteries and will allow the company to address the emerging market for renewable energy from a U.S. manufacturing site.



A rendering of Saft's lithium-ion battery factory under construction in Jacksonville, Fla.

TALLAHASSEE

Tallahassee program encourages residents to build green

The city of Tallahassee recently launched a Residential Green Building Program that city officials predict will help reduce the city's carbon footprint and stimulate the local economy.

Cynthia Barber, executive director of Tallahassee's office of Environmental Policy and Energy Resources, says an increase in green construction will provide employment opportunities for trade specialists.

"Workers, who specialize in green services, such as homebuilders and evaluators, will get more opportunities to construct green homes and carry out certifications," says Barber. "They will benefit as a result of having the opportunity to work on projects connected to this program."

Funding for the program comes from a \$1.7 million Energy Efficiency and Conservation Block Grant (EECBG) from the U.S. Department of Energy, \$115,000 of which has been set aside to encourage the construction of green buildings. The program provides homebuilders with \$1.50 per square foot for the construction of green homes. It provides the same amount of money to homeowners if they renovate their homes to meet green certifications. With a maximum allotment of \$2,250 per project, city officials estimate the program can provide funding to about 50 homes.

"We limited the amount of money a single home could qualify. Larger homes tend to leave bigger carbon footprints, even if they are green certified. We want to encourage people to consider this when planning construction," says Barber.

Barber believes that green homes will help the city meet some of its environmental goals such as increasing overall energy efficiency. "We operate an electric utility, and we want to make sure that we are reducing the amount of energy we have to produce for the city, so we can delay the need to add additional energy resources," she says.

Tallahassee's Residential Green Building Program

- Funded by a \$115,000 Energy Efficiency and Conservation Block Grant from DOE

- Provides \$1.50 per square foot for the construction or rehabilitation of certified green homes

- Managed by the city's Environmental Policy and Energy Resources office. Operates on a first come, first serve basis until funds run out

- Supported by City of Tallahassee Utilities

Beyond energy efficiency

The benefits of green homes extend beyond increasing energy efficiency and reducing the costs of operation, according to Florida Green Building Coalition (FGBC), a nonprofit that promotes sustainable construction practices.

“Green buildings also result in improved water and indoor air quality,” says Suzanne Cook, FGBC’s executive director. “The materials used in green buildings also tend to be more durable and are chosen to resist problems that a home may face based on its location.”

According to Cook, homes in Florida tend to be susceptible to damage caused by hurricanes, termites and fires. Green buildings are made of materials that can minimize potential damage from these forces.

FGBC has certified 2,400 homes in Florida.

Cook supports the city of Tallahassee for encouraging green building. “Getting a local government to promote green building is critical to getting consumers to participate,” said Cook. “Ten percent of the green certifications FGBC has carried out this year have come from homes in Tallahassee.”

Qualifying for the program

To qualify for the Residential Green Building Program, homes must be served by City of Tallahassee Utilities, and they must receive green certification from LEED, FGBC or the National Association of Home Builders (NAHB).

City officials note that recent energy conservation initiatives have proven popular with Tallahassee residents. The Residential Green Building Program is similar to the city’s ENERGY STAR Certified New and Renovated Home Program, which offers rebates to homeowners who install energy-saving appliances. City officials plan to join the two programs under the umbrella “City of Tallahassee Green Building Program,” and homes will potentially be able to qualify for incentives under both initiatives.

The office of Environmental Policy and Energy Resources has received ten applications since the program commenced, and Barber expects more builders to apply for permits in the coming months.

E-Shelters to teach a valuable lesson on energy

The State of Florida is using part of its Recovery Act money to teach students the value of renewable energy.

The Florida Energy and Climate Commission has awarded the Florida Solar Energy Center (FSEC) \$10 million in Recovery Act money, enabling the center to set up a program that will provide solar energy systems for emergency shelters at public schools.

Through FSEC’s SunSmart E-Shelters program, a minimum of 90 Florida schools will receive a 10-kilowatt or larger solar system, which includes a battery backup that will power the shelters during electrical outages, reduce energy costs and slash greenhouse emissions. Local contractors will install the systems, pumping jobs

into Florida’s economy.

An important goal of the program is to “increase energy literacy,” says Susan Schleith, SunSmart’s program manager.

Teachers will incorporate the systems into their lesson plans, educating students about solar power and energy efficiency. Susan says training workshops for teachers will take place throughout the state and curriculum materials will be “online and available to download for free.”

Each school will be provided with a kit of solar cells, multi-testers and other materials to ensure “they have enough lab equipment,” Susan says. Students will be able to log on to energywhiz.com to learn how much energy their school’s solar shelter has created and how long electronic devices - such as a PlayStation, microwave and computer - can be powered.

A review team will determine which schools will receive the systems. Schools must be designated as Enhanced Hurricane Protection Area (EHPA) shelters. Other deciding factors include the school’s demographics and previous commitment to renewable energy.

The installations should be under way by late spring or early summer.

Susan has high hopes for the students involved in the program and says E-Shelters is “another tool for them” to learn about energy production and conservation.

Students, parents and teachers together can help spread the word and “get the community to understand renewable energy,” Susan says.

INDIANTOWN

Florida residents see energy bill reductions

Indiantown, Fla., has a lot of small-town charm. Its 7,000 residents have acres of citrus groves but only one traffic light in the town. It might be small in size, but Indiantown Non-Profit Housing is making quite an impact across its region. This nonprofit weatherizes the homes of qualifying residents free of charge, and demand for its services is on the rise.

“One of the best outcomes is that we can hire additional employees” says Director Donna Carman, referring to the \$5.2 million in Recovery Act funds Indiantown Non-Profit Housing has received. The staff has more than doubled from five to 16, meaning that Floridians like 72-year-old Edith Gastright can have their homes weatherized, saving significantly on energy costs.

Edith lives in a 100-year-old house in Stewart, Florida, with a lot of windows and doors. The architecture is quite nice, but the cold air it lets in meant sleeping under several quilts and never, ever walking on the wood floors barefoot. Edith’s children were starting to get concerned, wouldn’t it be better for her to move to a nice condo or mobile home rather than struggle to keep the house in good repair?

Edith’s dilemma was solved when a team of nine weatherization technicians came into her home to upgrade the entire place, “They made it possible for me to stay in my home, it is so incredible,” Edith says. Upgrades such as solar screening on all the windows, insulation under the floors, a new water heater and a smaller refrigerator made a significant impact. “It’s like a whole new house”

On average Indiantown says homeowners save 35 percent on their home energy bill. Edith confirms that hers was cut in half, “I almost think they’ve made a mistake.”

DAYTONA BEACH

Hopeful astronaut goes next-generation car designer

Nicole Lambiasi grew up near Cape Canaveral and the Kennedy Space Center where she attended space shuttle launches, dreamed of the stars and had hopes of becoming an astronaut.

In 2004, Nicole's dreams advanced as she began the aeronautical engineering program at Embry-Riddle Aeronautical University in Daytona Beach, Fla. Even though Nicole thrived in the program, she quickly discovered this path would more likely lead her to driving a computer rather than a space module.

So Nicole made a leap of faith and switched to the newly-formed mechanical engineering program at Embry-Riddle. "I figured the mechanical degree would give me a more well-rounded engineering education with better opportunities for employment when I graduated," Nicole says.

Nicole was still unsure of her decision until her first day of senior design class when several faculty advisers introduced her to EcoCAR: The NeXt Challenge. "Everything about the program got me really excited. The chance to be in a laboratory doing hands-on work with leading-edge automotive technologies was exactly what I was looking for," she says.

Sponsored by the U.S. Department of Energy and General Motors, EcoCAR challenges 17 North American universities, including Embry-

Riddle, to redesign and re-engineer a 2009 Saturn VUE to minimize fuel consumption and reduce greenhouse gas emissions. The program is managed for DOE by Argonne National Laboratory near Chicago.

University teams follow a real-world vehicle development process to develop, demonstrate, and test ultra-efficient vehicle designs and alternative fuels. Teams use both near-term and future vehicle technologies such as hybrid-electric, plug-in hybrid-electric, fuel-cell and all-electric powertrains.

Once Nicole worked in the lab on EcoCAR, she realized her true passion for automotive engineering. "The ability to create something from scratch as complex as a vehicle was really fascinating," she says. "Plus, it's really important to me to have the opportunity to help our country secure a more energy-efficient future through clean vehicle technology solutions," she adds.

Today, she is an engineering coordinator for Argonne National Laboratory's Advanced Vehicle Technology Competition program, where she helps organize and manage EcoCAR for future engineering generations.

Nicole may not be the one to prove there is life on Mars, but she was one of more than 15,000 students who participated in the DOE's Advanced Vehicle Technology Competition. And by working towards building cleaner, more efficient vehicles, she's got her feet to the ground making Earth a cleaner planet.