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# **ENERGY & UTILITIES POLICY COMMITTEE**

**Tuesday, October 06, 2009**

**4:00 PM – 6:00 PM**

**Morris Hall**

# **MEETING PACKET**

**Larry Cretul**  
**Speaker**

**Stephen Precourt**  
**Chair**

# **The Florida House of Representatives**

**General Government Policy Council**

**Energy & Utilities Policy Committee**

**Larry Cretul**  
**Speaker**

**Stephen L. Precourt**  
**Chair**

## **AGENDA**

October 6, 2009

4:00 p.m. – 6:00 p.m.

Morris Hall (17 House Office Building)

Opening Remarks by Chair Precourt

Summary of 2009 Energy & Utilities Policy Committee Activities

Status Report of the 2007 Farm to Fuel Grants Program (Bioenergy Grants):

Jay S. Levenstein, Deputy Commissioner  
Florida Department of Agriculture & Consumer Services

Overview of the following issues by Jeremy Susac, Executive Director, Florida Energy & Climate Commission:

- Federal Stimulus Allocation Plan – State Energy Program Funds and the Energy Efficiency & Conservation Block Grant
- Implementation of the 2009 Energy-Efficient Appliance Rebate Program (CS/CS/HB167)
- Discussion of the 2006-2010 Tax Exemptions, Tax Credits, and Incentives scheduled to expire on July 1, 2010:
  - Renewable Energy Technology Sales Tax Exemption
  - Renewable Energy Technologies Investment Tax Credit
  - Renewable Energy Production Credit
  - Solar Energy Systems Incentives Program (solar rebate)

Closing Remarks by Chair Precourt

Adjournment



## **2009 End of Session Summary Energy & Utilities Policy Committee**

### **CS/CS/HB 167 - Energy-Efficient Appliance Rebate Program**

**By: Finance & Tax Council; Energy & Utilities Policy Committee; Abruzzo and others**

**Tied Bills: None**

**Companion Bills: CS/CS/SB 942; CS/HB 1245; CS/SB 2592**

**Committee(s) of Reference: Energy & Utilities Policy Committee; General Government Policy Council; Finance & Tax Council**

The bill authorizes the Florida Energy and Climate Commission (commission) to develop and administer a consumer rebate program for residential energy-efficient appliances, consistent with 42 U.S.C. s. 15821 and any federal agency guidance or regulations issued in furtherance of federal law. The bill authorizes the commission to adopt rules pursuant to ss. 120.536(1) and 120.54, F.S., designating eligible appliances, rebate amounts, and the administration of the issuance of rebates. The commission is authorized to enter into contracts or memoranda of agreement with other state agencies, public-private partnerships, or other arrangements such that the most efficient means of administering consumer rebates can be achieved.

The bill includes an appropriation of \$150,000 from the General Revenue Fund to the commission for the purpose of administering the energy-efficient appliance rebate program. However, the funds shall not be released to the commission until it has submitted a report to the Legislative Budget Commission certifying that the energy-efficient appliance rebate program complies with 42 U.S.C. s. 15821 and that the state will receive funds pursuant to 42 U.S.C. s. 15821 and the American Recovery and Reinvestment Act of 2009 to implement the program.

Subject to the Governor's veto powers, the effective date of this bill is July 1, 2009.

### **CS/HB 515 - Oil and Gas Production Taxes****By: General Government Policy Council; Evers and others**

**Tied Bills: None**

**Companion Bills: CS/SB 978**

**Committee(s) of Reference: Energy & Utilities Policy Committee; General Government Policy Council; Finance & Tax Council**

Section 211.02(1), F.S., provides for an excise tax to be levied upon production of oil within Florida for sale, transport, storage, profit, or commercial use. Generally, oil produced in Florida is subject to an excise tax of 8 percent of gross value. Oil produced through the use of tertiary recovery methods, which are employed to recover oil remaining in a reservoir after less expensive primary and secondary methods have been exhausted, is subject to an excise tax of 5 percent of gross value.

The bill replaces the 5 percent excise tax on tertiary oil production with tiered tax rates applicable to the incremental value of the oil as follows:

- 1% of the gross value of oil on the value of oil \$60 and below
- 7% of the gross value of oil on the value of oil above \$60 and below \$80
- 9% of the gross value of oil on the value of oil \$80 and above

The bill clarifies that, for purposes of the excise tax, the value of oil is determined on a per barrel basis. The bill also amends the definition of tertiary oil in s. 211.02(3)(a), F.S., to update and correct a reference to federal law.

Subject to the Governor's veto powers, the effective date of this bill is July 1, 2009.

**CS/CS/SB 2626 - Telecommunications Companies**

**By: Commerce; Communications, Energy, and Public Utilities; Haridopolos and others**

**Tied Bills: None**

**Companion Bills: CS/CS/HB 1465; includes CS/SB 2092; includes parts of HB 7091**

**Committee(s) of Reference: Communications, Energy, and Public Utilities; Commerce; General Government Appropriations**

The bill is cited as the "Consumer Choice and Protection Act." The bill provides a means for the expansion of broadband Internet service in Florida through use of federal stimulus funds. It also makes several changes to the existing regulatory framework for local telephone service, or "local exchange service," established in Ch. 364, F.S.

*Expansion of Broadband Internet Service*

The bill provides the Department of Management Services (DMS) the authority to work collaboratively with Enterprise Florida, Inc., state agencies, local governments, private businesses, and community organizations for mapping and deployment of broadband Internet services in the state. The American Recovery and Reinvestment Act of 2009 provides \$7.2 billion for broadband mapping and deployment. The bill allows DMS to draw down these federal funds to help establish universal broadband in the state.

The bill requires funds received by DMS for this purpose to be focused on expanding broadband in rural, unserved, and underserved communities through grant programs. The department is charged with conducting a needs assessment of broadband and developing maps that identify unserved areas, underserved areas, and broadband transmission speeds in the state.

Priority for grants will be provided to projects that:

- Provide access to broadband education, awareness, training, access, equipment, and support to libraries, schools, colleges and universities, health care providers, and community organizations.
- Encourage investments in primarily unserved areas to provide consumers a choice of broadband service.
- Work toward establishing affordable and sustainable broadband service in the state.
- Facilitate the development of applications, programs, and services, including telework, telemedicine, and e-learning that increase the usage and demand for broadband services.

### *Regulation of Basic and Nonbasic Local Exchange Services*

The bill amends the definition of “basic local telecommunications service” (“basic service”) by removing “flat-rate single line business” customers from the definition and limiting the definition to residential “single-line” service. The bill amends the definition of nonbasic service to include basic service provided in combination with a nonbasic or unregulated service. Thus, residential service defined as basic service prior to the effective date of the act is redefined as nonbasic service when provided with an additional calling feature (e.g., caller ID, call waiting, voice mail), an additional unregulated service (e.g., broadband or video service), or an additional line.

The bill reduces the authority of local exchange telecommunications companies to increase prices for nonbasic services in exchange areas with at least one competitive provider. The bill reduces the maximum allowed price increases for such services from 20% to 10% in a 12-month period. Only 13 of the state’s 277 exchange areas are not served by a competitive provider.

For customers whose service is redefined under the bill from basic service to nonbasic service (i.e., service treated as basic service before July 1, 2009), the bill provides that the price for such basic service may not be increased by more than the amount allowed by current law. Current law limits price increases for basic service to no more than the change in inflation less 1 percent in a 12-month period.

The bill removes the Public Service Commission’s (PSC) authority to resolve service complaints concerning nonbasic services. Customers whose service is redefined under the bill from basic service to nonbasic service will no longer be able to resolve service complaints through the PSC. Such service will be subject to Florida’s generally applicable business regulation and deceptive trade practices and consumer protection laws. The bill also removes the PSC’s authority to compel repairs to secure adequate service or facilities for the provision of nonbasic services.

The bill provides telecommunications companies with some additional pricing flexibility by removing certain prohibitions, but the bill does not amend the current prohibition against unreasonable discrimination among similarly situated customers. In addition, the law will continue to provide the Public Service Commission jurisdiction over cross-subsidization, predatory pricing, and other anticompetitive behavior.

### *Broadband and Voice-over-Internet-protocol*

The bill reiterates existing law providing that broadband and VoIP services are exempt from PSC jurisdiction and removes the PSC’s jurisdiction over these services where such jurisdiction is authorized by federal law.

### *Publication and Availability of Rate Schedules*

The bill removes the requirement that every telecommunications company file rate schedules at the PSC and maintain printed rate schedules open to public inspection at places designated by the PSC. The bill allows telecommunications companies to publish their rate schedules through electronic or physical media and requires that companies inform customers of where the

schedules may be viewed. The bill eliminates the requirements that rate schedules be produced immediately upon demand and that a notice concerning the existence, location, and availability of current rate schedules be posted as designated by the PSC.

#### *Telecommunications Service Contracts*

The bill provides that telecommunications companies are exempt from PSC regulation of the terms of telecommunications service contracts.

#### *Operator Services*

The bill removes the PSC's authority to establish maximum rates and charges for operator services. Operator services rate schedules will no longer be filed with the PSC, but will be subject to the general publication requirements established in the bill for all services.

#### *Storm Damage Cost Recovery*

The bill removes the condition that a local exchange telecommunications company be subject to the carrier-of-last-resort obligation in order to be eligible to request recovery of storm damage costs. The carrier-of-last-resort obligation expired by sunset on January 1, 2009. Because all local exchange telecommunications companies were previously subject to the carrier-of-last-resort obligation, the bill does not change the scope of the companies that may request storm cost recovery.

#### *Lifeline Service*

The bill increases the pool of customers eligible for Lifeline service under the income eligibility test by lowering the threshold from 135 percent or less of the federal poverty guidelines to 150 percent or less of the federal poverty guidelines. The 2009 Federal Poverty Guidelines establish a poverty guideline of \$10,830 for an individual, \$14,570 for a family of two, and \$22,050 for a family of four. For a family of four, 135% of the poverty guideline is \$29,768, and 150% of the poverty guideline is \$33,075. The bill ensures that the companies currently required to provide Lifeline service to customers who meet the income eligibility test – AT&T, Verizon, and Embarq – must continue to provide such service. The bill does not change the requirement of all companies designated as eligible telecommunications carriers to provide Lifeline service to customers who qualify based on their participation in other specified public assistance programs.

#### *Transfers of Ownership and Control of Telecommunications Companies*

A person must obtain a certificate of necessity from the PSC before beginning the construction or operation of a telecommunications facility for the purpose of providing telecommunications service to the public. Prior approval by the PSC is required for a certificate to be transferred to another person or party for purposes of transferring ownership or control of telecommunications facilities. The bill allows a person holding a certificate, or its parent or an affiliate, to transfer the certificate or control of the certificate to another person who holds a certificate, or its parent or an affiliate, who may then acquire ownership or control of a telecommunications facility through acquisition, transfer, or assignment of majority organizational control of controlling stock ownership, without prior approval of the PSC. In the event of such a transfer, the bill requires 60 days' written notice to the PSC and affected customers.

### *Interconnection Rights for Competitive Local Exchange Companies*

The bill provides that a competitive local exchange telecommunications company is entitled to interconnection with a local exchange telecommunications company to transmit and route voice traffic (i.e., a phone call) between the two companies, regardless of the technology used by the end user to make or receive the call. The bill states that the PSC shall provide such competitive local exchange companies all rights available to such companies with respect to interconnection.

### *Anticompetitive Use of Preferred Carrier Freezes*

Under PSC rules, a customer may request that a "preferred carrier freeze," or "PC freeze," be placed on the customer's account, establishing the customer's choice of telecommunications company in order to prevent unauthorized changing of the customer's telecommunications service. A PC freeze may not be imposed or removed on a customer's account without the customer's authorization and may not be required as a condition for obtaining service. The bill provides a means to resolve complaints concerning a telecommunications company using PC freezes in an anticompetitive manner. Specifically, the bill provides that the PSC shall resolve any complaints of anticompetitive behavior concerning a local preferred carrier freeze on an expedited basis. The bill provides that the telecommunications company asserting the existence of a local PC freeze, in response to a complaint of anticompetitive behavior, shall have the burden of proving through competent evidence that the customer requested the local PC freeze.

The bill makes conforming changes and removes obsolete language from Ch. 364, F.S.

Subject to the Governor's veto powers, the effective date of this bill is July 1 2009.



## **Overview of Recent Energy Legislation 2006 - 2009**

### **2006 Legislation**

In 2006, in an effort to encourage the use of renewable energy, the Legislature adopted CS/CS/CS/SB 888 (Chapter 2006-230, L.O.F.) which accomplished the following:

- Established a nine-member Florida Energy Commission (FEC) appointed by the President of the Senate and Speaker of the House of Representatives to develop recommendations for legislation to establish a state energy policy based on specified principles. **[Replaced by Florida Energy and Climate Commission in 2008.]**
- Created a renewable energy technology sales tax exemption to further stimulate development of hydrogen technology and biofuels in the state. **[Expires July 1, 2010.]**
- Created a Renewable Energy Technologies Grants Program.
- Established an Energy-Efficient Products Sales Tax Holiday.
- Created a Solar Energy System Incentives Program (solar rebates). **[Expires July 1, 2010.]**
- Created corporate income tax programs: the Renewable Energy Technologies Investment Tax Credit program and the Florida Renewable Energy Production Credit program to encourage renewable energy investment and production. **[Both expire July 1, 2010.]**
- Authorized the Public Service Commission (PSC) to adopt appropriate goals for the use of renewable energy resources in Florida.
- Made numerous substantive and technical changes to power plant and transmission line siting statutes.
- Provided for early cost recovery provisions for nuclear power plants.

The Legislature provided the following appropriations:

- \$61,379 to the Department of Revenue for administering the sales tax holiday.
- \$15 million to the Department of Environmental Protection (DEP) for the renewable energy grants programs (\$5 million of which were contingent upon coordination between DEP and the Department of Agriculture and Consumer Services).
- \$2.5 million for the Solar Energy System Incentives Program (solar rebates).

## **2007 Legislation**

In 2007, the Legislature passed comprehensive legislation (CS/HB 7123) to promote energy affordability and reliability by encouraging energy efficiency and diversity. This legislation was subsequently vetoed by the Governor. Although the substantive legislation did not become law, approximately \$62 million were appropriated for energy-related projects through the General Appropriations Act as follows:

- \$20 million to the Institute of Food and Agricultural Sciences at the University of Florida to establish a research and demonstration cellulosic ethanol plant.
- \$12.5 million to the DEP for the Renewable Energy Technologies Grants Program.
- \$3.5 million to the DEP for the Solar Energy System Incentives Program (solar rebates).
- \$25 million to the Department of Agriculture and Consumer Services (DACS) for the Farm-to-Fuel Grants Program.
- \$100,000 to the Department of Community Affairs (DCA) for a workgroup to develop a model energy efficiency ordinance and to review the cost effectiveness of energy efficiency measures in the construction of certain buildings.
- \$250,000 to the DCA for an energy efficiency public awareness campaign that promotes energy efficiency and the benefits of building green.
- \$250,000 to the DEP for a public awareness campaign to promote energy education and the public dissemination of information on energy and its environmental, economic, and social impact.

## **2008 Legislation**

During the 2008 Legislative Session, the Legislature developed and passed significant energy policies - HB 7135 (Chapter 2008-227, L.O.F.) - which built on the 2006 energy package by pursuing the goals of energy affordability and reliability, including the promotion of alternative renewable energy. The package accomplished the following:

- Combined a pre-existing energy commission and an executive agency energy office to create a 9-member Florida Energy and Climate Commission appointed by the Governor, the Commissioner of Agriculture, and the Chief Financial Officer.
- Revised the membership of the Public Service Commission Nominating Council and the process for nominating members of the Public Service Commission, and provided for the council to nominate members of the Florida Energy and Climate Commission.
- Created the Florida Energy Systems Consortium with participation from all state universities to apply the talent within the university system to the many challenges posed by rapidly changing conditions in the energy sector.

- Authorized the Department of Environmental Protection (DEP) to adopt rules for a Cap-and-Trade Program to address greenhouse gas emissions from electric utilities. Prior to submitting the proposed rules, the DEP is required to answer a series of questions regarding potential costs to consumers and to the state's economy. **[Rules are not to be adopted prior to January 1, 2010, and are subject to legislative ratification.]**
- Authorized environmental cost recovery for expenses incurred by public utilities to meet greenhouse gas registry requirements and costs incurred for scientific research relating to carbon capture and storage that meet specified criteria.
- Prohibited the DEP from adopting and implementing the California motor vehicle emissions standards until ratified by the Legislature and prohibited the department from modifying its rules to implement such standards until ratified by the Legislature.
- Authorized the PSC to adopt a Renewable Portfolio Standard for public utilities, but required that the rule implementing the standard be submitted to the 2009 Legislature and be ratified by the Legislature prior to implementation.
- Directed the PSC to allow full cost recovery for costs claimed by July 1, 2009, for reasonable and prudent costs incurred by a public utility for renewable energy projects that are zero greenhouse gas emitting, up to a total of 110 megawatts statewide.
- Allowed prudent costs for electric transmission lines and facilities associated with a nuclear power plant to be recovered under current alternative cost recovery provisions for nuclear power plants.
- Revised laws governing state lands and power plant and power line siting to facilitate expanded power generation, including alternative energy generated electric power.
- Provided for standardized interconnection agreements and net metering for all electric utilities to encourage renewable energy cogeneration.
- Reauthorized an ad valorem tax exemption for renewable energy source devices, such as solar panels. **[Constitutional Amendment #3, adopted by Florida voters in the November 2008 general election, repealed the Legislature's authority to authorize an ad valorem tax exemption.]**
- Revised existing sales and use tax exemptions, corporate income tax credit programs, and the Innovation Incentive Program within the Office of Tourism, Trade, and Economic Development to facilitate their use by alternative energy enterprises.
- Created a Renewable Fuel Standard requiring that **[beginning on December 31, 2010]** all gasoline sold in Florida contain, at a minimum, 9-10 percent ethanol, by volume. The bill provided exceptions to the requirement, including waiving the requirement if blended fuel is more expensive than unblended gasoline.

- Made significant changes to require public utilities to develop and implement approved programs to promote energy conservation and demand-side management.
- Required the PSC to adopt and enforce goals for each public utility to increase and promote cost-effective demand-side and supply-side efficiency and conservation programs and demand-side renewable energy systems. Under previous law, public utility companies already offered cash incentive programs to encourage purchasing energy efficient equipment for new installations or retrofits, such as heating, air cooling, water heating, and lighting equipment. The bill revised the program to essentially require public utilities to provide incentives for conservation, increased energy efficiency, and demand-side renewable energy, such as solar energy, when doing so is less costly for utility customers, as a whole, than constructing new generating capacity.
- Directed the Florida Building Commission to select the most recent version of the International Energy Conservation Code as a foundation code to provide an alternative to the current Florida Energy Code. The bill further required the commission to modify the code to maintain the efficiencies of the Florida Energy Code for Building Construction.
- Provided for a phased 50 percent increase in energy efficiency standards in the Florida Building Code by the Year 2020. These increases are relative to the 2004 Florida Building Code, as amended on October 31, 2007:
  - **By 2010, efficiency increases of at least 20 percent.**
  - **By 2013, efficiency increases of at least 30 percent.**
  - **By 2016, efficiency increases of at least 40 percent.**
  - **By 2019, efficiency increases of at least 50 percent.**
- Required the Florida Building Commission to identify within code support and compliance documentation the specific building options and elements available to meet energy performance goals. The bill included a list of energy-efficiency performance options and elements such as solar water heating, energy-efficient appliances, and energy efficient lighting systems.
- Required the Florida Building Commission, prior to implementing the increases in energy performance of new buildings, to adopt by rule and implement a cost-effectiveness test to ensure that increases in energy efficiency result in a positive net financial impact.
- Revised current law governing guaranteed energy, water, and wastewater performance savings contracting to facilitate improving the efficiency of government-owned buildings.
- Adopted Climate Friendly Public Business requirements for the use of “green” products, lodging, vehicles, and fuel.
- Provided for goal requirements regarding solid waste, by providing for the following:
  - Required enhanced recycling goals and a plan to achieve such goals to be submitted by the DEP to the Legislature. **[Due by January 1, 2010, and not to be implemented until approved by the Legislature.]**

- Required the DEP to provide to the Legislature an analysis of disposal of plastic bags and a prohibition on the regulation of such bags. **[Due by February 1, 2010.]**
- Required counties to develop and implement composting programs. **[Plans due by July 1, 2010.]**
- Established enhanced energy standards for the construction of new state, county, municipal, school district, state university, community college, state court, and water management district buildings.
- Required the Agency for Enterprise Information Technology to submit to the Legislature recommendations for reducing energy consumption and improving the energy efficiency of state data centers. **[Due December 31, 2010, and bi-annually thereafter.]**
- Required the Department of Agriculture and Consumer Services to conduct an economic impact analysis on the effects of granting financial incentives to energy producers who use woody biomass as fuel. **[Report due to the Governor and the Legislature by March 1, 2010.]**

The General Appropriations Act, passed by the 2008 Legislature, included the following energy-related funding:

- \$50 million for the Florida Energy Systems Consortium, divided as follows:
  - \$15 million to the University of Florida;
  - \$8.75 million to Florida State University;
  - \$8.75 million to University of South Florida;
  - \$8.75 million to the University of Central Florida; and
  - \$8.75 million to Florida Atlantic University.
- \$8.5 million for the Florida Gulf Coast University Solar Field Installation Project.
- \$8 million for the Bioenergy Projects for Renewable Technology.
- \$7 million for the Renewable Energy and Energy-Efficient Technologies Grants Program
- \$5 million for the Solar Energy System Incentives Program (solar rebates).

## **2009 Legislation**

In the 2009-2010 General Appropriations Act, the Florida Energy & Climate Commission received federal stimulus funding through the American Recovery and Reinvestment Act of over \$126 million for State Energy Program Grants and \$30 million for Energy Efficiency & Conservation Block Grants.

A portion of the federal stimulus dollars, as discussed above, was used to fund the Energy Star Appliance Rebate Program established in CS/CS/HB 167 (Chapter 2009-36, L.O.F.). This program is intended to provide a consumer rebate for residential energy-efficient appliances. \$17.5 million were appropriated to the Florida Energy & Climate Commission for implementation of this program.

**Jay S. Levenstein**  
**FL Department of Agriculture**



Florida Department of Agriculture and Consumer Services  
Charles H. Bronson, Commissioner



# Farm to Fuel® Grants Program

Florida House of Representatives  
Energy & Utilities Policy Committee

October 6, 2009

Jay Levenstein, Deputy Commissioner

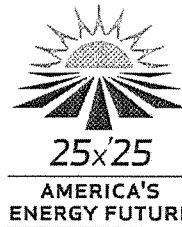


Florida Department of Agriculture and Consumer Services  
Charles H. Bronson, Commissioner



## **25x'25 Vision:**

By the year 2025, America's farms, ranches and forests will provide 25 percent of the total energy consumed in the U.S. while continuing to produce safe, abundant and affordable food, feed and fiber.



[www.25x25.org](http://www.25x25.org)



## Farm to Fuel® Initiative

### s. 570.954, Florida Statutes

The department may develop a farm-to-fuel initiative to enhance the market for and promote the production and distribution of renewable energy from Florida-grown crops, agricultural wastes and residues, and other biomass and to enhance the value of agricultural products or expand agribusiness in the state.

[www.floridafarmtofuel.com](http://www.floridafarmtofuel.com)



## Farm to Fuel® Grants Program

- Established to provide renewable energy matching grants for demonstration, commercialization, research, and development projects relating to **bioenergy**.
- Key Factors for consideration:
  - Use of **Florida-Grown Biomass**
  - Enhance the value of agricultural products or expands agribusiness
  - Market Potential
  - Economic Development (scored by OTTED)
  - Innovative Technology
- \$25 million appropriated (FY 07-08)
  - \$22 million commercialization
  - \$3 million R&D and demonstration
- Initial awards announced January 2008
- Funding provided on a **reimbursement basis** subject to meeting cost share
- \$2,423,557.94 paid to date
- Program expired July 1, 2008





## Farm to Fuel® Grants Program

- Breakdown
  - 12 awards
    - 4 commercialization (2 year duration)
    - 8 R&D or Demonstration (3 year duration)
  - 3 ethanol (energycane, sugarcane, sweet sorghum)
  - 4 biodiesel (jatropha, woody biomass, algae, poultry fat)
  - 3 biogas (animal waste, sugarcane)
  - 1 biofuels (crop oils)
  - 1 hydrocarbon fuel (pine shavings)



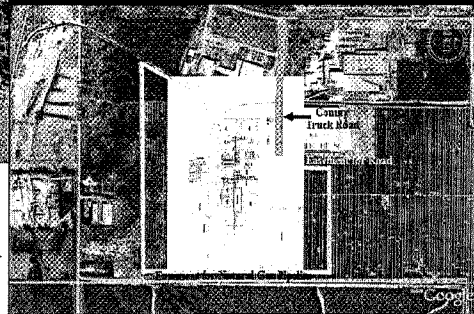
## Construction of a Commercial Sugar-to-Ethanol BioRefinery

- United States EnviroFuels, LLC
- Highlands County, Venus
- Award: \$7,000,000 - Cost Share: \$40,000,000
- Payments to Date: \$0
- Objective: Construction of a 20 mgy sugar-to-ethanol biorefinery which uses sweet sorghum as a primary feedstock. Finished products are low carbon ethanol, green renewable power, bio-fertilizer, beverage grade liquid carbon dioxide, and treated water for process recycling and irrigation.
- Project Status:
  - Phase I Process Design Engineering completed.
  - Purchase Agreement for 70 acre industrial site for the ethanol plant executed.
  - RFPs for site surveys, wetlands delineation, geotechnical studies for soil bearing pressures, environmental site assessments, air permitting, and detailed civil engineering and environmental permitting.
  - Sweet sorghum variety field trials planted in collaboration with local growers.
  - Completed a life cycle analysis (LCA) of greenhouse gas emissions that demonstrates that the company's planned sugar-based ethanol process will result in 80 percent lower greenhouse gas (GHG) emissions than the equivalent petroleum-based gasoline.





70 Acre Site with Preliminary Site Layout



The Phase 1 design study's preliminary facility site plan over-layered on the property aerial photo. →

Source: B. Krohn



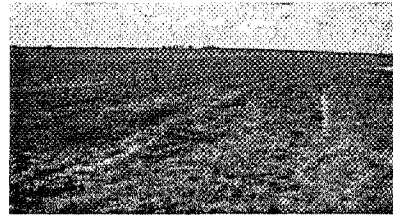
## Establishment of a 15,000 Acre Bioenergy Plantation for Cellulosic Ethanol Production

- Highlands Ethanol, LLC (Verenium Corp)
- Highlands County, Brighton
- Award: \$7,000,000 - Cost Share: \$16,651,925
- Payments to Date: \$400,949.04
- Objective: Establish a 15,000 acre commercial energy plantation for the production of dedicated energy crops to support a 36 mgy cellulosic ethanol plant. Development of this plantation will introduce a completely new and viable commercial crop to Florida and demonstrate innovative farming techniques to conserve precious resources.
- Project Status:
  - Conceptual Farm Design and Master Farm Plan completed
  - Preliminary Final Farm Design including preliminary drawings and specifications completed
  - Wild Island Farm prepped and planted
  - Seed Cane Farm prepped and ready for planting

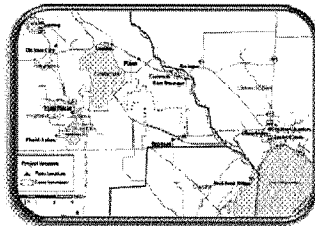




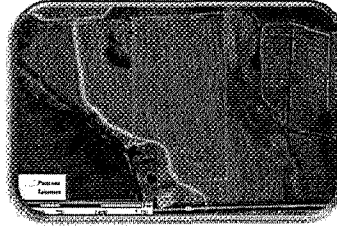
Energy Cane at Monkey Hammock (9/18/09)



250 acre Plot Prepped and Ready for Final Discing and Planting



Area Map



Aerial View

Sources: T. Eves, Vericipia Biofuels

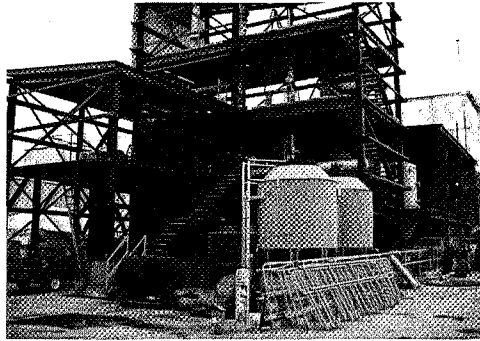


## Biodiesel Production Plant

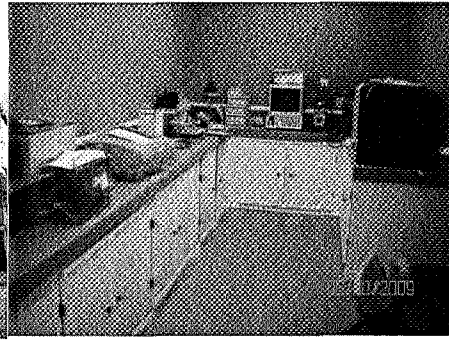
- Agri-Source Fuels, LLC
- Pasco County, Dade City
- Award: \$2,500,000 - Cost Share: \$10,728,741
- Payments to Date: \$981,657.27
- Objective: Increase output of the Dade City biodiesel production plant 60 mgy and the construction of a BQ-9000 certified laboratory and glycerin refinery.
- Project Status:
  - All equipment required to complete the project has been designed and engineered.
  - Glycerin refining, methanol recovery and lab equipment ordered and is either onsite or awaiting final delivery.



Agri-Source Fuels, LLC



New structure for glycerin refining and methanol recovery



New lab and equipment

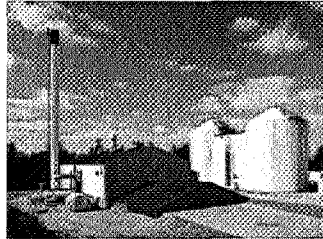
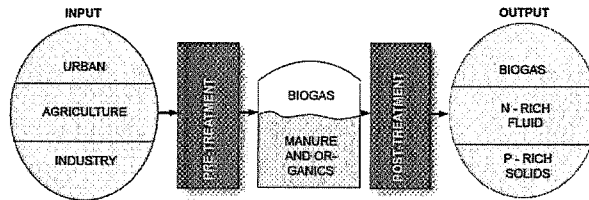
Source: R. Sutton



## Suwannee River Biogas Production Plant

- Waste Energy Solutions, LLC
- Lafayette County, Mayo
- Award: \$5,500,000 - Cost Share: ~\$18,637,000
- Payments to Date: \$0
- Objective: Construct a biogas plant that will produce renewable energy in the form of methane gas utilizing dairy and food waste using an anaerobic digestion process. The project includes installation of manure separation equipment on area dairies.
- Project Status:
  - Project financing and energy sales contract are being pursued.





The Biogas Plant in Hodsager was built in 1993 and is owned by a local co-operative society, Hodsager Energiselskab A.m.b.a., with the heat consumers and the slurry suppliers as members. The aim of the co-operative society is to build and operate a biogas plant to utilize the slurry and the digestible biomass resources of the local area to produce biogas for electricity and heat generation.

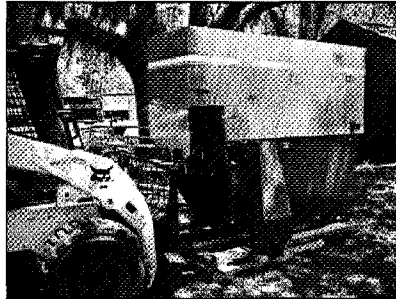
Sources: WES, Bioenergy Department, University of Southern Denmark



## Bioenergy and Agricultural Products from Animal Waste

- Sigarca, Inc./Southeastern Livestock Pavilion
- Award: \$499,500 - Cost Share: \$1,039,050
- Payments to Date: \$424,071.73
- Objective: Build and operate a patented dry fermentation biogas demonstration plant that will process horse muck into renewable energy, organic soil, and soil tonic.
- Project Status:
  - Installation of the bioenergy plant for the demonstration and research phases of the project has been completed.
  - Equipment used to bag organic soil conditioner during the developmental phase of the project has been acquired.
  - To be completed and operating in 4 weeks.





← Equipment that will be used to bag organic soil conditioner

Bioenergy Plant installed at the Southeastern Livestock Pavilion in Ocala →



Source: J. Sifontes

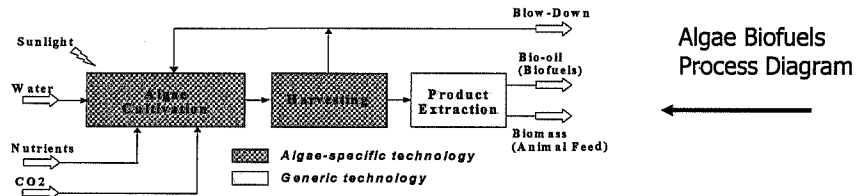


## Production of Biofuels and Animal Feed from Microalgae

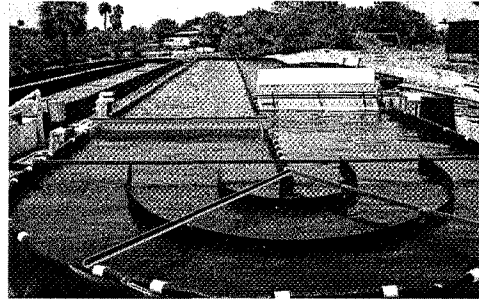
- Florida Institute of Technology
- Award: \$415,120 - Cost Share: \$507,479
- Payments to Date: \$226,411.07
- Objective: Develop and demonstrate a novel technology to economically produce biodiesel from algal liquids (oils) and animal feed from remaining biomass.
- Project Status:
  - The first phase of algal Screening and outdoor culture has been completed as scheduled.
  - Operation of the outdoor ponds is continuing.



Florida Institute of Technology



200 m2 Raceway in Vero Beach



Source: J. Weissman

## Conversion of Florida Woody Biomass Generated Syngas to Biodiesel

- University of Florida, Mechanical and Aerospace Engineering
- Award: \$500,000 - Cost Share: \$1,007,200
- Payments to Date: \$204,684.29
- Objective: Design, build and evaluate a lab-scale catalytic chemical reactor system to demonstrate the feasibility and conversion efficiency of syngas to biodiesel. Based on the lab-scale results and with engineering analysis and modeling, as well as numerical simulations, produce a scale-up/optimization plan for a pilot plant scale and industrial scale operation.
- Project Status:
  - Reactor has been designed, built and calibrated.
  - A number of catalysts have been prepared and characterized to select promising supports for future studies.





### Lab-Scale Chemical Reactor System

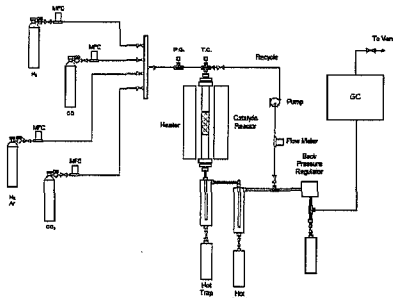


Figure 1. Deterl Fischer-Tropsch reactor drawing. MFC: Mass Flow Controller, P.G.: Pressure Gauge, T.C. Thermocouple, and GC: Gas Chromatograph.

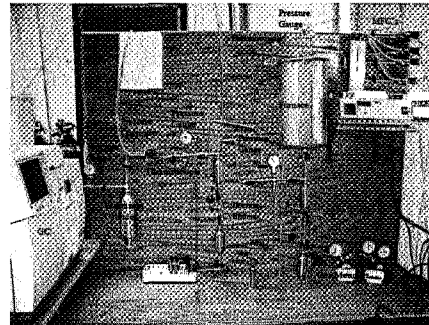


Figure 2. Full Constructed Experimental Reactor System.

Source: J. Chung

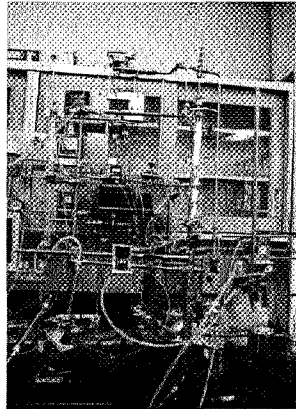


## Thermochemical Conversion of Biomass to Liquid Hydrocarbons As Substitutes for Petroleum-Based Fuels

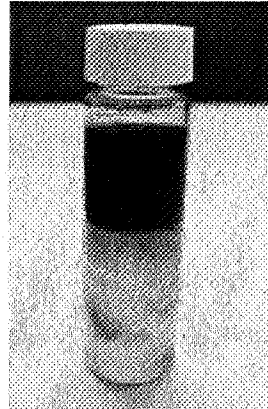
- University of Central Florida/Florida Solar Energy Center
- Award: \$498,000 - Cost Share: \$500,000
- Payments to Date: \$8,654.42
- Objective: Develop and demonstrate a process for generating clean-burning synthetic liquid hydrocarbon fuels (gasoline and diesel) made from Florida biomass resources.
- Project Status:
  - Designed, fabricated, and tested a bench-scale biomass gasifier.
  - Catalysts tested for converting syngas to hydrocarbons.







Experimental set-up for production of hydrocarbons from bio-syngas



Raw product of Fischer-Tropsch synthesis

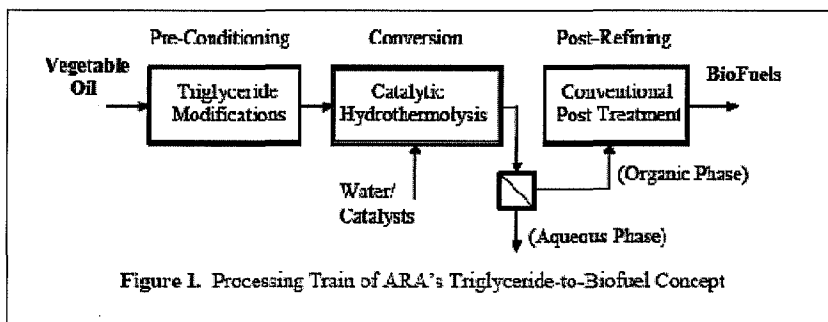
Source: FSEC



## Conversion of Crop Oils to Biofuels

- Applied Research Associates, Inc.
- Award: \$182,832 - Cost Share: \$875,000
- Payments to Date: \$96,560.15
- Objective: Demonstrate a novel catalytic hydrothermolysis (CH) process that converts Florida grown oil crops to high grade biofuels such as diesel, gasoline, and aviation fuels.
- Project Status:
  - Characterizations for soybean, jatropha, and tung oil have been completed.





The basic Catalytic Hydrothermolysis (CH) processing sequence consists of three key processing steps as shown in Figure 1. Vegetable oils are first pre-conditioned into a modified oil mixture, which is then contacted with high-temperature water to undergo conversion by hydrothermolysis in the presence of a catalyst. The high-temperature water catalyzes and attenuates these reactions with minimal formation of gaseous products or char. The resultant hydrocarbon products undergo conventional, mild hydrogenation and fractionation to produce tailored biofuels.

Source: L. Li



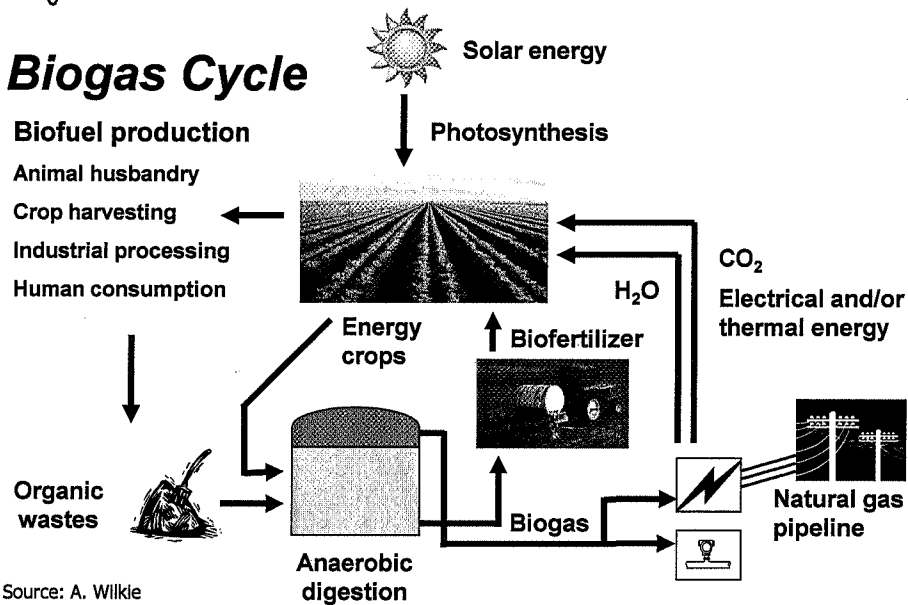
## Green Gas From Green Gas

- University of Florida, Soil and Water Science Department
- Award: \$271,374 - Cost Share: ~\$255,650
- Payments to Date: \$0
- Objective: Evaluate the feasibility of converting Florida-grown sugarcane to biogas fuel. The project will include laboratory and bench-scale research on bioconversion of sugarcane to biogas and research on the economic feasibility for full-scale implementation.
- Project Status:
  - Engaged in initial start-up activities.

**UF** UNIVERSITY of  
**FLORIDA**  
IFAS  
Soil and Water Science



## Biogas Cycle



## Assessment of *Jatropha curcas* for Biodiesel Production

- University of Florida, Tropical Research and Education Center
- Award: \$270,639 - Cost Share: ~\$169,497
- Payments to Date: \$13,705.16
- Objective: Assess and introduce *Jatropha curcas* as a feasible alternative energy crop for biodiesel production.
- Project Status:
  - Seeds from different varieties of *Jatropha curcas*, including toxic and non-toxic varieties obtained and seed germination started.
  - Cost analysis has already been initiated with preliminary costs assessed for the materials used for seed germination and field establishment.
  - Field demonstration and clonal propagation have been initiated as planned.
  - Economic assessment has started.



*Jatropha curcas* plantation in Mexico



Total oil from seed = 37.7%

Source: W. Vendrame

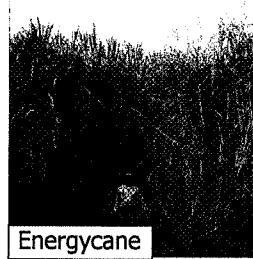


## Enhancing Conversion of Grass Biomass to Ethanol

- University of Florida, Agronomy Department
- Award: \$271,374 - Cost Share: ~\$143,434
- Payments to Date: \$0
- Objective: Identify the best adapted annual and perennial grass crops and varieties for bioenergy production at regional sites throughout Florida and screen perennial plants for potential invasiveness. Quantify the effects of crop species and region of production on crop sugar, starch, and fiber composition to assess potential for liquid fuel production.
- Project Status:
  - All field-based studies have been planted and will be ready for initiation of sampling activities.



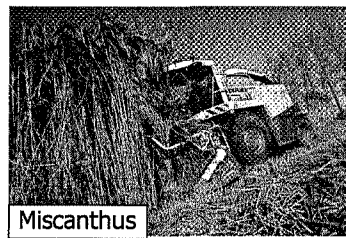
Elephantgrass



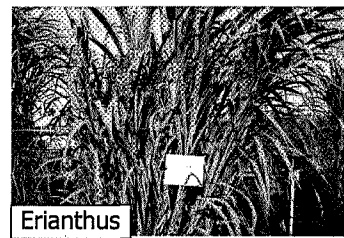
Energycane



Sugarcane



Miscanthus



Erianthus




# Questions?

Contact Information:


Jay Levenstein  
Deputy Commissioner  
(850) 488-3022  
levensj@doacs.state.fl.us

**Jeremy L. Susac**  
**FL Energy & Climate Commission**




## Florida Recovery & Reinvestment Plan

Florida's ARRA Energy  
Funding Strategy  
By  
Jeremy L Susac  
Florida Energy & Climate Commission




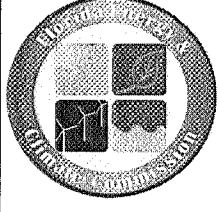
## Florida Energy Allocation


- **U.S. Weatherization Assistance Program - \$5 Billion**
  - Florida's Share: \$175.9 Million
  - Increased Income Ceiling - now 200% of Federal Poverty Level/\$6,500 house
- **U.S. Energy Efficiency & Conservation Block Grant (EECBG) - \$3.2 Billion**
  - \$400 Million for Competition
  - Florida Energy & Climate Commission - \$30.4 Million
- **State Energy Program Grant (SEP) - \$3.1 Billion**
  - Florida's Share: \$126 Million
  - Timely submittal and approval for entire \$126M
- **U.S. Energy Star Rebate Program - \$300M**
  - Florida's share is \$17.5 million
  - Created under the Energy Policy Act of 2005



## State Energy Program (SEP): FECC-Approved Projects


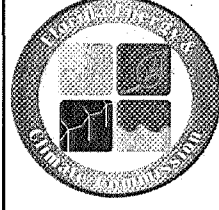
- Solar for Schools & Storm Shelters
- Solar for State Government Facilities
- Solar Energy Loan Program
- Solar Energy Rebate Program
- E-85/B20 Public Fueling - Conversion Revolving Loan
- CNG Fleet Fueling Facilities - Matching Grants
- Florida Residential Retrofit Grants/Loans
- Shovel-Ready Grants
- Florida Clean Energy Grants
- Florida Clean Energy Opportunity Fund



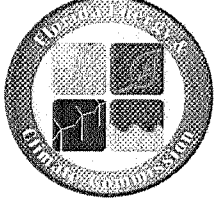


## SEP: Solar for Schools & Storm Shelters (\$10,600,000)

- **SUMMARY:** Install 10 kW photovoltaic systems on 90 public schools
  - Schools designated by Solar Energy Center and Emergency Operations Center
  - Battery back-up on 90 strategically located schools/emergency shelters
  - Educate faculty on solar energy
- **DOE REVIEW:** Approved
- **STATUS:** Contract with the Florida Solar Energy Center (UCF) in Procurement/ Legal



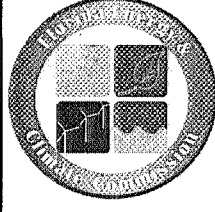







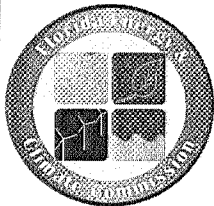
### SEP: Solar for State Government Facilities (\$1,000,000)

- **SUMMARY:** Install 200 kW photovoltaic system on the Department of Revenue's new LEED-certified headquarters in Tallahassee; includes an interactive public education component and increases certification to Gold
- **DOE REVIEW:** Approved
- **STATUS:** Agreement with the Department of Management Services (DMS)



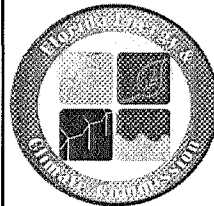
### SEP: Solar Energy Loan Program (\$10,000,000)

- **SUMMARY:** Low-interest loan program for residential solar hot water heaters; up to \$5,000
- **DOE REVIEW:** Approved
- **STATUS:** Request for Proposals (RFP) for loan administrator is in Procurement/Legal



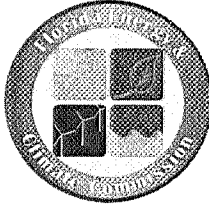
### SEP: Solar Energy Rebate Program (\$14,400,000)

- **SUMMARY:** Provides a \$4/per Watt rebate on PV systems with a max rebate amount
  - \$20,000 for residential systems and \$100,000 for commercial systems;
  - \$500 rebate for residential solar water heaters, a \$15 per 1,000 Btu up to a maximum of \$5,000 for commercial solar water heaters;
  - \$100 rebate for solar pool heaters
- **DOE REVIEW:** Approved
- **STATUS:** As of September 30 - 7,699 solar rebate applications have been received. Of those, 2,230 applications approved totaling \$5,888,386.00



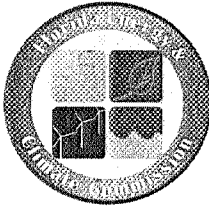
### SEP: E85/B20 Public Fueling Facilities Conversion Loan (\$5,000,000)

- **SUMMARY:** Provide low-interest loans to retail and public fueling station owners to install E85 or B20 tanks/pumps at their facilities;
  - low-interest loans of up to \$30,000
  - E85 and B20 tanks and pumps
- **DOE REVIEW:** Approved
- **STATUS:** Draft Request for Proposals (RFP) for loan administrator is in Procurement/Legal

### SEP: CNG Fleet Fueling Facility Matching Grants (\$4,000,000)

- **SUMMARY:** Enhance CNG fleet fueling stations by providing matching grants to commercial entities, non-profits, school districts, local governments.
  - up to \$500,000;
  - provides 25% matching funds installed by for-profit entities;
  - provides 50% matching funds for projects installed by not-for-profit and public entities
- **DOE REVIEW:** Conditionally Approved
- **STATUS:** Grant solicitation in development

### SEP: Florida Residential Retrofit Grants/Loans (\$15,000,000)


- **SUMMARY:** Must undergo an energy audit; goal is to capture at least a 20% energy efficiency for resident;
- \$3,000 rebate incentives (building envelope and HVAC)
- \$5,000 low-interest loans
- Improvements must be independently verified
- **DOE REVIEW:** Approved
- **STATUS:** Request for Proposals (RFP) for third-party administrator in development



## SEP: Shovel-Ready Grants (\$20,000,000)


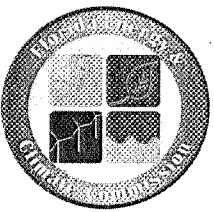
- **SUMMARY:** Competitively-selected renewable energy and energy efficiency projects; designed to stimulate capital investment in the state and promote the statewide utilization of renewable energy and energy efficiency technologies
- **DOE REVIEW:** On-going
  - Lamar Advertising (tentatively approved)
  - Clean Fuels (resubmitted - under review)
  - Perry Connection (approved)
  - U.S. Sugar (approved)
  - Petro-Algae (preparing to resubmit)
  - Green Hunter (resubmitted - under review)
  - Ag Oil (resubmitted - under review)
  - Florida Crystals (resubmitted - under review)
  - Mustang (resubmitted - under review)
  - Natural Air (submitted - under review)
- **STATUS:** Contract negotiations with approved entities




## SEP: Florida Clean Energy Grants (\$24,089,000)


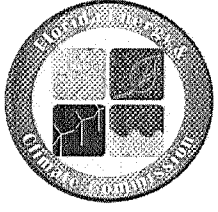
- **SUMMARY:** grant program designed to support energy efficiency retrofits and small-scale deployment of renewable energy;
  - minimum award \$250,000,
  - maximum award of \$3 million;
  - competitive selection process with FECC review and approval
- **DOE REVIEW:** Initial submission to DOE was not approved; redesigned and resubmitted - under review
- **STATUS:** Draft grant solicitation in development







## SEP: Clean Energy Opportunity Fund (\$22,000,000)

- **SUMMARY:** State strategic investment to “grow” clean energy businesses:
  - (1) energy efficient equipment and process improvements,
  - (2) renewable energy equipment,
  - (3) the adoption of EE/RE techniques or technologies, or
  - (4) demonstrating commercially available energy efficiency or renewable energy techniques and technologies
- **DOE REVIEW:** Approved
- **STATUS:** Draft investment management agreement with Opportunity Fund managers in development


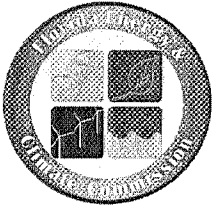




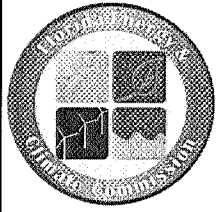
## Energy Efficiency & Conservation Block Grant: \$30.4 Million

- **Formula Allocation:**
  - 68% to Largest Cities & Counties;
  - 28% Energy Offices;
  - 2% to Tribes;
  - 2% for Federal Competitive Grants
- **Florida Appropriation:**
  - \$168.8 Million directly to cities, counties, and FECC
  - \$400 Million for National Competition

**FECC Submittal: June 25<sup>th</sup>**



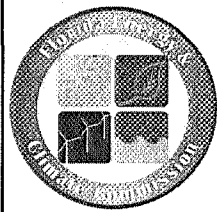
- \$30.4 Million to FECC for energy efficiency and conservation programs


## Energy Efficiency Conservation Block Grant FECC-Approved Projects

- Competitive Grants to Non-Entitlement Cities and Counties
- Sunshine State Buildings Initiative
- Energy Code Compliance and Evaluation
- Energy Code Training and Education
- Clean Tech Economic Development Strategy Support
- Electric Car Rebate
- Data Center Energy Efficiency


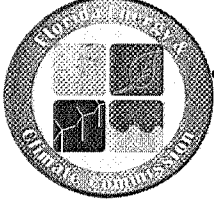

## EECBG: Competitive Grants to Non-Entitled Cities and Counties (\$18.2 million)

- **SUMMARY:** The FECC will distribute at least 60% of the State's portion of EECBG funds to small cities and counties that did not receive direct funding from the Department of Energy
  - Competitive solicitation with FECC review and approval;
  - Grants will focus on energy efficiency retrofits and small-scale renewable energy deployment
- **DOE REVIEW:** Awaiting final DOE approval
- **STATUS:** Draft grant solicitation in Procurement/ Legal




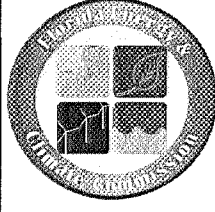
### EECBG: Sunshine State Buildings Initiative (\$8.9 million)



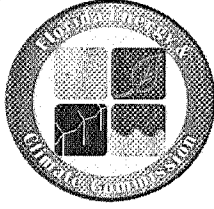
- **SUMMARY:** Leverage recent analyses of energy use in state facilities to prioritize deployment of energy efficiency and renewable technologies in state buildings (approximately 12 buildings included in scope of project)
- **DOE REVIEW:** Awaiting final DOE approval
- **STATUS:** Negotiating grant agreement with the Department of Management Services (DMS)

### EECBG: Energy Code Compliance and Evaluation (\$600,000)



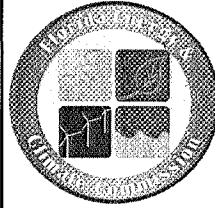
- **SUMMARY:** This initiative will provide an evaluation and analysis for understanding the market, construction practices, and the impact of available technologies for devising targets and implementation tactics for increased building/energy code stringency (mandated under HB 7135):
  - 30 percent for 2013 code;
  - 40 percent for 2016 code; and
  - 50 percent for 2019 code.
- **DOE REVIEW:** Awaiting final approval from DOE
- **STATUS:** Grant agreement discussions with the Department of Community Affairs (DCA)

### EECBG: Energy Code Training and Education (\$293,600)



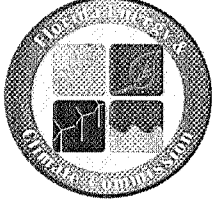
- **SUMMARY:** Energy code training and education program for architects, engineers, contractors, code officials, and other construction industry professionals:
  - Target programs at educational institutions; and
  - Energy extension demonstration centers throughout the state (i.e. small extension offices)
- **DOE REVIEW:** Awaiting final approval from DOE
- **STATUS:** Grant agreement discussions with the DCA

### EECBG: Clean Tech Economic Development Strategy Support (\$300,000)



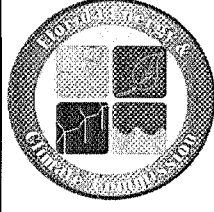
- **SUMMARY:** This initiative will analyze the success of current state energy incentives (scheduled to sunset in 2010) and compile a package of policy recommendations for the Legislature to encourage targeted deployment of clean energy technologies
- **DOE REVIEW:** Awaiting final approval from DOE
- **STATUS:** FECC will vet and hire consultant





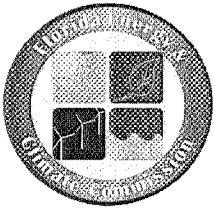
**EECBG: Electric Car Rebate (\$500,000)**

- **SUMMARY:** Residential vehicles and commercial fleets that convert hybrid vehicles to plug-in hybrid electric vehicles would be eligible to apply for a one-time \$5,000 rebate from the state within 12 months of the date of conversion
- **DOE REVIEW:** Awaiting final DOE approval
- **STATUS:** Rebates will processed "in-house"; rebate application and supporting documentation in development

**EECBG: Data Center Energy Efficiency (\$375,000)**


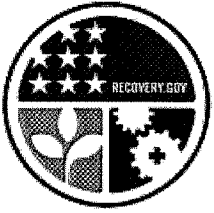
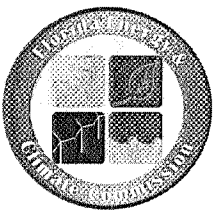
- **SUMMARY:** Project will develop a detailed plan for primary data center optimization:
  - evaluating and implementing specific technologies such as virtualization, power and cooling systems, and the use of energy efficient hardware devices;
  - Potential for substantial in energy consumption;
  - Working very close Agency for Enterprise Information Technology (AEIT)
- **DOE REVIEW:** Awaiting final DOE approval
- **STATUS:** Preliminary discussions with the AEIT, and other stakeholders concerning the scope of project

## ENERGY STAR Appliance Rebate Program


- **SUMMARY: \$17,585,466:**
  - Program runs from April 16, 2010 to April 25, 2010 which coincides with Earth Day on April 22<sup>nd</sup>
  - Save energy, reduce air emissions, & stimulate the economy by encouraging residential consumers to replace old appliances with new ENERGY STAR qualified models;
    - Gas Tankless Water Heaters
    - Room Air Conditioners
    - Clothes Washers
    - Refrigerators
    - Dish Washers
    - Freezers

DOE REVIEW: October 15<sup>th</sup> DOE deadline

## ENERGY STAR Appliance Rebate Program


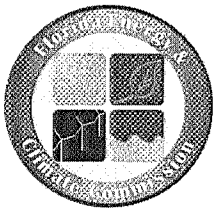
- Rebate amount is a flat 20% of the product price, before tax
- \$1,500 cap per household
- \$75 for proof of recycling old appliance (appliance swap)
- Program administered by an independent third party administrator
  - \$150 thousand general revenue from Legislative Budget Commission upon federal approval
  - In-kind contribution from Florida Retailers, such as Lowe's, Home Depot, Sears, etc.




## ENERGY STAR Appliance Rebate Program

**Potential Benefits to Florida per DOE analysis:**


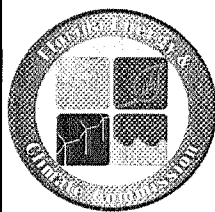
- Estimated 65,000 appliances to be sold and rebates provided
- Worth \$54,850,000 in sales
- Tax revenues of \$3,839,000
- Save 8,258,000 kWh energy
- Save 125,095,000 gallons of water
- Save 324,739 therms of natural gas
- Realize a 11,869,000 reduction in CO<sub>2</sub>







## Federal Reporting Requirements [www.FlaRecovery.gov](http://www.FlaRecovery.gov)

- Agencies must report no later than 10 days after the end of each quarter
  - Total amount of recovery funds received; and
  - Total amount of recovery funds expended/obligated
  - Detailed list of projects/activities for which recovery funds were expended or obligated, including:
    - Name of the project or activity
    - Description
    - Completion status
    - Number of jobs created/retained
  - Detailed information on subcontracts/subgrants
- Florida agencies report to [FlaReporting.gov](http://FlaReporting.gov)
  - Available for review by the FL Office of Economic Recovery, OPB reviewers, and inspector general;
  - Economic Recovery Office submits to [www.FederalReporting.gov](http://www.FederalReporting.gov)


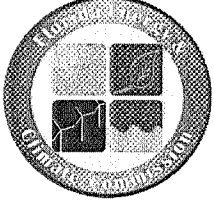






## Florida Sales Tax Program

From January 1, 2007, and ending December 31, 2010: the sale or use of the following in the state of Florida is tax exempt:


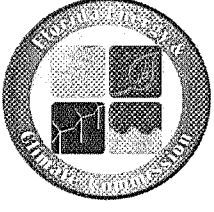
- Hydrogen Vehicles - \$2 million in tax exemptions each state fiscal year for all taxpayers.
  - To date, \$0 in sales tax has been exempted by DOR
  - \$2 million is available for FY 09-10
- Hydrogen Stationary Fuel Cells - \$1 million in tax exemptions each state fiscal year for all taxpayers.
  - To date, over \$450,000 in sales tax has been exempted by DOR
  - \$760,000 is available for FY 09-10
- Biodiesel and Ethanol - \$1 million in tax exemptions each state fiscal year for all taxpayers.
  - To date, nearly \$445,000 in sales tax has been exempted by DOR
  - \$600,000 is available for FY 09-10



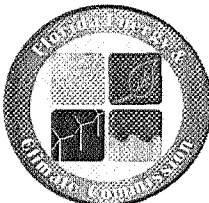





## Infrastructure Investment Tax Credit Program

- 75% of all capital costs, operation and maintenance costs, and research and development costs
- Hydrogen Vehicles - \$3 million per state fiscal year for all taxpayers.
  - To date, \$0 in tax credits has been dispersed
  - \$3 million is available for FY 09-10
- Hydrogen Stationary Fuel Cells - up to a limit of \$1.5 million per state fiscal year for all taxpayers, and limited to a maximum of \$12,000 per fuel cell.
  - To date, \$3 million has been dispersed or is scheduled to be dispersed by DOR
  - Funds are exhausted for FY 09-10
- Biofuels - \$6.5 million per state fiscal year
  - To date, nearly \$10 million in tax credits has been dispersed or is scheduled to be dispersed by DOR
  - \$6.5 million is available for FY 09-10

## Solar Rebate Program

- To date, defers over 10,000 MWh from the grid annually:
  - Equivalent to taking 1,300 passenger vehicles off of the road; or
  - Equivalent to emission reduction from approximately 1,000 homes per year (2009, U.S. Environmental Protection Agency, Greenhouse Gas Equivalent Calculator).
- As of September 30 - 7,699 solar rebate applications have been received:
  - Of those, 2230 applications totaling \$5,888,386.00 have been approved and placed on a waiting list.
  - Staffing plan to review remaining by Jan. 2010





## Contact Information

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