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**Energy & Utilities  
Subcommittee**

**MEETING PACKET**

**Tuesday, January 11, 2011  
9:00 AM – 12:00 PM**

**Dean Cannon  
Speaker**

**Clay Ford  
Chair**



# The Florida House of Representatives

Staff Affairs Committee

Energy & Utilities Subcommittee

Dean Cannon  
Speaker

Clay Ford  
Chair

## AGENDA

January 11, 2011  
9:00 a.m. – 12:00 noon  
306 House Office Building

Opening Remarks by Chair Ford

Introduction of Subcommittee Members and Staff

Overview of Florida's Evolving Energy Policy:

- Historical Perspective of Florida's Energy Policy  
Cochran Keating, Legislative Attorney, Energy & Utilities Subcommittee  
State Affairs Committee
- Governance of Florida's Energy Policy  
Kathy Baughman McLeod, Commissioner  
Florida Energy & Climate Commission
- Florida's Farm to Fuel Program  
Jay Levenstein, Deputy Commissioner  
Florida Department of Agriculture & Consumer Services
- Utility Regulatory Policy  
Art Graham, Chairman  
Bob Trapp, Assistant Director of Regulatory Analysis  
Florida Public Service Commission

Closing Remarks by Chair Ford

Adjournment



## **2010 End of Session Summary of Energy & Utilities Policy Committee**

**CS/CS/HB 163 (ch. 10-50, LOF) – Prepaid Wireless Telecommunications Service**

**By: Finance & Tax Council; Energy & Utilities Policy Committee; Gibbons**

**Tied Bills: None**

**Companion Bills: CS/CS/CS/SB 1202**

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

To fund the statewide E911 system, a fee is imposed on voice communications services at a capped rate of \$0.50 per month. This fee funds costs incurred by counties to install and operate E911 systems and reimburses wireless service providers for costs incurred to provide 911 or E911 services. Current law requires voice communications services providers (providers) to collect the E911 fee from their subscribers on a service identifier basis. The fee is imposed upon local exchange service, wireless service, and other services that have access to E911 service, such as Voice over Internet Protocol, but is not currently collected on prepaid wireless services.

The E911 Board helps implement and oversee the E911 system and administers the funds derived from the E911 fee. The primary function of the Board is to make disbursements from the E911 Trust Fund to county governments and wireless providers pursuant to law. Current law provides that a county may carry forward up to 20 percent of the total funds disbursed to it by the Board during a calendar year for capital outlay, capital improvement, or equipment replacement expenditures directly attributable to the establishment or provision of E911 service, including the functions of database management, call taking, location verification, and call transfer.

CS/CS/HB 163 provides that the E911 fee shall not, before July 1, 2013, be assessed on or collected from providers with respect to prepaid calling arrangements or from the sale of prepaid wireless service. The bill strikes obsolete language requiring the Board to conduct a study concerning the feasibility of collecting E911 fees from the sale of prepaid wireless service, as the Board has already completed this study. The bill increases to 30 percent the portion of funds disbursed by the Board to a county that the county may carry forward into the next calendar year for specified expenditures directly attributable to the establishment or provision of E911 service.

The bill was approved by the Governor on May 12, 2010, ch. 2010-50, Laws of Florida. The effective date of this bill is July 1, 2010.

**HB 281 - Communications Services Taxes**

**By: Schultz; McBurney**

**Tied Bills: None**

**Companion Bills: SB 344**

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

Current law provides that a communications service provider subject to the Communications Services Tax may take a credit, or claim a refund, for tax the provider has paid on a balance that is ultimately written off as bad debt for a worthless account. The provider, also referred to as a “dealer,” is required to report credits for bad debts separately from the tax when filing its return.

The dealer must report the credit based on the time period and jurisdiction in which the original sale occurred.

HB 281 allows dealers to “net” the tax paid on bad debts against the amount of tax due to the state or a local jurisdiction for reporting purposes, provided that the resulting amount is not less than zero. This bill also allows dealers to use a “proportionate allocation method,” based on gross taxes due, to determine the credit for bad debt attributable to the state or a local jurisdiction. In addition, the bill provides that the Department of Revenue may approve the use of another reasonable allocation method.

The bill provides for retroactive operation to July 1, 2000, as a remedial measure. However, the bill does not create a right to a refund or require a refund by any governmental entity of any tax, penalty, or interest remitted to the Department of Revenue before July 1, 2010. The bill is estimated to have no fiscal impact on state or local governments.

Subject to the Governor’s veto powers, the effective date of this bill is July 1, 2010.

**CS/SB 814 - Lifeline Telecommunications Service**

**By: Children, Families, and Elder Affairs; Aronberg**

**Tied Bills: None**

**Companion Bills: CS/HB 235**

**Committee(s) of Reference: Communications, Energy, and Public Utilities; Children, Families, and Elder Affairs; Policy and Steering Committee on Ways and Means (w/d)**

Lifeline Assistance is a program under the federal Universal Service Fund that, among other things, provides credits against the cost of basic local telecommunications service to qualifying low-income customers to encourage those customers to subscribe to telephone service. Carriers that are designated as eligible telecommunications carriers (ETCs) are eligible to participate in and receive benefits from the federal Universal Service Fund. All ETCs in Florida that are local exchange telecommunications companies with more than 1 million access lines must provide Lifeline services to qualifying customers or potential customers if the customer’s income is 150 percent or less of the federal poverty income guidelines (the “income eligibility test”).

The bill authorizes commercial mobile radio service providers (e.g., wireless service providers) designated as ETCs to utilize the income eligibility test to qualify customers for the Lifeline program. The bill also authorizes the Department of Children and Family Services (DCF), the Department of Education (DOE), the Public Service Commission (PSC), and the Office of Public Counsel (OPC) to exchange sufficient information with appropriate ETCs, such as a person’s name, date of birth, service address, and telephone number, so that the carriers can identify and enroll an eligible person in the Lifeline and Link-Up programs. The bill provides that this information will remain confidential and may only be used for purposes of determining eligibility and enrollment in Lifeline.

The bill extends until December 31, 2010, the deadline for development of procedures by DCF, DOE, PSC, and telecommunications companies to promote Lifeline participation. The bill amends the requirement for development of such procedures to specify that the

telecommunications companies participating in development of these procedures are those that are “designated eligible telecommunications carriers” providing Lifeline services.

The bill also provides that by December 31, 2010, the PSC, DCF, OPC, and each eligible telecommunications carrier offering Lifeline and Link-Up services must convene a “Lifeline Workgroup” to discuss how eligible subscriber information will be shared, the obligations of each party with respect to that information, and the procedures to be implemented to verify eligibility in these programs.

Subject to the Governor’s veto powers, the effective date of this bill is July 1, 2010.

**CS/CS/SB 982 - Underground Facility Damage Prevention & Safety**

**By: Judiciary; Communications, Energy, and Public Utilities; Bennett**

**Tied Bills: None**

**Companion Bills: CS/HB 691**

**Committee(s) of Reference: Communications, Energy, and Public Utilities; Community Affairs; Judiciary**

Chapter 556, F.S., is the “Underground Facility Damage Prevention and Safety Act.” The stated purpose of the Act is to identify and locate underground facilities prior to an excavation or demolition to prevent injury to persons or property or interruption of services resulting from damage to those facilities. To accomplish this, the Act creates Sunshine State One-Call of Florida, Inc. (One-Call system), a not-for-profit corporation to administer a free-access notification system whereby a person intending to conduct excavation or demolition activities can give prior notice to the system of the person’s intended activities, allowing operators of underground facilities the opportunity to identify and locate their nearby facilities. All operators of underground facilities in the state are required to be members of the corporation and are required to use and participate in the system.

CS/CS/SB 982 amends the “Underground Facility Damage Prevention and Safety Act” in the following ways:

- Specifies certain matters over which local government entities may not adopt ordinances or rules. Specifically, the bill provides that municipalities, counties, districts, or other local governments may not adopt or enforce ordinances or rules that conflict with ch. 556, F.S., or that do any of the following: require operators to obtain permits to identify underground facilities; require premarking or marking; specify the types of paint or other marking devices used to identify underground facilities; or require removal of marks;
- Establishes low-impact marking practices which should reduce the amount of markings that member operators are required to provide and the total amount of time that markings are visible. These provisions of the bill provide a uniform, statewide system of marking. The bill provides that violations of certain low-impact marking practices are noncriminal infractions; Establishes a voluntary alternative dispute resolution program available to all member operators, excavators, and other stakeholders to help resolve disputes arising from excavation activities. The program must include mediation, arbitration, or “other appropriate processes,” including the use of services of the Division of Administrative Hearings (DOAH). The bill provides that voluntary users of the program shall choose the

form of alternative dispute resolution to be used and shall be responsible for the costs of using the program;

- Establishes procedures concerning excavations proposed within 15 feet of a “high-priority subsurface installation.” These installations are defined to include certain underground pipelines for natural gas, gasoline, jet fuel, and other refined petroleum products and hazardous or highly volatile liquids, if the pipeline is deemed to be critical by the operator of the pipeline and is identified as a high-priority subsurface installation to an excavator. Damage to a high priority subsurface installation that results in death or serious bodily injury requiring inpatient hospitalization or results in property damage, including service-restoration costs, in an amount in excess of \$50,000 or interruption of service to 2,500 or more customers, is referred to as an “incident.” Upon receiving a report of an incident, the One-Call system must transmit the report to DOAH and contract with DOAH to conduct a hearing to determine whether an incident has occurred and whether any noncriminal infraction was the proximate cause of the incident. The bill provides that the contract must include provisions for the One-Call system to reimburse DOAH for costs incurred to conduct the hearing. The bill provides detailed procedures under which DOAH will conduct the hearing. The bill provides DOAH with jurisdiction to determine the facts and law concerning an alleged incident and to impose a fine no greater than \$50,000 against any person who commits a noncriminal infraction that was a proximate cause of the incident. If a state agency or political subdivision caused the incident, the maximum fine is limited to \$10,000;
- Provides a specific time frame for excavators to notify the One-Call system before beginning any excavation or demolition beneath state waters. The bill requires that excavators notify the system at least 10 full business days before beginning such work. The bill provides that an excavator must stop excavation or demolition activities around an underwater facility if the horizontal route of the facility is inadequately documented and must then notify the system to have the route adequately documented;
- Prohibits member operators from using information provided to the system by other member operators for marketing purposes or for any other purposes not stated in ch. 556, F.S.;
- Expands liability for damages caused by excavation with hand tools from excavators only to excavators and member operators;
- Prohibits an excavator from notifying the One-Call system of an emergency unless the excavator reasonably believes that the intended excavation or demolition is due to an emergency situation or condition as defined in the Act. The bill provides that falsely notifying the One-Call system of an emergency situation or condition is a noncriminal infraction;
- Increases the civil penalty for noncriminal infractions from \$250 plus court costs to \$500 plus court costs and eliminates the power of an enforcing authority to require appearance before a county court. The bill also requires annual reporting of noncriminal infractions by the clerks of court; and
- Requires that all members of the One-Call system be assessed a proportionate share of system operating costs through monthly assessments.

The bill is not expected to have a significant fiscal impact on state government revenues or expenditures or local government expenditures. The bill may have an indeterminate positive fiscal impact on local government revenues.

Subject to the Governor's veto powers, the effective date of this bill is October 1, 2010.

**CS/HB 7179 - Qualifying Improvements to Real Property**

**By: Finance & Tax Council; Energy & Utilities Policy Committee; Precourt**

**Tied Bills: None**

**Companion Bills: CS/CS/CS/SB 2322; includes part(s) of CS/HB 7229**

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

Qualifying Improvements to Real Property

CS/HB 7179 creates s. 163.08, F.S., providing supplemental authority to local governments regarding qualifying improvements to real property. Specifically, the bill authorizes a property owner to voluntarily enter into a financing agreement with a local government, which is defined in the bill as a county, a municipality, or a dependent special district, for the purpose of providing financing for qualifying improvements to residential, commercial, or industrial property. A local government may also partner with one or more local governments for the purpose of providing and financing qualifying improvements.

A "qualifying improvement" includes any:

- Energy conservation and efficiency improvement, which is a measure to reduce consumption through conservation or more efficient use of:
  - Electricity;
  - Natural gas;
  - Propane; or
  - Other forms of energy on the property.
  
- Renewable energy improvement, which is the installation of any system in which the electrical, mechanical, or thermal energy is produced from a method that uses one or more of the following fuels or energy sources:
  - Hydrogen;
  - Solar energy;
  - Geothermal energy;
  - Bioenergy; or
  - Wind energy.
  
- Wind resistance improvement, which includes, but is not limited to:
  - Improving the strength of the roof deck attachment;
  - Creating a secondary water barrier to prevent water intrusion;
  - Installing wind-resistant shingles;
  - Installing gable-end bracing;
  - Reinforcing roof-to-wall connections;
  - Installing storm shutters; or



- Installing opening protections.

A qualifying improvement must be affixed to a building or facility that is part of the property. Any work requiring a license must be performed by a properly certified or registered contractor, pursuant to Part I or Part II of ch. 489, F.S. The program does not cover wind resistance improvements in buildings or facilities under new construction.

Under the program, the local government would provide the upfront funding for the qualifying improvement project through proceeds of revenue bonds or other lawful debt, which would be repaid through voluntary non-ad valorem assessments on participating property owners' tax bills.

Without the consent of the mortgage holder or loan servicer, the total amount of any non-ad valorem assessment for a property cannot exceed 20 percent of the just value of the property, as determined by the county property appraiser. However, if an energy conservation and efficiency or a renewable energy qualifying improvement is supported by an energy audit, the amount financed is not limited to 20 percent if the audit demonstrates that the annual energy savings from the qualified improvement equals or exceeds the annual repayment amount of the assessment.

The local government may enter into a financing agreement only with the record owner of the property and this agreement or a summary memorandum of the agreement must be recorded in the public records of the county within five days after the agreement is executed. The recorded document must give constructive notice that the assessment to be levied on the property constitutes a lien of equal dignity to county taxes and assessments.

The bill provides that, at least 30 days before entering into the financing agreement, the property owner must provide notice to the mortgage holder or loan servicer of the intent to enter into the agreement, the maximum amount to be financed, and the maximum annual assessment that will be required to repay the amount. The property owner must provide proof to the local government that this notice has been provided to the holders of the mortgage or loan.

The bill provides that "A provision in any agreement between a mortgagee or other lienholder and a property owner, or otherwise now or hereafter binding upon a property owner, which allows for acceleration of payment of the mortgage, note, or lien or other unilateral modification solely as a result of entering into a financing agreement as provided for in this section is not enforceable." However, the bill recognizes that the mortgage holder or loan servicer may increase the required monthly escrow by an amount necessary to annually pay the qualifying improvement assessment.

The bill requires a participating local government to follow the uniform method for the levy, collection, and enforcement of non-ad valorem assessments, enumerated in s. 197.3632, F.S., which requires a resolution by the local government, public hearings, published notices in the newspaper, and individual mail notices to property owners informing them of the assessment and their right to attend a public hearing. Under current law, the special assessment process must be initiated prior to January 1 of each year. The bill provides an exception to the provisions in

s. 197.3632, F.S., allowing the process to start on or before August 15, if the property appraiser, tax collector, and local government agree. For purposes of bond repayment, the bill prohibits an early payment discount for the non-ad valorem assessment.

The bill provides that the authority is additional and supplemental to county and municipal home rule authority.

#### Loan Guaranty Program

The bill amends statutory provisions creating the Florida Development Finance Corporation (FDFC) (ss. 288.9602-288.9610, F.S.) and conforms cross-references to allow for the state's participation in the U.S. Department of Energy's 1705 Guaranteed Loan Program (s. 406 of the American Recovery and Reinvestment Act of 2009), which provides federal government loan guarantees for certain renewable energy systems, electric transmission systems, and leading edge biofuels projects.

The bill changes the definition of the term "guaranty fund" from the "Revenue Bond Guaranty Reserve Account" to the "Energy, Technology, and Economic Development Guaranty Fund," and authorizes the FDFC to issue revenue bonds or other evidence of indebtedness for the purpose of financing capital projects which promote economic development within the state. Specifically, the bill authorizes the FDFC to:

- Finance the undertaking of any project within the state that promotes renewable energy as defined in s. 377.803 or s. 366.91, F.S.;
- Finance the undertaking of any project within the state that is a project contemplated or allowed under s. 406 of the American Recovery and Reinvestment Act of 2009; or
- If permitted by federal law, finance qualifying improvement projects within the state, pursuant to s. 163.08, F.S.

The bill allows the FDFC to accept funds from the state, a county, or other public agency. The bill authorizes the FDFC to guarantee debt service payments for bonds or other indebtedness and limits these guarantees to no more than five percent of the total aggregate principal amount of bonds or other indebtedness relating to any one capital project. It specifically authorizes the FDFC to use moneys deposited in the guaranty agreement fund to satisfy requirements to obtain federal loan guarantees for capital projects authorized under the section. It requires that all policies, procedures, and regulations of the program that are used in conjunction with the federal program comply with the federal requirements. The bill deletes obsolete language relating to the State Transportation Trust Fund with regard to the FDFC.

#### Energy Economic Zone Pilot Project Study

The bill directs the Department of Community Affairs (DCA) and the Office of Tourism, Trade, and Economic Development (OTTED), in consultation with the Florida Energy and Climate Commission, to make recommendations to the Governor, the Senate President, and the Speaker of the House of Representatives regarding appropriate incentives and statutory revisions necessary to provide the Energy Economic Zone Pilot Program (pilot program) communities with tools for accomplishing the goals of the program, which is established in s. 377.809, F.S. The deadline for the recommendations is February 1, 2011, and must include consideration of:

- Fiscal and regulatory incentives;
- A jobs tax credit and a corporate property tax credit; and
- Refunds and exemptions from sales and use taxes.

The bill directs the DCA and the OTTED to coordinate with the pilot program communities and clean technology industries to help attract those industries and investments to the state.

#### Renewable Energy

The bill adds “electrical energy produced using pipeline-quality synthetic gas produced from waste petroleum coke with carbon capture and sequestration” to the definition of “renewable energy” in s.366.91, F.S.

Subject to the Governor’s veto powers, the effective date of this bill is upon becoming law.



Florida House of Representatives  
Energy & Utilities Subcommittee  
Cochran Keating, Attorney

# HISTORICAL OVERVIEW OF FLORIDA ENERGY POLICY

# What Is Florida's Energy Policy?

- ❖ 2010 Energy & Utilities Committee findings:
  - ❖ Florida does not have a clear, comprehensive, and cohesive energy policy
  - ❖ Florida law does not provide adequate guidance to state agencies, other governmental entities, and the private sector to develop and evaluate specific policies and programs necessary to implement a strategic energy plan for the state
  - ❖ Florida energy policy developed over time on a piecemeal basis

# Public Utilities Regulatory Policies Act of 1978

- ❖ Federal law arising from 1970s oil crisis
- ❖ Focused on achieving:
  - ❖ Conservation of energy supplied by electric utilities
  - ❖ Efficiency in the use of facilities and resources by utilities
  - ❖ Equitable rates to electric customers
- ❖ Introduced concept of avoided cost
  - ❖ Limits the price that utilities are required to pay for mandated purchases of power from certain facilities

# Recent History of Florida Energy Policy (2000 – present)

2000-2001	<ul style="list-style-type: none"><li>•Executive Order #00-127 creates Energy 2020 Study Commission; Final Report of the Energy 2020 Study Commission is produced in response to Exec. Order</li></ul>
2002-2003	<ul style="list-style-type: none"><li>•HB 1601 passes, requiring joint study by PSC/DEP to assess increased use of renewable energy; PSC and DEP produce joint study</li></ul>
2005	<ul style="list-style-type: none"><li>•HB 77 passes, requiring utilities to offer a standard offer contract to purchase renewable energy</li><li>•Executive Order #05-241 requires DEP to develop comprehensive state energy plan</li></ul>
2006	<ul style="list-style-type: none"><li>•DEP produces “Florida’s Energy Plan” in response to Exec. Order #05-241</li><li>•CS/CS/SB 888 passes, creating grant programs, tax incentives, and rebates for renewable energy; encouraging development of new transmission lines and new nuclear generation; creating Florida Energy Commission to provide recommendations for a comprehensive state energy policy</li></ul>
2007	<ul style="list-style-type: none"><li>•Florida Energy Commission produces recommendations to the Legislature</li><li>•HB 7135 passes, promoting energy efficiency and fuel diversity, but vetoed</li><li>•Executive Order #07-128 creates the Florida Governor’s Action Team on Energy and Climate Change to develop a comprehensive Energy and Climate Change Action Plan</li><li>•Action Team produces Energy and Climate Change Action Plan</li></ul>



# Recent History of Florida Energy Policy (2000 – present)

2008

- HB 7135 passes, requiring rulemaking to create a renewable portfolio standard, subject to ratification by Legislature (proposed rule was not ratified); replacing Florida Energy Commission with newly created Florida Energy & Climate Commission; encouraging increased conservation/efficiency; authorizing DEP to create carbon cap-and-trade program by rule, subject to ratification by Legislature (no rule has been proposed)

2009

- SB 1154 establishes clean energy portfolio standard, requiring electric utilities to produce, by 2021, 20% of retail energy sales from clean sources, including renewable resources, nuclear plants, and fossil-fuel facilities with carbon capture and sequestration (utilities permitted to recover additional costs of renewables up to 2% of total retail revenues)
- *Bill did not pass House*

2010

- HB 7229 establishes the goals of Florida energy policy and the priority of those goals; authorizes utilities to produce and/or purchase renewable energy and recover the additional costs of such production and purchases in an amount up to 2% of total retail revenues; *bill did not pass Senate*
- HB 7159 passes, establishing new financing mechanisms for renewable energy production, including property-assessed clean energy (PACE) program and loan guarantee program

# Energy 2020 Study Commission

- ❖ Created in 2000 by Gov. Bush by Executive Order #00-127
- ❖ Ordered to:
  - “determine what Florida’s electric energy needs will be over the next 20 years and how best to supply those needs in an efficient, affordable, and reliable manner that will ensure adequate electric reserves”
  - recommend appropriate electric energy policies for the state, including legislative recommendations, through a report to the Governor and Legislature
- ❖ Issued Final Report in December 2001; focused on change to competitive industry structure

# PSC/DEP Assessment Of Renewable Electric Generating Technologies for Florida

- ❖ Directed by the Legislature through HB 1601 (2002) to assess renewable energy's potential for electric generation in Florida
- ❖ PSC/DEP issued Assessment in January 2003
- ❖ Key findings:
  - Renewable resources provided approximately 3% of Florida's net electric generation in 2000, primarily from municipal solid waste (MSW), biomass materials, and waste heat recovered from industrial processes.
  - Feasible renewable resources (technologies deployable through 2008 that are commercially mature) include biomass derived fuels, MSW, landfill and digester gas, hydro-electric, solar photovoltaic, and industrial waste heat.
  - Long-term opportunities may exist for ocean conversion systems using current flows and tidal flow, gasification of certain hydrogen-rich feedstocks, and some meteorologically unique off-shore wind locations.
  - Electricity produced from renewable technologies is usually more expensive than traditional technologies on a production cost basis.
  - It is unlikely that very many new renewable facilities will be constructed based on the current avoided cost payment levels.
  - It is extremely difficult to quantitatively rank order the magnitude of the environmental impacts of various energy resources since there is no single metric which can be agreed upon.
- ❖ Many of these findings hold true today.

# Standard Offer Contracts For Purchase Of Renewable Energy

- ❖ Through HB 77 (2005), the Legislature:
  - Found that “[r]enewable energy resources have the potential to help diversify fuel types to meet Florida’s growing dependency on natural gas for electric production, minimize the volatility of fuel costs, encourage investment within the state, improve environmental conditions, and make Florida a leader in new and innovative technologies”
  - Defined renewable energy
  - Required each electric utility to continuously offer a purchase contract to producers of renewable energy with payment based upon the utility’s avoided cost and contract term of at least 10 years

# 2006 Florida Energy Plan

- ❖ Executive Order #05-241 (November 2005) directed DEP to develop a comprehensive energy plan by evaluating Florida's current and future energy supply and demand
- ❖ DEP required to consider all relevant topics, including:
  - Florida's Building Code
  - Florida's ability to generate, transmit, and distribute electric power
  - Florida's ability to generate, store, and distribute fuel
  - Traditional and alternative fuel vehicles
  - Methods to protect Florida's energy supplies during an emergency
  - Methods to reduce barriers to increase energy efficiency in power and fuel consumption
- ❖ Florida Energy Forum hosted by Secretary of DEP in December 2005 to gather input
- ❖ DEP issued "Florida Energy Plan" in January 2006

## CS/CS/CS/SB 888 (2006)

- ❖ Four major components:
  - ❖ Created the Florida Energy Commission
  - ❖ Streamlined the siting process for power plants and transmission lines
  - ❖ Created cost recovery provisions to promote development of new nuclear power in Florida
  - ❖ Established grants, rebates, and tax incentives to promote alternative energy technologies

# Florida Energy Commission

- ❖ Nine members, each with expertise in one or more specified areas, appointed by the House Speaker and Senate President
- ❖ Located within the Office of Legislative Services
- ❖ Created to develop recommendations for legislation to establish a state energy policy based on guiding principles of reliability, efficiency, affordability, and diversity, with input from specified state officials
- ❖ Required to file an initial report with the Legislature addressing:
  - Incentives for alternative energy research, development, or deployment
  - Policy recommendations for conservation of all forms of energy
  - Processes that evaluate greenhouse gas emissions
  - Steps and schedule for the development of a comprehensive state climate action plan
  - Plan of action, with a timetable, for addressing additional energy issues.

# Nuclear Power Plant Siting And Cost Recovery

- ❖ CS/CS/CS/SB 888 included several provisions intended to promote the development of new nuclear power in Florida, primarily through:
  - Modifications to the power plant need determination process that recognized the unique economics of nuclear power plants and associated fuel supply diversity benefits
  - Provisions allowing utilities to recover (through their retail rates) certain costs associated with new nuclear power before commercial operation of the plant



# Alternative Energy Incentives

- ❖ Renewable Energy Technologies Grants Program
  - Created within DEP to provide matching grants for demonstration, commercialization, research, and development projects related to renewable technologies
  - \$15 million appropriate for these grants
- ❖ Solar Energy System Incentives Program
  - Rebates for purchases of solar photovoltaic systems and solar thermal systems
- ❖ Tax Incentives
  - Sales tax holiday (1 week) for new energy-efficient products valued at \$1,500 or less
  - Sales tax exemptions and investment tax credits for hydrogen-powered vehicles and fueling stations, stationary hydrogen fuel cells, and biodiesel and ethanol production, storage, and distribution
  - Production tax credits for renewable energy facilities in Florida that produce electricity

# 2007 - A Transition

- ❖ HB 7123 (2007)
  - Intended to promote energy affordability and reliability by encouraging energy efficiency and resource diversity
  - Vetoed by Governor Crist – “It did not go far enough.”
- ❖ Executive Orders issued by Governor Crist
  - Reduce GHG emissions from state governmental buildings and vehicles (E.O. #07-126)
  - Adopt maximum emission levels for electric utilities and new motor vehicles (E.O. #07-127)
  - Create the Florida Governor’s Action Team on Energy and Climate Change (E.O. #07-128)

## Who's On First?

- ❖ The Florida Governor's Action Team on Energy and Climate Change submitted its Energy and Climate Change Action Plan to the Governor in November 2007
- ❖ The Florida Energy Commission submitted its report and recommendations to the Legislature in December 2007

# HB 7135 (2008)

- ❖ Four interrelated policy issues addressed in the bill:
  - Governance of Energy Policy
  - Climate Change and Greenhouse Gas Emissions
  - Promotion of Alternative and Renewable Energy
  - Conservation & Energy Efficiency

# Governance Of Energy Policy

- ❖ Creation of the Florida Energy & Climate Commission
- ❖ Revised membership of the Public Service Commission Nominating Council
- ❖ Creation of the Florida Energy Systems Consortium

# Climate Change And Greenhouse Gas Emissions

- ❖ Cap-and-Trade Program
- ❖ California Motor Vehicle Emissions Standards
- ❖ Environmental Cost-Recovery

# Promotion Of Alternative/Renewable Energy Resources

- ❖ Renewable Portfolio Standard
- ❖ Cost recovery for renewable energy projects
- ❖ Advanced cost recovery for certain transmission lines
- ❖ Standardized interconnection agreements and net metering
- ❖ Renewable fuel standards

# Conservation And Energy Efficiency

- ❖ Public utilities to develop new energy conservation and demand-side management plans
- ❖ Florida Building Commission to select the International Energy Conservation Code
- ❖ Phased 50 percent increase in energy efficiency standards in the Florida Building Code by 2020
- ❖ Cost-effectiveness test to ensure that increases in energy efficiency result in a positive net financial impact
- ❖ Enhanced energy standards for the construction of new state, county, municipal, school district, state university, community college, state court, and water management district buildings



# 2009 Legislation

- ❖ CS/HB 167 (passed)
  - Authorized the Florida Energy and Climate Commission to develop and administer a consumer rebate program for residential energy-efficient appliances.
  - Appropriated \$150,000 from the General Revenue Fund to the commission to administer the program.
  - Provided a conduit for federal stimulus dollars under the American Recovery and Reinvestment Act of 2009 (ARRA)
- ❖ CS/CS/SB 1154 (did not pass House)
  - Established a clean energy portfolio standard
  - Required electric utilities to produce, by 2021, 20% of retail energy sales from clean sources, including renewable resources, nuclear plants, and fossil-fuel facilities with carbon capture and sequestration
  - Permitted utilities to recover additional costs of renewables up to 2% of total retail revenues

## 2010 Legislation

### ❖ CS/HB 7229 (did not pass Senate)

- Established the goals of Florida energy policy and the priority of those goals
- Authorized utilities to produce and/or purchase renewable energy and recover the additional costs of such production and purchases in an amount up to 2% of total retail revenues

### ❖ CS/HB 7179 (passed)

- Establishing new financing mechanisms for renewable energy production, including property-assessed clean energy (PACE) program and loan guarantee program

# CS/HB 7229 – Statement Of Florida Energy Policy Goals

The purpose of the state's energy policy is to ensure an adequate and reliable supply of energy for the state in a manner that promotes the health and welfare of the public, promotes sustainable economic growth, and minimizes and mitigates any adverse impacts. The Legislature intends that governance of the state's energy policy be efficiently directed toward achieving this purpose.

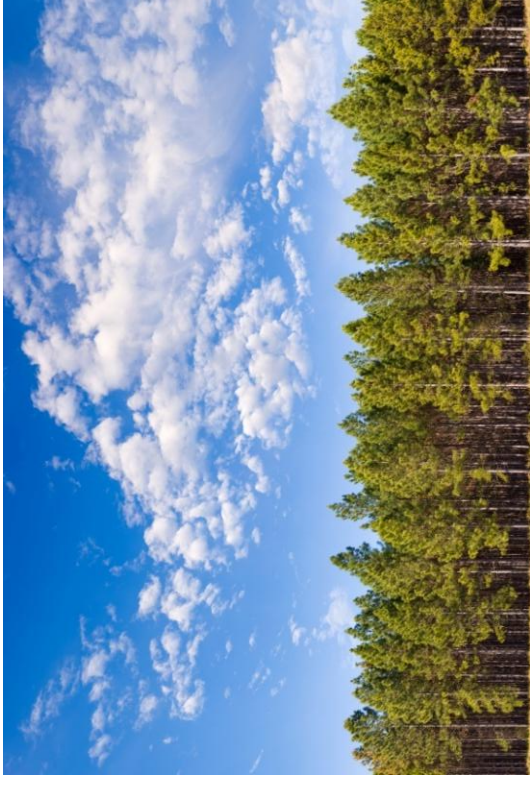
In furtherance of this purpose, the state's energy policy shall be implemented through effective, efficient, and reliable governance and shall be guided by the following goals in order of their priority:

- (a) Ensuring an affordable energy supply.
- (b) Ensuring adequate supply and capacity.
- (c) Ensuring a secure and reliable energy supply.
- (d) Minimizing energy cost volatility.
- (e) Minimizing the negative impacts of energy production on the state's environment, social fabric, and the public health and welfare.
- (f) Maximizing economic synergies for the state associated with its energy policy.
- (g) Reducing the net export of energy expenditures.

# Questions?

Florida House of Representatives  
Energy & Utilities Subcommittee  
Room 317, House Office Building  
(850) 487-1342  
[cochran.keating@myfloridahouse.gov](mailto:cochran.keating@myfloridahouse.gov)





# **Overview of the Florida Energy & Climate Commission for the House Energy & Utilities Subcommittee January 11, 2011**

**Kathy Baughman McLeod  
Commissioner**



# Florida Energy & Climate Commission (FECC)





# FECC Overview

- Created in 2008 by HB 7135 – Energy and Economic Development Legislation
- The Commission is comprised of 9 members
  - 7 appointed by the Governor
  - 1 appointed by the Commissioner of Agriculture
  - 1 appointed by the Chief Financial Officer
- The Commission is housed within the Executive Office of the Governor, and staffed by the Governor’s Energy Office





# FECC Commissioners

- James F. Murley, *Chair*
- Steven C. Bassett
- Kathy Baughman McLeod
- Howell L. Ferguson
- Nicholas C. Gladding
- Debra S. Harrison
- Timothy T. Jackson
- Christian H. Poindexter, *(Comm of Ag Appointee)*
- John “JB” Clark, *(CFO Appointee)*

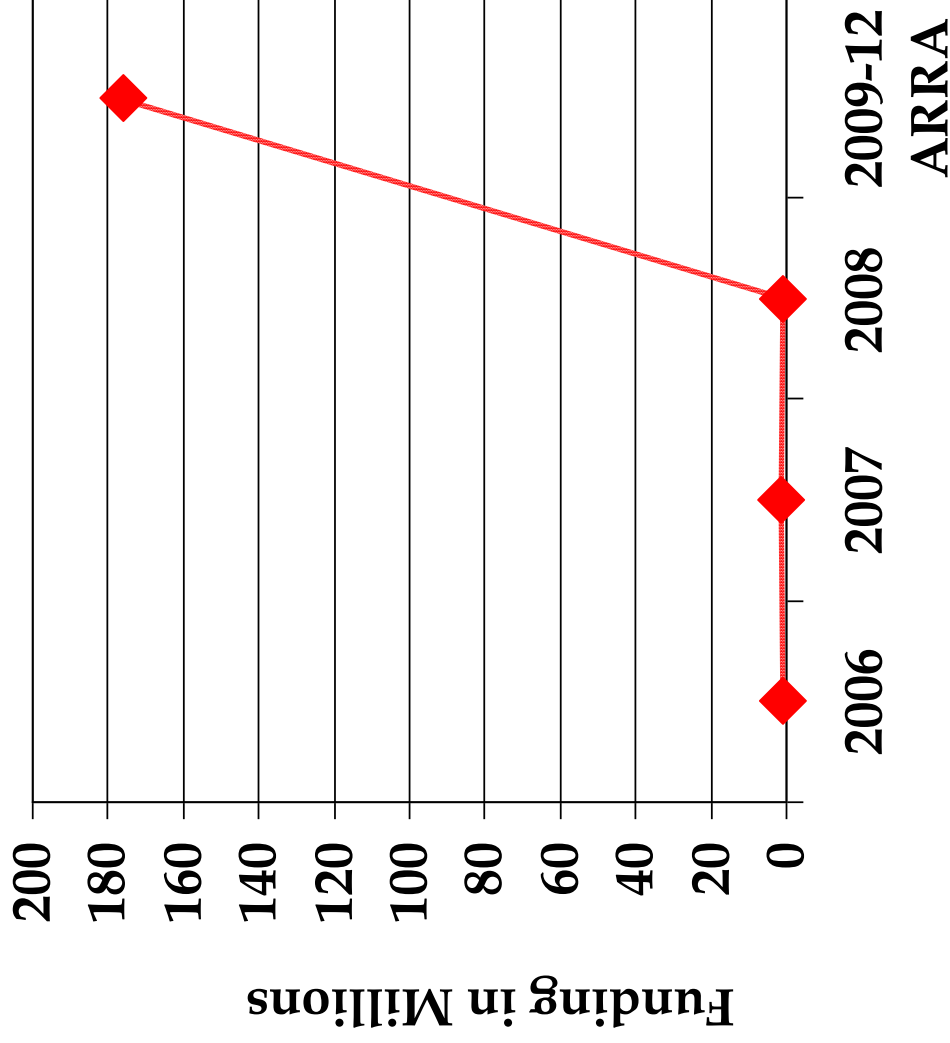


## FECC Overview (cont'd)

- Advocate for energy and climate change issues
- Provide educational outreach and technical assistance in cooperation with state universities (FESC)
- Administer the Renewable Energy and Energy-Efficient Technologies Grants Program
- Represent Florida in the Southern States Energy Compact
- Administer the Solar Energy Systems Incentive Program (aka Florida Solar Rebate Program)



# Energy Office Federal Funding

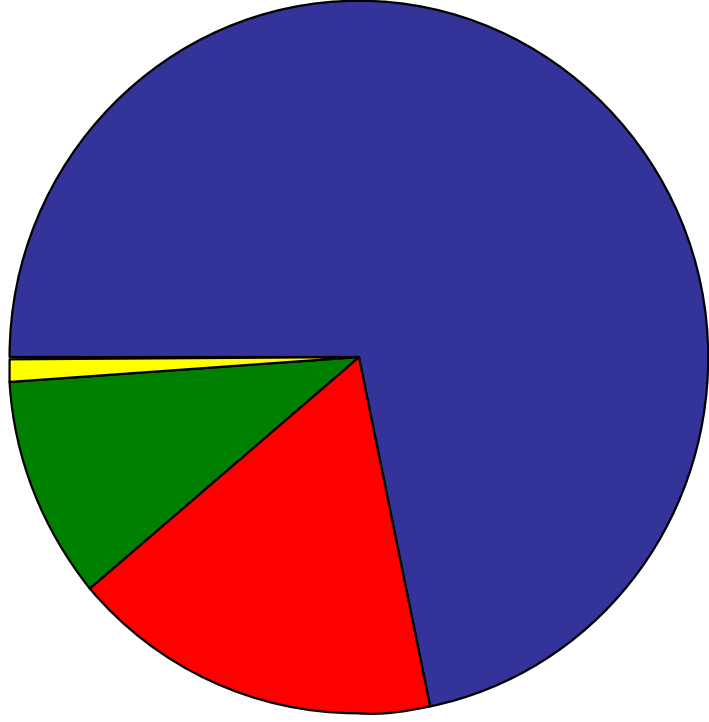


*16,000% funding increase from 2008 to 2009*



# 2009-12 ARRA Funding - By Category

- State Energy Program - \$126,089,000
- Energy Efficiency & Conservation Block Grant - \$30,401,600
- Energy Efficient Appliance Rebate - \$17,585,000
- Energy Assurance Grant - \$1,881,676



**TOTAL FUNDING = \$175,957,276**



# 2009-2012 Federal ARRA Funding

State Energy Program (SEP).....	\$126,089,000.00
Energy Efficiency & Conservation Block Grant (EECBG).....	\$30,401,600.00
Energy Efficient Appliance Rebate....	\$17,585,000.00
Energy Assurance Grant Program.....	\$1,881,676.00
<b>TOTAL FUNDING.....</b>	<b>\$175,957,276.00</b>



# 2009-2012 Federal ARRA Funding

Job creation is a key component of ARRA-funded competitive grant solicitations





## Overview of ARRA Grant Categories

### **ARRA - State Energy Program**

- Florida Clean Energy Grants
- Compressed Natural Gas (CNG) Fleet Fueling Grants
- E85 / B20 Fueling Retrofit Grants
- Florida Energy Opportunity Fund



# Overview of ARRA Grant Categories (cont'd)

## ARRA - EECBG

- Competitive Grants to Local Governments
- Energy Code - Compliance, Training and Education
- Electric Car Conversion Rebates
- Clean Tech Economic Development Strategy





# Overview of ARRA Grant Categories (cont'd)

## ARRA - Additional Funding

- Energy STAR Appliance Rebates
- Energy Star HVAC Rebates
- Energy Assurance Grants



## Overview of Other Grant Categories

### Florida's Renewable Energy and Energy- Efficient Technologies (REET) Grants:

- Currently administering 20 state funded R&D grants, public and private
- Total awarded - \$31,470,970



## A Focus on Energy and Climate Policy: Tools for Decision Makers

- Clean Tech Economic Development report  
and recommendations
  - Delivered to Legislature in March 2010
- Renewable Fuels Report on Transportation  
and Emissions
  - FECC report will be delivered in January 2011



# Additional FECC Policy Related Activities

- Florida Energy Efficiency and Conservation Act
  - The FECC filed comments on FEECA with the Florida Public Service Commission (FPSC)
- Renewable Portfolio Standard
  - The FECC voted to endorse the Renewable Portfolio Standard (RPS) submitted to the Legislature by the FPSC
- Florida Energy Systems Consortium (FESC)
  - An FECC Commissioner serves on the steering committee



# What's Next for the FECC?

- 2011 Legislative Session
  - Filed Bills: SB 282, SB 284 relating to an energy policy trust fund (Sen. Bennett)
- Reporting meaningful metrics resulting from ARRA programs and grants
- HB 15A - Solar and HVAC rebate funding
- Next FECC meeting is scheduled for Friday, January 14, 2011



# JOBS JOBS JOBS



- Florida is not among Top 10 States in an October 2010 survey report on solar jobs
  - Other populous states and those with RPS rank highest
- Clean-energy investments create 16.7 jobs for every \$1 million in spending
  - fossil fuels, by contrast, generates 5.3 jobs per \$1 million in spending
- In next 12 months, 50% of solar firms nationwide expect to add jobs

Sources: The Solar Foundation; EMSI Complete Employment 3Q 2010; UMass-Amherst



# A Bright Future

## Florida Energy and Climate Commission: A Resource for You





Florida Energy & Climate Commission  
 Governor's Energy Office  
 600 S. Calhoun Street, Suite 254  
 Tallahassee, FL 32399-0001  
 (850) 487-3800  
[energy@eog.myflorida.com](mailto:energy@eog.myflorida.com)  
[MyFloridaClimate.com](http://MyFloridaClimate.com)

## FLORIDA'S ENERGY-RELATED AMERICAN RECOVERY AND REINVESTMENT ACT FUNDING (LAST REVISED – JANUARY 7)

**Federal Stimulus Allocation Plan – State Energy Program (SEP)  
 State of Florida Funding: \$126,089,000**

<u>PROGRAM</u>	<u>FUNDING</u>	<u>STATUS</u>
Solar for Schools & Shelters	\$10,000,000	UCF reviewing bids for Contractor(s)
Solar Energy Rebate Program	\$14,408,000	Distributed to applicants through June-09
CNG Fleet Fueling Facilities – Matching Grants	\$ 1,716,600	7 eligible; 5 pending; 1 executed and complete
Shovel Ready Energy Project Grants	\$ 7,972,740	3 executed; 1 in EA; 1 DOE review
Florida Clean Energy Grants	\$10,000,000	Negotiating 21 grant agreements; 1 executed
Energy Efficiency/Conservation Grants	\$12,993,461	Negotiating 24 grant agreements; 12 executed
HB 15A - Approved Rebate funding	\$28,902,623	Implementing as directed in legislation
Florida Clean Energy Opportunity Fund	\$36,089,000	Program Launched 07/29, request for apps
E85/B20 Public Fueling Station Retrofit Grants	\$ 2,283,400	Negotiating 44 grant agreements
Program Administration	\$ 1,723,176	



**Federal Stimulus Allocation Plan – Energy Efficiency & Conservation Block Grant (EECBG)  
State of Florida Funding: \$30,401,600**

<u>PROGRAM</u>	<u>FUNDING</u>	<u>STATUS</u>
<i>Competitive Grants to Local Governments</i>	\$19,477,236	<i>29 of 40 grants executed, 7 awaiting signature</i>
<i>Sunshine State Buildings Initiative</i>	\$ 7,624,674	<i>DMS estimates \$5mm expended by end 2010</i>
<i>Energy Code Compliance and Effectiveness Measurement</i>	\$ 600,000	<i>Code Training Amendment in process</i>
<i>Energy Code Training and Education</i>	\$ 293,600	<i>DCA subcontract with FSEC for curriculum</i>
<i>Clean Tech. Economic Development Strategy</i>	\$ 300,000	<i>Develop Phase II ED strategy Jan 2011</i>
<i>Electric Car Conversion Rebate</i>	\$ 500,000	<i>30 rebates processed to date</i>
<i>State Data Center Energy Initiatives</i>	\$ 375,000	<i>Grant with data centers nearing close-out</i>
<i>Program Administration</i>	\$ 1,231,090	

**Federal Stimulus Allocation Plan – Energy Efficient Appliance Rebate  
State of Florida Funding: \$17,585,000**

<u>PROGRAM</u>	<u>FUNDING</u>	<u>STATUS</u>
<i>Energy Efficient Appliance Rebate</i>	\$15,117,756	<i>Final rebates processed</i>
<i>Energy Efficient HVAC Rebate</i>	\$2,467,244	<i>Spending authority approved 11/17</i>

**Federal Stimulus Allocation Plan – Energy Assurance Grant Program  
State of Florida Funding: \$1,881,676**

<u>PROGRAM</u>	<u>FUNDING</u>	<u>STATUS</u>
<i>Energy Assurance Grant</i>	\$1,881,676	<i>2 grants and 2 purchase orders executed</i>

**TOTAL ARRA Energy Funding \$175,957,276.00**



# **Energy Efficiency and Renewable Energy in Florida Executive Summary**

For the Florida Energy and Climate Commission

By:

Dr. Julie Harrington, Director

Dr. Bassam Awad

Zafar Siddiqui

Stephen Muscarella

Center for Economic Forecasting and Analysis (CEFA)

Florida State University

Ted Kury, Director, Energy Studies

Achala Acharya

The UF Public Utility Research Center (PURC)

University of Florida

Erik Sander, Associate Director

Florida Energy Systems Consortium (FESC)

Jack Sullivan Jr., President / CEO, Florida Research Consortium (FRC)

Dr. Aster R. Adams

March 12, 2010

Energy supply and production is of critical importance for Floridians. Florida, and the nation, in general, are concerned with the status of current energy reserves; based primarily on non-renewable resources. The diversification of the nation's energy portfolio to include renewable resources helps improve: 1) energy reliability and independence from foreign production 2) greenhouse gas emissions and/or global warming 3) national security and; 4) long term energy price stability. In addition to clean and renewable energy, the other area of interest in this study is energy efficiency.

This study aims to provide a framework or roadmap for the transition to clean and renewable energy sources, and energy efficiencies, in line with market driven forces. We conduct a comprehensive review of almost all existing statutory incentives supporting the deployment of energy efficiency and renewable energy in Florida followed by a discussion of effective mechanisms to overcome barriers of commercialization and project finance, and finally, with an analysis of the economic impact of a state renewable portfolio standard. In conclusion, this project aims to provide a necessary foundation or baseline for the next step in renewable energy and energy efficiency strategic planning and implementation, along with some suggestions and recommendations.

### ***Current Incentive Mix***

Government incentives (both State and Federal) can be categorized into two basic categories; up front incentives and performance based incentives. This section will look at current Florida renewable energy incentives.

The renewable energy incentives in Florida encompass:

- Renewable Energy Production Tax - Florida Statutes §220.193
- Renewable Energy Technologies Investment Tax Credit - Florida Statutes §220.192
- Renewable Energy Equipment Sales Tax Exemption - Florida Statutes §212.08(7)(ccc)
- Renewable Energy Technologies Grants Program - Florida Statutes §377.804
- Solar Energy System Incentives Program (Solar Rebate) - Florida Statutes §377.806
- The Capital Investment Tax Credit - Florida Statutes §220.191
- Renewable Energy Property Tax - Florida Statutes §196.175
- Solar Energy Systems Equipment Sales Tax Exemption - Florida Statutes §212.08(7)(hh)

Of these eight programs, the following five programs are scheduled to sunset June 30, 2010:

- Renewable Energy Production Tax Credit- Florida Statutes §220.193
- Renewable Energy Technologies Investment Tax Credit - Florida Statutes §220.192
- Renewable Energy Equipment Sales Tax Exemption - Florida Statutes §212.08(7)(ccc)
- Renewable Energy Technologies Grants Program - Florida Statutes §377.804
- Solar Energy System Incentives Program (Solar Rebate) - Florida Statutes §377.806

**Renewable Energy Production Tax Credit**

	2008	2009	2010	2011
Appropriation	\$5,000,000.00	\$5,000,000.00	\$5,000,000.00	\$5,000,000.00
Funds Expended	\$1,925,730.00	\$1,676,830.00	\$0.00	\$0.00
Balance	\$3,074,270.00	\$3,323,170.00	\$5,000,000.00	\$5,000,000.00
Percent of Funds Expended	38.51%	33.54%	n/a	n/a

**Renewable Energy Technologies Investment Tax Credit**

<b>Hydrogen (Vehicles)</b>	<b>FY06-07</b>	<b>FY07-08</b>	<b>FY08-09</b>	<b>FY09-10</b>
Appropriation	\$3,000,000.00	\$3,000,000.00	\$3,000,000.00	\$3,000,000.00
Funds Expended	\$0.00	\$0.00	\$0.00	\$1,547,586.75
Balance	\$3,000,000.00	\$3,000,000.00	\$3,000,000.00	\$1,452,413.25
Percent of Funds Expended	0.00%	0.00%	0.00%	51.59%
<b>Hydrogen (Stationary Fuel Cells)</b>	<b>FY06-07</b>	<b>FY07-08</b>	<b>FY08-09</b>	<b>FY09-10</b>
Appropriation	\$1,500,000.00	\$1,500,000.00	\$1,500,000.00	\$1,500,000.00
Funds Expended	\$0.00	\$0.00	\$1,500,000.00	\$1,500,000.00
Balance	\$1,500,000.00	\$1,500,000.00	\$0.00	\$0.00
Percent of Funds Expended	0.00%	0.00%	100.00%	100.00%
<b>Biodiesel &amp; Ethanol Infrastructure</b>	<b>FY06-07</b>	<b>FY07-08</b>	<b>FY08-09</b>	<b>FY09-10</b>
Appropriation	\$6,500,000.00	\$6,500,000.00	\$6,500,000.00	\$6,500,000.00
Funds Expended	\$3,347,482.62	\$4,519,660.30	\$2,473,456.24	\$0.00
Balance	\$3,152,517.38	\$1,980,339.70	\$4,026,543.76	\$6,500,000.00
Percent of Funds Expended	51.50%	69.53%	38.05%	0.00%

**Renewable Energy Equipment Sales Tax Exemption**

<b>Hydrogen (Vehicles)</b>	<b>FY06-07</b>	<b>FY07-08</b>	<b>FY08-09</b>	<b>FY09-10</b>
Appropriation	\$2,000,000.00	\$2,000,000.00	\$2,000,000.00	\$2,000,000.00
Funds Expended	\$0.00	\$0.00	\$0.00	\$0.00
Balance	\$2,000,000.00	\$2,000,000.00	\$2,000,000.00	\$2,000,000.00
Percent of Funds Expended	0.00%	0.00%	0.00%	0.00%
<b>Hydrogen (Stationary Fuel Cells)</b>	<b>FY06-07</b>	<b>FY07-08</b>	<b>FY08-09</b>	<b>FY09-10</b>
Appropriation	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00
Funds Expended	\$0.00	\$0.00	\$219,004.98	\$235,176.90
Balance	\$1,000,000.00	\$1,000,000.00	\$658,944.91	\$764,823.10
Percent of Funds Expended	0.00%	0.00%	21.90%	23.52%
<b>Biodiesel &amp; Ethanol Infrastructure</b>	<b>FY06-07</b>	<b>FY07-08</b>	<b>FY08-09</b>	<b>FY09-10</b>
Appropriation	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00	\$1,000,000.00
Funds Expended	\$0.00	\$3,982.60	\$41,349.06	\$482,726.69
Balance	\$1,000,000.00	\$996,017.40	\$958,650.94	\$517,273.31
Percent of Funds Expended	0.00%	0.40%	4.13%	48.73%

Some tax incentives have been used more than others. The Production Tax Credit has been consistently used and the bio-fuel infrastructure credit is showing increased consumption, but the hydrogen vehicle incentive has been barely used. The legislature should review each

technology granted a tax incentive and determine whether the tax code is the proper instrument to catalyze that market. If Florida elects to support pre-commercially deployed technologies, then the state should design incentives targeted to those technologies' needs. The data suggests there are state dollars allocated to these incentives that might be more productively used. In addition, it would be beneficial to examine the current method of information dissemination to the public regarding the state incentive program, to ensure the broadest coverage, application rate, and use of currently available incentives.

**Renewable Energy Technologies Grants Program**

	FY06-07	FY07-08	FY08-09	FY09-10
Appropriation	\$15,000,000.00	\$12,500,000.00	\$15,000,000.00	\$0.00
Funds Committed	\$15,000,000.00	\$12,500,000.00	\$15,000,000.00	\$0.00
Funds Expended	\$6,880,995.61	\$1,458,730.21	\$1,048,187.08	\$0.00

Since 2006, The Renewable Energy Technology Grant Program has distributed \$42.5 million dollars. Grants are attractive to industry because the application process is relatively straight forward and the awards are flexible. Although popular, the state may want to consider self-sustaining mechanisms such as: a loan program, performance based incentives, or an investment program rather than appropriating general revenue each year for the grant. The state may want to use public/private partnerships to leverage funding and engage a broader stakeholder group to select award winners.

**Solar Energy System Incentives Program (Solar Rebate)**

	FY06-07	FY07-08	FY08-09	FY09-10
Appropriation	\$2,500,000.00	\$3,000,000.00	\$5,000,000.00	\$14,400,000.00
Funds Expended	\$2,500,000.00	\$3,000,000.00	\$5,000,000.00	\$14,400,000.00
Balance	\$0.00	\$0.00	\$0.00	\$0.00
Percent of Funds Expended	100.00%	100.00%	100.00%	100.00%

Since 2006, the Solar Energy System Incentives Program (Solar Rebate) has distributed \$24.9 million dollars. The legislature should address the effectiveness and revise the Solar Rebate Program. The Solar Rebate's \$4 per watt subsidy has not changed since 2006 although both the cost of the technology and other incentives has reduced the need for the state subsidy. In addition to the declining costs of solar hardware, both the federal tax code and Florida Energy Efficiency and Conservation Act (FEECA) have provided alternative incentives. The Energy Improvement and Extension Act of 2008 (H.R. 1424) included an eight-year extension of the 30% personal income tax credit to December 31, 2016, the ability to take the credit against the alternative minimum tax, and the removal of the \$2,000 credit limit for solar-electric systems beginning in 2009. In 2009, FEECA utilities were authorized to provide up to \$24.5 million in total annual incentives for customer-owned solar water heaters and photovoltaic systems. The current rebate appears to be outdated and in light of other incentives, may need to be revised to encourage the deployment of residential and commercial solar systems.

## ***Barriers to Commercialization and Project Finance***

For this report, clean technology barriers of commercialization and project finance are divided into three major groups - technological, financial, and policy. The authors researched the availability of funds, and report on the “funding gaps” against what one would expect of a state with the nation’s 4<sup>th</sup> largest Gross State Product (GSP) in three lifecycle stages of clean technology development, finance, and commercialization.

The state of Florida is lagging behind its expected historical relative performance in funding all the stages of clean technology projects. There appears to be a glaring gap in resources available to clean technology entrepreneurs at all stages of clean technology development in Florida as compared to states with similar GSP. Florida does not compare favorably in terms of amounts financed, current assets, and system inputs related to new technologies including clean technology. Moreover, funding supplied to virtually all areas of venture creation has contracted, resulting in a more cautious venture capital market and less innovation making it to commercial production. The current economic landscape precludes Florida venture capitalists from assuming the same risk profiles in their investment portfolios as in the past decade and it appears that true clean technology seed funding of a significant amount is very limited in Florida.

This report identified the following main barriers to clean technology commercialization and project finance:

- Disparate and inconsistent policies and regulations affecting the industry which introduce an element of risk that detracts from the attractiveness of a potential investment.
- Clean technology developers’ perceived risks in terms of nascent technology, high initial costs, financial and business risks and potential revenue streams compared to investments in traditional industries
- Insufficient investments in R&D, especially by the federal and state government, which is interpreted by potential investors as a negative message that there is limited public support to create a business environment supportive of clean technology.
- First moves in policy, technology, product or marketing innovation by pioneering states, creating a financial, fiscal, social, and political environment conducive to new clean technology ventures.

## ***Regulatory Change – RPS Implementation***

The economic impacts of renewable portfolio standards (RPS) in individual states are difficult to quantify for two reasons. First, many states implement industry incentive programs in addition to an RPS and it may be difficult to separate the effects of industry incentives from any signal that is being given by an RPS. The second reason is that many state RPS policies are

relatively immature in the United States. As a result, available data make forensic analyses difficult.

Previous RPS economic impact studies are encouraging. There are already success stories in the application of an RPS enhancing employment and economic growth. An analysis was conducted to determine the effectiveness of best practice design elements for three individual policies: RPS, net metering, and interconnection. Some of the features of a well-designed RPS policy are found to significantly contribute to renewable energy development when looked at individually; however, none of them can be combined into a model that adequately predicts any of the renewable energy generation indicators.

Other important RPS policy decisions that Florida should consider include the following:

- Florida should evaluate the impact of an explicit cost associated with CO<sub>2</sub> emissions on conventional fuels and generation costs and in mitigating the need for government subsidization or mandate of clean energy technologies, and the relative impact of either program on short-term energy costs for consumers.
- RPS programs will not necessarily lead to increases in clean energy production as long as there is a cap on the price of renewable energy credits. However, the absence of a price cap puts consumers at risk of price spikes in the energy market.
- Current ten-year site plans show that Florida has no need for additional generating capacity beyond what is already planned for the next ten years, and producers are therefore more likely to purchase renewable energy credits or offsets elsewhere. The state might address the impacts of this situation with a comprehensive long-range capacity plan under various carbon pricing and technology scenarios.
- Conditions on capital investment and employment should accompany any incentive program for clean energy producers or manufacturers.

A February 2, 2010 study by Navigant Consulting<sup>1</sup> studied the impact of a national Renewable Electricity Standard (RES) program.<sup>2</sup> Its findings also support the implementation of a Florida RPS program in order to maximize economic development through job creation. Findings from the report pertinent to Florida include: 1) the biomass, hydropower, and waste-to-energy industries would see significant job gains in the Southeast United States under a strong national policy. Biomass jobs would double, with most of the increase concentrated in Louisiana, Florida, Georgia, Alabama and Kentucky. 2) Specifically for the state of Florida, the study found that without a national RES, Florida will gain up to 2,500 renewable electricity supported jobs between now and 2025. However, with a 25% RES by 2025, the state will see between 15,000 and 17,500 renewable electricity supported jobs. With a strong near-term target, Florida and Pennsylvania will see the largest job gains: between 5,000 and 7,500 additional jobs will be supported by 2014. A 20% RES in 2020 will support between 12,500 and 15,000 more renewable electricity jobs in the state than without a national policy. Stronger RES targets will mean more than 150,000 job-years of work by 2025 in the state of Florida.

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<sup>1</sup> Navigant Consulting: Jobs Impact of a National Renewable Electricity Standard, February 2, 2010.

<sup>2</sup> See: <http://www.res-alliance.org/public/RESAllianceNavigantJobsStudy.pdf>.

## Conclusions and Recommendations

**Task 1 – Recommend to the Florida Energy and Climate Commission whether the state should (1) renew the current incentives “as-is” (2) renew the current incentives with technical changes and review of funding levels, or (3) allow the current incentives to sunset**

The results of the analysis show that the sun setting programs have had varying degrees of success and must be analyzed on an incentive-by-incentive basis. The following chart analyzes each sun setting activity:

Program Category	Availability in Florida	Recommendation	Pros	Cons
Solar Rebate	Solar Energy System Incentives Program Expires June 2010  FEECA utility programs	Amend: expiration date, decrease the subsidy and consider impact of FEECA. Link to project performance	<ul style="list-style-type: none"> <li>•Support market transformation</li> <li>•Adjustable</li> <li>•Provide upfront capital</li> <li>•Low administrative burden</li> </ul>	<ul style="list-style-type: none"> <li>•Create rebate dependency</li> <li>•Can be economically inefficient</li> <li>•Not linked to project performance</li> </ul>
State Corporate Tax Incentives	<ul style="list-style-type: none"> <li>▪ State Corporate tax incentives</li> <li>▪ Renewable Energy Production Tax Credit, Expires June 2010</li> <li>▪ Renewable Energy Technologies Investment Tax Credit Expires June 2010</li> </ul>	Continue and Amend: Only available to commercial  Continue and Amend: Include Residential  Continue and Amend: Include residential, remove hydrogen vehicles and stations	<ul style="list-style-type: none"> <li>•Easy to administer</li> <li>•Easy to modify</li> </ul>	<ul style="list-style-type: none"> <li>•Insufficient tax liability</li> <li>•Impact on state revenue</li> <li>•May not be the best incentive for each technology</li> </ul>
Renewable Sales Tax Exemptions	<ul style="list-style-type: none"> <li>▪ Renewable Energy Equipment Sales Tax Exemption Expires June 2010</li> <li>▪ Solar Energy Systems Equipment Sales Tax Exemption</li> </ul>	Continue and Amend: No expiration date  Continue the program as is	<ul style="list-style-type: none"> <li>•Easy to administer</li> </ul>	<ul style="list-style-type: none"> <li>•Not a strong incentive</li> </ul>
Renewable Energy Technology Grant Program	Expires June 2010	Continue and Amend: Investment/loan program instead of grant.	Investment/Loan Program <ul style="list-style-type: none"> <li>•Lower administrative requirements</li> <li>•Leverage private capital</li> <li>•Leverage state funds</li> <li>•Build lender confidence</li> <li>•Support innovative projects</li> </ul>	Investment/Loan Program <ul style="list-style-type: none"> <li>•Reliance on private lenders</li> <li>•Default risk</li> <li>•Narrow target market</li> </ul>

**Task 2 - Recommend to the Florida Energy and Climate Commission how to cater non-sun setting existing incentives to the clean technology sector**

Maximizing the benefits associated with an increase in federal funding of clean technology at all stages will require the state to implement the best net metering and interconnection standards. The state's goals should be to implement the best net metering and interconnection standards and at the same time, put in place state policies to alleviate the short-term increase in rates associated with such policies. The improved net metering and interconnection standards should explore the possibilities to expand net metering and interconnection standards to all utilities including municipal and co-operative utilities through



an opt-in process, to increase the capacity covered by the interconnection rules to a level that provides the greatest incentive for investors, to remove requirements for redundant external disconnect switches on larger systems, and to remove interconnection requirements for additional insurance on larger systems.

A major incentive for clean technology related to clean energy would be to calculate the “full avoided costs” in Section 366.051 of Florida Statutes based on the actual cost of renewable energy generation and provide a reasonable rate of return in order to make clean energy projects profitable. The new “full avoided costs” formula would be based on the type of clean energy resource or technology, potential carbon emission reduction, the size of the plant, the resource intensity of the renewable energy plant, the time of day in which generation occurs (i.e., peak or off-peak), and the geographic location. Another incentive is to enable clean technology developers to effectively recover investments in clean technology projects at the fully avoided costs of the projects.

### **Task 3 - Recommend to the Florida Energy and Climate Commission a portfolio of programs to decrease financial barriers to clean sector technology commercialization and project finance**

Although the State of Florida ranks 9th in the total number of programs offering financial incentives to renewable energy businesses, the state currently does not have in place certain important direct programs and incentives. In order to be more renewable energy friendly and create more opportunities for economic development, the state of Florida should consider implementing certain state-sponsored programs in addition to the programs and incentives already in place. The majority of clean energy developers believe that a combination of long-term carbon price, stable subsidies, higher targets and tax breaks is very important for institutional investors.

If Florida chooses to pursue clean technologies as an economic development opportunity, now is the time to benefit from a global pro- clean technology environment, with a fundamentally strong federal support and a strong performance of clean technology companies on the capital market. The following are proposed incentive programs that the state should investigate or implement in order to decrease financial barriers to clean technology commercialization and project finance: rebates, direct loans, matching loans, interest rate buy-down, linked deposits, leases, loan guarantees, RPS set-aside and renewable energy credits (RECs), state tax incentives and exemptions, production incentives and public benefit fund.

Additionally, a number of recommendations are offered for consideration to reduce barriers to commercialization and project finance, including:

- R&D Stage
  - Support the Innovation Caucus initiative to increase SUS funding and provide university GAP Program funding.
  - Build R&D partnerships with industry by expanding the Florida High Tech Corridor Council model focused on clean technology across Florida.
- Early Stage Capital
  - Allow angel & corporate investors to earn a transferable corporate income tax liability credit for qualified high risk early venture investment.

- Expand the Florida Opportunity Fund to invest in pre-commercialized clean technology.
- Mid to Late Stage Capital
  - Enhance the state’s role as a purchaser of clean technology (e.g. energy efficiency).
- Project Finance
  - Enact policy to drive clean technology market demand as outlined in the report.
  - Partner with corporate leaders and others to establish a special purpose fund which can be used in loan guarantee programs, longer term grants to support commercialization of clean technologies, and other similar purposes
  - Authorize Florida to partner with DOE to access the Section 1705 Loan Guarantee Program that could help Florida secure \$400–800M of federal loan guarantees

**Task 4 – Recommend to the Florida Energy and Climate Commission whether to pursue an RPS or a CES.**

An RPS package that combines direct or indirect payments with production incentives may serve the dual purpose of attracting investment and mitigating the risk to the government agency. The previous economic impact studies are encouraging, although it can be difficult to distinguish the policy effects of RPS from the effects of economic incentives. While an RPS increases the demand for targeted renewable energy products and services, reduces the carbon footprint of electricity in a state and reduces the need for rebates, it does not provide much needed upfront capital, almost certainly leads to higher electricity prices and places additional administrative and oversight burden on a state. Unlike a state RPS, a CES (or Clean Energy Standard) expands the scope of available energy technologies to include nuclear energy. Nuclear power is considered a clean energy and generates a large amount of energy, but has some limitations such as the uncertainty associated with the disposal of nuclear waste.

**Task 5 – Recommend to the Florida Energy and Climate Commission effective demand side incentives**

Recognizing the importance of providing the right financing incentive, the federal government created through ARRA 2009 the Clean Energy Finance Authority (CEFA) which is designed to promote a clean energy future for America. States around the country have also created similar programs. Property-Assessed Clean Energy (PACE), an emerging clean technology financing program, is quickly becoming a key incentive for residential and commercial property owners to invest in clean technology projects. Although existing Florida laws permits municipalities and counties to create special districts for financing projects that serve the public purpose and benefit the municipality or county, as of January 2010, no counties or municipalities in Florida have created such special districts for PACE financing programs. The Florida Legislature should investigate barriers to properly functioning PACE programs, through an analysis of existing successful PACE models in other states.

Many states around the country are also developing innovative financing mechanisms designed to help finance the high upfront costs of clean technologies. The state of Florida

should explore the development of those financing mechanisms which include a Green Bank, Clean Technology Victory Bonds, Tax Credit Bonds, State Loan Guarantees, energy efficiency and conservation block grant (EECBG) models, Cleantech City Funds and Public Benefit Funds (PBF).

As no state loan guarantee program (LGP) currently exists, Florida LGP, if implemented, should be modeled after the federal LGP. In order to improve the implementation of a state LGP and to help mitigate risk to the state taxpayers, we recommend that an analysis of the federal LGP be performed to determine improvements to a similar program for Florida and adopts the recommendations that the federal Government Accountability Office (GAO) recently issued for improvement of the federal LGP.



March 15, 2010

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

**Commissioners**

James F. Murley,  
Chair

Kathy Baughman  
McLeod

John B. Clark

Nils J. Diaz

Howell L. Ferguson

Nicholas C. Gladding

Debra S. Harrison

Timothy T. Jackson

Christian H.  
Poindexter

**Executive Staff**

Robert Vickers,  
Executive Director

Benjamin Stuart,  
Deputy Director

*Dedicated to ensuring Floridians have a sustainable, diverse and clean energy portfolio that reduces greenhouse gases and benefits both Florida's economy and its unmatched environment.*

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Executive Office of the  
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President Jeff Atwater  
Office of the President  
409 The Capitol  
404 South Monroe Street  
Tallahassee, FL 32399

Dear President Atwater:

Since our creation in 2008, the Florida Energy & Climate Commission (Commission) has overseen the administration of over \$200 million dollars in renewable and energy efficiency grants. With a demand for and focus on sound, transparent distribution of these funds, our Commission has been committed to the efficient use of critical resources to develop and deploy clean technologies that will stimulate Florida's economy. \$176 million of the FECC's total funding is a one time stimulus appropriation. Your action is needed to continue Florida's progress towards a clean energy economy.

As the legislative session begins, we now shift attention to the public policy aspects of the Commission's charge. In addition to the diverse experience of its members, the Commission has the benefit of foundational energy policy materials such as the Energy and Climate Action Team Report, the Florida Energy Commission Report, and the Florida Renewable Energy Potential Assessment produced by Navigant Consulting. Most recently the Commission requested that the Florida Energy Systems Consortium (FESC) analyze Florida's existing financial incentives, barriers to clean technology commercialization, and possible regulatory actions necessary to build a Florida-focused clean energy economy. The executive summary of FESC's economic analysis is attached and provides information about renewable energy job creation potential that can inform your discussion about the economic benefits to be derived from Florida's energy policy. The complete report will be distributed shortly.

Florida has a tremendous opportunity to emerge as a leader in the clean technology economy because of our natural resource advantages, skilled workforce, and our business friendly environment. Perhaps the greatest obstacle to Florida realizing our potential is time, as many projects will be break ground in the next couple of years. Your leadership can help the state to realize its potential and secure investments in this emerging sector through the enactment of targeted incentives and supportive regulatory policies. There are three areas of policy implementation upon which you should immediately act:

1) *Pass legislation creating renewable energy demand*

The Commission strongly supports legislation creating renewable energy demand but does not endorse a specific mechanism before the Legislature. If the Legislature elects to enact renewable energy legislation, the Commission recommends the following:

- a. create clear renewable goals and time frames;
- b. impose cost-caps to protect ratepayers;

- c. include technology focused carve-outs to drive economic development into Florida's preferred renewable sectors;
- d. include nuclear energy as a component; and
- e. Increase net metering beyond 2 megawatts.

2) *Authorize and implement a Property Assessed Clean Energy (PACE) program*

Different versions of PACE have been implemented with varying degrees of success at both the community and the state level. The Commission supports PACE legislation and recommends the following as best-practices:

- a. create the legal foundation necessary to allow local governments to exercise appropriate police power and taxing authority;
- b. create a framework to provide supplemental authority to local governments to facilitate the rapid adoption and implementation of local and regional PACE programs; and
- c. encourage the development of services to measure and verify energy savings and energy production to ensure that the property improvements are delivering the promised benefits. This provision should be designed to generate overall cost effectiveness in delivering energy conservation and renewable energy production as well as economic development and job creation, and to develop standardized measurement criteria.

3) *Create new or expand current programs to finance Florida's clean technology economy*

- a. Florida must leverage state resources with federal funds and private partnerships to deploy as much capital as possible within the state. The attached economic analysis uses Florida's gross state product (GSP) as the baseline for clean technology economic activity. Although Florida boasts the country's 4<sup>th</sup> highest GSP, the state has underperformed and usually placed 10<sup>th</sup> or lower in actual levels of clean technology investment. The FECC recommends the following programs to address Florida's deficiencies in helping a project transition from inception to full scale deployment:
  - 1. Stage 1 - Research and Development - The Legislature could expand the Florida High Tech Corridor Council Matching Funds Research Program as a model for helping companies leverage their research and development budgets by working with a Florida research institution.
  - 2. Stage 2 - Early Stage Capital - The Legislature could allow angel and corporate investors to earn a transferable corporate income tax liability credit for qualified high risk early venture investment.
  - 3. Stage 3 - Mid/Late Stage Capital - The Legislature could use the Florida Opportunity Fund to invest in pre-commercialized clean technologies. The FECC has already dedicated \$36 million of American Recovery and Reinvestment Act State Energy Program funds to capitalize the Opportunity Fund, but those monies are restricted to commercialized technologies.
- b. Florida must receive its fair share of stimulus funds and ensure the maximum amount of capital is invested in the state. The Department of Energy (DOE) has become the largest clean technology investment bank in the United States. The DOE's 2009-2011 budget for energy and water development projects exceeds \$53 billion dollars. The economic analysis didn't find Florida specific data for project finance, but the analysis did find that global clean sector asset financing exceeded \$48 billion in 2008 which

3/25/2010

3

shows the magnitude of DOE's financial commitment to the sector. DOE is actively looking for partnerships that will bring communities, utilities, entrepreneurs, and private capitalists together to leverage the federal government's investment. State government must act as an interface for interested parties to find opportunities, in addition to taking the lead in securing funding for the state. Specifically, the FECC recommends that the Legislature authorize Florida to partner with DOE to access the Section 1705 Loan Guarantee Program which could help Florida secure between \$100-500 million of federal loan guarantees.

Florida is at the threshold of transformational economic opportunity and the Commission has confidence that the Legislature will seize this chance to build a stronger economy for Floridians, create more jobs, and foster energy independence. The Commission and its staff are always available as a resource to you and we look forward to engaging in productive dialogue with the Legislature.

Sincerely,

James F. Murley, Chair  
Florida Energy & Climate Commission

Cc: Speaker Larry Cretul

BS/bc

## 1. Executive Summary

The *National Solar Jobs Census 2010* is the first attempt to quantify the current employment and projected growth of the United States solar industry and is based on a statistically valid sampling of employers throughout the nation.<sup>1</sup> The rapid increase of solar energy generation has warranted a credible study that examines the size and scope of the industry that until now, has been lacking.

The Solar Foundation™, a 501(c)(3) nonprofit, non-lobbying organization funding solar research and education, recognized this gap and worked with Green LMI Consulting, Cornell University and others to bring this important information to the foreground. This report represents an unprecedented effort to understand the solar industry's labor market conditions and potential for growth.

In general, U.S. solar companies expect to add jobs at a pace that is much faster than the general economy, and are highly optimistic regarding their overall revenue growth over the near term. **Specifically, as of August 2010, the U.S. solar industry employs an estimated 93,000 solar workers** - defined as those workers who spend at least 50% of their time supporting solar-related activities. **Over the next 12 months, over 50% of solar firms expect to add jobs, while only 2% expect to cut workers.** This finding is especially relevant given that the overall expected 12-month growth rate for the entire U.S. economy is only about 2%.

**Figure A: Current and Expected U.S. Solar Jobs**



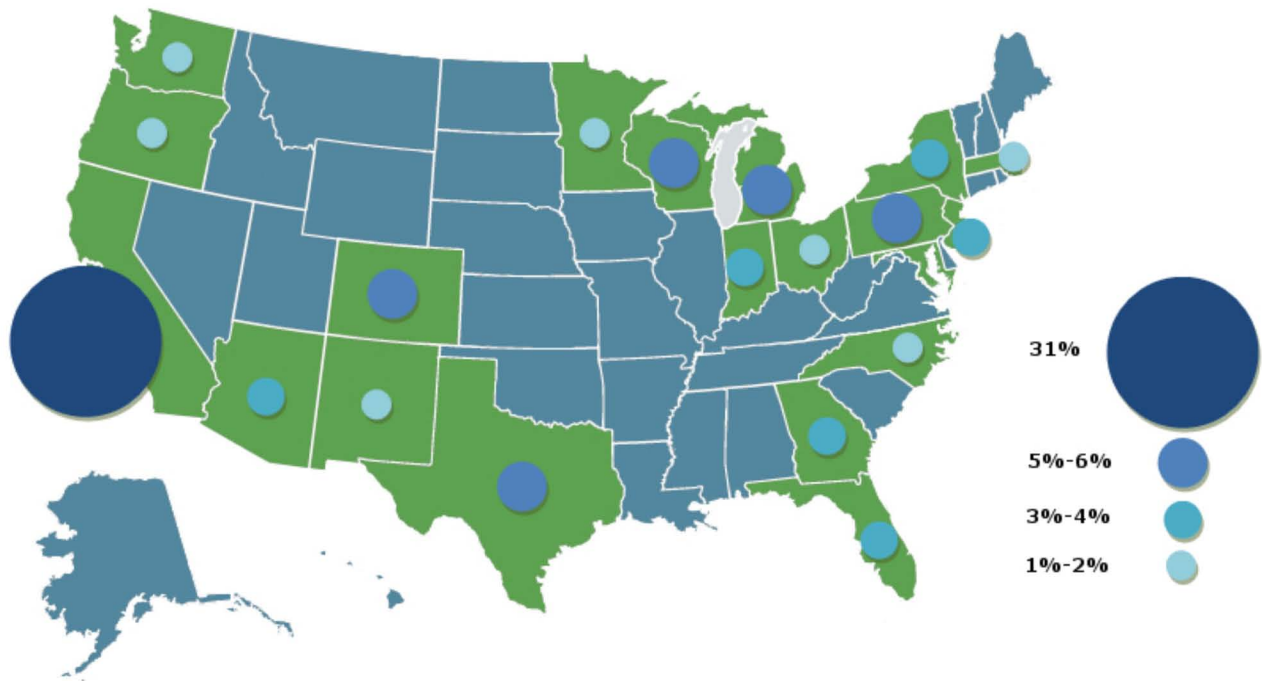
<sup>1</sup> The data contained in this report include information gathered from approximately 2,500 employers drawn from every state and from all types of companies; from those who manufacture solar components to those who install them. A rigorous research methodology and strong participation from solar employers allows us to draw more comprehensive conclusions from the data than from previous reports on the industry.

## TOP SOLAR STATES

The Solar Foundation conducted an independent analysis of state-level data that were collected by employers as part of the National Solar Jobs Census 2010. This information is important because it provides a way to measure the effectiveness of certain state-driven policies. Because this census is national in scope, state-level data is limited due to geographically-diverse response rates and unrepresentative samples. By reviewing the national data and individual state responses, however, it is possible to generate approximate employment data on a state-by-state basis. Please note that certain states with low number of solar firms may be ranked highly because those firms are larger manufacturers, rather than smaller installer firms. Based on this analysis, the top 10 states for solar jobs are:

1	<b>California</b>	17,352	<b>36,000</b>	1,072
2	<b>Pennsylvania</b>	3,193	<b>6,700</b>	282
3	<b>Texas</b>	3,068	<b>6,400</b>	170
4	<b>Michigan</b>	3,023	<b>6,300</b>	76
5	<b>Wisconsin</b>	2,885	<b>6,000</b>	89
6	<b>Colorado</b>	2,528	<b>5,300</b>	254
7	<b>Georgia</b>	2,157	<b>4,500</b>	62
8	<b>Arizona</b>	1,815	<b>3,800</b>	230
9	<b>New York</b>	1,654	<b>3,500</b>	225
10	<b>Indiana</b>	1,628	<b>3,400</b>	25

Estimated Jobs in Top 20 States as Percent of Total Solar Jobs



<sup>1</sup> These figures include the total number of jobs at all solar firms in each state, as indicated by the survey responses.

<sup>2</sup> For more information on solar companies in each state, visit: [www.solarworksforamerica.com](http://www.solarworksforamerica.com).





# MEETING OF THE FLORIDA ENERGY & CLIMATE COMMISSION

FRIDAY, JANUARY 14, 2011  
1:00 PM – UNTIL COMPLETION  
TONI JENNINGS ROOM, 110 SENATE OFFICE BUILDING  
404 SOUTH MONROE STREET, TALLAHASSEE, FL  
TALLAHASSEE, FL 32399-0001

<b>Commissioners:</b>	James F. Murley, Chair	Nicholas C. Gladding
	Steven C. Bassett	Debra S. Harrison
	Kathy Baughman McLeod	Timothy T. Jackson
	John "JB" Clark	Christian H. Poindexter
	Howell L. Ferguson	

## AGENDA

- |  |   |            |
|--|---|------------|
| I. Opening Comments and Welcome of New Executive Director  | Chairman Murley and Commission Members      |            |
| II. Review and Approval of the January 14, 2011 FECC Agenda  |   |            |
| III. Review and Approval of the December 8, 2010 Meeting Minutes   |   |            |
| IV. Memorandum of Allocations for ARRA-SEP; Transmittal of UF-FESC GHG Emissions Study ( <i>Action requested</i> ) | Commission Staff                            | 20 minutes |
| V. Reports from Delegation Visit to United Kingdom; UN Climate Summit in Cancun                                    | Commissioner Baughman McLeod                | 15 minutes |
| VI. Opportunity for Florida: DOE/States Marine Energy Partnership  | Jessica Morey, Clean Energy States Alliance | 15 minutes |
| VII. Status Report on Programs Implemented Pursuant to the American Recovery and Reinvestment Act                  | Commission Staff                            | 10 minutes |
| VIII. Presentation from the Florida Energy Systems Consortium  | Dr. Tim Anderson                            | 20 minutes |
| IX. Discussion of Proposed MOU with Florida Climate Institute  | Chairman Murley                             | 10 minutes |
| X. Review and Discussion of FECC/GEO Agency Summary  | Commission Staff                            | 20 minutes |
| XI. Public Comment Period  |   | 30 minutes |
| XII. Closing Comments and Questions  |   |            |

## Additional Information

Staff will conduct the meeting from the Toni Jennings Room, 110 Senate Office Building, 404 South Monroe Street, Tallahassee, Florida, where members of the public are invited to attend. Members of the public are also invited to listen to the call, but due to noise consideration are asked to dial-in from a land line and keep their phone lines muted until the public comment section of the agenda. The dial-in number is (866) 233-5216 and the conference code is 5654699.

If further information or if an accommodation is needed for a disability (notification must be made within 48 hours of meeting date), please contact: Jacqueline Warr with the Florida Energy & Climate Commission at (850) 487-3800.



# Florida's Farm to Fuel<sup>®</sup> Initiative

## House Energy and Utilities Subcommittee

January 11, 2011



FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

COMMISSIONER ADAM H. PUTNAM



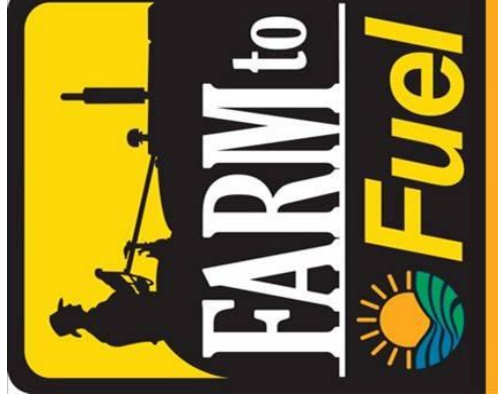
## 25X'25 Vision

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.

# 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.



# Benefits of Farm to Fuel<sup>®</sup>

- increased farm income
- added value uses for crops and agricultural residues
- new markets to maintain the viability of agriculture
- major impact on rural development with job opportunities
- maintain green space
- more productive use of marginal land








# Biomass Sources in Florida

- 40,000 farms and ranches
- 16<sup>+</sup> million acres of timberland, with 10<sup>+</sup> million acres in private ownership
- 10 million acres cropland
- 3.4 million acres of pastureland
- fast-growing trees and crops
- agricultural residues
- forest debris, thinnings, and undergrowth
- leftover materials from the wood products industry
- animal manures
- urban wood waste
- invasive species
- algae




# Potential Ethanol Feedstocks

Corn		300-400 gal/acre
Sugar Cane		600-800 gal/acre
Sweet Sorghum		200-600 gal/acre
Woody Biomass, Grasses		1000 gal/acre?
Bagasse (1 mil tons)		80-100 mgy



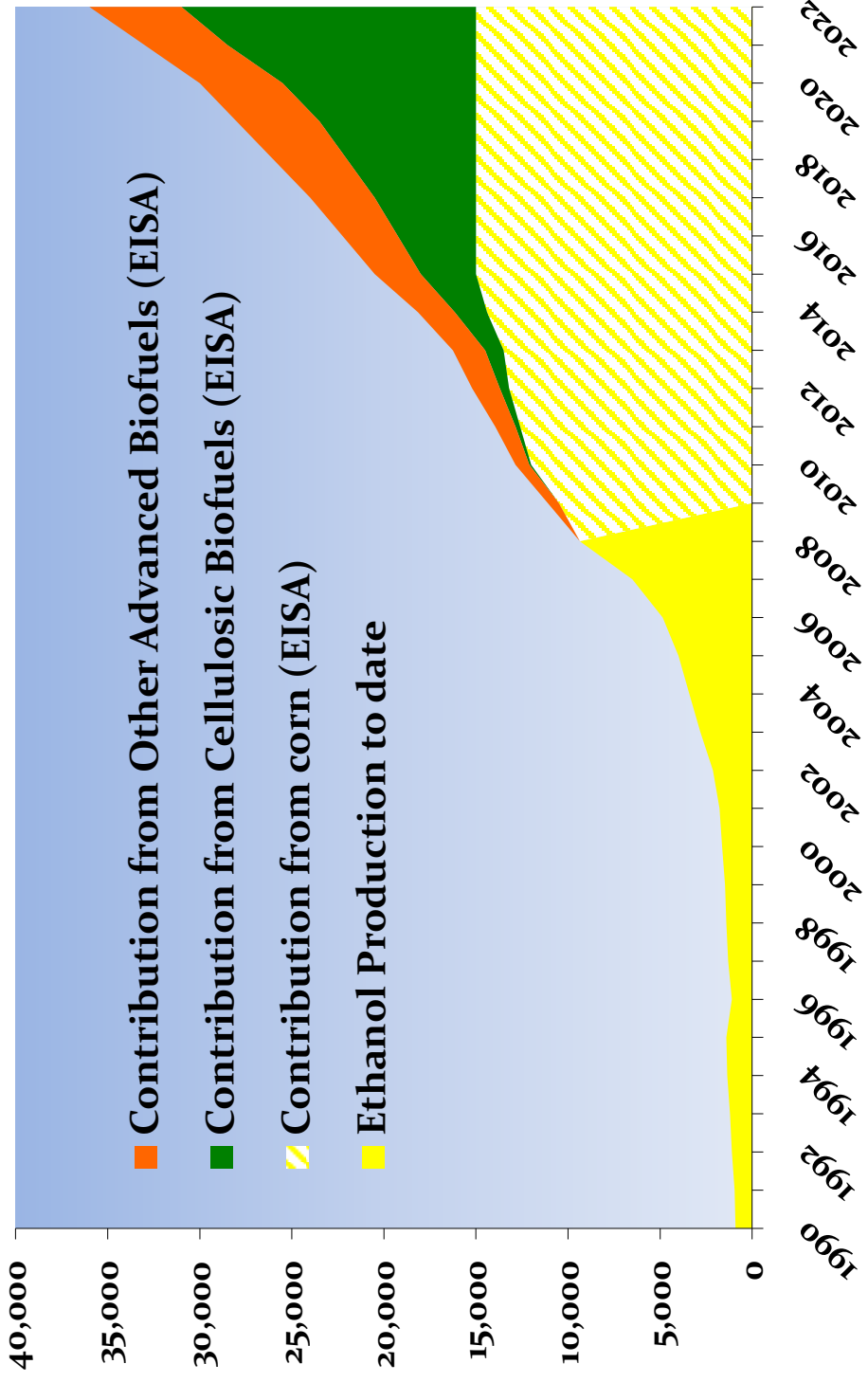


# Potential Biodiesel Feedstocks

Soybean		60 gal/acre
Jatropha		200-300 gal/acre
Algae		2,000+ gal/acre
Camelina		100 gal/acre



# Renewable Fuel Standard



(million gallons/year)



1-800-HELPFLA

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



# Biofuels Strategic Production Report

- Advanced biofuel mandate – 21 bgy
  - 14.6 bgy – dedicated energy crops
  - 4.6 bgy – crop residues
  - 3.0 bgy – woody biomass
- Additional investment - 527 new biorefineries totaling \$168 billion investment
  - 263 biorefineries costing \$83.8 billion in the SE region



# State Grant Funding 2006-2008

	Renewable Energy Technologies	Bioenergy	Total
2006-07	\$10 million	\$5 million	\$15 million
2007-08	\$12.5 million	\$25 million (Farm to Fuel)	37.5 million
2008-09	\$7 million	\$8 million	\$15 million
Total	29.5 million	\$38 million	\$67.5 million



# Farm to Fuel<sup>®</sup> 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
- \$25 million appropriated (FY 07-08)
  - \$22 million commercialization
  - \$3 million R&D and demonstration



# Sugar-to-Ethanol BioRefinery

- United States EnviroFuels, LLC
- Highlands County
- Award: \$7,000,000
- Cost Share: \$40,000,000
- Payments: \$105,519.13
- 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.



# Bioenergy Plantation

- Highlands Ethanol, LLC (Vercipia Biofuels)
- Highlands County
- Award: \$7,000,000
- Cost Share: \$16,651,925
- Payments: \$1,515,291.73
- Objective: Establish a 15,000 acre commercial energy plantation for the production of dedicated energy crops to support a 36 mgy cellulosic ethanol plant.



# Biodiesel Production

- Agri-Source Fuels, LLC
- Pasco County
- Award: \$2,500,000
- Cost Share: \$10,728,741
- Payments: \$1,831,807.58
- Objective: Increase output of the Dade City biodiesel production plant 60 mgy and the construction of a BQ-9000 certified laboratory and glycerin refinery.





# Biogas Production

- Waste Energy Solutions, LLC
- Lafayette County
- Award: \$5,500,000
- ~\$18,637,000
- Payments: \$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.



# R&D Projects

- Fischer-Tropsch Conversion of Florida Woody Biomass Generated Syngas to Biodiesel
- Bioenergy and Agricultural Products from Animal Waste
- Thermochemical Conversion of Biomass to Liquid Hydrocarbons as Substitutes for Petroleum-Based Fuels
- Production of Biofuels and Animal Feed from Microalgae
- Conversion of Crop Oils to Biofuels
- Development of Floating Algae/Biodiesel Production System in Quarry Lakes Utilizing Fish Production Effluent as the Nutrient Source
- Assessment of Jatropha Curcas for Biodiesel Production
- Enhancing Conversion of Grass Biomass to Ethanol
- Green Gas from Green Gas



2011

# Farm to Fuel Summit

August 3-5

Rosen Shingle  
Creek

Orlando,  
Florida

1-800-HELPFLA



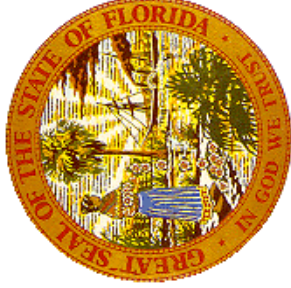
[www.FreshFromFlorida.com](http://www.FreshFromFlorida.com)

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FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

COMMISSIONER ADAM H. PUTNAM

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# House Energy & Utilities Subcommittee

Florida Public Service Commission  
Functions and Current Issues  
January 11, 2011

# Function

As an arm of the Legislature, the PSC implements policies enacted by the Legislature to ensure that:

- Consumers receive electric, natural gas, water, and wastewater services in a safe, affordable, and reliable manner.
- For telecommunications companies, the PSC has jurisdiction over company-to-company matters, quality of service for basic local service customers, customer billing complaints, and Life-line.



# Regulatory Compact

- Government protects the interests of both the consumer and the supplier.
- In return, the supplier has rights AND responsibilities.



# Regulatory Compact

- Rights
  - Natural monopoly
  - Franchise for defined territories
  - Can charge rates to cover prudent cost of service
  - Entitled to an opportunity to earn a fair and reasonable return on their investment
- Responsibilities
  - Obligation to serve ALL customers in the defined territory
  - No discrimination in providing service or charging rates
  - Provide safe and reliable service
  - May not build unnecessary facilities or incur costs for unnecessary services
  - Open the books to regulators

# Electricity Regulation

- Economic (rate base) regulation over rates and quality of service for 5 investor-owned electric utilities.
- Rate structure authority over 35 municipal and 16 rural co-op utilities.
- Authority over grid reliability; oversight of ten-year plans for meeting customer bulk power needs.
- Determine need for new steam power plants greater than 75 MWs and transmission lines greater than 240 kV that cross county lines.
- Set demand-side management and energy efficiency goals for IOUs and two municipal electric utilities and approve cost effective utility plans and programs to meet those goals.
- Set buy-back rates and authorize cost recovery for purchases from renewable energy generators.

## Telecommunications Oversight

- Regulation is primarily focused on incumbent wireline local exchange companies (ILECs).
- Competitive local exchange companies (CLECs), and interexchange companies (IXCs) are subject to minimal regulation.
- Generally, the PSC does not regulate wireless telecommunications, broadband services, Voice over Internet Protocol (VoIP) services, or cable/satellite television.

# Telecommunications Oversight

- **Oversight Functions:**
  - Statutory price caps for ILECs
  - Interconnection negotiation and arbitration of agreements between ILECs and competitors
  - Consumer Complaints
    - Charging according to rate schedules
    - Slamming
    - Cramming
    - Billing
    - Service quality
  - Lifeline
  - Numbering
  - Relay
  - Market Monitoring

## Natural Gas Regulation

- Regulatory authority of eight local distribution companies (LDCs) which sell to end-users.
  - Rates and charges
  - Meter and billing accuracy
  - Territorial agreements and disputes
  - Basic service issues
- Safety evaluations for LDCs, municipally-owned utilities, and gas districts as an agent for U.S. DOT.
- The PSC does not regulate:
  - Rates for municipally-owned utilities
  - Pipeline siting
  - Liquid propane gas

# Water and Wastewater Regulation

- Regulatory authority over investor-owned water and wastewater companies in 36 counties:
  - Rates and charges
  - Meter and billing accuracy
  - Certification and territory amendments
  - Quality of service
- The PSC does not regulate municipally owned and county-owned water and wastewater utilities.

## Energy – Current Issues

- Legislative emphasis on fuel diversity due to increasing reliance on natural gas-fired generation and the volatility of natural gas fuel prices.
- Legislative direction to increase conservation.
- Legislative initiatives to increase development of renewable resources for electric generation.
- Legislative initiatives to encourage the development of nuclear generation.

## Balanced Fuel Supply – Fuel Diversity

- Ten years ago, the state's utilities relied substantially on coal-fired and nuclear generation.
- Advances in gas-fired technology and moderate fuel prices led the state's utilities to almost exclusively construct gas-fired generation over the past ten years.
- Large upward swings in natural gas prices during a large part the last decade resulted in substantial increases in the cost of electricity.
- Current natural gas prices have moderated, but Florida's dependence on natural gas to generate electricity continues to grow.
- Florida's utilities should strive for a balanced fuel supply to mitigate potential swings in electricity cost due to fuel price fluctuations.



## Energy - Conservation

- 2008 legislation placed increased emphasis on demand-side management and energy efficiency.
- In response, the PSC established aggressive new conservation goals for reductions in the growth of seasonal peak demand and annual energy consumption.
- Utility plans and programs implementing the new goals are currently under review.
- The utility conservation plans include measures that are cost effective from a system-wide basis (Total Resource Test) and take into consideration the potential for costs associated with reducing green-house gas emissions.
- Utility plans also include incentives for customer based thermal and photovoltaic solar installations.

## Energy - Renewables

- 2005 and 2006 Legislation encouraged the development of renewable energy. In response, the PSC enacted rules requiring utilities to:
  - Offer continuous standard offer and negotiated contracts for the purchase of capacity and energy from renewable generators.
  - Provide more flexible pricing options, including the payment of levelized costs and fixed energy payment options.
- 2008 Legislation directed PSC to:
  - Provide for standard interconnection and net metering of demand-side renewables, including small solar systems.
  - Submit for ratification a draft Renewable Portfolio Standard (RPS). Upon ratification of the rule, the statute would allow the PSC to authorize payments to renewable generators above the utility's avoided cost of producing electricity.
  - Authorized PSC to allow cost recovery for up to 110 MW of utility owned demonstration solar energy projects.

## Energy – Renewable Portfolio Standard (RPS)

- PSC submitted a draft RPS rule to the Legislature on January 30, 2009.
- The PSC considered three options:
  - Market-based approach
  - Standard offer contract approach
  - Clean energy portfolio.
- Each option would allow utilities to purchase renewable energy at rates higher than the utility's avoided cost of producing electricity.
- The amount paid above the utility's avoided cost would be limited to 2% of the utility's total annual revenues.
- Since renewable energy may cost more than conventional energy generation, significant issue is:
  - How much more should consumers be required to pay for renewable energy alternatives?

## Energy - Nuclear

- 2006 Legislation required the PSC to consider fuel diversity in determining the need for new nuclear units and encouraged the development of nuclear energy by identifying certain costs eligible for recovery prior to the in-service date of the unit.
- FPL received regulatory approval for two new units at their existing Turkey Point nuclear site.
- PEF received regulatory approval for a greenfield site in Levy county.

## Telecommunications – Current Issues

- In 1995, the Legislature recognized the potential benefits of introducing competition for telecommunications services and opened local telecommunications markets to service providers other than incumbent local exchange companies.
- In 2009, the Legislature made additional reforms to the existing regulatory framework for telecommunications by redefining basic service and further limiting the service subject to price regulation.
- Current issues include what role the PSC should continue to play in the area of competitive market oversight and consumer protection.

# Universal Service Fund

- Federal Universal Service Fund (USF) continues to grow, \$4.7 billion in 2010 compared to \$2.2 billion ten years ago.
- Florida is the largest **net** contributor to the program.
- In 2009, Florida consumers contributed \$496 million to the fund; yet \$222 million was targeted for Florida. This represents a **net** contribution of \$274 million.
- For the first time, in 2009, Florida consumers received more benefit from the low income programs (Lifeline and Link-Up) than was contributed into the program (Contributed \$68 million and received \$74 million).
- PSC continues to work to reform this federal program.

## Water and Wastewater – Current Issues

- The PSC only regulates those water and wastewater utilities that counties have elected not to regulate. These systems tend to be smaller, older systems with smaller customer bases over which to spread increasing costs. Significant issues include:

- Aging infrastructure
- Rate affordability
- Financial viability
- Quality of service