The Florida Senate

COMMITTEE MEETING EXPANDED AGENDA

COMMUNICATIONS, ENERGY, AND PUBLIC UTILITIES
Senator Benacquisto, Chair
Senator Smith, Vice Chair

MEETING DATE: Monday, February 21, 2011
TIME: 1:45 —3:45 p.m.
PLACE: *Toni Jennings Committee Room,* 110 Senate Office Building

MEMBERS: Senator Benacquisto, Chair; Senator Smith, Vice Chair; Senators Altman, Bogdanoff, Diaz de la Portilla, Evers, Fasano, Flores, Joyner, Lynn, Margolis, Negron, and Sachs

TAB	BILL NO. and INTRODUCER	BILL DESCRIPTION and SENATE COMMITTEE ACTIONS	COMMITTEE ACTION
1		Presentation of the Renewable Energy in the South Study	
2		Presentation by University of Florida Institute of Food and Agricultural Sciences	
3		Presentation by the Governor's Energy Office	
4		Presentation by Florida Energy and Climate Commission	

Georgia Tech Ivan Allen College School of Public Policy

NICHOLAS INSTITUTE FOR ENVIRONMENTAL POLICY SOLUTIONS
DUKE UNIVERSITY

Renewable Energy in the South and Opportunities for Florida

Marilyn Brown
Georgia Institute of Technology

Etan Gumerman
Duke University

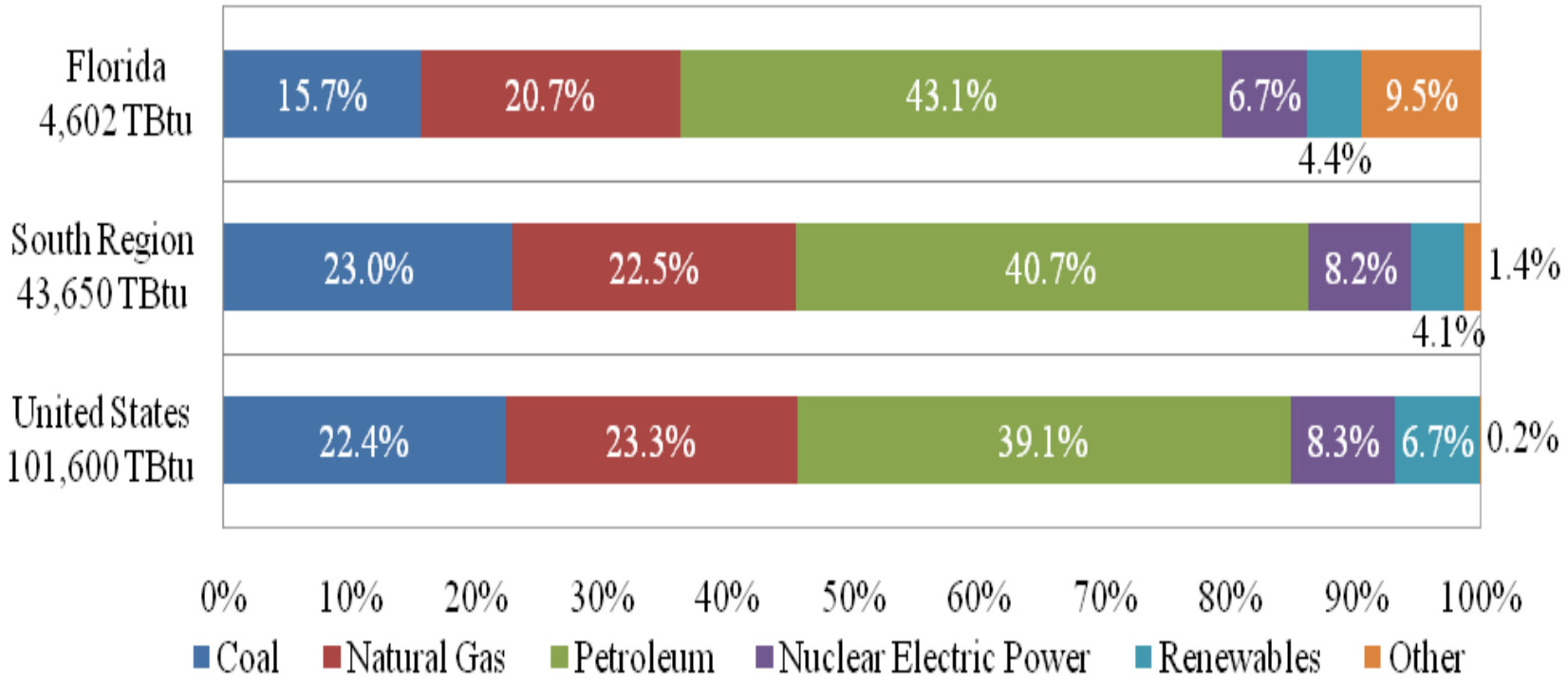
Tallahassee, FL
February 21-22, 2011

The Energy Foundation

THE KRESGE FOUNDATION

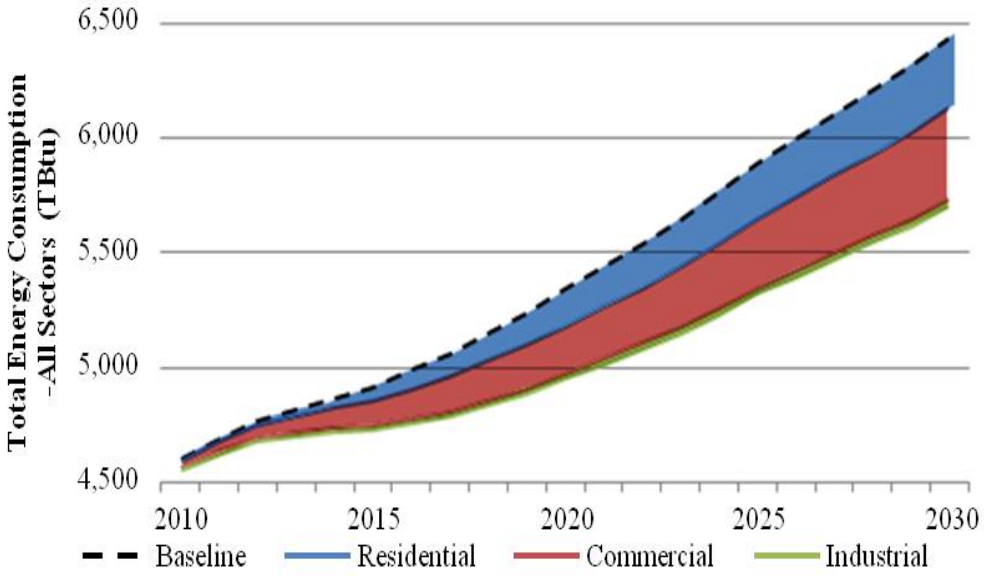
turner foundation, inc.

Energy Consumption in Florida



Florida spent $68 billion energy in 2008
($12 billion on electricity).

The Potential for Florida to Use Energy More Efficiently is Large



Such energy-efficiency investments would shrink electricity and natural gas bills by:

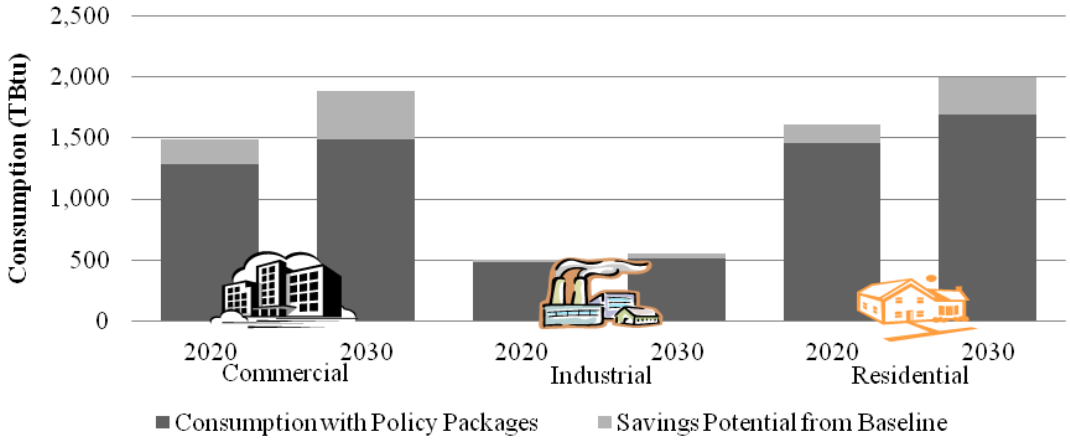
- $4.4 billion in 2020
- $9.1 billion in 2030

Jobs would also be created in Florida:

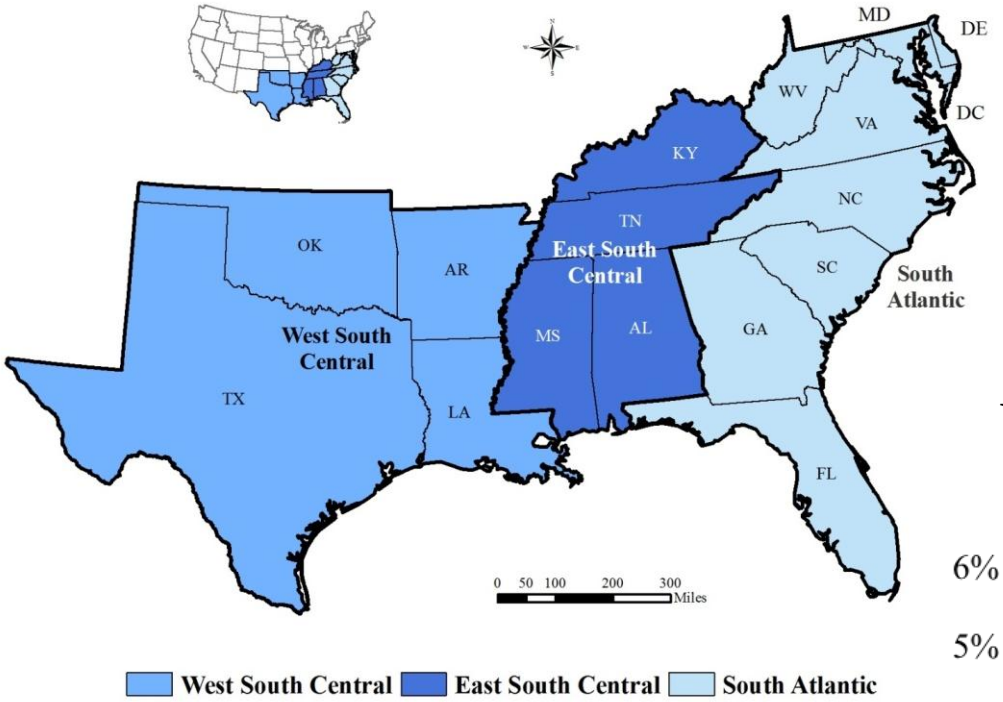
- 63,900 in 2020
- 94,100 in 2030

Private and public-sector investments would be required:

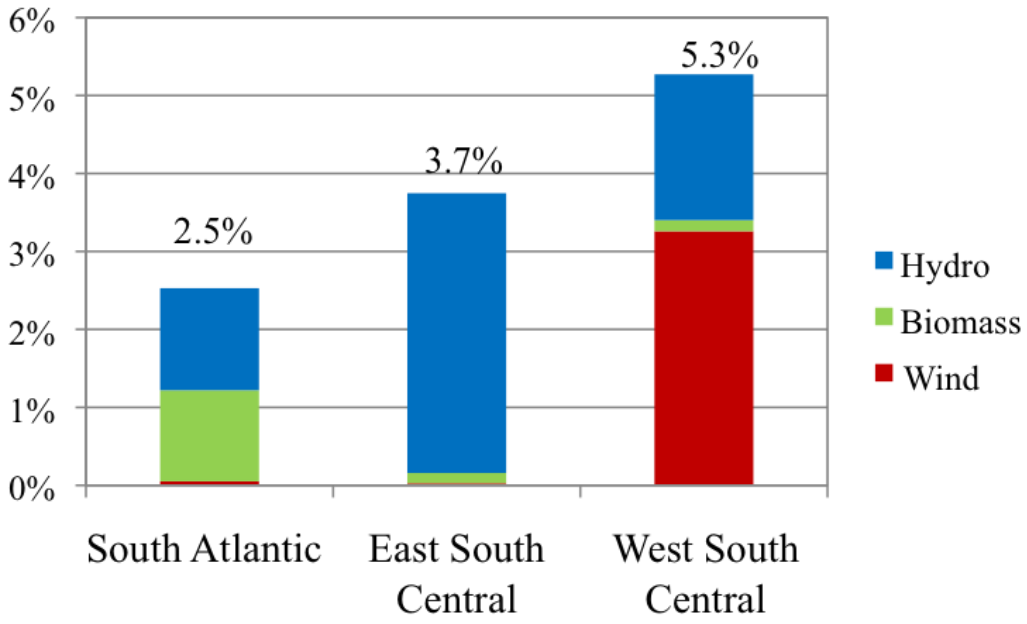
- $578 million in 2020
- $744 million in 2030



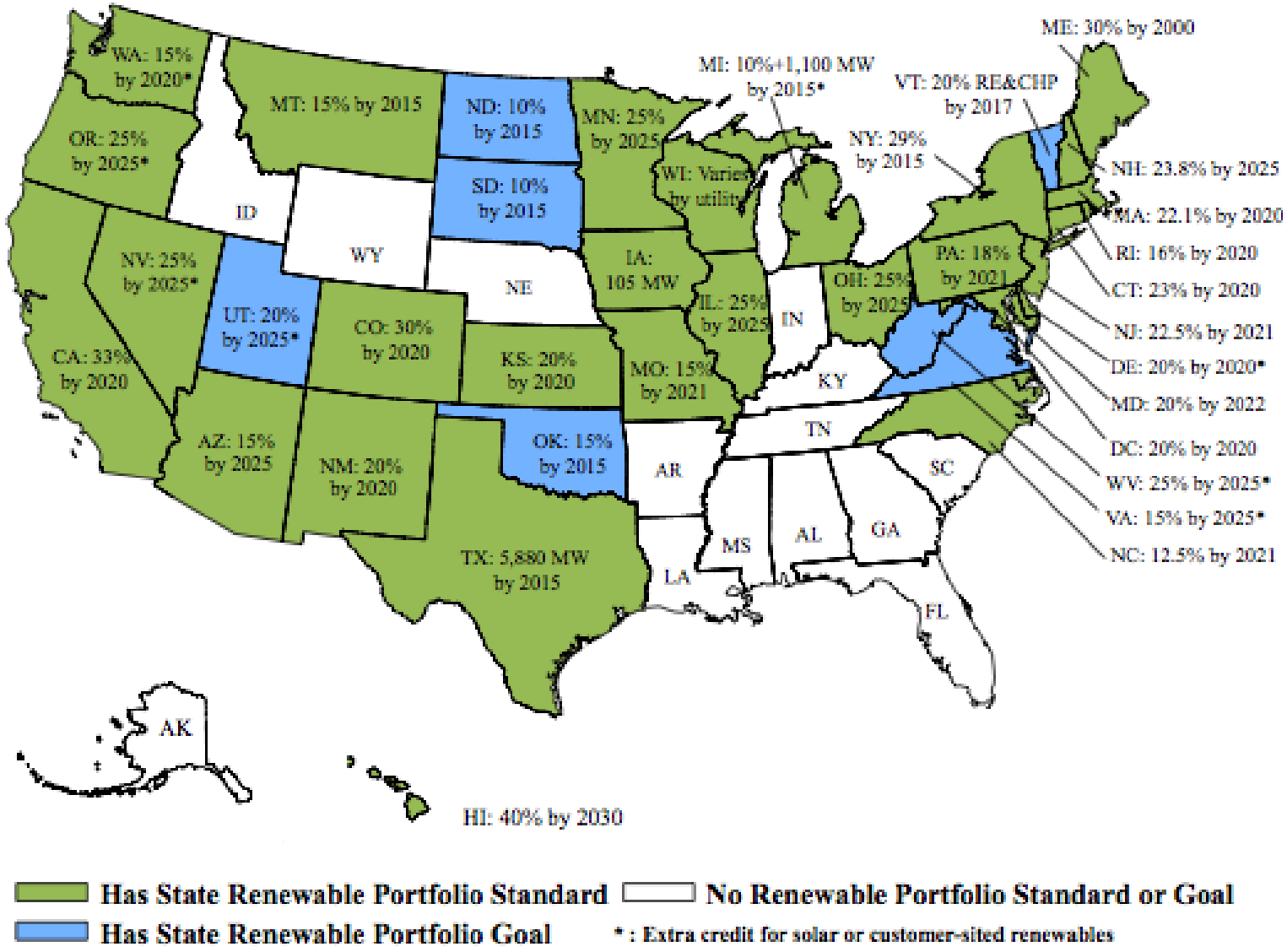
What about Renewable Electric Power in the South: Every State is Unique



Utility-Scale Renewables, in 2008 (% of Electricity Generation)

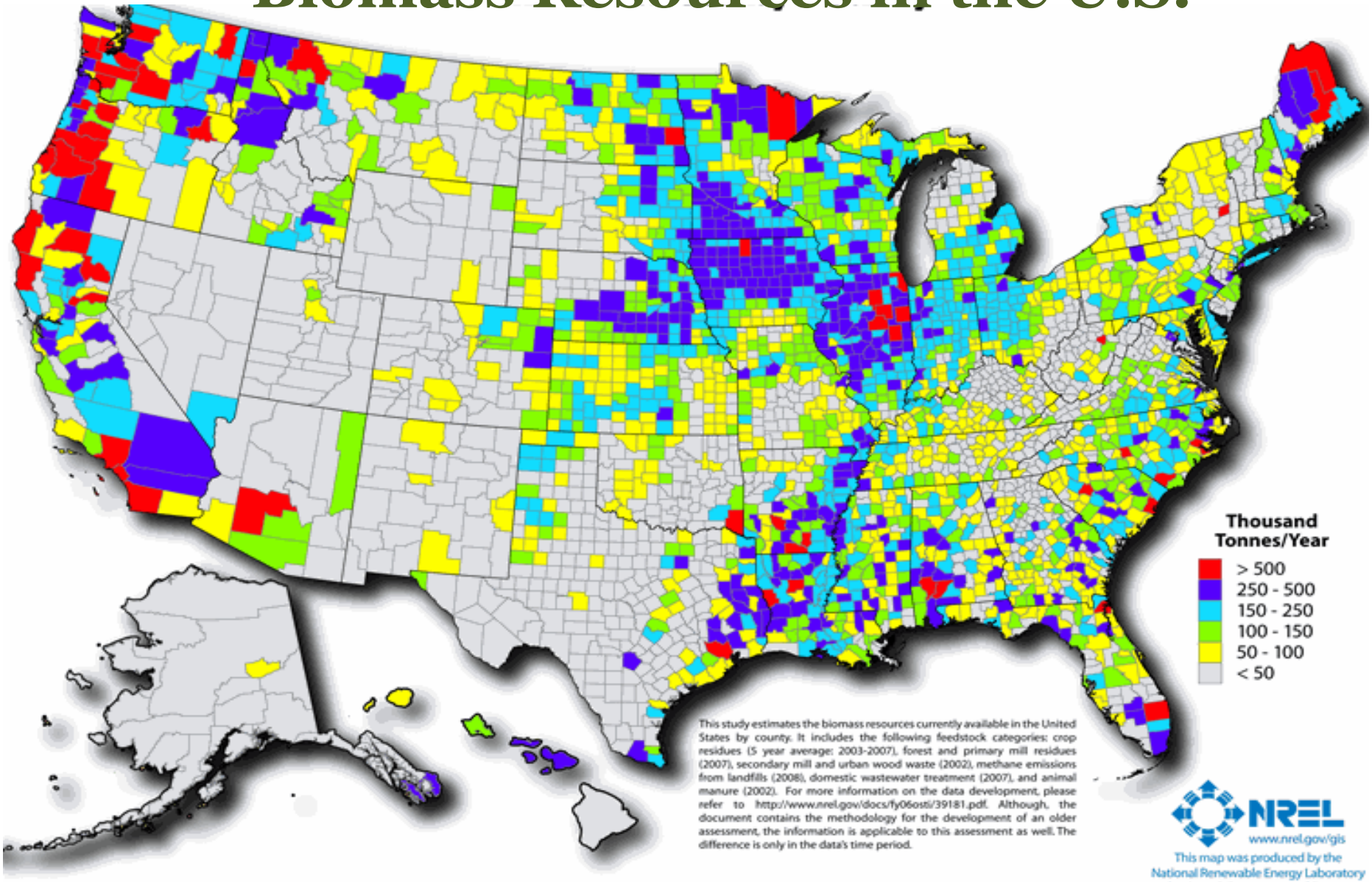


29 States have Renewable Electricity Standards

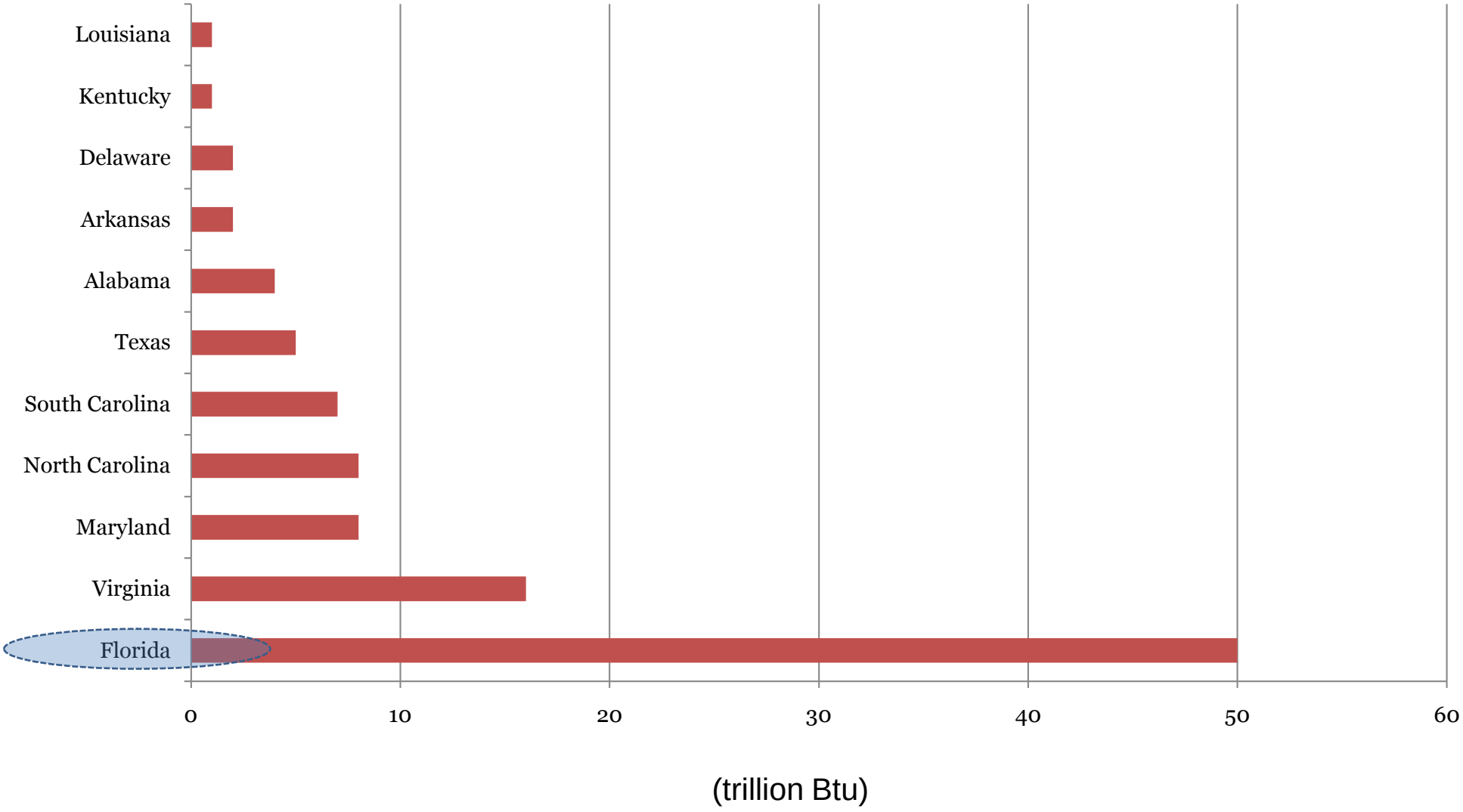


Source: Database of State Incentives for Renewable Energy (2010) http://www.dsireusa.org/. Accessed August 17, 2010

Biomass Resources in the U.S.

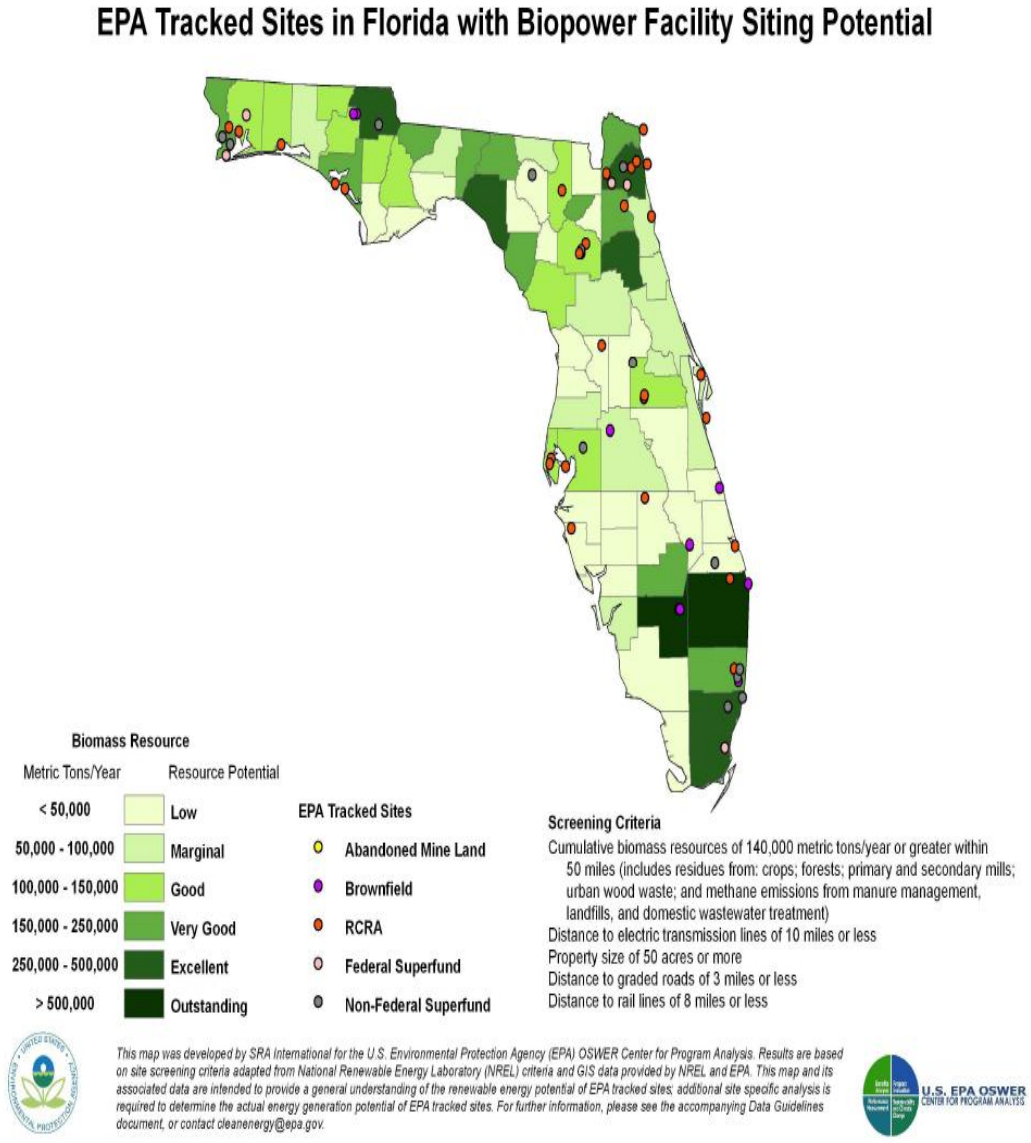


Biomass Consumption in Southern States



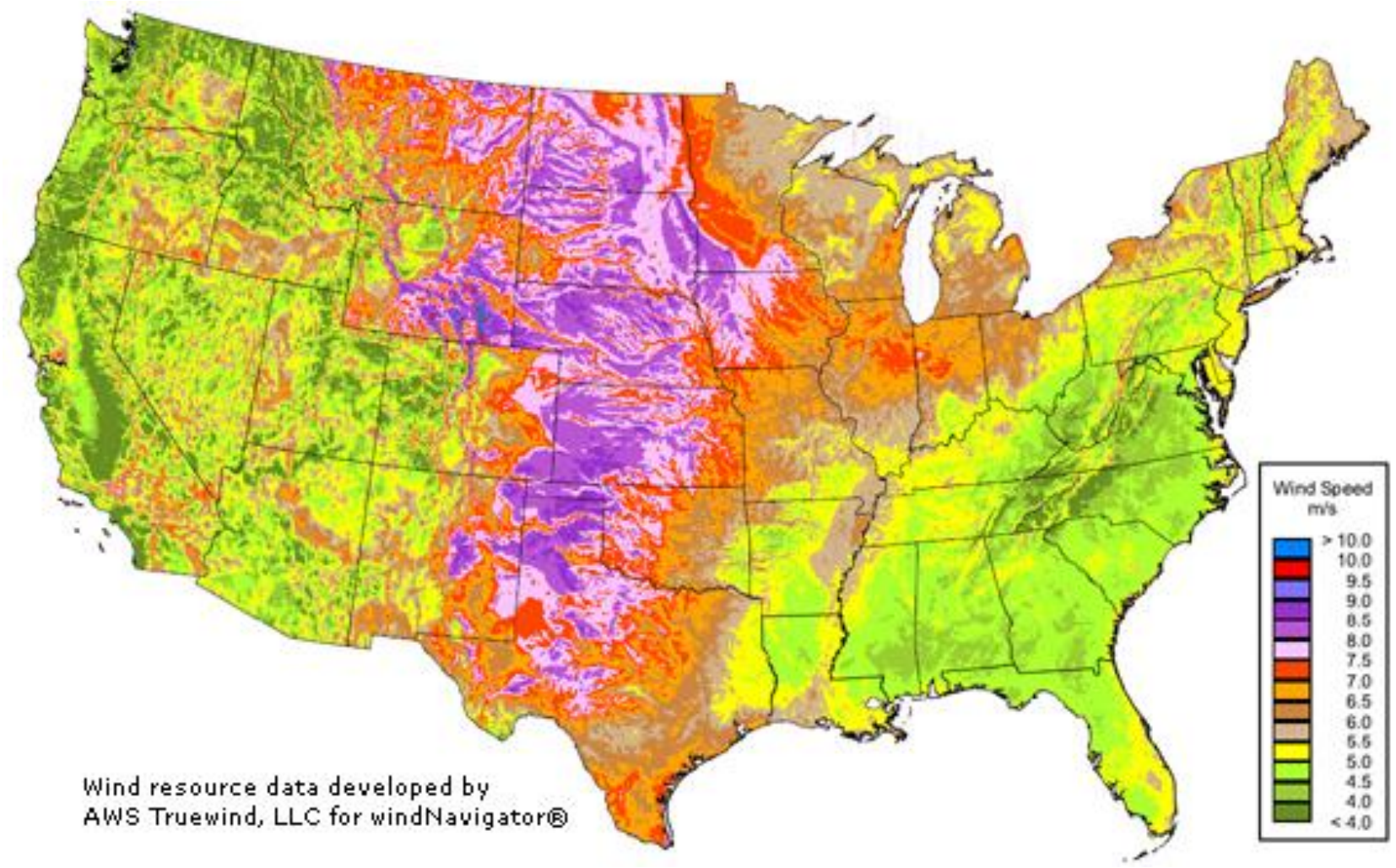
Biopower Potential in Florida

- Solid biomass leads Florida's installed capacity base for renewable energy.
  - Current electricity generation capacity from solid biomass: 991MW



Source: Navigant

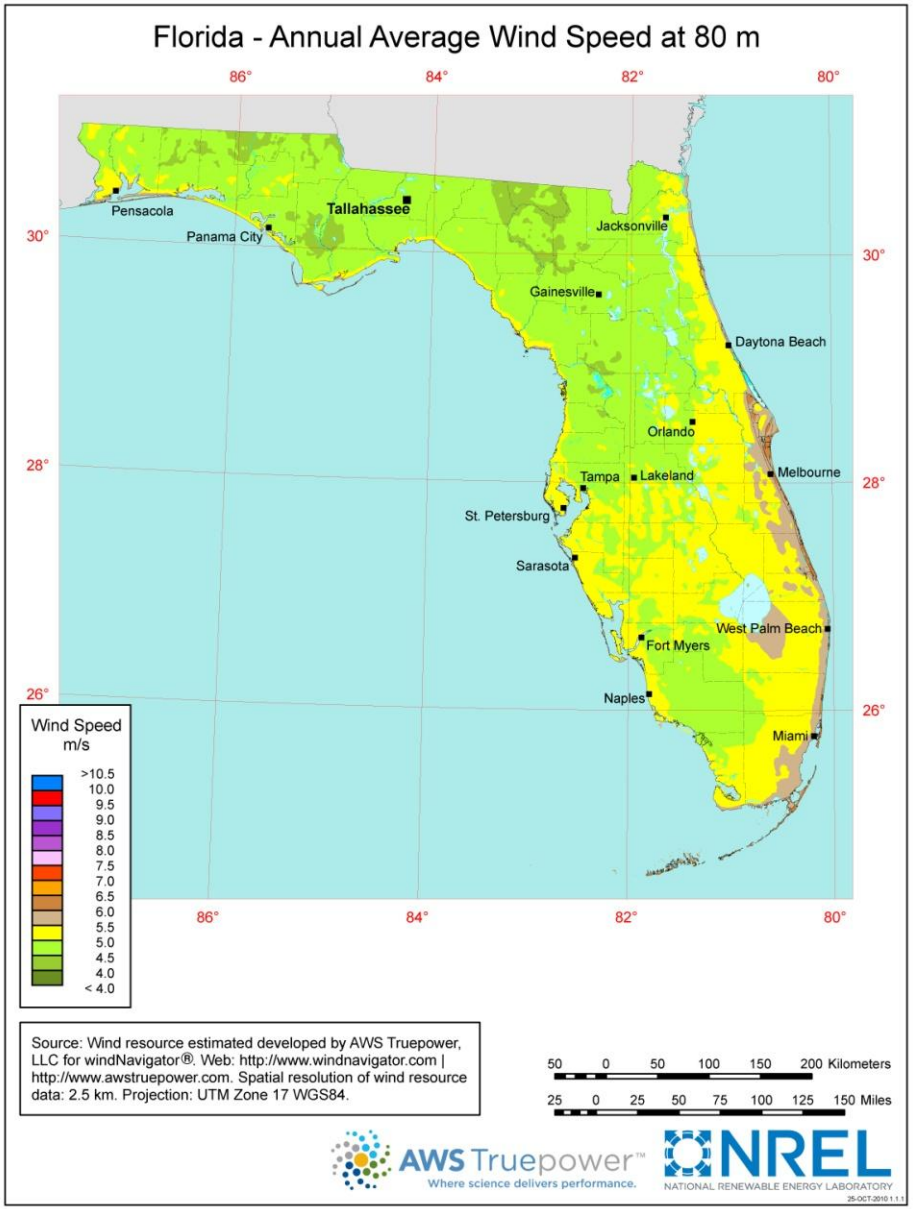
Wind Resources in the U.S. at 80 Meters



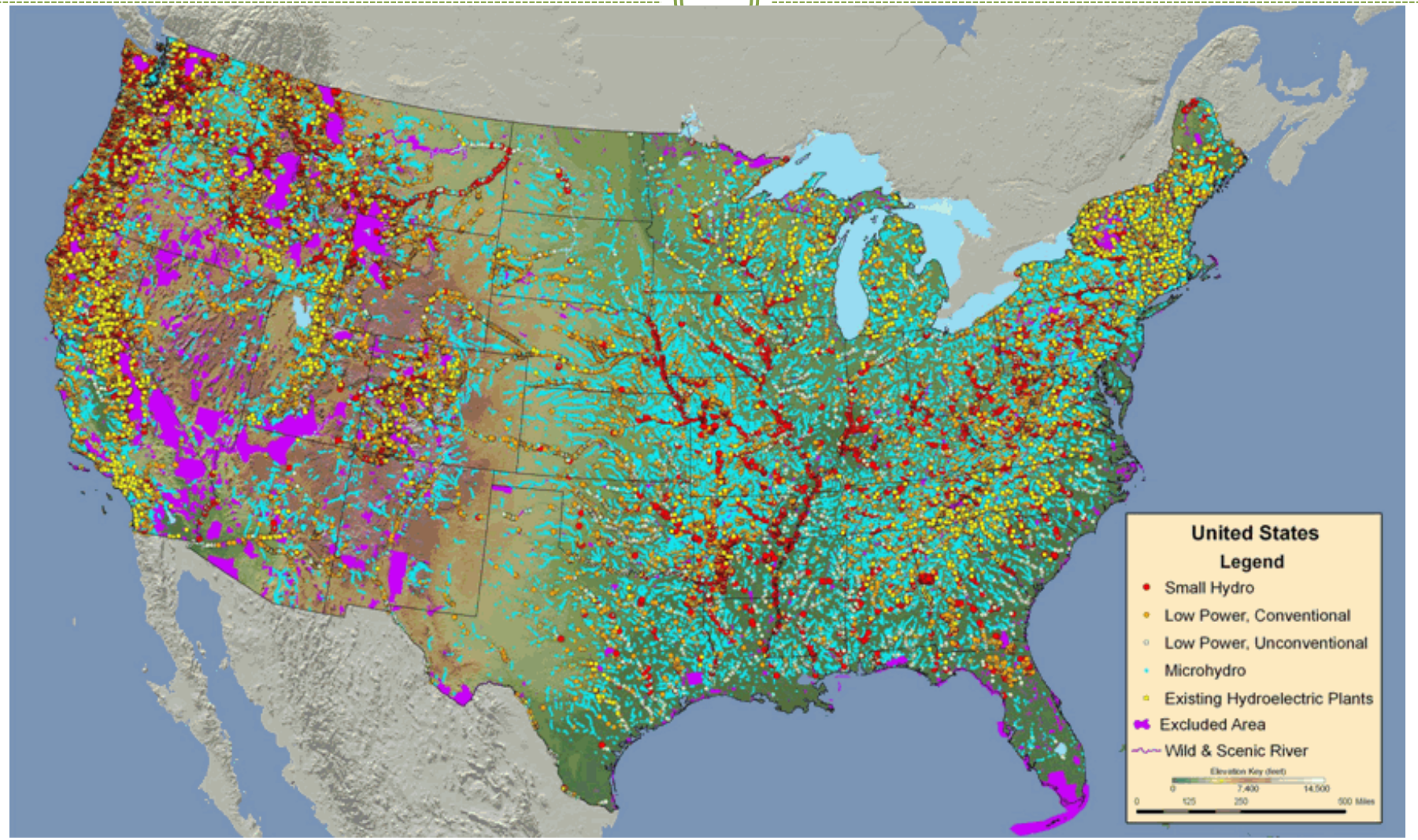
Source:http://www.windpoweringamerica.gov/wind_maps.asp

Wind Power Potential in Florida

- Florida has relatively light winds.
- As turbine technology advances, small-scale wind installations might make sense for homeowners or small businesses in windy areas.
- Future developments might also make offshore wind farms more feasible



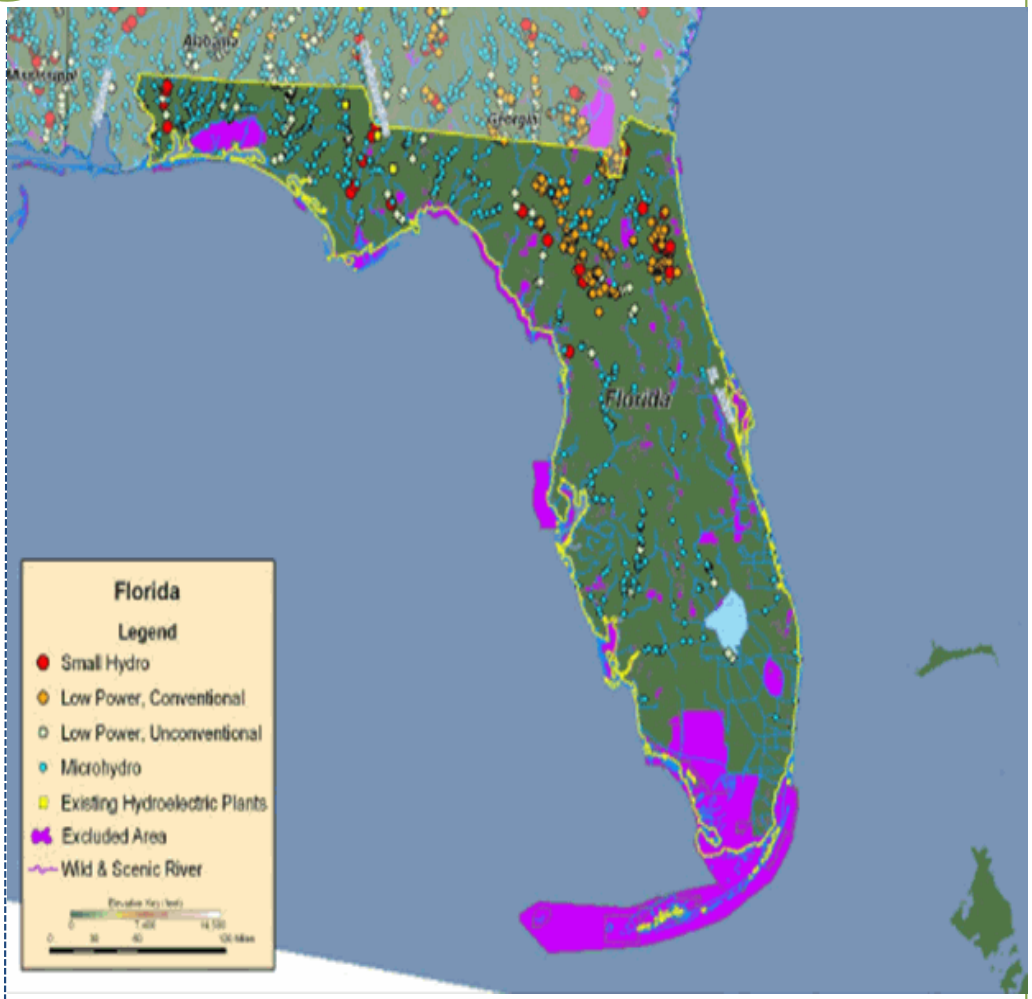
Feasible Hydropower Resources in the U.S.



(Source: Hall, et al, 2006)

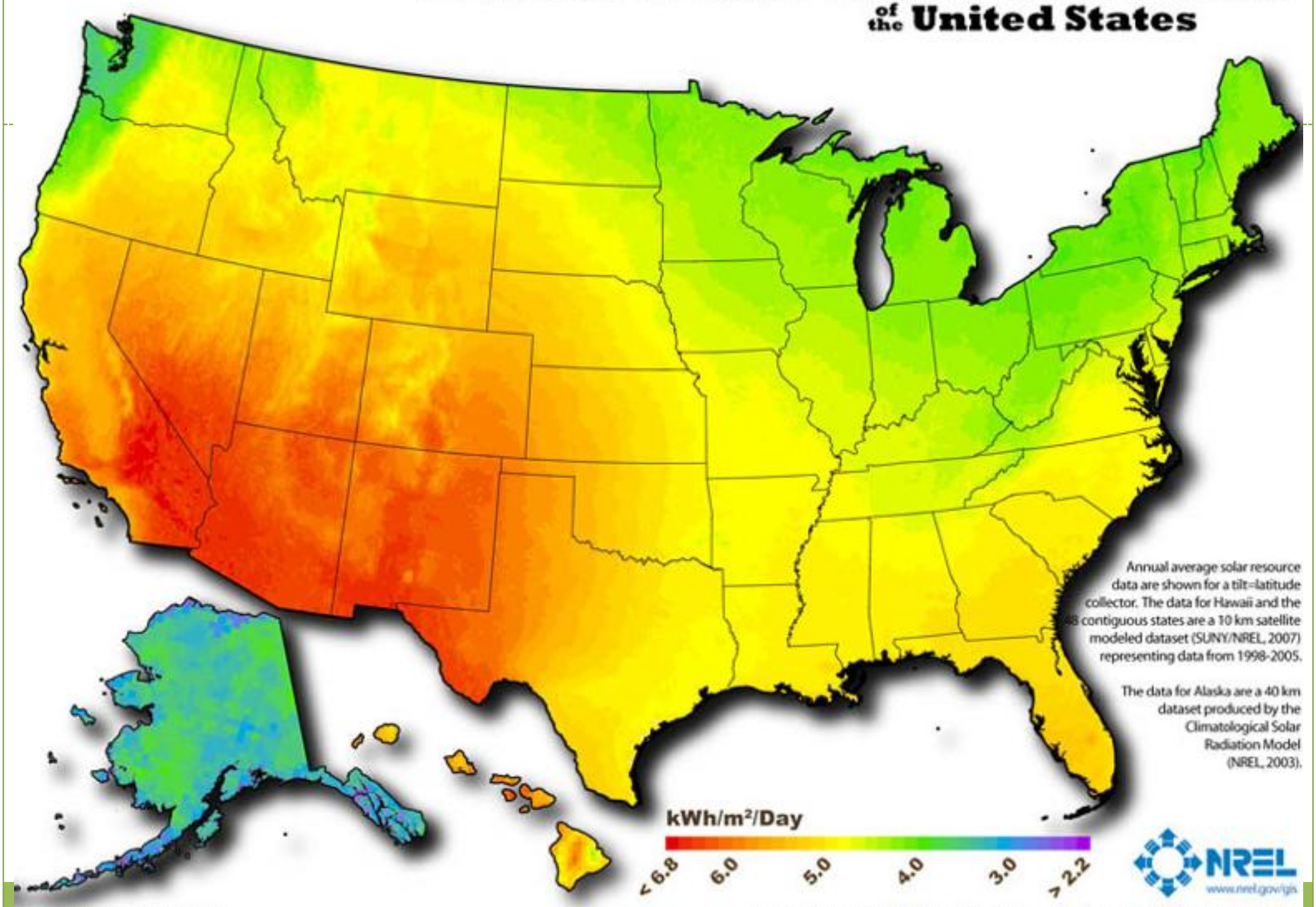
Hydropower Potential in Florida

- About 153 GWh (0.7%) of electricity is generated from hydroelectric sources in 2010 (EIA, 2011).
- FL has only two small hydroelectric plants
  - The C. H. Corn Hydroelectric Power Plant (about 12 MW) on the Ochlocknee River
  - The Jim Woodruff Dam powerhouse (about 14.5 MW) on the Apalachicola River
- 14 feasible small hydro projects (51 MW)
- 422 feasible microhydro projects (27MW)



Low power and small hydropower feasible projects and existing hydroelectric plants in Arkansas (Hall, et al, 2006)

Photovoltaic Solar Resource of the United States



Annual average solar resource data are shown for a tilt=latitude collector. The data for Hawaii and the 48 contiguous states are a 10 km satellite modeled dataset (SUNY/NREL, 2007) representing data from 1998-2005.

The data for Alaska are a 40 km dataset produced by the Climatological Solar Radiation Model (NREL, 2003).

NREL
www.nrel.gov/gis

Author : Billy Roberts - October 20, 2008

This map was produced by the National Renewable Energy Laboratory for the U.S. Department of Energy.

Solar Power Potential in Florida

- The greatest U.S. solar potential lies in the desert Southwest.
- Still, Florida has 85 percent of the maximum photovoltaic potential of any place in the country, at 7.2 kilowatt-hours/m^2/Day.

Source: NRDC (2011) Renewable Energy for America http://www.nrdc.org/energy/renewables/florida.asp

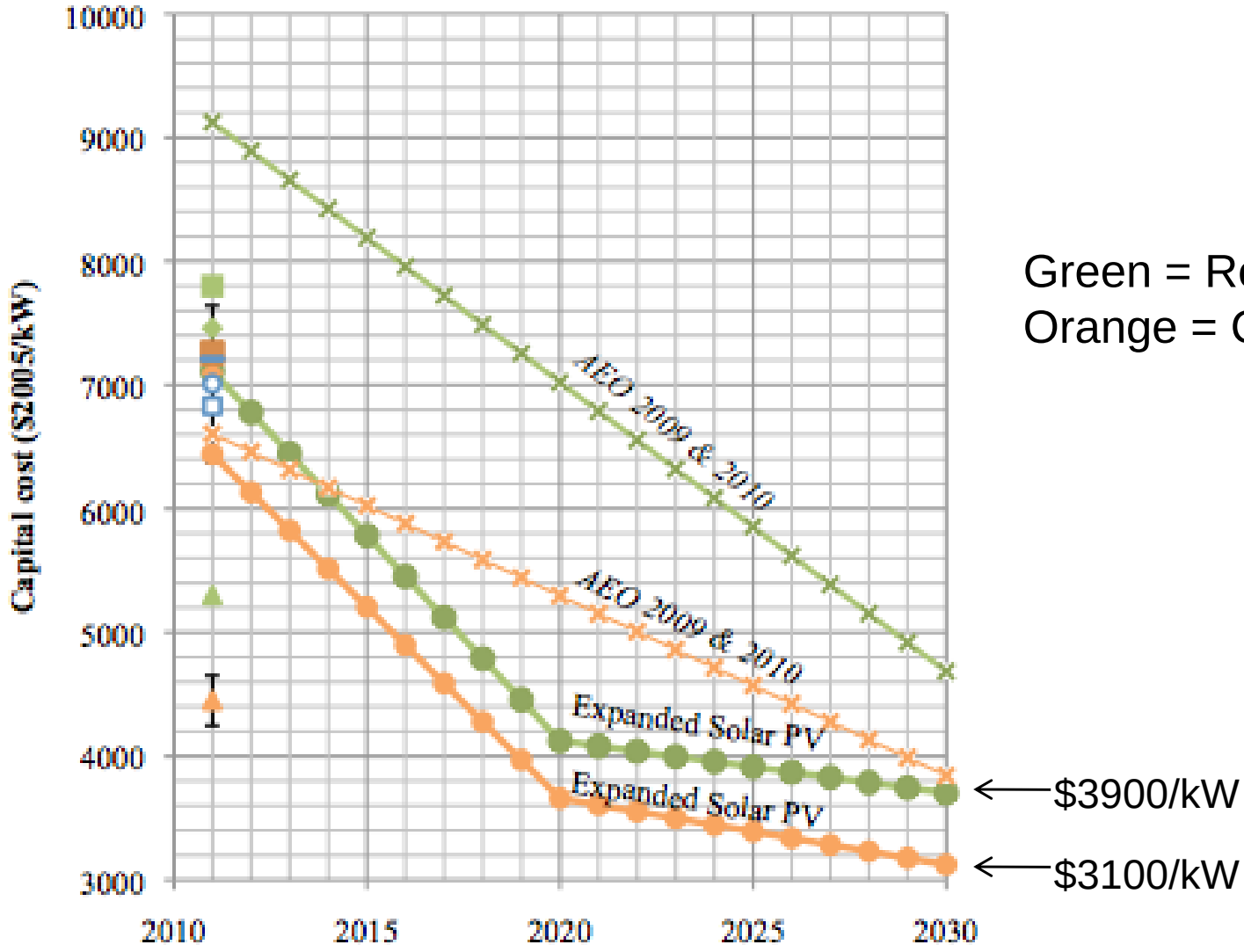
Which Renewable Electricity Resources have the Greatest Potential to Increase in the South?

Changes in Resource, Technology & Policy Assumptions in "Expanded Renewables"

Utility-Scale Renewables ⟵ ⟶ Customer-Owned Renewables

Changes	Wind	Biopower	Municipal Waste	Hydro	Solar PV		Solar Water Heating	Heat Pump Water Heating	Combined Heat and Power
					Utility	Com & Res			
Resource Updates									
Tax Credit Extended									
Technology Improved									
Revised Costs									

An Illustration: Solar PV Costs in the "Expanded Renewables" Diverge from NEMS



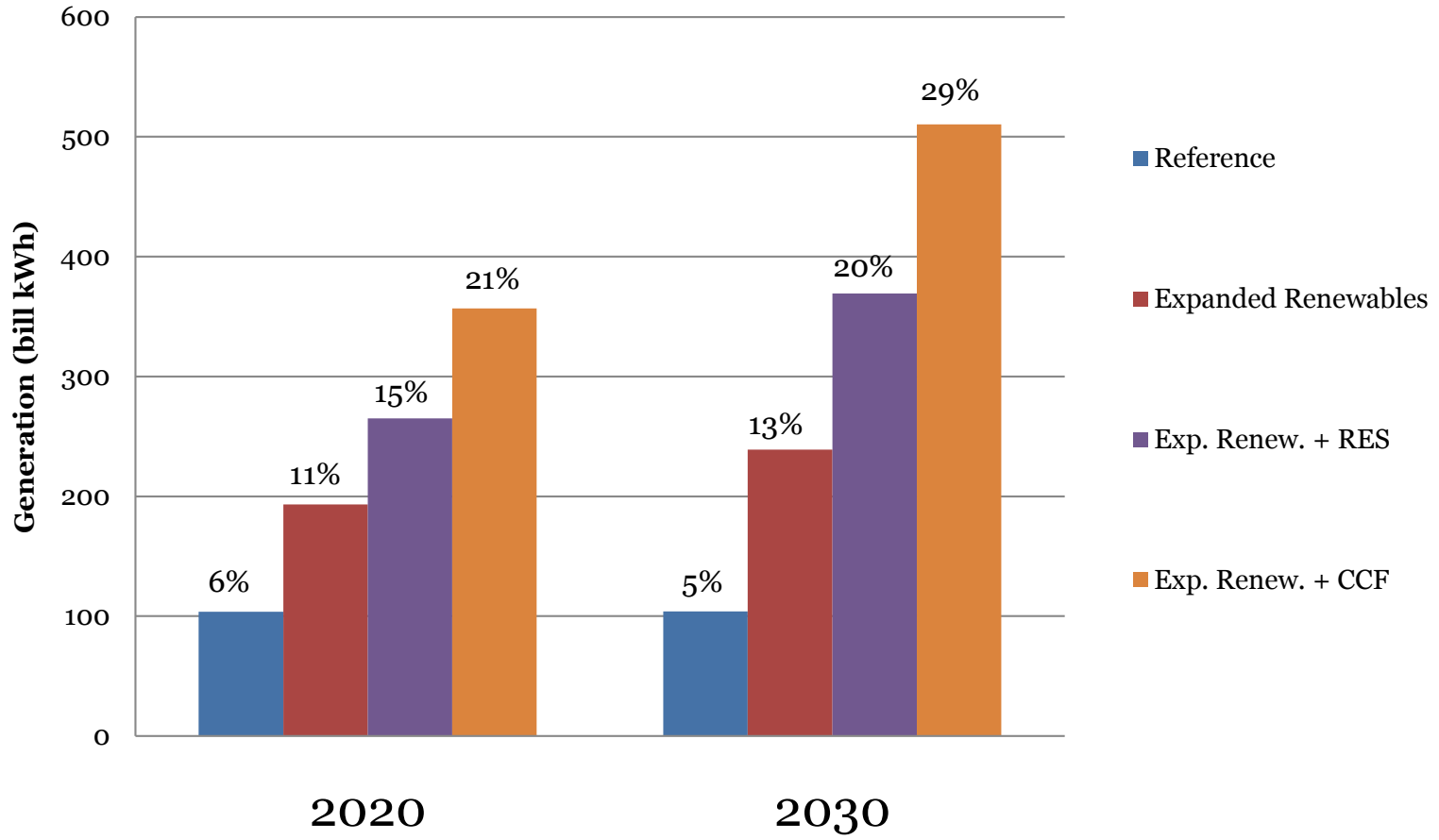
Green = Residential PV
Orange = Commercial PV

←$3900/kW

←$3100/kW

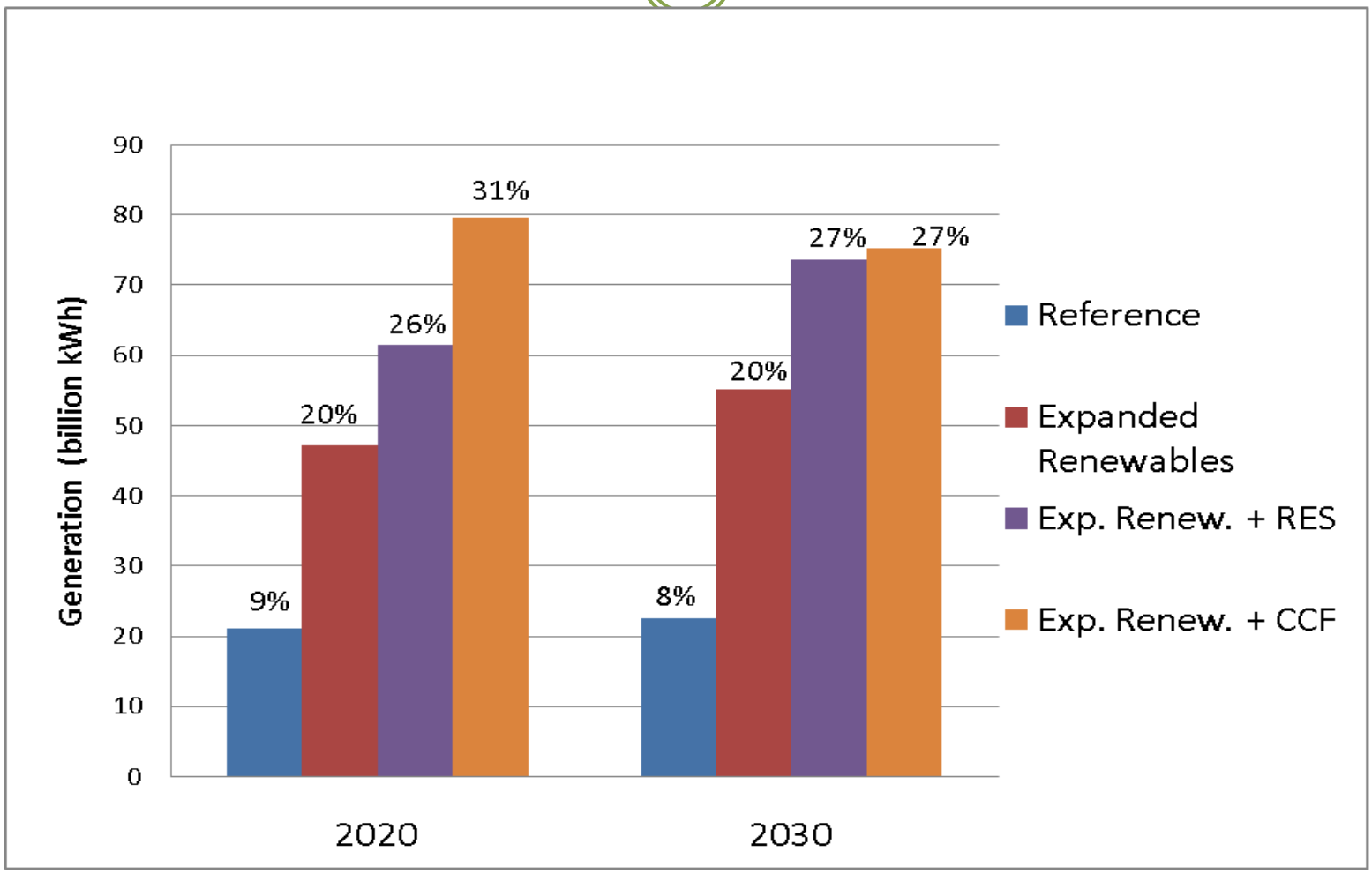
Results

Utility-Scale Renewables Can Grow in the South



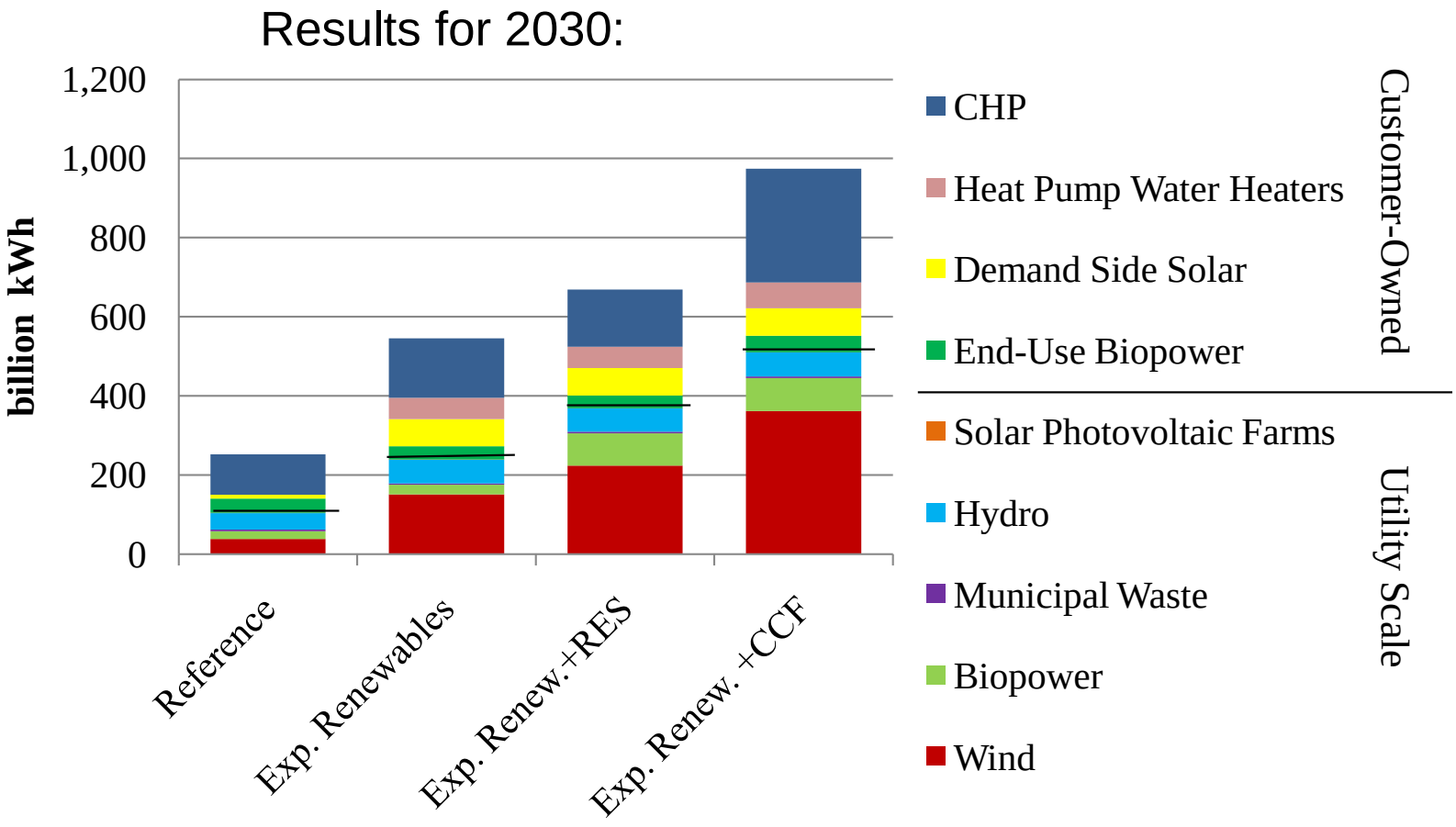
RES = Renewable Electricity Standard (25% by 2025)
CCF = Carbon-Constrained Future

… and in Florida



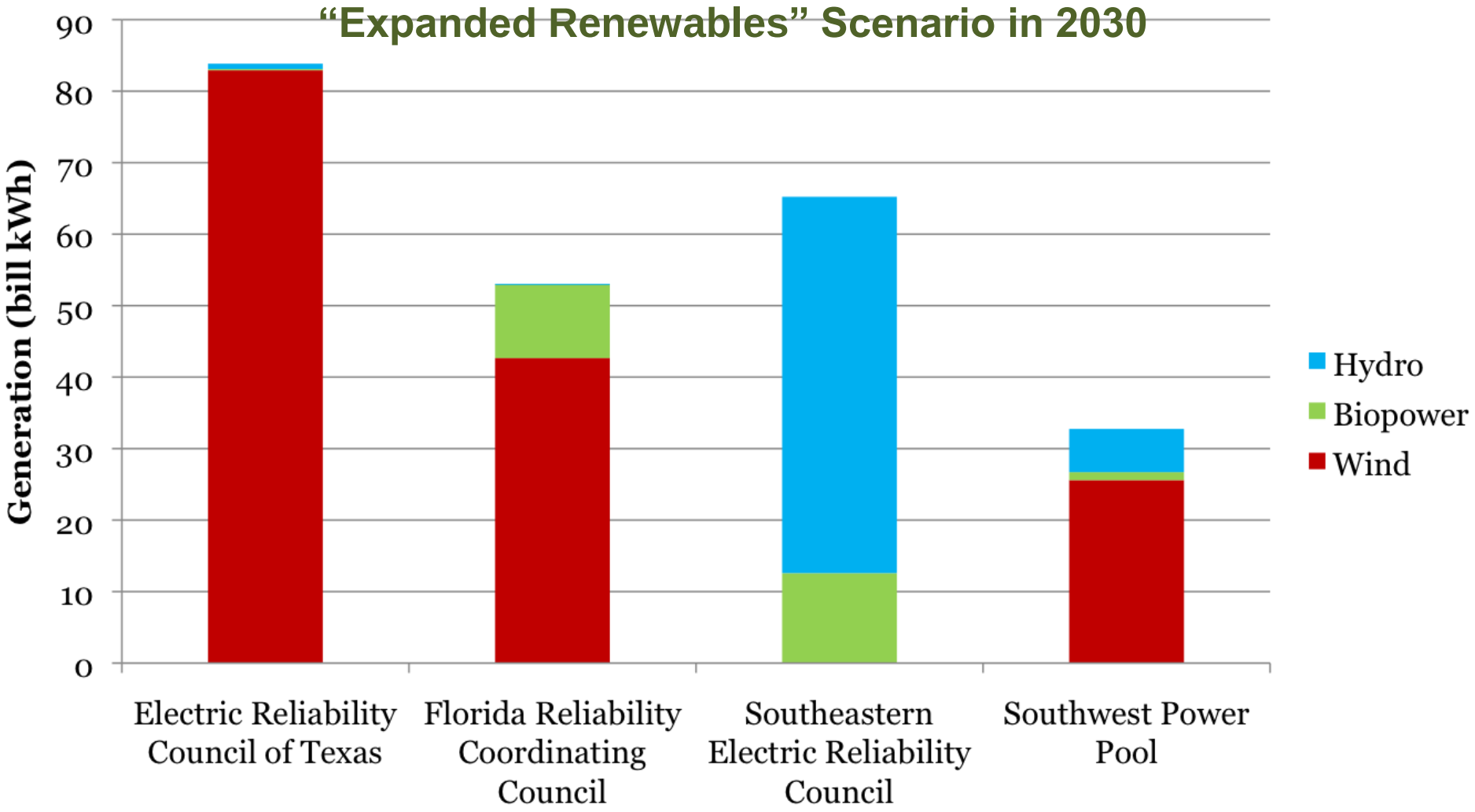
RES = Renewable Electricity Standard (25% by 2025)
CCF = Carbon-Constrained Future

Customer-Owned Resources Could Double the South's Renewable Generation and Use



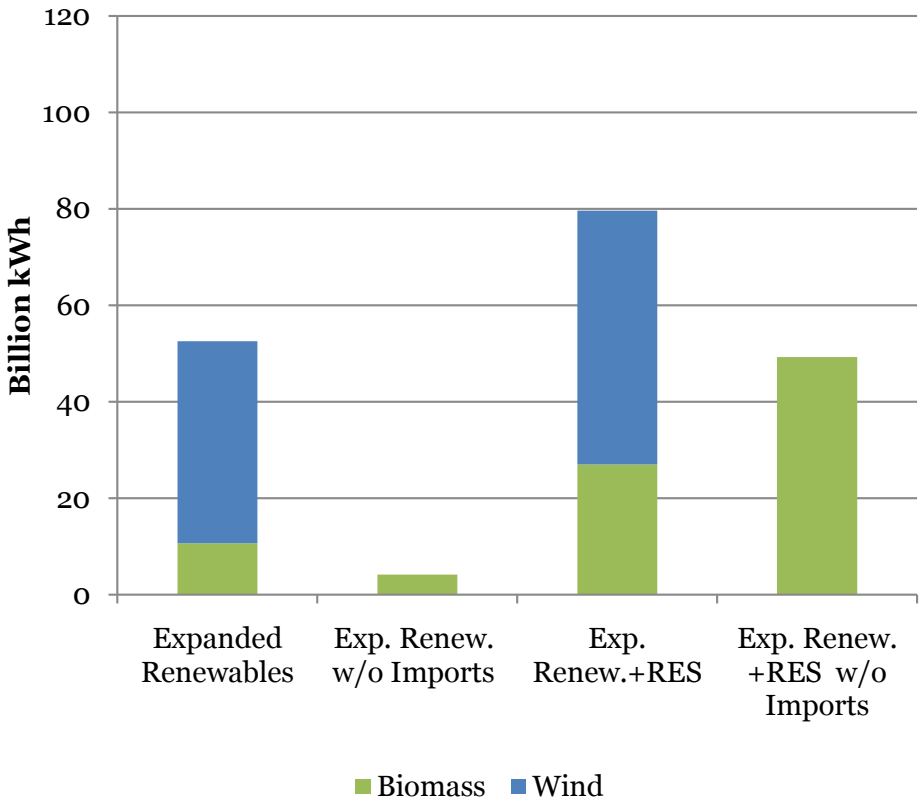
RES = Renewable Electricity Standard (25% by 2025)
CCF = Carbon-Constrained Future (price on CO_2)

Wind, Hydro, and Biopower Dominate Future Utility-Scale Renewables in the South

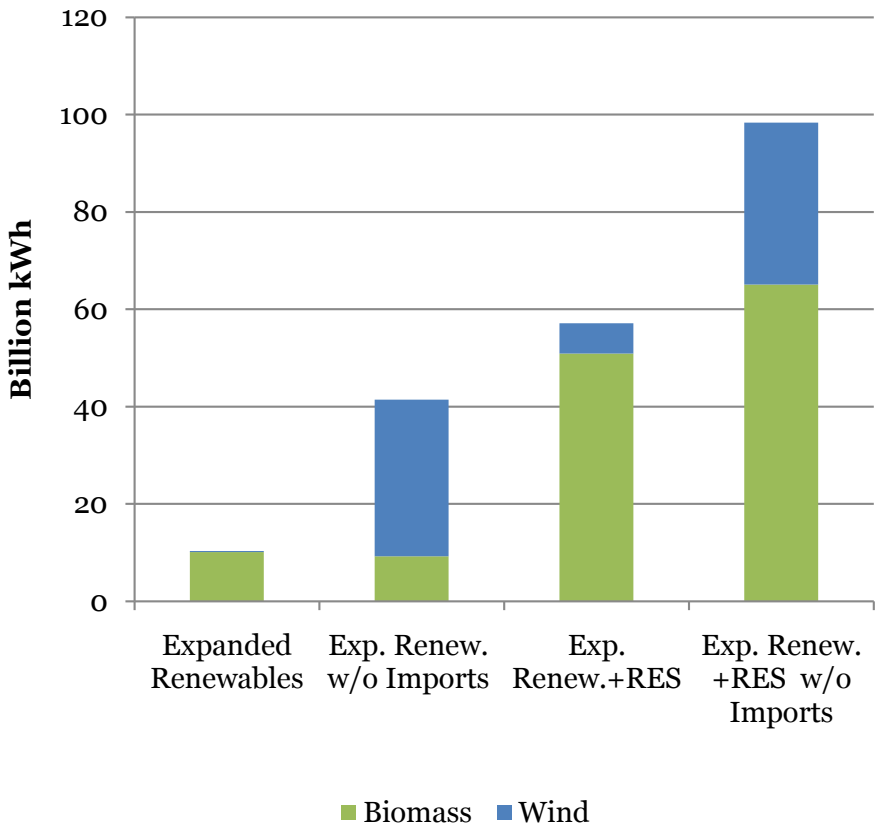


Biomass and SERC Wind Substitute for Imported Wind in Florida (in the year 2030)

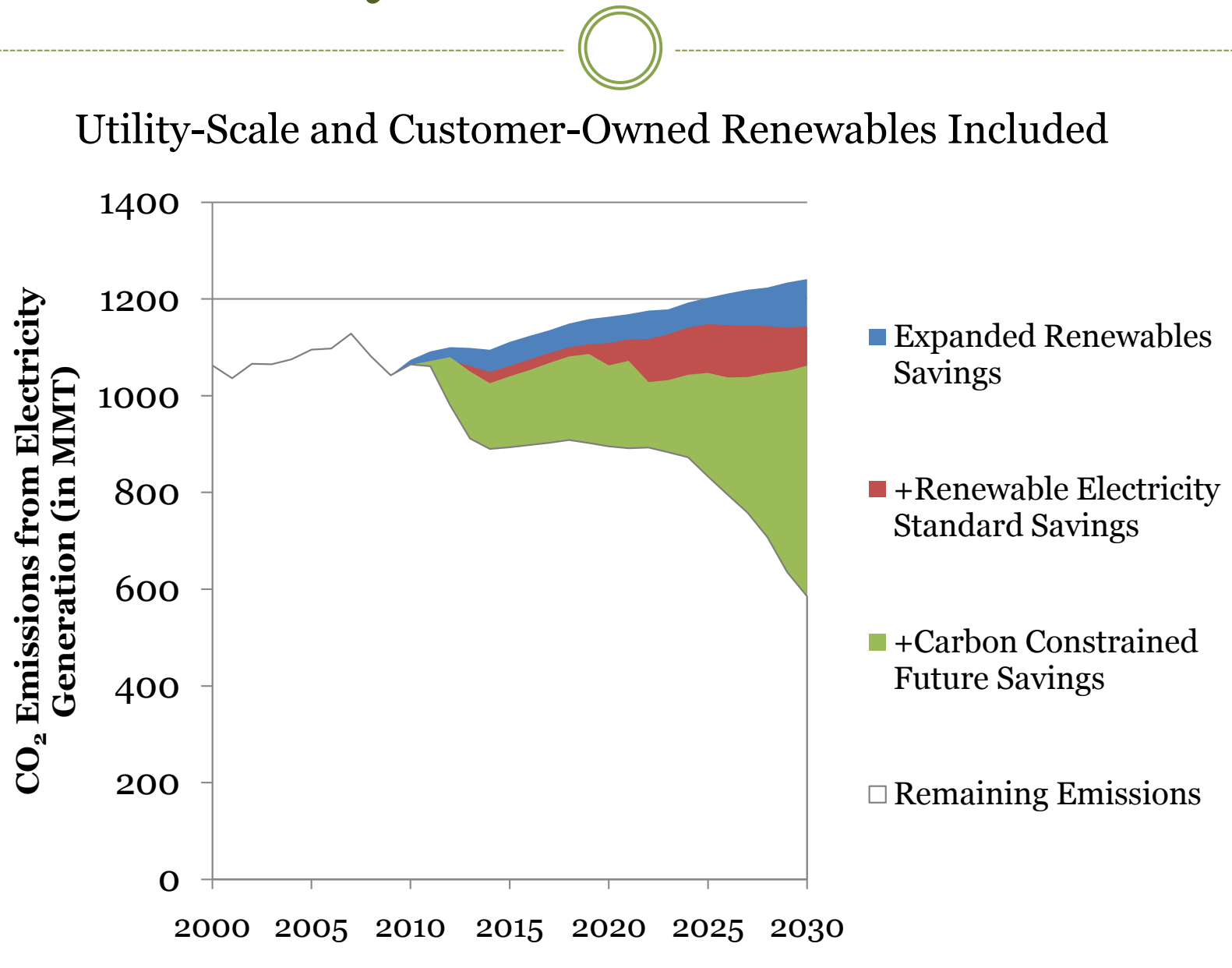
Florida Reliability Coordinating Council



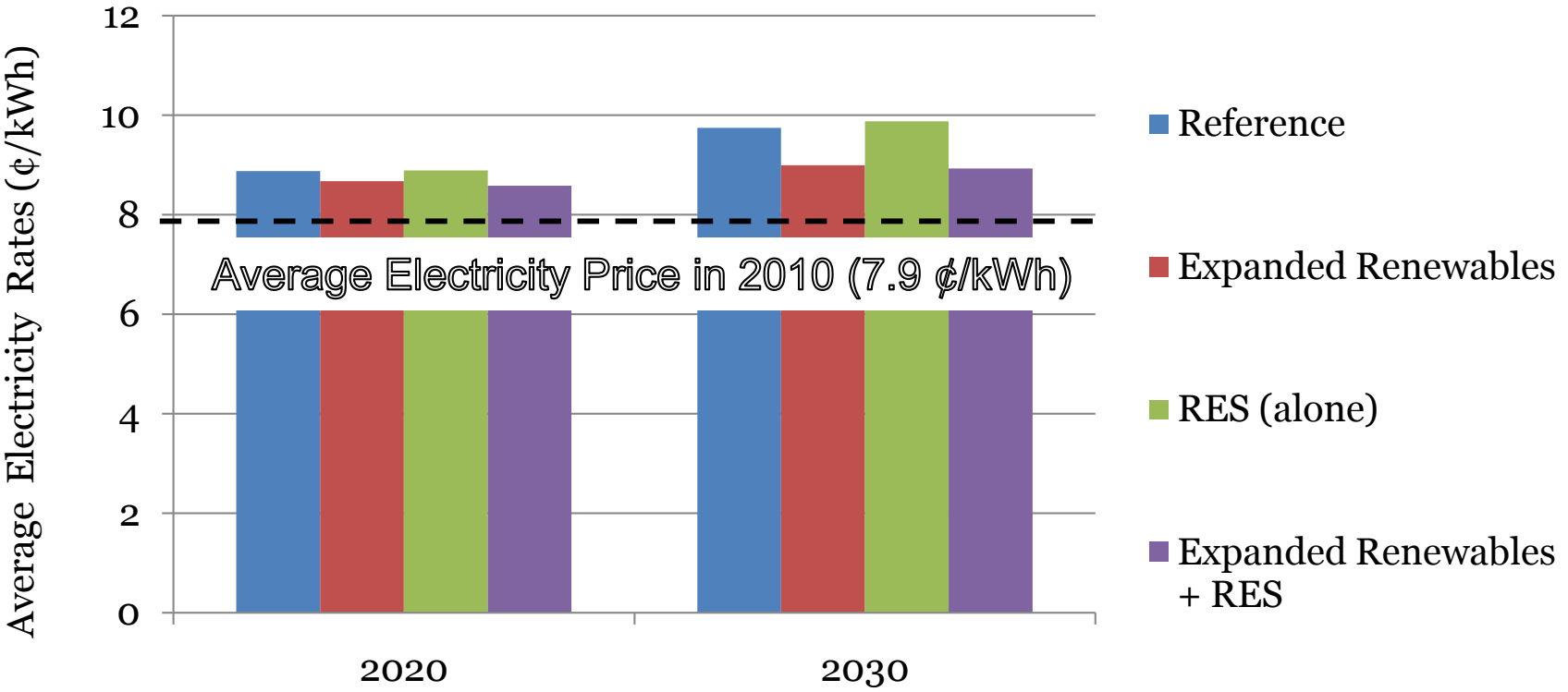
Southeastern Electric Reliability Council



CO_2 Emissions in the South Could Shrink Substantially with Renewable Resources

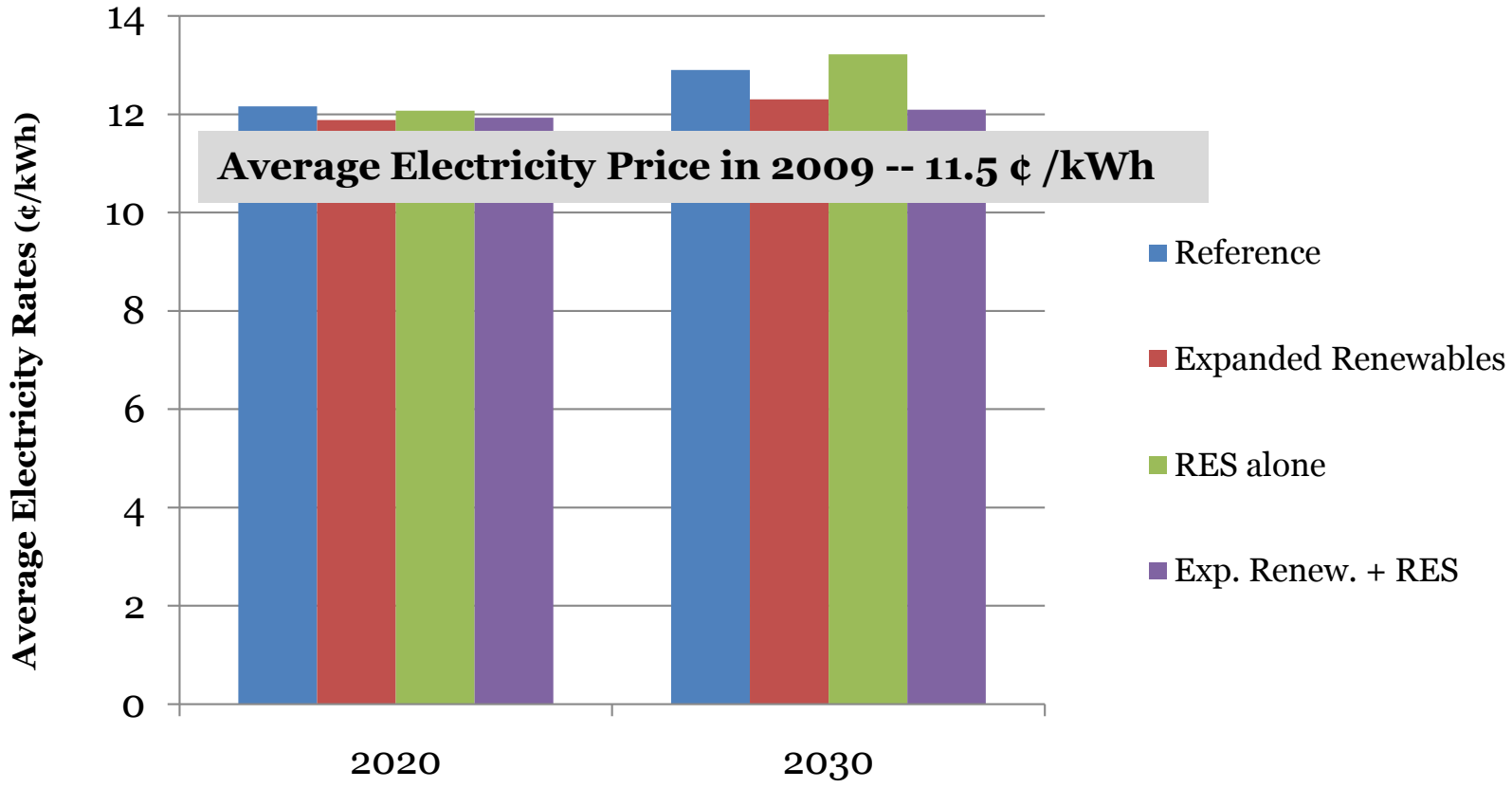


Rate Increases can be Moderated by Supportive Renewables Policies



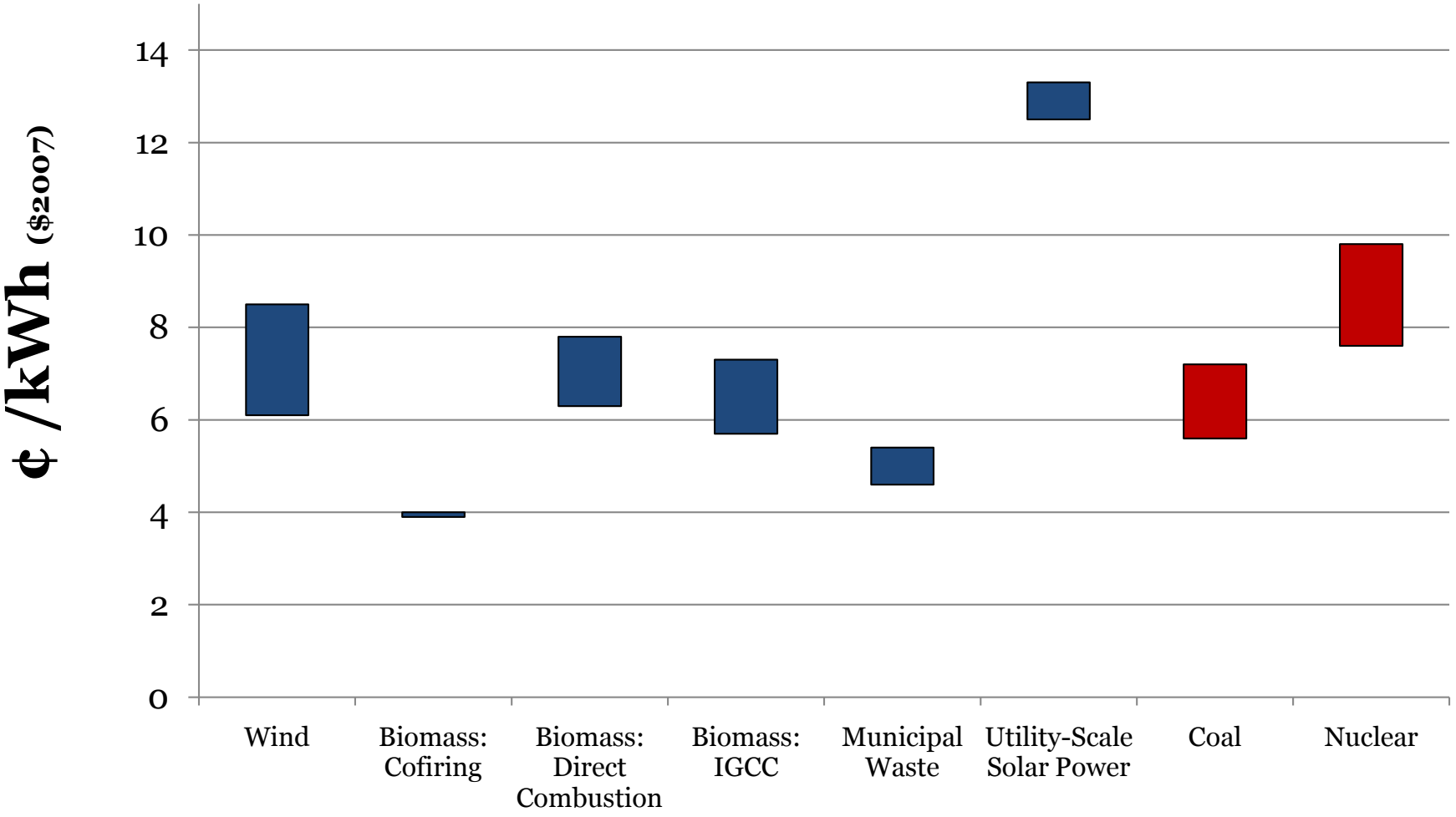
RES = Renewable Electricity Standard (25% by 2025)

Adding Renewables Affect Florida Rates Modestly



RES = Renewable Electricity Standard (25% by 2025)

Renewable Costs Can Compete



Utility-Scale and Customer Owned Renewables

SOME ILLUSTRATIVE PROJECTS IN THE SOUTH

Biomass Projects

- Gainesville Renewable Energy Center
  - 100 MW biopower facility near Alachua, FL
  - Will use approx. 100 million tons wood waste/year
- Florida Biomass Energy, LLC
  - 60 MW biopower facility near Port Manatee
  - Currently talking with equity investment firms

Solar Projects

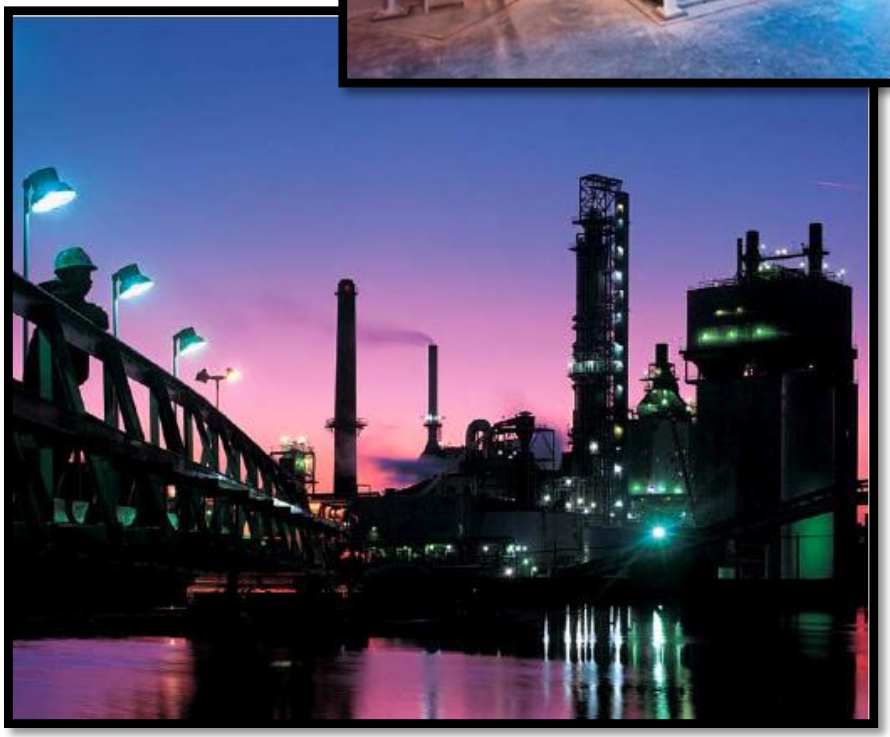
- Concentrating Solar Power
  - The Martin (Florida) Next Generation Solar Energy Center
  - 75 MW concentrating solar plant with a 3.8 GW natural gas plant.

- Sybac Solar LLC Solar Array
  - 2 MW facility to start in mid-February 2011
  - Largest privately owned solar array in FL
  - Located in Gainesville, FL

- Butler Plaza Solar PV Array
  - 1.6 MW facility that began in late 2010
  - Located in Gainesville, FL

Combined Heat and Power Projects

- University of Florida Hospital CHP
  - ShandsCancer Hospital, LEED Gold
  - 4.3 MW Combustion Turbine
  - Saves 26.4K tons CO_2 per year
- City of Ocala
  - 3.2 MW
  - Biomass Reciprocating System
- Smurfit Stone Container
  - 36.5 MW Boiler/Steam Turbine
  - Located in Panama City



Conclusions: Renewables in the South

- The South has an abundance of renewable energy resources to help transition the nation away from scarce and polluting fossil fuels.
- Renewables can be cost competitive.
- Consumers can contribute just as much as utilities to this transition.
- Transforming the market for renewables requires **Improved Technologies, Stronger Policies, and a Motivated Public.**

For More Information

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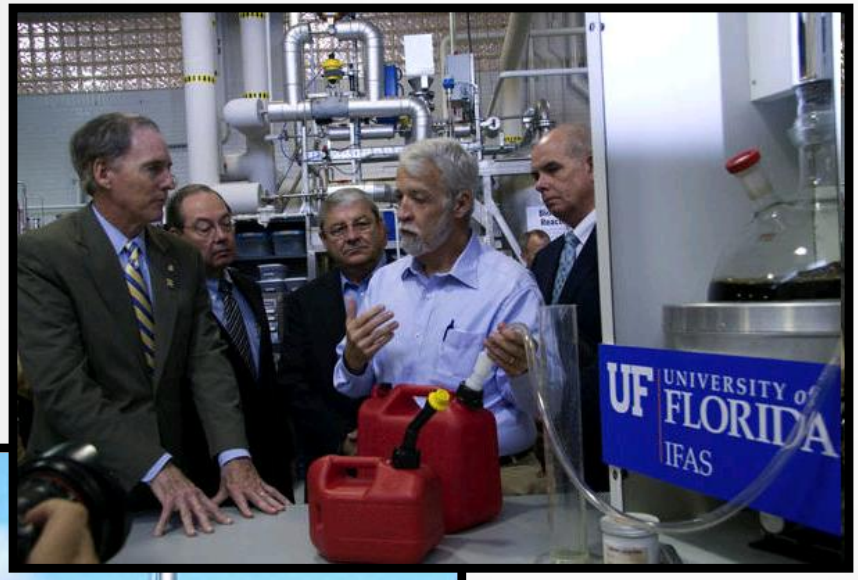
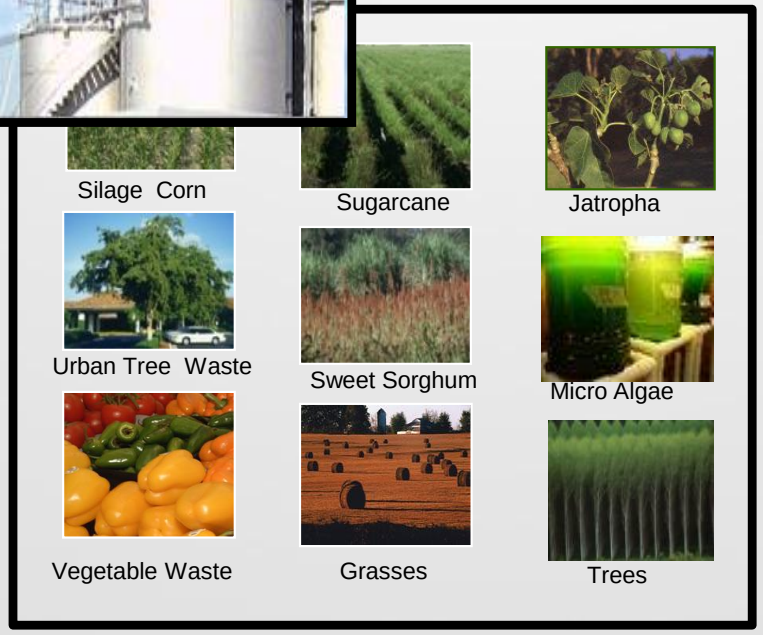
"RENEWABLE ENERGY IN THE SOUTH" can be down-loaded from:

WWW.SEEALLIANCE.ORG





Bioenergy Research at UF/IFAS

Senate Committee on Communications, Energy, and Public Utilities

Mary Duryea
mlduryea@ufl.edu

February 21, 2011

UF UNIVERSITY of FLORIDA
IFAS

·Jay
·Milton
Marianna
· Quincy
· Live Oak
Hastings
• Gainesville
• Citra
· Apopka
·Brooksville
·Lake Alfred
·Balm
Vero Beach •
Ft. Pierce•
Belle Glade •
· Immokalee
Ft. Lauderdale •
Homestead

Bioenergy Feedstocks in Florida

15 million acres of forest land
10 million acres of farm land

- **#1 in sugarcane and citrus**
- **#1 in forest residues**
- **#1 in urban wood waste**

UF/IFAS Bioenergy Systems Research

Biomass

Feedstocks

- Species identification & comparisons
- Advanced growing systems
- Genetics & breeding
- Harvesting & transportation


Silage Corn


Sugarcane


Jatropha


Trees


Sweet Sorghum


Micro Algae


Vegetable Waste


Grasses


Urban Tree Waste

Bioconversion

Cellulose

- Pretreatment
- Improved hydrolysis
- Fermentation
- Gasification

Oil feedstocks

- Extraction

Waste

- Anaerobic digestion

Products

Liquid Fuels
- Ethanol
- Butanol
- Biodiesel

BioGas
- Methane

Electricity
- Cofiring

Heat
- Wood pellets

Co-Products
- Bio-plastics
- Chemicals

Systems analyses of environmental sustainability

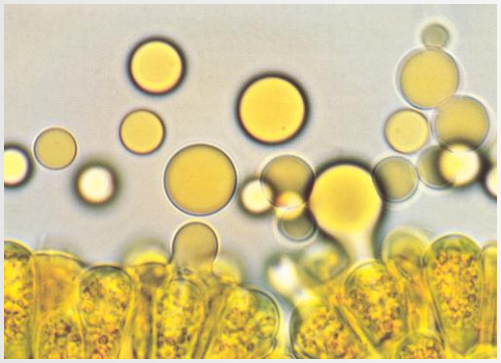
Economic & policy analyses

Developing Energy Crops: **Jatropha**

Product: Biodiesel

- Tree from Central America
- Oil from seeds – Biodiesel & jet fuel
- Greatest potential for South/Central FL
- Wagner Vendrame's team:
  - 17 varieties from 12 countries
  - Yield (genetic improvement)
  - Best sites
  - Cold tolerance
  - Physiological methods to increase seed production
  - Fertilizer/Irrigation needs / environment
  - Economics to produce
    - Co-products (animal feed, cosmetics)

Developing Energy Crops: **Algae**

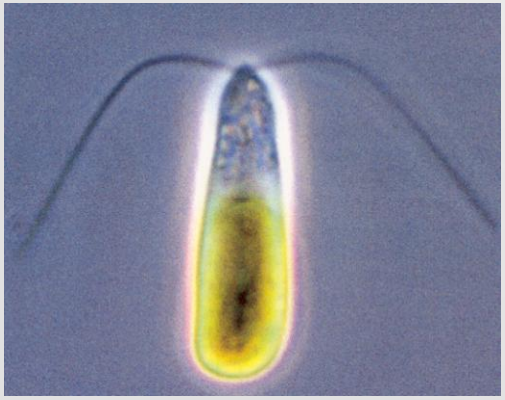


Botryococcus

Cyanobacteria

Spirulina

Diatoms



Dunaliella

Product: Biodiesel, Ethanol

- Ed Phlip's team explores and selects species for their:
  - Growth
  - Oil content
  - Environmental tolerance
- Genetic research:
  - Selecting varieties
  - Genetics transformation – introduce new characteristics
  - Explores oil production pathways

Many industry partners

Cellulosic vs Sugar Ethanol

Sugar to Ethanol:

- Easy to get sugars: Sugarcane, Corn, Potatoes
- Sugars are fermented to make ethanol
- Corn ethanol in U.S. = About 14 billion gal.

Cellulose to Ethanol:

- Sugars can also be obtained from cellulose: Woody materials such as trees and grasses, also corn stover and sugarcane bagasse
- Cellulose is a long chain of sugar molecules
- Must be broken down to ferment to alcohol
- Breaking down cellulose to sugars is called hydrolysis
- Enzymes or chemicals can be used for hydrolysis ($$)
- U.S. goal for cellulosic ethanol by 2022 = 21 billion gal. (50% could be produced in the SE)

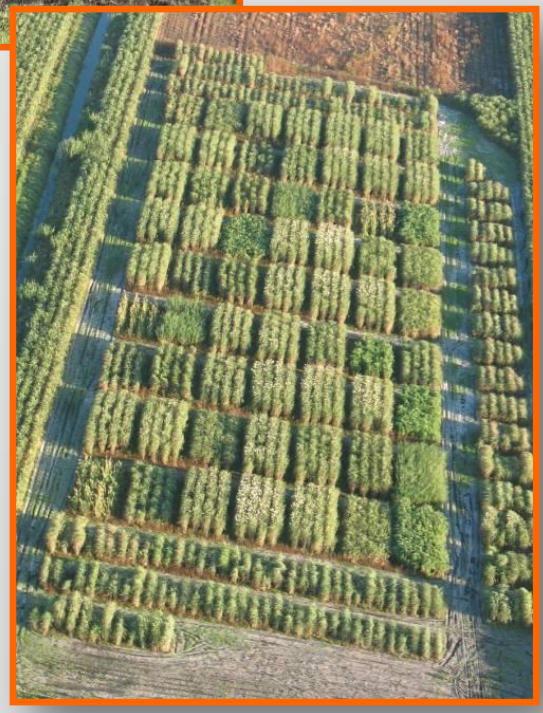
Developing Energy Crops: **Energycane**

Product: Cellulosic Ethanol

- A sugarcane hybrid
- Grass with deep root system, grows up to 15 ft.
- High fiber concentration, low sugar
- 53 varieties
- Exploring:
  - Biomass yield on different soils
  - Fiber composition
  - Disease resistance

★ Goal = High-yielding, disease-resistant varieties

Good news = New energy canes have excellent yields without susceptibility to disease



Developing Energy Crops: **Sweet Sorghum**

Product: Cellulosic Ethanol

- A tall grass with sugar-rich stems
- Genetics and breeding to produce superior varieties for FL
  - 80 varieties are being tested at multiple sites
  - Sugar content, juice stability, pest resistance
    - ID genes responsible for sugar accumulation
  - Evaluate fertilizer and water requirements (drought tolerance)

Goal: Genetic selection for more ethanol/acre (200-600 gal/acre)

Developing Energy Crops: **Other Grasses**

- Other high biomass grasses being investigated:
  - Giant reed
  - Erianthus
  - Elephantgrass
  - Miscanthus
- Breeding & Production systems
  - Costs of sustainable production

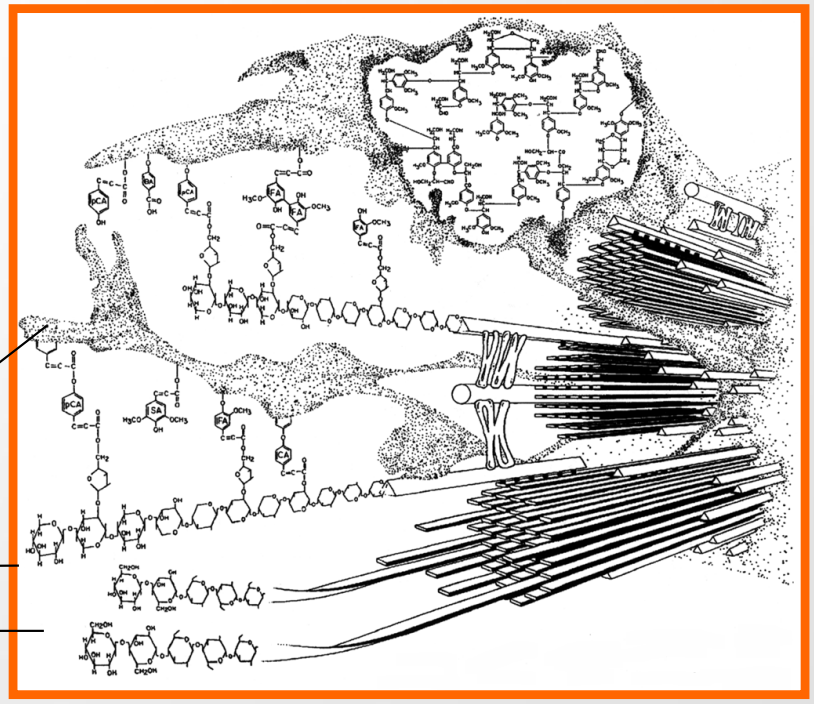
Energy-Crop Field Day

Developing Energy Crops: **Trees**

Improving Processing Efficiency

- Conversion to **Biofuel**
  - High ‘easy-to-utilize’ sugars
  - Low lignin
- Conversion to **Bioelectricity**
  - High energy content
  - High wood density, low water
  - High lignin

cell wall chemistry



Developing Energy Crops: **Trees**

Discovered a new gene that will help ethanol production –

- Naturally occurring gene in the poplar tree
- Reduction in lignin content by almost half
- Faster growth
- Higher cellulose content
- This combination is highly favorable for increased ethanol production

Drs. Matias Kirst, Gary Peter, John Davis

Biomass to Ethanol Process

ETHANOL

Acid Hydrolysis

Fiber Residue (cellulose+lignin)

Cellulase

"Detox"

Syrup

Co-products

K.oxytoca (cellulase)

Fungal Cellulase

SSF

Hemicellulose Syrup

E.coli (cellulase)

Distillation

Team headed by Dr. Lonnie Ingram

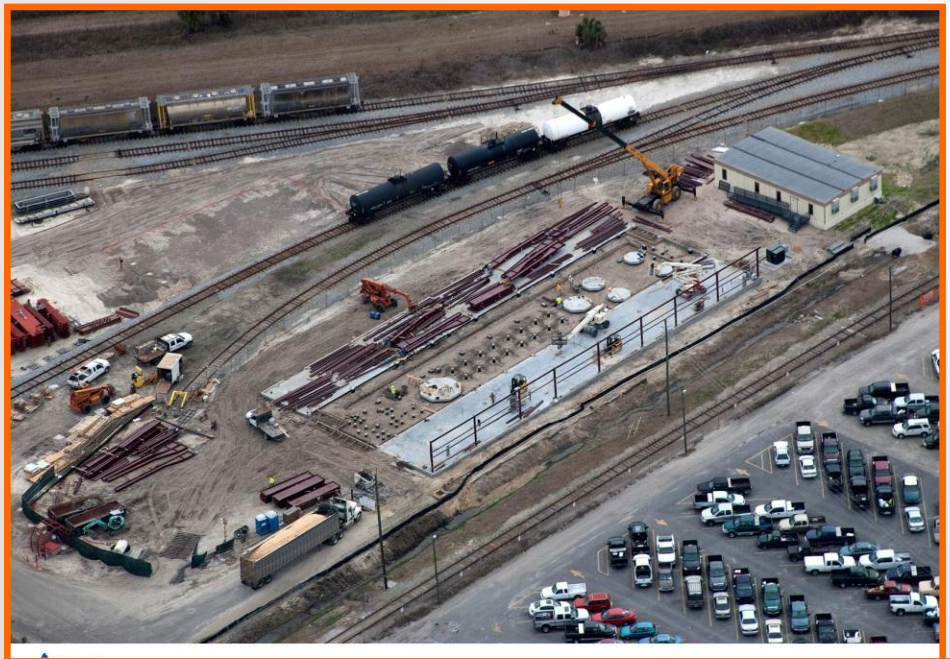
- Over 20 patents for cellulosic ethanol
- 2 spin-off companies
  - Verenium and BP (Cellulosic Ethanol)
  - Myriant Technologies (Biobased Chemicals)

Residue to Boiler

Cellulosic Ethanol

Biofuel Pilot Plant

- ✓ UF campus, Gainesville
- ✓ Batch process



Research and Demonstration Cellulosic Ethanol Plant

- ✓ In partnership with Buckeye, Perry
- ✓ Other industrial partners
- ✓ Continuous flow process
- ✓ To be completed Fall, 2011

Goals =

- **To accelerate commercial development of cellulosic ethanol process**
- **To provide jobs and alternative income sources for Florida agriculture**






With:

UF/IFAS's expertise in bioenergy research & extension

+

UF/IFAS/Industry/Government/University partnerships

+

Florida's capacity to grow biomass

Our goals are to:

- **Advance the science of bioenergy.**
- **Accelerate the commercialization of renewable biofuels and chemicals.**
- **Increase jobs and improve economy.**
- **Contribute substantially to global sustainable energy supply.**

UF UNIVERSITY of FLORIDA
IFAS

Overview of the Governor's Energy Office

for the

Senate Committee on Communications, Energy and Public Utilities

February 21, 2011

Sean T. Miles, Executive Director

Governor's Energy Office

Governor's Energy Office (GEO) Origination

- HB 7135 (2008) – Energy and Economic Development Legislation created the Florida Energy and Climate Commission
- The Commission is housed within the Executive Office of the Governor, and staffed by the Energy Office
- Energy Office staff was a blending of the Legislature's Florida Energy Commission, Governor's Action Team on Energy and Climate Change, and DEP's Florida Energy Office

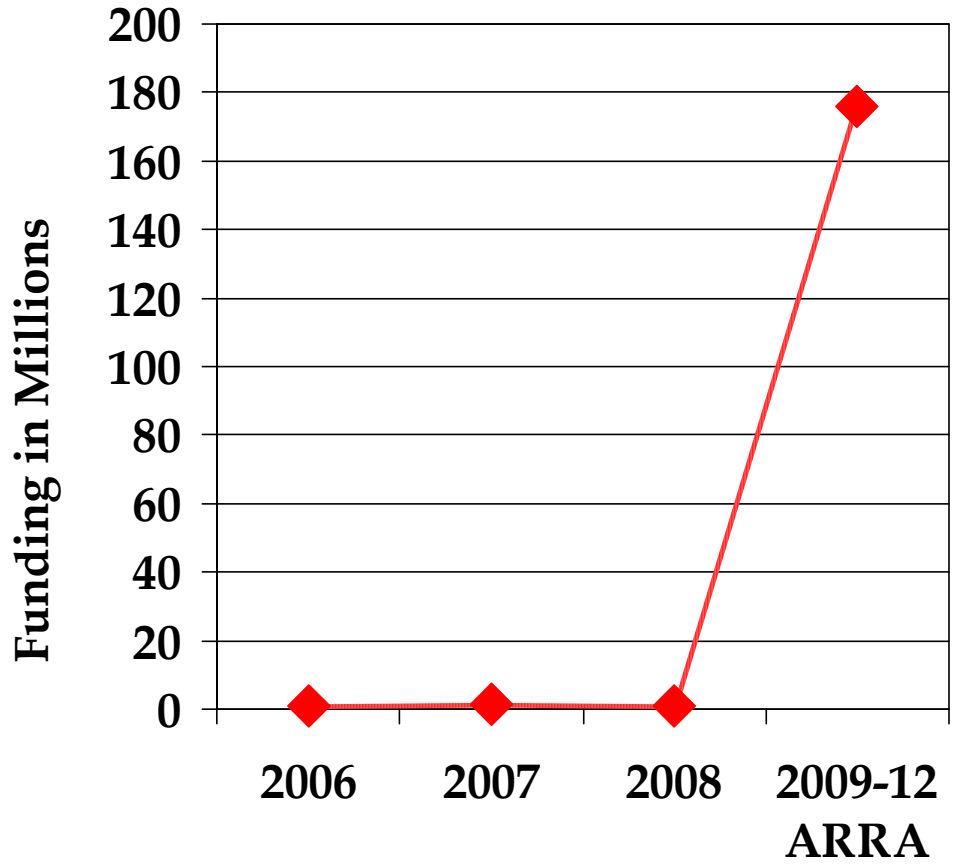
GEO Core Responsibilities

- Administer the allocations of $176 million in ARRA funds for energy programs and initiatives
- Administer the state-funded REET grant program
- Administer the Florida Solar Rebate Program

GEO Responsibilities (cont'd)

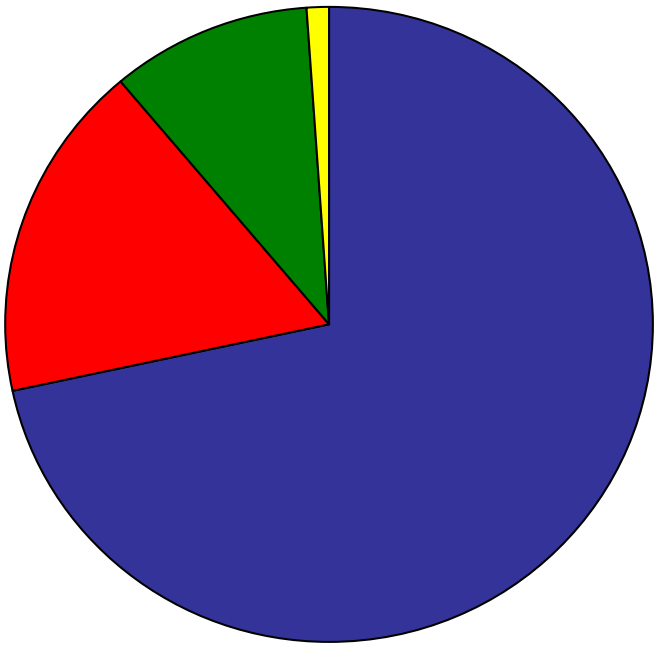
- Emergency Management
  - Emergency Support Function (ESF) 12 Fuels
- SEP Base funding from US DOE
  - Historically between $1-$1.5 million annually
  - FY 10-11 is $815,000 used partially for program administration
  - Also to develop state strategies and goals to address the State's energy priorities
- Represent Florida in regional and national associations
  - Southern States Energy Board (SSEB) *also in Florida Statutes*
  - National Assoc of State Energy Officials (NASEO)
  - Clean Energy States Alliance (CESA)

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

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 18 state funded R&D grants, mix of public and private
- Total awarded - $33.5 million
- Mustang Vacuum & Avera Motors in 2010

JOBS JOBS JOBS

There is an inherent connection between programs and financing tools from the Energy Office that touch economic development initiatives at state and local levels:

- Programs that fund directly to the private sector (Opportunity Fund; Shovel-Ready Grants; Clean Energy Grants; CNG)
- Programs that fund through grantees into the energy supply and process chain (EECBG; Sunshine Buildings; Florida REEC; Clean Energy Grants)
- Financing tools: PACE, QECBs, Opportunity Fund

What's Next for the GEO?

Governor's Budget Recommendations:

- Move Energy Office to Department of Environmental Protection *(moved from DEP to EOG in 2008)*

- Repeal Florida Energy and Climate Commission enabling statutes

Closing and Contact Information

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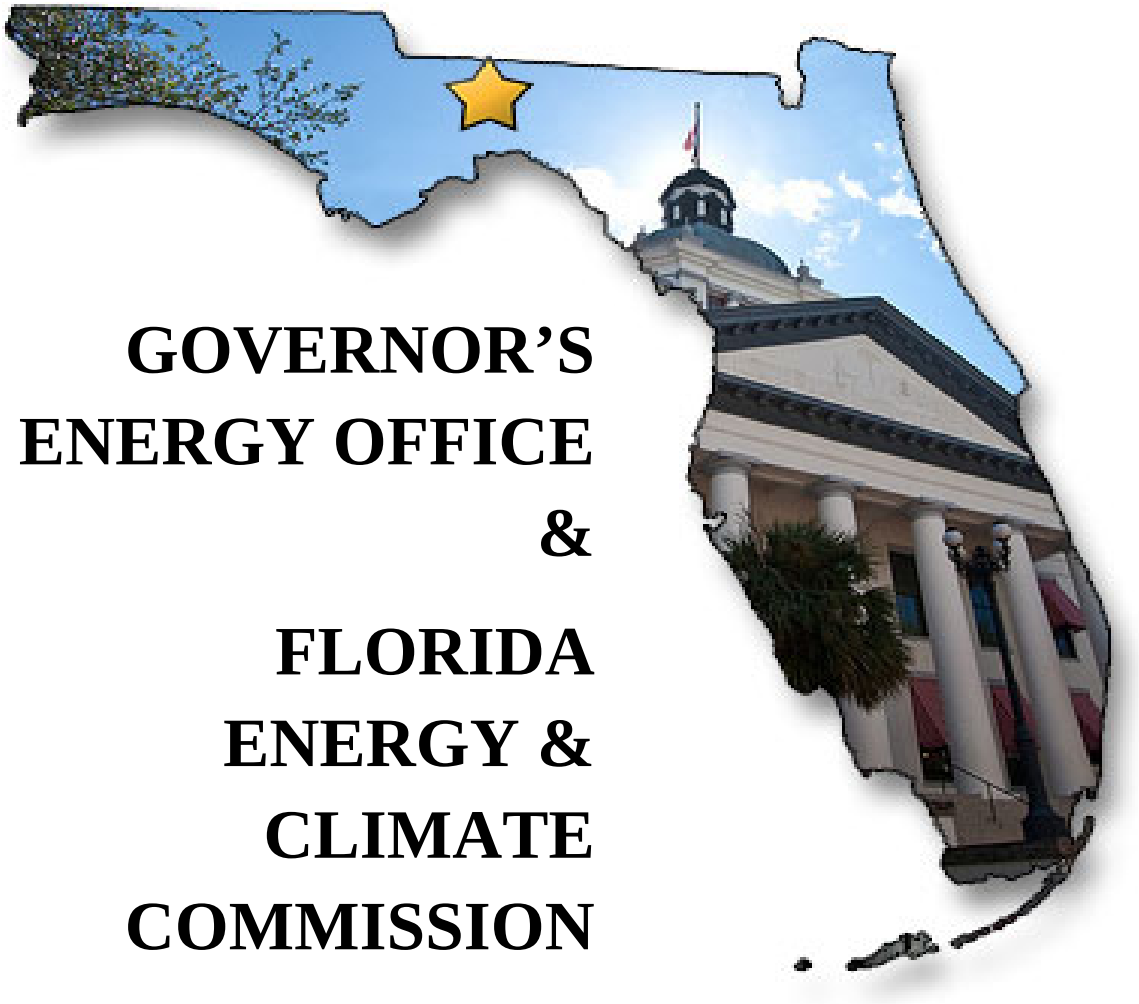
GOVERNOR'S AGENCY

Agency Summary



GOVERNOR'S ENERGY OFFICE & FLORIDA ENERGY & CLIMATE COMMISSION

Sean T. Miles, Executive Director

Governor's Energy Office

600 South Calhoun Street, Suite 251

Tallahassee, Florida 32399-0001

850.487.3800

James F. Murley, Chair

Florida Energy and Climate Commission

HISTORY OF GOVERNOR'S ENERGY OFFICE & FLORIDA ENERGY & CLIMATE COMMISSION

The State Energy Office was originally created and organized on July 1, 1975, by the Florida Legislature. Since 1975, the Energy Office has been house in several state agencies, including the Department of Administration, the Department of Community Affairs, the Department of Environmental Protection and the Executive Office of the Governor. Through the years the responsibilities and functions of the office have increased from emphasizing energy conservation and reducing the demand for petroleum allocation to policy advising and the administration of grant programs, both state and federal.

In the mid 2000s, the state began to focus more on energy issues within the state and how to increase our energy independence, decrease our dependence on foreign oil and create a clean energy economy within the state. To do this the legislature and the Governor's office created two separate bodies to advise them on these issues and develop a plan to implement the policy actions recommended. In 2006, the Florida Energy Commission (FEC) was created by the Florida Energy Act. The following year, the Governor created the Governor's Action Team on Energy and Climate Change.

As a result of FEC and Governor's Action Team recommendations, HB7135 was passed in 2008 by the Florida Legislature. The bill created the Florida Energy and Climate Commission (FECC) and consolidated staff from three different agencies to create the Governor's Energy Office (GEO) housed in the Executive Office of the Governor. GEO staff also serves as staff to the FECC. On July 1, 2008, the GEO was formed and began working on policy issues and grants related to energy issues.

The FECC is comprised of nine members, which have been nominated by the Florida Public Service Commission Nominating Council, then appointed by the Governor, Commissioner of Agriculture and Consumer Services, and Chief Financial Officer. FECC appointees are also subject to Senate confirmation. In September/October of 2008 appointments were made to the FECC and in January 2009, the FECC met for the first time in Tallahassee. The complete names and terms of service along with the relevant experience of the FECC are listed in Appendix A, and the enabling statute for the FECC in entirety is in Appendix B.

MISSION AND AUTHORITY

The FECC is the lead entity for state energy and climate change programs and policies.

The commission shall:

- Administer the Florida Renewable Energy and Energy-Efficient Technologies Grants Program pursuant to s. 377.804
- Develop policy for requiring grantees to provide royalty-sharing or licensing agreements with state government for commercialized products developed under a state grant.
- Administer the Florida Green Government Grants Act pursuant to s. 377.808
- Administer the information gathering and reporting functions pursuant to ss. 377.601-377.608.
- Administer petroleum planning and emergency contingency planning pursuant to ss. 377.701, 377.703, and 377.704.
- Represent Florida in the Southern States Energy Compact pursuant to ss. 377.71-377.712.
- Complete the annual assessment of the efficacy of Florida's Energy and Climate Change Action Plan, upon completion by the Governor's Action Team on Energy and Climate Change pursuant to the Governor's Executive Order 2007-128, and provides specific recommendations to the Governor and the Legislature each year to improve results.
- Administer the provisions of the Florida Energy and Climate Protection Act pursuant to ss. 377.801-377.806.
- Advocate for energy and climate change issues and provide educational outreach and technical assistance in cooperation with the state's academic institutions.
- Be a party in the proceedings to adopt goals and submit comments to the Public Service Commission pursuant to s. 366.82.
- Adopt rules pursuant to chapter 120 in order to implement all powers and duties described in this section.
- Provide policy recommendations to the Governor and the Legislature, by working with experts such as the Florida Energy Systems Consortium (FESC). The FESC director, whose office shall be located at the University of Florida, shall report to the Florida Energy and Climate Commission pursuant to s. 1004.648 .
- Work cooperatively with other state entities, including the Florida Public Service Commission, the Florida Department of Environmental Protection, and the Florida Department of Community Affairs, to develop state and federal energy and climate change policies and programs.
- Members shall serve without compensation but are entitled to reimbursement for per diem and travel expenses as provided in s. 112.061.

- The chair may designate the following ex officio, nonvoting members to provide information and advice to the commission at the request of the chair:

  1. The chair of the Florida Public Service Commission, or his or her designee.
  2. The Public Counsel, or his or her designee.
  3. A representative of the Department of Agriculture and Consumer Services.
  4. A representative of the Department of Financial Services.
  5. A representative of the Department of Environmental Protection.
  6. A representative of the Department of Community Affairs.
  7. A representative of the Board of Governors of the State University System.
  8. A representative of the Department of Transportation.

- Meetings of the commission may be held in various locations around the state and at the call of the chair; however, the commission must meet at least six times each year.

- The commission may:
  (a) Employ staff and counsel as needed in the performance of its duties.
  (b) Prosecute and defend legal actions in its own name.
  (c) Form advisory groups consisting of members of the public to provide information on specific issues.

MAJOR REVENUE SOURCES

STATE FUNDING

The FECC receives annual state funding to administer the program. From 2005-2008 the Legislature also included appropriations for state energy grant programs, but in the current economic climate no state funds above the base budget were included for this fiscal year. Over $25 million in state-funded projects are still active and currently being administered by the FECC, as described further below under "Energy Office Programs."

FEDERAL FUNDING

In February of 2009, the Federal Government announced that through the American Recovery and Reinvestment Act (ARRA), the State of Florida would receive approximately $176 million in federal stimulus money. With this increase in funds the GEO and FECC worked to design and develop programs to disburse the money to energy projects around the state. Since February of 2009, the primary focus of the FECC and GEO has been the disbursement of the ARRA funds. The increase in funding is as follows:

ARRA

- **State Energy Program**: ARRA funding in the amount of $126 million was received to provide mechanisms to assist the funding for energy efficiency and renewable energy projects.

- **Energy Efficiency and Conservation Block Grants**: ARRA funding in the amount of $30.4 million to be used for: reduction of fossil fuel emissions; reduction of total energy use of eligible entities; and improvement of energy efficiency in the building, transportation, and other appropriate sectors.

- **Energy Efficient Appliance Rebate:** ARRA funding in the amount of $17.585 million to be used for establishing and administering state ENERGY STAR appliance rebate programs.

- **Energy Assurance Grant Program:** ARRA funding in the amount of $1.881 million to be used to strengthen and expand the State's energy assurance planning and resiliency efforts by incorporating response actions for new energy portfolios and Smart Grid applications and to build in-house energy assurance expertise.

ANNUAL FEDERAL ALLOCATION FOR STATE ENERGY PROGRAM

- **State Energy Program:** The State has annually received varying amounts of these funds since 1975. Federal funding in the amount of $815,000 is used for program administration and to develop state strategies and goals to address the State's energy priorities.

STATE ENERGY PROGRAMS

RENEWABLE ENERGY AND ENERGY-EFFICIENT TECHNOLOGY GRANT PROGRAM (REET)

The Renewable Energy Technologies Grants Program was originally established in 2006 by the Florida Renewable Energy Technologies & Energy Efficiency Act (Senate Bill 888) to provide renewable energy matching grants for demonstration, commercialization, research and development projects relating to renewable energy technologies. The grant program was designed to stimulate capital investment in the state and promote and enhance the statewide utilization of renewable energy technologies.

The 2008 Florida Legislature expanded the program to include energy efficient technologies as well as renewable energy resources, including hydrogen, biomass, solar energy, geothermal energy, wind energy, ocean energy, waste heat and hydroelectric power. During FY 2008-2009 $15 million was appropriated for the Renewable Energy and Energy-Efficient Technologies Grant Program, with $8 million for bioenergy projects.

To date the State has issued 27 grants for over $42 million under this program. Of these grants, five have been recommended for termination to the Commission for lack of progress on the grants and non-compliance with the terms of the grant and one has ended under the natural time frame of the grant. Upon Commission approval of the terminations, the GEO has returned over $10 million in funds to the energy trust fund and general revenue for reappropriation or allocation of funds to other grant projects.

Grant funds were available to Florida municipalities and county governments, established for-profit companies licensed to do business in Florida, universities and colleges in Florida, utilities located and operating within Florida, not-for-profit organizations, and State of Florida agencies. Eligible proposals were evaluated based on a number of different criteria, including cost share percentage, economic development potential, energy efficiency and how the project fosters public awareness of renewable energy technologies. This program has not been funded by the legislature for the past two years, due to the economy and the lack of funds available in the State.

AVERA MOTORS GRANT

The funding for this grant was established and authorized by Chapter 2010-152, Section 135, Laws of Florida in the amount of $2,000,000.00. The grant funds are being used to design, develop and build high efficiency vehicles in the State of Florida.

Located in Rockledge, FL, Avera Motors is developing a highly flexible and ultra-efficient vehicle platform that will be used for a range of green performance vehicles. Avera's first vehicle will be an ultra-efficient, four-passenger sports coupe, it will enter the market in early 2013 with a retail price of $25,000. This vehicle will provide handling comparable to some of the world's best sports cars. By 2015, the flexible Avera platform will also be used with a five-passenger crossover and a convertible leading to a total yearly production of approximately 60,000 vehicles.

EMERGENCY MANAGEMENT

Emergency Support Function 12 Fuels involves close coordination with private sector providers of energy and transportation fuels such as propane, fuel oil, diesel fuel, and gasoline. The FECC have primary responsibility to monitor and coordinate with the private sector suppliers of such fuels to ensure that adequate supplies of other energy and transportation fuels are available and deliverable for normal community functioning.

Additionally, once the request is made by the State Emergency Response Team or the FECC a daily sampling of the retail gas stations is initiated. ESF-12 Fuels remains activated during response and recovery.

FEDERAL ENERGY PROGRAMS

ARRA-FUNDED STATE ENERGY PROGRAM (SEP) – ($126,089,000)

The State Energy Program (SEP) provides financial and technical assistance to states through formula and competitive grants. States use their formula grants to develop state strategies and goals to address their energy priorities. Competitive grant solicitations for the adoption of energy efficiency/renewable energy products and technologies are issued annually based on available funding. SEP emphasizes the state's role as the decision maker and administrator for the program activities within the state. The energy offices in each state and territory are a vital resource for delivering energy benefits, addressing national energy goals, and coordinating energy-related emergency preparedness across the nation.

- **Solar for Schools & Shelters** ($10,000,000) - This program will support the installation of photovoltaic systems with battery back-up on strategically located schools and emergency shelters throughout the state. The FECC will coordinate with the Florida Solar Energy Center to select 90 co-located schools and emergency shelters in Florida and install 10 kW and larger solar systems with dataloggers on each site. The program will include operation and maintenance workshops for energy and facilities managers and administer education orientation workshops for teachers. In addition, it will update the www.energywhiz.com Web site to include new system information for each of the 90 schools/shelters. There are four primary objectives to this program: (1) creating or saving green collar jobs by hiring solar contractors to install solar systems; (2) providing power for critical needs during power outages and times of disaster; (3) educating future generations about solar energy technologies; and (4) and reducing greenhouse gas emissions.

- **Solar Energy Rebate Program** ($14,408,000) The program provides a $4/per Watt rebate on photovoltaic systems, with a maximum rebate amount of $20,000 for residential systems and $100,000 for commercial systems. In addition, the program provides a $500 rebate for residential solar water heaters, a rebate of $15 per 1,000 Btu up to a maximum of $5,000 for commercial solar water heaters and a $100 rebate for solar pool heaters. Due to the tremendous demand and limited availability of state funding, a significant backlog in solar rebate applications occurred. Through the advent of SEP funds the state was able to provide $14,400,000 in funding to address the backlog in rebate applications. The SEP funds have been fully committed.

- **E-85/B20 Public/Private Fueling Grant Program** ($2,283,400) This program is designed to increase the availability of E85 and B20 biofuels to consumers at retail stations throughout Florida by providing grants to fuel station owners to install E85 or B20 tanks and pumps at their facilities. There are over 500,000 flex fuel vehicles traveling on Florida roadways with very limited access to E85 fuel. One of the major challenges for station owners in the installation of alternative fuel tanks and pumps is the large up-front cost and limited access to capital due to current credit market conditions. This program will alleviate that hurdle by assisting owners with the cost of installation of these alternative fuel tanks and pumps by providing grants. This program compliments the emphasis provided to alternative fuel production facilities by the State of Florida in current law and previous appropriations.

- **Florida ENERGY STAR Residential HVAC Rebate Program** (TBD) The Florida ENERGY STAR Residential HVAC Rebate program was designed to provide an incentive for Florida homeowners to upgrade their air conditioning systems to a more energy efficient model. Concurrent with upgrading their air conditioning system, the homeowner must also ensure their HVAC duct system has no more than 15 percent leakage to the outside by having their HVAC duct system tested for leaks by a qualified tester. In return for these efforts, the homeowner will receive a rebate from the state for $1,500. As an added incentive, because the HVAC system meets the Federal Energy Tax Credits criteria, the homeowner also qualifies for a tax credit off their 2010 income taxes.

- **Shovel Ready Energy Project Grants (**$7,972,740) This program leverages Florida's state energy grant initiatives to identify "shovel-ready" projects that can be expeditiously implemented through available SEP funding. The goal is to provide grants for competitively-selected renewable energy and energy efficiency technology projects. The grant program is designed to stimulate capital investment in the state and promote and enhance the statewide utilization of renewable energy technologies. The top ten ranked (but unfunded) projects from FY 2008-09 grant applications from the Renewable Energy and Energy-Efficient Technology category as well as the Renewable Energy and Energy-Efficient Technology for Bioenergy category have been selected to receive funding. Applicants had to undergo eligibility and environmental review by the U.S. Department of Energy and agree to the requirements applicable under the ARRA.

- **Florida Clean Energy Grants** ($10,000,000) The Clean Energy Grant program will provide funding to promote energy efficiency measures and renewable energy deployment for eligible public, not-for-profit, and agricultural entities. The maximum amount for an individual award is $500,000 with a minimum amount of $100,000. The program is subdivided into two categories. Eligible applicants under Category 1 ($8,000,000) include Florida state and local governments who did not receive a direct allocation of funds from the U.S. DOE for the Energy Efficiency Conservation Block Grant Program, school districts, public universities and colleges, Florida Constitutional Officers, independent special districts, and not-for-profit companies. Existing Florida farms and farm operations will be considered eligible applicants under Category 2 ($2,000,000).

- **Florida Renewable Energy, Efficiency and Conservation Grants (FREEC)** ($12,993,461) As a result of action taken by the Florida Energy and Climate Commission on June 30, 2010, $12,993,461 was reprogrammed under the State Energy Program (SEP) in order to fund additional grants to local governments. Local governments receiving reprogrammed dollars

were based on the final ranking of the Competitive Grants to Local Governments under the Energy Efficiency and Conservation Block Grant Program and each application was reviewed for SEP eligibility. These grants are helping 36 communities around the state.

- **Florida Energy Opportunity Fund -** *Clean Energy Investment Program* ($36,089,000) The Florida Opportunity Fund – Clean Energy Investment Program is a direct investment program created to promote the adoption of energy efficient and renewable energy (EE/RE) products and technologies in Florida. The Fund will increase the availability of capital in Florida through both loan and equity investment instruments, and is designed to help Florida businesses and promote the adoption of commercialized clean energy technology. Fund investments must comport to the State Energy Program statute which requires that funds be used primarily for: (1) facility and equipment improvement with EE/RE products; (2) acquisition or demonstration of renewable energy products; and (3) improvement of existing production, manufacturing, assembly or distribution processes to reduce consumption or increase the efficient use of energy in such processes. The FECC is working with the Grantee – Florida Opportunity Fund (staffed by Enterprise Florida) – and their contracted investment manager Florida First Partners to administer the program.

- **Compressed Natural Gas (CNG) Fleet Fueling Facilities– Matching Grants** ($1,716,000) This program is intended to foster the development and operation of compressed natural gas (CNG) fleet fueling stations throughout Florida by providing matching grants to commercial companies, school districts, local governments, utilities, etc. up to $500,000. The program will provide 25 percent matching funds for projects installed by for-profit entities. Not-for-profit and public entities will be eligible for matching funds of up to 50 percent of installation costs. One of the major challenges for fleet owners is the significant initial cost of installing a CNG fueling station for their fleets. This program will lessen that challenge by assisting facility owners with the acquisition of equipment necessary to operate and maintain CNG fueling facilities.

ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANT ($30,401,600)

The Energy Efficiency and Conservation Block Grant (EECBG) Program, funded for the first time by the American Recovery and Reinvestment Act (Recovery Act) of 2009, represents a Presidential priority to deploy the cheapest, cleanest, and most reliable energy technologies we have—energy efficiency and conservation—across the country. The Program is modeled after the Community Development Block Grant program administered by the Department of Housing and Urban Development (HUD). It is intended to assist U.S. cities, counties, states, territories, and Indian tribes to develop, promote, implement, and manage energy efficiency and conservation projects and programs designed to:

- Reduce fossil fuel emissions;
- Reduce the total energy use of the eligible entities;
- Improve energy efficiency in the transportation, building, and other appropriate sectors; and
- Create and retain jobs.

Through formula and competitive grants, the Program empowers local communities to make strategic investments to meet the nation's long-term goals for energy independence and leadership on climate change. Florida has also received $138 million in direct grants from US DOE to 88 local and tribal governments.

Competitive Grants to Local Governments – Pursuant to the EECBG Program requirements, the FECC is distributing $19.4 million to cities and counties within the state that are ineligible for direct formula grants from the DOE. The implementation is accomplished through a competitive grant program. This grant program is helping 40 communities around the state.

Sunshine State Building Initiative – The FECC is allocating $7.6 million to support the deployment of energy efficiency and renewable technologies in State buildings.

Energy Conservation Initiatives – The FECC is allocating $2.1 million to support a broad spectrum of energy efficiency and conservation initiatives, including training, outreach, analysis, and administration. These initiatives include the following specific activities:

- **Data Center Energy Efficiency** - Existing technology in Florida's primary data centers is inefficient and measurement of energy consumption, carbon emission and overall environmental impact assessment cannot be achieved with the existing technology and infrastructure. A detailed plan has been developed for primary data center optimization by evaluating and implementing specific technologies such as virtualization, power and cooling systems, and the use of energy efficient hardware devices. The implementation of the measures is in the final stages at the Southwood and Northwood Data Centers.

- **Energy Code Training and Education** – The FECC will leverage funds designated from the ARRA for the Weatherization Assistance Program and state funds for the Building Code Mitigation and Outreach Program with EECBG funding to develop and implement a building energy conservation training program. This initiative will provide training to designers, contractors, code officials and other construction industry parties through existing programs at educational institutions and energy extension demonstration centers throughout the state. It will also train trainers for the state building officials association's education program and for education programs of construction industry associations.

- **Energy Code Compliance and Effectiveness Measurement** - Florida's long running Energy Code Program offers a number of opportunities for measuring compliance and measuring the desired outcome, conserved energy. The information obtained from the effectiveness measurement program will also identify surrogate measures that can be used in the future to track Code effectiveness with more affordable and sustainable methods. Additionally, this program will be used in planning future Energy Code stringency increases. Understanding the market,

construction practices and the impact of available technologies to gauge their energy conservation impact is essential to devising targets and implementation tactics for increased code stringency. This study will provide the base information for those determinations.

- **Clean Tech Economic Development Strategy Support** - Florida currently offers a range of economic incentives for the clean technology sector including but not limited to corporate income tax, property tax, rebates, grants, and relocation packages. This initiative analyzed the success of these incentives and compiled a package of policy recommendations for the 2010 legislative session to encourage more targeted deployment of clean technologies that are consistent with the state's resources and energy/climate policy objectives. This initiative was especially timely in light of the fact that many of Florida's existing incentives sunset in 2010. Several significant recommendations were submitted to the Legislature and were incorporated into CS/HB 7179. Phase II of this effort will be defined in early 2011.

- **Plug-In Hybrid Electric Conversion Rebate Program** - The object of this program is to increase the affordability of hybrid plug-in electric conversion kits within the state of Florida. The rebates are available for both residential vehicles and commercial fleets. Florida's transportation sector accounts for over forty percent of the state's greenhouse gas emissions. By pursuing the expansion of electric hybrid conversion kits within the state, Florida will increase our energy security; decrease our dependence on foreign oil; as well as to protect the state's environment and reduce our greenhouse gas emissions.

ENERGY ASSURANCE AND SMART GRID RESILIENCY ($1,881,676)

This is a collaborative effort involving several state agencies to review and strengthen Florida's Energy Assurance Plan by incorporating recent and planned smart grid improvements and renewable energy facilities. This program will examine replacing Florida's current electric outage reporting system with an automated system and incorporate the electric outage data into Florida's emergency assistance mapping system.

ENERGY STAR APPLIANCE REBATE PROGRAM ($17,585,000)

This program was funded through the American Recovery and Reinvestment Act and is designed to stimulate Florida's economy by encouraging consumers to purchase new ENERGY STAR® appliances. Purchasing new appliances will help create jobs for appliance manufacturers and retail stores. The program also encourages consumers to save energy, water, and to lower their monthly bills through the use of a more efficient appliance. The April 2010 Appliance Rebate program has ended and paid out 64,047 rebates and 49,522 recycling bonuses. Approximately $2.4 million remains in that grant. With the remaining funds, Florida was given USDOE approval to add central air conditioners, air source heat pumps, and geothermal heat pump systems to its rebate program during the fall of 2010. This program

launched August 30, 2010, was halted September 14, 2010, and reinstated with new qualifications on November 17, 2010 by the Florida Legislature during a Special Session.

PROGRAM ADMINISTRATION

Funding for Program Administration is currently derived from four sources – State of Florida's General Revenue fund, federal State Energy Program funding, ARRA-SEP administration, and ARRA-EECBG administration. Funding from ARRA sources is designated for administration over the three year period (2009-2012) of ARRA-funded programs. State and federal funding has varied in amount but recurs annually. Program Administration funding is expensed at the state level in the following general categories – Salaries & Benefits, Expenses, Other Capital Outlay, and Contractual Services.

EMERGING POLICY, BUDGET AND ADMINISTRATIVE ISSUES

Florida Solar Energy System Incentives Program

The Solar Energy System Incentives Program, often referred to as the Florida Solar Rebate Program, was created by the Legislature in 2006 under the Florida Renewable Energy Technologies and Energy Efficiency Act (Florida Statute 377.801-377.806) as a four-year program to sunset June 30, 2010.

- November 2010 - The Florida Legislature appropriated up to $28.9 million to fund the backlog of solar rebate applications. This funding may increase or decrease contingent on the funding requests from the HVAC rebate program (see below).

Florida ENERGY STAR Residential HVAC Rebate Program

Florida launched this program on August 30, 2010 and it was suspended on September 14, 2010 when the Florida Legislative Budget Commission declined to take up the necessary budget request. On November 16, 2010, the Florida Legislature revisited this issue during a Special Session and approved House Bill 15A. This bill funded rebates for those qualifying applications where the new HVAC or geothermal system was contracted for purchase between August 30, 2010 and September 14, 2010. The bill states that all qualifying rebates will be paid for this rebate program prior to paying any rebates for the aforementioned Solar Rebate Program.

Emergency Fuel Purchases

The Department of Environmental Protection, State of Florida ("DEP") is an executive department of the State of Florida, as established by Section 20.255. The Florida Energy and Climate Commission ("FECC") is likewise an executive department of the State, as established by Section 377.6015, Florida Statutes.

The FECC is responsible, under Sections 377.701-377.703, Florida Statutes, for the allocation of fuel resources and for planning for statewide emergencies caused by shortages of primary and secondary energy sources. The FECC has demonstrated the institutional capacity to administer energy emergency policy through its responsibilities related to Emergency Support Function #12 (ESF 12) Fuels of the State of Florida's Comprehensive Emergency Management Plan (CEMP). ESF 12 establishes policies and procedures for response to and recovery from shortages and disruptions in the supply and delivery of electricity, natural gas, and other forms of energy and fuels which impact or threaten to impact large numbers of the State's citizens and visitors of which the FECC is responsible for transportation fuels. DEP through the State Energy Program and access to the Inland Protection Trust Fund has demonstrated the capacity to fund the purchase of emergency fuel pursuant to the execution of an executive order by the Governor.

Financing Energy Programs

During the 2010 legislative session HB7179 was passed by both chambers of the Legislature and signed into law. The legislation created a financing mechanism for energy improvements that is often referred to as Property Assessed Clean Energy (PACE). Specifically, the legislation 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.

Under the program, property owners can elect to invest in energy efficiency retrofits or renewable energy. The local government will then issue bonds or other lawful debt and pay for these improvements to an owners' property. The local government will then be paid back by the property owners through non-ad valorem assessments on participating property owners' tax bills.

While Florida has moved forward with PACE legislation, PACE programs are currently facing significant barriers by the Federal Housing and Finance Agency (FHFA). The FHFA, which regulates Fannie Mae and Freddie Mac, and 12 Federal Home Loan Banks, has stated that PACE programs "present significant safety and soundness concerns". The FHFA's principal concern resides in the senior lien position of the local governments/PACE lenders. FHFA is concerned about how this additional debt—created through PACE programs—affects the value of mortgages and the risk portfolio of mortgage lenders. The FECC/Governor's Energy Office continues to monitor federal developments and maintains dialog with the US Department of Energy on this emerging issue.

Capacity

Prior to the American Recovery and Reinvestment Act of 2009 (ARRA), the focus and responsibilities of the Governor's Energy Office were primarily related to energy policy and legislation. With the recent allocation of over $175 million in ARRA funding, the focus has changed and the primary role and function of the Energy Office is grant management. This allocation was a substantial increase to the Energy Office programs which, prior to ARRA, had an average funding level of approximately $20 million. The Governor's Energy Office is currently in various stages of administering its grant programs funded under ARRA including but not limited to the following processes:

- application review and validation;
- award approval and notification;
- grant/contract development;
- grant/contract execution; and
- grant/contract implementation

These processes must be completed for each of the approximately 172 new grant awards. In addition there are approximately 28 sub-grants currently open and being managed from previous funding cycles. ARRA also includes an unprecedented level of accountability and transparency reporting on both expenditures and results. These requirements have significantly increased the administrative workload for staff managing projects funded with ARRA grant dollars and have consumed significant management resources and time.

In addition to the day-to-day oversight duties of grant management, the grant monitoring functions will greatly increase the amount of time required for each grant by the assigned Grant Manager. This

increase in grant management duties can only be adequately addressed by increasing the number of Energy Office staff assigned as Grant Managers.

Currently there are eight staff members assigned as Grant Managers whose responsibilities are ensuring that subgrantees properly carry out Federal or State assistance programs and account for Federal and State funds subgranted to them for that purpose. With the increase of funding and responsibilities there is a need to ensure that the Office has sufficient staffing in place to meet the requirements and goals of the programs it administers. The lack of capacity will affect the Office's ability to adequately manage its grants and carry out its mission effectively and efficiently. Furthermore, failure to achieve compliance with the requirements of ARRA will result in loss of funding to the State and negative media coverage for the Governor's Office and the State of Florida.

Programmatic Infrastructure

The Energy Office both receives and awards grants. A significant portion of the Energy Office's overall funding comes from federal grants through the U.S. Department of Energy. In addition, the Energy Office may, from time to time, apply to receive funding to promote renewable energy and energy efficiency technologies that may be announced via Grants.Gov or other federal resources. As a result, the Energy Office continuously and simultaneously acts as both a grant provider and a grant recipient.

Competition is the primary method for the awarding of grant funds, therefore, the Energy Office staff must ensure that grant applicants and recipients are subject to common requirements, treated fairly and consistently, and receive consistent interpretation of policies and procedures. Most grants issued by the Energy Office are awarded for specified energy efficiency and conservation programs or projects. These grants may fulfill a wide variety of energy efficiency and conservation purposes including but not limited to: demonstration, commercialization, research, and development projects relating to renewable energy technologies; development and implementation of energy efficiency and conservation strategies; eligible building/facility improvements and equipment purchases and upgrades.

Unlike many state agencies, the Executive Office of the Governor (EOG) does not have a grant management unit that is solely dedicated to the allocation and oversight of its grant programs. With the increase of federal funding the support functions provided by the EOG which include, finance and accounting, legal, and administrative services are overwhelmed with the volume of transactions and

responsibilities for the grant programs administered solely by the Energy Office. These support functions are imperative for the successful management of grant funds. However these support functions are not only provided to the Energy Office but must be shared and provided to all other Offices and Programs under the EOG, which creates a volume of work that overwhelms the support offices. It has been calculated that the number of financial transactions completed in a month for the Energy Office equals the total amount of other financial transactions completed for the entire EOG annually.

Federal and State Coordination on Renewable Energy

Continued improvement in communication and coordination with other States and the Federal Government has shown to be beneficial. As additional programs have been created using federal ARRA dollars, the increased interaction with US DOE has also proved beneficial, along with membership and participation in the National Association of State Energy Officials, Southern States Energy Board, and Clean Energy States Alliance. An intergovernmental task force on offshore renewable energy coordination between the State of Florida and the US Department of Interior is being negotiated but not yet culminated. The importance of federal policy to catalyze development of emerging technologies and commercialization opportunities in renewable energy is critical to meeting Florida's future energy needs.

Travel

The Energy Office is diligent in protecting the best interests of the public and does not act in a manner that is contrary to its stated principles of transparency and accountability. The Grant Managers are responsible for verifying that the terms and conditions imposed on the Energy Office in a grant award are adhered to by the sub-recipients. The primary means by which this oversight is performed is through monitoring.

Monitoring is the means by which the Governor's Energy Office carries out its program management responsibilities with USDOE including ensuring that funds are expended in a timely manner for the purpose for which they were made available; ensuring that programs are carried out in accordance with applicable laws, rules and regulations; and minimizing opportunities for fraud, waste and mismanagement. Due to the increase in the number of grants and the extensive oversight requirements imposed with the ARRA funding, travel will be required and is expected to increase proportionately.

Energy Office Grant Managers monitor recipient projects on a monthly basis via Desk Review and on a frequent, periodic, on-site basis as determined by a Risk Assessment. Based on the Risk Assessment, a recipient may be determined to be a low, medium or high risk. This determination will decide the minimum amount of on-site visits, how often the Grant Manager will make phone contact with the Recipient and how often staff will conduct a desk monitoring of the recipient. USDOE mandates that on-site monitoring is performed at least annually for low risk projects but possibly as frequently as quarterly for high risk projects.

Previously, the "risk" level (high, medium or low) was assessed at the onset of each project with on-site project monitoring performed either annually or once over the term of the grant, depending on the assessed "risk" level. The USDOE now mandates that ARRA funded projects are re-evaluated more frequently (monthly or quarterly) to continually re-assess each project's "risk" level. Before the ARRA awards, Energy staff managed an average of 30-35 grants and performed approximately 30 grant-related trips per year. With the additional travel requirements of ARRA funded projects, the 200 grants now managed by the Energy Office will require between 200-300 trips per year.

P-Cards

The 200 grants managed by the Energy Office and the escalated frequency of on-site monitoring required for each grant have drastically increased the requirement for Energy Office staff to travel. Although these costs are included in the Administrative Funds provided in ARRA awards, State of Florida and EOG procedures must be followed during the performance of these duties. Typically, an on-site project monitoring trip can be accomplished in 1-2 days by an experienced Grant Manager if no major issues of non-compliance are identified. For cost-effectiveness (i.e. airfare or mileage), multiple grants are usually monitored on each trip. This can result in travel costs ranging from several hundred dollars up to $2,000 per trip.

Unlike most other state agencies, the EOG does not currently issue Purchasing Cards (P-cards) to staff for use conducting duties on official state-business. Alternatively, staff is required to request an Advance of Funds equating to 80% of anticipated travel costs and fund the remaining costs out of their own pocket until the required travel documentation is submitted and they receive reimbursement of these state-business expenditures.

It is anticipated that frequent staff turnover leading to inefficiency and potential state liability may result from a continuance of this procedure. Therefore, it is not in the best interest of the State to require Energy Staff to provide their own funds to incur travel costs conducting duties on official state-business at these escalated levels; nor is it feasible to reduce the frequency of federally required project monitoring.

It is recommended that P-cards be issued to Energy staff that are required to perform essential travel functions for the adequate grant management of ARRA funded grants. It is further recommended that the limits placed on these P-cards be set at $2,000 each, in order to permit multiple trips to be performed each month by Energy staff.

Appendix A

COMMISSIONERS AND SENIOR STAFF MANAGERS

COMMISSIONERS

James F. Murley, Commission Chair – Gubernatorial Appointee
(Term expires September 30, 2011)
Assistant Dean, External Affairs, College for Design and Social Inquiry and
Senior Research Adviser, Energy and Climate Change, Center for Environmental Studies,
Florida Atlantic University
Mr. Murley has been employed in various capacities at Florida Atlantic University since 1999. He also directs climate change adaptation studies funded by the National Commission on Energy Policy (NCEP). Mr. Murley has extensive experience in climate change, natural resource conservation, public administration, law, land use and public administration, and is a former Secretary of Florida's Department of Community Affairs. Mr. Murley is a Fellow at the National Academy of Public Administration.

Steven C. Bassett – Gubernatorial Appointee
(Term expires September 30, 2013)
Engineer with Eco Advisors, LLC/ REP Associates, Inc.
Mr. Bassett has extensive experience in mechanical and environmental engineering experience, general environmental compliance consulting, green/high performance buildings, and climate change. In 2002, Mr. Bassett was recognized as Florida Professional Engineer of the Year by the Florida Engineering Society. Mr. Bassett is a graduate of the Georgia Institute of Technology with a degree in Mechanical Engineering.

Kathy Baughman McLeod – Gubernatorial Appointee
(Term expires September 30, 2013)
Director, Public Policy Group for Bryant Miller Olive, P.A.
Ms. Baughman McLeod has extensive experience in public policy development, public finance initiatives, legislative and cabinet affairs, public affairs consultancy, communications, climate change, property & casualty insurance and reinsurance, land conservation, and grant programs. She has served on many boards and commissions and has participated in numerous national and worldwide climate conferences. Ms. Baughman McLeod holds a Bachelor of Science in International Affairs and a Masters of Science in Geography, both from Florida State University.

John B. Clark – Chief Financial Officer Appointee
(Term expires September 30, 2011)
Director of Legislative & Political Affairs, Florida Electrical Workers Association
Mr. Clark has extensive experience in various aspects of the energy industry including high level leadership positions in electrical construction management, electrical apprenticeship, training programs, labor management, workforce development, hands-on experience in the construction of generating plants, transmission and distribution lines and has also served on many boards and commissions. Mr. Clark attended the engineering schools at Georgia Tech and the Southern Technical Institute and subsequently graduated from a four-year Registered Electrician Apprenticeship Program in Florida and obtained a Master Electrician License.

Howell L. Ferguson – Gubernatorial Appointee
(Term expires September 30, 2011)
Chairman /Chief Executive Officer of Lykes Bros
Mr. Ferguson has extensive experience in energy, agriculture, biofuels, land and water resource management, insurance, sustainability consulting and has served on numerous boards/commissions. Mr. Ferguson is a graduate of Yale University, University of Florida Law School, and the London School of Economics.

Nicholas C. Gladding – Gubernatorial Appointee
(Term expires September 30, 2012)
Attorney with Adams and Reese LLP
Mr. Gladding has extensive experience in law focusing on environmental counseling, permitting, enforcement defense and litigation, state legislative lobbying, diverse environmental proceedings, environmental permitting, land use, compliance counseling, environmental due diligence, and military law and procedure. In 2009, Governor Crist named him a volunteer "Point of Light" for his work on energy issues. Mr. Gladding holds his Bachelors degree from Yale University, and his Juris Doctorate from Vanderbilt University Law School. Mr. Gladding is AV® rated by Martindale-Hubbell.

Debra S. Harrison – Gubernatorial Appointee
(Term expires September 30, 2011)
Director, World Wildlife Fund's (WWF) Florida Program
Ms. Harrison has extensive experience in climate change, energy, natural resource conservation and adaptation, land use, sustainability, comprehensive land-use plan, land use planner, and environmental assessments. Ms. Harrison holds a Bachelors of Science from Central Michigan University and a technical diploma in energy processing from the Lambton College of Technology in Ontario, Canada.

Timothy J. Jackson – Gubernatorial Appointee
(Term expires September 30, 2011)
President and CEO, Glatting Jackson Kercher Anglin, Inc.
Mr. Jackson has extensive experience in community planning, consulting, plan/designs for livable communities for public/private, planning, urban design, landscape architecture, transportation, environmental science. Mr. Jackson holds a Bachelor of Civil Engineering and a Master of City Planning from the Georgia Institute of Technology, as well as a Master of Urban and Regional Planning from Florida State University.

Christian H. Poindexter – Commissioner of Agriculture Appointee
(Term expires September 30, 2011)
Retired in 2003 as Chairman and CEO of Constellation Energy Group
Mr. Poindexter has extensive experience in energy, engineering, nuclear power plants, finance, land use, and has served on numerous boards/commissions. Mr. Poindexter is a graduate of the United States Naval Academy, holds a degree in Engineering, an MBA degree with a major in Finance from Loyola College and served for seven years on active duty in the U.S. Navy and had dual qualifications as a Naval Aviator and a graduate of the Navy's Advanced Nuclear Power School.

Point of Contact: Jacqueline Warr, FECC Clerk
(850) 922-4917, Jacqueline.Warr@eog.myflorida.com

GEO SENIOR STAFF MANAGEMENT CONTACT INFORMATION

Executive Director
Sean T. Miles, 850-487-3800, sean.miles@eog.myflorida.com

Deputy Director
Travis Yelverton, 850-487-9781, travis.yelverton@eog.myflorida.com

Program Administrator
Alexander Mack, 850-487-4568, alexander.mack@eog.myflorida.com

Compliance Officer
Gail Stafford, 850-487-1961, gail.stafford@eog.myflorida.com

Budget Officer
Kim Hoffman, 850-922-4927, kim.hoffman@eog.myflorida.com

APPENDIX B

Florida Statute 377.6015 Florida Energy and Climate Commission.--

(1) The Florida Energy and Climate Commission is created within the Executive Office of the Governor. The commission shall be comprised of nine members appointed by the Governor, the Commissioner of Agriculture, and the Chief Financial Officer.

(a) The Governor shall appoint one member from three persons nominated by the Florida Public Service Commission Nominating Council, created in s. 350.031, to each of seven seats on the commission. The Commissioner of Agriculture shall appoint one member from three persons nominated by the council to one seat on the commission. The Chief Financial Officer shall appoint one member from three persons nominated by the council to one seat on the commission.

1. The council shall submit the recommendations to the Governor, the Commissioner of Agriculture, and the Chief Financial Officer by September 1 of those years in which the terms are to begin the following October or within 60 days after a vacancy occurs for any reason other than the expiration of the term. The Governor, the Commissioner of Agriculture, and the Chief Financial Officer may proffer names of persons to be considered for nomination by the council.

2. The Governor, the Commissioner of Agriculture, and the Chief Financial Officer shall fill a vacancy occurring on the commission by appointment of one of the applicants nominated by the council only after a background investigation of such applicant has been conducted by the Department of Law Enforcement.

3. Members shall be appointed to 3-year terms; however, in order to establish staggered terms, for the initial appointments, the Governor shall appoint four members to 3-year terms, two members to 2-year terms, and one member to a 1-year term, and the Commissioner of Agriculture and the Chief Financial Officer shall each appoint one member to a 3-year term and shall appoint a successor when that appointee's term expires in the same manner as the original appointment.

4. The Governor shall select from the membership of the commission one person to serve as chair.

5. A vacancy on the commission shall be filled for the unexpired portion of the term in the same manner as the original appointment.

6. If the Governor, the Commissioner of Agriculture, or the Chief Financial Officer has not made an appointment within 30 consecutive calendar days after the receipt of the recommendations, the council shall initiate, in accordance with this section, the nominating process within 30 days.

7. Each appointment to the commission shall be subject to confirmation by the Senate during the next regular session after the vacancy occurs. If the Senate refuses to confirm or fails to consider the appointment of the Governor, the Commissioner of Agriculture, or the Chief Financial Officer, the council shall initiate, in accordance with this section, the nominating process within 30 days.

8. The Governor or the Governor's successor may recall an appointee.

(b) Members must meet the following qualifications and restrictions:

1. A member must be an expert in one or more of the following fields: energy, natural resource conservation, economics, engineering, finance, law, transportation and land use, consumer protection, state energy policy, or another field substantially related to the duties and functions of the commission. The commission shall fairly represent the fields specified in this subparagraph.

2. Each member shall, at the time of appointment and at each commission meeting during his or her term of office, disclose:

a. Whether he or she has any financial interest, other than ownership of shares in a mutual fund, in any business entity that, directly or indirectly, owns or controls, or is an affiliate or subsidiary of, any business entity that may be affected by the policy recommendations developed by the commission.

b. Whether he or she is employed by or is engaged in any business activity with any business entity that, directly or indirectly, owns or controls, or is an affiliate or subsidiary of, any business entity that may be affected by the policy recommendations developed by the commission.

(c) The chair may designate the following ex officio, nonvoting members to provide information and advice to the commission at the request of the chair:

1. The chair of the Florida Public Service Commission, or his or her designee.

2. The Public Counsel, or his or her designee.

3. A representative of the Department of Agriculture and Consumer Services.

4. A representative of the Department of Financial Services.

5. A representative of the Department of Environmental Protection.

6. A representative of the Department of Community Affairs.

7. A representative of the Board of Governors of the State University System.

8. A representative of the Department of Transportation.

(2) Members shall serve without compensation but are entitled to reimbursement for per diem and travel expenses as provided in s. 112.061.

(3) Meetings of the commission may be held in various locations around the state and at the call of the chair; however, the commission must meet at least six times each year.

(4) The commission may:

(a) Employ staff and counsel as needed in the performance of its duties.

(b) Prosecute and defend legal actions in its own name.

(c) Form advisory groups consisting of members of the public to provide information on specific issues.

(5) The commission shall:

(a) Administer the Florida Renewable Energy and Energy-Efficient Technologies Grants Program pursuant to s. 377.804 to assure a robust grant portfolio.

(b) Develop policy for requiring grantees to provide royalty-sharing or licensing agreements with state government for commercialized products developed under a state grant.

(c) Administer the Florida Green Government Grants Act pursuant to s. 377.808 and set annual priorities for grants.

(d) Administer the information gathering and reporting functions pursuant to ss. 377.601-377.608.

(e) Administer petroleum planning and emergency contingency planning pursuant to ss. 377.701, 377.703, and 377.704.

(f) Represent Florida in the Southern States Energy Compact pursuant to ss. 377.71-377.712.

(g) Complete the annual assessment of the efficacy of Florida's Energy and Climate Change Action Plan, upon completion by the Governor's Action Team on Energy and Climate Change pursuant to the Governor's Executive Order 2007-128, and provide specific recommendations to the Governor and the Legislature each year to improve results.

(h) Administer the provisions of the Florida Energy and Climate Protection Act pursuant to ss. 377.801-377.806.

(i) Advocate for energy and climate change issues and provide educational outreach and technical assistance in cooperation with the state's academic institutions.

(j) Be a party in the proceedings to adopt goals and submit comments to the Public Service Commission pursuant to s. 366.82.

(k) Adopt rules pursuant to chapter 120 in order to implement all powers and duties described in this section.

History.--s. 46, ch. 2008-227.

Note.--

A. Section 45, ch. 2008-227, provides that "[a]ll of the records, property, unexpended balances of appropriations, and personnel related to the Florida Energy Commission for the administration and implementation of s. 377.901, Florida Statutes, shall be transferred from the Office of Legislative Services to the Florida Energy and Climate Commission in the Executive Office of the Governor. The

Executive Office of the Governor is authorized to establish four full-time equivalent positions to staff the Florida Energy and Climate Commission."

B. Section 48, ch. 2008-227, provides that "[a]ll of the powers, duties, functions, records, personnel, and property; unexpended balances of appropriations, allocations, and other funds; administrative authority; administrative rules; pending issues; and existing contracts of the state energy program in the Department of Environmental Protection, as authorized and governed by ss. 20.255, 288.041, 377.601-377.608, 377.703, and 377.801-377.806, Florida Statutes, are transferred by a type two transfer, pursuant to s. 20.06(2), Florida Statutes, to the Florida Energy and Climate Commission in the Executive Office of the Governor."

Appendix C

GOVERNOR'S ENERGY OFFICE PERSONNEL & STAFF TO THE FECC

Sean T. Miles (PSN 000525)
Executive Director
Oversees and direct the full operation of the Governor's Energy Office. Serves as Executive Director to the Florida Energy & Climate Commission and coordinates state energy policy. Formulates plans and programs to promote renewable energy, energy efficiency and conservation programs including, but not limited to, those eligible and/or funded under State Energy Programs.

Travis Yelverton (PSN 000530)
Deputy Director

- Florida Energy & Climate Commission
- Florida Energy Opportunity Fund
- Qualified Energy Conservation Bonds, Section 1705 Loan
- Economic Development
- Program support & media promotion

Directs the development of the Department's strategic priorities while demonstrating organizational efficiency in planning and organizing office workload. Serves as the primary staff liaison for the Florida Energy & Climate Commission. Assists in the development and management of energy-related policy and projects and provides an analysis of state and federal energy regulatory policy. Develops and manages cross-program or cross-media projects. Serves as Grant Manager for the Florida Energy Opportunity Fund.

Alexander Mack (PSN 000535)
Program Administrator

- Grant Management
- ARRA State Energy Plan
- Emergency Coordinating Officer ESF-12 Fuels
- Federal Liaison

Plans, supervises and coordinates staff activities in the ongoing development and implementation of Energy Efficiency Programs including, but not limited to, those eligible and/or funded under the State Energy Program. Formulates plans and programs to promote energy efficiency and conservation programs including, but not limited to, those eligible and/or funded under State Energy Programs. Maintains budgetary controls and monitors accordingly. Coordinates Emergency Support Function #12 Fuels.

Kim Hoffman (PSN 000534)
Budget Officer

- FECC Budget operations
- Accounting/Reconciliation
- Approval of Invoices
- Financial Reporting (USDOE-PAGE & ARRA-1512)

Coordinates accounting, financial management and budget operations for office with EOG Administration, Office of Planning & Budgeting and the Legislature, including the generation of Legislative Budget Requests, Legislative Budget Amendments and budget releases. Provides technical

assistance to Grant Managers and grantees regarding the source documentation required for approval of grant reimbursement or matching costs.

Gail Stafford (PSN 000528)
OMC Manager

- Grant Management and Compliance
- Monitoring Oversight
- Federal Reporting

Assists in the coordination and management of all Energy Office programs regarding grant administration. Provides administrative guidance on grant compliance with federal and state regulations and recipient oversight. Provides technical assistance to Grant Managers and grantees regarding the management of State Energy Program (SEP) and Energy Efficiency and Conservation Block Grant (EECBG) funding. Develops quality assurance methods, monitoring tools and best practices to ensure compliance with Department of Energy's regulations. Provides training and technical assistance to grant recipients in the areas of contract management/administration, implementation, closeouts, conflicts of interest, federal labor standards, federal and state procurement regulations, and the National Environmental Policy Act.

Brenda Buchan (PSN 000532)
Chief Analyst

- Policy
- Energy Star Rebates
- Florida Residential HVAC Rebates
- Energy Assurance

Provides economic analysis and other assistance for policy development activities and strategic planning activities as assigned. Provides analytical support for electric utility related proceedings and activities. Responsible for the development, implementation and monitoring of energy efficiency and conservation and including the Florida ENERGY STAR Rebate Program, the Energy Assurance Grant Program, and assists with the Renewable Energy Sector Grant Program.

Kelley Smith Burk (PSN 000536)
Grant Manager

- REET
- CNG Fleet Fueling Facilities Grant Program
- Electric Vehicle Rebate Program
- Shovel Ready Grants
- E85/B20 Public/Private Fueling Grant Program
- Policy

Provides economic analysis and other assistance for policy development activities and strategic planning activities as assigned. Provides analytical support for transportation and biofuel/bioenergy related proceedings and activities. Responsible for the development, implementation and monitoring of energy efficiency and conservation and management programs related to alternative fuels and biomass.

VACANT (PSN 000538)
Grant Manager

- REET
- PACE
- Policy
- Shovel Ready Grants
- FREEC Grants
- Emergency Management- Fuel Tracking

Responsible for the development, implementation and monitoring of energy efficiency and conservation and management programs in solar, wind and ocean energy technologies. Provides policy support for the development of energy legislation and policy for tax incentives, Renewable Portfolio Standards, solar manufacturing/supply chains, and Property Assessed Clean Energy (PACE). During state emergencies, provides support to the ESF-12 team through tracking fuel supplies at Florida's major ports.

John Leeds (PSN 900094)
OPS Staff Assistant

- REET
- Solar for Schools & Storm Shelters
- Florida Clean Energy
- Shovel Ready Grant
- 100 Mile Car
- EECBG
- FREEC Grants

Responsible for assisting with the development, implementation and monitoring of energy efficiency and conservation and management programs for solar and various technologies.

Jennifer Hartshorne (PSN 31000087)
Grant Manager

- Florida Clean Energy Grants
- FREEC Grants
- E85/B20 Public/Private Fueling Grant Program
- EECBG

Responsible for the development, implementation and monitoring of energy efficiency and conservation and management programs in alternative fuels and various other technologies.

Tony Morgan (PSN 000537)
Grant Manager

- Energy Code Compliance and Evaluation
- Energy Code Training and Education
- EECBG Subgrants
- DCA Grants

Responsible for the development, implementation and monitoring of energy efficiency and conservation and management programs.

April Groover (PSN 000531)
Grant Manager

- Data Centers Energy Efficiency
- Sunshine State Buildings Initiative
- EECBG Subgrants
- Federal Special Project Grants

Responsible for the development, implementation and monitoring of energy efficiency and conservation and management programs.

VACANT (PSN 999529)
Grant Manager
Responsible for the development, implementation and monitoring of energy efficiency and conservation and management programs in various technologies.

VACANT (PSN 000533)
Administrative Assistant III

- Office Manager
- FECC Website Management
- Clerk for the Energy & Climate Commission
- Manages logistics for all FECC meetings and events
- Manages FECC Calendar
- Legislative Affairs relating to the FECC
- Manages Solar Rebate Program (sunset)
- Responsible for rule-making and compliance with Florida Administrative Code

Assists supervisor in conducting daily administrative activities; acts in matters where authority has been delegated. Performs general office management duties.

Landa Korokous (PSN 000526)
Administrative Assistant III

- Executive Director, Deputy Director and Program Administrator administrative support
- Scheduling Coordinator
- Travel coordination/arrangements
- Record Management
- Personnel Records
- Vehicle Maintenance
- Receptionist/telephone assistance

Performs a variety of confidential administrative tasks, including the preparation and submittal of personnel review forms. Provides independent support to the Executive Director of the Energy Office and other executive staff for preparing and maintaining Directives. Maintains calendar for the Executive Director, Deputy Director and Program Administrator. Coordinates scheduling of meetings and teleconferences. Assists in the preparation of travel and associated reimbursements. Assist with other duties as assigned.

VACANT (PSN 900138) – OPS
OPS Staff Assistant

- Compliance and Monitoring Assistance
- Grant Management Assistance

Responsible for review, verification and processing of compliance and monitoring issues and other SEP tasks. Responsible for assisting with the development, implementation and monitoring of energy efficiency and conservation and management programs.

Mark Hermanson (PSN 900137) – OPS
OPS Staff Assistant

- Invoice Processing
- Budget Assistance

Responsible for review, verification and processing of invoices for all grants within Energy Office, assists in the generation of budgeting spreadsheets and other reconciliation tools. Also performs other SEP tasks.

Jackie Warr PSN (PSN 900132) – OPS
OPS Staff Assistant

- Solar Rebate Processing
- Correspondence

Responsible for processing the solar rebates within the Energy Office, correspondence and other SEP-ARRA grant related tasks. Responsible for assisting with the development, implementation and monitoring of energy efficiency and conservation and management programs.

Andrea Mars PSN (PSN 900134) –OPS
OPS Staff Assistant

- Solar Rebate Processing
- Grant Management Assistance

Responsible for processing the solar rebates within the Energy Office, clips, correspondence and other SEP-ARRA grant related tasks. Responsible for assisting with the development, implementation and monitoring of energy efficiency and conservation and management programs.

Fredricka Jones PSN (PSN 900042) – OPS
OPS Staff Assistant

- Solar Rebate Processing
- Grant Management Assistance

Responsible for processing the solar rebates within the Energy Office, and other SEP-ARRA grant related tasks. Responsible for assisting with the development, implementation and monitoring of energy efficiency and conservation and management programs.

Shane Stevens PSN (PSN 900124) – OPS
OPS Staff Assistant

- Solar Rebate Processing
- Grant Management Assistance
- News Clips
- Geographical Information Systems
- Energy Assurance Assistance

Responsible for processing the solar rebates within the Energy Office, and other SEP-ARRA grant related tasks. Responsible for assisting with the development, implementation and monitoring of energy efficiency and conservation and management programs.

Matthew Faulk PSN (PSN 900126) – OPS

OPS Staff Assistant

- Solar Rebate Processing
- Grant Management Assistance
- Electric Vehicle Rebates Program Assistance
- Energy Assurance Assistance
- ESF 12 Fuels Assistance

Responsible for processing the solar rebates within the Energy Office, and other SEP-ARRA grant related tasks. Responsible for assisting with the development, implementation and monitoring of energy efficiency and conservation and management programs.

Amanda Reecer (**PSN 000416)**

Administrative Support

- Tracking/organization/review of grants/contracts for Purchasing Director
- Audit energy rebate payments and prepare related spreadsheet
- Coordinate with Energy staff on Priority List updates

Responsible for providing administrative support to the EOG Purchasing Director to facilitate efficient approval of Energy grants/contracts. Responsible for auditing Solar Energy Rebate applications and facilitating payment of these rebates with the Department of Financial Services.