

Energy & Utilities Subcommittee

Tuesday, March 29, 2011 212 Knott Building 8:00 AM – 11:00 AM

ACTION PACKET

Energy & Utilities Subcommittee

3/29/2011 8:00:00AM

Location: Webster Hall (212 Knott)

Summary:

Energy & Utilities Subcommittee

Tuesday March 29, 2011 08:00 am

HB 1281 Favorable With Committee Substitute

Yeas: 15 Nays: 0

Amendment 1 Adopted Without Objection

Strike-all-Rep. Rep. Rehwinkel Vasilinda , sponsor.

PCB ENUS 11-01 Favorable

Yeas: 15 Nays: 0

Amendment 1 Withdrawn

Line 500-1888-Rep. Clemens, sponsor

Amendment 2 Withdrawn

Lines 500-1888-Rep. Clemens, sponsor.

Amendment 3 Withdrawn

Lines 307-456-Rep Albrittion, sponsor.

Amendment 4 Not Considered

Lines 333-335 (hand written)-Rep. Albrittion,

sponsor.

PCB ENUS 11-02 Favorable

Yeas: 15 Nays: 0

Amendment 1 Failed to Adopt

Lines 59-90, lines 103 & lines 525-594-Rep. A.

Williams, sponsor.

Energy & Utilities Subcommittee

3/29/2011 8:00:00AM

Location: Webster Hall (212 Knott)

Print Date: 3/29/2011 3:30 pm

Attendance:

	Present	Absent	Excused
Clay Ford (Chair)	×		
Ben Albritton	X		
Charles Chestnut IV	×		
Jeff Clemens	×		
Janet Cruz	×		
Daniel Davis	X		
Shawn Harrison	×		
Clay Ingram	X		
George Moraitis, Jr.	×		
Peter Nehr	×		
Kathleen Passidomo	X		
Elizabeth Porter	X		
Michelle Rehwinkel Vasilinda	×		
W. Gregory Steube	X		
Alan Williams	X		
Totals:	15	0	0

Energy & Utilities Subcommittee

3/29/2011 8:00:00AM

Location: Webster Hall (212 Knott) **HB 1281 : Energy Conservation**

X Favorable With Committee Substitute

	Yea	Nay	No Vote	Absentee Yea	Absentee Nay
Ben Albritton	X				
Charles Chestnut IV	X				
Jeff Clemens	. X				
Janet Cruz	X				
Daniel Davis	X				
Shawn Harrison	X				
Clay Ingram	. X				
George Moraitis, Jr.	X				
Peter Nehr	X				
Kathleen Passidomo	X				
Elizabeth Porter	X				
Michelle Rehwinkel Vasilinda	X				
W. Gregory Steube	X				
Alan Williams	X				
Clay Ford (Chair)	X				
	Total Yeas: 15	Total Nays: ()		

HB 1281 Amendments

Amendment 1 - Strike-all-Rep. Rep. Rehwinkel Vasilinda , sponsor.

X Adopted Without Objection

Appearances:

David Cullen (Lobbyist) - Proponent Sierra Club Florida 820 E Call Street Tallahassee Florida 32301 Phone: 941-323-2404

Steven Webster (Lobbyist) - Proponent MW Consulting/Florida Feedstock Growers Association 122 S Calhoun Street Tallahassee Florida 32301 Phone: 850-391-7674

Stephen Comley - Information Only We the People, Inc. of the United States 1518 Piper Dunes Place Fernandina Beach Florida 32034-6610

Phone: 904-206-3114

Print Date: 3/29/2011 3:30 pm

Energy & Utilities Subcommittee

3/29/2011 8:00:00AM

Location: Webster Hall (212 Knott)

PCB ENUS 11-01 : Energy Incentives and Initiatives

X Favorable

	Yea	Nay	No Vote	Absentee Yea	Absentee Nay
Ben Albritton	X				
Charles Chestnut IV	X				
Jeff Clemens	X				
Janet Cruz	X				
Daniel Davis	X				
Shawn Harrison	X				
Clay Ingram	X				
George Moraitis, Jr.	X				
Peter Nehr	X				
Kathleen Passidomo	X				
Elizabeth Porter	X				
Michelle Rehwinkel Vasilinda	X				
W. Gregory Steube	X				
Alan Williams	X				
Clay Ford (Chair)	X				
	Total Yeas: 15	Total Nays: 0)		

PCB ENUS 11-01 Amendments

Amendment	1	-	Line	500-	1888	-Rep.	Clemens.	s	ponsor

X Withdrawn

Amendment 2 - Lines 500-1888-Rep. Clemens, sponsor.

X Withdrawn

Amendment 3 - Lines 307-456-Rep Albrittion, sponsor.

X Withdrawn

Amendment 4 - Lines 333-335 (hand written)-Rep. Albrittion, sponsor.

X Not Considered

Appearances:

Jon Moyle (Lobbyist) - Opponent Florida Industrial Power Users Group 118 N. Gadsen Street Tallahassee Florida 32301 Phone: 850-681-3828

Energy & Utilities Subcommittee

3/29/2011 8:00:00AM

Location: Webster Hall (212 Knott)
Bruce Kershner (Lobbyist) - Proponent
Florida Solar Energy Industries Association
231 West Bay Avenue
Longwood Florida 32750
Phone: 407-339-2010

Rep. Albrittion's Amendment
Kent Crook (General Public) - Proponent
Tko Investments Inc
12201 SW 128th Court, Suite 101
Miami Florida 33186
Phone: 305-378-4011

Heather Beaven - Proponent
Operation Free-The Truman Project
203 London Drive
Palm Coast Florida 32137
Phone: 386-445-3811

Dan Holladay - Proponent SEMATECH 2706 Montopolis Drive Austin Texas 78704 Phone: 512-356-3564

Josh Kellam - Proponent Global Energy United LLC 3333 Virginia Beach Blvd. Virginia Beach Virginia 23452 Phone: 757-286-4183

Tony Shay - Proponent Petra Solar 1717 Azure Drive Wall New Jersey 07753 Phone: 908-692-2514

Jack Sullivan - Proponent
Florida Research ConsortiumFL Solar Energy Center
150 S. Monroe Street, Suite 300
Tallahassee Florida 32301
Phone: 850-425-52223

Rudy Magasrevy - Proponent Hypower, Inc. 5913 NW 31st Avenue Ft. Lauderdale Florida 33309 Phone: 954-609-1575

Jose Gonzalez (Lobbyist) - Proponent Associated Industries of Florida 576 N. Adams Tallahassee Florida 32301 Phone: 850-224-7173

Print Date: 3/29/2011 3:30 pm

Energy & Utilities Subcommittee

3/29/2011 8:00:00AM

Location: Webster Hall (212 Knott)

Donald Ryan - Opponent Solar Impact

4509 NW 23rd Avenue Gainesville Florida 32606 Phone: 352-338-8221

Susan Glickman (Lobbyist) - Proponent Southern Alliance for Clean Energy Post Office Box 310

Indian Rocks Beach Florida 33785

Phone: 727-595-7314

Michelle Curtis (Lobbyist) - Information Only

Buckeye One Buckeye Drive

Perry Florida 32347 Phone: 850-584-1218

Rep. Albrittion's Amendment Charles Hinson (Lobbyist) - Information Only Tampa Electric Company 106 E. College Avenue Tallahassee Florida 32301

Phone: 850-508-0758

Rep. Albrittion's Amendment
Terry Deason (Lobbyist) - Opponent
FPL, TECO, Gulf Power, Progress Energy
301 S. Bronough
Tallahassee FL 32301
Phone: 850-425-6654

Rep. Albrittion's Amendment
Bill Johnson - Proponent
Brilliant Harvest, LLC
3455 West Forest Lakes Drive
Sarasota Florida 34232
Phone: 941-345-7652

Rep. Albrittion's Amendment
Richard Pinsky (Lobbyist) - Proponent
FL Alliance for Renewable Energy
106 E. College, Suite 1200
Tallahassee Florida 32301
Phone: 850-224-9634

Rep. Albrittion's Amendment
David Cullen (Lobbyist) - Proponent
Sierra Club Florida
820 E. Call Street
Tallahassee Florida 32301
Phone: 941-323-2404

Print Date: 3/29/2011 3:30 pm

Energy & Utilities Subcommittee

3/29/2011 8:00:00AM

Location: Webster Hall (212 Knott)

Rep. Albrittion's Amendment
Dani Torcolacci - Proponent
Hurricane Wind
407 Lincoln road
Miami Beach Florida 33139
Phone: 248-217-4805

Rep. Albrittion's Amendment Scott McIntyre - Proponent Solar Energy Management 1058 42nd Avenue North-East St. Petersburg Florida 33703 Phone: 727-430-3043

Rep. Albrittion's Amendment Monica Kennedy - Proponent Elite Solar 4726 E. Trails Drive Sarasota Florida 34232 Phone: 941-915-9911

Rep. Albrittion's Amendment Wolfgang Beaugrand - Proponent Solar Dealers 4477 Sabrina Terrace Port Charlotte Florida 34286 Phone: 941-312-1221

Elaine Brown - Proponent
Advanced Roofing
212 Canal Street
Ponte Vedra Florida 32082
Phone: 904-318-5904

Eric Draper - Information Only Audubon of Florida

Eric Draper - Proponent Audubon of Florida 308 N Monroe Street Tallahassee Florida 32312 Phone: 850-227-7571

Print Date: 3/29/2011 3:30 pm Leagis ® Page 7 of 8

#3

LEGISLATIVE ACTION

Senate . House

Energy + Utilities Subcommittee

The Committee on Communications, Energy, and Public Utilities (Altman) recommended the following: Rep. Albrith N

Senate Amendment (with title amendment) 307 - 456

Delete lines 146 251

and insert:

1

2 3

4

5

6

7

8

9

10

11

12

(3) Subject to the provisions of this subsection, in order to provide for the most cost-effective development and deployment of renewable energy resources in this state, the commission shall provide for the full cost recovery under the

environmental cost-recovery clause of all reasonable and prudent

costs incurred by a provider to produce or purchase, pursuant to

the provisions of this section, renewable energy for the

purposes of supplying electrical energy to its retail customers.

14 <u>to</u> 15 <u>fro</u>

- (a) Each provider shall purchase renewable energy pursuant to a standard form contract for the purchase of renewable energy from different types of renewable energy facilities located in Florida.
- 1. The price to be paid for renewable energy purchased through a standard form contract shall be expressed in a levelized, or constant, price per kilowatt hour for the term of the contract. The price shall be determined by a competitive auction conducted by an independent auction administrator engaged by the commission to ensure the objectivity and fairness of the auction. The provider shall reimburse the commission for the cost for the independent auction administrator, and the cost is recoverable by the provider through the environmental cost-recovery clause.
- 2. The terms and conditions of the standard form contract shall be determined pursuant to the hearing conducted by the commission before the issuance of such contract and the conduct of the auction provided for in this paragraph.
- 3. For a renewable electric generating facility to be eligible to participate in the auction, the renewable energy supplier's facility must be located in Florida.
- 4. A contract shall be for a minimum term of 20 years and a maximum term of 30 years, with the term in years to be among the terms and conditions to be established by the commission pursuant to the hearing provided for in this paragraph.
- (b) Each provider must offer, as its minimum, a standard form contract for each of the following types and size classes of renewable energy technologies:
 - 1. Large (greater than 1,000 kilowatts), medium (greater

than 100 kilowatts but less than or equal to 999 kilowatts), and small (less than or equal to 100 kilowatts) solar electric technologies, including photovoltaic, solar thermoelectric, and solar thermal generating technologies, as well as other electric production technologies that convert solar energy into electricity, and also including fuel cells that are fueled by hydrogen produced from hydrolysis of water using electricity produced by solar technologies;

- 2. Large (greater than 100 kilowatts) and small (less than or equal to 100 kilowatts) wind technologies;
- 3. Large (greater than 100 kilowatts) and small (less than or equal to 100 kilowatts) hydroelectric technologies, including technologies that utilize the energy in waves, ocean currents, and thermal energy differentials;
- 4. Large (greater than or equal to 10 megawatts), medium (greater than 100 kilowatts but less than 10 megawatts), and small (less than or equal to 100 kilowatts) biomass technologies; and
- 5 Large (greater than 100 kilowatts) and small (less than or equal to 100 kilowatts) waste heat technologies.
- (c) Each provider may expend in 2011 and in each calendar year thereafter 2 percent of the provider's total retail revenues for renewable energy. The purchase is in addition to the provider's avoided as-available energy cost for the energy purchased. The provider's total retail revenues include all cost adjustment, cost recovery, and similar add-on charges collected by the provider in the preceding calendar year. However, the total retail revenues exclude only franchise fee revenues. Ten percent of the amount designated for each technology type shall

be reserved for small renewable energy production facilities of the respective technology. A provider may expend in any year up to an additional 1 percent above the minimum amounts required in this subsection of the provider's total retail revenues, including all cost adjustment, cost recovery, and similar add-on charges, collected by the provider in the preceding calendar year, excluding only franchise fee revenues.

- (d) 1. The commission shall require that a minimum of 25 percent of the total funding to be expended by each provider on the purchase of solar energy. Each utility shall make available a minimum of 10 percent of the utility's applicable amount for small solar suppliers and a minimum of 20 percent of the utility's applicable amount for medium solar suppliers. The commission may establish minimum percentages of the funding that is to be expended for renewable energy for wind energy and other renewable energy technologies.
- 2. If the bids received from the auction are insufficient to expend the total amount of funds available, the residual funds are available for either technologies other than the under-subscribed technologies or to be carried forward and expended on a pro rata basis over the succeeding 4 years.
- (e) Each provider may elect to provide up to, but no more than, 25 percent of the total amount of renewable energy to be purchased for each technology type listed in paragraph (b). If the provider elects this option, the provider's cost recovery shall be limited to the lowest price bid by any respondent in the auction for supplying renewable energy of the respective technology type for the life of the commitment.
 - (f) After a contract is executed or the provider has

elected to provide a portion of the renewable energy under paragraph (c), the provider may not recover costs any greater than the contract price or the price determined under paragraph (c).

- (g) Each provider may recover through the environmental cost-recovery clause an amount equal to 0.005 percent of all moneys paid to unaffiliated renewable energy producers to purchase renewable energy.
- (h) A provider may recover only the costs for new construction or conversion projects for which construction commenced on or after July 1, 2011, and for purchases made on or after that date. All renewable energy projects for which costs are approved by the commission for recovery through the environmental cost-recovery clause before July 1, 2011, are not subject to or included in the calculation pursuant to paragraph (c).
- (i) In a proceeding to recover costs, a provider must provide to the commission all cost information, hourly energy production information, and other information deemed relevant by the commission with respect to each project.
- (j) If a provider purchases renewable energy at a cost in excess of its full avoided cost, the seller must surrender to the provider all renewable attributes of the renewable energy purchased.
- (k) Revenues derived from any renewable energy credit, carbon credit, green tag credit, renewable energy attribute, or any other mechanism that attributes value to the production of renewable energy, either existing or hereafter devised, and received by a provider by virtue of the production or purchase

130 131

132

133

134

135

136

137

138

139

140

141

142

143 144

145

146

147 148

149

150

151

152

153

154 155

157

of renewable energy for which cost recovery is approved, shall be shared with the provider's ratepayers such that the ratepayers are credited at least 90 percent of such revenues. However, the provider is not required to share with its ratepayers any value derived from credits received by the provider by virtue of the purchase of renewable energy from a third-party generating facility in the state which does not exceed 2 megawatts in capacity and is not a regulated utility or its unregulated affiliate.

- (1) A renewable energy generating facility that is constructed by a renewable energy supplier or by a provider to provide renewable energy is not subject to s. 403.519. The commission is not required to submit a report for the project pursuant to s. 403.507(4)(a).
- (4) Each provider shall, in its 10-year site plan submitted to the commission, provide the following information:
- (a) The amount of renewable energy resources the provider produces or purchases.
- (b) The amount of renewable energy resources the provider plans to produce or purchase over the 10-year planning horizon and the means by which such production or purchases will be achieved.
- (c) A statement indicating how the production and purchase of renewable energy resources impact the provider's present and future capacity and energy needs.

======== T I T L E A M E N D M E N T =========== 156

And the title is amended as follows:

Delete line 17

158	and insert:
159	conditions; requiring providers to submit certain
160	information to the commission in its 10-year site
161	plan;

					21 7x \		
O'DEPRES ON	Conneil	Committee/S	Subcommittee	e on	X/X	\mathbf{X}^{*}	
197	, , , , , , , , , , , , , , , , , , , ,				V X		
est al la se	<u> </u>			· · · · · · · · · · · · · · · · · · ·	$N \sim$		
	Date		ry in the line of	All the property of the	$\cdot \Lambda$		
V. Francis	Dave			######################################			
William .	3.1 (14.				Action		

HOUSE AMENDMENT FOR DRAFTING PURPOSES ONLY

(may be used in Council/Committee/Subcommittee, but not on House Floor)

Amendment No	Bill No. <u>PCB #NUS (1—</u> 01
(For filing with the Clerk, Council, Committee and Member Amendments m	ust be prepared by House Bill Drafting Services (Rule 12.1))
Representative(s)/The Council/Committee/Subcommit	ee on EUN64 + UTLS SE
ancoultrand REP, MUSRIT	TON
offered the following amendment:	
Amendment	
on page 12, line(s) 333-	· <u>335</u> ,
+ insect	
Subject to the cost The provider must p energy eligible to	- cap in paragraph (
The provider must o	rocure rerouable
energy elitible fo	rost recovery
under this section	through a competitive
process administered	by an independent
third pary, Are E	Locida Publiz Senice
Commission is aut	
rules necessary a	n implement the
competitive proce	rement process. However, at
regulared herein	. However, at
Teast 20	



Monday, January 31, 2011

The Honorable Rick Scott
Office of the Governor
State of Florida
The Capitol
400 S. Monroe St.
Tallahassee, FL 32399-0001

Dear Governor Scott,

Attached you will find a position paper by the Florida Research Consortium that asks state leaders to allow utilities to earn a return on voluntary investments in renewable energy projects. We believe this is an essential step in the formation of a renewable energy cluster in Florida.

The Washington Economic Group and Citizens for Clean Energy, among others, are rightly focused on job creation that will result from this small step. Our purposes are first, to validate their projections by providing you with what the capital markets are saying about the potential for this industry and second, to tell you why we believe it is essential for Florida to do this now.

As a highly successful businessman in a highly regulated industry, you recognize that earning a fair return is the essential element in the decision to place capital. That is what is being asked for, nothing more, nothing less. Over the long haul, we believe this step will in fact save consumers additional dollars in fuel surcharges, result in greater consumer choice and help diversify fuel sources beyond price and supply volatile fossil fuels.

We are taking this position because the Florida Research Consortium Board is the state's most focused yet widest ranging advocate for knowledge based economic development. Members include SUS research universities, three private research universities, five private research institutes, Fortune 500 companies, FP&L Group, AT&T, IBM and a dozen other private sector members from startup Nanotherapeutics to the Lake Nona Science and Technology Park.

We assisted with the development and implementation of programs like Centers of Excellence, the 21st Century World Class Scholar's program, the Innovation Fund, the State University Research Commercialization Grant Program, the Institute for the Commercialization of Public Research, Economic Gardening and the Florida Opportunity Fund.

We recognize that without a private sector taking up the fruits of Florida's research enterprises, our efforts are devalued. We advocate for this now as an essential piece for your job creation plans and Florida's bright future.

Best Regards,

Jack Sullivan, Jr. President/CEO



Florida Poised to Lead in Renewable Energy

The Opportunity

According to Merrill Lynch Cleantech Strategist, Steven Milunovich, the sixth technology revolution will be driven by clean technology and biotech. "History shows that technology revolutions occur every 50 years. We believe cleantech is at the beginning of a high-growth period much like computing was in the early 1970s. The application of technology to resource problems should cause profound changes in the energy, utility, and automotive industries," said Milunovich. This opinion is supported by changes in the flow of venture capital. As noted in Table 1, investments in "Clean Energy" companies in the US increased 20 fold from 6/10^{ths} of a percent to almost 12% of total venture investment from 2000 to 2008.

In fact, according to the **MoneyTree Report** by PricewaterhouseCoopers and the National Venture Capital Association, by 2010 the percentage of venture money allocated to Cleantech Ventures rose to 17%.ⁱⁱ Risk capital is shouting that renewable energy and

Clean-Energy Venture Capital Investments in U.S.-Based
Companies as Percent of Total

	Total Venture	Energy Technology	
		Investments (US	% of Venture
Year	(US \$Billions)	\$ Millions)	Total
2000	\$105.1	\$599	0.60%
2001	\$40.6	\$584	2.20%
2002	\$22.0	\$483	2.20%
2003	\$19.7	\$446	2.30%
2004	\$22.5	\$663	2.90%
2005	\$23.0	\$1,038	4.50%
2006	\$26.5	\$1,555	5.90%
2007	\$29.4	\$2,665	9.10%
2008	\$28.3	\$3,351	11.84%
Tahl	e 1 Source: Clea	n Energy Trends	2009

Table 1, Source: Clean Energy Trends 2009

cleantech, as the fastest growing investment segments, are poised to form the next high growth business and employment clusters. **The only questions are where and how they develop**.

Barriers and Timing: Allow Utilities a Return on Voluntary Investments in Renewables Now!

In a January white paper on the subject of the creation of new jobs from renewable energy, Lynda Weatherman, president of the Economic Development Council of Florida's Space Coast, rightly notes: "It is important to understand that true and significant industrial clusters are shaped when those industries are being developed. New economies shift and magnets are drawn. Once that occurs, relocation is a non starter and the best other areas can hope for are ancillary sub sets of those national industrial drivers.... This is one time in Florida's economic development history that we have the presence and knowledge prior to the solidification of an industrial cluster. But as in any opportunity, the window opens and closes rapidly. As these emerging companies grow, decisions to locate will be made."

This white paper goes on to say, "This industry must have the local market present to create the demand necessary, and in effect, the critical mass required to build a manufacturing plant in Florida." Other states have taken aggressive policy approaches to creating "local market demand", which thus far Florida has eschewed. However, Florida policy makers have demonstrated that local demand is created when the small step of returns on voluntary utility investments in renewables are allowed.

Utilities are conservative and sophisticated business entities that avoid fad or interests beyond those of their stakeholders and customers. With the advent of smart grid technology, distributed generation and new storage options, this regulated industry may be ripe for a transformative shift, akin to that in telecommunications. Should this occur, there will be winners and there will be losers. Greater flexibility with regard to regulated returns on investments in renewable energy alternatives will help to ultimately diversify consumer choice and our energy security. The fact is that Investor Owned Utilities are responsible for 76%^{iv} of the electricity sales in state. They are the sector where sufficient demand can be generated to locate this "new business cluster" in Florida. **We must knock this impeding barrier out of the way!**

¹ Merrill Lynch Research Calls Cleantech the Sixth Technology Revolution. Merrill Lynch Newsroom. November 24, 2008.

^{II} Clean Technology crosses traditional MoneyTree industries and comprises alternative energy, pollution and recycling, power supplies and conservation.

http://www.spacecoastedc.org/LinkClick.aspx?fileticket=VWvq0zflZ7c%3D&tabid=357

iv http://www.eia.doe.gov/cneaf/electricity/esr/esr_sum.html



FLORIDA SOLAR ENERGY CENTER®

VIA FAX AND OVERNIGHT MAIL

Governor Rick Scott
State of Florida
The Capitol
400 S. Monroe St.
Tallahassee, FL 32399-0001

February 1, 2011

Dear Governor Rick Scott,

We are writing to express our strong support for the expedient passage of a sound renewable energy policy in Florida. Such a policy would create significant economic and social opportunities for our state by immediately stimulating the economy and by putting Floridians to work. It would immediately reduce by tens of millions of dollars the unemployment benefits the state is currently paying and providing millions of dollars in new revenue to local governments.

We support a renewable energy policy that will allow utilities to immediately build or purchase diverse forms of renewable energy including large scale solar, biomass, energy from waste (efw), wind, and rooftop solar, with a cost recovery mechanism and cap to protect Florida consumers. This type of progressive policy would establish a sustainable market for renewable energy, and provide market based incentives for companies to relocate to Florida from out of state and overseas. Most importantly, it would create jobs at a time when unemployment in Florida is at a record high and reduce the tremendous burden we all shoulder as taxpayers.

Today, 35 states have renewable energy policies and they are reaping the benefits of a clean energy economy by attracting industries that should be coming to Florida. Other countries, such as China, have positioned themselves to capture existing and future renewable markets with significant manufacturing capabilities and their actions have already led to the creation of over one million clean energy jobs. [New York Times; September 8, 2010 "On Clean Energy, China Skirts Rules" by KEITH BRADSHER]

As you know the Florida Solar Energy Center (FSEC) is part of UCF and at a meeting on October 25, 2010 of their Policy Advisory Board the following resolution was passed:

"Establishing a Market for Renewable Energy: Investing in Florida's Future Economic Sustainability

It is imperative for Florida's economic sustainability that the State of Florida establishes and incentivizes a renewable energy goal that establishes a marketplace for renewable energy. Without a strong renewable energy market in Florida, the high-wage manufacturing, engineering, and research and development jobs for renewable energy products will go elsewhere. Clean energy technologies create jobs, attract new industry investment and diversify fuel types, reducing the state's dependence on imported fossil fuels. From a competitive perspective, 35 other states and the District of Columbia have renewable energy goals - Florida does not. If we do not quickly establish a strong renewable energy market place within Florida, the high paying jobs associated with this industry will likely be lost to Floridians forever."



This position is not unique to those from the energy industry as represented by FSEC's Advisory Board. A Florida Tax Watch poll (SunSentinel, 11-10/2010) of likely Florida voters revealed that: 80% want elected officials to take action to require more renewable energy production in Florida and 70% said they are willing to pay more in their monthly electric bills for new renewable energy.

There is no more time to lose..... nearly every week there are new announcements of solar and other renewable energy factories being built in other states with progressive, job producing energy policies such as Arizona and Texas. Our time is now. We have the trained workforce, abundant natural resources and a proven track record of being able to develop, build and successfully operate renewable energy projects at very competitive pricing.

As we did in the 1960's when NASA came to the Space Coast, we have a once in a generation opportunity to put Florida on the world stage, but we need your vision, support and strong leadership. We ask that you please take the time to seriously consider passing renewable energy legislation and help us to rebuild our great state. The stakes for our economy, our workforce and for our future generations has never been greater.

Enclosed are the following:

- 1. Copy of a letter sent to Senate President Mike Hardopolos on November 12, 2010;
- 2. Copy of the Resolution passed by the Policy Advisory Board of Florida Energy Center at its meeting on October 20, 2010;
- 3. "Why should we invest in a Renewable energy future for Floridians?" prepared by Florida Solar Energy Center;
- 4. "Establishing a Market for Renewable Energy: Investing in Florida's Future Economic Sustainability" also prepared by Florida Solar Energy Center.

In closing we want to thank you again for your support of our competitive Department of Energy proposal to establish an industry lead Photovoltaic Manufacturing Consortium in our state. A renewable energy policy for our state would help accelerate the job growth associated with that project.

Chairman, Policy Advisory Board to The Florida Solar Energy Center

Sincerety, 10 mmy Borous

cc: M.J. Soileau, VP for Research and Commercialization (w/encs.)
Dan Holsenbeck, VP for University Relations (w/encs.)
John C. Hitt, President, University of Central Florida (w/encs.)

FLORIDA SOLAR ENERGY CENTER*



Senate President Mike Haridopolos 420 Senate Office Buliding 404 South Monroe Street Tallahassee, Fl 32399

Dear President Haridopolos,

We are writing to express our strong support for the expedient passage of a sound renewable energy policy in Florida during a special session to take place prior to year's end. Such a policy would create significant economic and social opportunities for our state by immediately stimulating the economy and by putting Floridians to work. It would immediately reduce by tens of millions of dollars the unemployment benefits the state is currently paying and providing millions of dollars in new revenue to local governments. A quick passage of the bill will put companies in a greater position to receive federal grants that will expire December 31, 2010, thereby improving project economics and benefiting Florida consumers.

We support a renewable energy policy that will allow utilities to immediately build or purchase diverse forms of renewable energy including large scale solar, biomass, energy from waste (efw), wind, and rooftop solar, with a cost recovery mechanism and cap to protect Florida consumers. This type of progressive policy would establish a sustainable market for renewable energy, and provide market based incentives for companies to relocate to Florida from out of state and overseas. Most importantly, it would create jobs at a time when unemployment in Florida is at a record high and reduce the tremendous burden we all shoulder as taxpayers.

Today, 35 states have renewable energy policies and they are reaping the benefits of a clean energy economy by attracting industries that should be coming to Florida. Other countries, such as China, have positioned themselves to capture existing and future renewable markets with significant manufacturing capabilities and their actions have already led to the creation of over one million clean energy jobs. [New York Times; September 8, 2010 "On Clean Energy, China Skirts Rules" by KEITH BRADSHER]

As you know the Florida Solar Energy Center (FSEC) is part of UCF and at a meeting on October 25, 2010 of their Policy Advisory Board the following resolution was passed:

"Establishing a Market for Renewable Energy: Investing in Florida's Future Economic Sustainability

It is imperative for Florida's economic sustainability that the State of Florida establishes and incentivizes a renewable energy goal that establishes a marketplace for renewable energy. Without a strong renewable energy market in Florida, the high-wage manufacturing, engineering, and research and development jobs for renewable energy products will go elsewhere. Clean energy technologies create jobs, attract new industry investment and diversify fuel types, reducing the state's dependence on imported fossil fuels. From a competitive perspective, 35 other states and the District of Columbia have renewable energy goals — Florida does not. If we do not quickly establish a strong



FLORIDA SOLAR ENERGY CENTER®

renewable energy market place within Florida, the high paying jobs associated with this industry will likely be lost to Floridians forever."

This position is not unique to those from the energy industry as represented by FSEC's Advisory Board. Florida TaxWatch recently release (SunSentinel, 11-10/2010) a poll of likely Florida voters that revieled:

80% want elected officials to take action to require more renewable energy production in Florida and 70% said they are willing to pay more in their monthly electric bills for new renewable energy.

There is no more time to lose...nearly every week there are new announcements of solar and other renewable energy factories being built in other states with progressive, job producing energy policies such as Arizona and Texas. Our time is now. We have the trained workforce, abundant natural resources and a proven track record of being able to develop, build and successfully operate renewable energy projects at very competitive pricing.

As we did in the 1960's when NASA came to the Space Coast, we have a once in a generation opportunity to put Florida on the world stage, but we need your vision, support and strong leadership. We ask that you please take the time to seriously consider passing renewable energy legislation and help us to rebuild our great state. The stakes for our economy, our workforce and for our future generations has never been greater.

In closing we want to thank you again for your support of our competitive Department of Energy proposal to establish an industry lead Photovoltaic Manufacturing Consortium in our state. A renewable energy policy for our state would help accelerate the job growth associated with that project.

Sincerely,

Tommy Boroughs

President

Policy Makers Board of The Florida Solar Energy Center

Borowahs

cc: M.J. Soileau, VP for Research and Commercialization Dan Holsenbeck, VP for University Relations John C. Hitt, President, University of Central Florida



Resolution that FSEC Policy Advisory Board passed October 2010

Establishing a Market for Renewable Energy: Investing in Florida's Future Economic Sustainability

It is imperative for Florida's economic sustainability that the State of Florida establishes and incentivizes a renewable energy goal that establishes a marketplace for renewable energy. Without a strong renewable energy market in Florida, the high—wage manufacturing, engineering, and research and development jobs for renewable energy products will go elsewhere. Clean energy technologies create jobs, attract new industry investment and diversify fuel types, reducing the state's dependence on imported fossil fuels. From a competitive perspective, 35 other states and the District of Columbia have renewable energy goals — Florida does not. If we do not quickly establish a strong renewable energy market place within Florida, the high paying jobs associated with this industry will likely be lost to Floridians forever.

Why should we invest in a Renewable energy future for Floridians?

Because energy costs will rise faster if we don't than if we do

- Florida currently exports about \$40 billion in hard-earned capital to other states and countries to pay for fuels let's keep more of that capital in Florida
- Florida's Public Service Commission projects that average household energy use will decline by 0.2% per year over the next 10 years but the price of energy is projected to rise by 4.7% per year over that same time

Because energy security and economic sustainability are imperatives for Florida

- The solar resource is our only known energy source that is not subject to global politics, outsourcing, government instability, natural disasters, terrorism or fuel escalation
- While the initial cost of solar energy systems may be somewhat greater, fuel costs are zero as far out into the future as we can project
- While the cost of conventional energy systems is rising, the cost of photovoltaic systems is declining.

Because Floridians need jobs

- Recent studies show job creation for photovoltaic technology to range from 15-45 jobs per megawatt (MW) of installed capacity, depending on whether manufacture is local or outsourced.
- A recent study by the Washington Economics Group shows that 40,000 jobs would be created with renewable energy legislation providing for 700 MW of increased PV capacity
- A number of manufacturing and research and development companies have indicated that they would relocate to Florida if renewable energy legislation is passed
- More than 75% of renewable energy jobs are in the manufacturing and construction industries the exact skill-sets of many who are unemployed in Florida's construction trades
- A strong renewable energy market can result in up to 2.3 new business firms and 25 direct jobs in green manufacturing and construction per MW of production.

Because Floridians and our visitors treasure our pristine environment

- A renewable energy market will significantly reduce Florida's green house gas footprint, improving Florida's air and water quality and allaying future costs of environmental abatement
- Solar PV projects consume no water and generate zero emissions
- Solar technologies will relieve Florida's need for unreliable, risky, polluting and imported conventional fossil fuels
- Florida's pristine environment attracts significant tourism, a source of many jobs and significant economic activity in Florida.

Establishing a Market for Renewable Energy: Investing in Florida's Future Economic Sustainability

The US used 3,870 billion kWh (TWh) of electricity in 2008 and is expected to use 4,785 TWh by 2030. Florida used 217 billion kWh (TWh) of electricity in 2008 and if Florida increases its energy utilization at the same rate as the nation, Florida is expected to use 270 TWh by 2030. The US consumed 21 million barrels of oil/day (importing 62%) in 2008 and is expected to consume 25 million barrels of oil/day (importing 75%) by 2030. The cost of fossil fuels, level from 1980 until 2000, has increased on average more than 4% per year since 2000. The average residential electricity rate (US and Florida rates are approximately equal) has gone from roughly \$0.08 per kWh in the 1980's and 1990's to more than \$0.11 per kWh today. If the out-of-the wall cost continues to increase at the rate of the last seven years, 4.7%, the nation and Florida will pay \$0.14 in 2015, \$0.17 in 2020, and \$0.28 per kWh in 2030.

While the cost of fossil fuels can only go up, the cost of solar photovoltaics is going down. The cost of power from rooftop solar panels is projected by the U.S. Department of Energy (DOE) to drop from a mean of \$0.21 per kWh in 2009 to about \$0.10 per kWh in 2015, which is less than the price the nation and Florida pays for electricity out—of-the-wall today (grid parity is reached). Further, the cost of rooftop solar power could drop to as low as \$0.06 per kWh by 2030. If only 10% of the 4,785 TWh of electricity used in 2030 comes from photovoltaics (479 TWh for the US and 27 TWh for Florida) this is equivalent to 319,000 MWs of installed PV in the US (18,000 MWs of installed PV in Florida). This 10% of the electricity from PV in 2030 would save residents of the US, \$105 billion ((\$0.28 - \$0.06) x 479 x 10⁹) and residents of Florida, \$5.9 billion ((\$0.28 - \$0.06) x 27 x 10⁹) per year in electricity costs. If the PV panel equipment is manufactured in the US, 13 US manufacturing jobs and 12 US installation jobs per MW are created.⁵

Since rooftop solar power will be substantially less in cost than conventional electricity from fossil fuels, the US will gain more than 3.8 million installation jobs and Florida will gain more than 216,000 installation jobs. The key question is, will the US (Florida) installers be installing US (Florida)-made panels or will we be trading our imported fossil fuels addiction for imported PV panels. If Florida were to manufacture all of its 18,000 MWs of PV installed by 2030, Florida would have 234,000 manufacturing jobs and 216,000 installation jobs and save its residents \$5.9 billion per year in electric bills and all the money spent on the 18,000 MWs of PV would stay in Florida.

The US has been a leader in the research and development of PV technologies. Florida, through UCF's Florida Solar Energy Center (FSEC) has led the nation in research, development, application and education of PV technologies for thirty-five years. The US and Florida leadership in R&D&A&E has not followed through to leadership in manufacturing, as US-made PV products constitute less than 10% of the world output. Florida's lack of competitiveness can be directly linked to a lack of market in Florida (Florida does not have a renewable energy goal which sets the market) and limitations in manufacturing that lead to PV products that are not technically or economically globally competitive. It is imperative that Florida establish a renewable energy goal so that a market exists for Photovoltaic's Manufactured in Florida. The Photovoltaic Manufacturing Consortium (PVMC), which is being established in Florida, will promote PV manufacturing and its supply chain through focused research and incubation of PV manufacturing entities. If a market is established in Florida, then the PVMC will serve both Florida and the whole nation and Florida will capture manufacturing jobs beyond its own market.

¹ Annual Energy Outlook 2010 with Projections to 2035, U.S. Energy Information Administration Report #:DOE/EIA-0383(2010), May 11, 2010, http://www.eia.doe.gov/oiaf/aeo/electricity.html

² Fairey, P., "Drilling, alternative fuels and efficiency: Can the United States wean itself from imported fuels." *Energy Policy*, Vol. 37, Issue 4, pp 1249-1256, Elsevier Press, April 2009.

³ Retail cost of gasoline, and coal and natural gas prices as purchased by utilities taken from U.S. Energy Information Administration http://www.eia.doe.gov/, data examined September 2010

⁴Average Retail Price of Electricity to Ultimate Customers: Total by End-Use Sector, Table 5.3, September 15, 2010, U.S. Energy Information Administration, http://www.eia.doe.gov/cneaf/electricity/epm/table5_3.htmlEIA data

⁵ Recent studies show job creation for photovoltaic technology to range from 15-45 jobs per megawatt (MW) of installed capacity, depending on whether manufacture is local or outsourced. One such reference: New Energy Finance, 2009

Energy & Utilities Subcommittee

3/29/2011 8:00:00AM

Location: Webster Hall (212 Knott)

PCB ENUS 11-02: Florida Public Service Commission (PSC)

X Favorable

	Yea	Nay	No Vote	Absentee Yea	Absentee Nay
Ben Albritton	X				
Charles Chestnut IV	X				
Jeff Clemens	X				
Janet Cruz	X				
Daniel Davis	X				
Shawn Harrison	X				
Clay Ingram	X				
George Moraitis, Jr.	X				
Peter Nehr	X				
Kathleen Passidomo	X	-			
Elizabeth Porter	X				
Michelle Rehwinkel Vasilinda	X				
W. Gregory Steube	X				
Alan Williams	X				
Clay Ford (Chair)	X			· · · · · · · · · · · · · · · · · · ·	
	Total Yeas: 15	Total Nays: ()		

PCB ENUS 11-02 Amendments

Amendment 1 - Lines 59-90, lines 103 & lines 525-594-Rep. A. Williams, sponsor.

X Failed to Adopt

Appearances:

Section 10 of PCB ENUS 11-02 Jon Moyle (Lobbyist) - Opponent FL Industrial Power Users 118 N Gadsden Street Tallahassee Florida 32301 Phone: 850-681-3828.

J. R. Kelly - Information Only Office of Public Counsel 111 West Madison Street, Room 812 Tallahassee Florida 32399-1400

Phone: 850-488-9330

Print Date: 3/29/2011 3:30 pm