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FPSC-COMMISSION CLERK

Florida Public 2540 Shumard	nmission Clerk Service Commission	VIA HAND DELIVERY COMMISS	08 DEC 31 PM	DECENTED-FPSC
RE:	In re: Commission review of numeric conservation goals for Florida Power & Light Company.	n DOCKET NO. 080407	。 30 ⁻ 54	:PSC
	In re: Commission review of numeric conservation goals for Progress Energy Florida, Inc.	n DOCKET NO. 080408	-EG	
	In re: Commission review of numeric conservation goals for Tampa Electric Company.	n DOCKET NO. 080409	-EG	
	In re: Commission review of numeric conservation goals for Gulf Power Company.	n DOCKET NO. 080410	-EG	
	In re: Commission review of numeric conservation goals for Florida Public Utilities Company.	n DOCKET NO. 080411	-EG	
	In re: Commission review of numeric conservation goals for Orlando Utilities Commission.	n DOCKET NO. 080412-	-EG	
	In re: Commission review of numeric conservation goals for JEA.	n DOCKET NO. 080413	-EG	

Dear Ms. Cole:

Attached please find the original and seven copies of the Comments of the Florida Solar Coalition to be filed in the above-styled dockets and one (1) copy of the Comments to be stamped and returned to our office.

 COM
 Should you have any questions or need any additional information regarding this filing please

 COM
 contact me.

 GCL
 Very truly yours,

 OPC
 Suzame Brownless

 RCP
 Suzame Brownless

 SSC
 C: 6415

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 080407-EG
 DOCKET NO. 080408-EG _/
DOCKET NO. 080409-EG
- DOCKET NO. 080410-EG
- DOCKET NO. 080411-EG
- DOCKET NO. 080412-EG
- DOCKET NO. 080413-EG

COMMENTS OF THE FLORIDA SOLAR COALITION

The Florida Solar Coalition (FSC)¹, by and through its undersigned attorney, files its Comments

on the December 15, 2008 workshop in the above-styled dockets and states as follows:

All demand-side renewable energy systems 2 MW or less should be included

Section 366.82(1)(b), F.S., defines "demand-side renewable energy" as "a system located on the customer's premises generating thermal or electric energy using Florida renewable energy resources and primarily intended to offset all or part of the customer's electricity requirements provided such system does not exceed 2 megawatts." Section 366.82(2), F.S., requires the Commission to:

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¹ The views presented are those of the Florida Solar Coalition and not necessarily those of any specific group or individual member of the Coalition.

adopt appropriate goals for increasing the efficiency of energy consumption and increasing the development of demand-side renewable energy systems, specifically including goals designed to increase the conservation of expensive resources, such as petroleum fuels, to reduce and control the growth rates of electric consumption, to reduce the growth rates of weather-sensitive peak demand and to encourage the development of demand-side renewable energy resources. [Emphasis added.]

Section 366.82(3), F.S., states:

In developing the goals, the commission shall evaluate the full technical potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems. [Emphasis added.]

In order to meet these statutory requirements the FEECA Utilities (Florida Power & Light Company (FPL), Progress Energy Florida, Inc. (PEF), Tampa Electric Company (TECO), Gulf Power Company (Gulf), Florida Public Utilities Company (FPUC), the Orlando Utilities Commission (OUC) and JEA issued an RFP and ultimately selected Itron/KEMA to prepare a technical potential study of end-use energy efficiency (EE) measures and demand-response measures. Demand-side renewable measures considered in the study were limited to solar water heating and photo-voltaic (PV) powered pool pumps. These technologies were included as part of the end-use energy efficiency measures analyzed. Rooftop solar PV systems smaller than 2 MW, direct load control, and advanced metering infrastructure were deemed outside of the EE potential analysis. [Dec.15, 2008 Presentation Slide 6]

It appears that hybrid solar thermal (hot water heating) and PV systems commonly installed in Florida in both residential and commercial settings were not analyzed at all although clearly included within the definition of "demand-side renewable energy"in § 366.82(1)(b), F.S.. Further, it is unclear how or if the interaction of net metering in the case of rooftop PV was taken into account in quantifying the potential reduction in energy and peak demand reflected in the preliminary results presented at the December 15th workshop. Slide 10 of the December 15th workshop presentation discusses the types of energy efficiency potential to be analyzed by Itron/KEMA in its energy efficiency potential analysis: technical, economic, achievable and naturally occurring. "Technical potential" is defined in the study as "complete penetration of measures analyzed in applications where deemed technically feasible from an engineering perspective." Technical potential is the "upper bound of energy efficiency potential in a technical feasibility sense, regardless of cost or acceptability to customers." [Dec. 15 presentation, Slide 11] "Economic potential" is the "technical potential of measures that are cost-effective when compared to supply-side alternatives". [Dec. 15 presentation, Slide 10]

As FSC understands the process, step one is to identify and quantify all of the measures that are technically feasible, i.e., the entire universe of energy efficiency and renewable and non-renewable demand side measures that are capable of being used in Florida from an engineering standpoint. Step one is not supposed to reflect the economic potential; it is not supposed to screen measures based upon a comparison to the cost of supply-side alternatives. The economic and achievable analyses are supposed to occur in step two where potential MWh savings from all technically feasible programs are balanced against the cost to achieve those savings.

However, small customer-sited PV and hybrid PV/solar thermal systems have been excluded from the list of technologies included in the technical potential study exactly because they were deemed not to be cost-effective. As explained at the November 3rd workshop in this docket by the FEECA Utilities' counsel:

Now, a lot of attention has been paid to demand-side renewable resources, and it is worth noting to you that the scope of the technical potential includes solar hot water heaters and PV powered pool pumps in the area of renewables. However, stand-alone PV [Note: FSC assumes this refers to customer-sited whether grid-tied or off-grid] systems are not directly addressed because they are not cost-effective under either the total resource test or the rate impact test. But we can add them back into the study if the Commission so desires.

[T. at 12; emphasis added.]

The Commission Staff has issued interrogatories and production of documents requests to the FEECA Utilities ² asking for an explanation of why only demand-side renewable resources were subjected to a cost-effectiveness screening before being included in the technical potential study and requesting the results of the cost-effectiveness tests that supported their elimination from the technical potential study. While the FEECA Utilities' answer to this question will be enlightening, FSC strongly urges the Commission to take the Utilities up on their offer and require that these established, viable technologies be included in the technical potential study now. Unless this is done, the crucial baseline data developed for all of the other 276 measures will not be developed for these technologies. Without inclusion in the technical potential study, the economic and achievable studies that result in the numeric goals established for each utility can't be conducted. Exclusion of these technologies now excludes them from being included in programs later.

It is the Commission, not the FEECA Utilities that are ultimately tasked with balancing the costs and benefits of all energy efficiency and demand-side renewable resources to the customers participating in an approved measure with those of the general body of ratepayers as a whole. It is the Commission, not the FEECA Utilities, that will ultimately determine what cost-effectiveness tests are to be applied to determine if a measure is cost-effective or not, an issue that is hotly contested by the parties in this docket. The FEECA Utilities argue that the Ratepayer Impact Measure (RIM) test is still the definitive cost-effectiveness test notwithstanding the newly adopted language of §366.82(3)(b), F.S. FSC argues that the newly adopted language of §366.82(3)(b)³, F.S., requires the sole application of the Total

² Staff's First Set of Interrogatories Nos. 1-9 issued on December 12, 2008.

³ "(3) In developing the goals, the commission shall evaluate the full technical potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems. In establishing the goals, the commission shall take into consideration:

⁽a) The costs and benefits to customers participating in the measure.

⁽b) The costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions.

⁽c) The need for incentives to promote both customer-owned and utility-owned energy efficiency and

Resource Cost (TRC) test or some variation of it. Allowing the FEECA Utilities to eliminate small customer-sited PV systems and solar thermal/PV systems from the technical potential analysis so that no analysis of these systems is conducted is to delegate to the utilities the Commission's legislatively directed responsibilities under §§ 366.82(2) and (3), F.S.

Solar technologies are cost-effective

While FSC reaffirms that cost-effectiveness should not have been considered in this phase of the docket, since it has been brought into the record, we feel compelled to address it. Section 366.92(3)(d), F.S., specifically states that FEECA goals shall take into consideration the costs imposed on utilities for the state and federal regulation of green house gases. It should be remembered that FEECA was not revised in a vacuum in the 2007 legislative session but as a part of a comprehensive energy bill which addressed encouraging renewable energy as a tool to reduce the production of green house gases. [Sections 42, 44, 45, 46, 65, Chapter 2008-227, Laws of Florida.]

FSC questions the cost data used for solar technologies in the technical potential study for several reasons. First, Itron/KEMA used a fixed levelized cost rather than a levelized cost that significantly decreases over time. This assumption is at odds with industry analyses. As an example, Lazard reports that capital costs today for crystalline PV range from a low of \$5,500 to a high of \$6,000/kW but are expected to decline to \$5,000 by 2010 and \$4,000 by 2012. For thin film technologies, today's capital costs range from \$3,500 to \$4,000/kW but are expected to drop to \$2,750 by 2010 and \$2,000 by 2012. These costs ranges compare favorably to IGCC (\$3,750-\$5,500/kW), coal (\$2,550-\$5,350) and nuclear (\$5,750-\$7,550).⁴

Second, a comparison of capital costs alone is not reflective of the life-cycle costs that Florida

demand-side renewable energy systems.

⁽d) The costs imposed by state and federal regulations on the emission of greenhouse gases."

⁴ "Levelized Cost of Energy Analysis- Verson 2.0", Lazard Freres in Comments of the Solar Alliance on the Draft New Jersey Energy Master Plan to the New Jersey Board of Public Utilities, July 25, 2008.

ratepayers ultimately bear for resource choices made today. A comparison of installed cost ignores ongoing fuel, operating and maintenance expenses over the generator's lifetime. For fossil-fueled technologies, these costs have typically exceeded capital costs by a factor of ten or more. For solar, which uses no fuel and costs very little to operate and maintain over the plant's lifetime, they are negligible: what you see is what it costs. Nor does this comparison take into account the fact that distributed solar generation reduces the amount of transmission and distribution lines necessary, and thus the capital expenditure for those facilities, to serve both average and peak demand loads. For small commercial and residential solar installations, virtually all of the electricity is produced on site and used on site.

For the reasons stated above, FSC believes that both solar water heating and customer-sited PV can make a meaningful contribution to Florida demand side and conservation measures. FSC urges the FEECA Utilities and the PSC to include these technologies in its technical potential study and subsequent proceedings in order to comply with §366.82(2), F.S. FSC looks forward to working with the FEECA Utilities and Commission to design a successful demand side renewables program.

Respectfully submitted this <u>35</u> day of <u>Ocember</u>, 2008 by:

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