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090451-EM

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**Sent:** Thursday, May 13, 2010 5:04 PM  
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**Cc:** 'Paula Stahmer'  
**Subject:** Post Hearing Brief  
**Attachments:** 090451 Intervener Deevey's Post Hearing Brief 5-13-2010.pdf

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b. 090451-EM

In Re: Joint Petition to Determine Need for Gainesville Renewable Energy Center in Alachua County, by Gainesville Regional Utilities and Gainesville Renewable Energy Center, LLC.

c. Document being filed on behalf of Dian R. Deevey, Intervener

d. There are a total of 12 pages in the attached document.

e. The document attached for electronic filing is 090451 Intervener Deevey's Post-Hearing Brief

Thank you.

DOCUMENT NUMBER-DATE

090451 MAY 14 2010

FPSC-COMMISSION CLERK

5/14/2010

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

In re: Joint Petition to Determine Need )  
For the Gainesville Renewable Energy )  
Center in Alachua County by Gainesville )  
Regional Utilities and Gainesville Regional )  
Utilities and Gainesville Renewable )  
Energy Center )  
\_\_\_\_\_ )

DOCKET No 090451 - EM

FILED: MAY 13, 2010

**POST-HEARING BRIEF STATEMENT OF ISSUES AND POSITIONS  
AND BRIEF OF INTERVENER DEEVEY**

Intervener Dian R, Deevey pursuant to the Prehearing Order in this Docket, Order No. PSc-10-0227-PHO-EM, and the Order Establishing Procedure Order No. 09-0671-PCO-EI, and pursuant to Rule 28-106.215, Florida Administrative code ("F.A.C"), hereby submits her Post Hearing Statement of Issues and Positions and Brief.

Issues and Positions and Brief. Citations to the December 16, 2009 hearing Transcript are in the form TR abc (pagenumber), citations to hearing exhibits are in the form EXH jkl (exhibit number) at pqr (page) or Exhibit syz BSP (numbvrger), citations to the Transcript from the December 16 ,2009 hearing are in the form and citations to the transcript from the December 9, 2009 customer hearing in Gainesville are in the form GvilleTR-(page number) number), citations to the transcript from the transcript from the May 3, 2010 supplemental hearing are in the form hearing are in the form STR-(page number).

**PETITIONERS'S SUMMARY OF POSITIONS ON THE ISSUES**

ISSUE 1: \*No Position on Stipulated Issue 1.\*

ISSUE 2. Is there a need for the Gainesville Energy Renewable Energy Center taking into account the need for electric system reliabilirty and integrity as this criterion is sued in Section 403.519, F. S. ?

\*No Position on Issue 2\*

ISSUE 3. Is there a need for the Gainesville Renewable Energy Center, taking into Account the need for adequate electricity as a reasonable cost as this issue is used in Section 403.591.

\*The Petitioners have not established what the costs of the Renewable Energy Center will be because they have not provided evidence or support for the claims that woody biomass fuel will remain inexpensive throughtout the 30 duration of the proposed PPA.

ISSUE 4. Is there a need for the Gainesville Renewable Energy Center, taking into account the need for fuel diversity and supply reliability as this criterion is used in Section 403.519 F.S.?

\*No position on this issue\*

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ISSUE 5: Are there any renewable energy sources and technologies as well as conservation measure, taken by or reasonably available to Gainesville Regional Utilities which might mitigate the need for the proposed Gainesville Renewable Energy Center?

\*There are many available conservation measures that could mitigate the need for proposed Gainesville Renewable Energy Center, and one of them would greatly mitigate the need for this Center. It consists of eliminating sales to wholesale customers the City of Alachua and Seminole Electric Cooperative.\*

Issue 6: Is the Gainesville Renewable Energy Center the most cost-effective alternative available as this criterion is used in Section 403.519 F. S.?

\*No, because they have grossly underestimated the future costs of woody biomass fuel to be used at the Center, Petitioners have failed to confirm that the proposed project is the most cost effective alternative.\*

### **INTERVENER DEEVEY'S POST HEARING BRIEF**

#### The Costs of Woody Biomass

The cost of woody biomass fuels is critical to these entire proceedings. If the fuel cost estimates provided by Petitioners are unreasonably low, and there is good evidence that fuel costs may be as much as 25 to 50% higher than the costs reported by Petitioners in several confidential documents, then PSC Commissioners must carefully reconsider Issues 3 and 6, which deal directly with cost. Issue 3 asks whether there is a need for Gainesville Renewable Energy Center taking into account the need for adequate electricity at a reasonable cost. Issue Issue 6 asks whether the Gainesville Renewable Energy Center is the most cost-effective alternative available. I contend that the Petitioners have not demonstrated that their estimate of future costs of woody biomass fuels are reasonable ones, given the strong likelihood that the state and/or federal government will enact a renewable portfolio standard that requires every utility in Florida to generate some of the energy it produces from renewable energy sources.

Petitioners have claimed that the costs of the woody fuels they expect to use to fire GREC LLC's 100 MW generator are will increase in price only in response to inflation throughout the life of the project. For example, Petitioners tables projecting the cost of fuel to GRU reveal a very slow cost increase due to an assumed 2.5% inflation rate over the life of the project. (Exhibit BEK-6). Richard Schroeder, GREC's expert on wood resources and prices testified that his studies found that there is more than enough woody biomass within a reasonable haul distance of GRU top supply all needed fuel at an economic price (STR 329, lines 116-18). This witness also testified that the GREC this area contains more than enough low quality biomass such as logging residues, and forest thinnings, and urban wood waste to supply all current North Florida wood users as well as GREC (STR p 332 lines 290-24, page 333 line 1, and page 335, lines 3 to 17), a conclusion consistent with other evidence in exhibit he sponsors (Exh RMS-4 and 5).

But much of this witness's testimony is inconsistent with important conclusions about the effects of Renewable Portfolio Standards in three other exhibits (RMS-7, RMS-8, and RMS-9)

In 2008 the Florida Legislature passed HB 7135 and one of its provisions requires the Florida Public Service Commission to adopt a Renewable Portfolio Standard which requires all utilities to use a renewable energy source for a percentage of the energy they generate. At present, wood appears to be the least expensive renewable energy resource as determined by an analysis of Florida's renewable energy technological potential conducted by Navigant Consulting (Petitioners' Exhibit RMS-6). According to this report, Florida's wood resources could potentially support generators with a nameplate capacity between 6000 and 13,500 MW

provided substantial amounts of wood were produced as Short Rotation Energy crops, (SREC) grown on crop land. In contrast, solar PV has the potential to support 89,000 MW and offshore wind can support an additional 40,000 MW of nameplate capacity. (Exh RMS-6, page 181 of 311). At present, the latter resources are more costly than woody biomass, and consequently policy-makers in the state focus on wood.

In March of this year, the Florida Department of Forestry released three reports on the economic impacts of renewable portfolio standards on Florida's timber and electric power industries, all of which consider renewable portfolio standards of 7%, 15%, and 20%.

The Exhibits in question are:

Exhibit RMS-7 "Woody Biomass for Electricity Generation in Florida: Economic Impacts of Expanded Woody Biomass Utilization on the Bioenergy and Forest Products Industries in Florida" Sponsored Project Final Report to Florida Department of Agriculture and Consumer Services--Division of Forestry, by Alan W. Hodges, Thomas J. Stevens and Mohammad Rahmani

Exhibit RMS-8: "Woody Biomass for Electricity Generation in Florida: Bioeconomic Impacts under a Proposed Renewable Portfolio Standard (RPS) Mandate", Final Report Prepared for: Florida Department of Agriculture and Consumer Services Division of Forestry by Frederick J. Rossi, Douglas R. Carter, and Robert C. Abt.

Exhibit RMS-9 "Woody Biomass Economic Study" Florida Department of Agriculture and Consumer Services, Division of Forestry, Florida Department of Environmental Protection,

University of Florida, School of Forest Resources & Conservation, University of Florida, Food & Resource Economics Department.

According to his supplementary pre-filed testimony, witness Schroeder finds nothing in these reports to suggest that GREC would experience an increase in fuel costs if the proposed 20% RPS were implemented (STR page 329, lines 4 to 9) , but this claim is difficult to reconcile with the reports themselves.

Mr. Schroeder correctly points out that the three Department of Forestry (DOF) studies conclude that a 7% RPS would require approximately 1000 MW of biomass-based energy annually almost all of which can be supplied from logging residues and urban wood waste with little disruption to the timber industry.(STR page 328, lines 4 to 10.) Mr Schroeder further notes that in 2025 a 7% RPS would require about 10 million green tons of woody biomass.(SRS page 328, lines 18 to 24).

But Mr. Schroeder ignores the 15% and 20% standards considered in these reports and the fact that they will place great demands on Florida;s timber industry which in 2007 supplied a total of only 20 million tons of harvested wood, while about 4.1 million additional tons remained unharvested in existing forests. (Exh RMS-9, page 8 of 22 and Exh RMS-6 page 89 of 311).

Renewable portfolios standards of greater than 7% will place very high demands on the timber industry, and the resulting price increases that are expected warrant a careful examination of just what those higher RPS levels are expected to entail.

The demands of 15% and 20% portfolio standards are listed shown in Table 1` and Figure 1 of the study entitled “Woody Biomass Economic Study (Exh RMS-9, page 8 or 22), and may be listed as follows:

1. A 7% RPS would require no significant additional quantity of biomass in 2025, and would produce 2% of all energy used in the state, or 6.3 thousand GWh.
2. A 15% RPS would require 30 million additional green tons of woody biomass in 2025 and produce 12% of all energy used in the state, or 20.4 thousand GWh.
3. A 20% RPS would require 40 million additional green tons of woody biomass and produce 15% of all energy in the state, or 43 thousand GWh.

Clearly, the 15% and 20% Portfolios represent enormous increases in the productivity of the forest industry. The three DOF reports confirm that such heavy demands on the timber industry will result in substantial price increases, during the first 10 years while the industry adapts to these demands.

As stated in “Woody Biomass for Electricity Generation in Florida: Economic Impacts of Expanded Woody Biomass Utilization on the Bioenergy and Forest Products Industries in Florida” , woody biomass prices derived from the models of economic impacts at the 40 million showed a overall price increase of wood of 18% (RMS-7 page 21 of 36), However, as stated by the authors of this report, studies reported in the companion study RMS-8 show much higher price effects when the impact on timber prices and logging support services were examined separately:

“When the CGE model was modified to disaggregate timber production and logging forestry support

services, much larger price effects were observed, with composite prices for timber increasing by 42

percent, prices for logging support services increasing by 143 percent, and prices for manufactured wood products increasing by 2.4 percent, under the scenario with 40 million tons biomass supply and fixed capital. The price response was greater for logging/support services than for timber production in this case because logging is the direct supplier to the electric power sector and timber production becomes an indirect input. When the model was further modified to restrict imports of timber and logging support services, prices for forestry products increased by 150 percent, prices for logging sup increased by 4.6 percent.”

These studies cannot predict future prices, and the authors of Exh RMS-8 caution that the SRTS model they used “.. cannot account for every conceivable economic variable, much less for the variety of strategic responses one would expect from all of the economic actors that will be affected by an RPS policy mandate.” (Exh RMS-8 page 54). The authors go on to say:

“This is why the extreme price increases forecasted are rather unlikely. Market forces will work to mitigate these increases, since the very same high prices will actually bring other options into play. Importing pulpwood from Brazil, efficiency increases in production, renewable energy credits (RECs), etc. are just a few examples of how the various economic agents might respond. However, given the enormity of the volumes of merchantable timber being discussed .here, there is a limit to the adaptability that will surely take place. And while such adaptability (and other factors) will dampen the price effects predicted by SRTS, the massive amount of woody biomass required under a 20% RPS will *still* need to be met under the terms of the mandate, regardless of all of the other considerations.”



The statements quoted here are not the only places where potential increases in prices are mentioned in these important reports, but they convey the important message clearly:

Prices will increase if a renewable portfolio standard requires large increases in the amount of wood Florida produces, and even comparatively modest 15% RPS will impact the entire industry.

Mr. Schroeder's testimony ignores all these important impacts, and as is fully evident from his erroneous belief that the 20% RPS would require only about 10 generators with a capacity equivalent to that of GREC .

In testifying about the potential impact of additional biomass plants currently in the planning that may also use biomass from the area designated GREC's "wood basket" that will supply wood fuel for the plant, Mr. Schroeder explained that o[purchases have little impact on wood prices if they represents as little as one-sixth the total supply (which would be the case if there were no other purchaser using wood in the GREC wood basket) (SRT page 376, line 1 to SRT page 377, linec21) One must conclude that Mr. Schroeder does not anticipate significant increases in demand for wood to fuel the production of electric energy. This position does not seem to be compatible with the information in his sponsored exhibits containing the DOF reports (Exh RMS-7, RMS-8, and RMS-9)

In summary, Mr. Schroeder has not shown that fuel costs will in fact remain essentially the same as they are today and exhibiting no future increases except those due to inflation. The evidence of the exhibits he has sponsored show that in fact large price increases are expected to result from legislation imposing renewable portfolio standards on all utilities in the state—the very

legislation that Petitioners claim will enhance the value of the biomass-fired plant for which they seek need certification in these proceedings.

#### ISSUE 5:

In deciding Issue 5 PSC commissioners must determine whether there are any renewable energy sources and technologies, or non-generational measures including conservation measures that may mitigate the need for the proposed Gainesville Renewable Energy Center.

The petitioners have not shown that they have examined any such non-generational means of reducing need. Since GRU does not have a need for new capacity until 2023, Petitioners did not perform a formal evaluation to determine whether there are any demand-side management or conservation measures available to mitigate need.

GRU can point to a very admirable record of conservation that has significantly reduced the need for new capacity and this record has been so outstanding that it has delayed the time at which new capacity need be added until 2023, which is eight years later 2014, the year that Gainesville anticipated a need for capacity to serve its customers when the utility when GRU began negotiating in 2008 with Nacogdoches in the predecessor to American Renewables. (See Interveners Exhibit 16, page 189 and page 254).

But GRU could do much more to reduce its need for a new generator or for purchased power just by dropping wholesale sales to two nearby customers.

The customers in question are the City of Alachua and Seminole Electric Cooperative, which serve retail customers in two suburban areas adjacent to the Gainesville City boundary. Seminole Electric Cooperative delivers the energy purchased from GRU to customers of Clay Electric Cooperative that live in a suburban area that is also adjacent to Gainesville. (Petitioners' Need

Application, Section 3.4, pages 29 through 30). The projected needs of these two customers are included in GRU's forecasts of its native load through 2044, even though contracts with them will expire in or before 2012. (See Need Application, section 4, pages 34 through 35, and the contracts with Alachua and Seminole found in Staff Exhibit 69, pages 001525, and 001543).

GRU has no obligation to renew these contracts (Intervenors Exhibit 1, pages 16 to 18). If GRU were to stop selling energy to these two customers, then its forecast needs would drop by at least 10% beginning in 2013, as shown in two tables produced by Petitioners in response to Staff Interrogatory 15. These tables show seasonal demand and energy needs of GRU's retail customers and also those of Alachua and Seminole. The base case for summertime demand is shown in Exhibit 000015, while energy needs are listed in a second table in Exhibit 000016. Part of the first table is shown below:

Forecast: Summer Demand (MW)									
Base Case									
Year	Total	Wholesale	Retail	Interruptible	Residential		Commercial/Industrial		Not Firm Demand
					Load Management	Conservation	Load Management	Conservation	
2010	478	46	393	0	0	23	0	16	439
2011	485	47	394	0	0	26	0	18	441
2012	492	48	395	0	0	28	0	21	443
2013	500	49	396	0	0	31	0	24	445
2014	508	50	398	0	0	34	0	26	448
2015	516	51	399	0	0	37	0	29	450
2016	523	52	401	0	0	39	0	31	453
2017	532	53	404	0	0	42	0	33	457
2018	539	54	406	0	0	44	0	35	460
2019	546	55	408	0	0	46	0	37	463
2020	552	55	410	0	0	48	0	39	465
2021	559	56	410	0	0	51	0	42	466
2022	565	57	411	0	0	53	0	44	468
2023	570	58	411	0	0	55	0	46	469
2024	577	59	412	0	0	58	0	48	471
2025	583	59	414	0	0	60	0	50	473
2026	589	60	415	0	0	62	0	52	475
2027	594	61	415	0	0	64	0	54	476
2028	601	62	416	0	0	67	0	56	478
2029	607	62	418	0	0	69	0	58	480

Inspection of this table confirms that dropping the wholesale sales in 2013 would reduce the seasonal peak demand from 443 to 396, a savings of over 11%. Without sales to Alachua and Seminole, the peak seasonal demand would be equal to the retail demand. By 2029 this option would reduce summertime peak demand from 480 MW to 418, a drop of 13%. Dropping wholesale sales would also significantly reduce energy needs as well as carbon dioxide emissions to the atmosphere. In 2013, wholesale energy requirements are forecast to total 215 GWh, which is about 10% of the projected total net energy for load shown in the second table, while in 2029, the elimination of wholesale sales to Alachua and Seminole would reduce net energy for load by 273 GWh, or about 11% of the forecast load in that year.

The advantages to customers is obvious and need not be elaborated. Dropping sales to Alachua and Seminole could significantly mitigate GRU's need for GREC, and could, in theory at least, allow the utility to seek alternatives to GREC that would greatly reduce the burden on ratepayers. It is an option that should be adopted by GRU, but one which will serve little purpose if the PSC approves the Petitioners' application for need certification.

Respectfully submitted this 13<sup>th</sup> Day of May, 2010

s/ Dian R. Deevey, pro  
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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished electronically and by United States mail this 13 day of May, 2010, to the following:

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