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**ORIGINAL**

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Docket No. 060635-EU

JOHN CARL WHITTON, JR.'S POST-HEARING STATEMENT OF ISSUES AND POSITIONS

**The name of the party on whose behalf the document is filed:**

John Carl Whitton, Jr.

**The total number of pages in each attached document: 26**

**A brief but complete description of each attached document:**

This is a "corrected", reformatted version of Document 00707-07 filed on January 24, 2007.

It is the Post-Hearing Statement of Issues and Positions, Brief and Certificate of Service in Word format.

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**ORIGINAL**

**In re: Petition for Determination of Need for  
an Electrical Power Plant in Taylor County  
by Florida Municipal Power Agency, JEA,  
Reedy Creek Improvement District, and  
City of Tallahassee**

**Docket No. 060635-EU  
Dated: January 24, 2007**

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**JOHN CARL WHITTON, JR.'S  
POST-HEARING STATEMENT OF ISSUES AND POSITIONS**

Pursuant to Order No. PSCPSC-07-0016-PHO-EU, John Carl Whitton, Jr. ("Whitton"), hereby files his Posthearing Statement and Brief in Docket No. 060635-EU.

**BASIC POSITION**

Whitton, a utility customer of the City of Tallahassee, requests a denial of the Petition for Determination of Need for an Electrical Power Plant in Taylor County by Florida Municipal Power Agency, JEA, Reedy Creek Improvement District and City of Tallahassee (collectively "Applicants"). The Applicants' proposal is for the construction of a new nominal 765 MW (net) supercritical coal-fired power plant in Taylor County, Florida, known as the Taylor Energy Center ("TEC").

The Applicants have not submitted sufficient data upon which the Public Service Commission ("PSC" or "Commission") can determine that the proposed pulverized coal power plant is needed and the most cost effective alternative available. Because all the Applicants have not adequately considered demand-side management ("DSM"), energy efficiency and conservation, and innovative alternatives such as woody biomass utilization, the Applicants have not adequately attempted to mitigate the need for this proposed coal power plant. Further, given the current volatility in the costs associated with constructing coal power plants and the commodity prices of coal, the undetermined costs of transportation to deliver coal to Taylor County, the reasonably anticipated future carbon costs as well as the direct health and

environmental costs of operating a coal power plant, the Commission is unable to determine if this proposal is indeed the most cost effective based on the information submitted by the Applicants. Thus, the Commission should deny this Petition because the Applicants have failed to meet their burden to demonstrate the need and cost-effectiveness of their proposed facility.

The Applicants - Florida Municipal Power Agency (“FMPA”), Jacksonville JEA, Reedy Creek Improvement District (“RCID”), and City of Tallahassee (“Tallahassee”) – have failed to prove by a preponderance of the evidence that the Petition should be granted. The evidence adduced at hearing is adverse to the Applicants on several of the 11 issues which were identified by the parties.

Section 403.519, Florida Statutes (2006), specifies five criteria that the Public Service Commission (“Commission” or “PSC”) must consider in a determination of need proceeding: (1) the need for electric system reliability and integrity, (2) the need for adequate electricity at a reasonable cost, (3) the need for fuel diversity and supply reliability, (4) whether the proposed plant is the most cost-effective alternative available and (5) the conservation measures taken by or reasonably available to the applicant or its members which might mitigate the need for the proposed plant. The law also allows the PSC to consider “other matters within its jurisdiction which it deems relevant.” 403.519(3), Fla. Stat.

The Applicants did not prove, by a preponderance of the evidence, that the Taylor Energy Center (“TEC”) meets the five statutory criteria set forth in Section 403.519(3), Florida Statutes (2006). The Applicants did not prove that the TEC will promote electrical system reliability and integrity. The Applicants have not proven that the TEC will promote fuel diversity and supply reliability, particularly if the Commission includes renewable energy resources. The Applicants did not prove that each Applicant has reasonably implemented conservation or DSM measures or

that each has reasonably considered additional conservation measures that might mitigate the need for the TEC. The Applicants have not proven that the TEC Generating is the most cost-effective alternative available. The viability, feasibility and cost-effectiveness of the TEC will be dramatically affect by the likely carbon dioxide emission compliance costs, which the Applicants have failed to appropriately evaluate. The Applicants have not requested funding from DOE to construct an IGCC unit, which could help to defray the costs of building such a facility from the Applicants' customers. Moreover, each Applicant has not committed final approval of its respective governing body for the construction of the TEC. Thus, even if the Commission has determined that there is indeed a need for the TEC, the Applicants are able to reallocate their proportional share in the TEC, back out and even add new parties to the TEC after the final permitting – and after the final costs – is determined.

## ISSUES AND POSITIONS

**ISSUE 1:** Is there a need for the proposed Taylor Energy Center (TEC) generating unit, taking into account the need for electric system reliability and integrity, as this criterion is used in Section 403.519, Florida Statutes?

**POSITION:** No. While there is evidence of growth in the Applicants' need for capacity requirements, the Applicants have not proved, by a preponderance of the evidence, that the proposed TEC will enhance the reliability and integrity of each Applicant. For example, the details and costs of interconnecting the TEC have yet to be determined.

Final arrangements for the transmission of power from the TEC have not yet been made. [T 762, 814]. All four of the interconnection alternatives studied by Progress Energy Florida ("PEF") and Florida Power and Light ("FPL") will require the construction of two 230 kV transmission lines from the TEC site to PEF's Perry substation. [T 758 L 10-11]. "All the transmission studies associated with this interconnection request have not yet been completed and cost responsibilities for the necessary facilities have not been finalized. [T 762 L 8-11]. Thus, the details and costs of interconnecting the TEC have yet to be determined. [T 775-776]. Further, the Applicants do not know the exact location of the additional transmission line that is likely required to interconnect the TEC to the PEF system. [T 814]. As not knowing the location of all the transmission lines that will be required to interconnect the TEC to the grid, the Applicants have not made applications for the necessary State easements, nor could they have researched the title along the prospective rights-of-way. Instead, the Applicants rely on "estimated" capital cost "projections" of \$11.7 million, without knowing the actual costs. [T 758 L18-23].

The Applicants also have not demonstrated that the TEC will promote reliability of the grid. Instead, the Applicants primarily rely on TEC's role in providing fuel diversity in their

evaluation of reliability. [T 628 L 7-11, T658 L 21- T659 L 4, 717 L 8-15, T 752 L 1-8, T 816 L1-2, T 963 L 4-9, T 1007 L 12-14, T 1008 L 8-14].

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**ISSUE 2:** Is there a need for the proposed TEC generating unit, taking into account the need for adequate electricity at a reasonable cost, as this criterion is used in Section 403.519, Florida Statutes?

**POSITION:** No.

**ISSUE 9:** Is the proposed TEC generating unit the most cost-effective alternative available, as this criterion is used in Section 403.519, Florida Statutes?

**POSITION:** No. The Applicants could meet their needs through conservation and DSM measures, as well as invest in smaller-scale renewable energy sources such as biomass, in a more cost-effective manner than the proposed TEC. Given the current instability of the fossil-fuel markets as well as the uncertainties and potential dramatic economic impacts of CO<sub>2</sub> regulation, deferring the need through these other alternatives would be more prudent and cost-effective.

The Commission should not approach this issue in an all-or-nothing manner. The more prudent course for these municipal Applicants would be to make heavy DSM investments and, where possible, adopt alternative energy sources, [T 556 L 15-16], thus mitigating the need for the TEC. In the present energy environment, given the extreme regulatory and technological uncertainties, large investments in coal-based generators are too risky for municipal utilities. [T 555 L 20 – T 556 L 5]. Tallahassee’s more thorough analysis of cost-effective DSM has already deferred its need from 2011 to 2016. [T 765 L 6-9, Exh. 2 p. 2078 L 2-3]. The other Applicants should be required by the Commission to take the same hard look as Tallahassee.

In addition to investing in energy efficiency, conservation and DSM initiatives, there are potential alternative energy sources which the Applicants could pursue. In particular, the Applicants have not adequately evaluated generation of electricity using woody biomass, an alternative fuel with many environmental and cost advantages, or compared them to the other fossil fuel-based generators they have considered. [T 557 L 4-7]. There are several deficiencies

in the Applicants analysis of the potential for woody biomass generation. First, although the Applicants did not explicitly rule out direct-fired wood-based generation, they repeat the idea that fuel availability problems would limit size to a practical maximum of 50 MW, which is the case in many parts of the country, but not in the Southeast and, more importantly, not in Florida. [T 558 L 1-4]. The Applicants maintain that fuel supply is the most important factor in determining the appropriate size for a biomass plant. [T 609 L 13-15]. However, Ms. Deevey calculated that the Tallahassee municipal utility could fire a 100 MW generator at a fuel cost of 2 cents per kWh, assuming they purchased 60% of the urban waste wood and 70% of the forestry residues and stumps available within travel time of about 1 hour. [T 558 L 20 – T 559 L 2].

Specifically, the Commission does not have sufficient data to determine if the Applicants have exhausted all reasonable DSM and conservation measures which would diminish the need for the proposed TEC, [see discussion infra Support of Position to Issue 4], or if the Applicants have sufficiently analyzed innovative alternatives such as woody biomass utilization. [See discussion supra Support of Position to Issue 9].

In addition, the Applicants have not included all the potential transportation costs of delivering coal to the TEC. [See discussion infra Support of Position to Issue 3]. For example, the Applicants have committed \$5 million to the City of Perry for a rail overpass to address emergency response issues. [T 411 L 12-15]. At least eight local governments along the potential rail supply route have expressed concerns to the Applicants about the impacts of increased rail traffic on their communities. [Exh. 87]. Some of the jurisdictions will be more impacted by the 110-135 rail cars of coal than others, but the Applicants have indicating they are willing to discuss the impacts with them. [T 416 – L 8-13]. Any money that the Applicants

would contribute to these rail improvements – besides the \$5 million contribution to Perry – has not been included in the cost estimates in the Application.

The Applicants has also not provided sufficient information demonstrating that they have reasonably anticipated carbon compliance emission costs. [See discussion *infra* Support of Position to Issue 5]. In addition, the Applicants failure to seek federal funding towards an IGCC coal plant which, among other things, would reduce the costs of carbon sequestration, to defray the costs of building such a facility from the Applicants’ customers, further demonstrates the Applicants’ unwillingness to fully investigate alternatives to this project.

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**ISSUE 3:** Is there a need for the proposed TEC generating unit, taking into account the need for fuel diversity and supply reliability, as this criterion is used in Section 403.519, Florida Statutes?

**POSITION:** Whitton recognizes the need for fuel diversity in the State of Florida’s electric power generation facilities. However, fuel diversity should include renewable sources of fuel, which have not been seriously considered by the Applicants in this proceeding. The addition of the proposed TEC coal power plant also will not serve to further JEA’s fuel diversity, as it will maintain its existing fuel diversity at approximately 50 percent coal and 50 percent natural gas. The primary fuel diversity benefits of TEC are that it will be able to utilize three types of the same fuel source – coal. In addition, since the Applicants have failed to identify specific modes and routes for the transportation of coal, the Commission cannot adequately assess the supply reliability for TEC.

The resolution of the issue of whether the Applicants have taken into account the need for fuel diversity requires interpretation of the term “fuel diversity” in Section 403.519, Florida Statutes (2006). The PSC should construe “fuel diversity” to include renewable energy resources. To interpret “fuel diversity” to exclude renewable energy resources would frustrate the legislative intent of Senate Bill 888. Fla. Laws. ch. 2006-230.

“The cardinal rule of statutory construction is ‘that a statute should be construed so as to ascertain and give effect to the intention of the Legislature as expressed in the statute.’” Tampa



v. Thatcher Glass Corp., 445 So. 2d 578, 579 (Fla. 1984) quoting Deltona Corp. v. Florida Public Service Com., 220 So. 2d 905, 907 (Fla. 1969).

It is a familiar rule of statutory construction that a statute should be so construed and applied as to give effect to the evident legislative intent, even if the result seems contradictory to rules of construction and the strict letter of the statute. \* \* \*  
\* In construing a statute, the legislative intent should be gleaned from the language of the statute, the subject sought to be regulated, *the purpose to be accomplished, and the means adopted for accomplishing the purpose.* \* \* \*  
Where there is ambiguity and uncertainty in the meaning to be given the words employed in a statute, or where the context of a statute taken literally conflicts with a plain legislative intent clearly discernible, the context must yield to the legislative purpose, for otherwise the intent of the lawmakers would be defeated.

Deltona Corp. v. Florida Public Service Com., 220 So. 2d 905, 907 (Fla. 1969) quoting Beebe v. Richardson, 156 Fla. 559, 562, 23 So.2d 718, 719 (Fla. 1945) (emphasis added).

Section 1 of Senate Bill 888 sets forth the legislative findings and intent as follows:

The Legislature finds that advancing the development of renewable energy technologies and energy efficiency is important for the state's future, its energy stability, and the protection of its citizens' public health and its environment. The Legislature finds that the development of renewable energy technologies and energy efficiency in the state will help to reduce demand for foreign fuels, *promote energy diversity, enhance system reliability*, reduce pollution, educate the public on the promise of renewable energy technologies, and promote economic growth. The Legislature finds that there is a need to assist in the development of market demand that will advance the commercialization and widespread application of renewable energy technologies. The Legislature further finds that the state is ideally positioned to stimulate economic development through such renewable energy technologies due to its ongoing and successful research and development track record in these areas, an abundance of natural and renewable energy sources, an ability to attract significant federal research and development funds, and the need to find and secure renewable energy technologies for the benefit of its citizens, visitors, and environment.

Fla. Laws ch. 2006-230 § 1.

It is clear that the purpose of Senate Bill is to advance the development of renewable energy technologies and energy efficiency. One of the means to accomplish this purpose is through the Commission considering "the need for fuel diversity and supply reliability" in its need determination proceedings. Id. at § 43(3). Thus, it is imperative that the Commission

include renewable energy technologies in its consideration of fuel diversity in this need determination docket.

JEA should be commended on this aspect as it is the only Applicant with any significant renewable energy contributions to its current capacity. JEA currently has approximately 91 MW of renewable capacity committed toward its Clean Power Program goal, including approximately 321 kW of solar photovoltaic (PV) capacity, 9 MW of solar thermal capacity, 6 MW in landfill biogas capacity, 800 kW in digester biogas capacity, 10 MW of wind capacity, 22 MW of proposed landfill and biomass projects and 43 MW of generating unit efficiency improvements. [Exh. 17 p. C.2-8]. JEA also has a goal of 7.5 percent clean power. [T 663 L 12-13]. Tallahassee should also be commended for recently entering into a contract for 38 MW of biomass. [T 1230 L 24]. However, it is clear that that contract is for energy only with no purchase of capacity, [Exh. 2 p. 24], so Tallahassee cannot rely on this as a demonstration of diversity at this point.

While the above-mentioned efforts of JEA and Tallahassee are positive, they do not preclude the need of all Applicants to demonstrate diversity in fuel supply to include renewable energy sources. Despite JEA's and Tallahassee steps towards more renewable energy in general, it should also be noted that the TEC at issue in this docket does not promote energy diversity in the form of renewables. In fact, the TEC may well thwart any further significant efforts towards renewable energy sources by the individual Applicants because this proposed 765 WM coal plant will require the investments of large amounts of capital resources.

In general, TEC will diversify fuel capacity resources of Applicants FMPA, RCID and Tallahassee. However, TEC will not affect JEA's fuel diversity, but will maintain JEA's "capacity at approximately 50 percent solid fuel and 50 percent gas and fuel oil." [T 664 L 4-5].

Greater fuel diversity results in minimization of risks of utility operations. [T 635 L17-20]. Thus, JEA has the least to gain among the Applicants by adding additional coal capacity to its system, as JEA relies more heavily on coal to meet its load than any other Applicant. [Comp. Exh. 17 p. C.A-2 with Exh. 13 p. B.8-2, Exh. 18 p. D.8-2, Exh. 20 p. E.8-2]. The Applicants' tout TEC's ability to utilize coal from multiple regions as an advantage for fuel diversity. [T 658 L 6-8]. Although TEC has the ability to burn up to 30 percent petcoke blended with coal [T 815 L 18-20], TEC does not reduce JEA's risks associated with heavy reliance on coal as a fuel source. This is particularly true should the carbon compliance costs associated with burning coal as estimated in the Synapse report [Exh. 79, Fig. 6.3] be realized.

The reliable movement of coal by rail to utility plants is an integral part of assessing fuel supply reliability – as well as the broader issues associated with electric reliability. The Applicants have not entered into any contracts for coal or petcoke supply or delivery. [T 964 L 1-3]. Although the Applicants expect a blend of Latin American coal and petcoke to provide the lowest production costs for TEC, no specific Atlantic or Gulf port location has been identified for terminaling services. [T 962 L 1-8]. Because the Applicants anticipate increased port traffic for the importing and exporting of coal, [Exh. 31 p. A.3-16,17], not having identified a specific port of entry for importing coal for TEC could impact supply reliability. Further, one of the ports apparently preferred by the Applicants – Jacksonville, [T 434 L 7-18, T 410 L 1, T 447 L 14, Exh. 31 p. A-3.18-21] – is prospective at this time. [Exh. 31 p. A-3.18]. The Jacksonville Port Authority (“JPA”) would have to condemn and acquire a 91-acre tract under through eminent domain and significantly expand its Talleyrand port facilities and add a new bulk materials terminal to accommodate the importation of coal for the TEC. Id.

In addition to not identifying any specific port, the Applicants have not identified which transportation routes that will deliver the coal to TEC. However, the Applicants do admit the fact that the costs will differ depending on which routes are ultimately selected. [T 408-410]. Moreover, the Applicants were not able to provide any documentation related to assurances they have received from potential rail carriers, or barge carriers, that sufficient rail capacity exists to transport the required fuel for TEC, as all discussions with potential transportation providers have been verbal. [Exh. 2 p. 1463-64].

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**ISSUE 4:** Are there any conservation measures taken by or reasonably available to the Florida Municipal Power Agency, JEA, Reedy Creek Improvement District, and City of Tallahassee (Applicants) which might mitigate the need for the proposed TEC generating unit?

**POSITION:** Yes. The total benefits of DSM opportunities have not been adequately evaluated in the analyses conducted by each Applicant. The four Applicants utilized three different methods for determining which DSM and conservation measures were cost-effective are indicative of this. JEA and FMPA relied on the Rate Impact Test for their determination of cost-effectiveness of DSM and conservation measures. On the other hand, Tallahassee evaluated the cost-effectiveness of DSM measures based on projections of total achievable energy and capacity reductions and their associated annual costs utilizing a methodology developed specifically for Tallahassee. As a result, Tallahassee is acquiring 100 MW of DSM, despite the fact that Tallahassee believed there were no new cost-effective DSM measures available before making this more detailed analyses. Meanwhile, RCID did not conduct any tests to determine if there are any potential additional DSM measures available, and instead relied on conclusory statements that RCID's unique customer base is doing all they can for cost-effective conservation measures.

Section 403.519, Florida Statutes, specifically directs the Commission to consider "the conservation measures taken by or reasonably available to the applicant ... that might mitigate the need for the proposed plant." While conservation measures may not mitigate the need for all 765 MW of electricity to be generated by TEC, PSC precedent requires the consideration of conservation measures that are reasonably available which might mitigate the need for all *or part*

of the proposed plant. See, e.g., Order No. PSC-98-1301-FOF-EM, p. 10; Order No. PSC-99-0931-FOF-EM, p. 10.

In response to the Applicants case-in-chief, Sierra Club et al. sponsored the testimony and analysis of Hale Powell. He concluded that “[t]he DSM testimony in this docket appears to provide only a small fraction of the detail required to assess the scale of the past and present DSM efforts and the savings achievements of the TEC applicants.” [T 895]. Of the four Applicants, only Tallahassee can be considered to have given any serious consideration to acquiring additional DSM measures. As a result, Tallahassee identified 162 MW of additional DSM, [Exh. 2 p. 2089 L 10-11], which will defer Tallahassee’s capacity needs to 2016. [T 765 L 6-9, Exh. 2 p. 2078 L 2-3].

Unlike Tallahassee, whose “DSM evaluation was developed based on projections of total achievable energy and capacity reductions and their associated annual costs developed specifically for the City of Tallahassee,” [T 1118 L 18-20]<sup>1</sup>, FMPA and JEA utilized the Florida Integrated Resource Evaluator (“FIRE”) model for their DSM evaluations. [Id. at L 16-17]. The FIRE model provides three tests to determine the cost-effectiveness of DSM and conservation: Total Resource Test, the Participant Test, and the Rate Impact Test (“RIM test”). [T 1119 L 6-8]. There are 5,000 DSM programs currently available on the market, but JEA and FMPA analyzed only 180. [Exh. 106, T 1173 L 24 – T 1174 L 3]. Of those 180 DSM measures analyzed, numerous measures passed the Total Resource Tests – though none passed the RIM Test. [Exh. 108 p. 10-25]. For FMPA, 74 measures passed the Total Resource Test for residential and commercial rate classes combined, and 28 measures passed the Total Resource Test for residential and commercial rate classes combined for JEA. [T 1120 L 3-5]. If these

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<sup>1</sup> A detailed discussion of the methodology used by Tallahassee’s consultant to evaluate DSM for Tallahassee can be found in the cross-examination of Gary Brinkworth, T 768-70.

measures were implemented, JEA would save 100 MW and FMPA would save 200 MW. [T 1190 L 5-9].

It should be noted that “[b]efore hiring consultants with expertise in DSM and renewables, the [Tallahassee] city staff, based on reports from city consultants, had indicated that [Tallahassee] was already acquiring virtually all of the DSM and renewables that was cost effective.” [T 1231 L 13-16]. Further, the Applicants conducted a study of each of measures included in Tallahassee’s DSM portfolio, and none of those measures passed the RIM test for FMPA and JEA. [T 1173 3-6].

Thus, the most evident thing to be gained from the DSM analysis of JEA and FMPA is that the FIRE model, particularly the RIM Test aspect, is too restrictive to permit utilities to find any significant energy efficiency savings through DSM programs. While the Commission may have previously approved of the use of the FIRE model and RIM Test, it has not had to address the issue since the implementation of Senate Bill 888. To continue to require such minimal efforts to analyze conservation measures to defer the need for new electric generating facilities will be contrary to the Legislative intent of Senate Bill 888, which requires the promotion of energy efficiencies. See Fla. Laws ch. 2006-230 § 1.

In addition to the insufficient DSM efforts of JEA and FMPA, RCID put forth no analysis to find any additional conservation or DSM savings. Because RCID trusts that its customers are achieving all the cost-effective conservation measures possible, “there’s no basis to believe that there are additional DSM measures that could be implemented and, therefore, none were evaluated.” [T 1172 L 5-7]. Thus, RCID is asking the Commission to simply trust its customers are implementing all the DSM programs that are practical and ignore their failure to fulfill their duty to mitigate the need for the TEC through conservation and DSM measures.

Again, had Tallahassee followed the same reasoning and analysis as JEA, FMPA and RCID, and had not taken a harder look at potential cost-effective DSM measures, Tallahassee would not have identified the 162 MW of savings it did. [T 1231 L 13-16].

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**ISSUE 5:** Have the Applicants appropriately evaluated the cost of CO<sub>2</sub> emission mitigation costs in their economic analyses?

**POSITION:** No. The Applicants have underestimated the cost of carbon dioxide allowances which will be required to operate the proposed pulverized coal power plant. Instead of relying on existing estimates from credible sources, the Applicants relied upon the cost projects made by Hill & Associates specifically for TEC, which are dramatically less than those made in Hill & Associates commercially available projections. In order for the CO<sub>2</sub> cost projections used by the Applicants to be reasonable, the following assumptions must be realized: (1) Demand increases for some EGUs will not exceed 1 percent per year; (2) EGUs in states which do not currently have any renewable energy standards are projected to aggressively shift to carbon-free energy sources; (3) 12 nuclear plants will come on line between 2016 and 2020, and that these will be considered non-emitters; (4) non-EGUs will aggressively reduce their emission; by non-electric generating industries; and, (5) EGUs will receive further economic relief based on political pressure.

The appropriate evaluation of the costs of carbon dioxide (CO<sub>2</sub>) emission mitigation costs is potentially one of the most significant economic considerations before the Commission in this docket. The Applicants have portrayed this issue as speculation. See, e.g., Prehearing Order PSC-07-0016-PHO-EU p. 10-11. However, this is not the first time the Commission has faced making a determination of need in the face of an uncertain regulatory environment. See Order No. PSC-93-1715-FOF-EQ p. 13-15 (“We find that Dade County adequately considered all reasonably anticipated costs of environmental compliance... Dade County also *considered the potential for more stringent air pollution control regulations which are currently being considered* by the Florida Department of Environmental Protection... Therefore, we believe that Dade County has adequately considered all reasonably anticipated costs of environmental

compliance.” (emphasis added)); Order No. PSC-93-1376-FOF-EI p. 3 (“Because of the uncertainty of future low sulfur-high sulfur differential fuel costs, allowance prices, and *future environmental regulations*, particularly for air toxics, a fuel switching strategy appears to be the most reasonable and cost-effective plan at this time.” (emphasis added)); Order No. 23080 p. 24-25 (Docket No. 890974-EI) (“FPL has included the capital and operating costs of meeting all presumed local, state and federal environmental regulations in the project costs used as the basis for FPL’s economic analysis... Thus, we find that FPL has taken into account the reasonably anticipated costs of environmental compliance in the unit selection process.”); Order No. 23079 p. 27 (Docket No. 890973-EI) (“Thus, we find that FPL has taken into account the reasonably anticipated costs of environmental compliance in the unit selection process.”).

Thus, all the Commission can ask of the Applicants is that they reasonably anticipate the likely costs of CO<sub>2</sub> regulations. In this case, their analysis does not do that. Rather than attempt to realistic quantify carbon compliance costs, the Applicants have relied on a study by Hill and Associates that developed estimates of the costs of compliance with a hypothetical regulation based loosely on Senate Amendment 2028 to the McCain-Lieberman Climate Stewardship Act S. 139. [T 1014 L 1-16]. These estimates differ strikingly from others in the literature and especially from a set developed by Synapse Energy Economics. [Exh. 79].

In their recent publication on carbon compliance costs, the Synapse group reports the results of two analyses of Senate Amendment 2028, one by the EIA and another by the Tellus Institute. Both concluded that carbon costs would be much higher than the estimates developed by Hill and Associates. Both are shown together with other analyses of the impact of the McCain-Lieberman Climate Stewardship Act in the figure in Trial Exhibit 112.



Synapse developed three projections of future carbon prices corresponding to a projection and a “high case” a “mid case” and a “low case” projection. They are based on either actual costs employed by utilities in integrated resource planning, or figures recommended for planning purposes by state agencies, and on and the results of economic modeling of the impacts of specific legislation introduced to the Senate in recent years. These are shown in Synapse’s Figure 6.3. [Exh. 79 p. 51]. At present, the best index to “reasonably anticipated future costs” is the mid case developed by the Synapse group, which forecasts carbon dioxide allowance prices of \$5 per ton in 2010, \$25 in 2020 and \$35 in 2030, with a levelized value between 2010 and 2040 of \$19.6 per ton. [Id. at p. 52, Table 6.4].

In response to the Applicants analysis of CO<sub>2</sub> costs, Whitton sponsored the testimony and analysis of Dian Deevey. Ms. Deevey testified that Applicants’ forecasts of compliance costs per ton of CO<sub>2</sub> emitted range from \$4.22 in 2012, to a maximum of \$10.28 in 2016, after which they drop rapidly to \$2.43 in 2018, and rise very slowly through the interval 2017 to 2030 to a maximum of \$9.52. [T 559 L 16-20]. While these are not the lowest cost estimates in the literature, their erratic progression over time from low to high and then down again is unusual. [See comparison of Hill and Associates estimates to other estimates in Exh. 112]. Ms. Deevey then identified the following questionable assumptions made by Hill and Associates: (1) Demand increases for some Electrical Generating Units (“EGUs”) will not exceed 1 percent per year; (2) EGUs in states which do not currently have any renewable energy standards are projected to aggressively shift to carbon-free energy sources; (3) 12 nuclear plants will come on line between 2016 and 2020, and that these will be considered non-emitters; (4) non-EGUs will aggressively reduce their emission; by non-electric generating industries; and, (5) EGUs will receive further economic relief based on political pressure. [T 560 L 9 – T 562 L 12].

While the McCain-Lieberman Climate Stewardship Act is more “industry-friendly” than other existing legislative proposals for controlling CO<sub>2</sub> emissions, [T 560 L 3], the Applicants’ expert on this issue, Mr. Preston, characterized this bill by saying the “lights would start to go out”, [T 1055 L 15-18], and would “wreck the U.S. economy”, [T 1045 L 19-22], if it were implemented as written. Hill and Associates’ estimates of carbon costs are only accurate if all the assumptions above come to fruition. [T 1058 L 4]. And, Mr. Preston again believes that if his assumptions are not implemented, “the lights will go out.” Id. Instead of relying on other credible analysis of federal legislation by Synapse or the EIA, Mr. Preston “creat[ed his] own thoughts on what would be a plausible scenario for the future.” [T 1039 L 1-2]. However, when analyzing the McCain-Lieberman Act without his assumptions, Mr. Preston recognized that the results of his analysis had CO<sub>2</sub> emission allowance costs which were approximately twice as much – or “perhaps 100 percent” greater – than those being presented by the Applicants. [T 1046 L 23-25].

The Applicants experts also cannot agree on how significant CO<sub>2</sub> emission allowance costs could be before making the TEC not cost effective. For example, Mr. Preston testified that the McCain-Lieberman Act, if implemented without his assumptions, would have compliance costs of approximately \$20 per ton of CO<sub>2</sub> emitted would “wreck the U.S. economy.” [T 1045 L 19-22]. On the other hand, Mr. Rollins, Project Manager with Black & Veatch, estimates that compliance costs would have to exceed \$180 per ton of CO<sub>2</sub> emitted before a natural gas combined cycle unit would be most cost-effective than the TEC. [T 1247 L 5-15]. Whereas the Tallahassee’s IRP update on April 26, 2006, prepared by Black & Veatch, demonstrates that the Synapse “high case” projection – with a maximum compliance cost of approximately \$50 per ton

of CO<sub>2</sub> emitted, [Exh. 79 Table 6.4] – would make an “all gas” scenario more cost-effective than participating in TEC. [T 779-781; Exh. 107 p. 5].

Whether overly optimistic or overly pessimistic regarding CO<sub>2</sub> emission allowance costs, the Applicants evaluations are not appropriate.

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**ISSUE 6:** Does the proposed TEC generating unit include the costs for the environmental controls necessary to meet current state and federal environmental requirements including mercury (Hg), NO<sub>x</sub>, SO<sub>2</sub> and particulate emissions?

**POSITION:** It appears that the Applicants have evaluated the costs for the controls necessary to meet the current and reasonably anticipated state and environmental controls associated with SO<sub>2</sub> and NO<sub>x</sub>. However, it seems that the Applicants have not fully evaluated the impacts of Florida’s proposed State Implementation Plan (“SIP”) with regards to mercury (Hg).

It appears that the Applicants have evaluated the costs for the controls necessary to meet the current and reasonably anticipated state and environmental controls associated with SO<sub>2</sub> and NO<sub>x</sub>. However, it seems that the Applicants have not fully evaluated the impacts of Florida’s proposed State Implementation Plan (“SIP”) with regards to mercury (Hg). The Applicants have anticipated that the Clean Air Mercury Rule (“CAMR”) will be implemented as promulgated in 2005. As of June 2006, DEP has decided to opt-in to the cap-and-trade program. However, the Applicants have not indicated that they have considered the potential impacts of the litigation against EPA challenging CAMR by 14 states (California, Connecticut, Delaware, Illinois, Maine, Massachusetts, Minnesota, New Hampshire, New Jersey, New Mexico, New York, Pennsylvania, Vermont and Wisconsin), as well as several Indian tribes and numerous public health and environmental organizations, which is currently pending. State of New Jersey et al., v. EPA, petition for review docketed, No. 05-1097 (D.C.C., March 29, 2005).

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**ISSUE 7: Have the Applicants requested available funding from DOE to construct an IGCC unit or other cleaner coal technology?**

**POSITION: No. The Applicants have not made, nor has DOE not received, any formal requests for funding from the Applicants to construct a coal power plant utilizing IGCC technology.**

The Applicants have not made any requests for funding from the U.S. Department of Energy (“DOE”) to construct an IGCC unit or other cleaner coal technologies. [T 407 L 14, see also Exh. 102]. While the Applicants attempted to justify their not seeking funding by explaining how they “investigated” potential funds, [see, e.g., Exh. 8, Exh. 102, T 406-08], the simple fact is that they did not make a request. This is despite the Taylor County Board of Commissioners’ resolution specifically asking for the request of funds from DOE so that a coal plant in Taylor County would be built using only the very latest and cleanest technology available such as the coal gasification process. [T 406 L 18 – T 407 L 3]. Nonetheless, the Applicants even structured their Request for Proposal (“RFP”) so that even if a bidder had asked TEC to jointly approach DOE to request funding for an IGCC plant, it would have been rejected as a non-conforming bid. [T 432 L 4-11].

Although it may be highly unlikely that funding from DOE would pay for an entire IGCC power plant, funding could have been available to make an IGCC plant cost-effective, as was the case with the \$235 million Clean Coal Power Initiative Grant that was given to Orlando Utility Commission (“OUC”). [T 341 L 7-10]. The fact is no one will ever be certain as to whether or not any funding for an IGCC would have been available for the TEC because the applicants could not be bothered to make a formal request.

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**ISSUE 8:** Has each Applicant secured final approval of its respective governing body for the construction of the proposed TEC generating unit?

**POSITION:** No. Each Applicant has the contractual right to withdraw from the TEC once all permitting has been secured necessary to construct the TEC generating unit and the final construction costs are known, pursuant to the Phase II-B Development Agreement between the Applicants.

None of the Applicants have provided final approval of their respective governing bodies for the construction of the TEC because such approval is not required by the Phase II-B Development Agreement. [Exh. 2, p. 1742-1814]. Thus, the Applicants are only committed to the TEC until the time that TEC receives all its permits (e.g., sight certification permit, air permit, water permit). [T 422 L 15-24].

This Development Agreement creates a number of problems for the Applicants. First, once need is determined by the Commission under Section 403.519, Florida Statutes, a presumption of public need and necessity exists. Therefore, if one of the Applicants finds like capacity at a lower cost than participating in the TEC – for example, through new DSM or conservation – made after the Commission has already determined need, it would not in and of itself preclude the Applicant from constructing the new capacity. Order No. 25668 p. 9 (Docket No. 910603-EQ). Yet, the Development Agreement allows the Applicants to opt-out of the TEC after the PSC’s need determination.

Second, the Development Agreement allows the Applicants to reallocate between themselves percent shares of the participation as long as the total interest is maintained at 100 percent. [T 423 L 22-24, Ex. 2 p. 1770]. Since this would take place after the PSC’s need determination, it allows the Applicants to take on more electrical generation capacity – and more costs to be passed on to their customers – without a determination that such need is actually exists by the Commission.

Third, the Development Agreement allows an Applicant to completely withdraw from the TEC if one of the other three participants is willing to completely take his share. [T 424 L 3-7, Exh. 2 p. 1771]. In addition, if an Applicant completely withdraws, the Applicant can invite an undetermined third party to take its place with the written consent of the other parties. [T 424 L 8-11, Exh. 2 p. 1771-74]. Thus, the Development Agreement permits an unknown party, who never had to demonstrate a need before the PSC, to add capacity to their systems and incur costs to be passed onto their customers.

Whether or not intentional, this Development Agreement creates an end-around the Commission's authority and statutory obligations. By making a need determination at this time, the Applicants are asking the Commission to make a final determination about the need and cost-effectiveness of the TEC when none of the Applicants have to make that decision until the final costs are more certain.

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**ISSUE 10: Based on the resolution of the foregoing issues, should the Commission grant the Applicants' petition to determine the need for the proposed TEC generating unit?**

**POSITION: No.**

Based on the reasons discussed above, as well as the evidence contained in the record and adduced at hearing, the Applicants' Petition for Determination of Need for a 765 MW pulverized coal-fired electrical power plant in Taylor County should be DENIED.

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**ISSUE 11: Should this docket be closed?**

**POSITION: This docket should be closed when the Commission has issued its final order and all motions for reconsideration have been disposed of.**

Dated this 24<sup>th</sup> day of January, 2007.

Respectfully submitted,

s/ Brett M. Paben

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## SUMMARY OF ARGUMENT

### ARGUMENT

- I. THE APPLICANTS HAVE NOT DEMONSTRATED THAT TEC WILL PROMOTE ELECTRICAL SYSTEM RELIABILITY AND INTEGRITY**
- II. THE APPLICANTS HAVE NOT DEMONSTRATED THAT TEC WILL PROMOTE FUEL DIVERSITY AND SUPPLY RELIABILITY**
- III. CONSERVATION MEASURES ARE REASONABLY AVAILABLE TO MITIGATE THE NEED FOR THE TEC**
- IV. THE APPLICANTS HAVE NOT APPROPRIATELY EVALUATED THE COST OF CO<sub>2</sub> EMISSION MITIGATION COSTS IN THEIR ECONOMIC ANALYSES**
- V. THE APPLICANTS HAVE NOT FULLY EVALUATED THE IMPACTS OF FLORIDA'S PROPOSED STATE IMPLEMENTATION PLAN ("SIP") WITH REGARDS TO MERCURY**
- VI. THE APPLICANTS HAVE NOT REQUESTED AVAILABLE FUNDING FROM DOE TO CONSTRUCT AN IGCC UNIT OR OTHER CLEANER COAL TECHNOLOGY**
- VII. EACH APPLICANT HAS NOT SECURED FINAL APPROVAL OF ITS RESPECTIVE GOVERNING BODY FOR THE CONSTRUCTION OF THE TEC**
- VIII. THE PROPOSED TEC GENERATING UNIT IS NOT THE MOST COST-EFFECTIVE ALTERNATIVE AVAILABLE TO THE APPLICANTS**
  - A. INVESTMENT IN DSM AND RENEWABLES TO MITIGATE THE NEED FOR THE TEC IS MORE COST-EFFECTIVE**

### CONCLUSION

Dated this 24<sup>th</sup> day of January, 2007.

Respectfully submitted,

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## CERTIFICATE OF SERVICE

I hereby certify that a copy of John Carl Whitton, Jr.'s Post-Hearing Statement of Issues and Positions and John Carl Whitton, Jr.'s Post-Hearing Brief in Opposition to Determination of Need have been furnished via e-mail on this 24<sup>th</sup> day of January, 2007, to the following:

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