

**BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION**

In Re: Petition for Determination of Need For Citrus County Combined Cycle Power Plant, by Duke Energy Florida, Inc.	) ) )	DOCKET NO. 140110-EI
In Re: Petition for Determination of Cost Effective Generation Alternative to Meet Need Prior to 2018 for Duke Energy Florida, Inc.	) ) )	DOCKET NO. 140111-EI Filed on: September 10, 2014

**POST-HEARING BRIEF AND STATEMENT OF ISSUES AND POSITIONS  
OF WHITE SPRINGS AGRICULTURAL CHEMICALS, INC.  
d/b/a PCS PHOSPHATE – WHITE SPRINGS**

Pursuant to the Commission’s Orders Establishing Procedure in these dockets, Order No. PSC-14-0274-PCO-EI and Order No. PSC-14-0275-PCO-EI, issued May 29, 2014, and the “*Third Order Establishing Procedure and Order Granting Motion for Alternative Testimony Filing Dates*,” Order No. PSC-14-0341-PCO-EI, dated July 3, 2014, White Springs Agricultural Chemicals, Inc. d/b/a PCS Phosphate – White Springs (“PCS Phosphate” or “PCS”), through its undersigned attorney, files its Post-Hearing Brief and Statement of Issues and Positions in the above matters. Except as described below, the PCS Phosphate positions on issues remain as stated in the Prehearing Order issued August 22, 2014.

**I. OVERVIEW**

In these consolidated dockets, Duke Energy Florida, Inc. (“Duke”) originally sought Commission approval to spend an estimated \$1.93 billion for three generation construction projects to replace lost generating capacity associated with the closure of the utility’s ruined

Crystal River 3 nuclear plant, to replace aging existing coal and peaking generation, and to meet summer peak demand needs. Those projects were described as follows:

- 320 MWs (summer rating) of additional combustion turbine (CT) peaking capacity at its Suwannee station, scheduled for commercial operation by June 2016 at an estimated capital cost of \$197 million (including AFUDC).
- 220 MWs of additional summer capacity (effectively zero added MWs in winter) by installing a chiller system on all four Hines combined cycle units, to be available in the summer of 2017 at an estimated capital cost of \$160 million.
- Construction of 1,640 MWs of combined cycle generating capacity at a greenfield site in Citrus County adjacent to the Crystal River power station, with half of the capacity available in May 2018 and the remainder entering commercial service by December 2018, at an estimated total capital cost of \$1,514 million.

As the applicant, Duke bears the burden of proof to demonstrate the need for each project and the reasonableness of the projected costs. There is no presumption of prudence in these matters.

As is explained below, PCS supports, and it appears other intervenors do as well, Duke's proposal to move forward with its planned investment in the Hines chillers. Next, at the beginning of the hearing held on August 26, 2014, Duke announced that it intended to withdraw its request for the Suwannee CTs in favor of acquiring the Calpine-owned Osprey combined cycle generation unit located in Auburndale which Calpine had offered for sale in response to a Duke request for proposals. That announcement contrasted with the filed testimony in this docket, in which Calpine argued that the Osprey acquisition was more cost-effective than the Suwannee CTs while Duke maintained that the need to construct a transmission connection to the Osprey unit (which is physically located on the Tampa Electric system) and the need to secure FERC approval of the transaction (which Duke considered problematic under its view of FERC's market power screening policy) rendered the Osprey acquisition an unattractive alternative. The terms of the hastily-announced proposed acquisition, including the planning, cost, schedule and rate recovery of necessary transmission upgrades and extensions have not

been disclosed at this date, but, presumably, will be addressed in a subsequent petition after the terms of the proposed sale are finally settled, necessary board approvals are obtained, and final documents are executed. In any event, for the purposes of Docket No. 140111-EI, the salient fact is that Duke has withdrawn its request for Commission approval of the proposed investment in the Suwannee CTs.

Based on the circumstances described above, it appears that only the issues pertaining to Duke's application for a determination of need for Citrus County pose disputed issues of fact for the Commission to resolve. In this regard, there are two fundamental, indeed fatal, flaws concerning Duke's application, and the application should be denied as a result.

First, and most transparently, Duke's application for a need determination for the 1,640 MW Citrus units "stands on the shoulders" of the "little GBRA" investments. Duke's application was predicated upon construction of the Suwannee CTs, but now apparently will follow from Duke's acquisition of the Osprey unit. The Osprey combined cycle unit<sup>1</sup> and the proposed Suwannee combustion turbines are not fungible forms of generation, but have distinct operational and performance characteristics that affect the timing and need for additional generating capacity at Citrus County (or elsewhere on the Duke system). There is nothing in the record that assesses the need for either or both of the Citrus 820 MW units in light of this changed circumstance. Tr. Vol. 5, pg. 716. The Duke application is, therefore, deficient.

Second, Duke's assessment of generation need flows from its calculated generation reserve margin studies. Tr. Vol. 5, pg. 715. That assessment in turn is driven by a load forecast

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<sup>1</sup> The Osprey unit is rated at 515 MWs which can be increased to 599 MWs with duct firing. Tr. Vol. 5, p. 699. Currently, 249 MWs of capacity can be delivered to the Duke system under a firm point-to-point transmission arrangement through TECO. Duke estimated that three years may be required to plan and construct a direct transmission connection that will allow Duke to access the full rated capability of the Osprey unit. Tr. Vol. 2, pp. 256-257.

that differs markedly from recent historic experience and suffers from a glaringly evident inconsistency. In the briefest terms, Duke’s “slow but picking up” growth in customer accounts combined with a substantial forecasted decline in residential and commercial usage per customer do not support the significant weather adjusted increase in summer peak load that Duke relies upon in this docket. Given the actual trends, continuation of recent (post-recession) peak load growth experience indicates that the Citrus County generation additions will produce substantial excess generating capacity at a time when consumers can ill-afford it.

Finally, there is no dispute concerning NRG witness Pollock’s observation that Duke’s electric rates are already among the highest in the state, and that future rate recoveries related to Duke’s mis-adventures that led to the closure of the Crystal River nuclear unit will further increase those rates, particularly beginning in 2017. Under these circumstances, the Commission should not authorize additional rate recovery through the GBRA mechanism for generating units that are not needed.

## **II. SPECIFIC ISSUES**

Duke’s failure to satisfy its burden of demonstrating the need to construct 1,640 MWs of combined cycle generating capacity in Citrus County by the end of 2018 applies to Issues 1, 2, 5, 6 and 7 below.

### **PCS PHOSPHATE POSITIONS**

**Issue 1: Is the proposed Citrus County combined cycle plant needed, taking into account the need for electric system reliability and integrity?**

**PCS Phosphate:** \*No. Duke failed to meet the burden of demonstrating the reasonableness of its load forecasts, and has not demonstrated that capacity additions proposed in the Citrus County project are needed by 2018, particularly considering the changed circumstances created by Duke’s announced intention to acquire the Osprey combined cycle unit.\*

**Issue 2: Is the proposed Citrus County combined cycle plant needed, taking into account the need for adequate electricity at a reasonable cost?**

**PCS Phosphate:** \*No. Duke has not demonstrated that capacity additions of the size proposed in the Citrus County project are needed by 2018. Premature construction of those facilities will produce consumer rate impacts that are not just and reasonable.\*

**Issue 5: Is the proposed Citrus County combined cycle plant the most cost-effective alternative available to meet the needs of Duke Energy Florida and its customers?**

**PCS Phosphate:** \*No. Duke has not demonstrated that constructing the proposed Citrus County combined cycle plant for an in-service date of December 2018 is the most cost-effective alternative available to meet the needs of Duke Energy Florida and its customers.\*

**Issue 6: Did Duke Energy Florida reasonably evaluate all alternative scenarios for cost effectively meeting the needs of its customers over the relevant planning horizon?**

**PCS Phosphate:** \*No. Duke has not evaluated all cost-effective resource alternatives for meeting customer needs, taking into account Duke's intention announced on August 26, 2014 to acquire the Osprey facility.\*<sup>2</sup>

**Issue 7: Based on the resolution of the foregoing issues, should the Commission grant the requested determination of need for the proposed Citrus County combined cycle plant?**

**PCS Phosphate:** \*No. Duke has not met its burden of proving that constructing the proposed Citrus County combined cycle plant for an in-service date of December 2018 is the most cost-effective alternative available to meet the needs of Duke Energy Florida and its customers.\*

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<sup>2</sup> PCS previously took "no position" on this issue, but has updated its position based on the Duke-Calpine announcement on August 26, 2014.

### **III. ARGUMENT**

#### **A. Duke's Announced Intention to Acquire the Calpine Osprey Facility Constitutes a Material Change in Circumstances that has not been Adequately Addressed.**

As the parties began opening statements in this consolidated matter on August 26, Duke announced that it had reached a tentative agreement to enter into a purchase power-acquisition arrangement with Calpine concerning the Osprey 515/599 MW combined cycle unit in Auburndale, Florida.<sup>3</sup> This announcement stands in contrast to Duke's pre-filed testimony, which claimed that Duke required only peaking capacity by the summer of 2016, that Osprey was less cost-effective than its proposed Suwannee CTs, that \$150 million in new transmission investment would be required to deliver all of the generating capacity from Osprey to the Duke system, and that Duke did not believe the acquisition would satisfy the FERC market power screen analysis.<sup>4</sup> Duke also maintained that the combined cycle facility was not a "like resource" to the Suwannee CTs because "combined cycle and CT generation have different capital, fixed and variable operation and maintenance (O&M), and other costs and different capacity factors."<sup>5</sup>

To be clear, PCS does not object at this point to Duke's decision to withdraw its proposal to build the Suwannee CTs and to purchase the Osprey facility because PCS does not have sufficient information concerning the proposed transaction to form any conclusion. It is our understanding that Duke and Calpine eventually will file a petition disclosing all relevant terms, and that parties will at that time be afforded an opportunity to conduct discovery and take positions.

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<sup>3</sup> Osprey is nominally summer rated at 515 MW which can be increased to 599 MWs with duct firing. Tr. Vol. 5, p. 699.

<sup>4</sup> Tr. Vol. 4, p. 574; Vol. 4, pg. 598.

<sup>5</sup> Tr. Vol. 4, p. 630.

Clearly, none of the reservations that Duke previously expressed with respect to the Osprey acquisition are diminished by the recent announcement since none of the relevant terms of the proposed transaction have been disclosed. Duke also concedes that none of its analyses supporting the Citrus County project are premised upon the Osprey acquisition. Tr. Vol. 5, pg. 716. Consequently, if, as Duke correctly maintained, the capacity offered by Osprey, its capacity factor and pertinent costs are distinct from the proposed Suwannee CTs, the analysis upon which Duke relies to support the need for the Citrus County project is inaccurate and outdated. Duke should be required to demonstrate, with competent and up-to-date evidence, that there is a need for the Citrus County project assuming that Duke now intends to purchase Osprey, construct the needed transmission to that facility, and construct the Hines's chillers. Absent such a showing, which does not appear in this record, Duke has not met its burden of proof and the utility's application for a determination of need for the Citrus County project must be rejected.

**B. Duke's Forecasted Peak Load Growth Is Unsubstantiated and Generation Reserve Margins Will Be Excessive if the Citrus County Units are Constructed as Proposed**

Duke's proposal to construct 1,640 MWs of combined cycle generation in Citrus County is predicated upon the load forecasts from its most recent Ten Year Site Plan ("TYSP") filed in April 2014. Tr. Vol. 5, p. 726. The utility forecasts a significant weather-normalized 10.4% increase in the summer peak from its 2013 actual levels. Exh. 49, Sch. 3.1. Duke maintains that its forecast methods do not attempt to reconcile forecast levels with recent actual experience (Tr. Vol. 5, pg. 744), but there is very little about the jump in summer peak load that Duke forecasts that holds up.

Duke's load forecast looks at the key drivers for residential, commercial and industrial energy and demand growth and their ultimate impact on summer peak demand and net energy

for load. Exh. 49. Reduced to their essentials, for residential and commercial customers (which tend to be the more weather sensitive loads that drive peak demands), the key elements are changes in the average number of customer accounts and in usage per customer (because the forecast assumes normal weather). *See* Exh. 49; Schedules 2.1-2.2; Tr. Vol. 5, p. 737. Duke's industrial load forecast is split between customer-specific forecasts for its very large phosphate mining customers (including PCS Phosphate) and other industrial loads. The results shown in its 2014 TYSP, which are consistent with the results of the 2013 TYSP as well, show the following:

1. Duke's system load factor dropped dramatically in 2009 as retail and wholesale customers alike reduced energy usage in response to the Great Recession. The system load factor subsequently improved throughout the period 2010-13 as the economic recovery took hold. Exh. 49; Sch. 3.3, col. 9.
2. Beginning in 2010, and continuing through 2013, Duke's summer peak demand continuously dropped year over year. Exh. 49; Sch. 3.1, col. 10.
3. The growth in the average number of residential and commercial customers slowed substantially from pre-recession levels and has not recovered. For example, for the years 2005-2008, Duke saw an average annual increase of residential and rural customers of 21,091, but, in the post-recession and recovery years of 2010-2013, the increase in customer accounts has averaged 5,961 (a 72% drop in adding new customers). Duke experienced a similar but less dramatic trend among its commercial customers. Exh. 49; Sch. 2.1. The number of industrial customers showed a continued chronic decline in accounts with a comparable post-recession decline in average usage. Exh. 49; Sch. 2.2.
4. Going forward, Duke forecasts a continued decline or flattening of average customer usage for the near term. For example, among residential and rural customers, Duke forecasts a decline of 1.8% in 2014 and an average annual decrease of 0.2% over the period 2014-2020. Exh. 49; Sch. 2.1, col. 6. Again, Duke projects a comparable trend for commercial customers.
5. In keeping with the observed post-recession trend, Duke forecasts a drop in net energy for load in 2014 of 2.4% from 2013 (actual NEL averaged a decline of 1.85% for the years 2010-2013). Exh. 49; Sch. 3.3, col. 8. Also, Duke forecasts a modest improvement of 1.1% for the five year period 2014-2020. *Id.*

Notwithstanding the above uncontested facts and estimates, Duke forecasted a 10.4% increase in the 2014 summer peak demand and an average growth in that peak of 3.5% over the



five year period 2014-2018. Exh. 49, Sch. 3.1, col. 10. Assuming, as it does, normal weather, and accounting for the depressed average customer usage that Duke has recently observed, and expects to continue, the substantial increase in summer peak load that Duke relies upon to justify the Citrus investment can only be attributed to a sudden, substantial and sustained increase in customer accounts with lower load factor usage patterns. There is, however, nothing to support that assertion. Duke witness Borsch conceded that customer growth in 2014 “has been slower than we had hoped.” Tr. Vol. 5, p. 751. Moreover, Duke’s most recent quarterly filing with the SEC revealed a modest increase in total average customer accounts of 1.3% for the six months ended June 30, 2014 (compared to the comparable period in 2013). Exh. 141. This does not remotely approach the 2.2% increase in residential customers that Duke included in the 2014 TYSP and its Need Study for the Citrus County project. Exh. 49; Sch. 2.1, col. 5.

In short, in 2013 Duke forecasted a spike in its summer peak load that did not happen (the peak dropped by 700 MWs when Duke forecasted an increase of 250 MWs).<sup>6</sup> In the 2014 TYSP (and the Need study), Duke again forecasts a spike in weather-normalized summer peak demand, but has neither customer account nor customer usage growth to support its claim. Similarly, the new decline in system load factor (after four successive years of improving load factors following the recession) that Duke forecasts for the next three years does not have empirical support. *See* Exh. 49, Sch. 3.3, col. 9.

In prior years, Progress Energy submitted low, base, and high load forecasts in its Ten Year Site Plans to provide some sensitivity analysis with respect to its forecast.<sup>7</sup> Such sensitivity analyses were sorely needed in this proceeding to test the Duke hypothesis that customer usage and overall energy needs (net energy for load) are witnessing a permanently changed (slow

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<sup>6</sup> *See* Exh. 139 (2013 Forecast) and Ex. 49, Sch. 3.1 (2013 Actual).

<sup>7</sup> Exh. 122, p. 163.

growth) dynamic while summer peak load follows a high growth trajectory, at least until the Citrus County units are slated to enter commercial service in 2018.

Because Duke has failed to establish that its high peak load growth scenario for 2014-2018 is empirically grounded based on the factors that its forecast methods evaluate, PCS calculated the summer peak demands that would be expected if, as has historically occurred, peak load growth maintained its recent, post-recession, historical relationship with net energy for load and average system demand. Exh. 140, p. 4. That adjusted peak demand reveals that Duke's expected generation reserve margins would average 34.6% for the period 2014-2018 if the three projects originally proposed by Duke were to be constructed as proposed. Exh. 140, p. 5. With the additional combined cycle generating capacity that the Calpine-Duke deal ostensibly offers compared to the Suwannee CTs, that excessive generating reserve margin would only become more bloated.

In sum, Duke has failed to meet its burden of demonstrating that the generating capacity associated with the proposed Citrus County combined cycling is needed based upon a reasonable assessment of its expected generation reserve margins. In fact, the record does not support either the customer growth or usage levels required to achieve the peak loads that Duke is estimating. Moreover, Duke cannot satisfy its burden of proof simply by arguing that there is a certain degree of variability to all forecasts. To justify its claimed need for the Citrus County units, Duke must demonstrate that the bases for its forecasts are reasonable, and this it has failed to do.

**C. Duke Should Preserve its Resource Planning Flexibility Until the Commission Has Completed its Assessment of the Proposed Osprey Unit Acquisition**

Calpine witness Hibbard maintained that Duke should create some resource planning flexibility by moving forward with the Hines chillers and one of the proposed existing generation

acquisitions before irrevocably committing to investment that may not be needed in the Citrus County units. Tr. Vol. 3, p. 348. Duke, however, prefers to spend ratepayer dollars to support a high growth scenario that it cannot justify.

The prudence of a more flexible course of action obviously is supported by Duke's announced intention to acquire the Calpine Osprey unit. Such action also would be consistent with the general electric industry concern of flattened load growth and the expected emergence of distributed energy resources. Duke witness Borsch acknowledges that customer initiated energy efficiency practices and improvements (beyond the measures that are included in Duke's DSM plans) are affecting load and energy forecasts. Tr. Vol. 4, p. 418. Certainly the disconnect between Duke's peak load and energy forecasts discussed above represents an emerging trend that the utility cannot fully explain.

Also, NRG witness Pollock is undoubtedly correct that the continuing rate fallout (base rate and fuel clause impacts) from Duke's disasters at Crystal River unit 3 and the Levy Nuclear Project will continue to impose upward pressure on Duke's already comparatively high electric rates. Tr. Vol. 6, pp. 883-884. Under the Revised and Restated Stipulation and Settlement Agreement approved by the Commission in Order No. PSC-13-0598-FOF-EI, Duke will begin recovering the CR3 regulatory asset beginning in January 2017. Adding substantial amounts of new combined cycle generation that likely is not needed will only further stunt Florida's economic recovery efforts.

#### **IV. CONCLUSION**

For the reasons stated herein, PCS Phosphate urges the Commission to deny the Duke Energy application for a determination of need for the Citrus County project for generating capacity to enter commercial service in 2018.

Respectfully submitted

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Dated: September 10, 2014

**CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that a true copy of the foregoing has been furnished by electronic mail and/or U.S. Mail this 10th day of September 2014 to the following:

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