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August 18, 2011

**VIA HAND DELIVERY**

Ms. Ann Cole, Commission Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399-0850

Re: *Petition for approval of negotiated power purchase agreement with US EcoGen Polk, LLC by Progress Energy Florida, Inc.; Docket No. 110090-EQ*

Dear Ms. Cole:

Please find enclosed for filing on behalf of Progress Energy Florida, Inc. ("PEF") the original and five (5) copies of PEF's responses to Staff's Data Request No. 5 dated August 11, 2011 in the above referenced docket.

Thank you for your assistance in this matter. Please call me at (727) 820-5184 should you have any questions.

Sincerely,

John T. Burnett

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**PROGRESS ENERGY FLORIDA, INC.'S RESPONSES TO STAFF DATA REQUEST NO. 5**  
**DOCKET NOS. 110090-EQ**

- Q1. Please refer to PEF's response to question 1 of staff's data request # 4. This states the forecasted commodity prices of natural gas for the 2011 Ten-Year Site Plan.**
- a. Please describe in detail PEF's methodology for this forecast. As part of this description, please state and describe the assumptions behind this forecast, including assumptions made by PIRA Energy, PEF, etc.**
  - b. Please compare this gas price forecast to the reference case gas price forecast published by the Energy Information Administration in its 2011 Annual Energy Outlook. This is the gas price forecast for Henry Hub. Please state why PEF's gas price forecast differs from the reference case gas price forecast in the EIA's 2011 Annual Energy Outlook other than the difference due to the reference case EIA forecast being in 2009 dollars. In general, state the differences in the assumptions between the two forecasts.**
  - c. What is the assumed rate of general inflation that PEF's gas price forecast uses to convert real dollars to nominal dollars?**
  - d. Is PEF's gas price forecast (the one in staff's data request # 4 for the 2011 Ten-Year Site Plan) a reasonable long-term gas price forecast? Please explain.**
  - e. How has PEF tested this gas price forecast (response to question 1 of staff's data request # 4; the gas price forecast for the 2011 TYSP) for reasonableness? Please explain. As part of this response, please describe any comparisons PEF made to other long-term gas price forecasts.**
  - f. The EIA's reference case gas price forecast assumes status quo for environmental regulations. What assumptions regarding changes in environmental regulations are behind PEF's 2011 TYSP gas price forecast?**

**Response:**

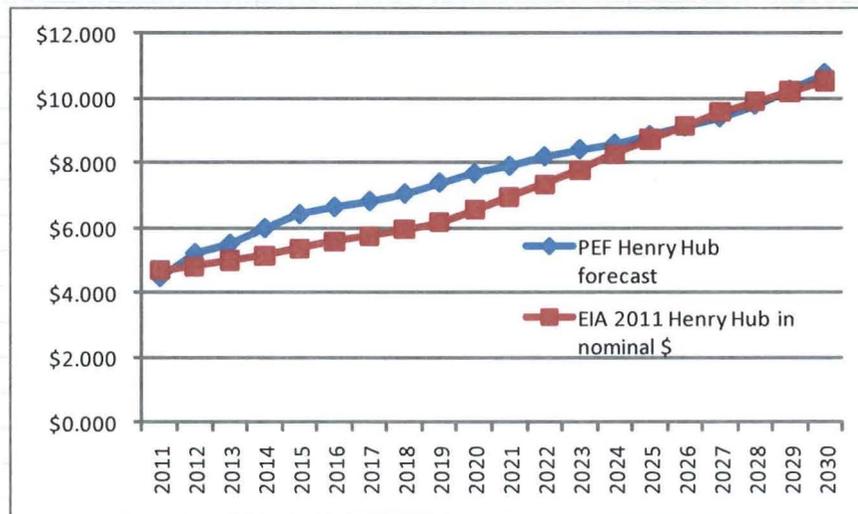
- a. PEF's 2011 Ten Year Site Plan natural gas forecast for years 2014 through 2030 is an average of three forecasts. The three forecasts are the Ventyx forecast Fall 2010 (converted to nominal dollars at an escalation rate of 2.4%), the CERA forecast dated September 2010, and the EIA forecast dated April 2010. The assumptions behind this forecast used by CERA and Ventyx are proprietary and unknown to PEF.**
- b. Please see the chart below:**

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Source:	PEF Henry Hub (2011 - 2013 average monthly)	EIA 2011 Annual Energy Outlook Henry Hub in Nominal \$ Using 2.4% Escalation Rate	EIA 2011 Annual Energy Outlook Henry Hub as collected in 2009 (\$/MMBtu)
Year:	(\$/MMBTU)	(\$/MMBTU)	
2011	\$4.470	\$4.698	\$4.480
2012	\$5.209	\$4.832	\$4.500
2013	\$5.501	\$5.014	\$4.560
2014	\$5.981	\$5.145	\$4.570
2015	\$6.415	\$5.373	\$4.660
2016	\$6.635	\$5.596	\$4.740
2017	\$6.815	\$5.754	\$4.760
2018	\$7.047	\$5.954	\$4.810
2019	\$7.383	\$6.173	\$4.870
2020	\$7.667	\$6.555	\$5.050
2021	\$7.906	\$6.965	\$5.240
2022	\$8.193	\$7.336	\$5.390
2023	\$8.408	\$7.777	\$5.580
2024	\$8.572	\$8.278	\$5.800
2025	\$8.847	\$8.725	\$5.970
2026	\$9.111	\$9.129	\$6.100
2027	\$9.396	\$9.563	\$6.240
2028	\$9.792	\$9.902	\$6.310
2029	\$10.259	\$10.204	\$6.350
2030	\$10.773	\$10.531	\$6.400



There are two major differences between the 2011 EIA forecast and the PEF forecasts. First, the PEF forecast is an average of three separate forecasts while the EIA forecast is one forecast. Second, the PEF forecast and the 2011 EIA forecast were performed at different times.

The 2011 EIA forecast was released on April 26, 2011, well after the pricing for this agreement had been negotiated and even after the petition requesting approval of this

agreement was filed. Natural gas prices and forecasts are volatile. As a result, forecasts are frequently updated by various sources. As a result of this volatility it would be impossible to negotiate a fixed price contract as required by Rule 25-17.250(6) and always use the most recent fuel forecast, especially when the most recent forecast could have been released after the contract was finalized. It therefore seems that the best approach is to use the same fuel forecast to fix energy prices as the forecast that was used to establish the avoided unit that the capacity pricing and the remainder of the terms and conditions of the standard offer are based upon.

- c. PEF assumed an escalation rate of 2.4% from EIA Annual Energy Outlook 2010 Table 20 Macroeconomic Indicators Energy Commodities and Services dated December 14, 2009.
- d. Yes, PEF's gas price forecast for the 2011 Ten-Year Site Plan is reasonable for the 2011 Ten-Year Site Plan because it was developed based on the same methodology that PEF routinely uses in its work products. Specifically, the forecasts were developed from recognized, reputable sources. However, the gas forecasts used for the 2011 Ten-Year Site Plan were based on the information known to the Company at the time it developed the forecast, which would not have been available during the time period in which the U. S. EcoGen agreement was negotiated.
- e. As PEF averages three different forecasts, this process ensures reasonableness and aids in the prevention of any one outlier viewpoint.
- f. Because the CERA and Ventyx forecasts are proprietary, PEF does not know if their forecast assumes the status quo for environmental regulations.

**Q2. For EIA's 2011 Annual Energy Outlook reference case gas price forecast, what assumed rate of general inflation does PEF use to convert real dollars (2009 dollars) to nominal dollars?**

- a. As part of this response, please explain the basis and reasoning for this assumed rate of general inflation.**

Response:

- a. PEF used a 2.4% general inflation rate to convert real dollars to nominal dollars. As was the case in response to 1a above, PEF used data from EIA for this purpose. This rate is specific to fuel commodities and is therefore correlated for this purpose versus using more general inflation indices.