

State of Florida



## Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD  
TALLAHASSEE, FLORIDA 32399-0850

**-M-E-M-O-R-A-N-D-U-M-**

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**DATE:** September 11, 2018  
**TO:** Carlotta S. Stauffer, Commission Clerk, Office of Commission Clerk  
**FROM:** Takira Thompson, Engineering Specialist, Division of Engineering *TT*  
**RE:** Docket No. 20180000-OT - Undocketed filings for 2018.

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Please file the attached, "DEF – TYSP Staff's Supplemental Data Request #4," in the above mentioned docket file.

Thank you.

TTT/pz

Attachment

COMMISSIONERS:  
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STATE OF FLORIDA



DIVISION OF ENGINEERING  
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## Public Service Commission

September 11, 2018

Mr. Bobby Pickels  
Duke Energy Florida  
[robert.pickels@duke-energy.com](mailto:robert.pickels@duke-energy.com)

VIA EMAIL

Dear Mr. Pickels:

**Re: Review of the 2018 Ten-Year Site Plans for Florida's Electric Utilities Supplemental Data Request #4**

Please electronically file all responses to the attached Staff's Supplemental Data Request #4, no later than Tuesday, October 2, 2018, via the Commission's website at [www.floridapsc.com](http://www.floridapsc.com) by selecting the Clerk's Office tab and Electronic Filing Web Form. Please reference 20180000-OT (Undocketed filings for 2018). In addition, please email responses to Takira Thompson at [tthomps@psc.state.fl.us](mailto:tthomps@psc.state.fl.us).

If you have any questions, please contact Takira Thompson by phone at (850) 413-6592 or at the email address provided above, or contact Phillip Ellis by phone at (850) 413-6626 or by email at [pellis@psc.state.fl.us](mailto:pellis@psc.state.fl.us).

Sincerely,

A handwritten signature in blue ink that reads "Takira Thompson".

Takira Thompson  
Engineering Specialist  
Division of Engineering

TTT:pz

Enclosure

cc: Office of Commission Clerk (20180000-OT – Undocketed filings for 2018)

1. With respect to the forecasting methodology, procedures, and models developed associated with Winter and Summer Peak Demand, please specify all the differences/modifications/ improvements, if any, between what used in DEF’s 2018 Ten-Year Site Plan (TYSP) and DEF’s 2017 TYSP.
2. For its 2018 TYSP, please identify and explain the measures and/or criteria, if any, DEF used to ensure the models of peak demand adequately explain historical volatility and to enhance the forecasting accuracy.
3. Please identify and explain the new measures, if any, DEF used to address the uncertainty inherent in the process of peak demand forecasting for its 2018 TYSP.
4. Please provide the Historical Forecast Accuracy associated with DEF’s Winter Peak Demand for the period 2012/13 through 2016/17 and Summer Peak Demand for 2013 through 2017, respectively.

**Table 1. Accuracy of Winter Peak Demand Forecasts**

Forecast Actual	Winter Peak Demand Forecast Error Rate (%)					Average
	Forecasting Period Prior					
	5	4	3	2	1	
	2008 TYSP	2009 TYSP	2010 TYSP	2011 TYSP	2012 TYSP	–
2012/13						
	2009 TYSP	2010 TYSP	2011 TYSP	2012 TYSP	2013TYSP	–
2013/14						
	2010 TYSP	2011 TYSP	2012 TYSP	2013TYSP	2014 TYSP	–
2014/15						
	2011 TYSP	2012 TYSP	2013 TYSP	2014 TYSP	2015 TYSP	–
2015/16						
	2012 TYSP	2013 TYSP	2014 TYSP	2015 TYSP	2016 TYSP	–
2016/17						

**Table 2. Accuracy of Summer Peak Demand Forecasts**

Forecast Actual	Summer Peak Demand Forecast Error Rate (%)					Average
	Forecasting Period Prior					
	5	4	3	2	1	
	2008 TYSP	2009 TYSP	2010 TYSP	2011 TYSP	2012 TYSP	–
2013						
	2009 TYSP	2010 TYSP	2011 TYSP	2012 TYSP	2013TYSP	–
2014						
	2010 TYSP	2011 TYSP	2012 TYSP	2013TYSP	2014 TYSP	–
2015						
	2011 TYSP	2012 TYSP	2013 TYSP	2014 TYSP	2015 TYSP	–
2016						
	2012 TYSP	2013 TYSP	2014 TYSP	2015 TYSP	2016 TYSP	–
2017						

5. Please refer to the first three lines on page 2-40 of DEF's 2018 TYSP. What are the "utility-sponsored DR programs?"
6. On page 2-41 of its 2018 TYSP, DEF states "[f]irst, a calculation of twenty-eight years of historical variation for economic driver variables selected in the base case energy sales model."
  - a. Please explain what the calculation is and what function it serves.
  - b. Please explain why specifically twenty-eight years variation was used, given that DEF indicated in its DEF's 2017 TYSP, page 2-41, that "a measurement of twenty-year historical variation for economic driver variables deemed best to correlate with DEF class energy sales."
7. Please refer to DEF's 2018 and 2017 TYSPs, page 2-13, Schedule 3.1.1 Summer Peak Demand, Base Case Forecast, for the following questions.
  - a. Referring to DEF's 2018 TYSP, Column (1), Total (MW), please explain why the 2017 actual value is significantly lower than DEF's 2017 TYSP projection (10,220 vs. 10,537).
  - b. Referring to DEF's 2018 TYSP, Column (5), Interruptible (MW), please explain why DEF projected that starting in 2022, the amount would maintain at a same level rather than decrease in trend as what had been projected in DEF's 2017 TYSP.
8. Please refer to DEF's 2018 and 2017 TYSPs, page 2-16, Schedule 3.2.1 Winter Peak Demand, Base Case Forecast, for the following questions.
  - a. Referring to DEF's 2018 TYSP, Column (1), Total (MW), please explain why the actual peak demand level for winter 2016/17 is significantly lower than DEF's 2017 TYSP projection (8,739 MW vs. 11,338 MW).
  - b. Given that the actual peak demand for winter 2016/17 in DEF's 2018 TYSP is significantly lower than what was projected in DEF's 2017 TYSP, please explain why DEF's Winter Peak Demand forecast is unchanged in its 2018 TYSP.
  - c. Referring to DEF's 2018 TYSP, Column (5), Interruptible (MW), please explain why DEF projected that the winter 2021/22 demand amount would not materially change through the winter 2026/27 rather than decrease in trend as projected in DEF's 2017 TYSP.

9. Please refer to DEF's 2018 TYSP, page 2-16, Schedule 3.2.1, Winter Peak Demand Base Case, Column (4) Retail.
  - a. Please specify to what forecasting period the forecasted 9,072 (MW) applies, if any.
  - b. Please verify whether each of the forecasted amount of Retail Winter Peak Demand presented on page 2-16 is correctly associated with its corresponding forecast year.