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Public Service Commission

Tampa Electric Company
James Beasley
Ausley Law Firm
P.O. Box 391
Tallahassee, FL 32302

**STAFF'S FIRST DATA REQUEST
VIA EMAIL**
jbeasley@ausley.com

RE: Docket No. 20180133-EI – Petition for limited proceeding to approve second solar base rate adjustment (SoBRA), effective January 1, 2019, by Tampa Electric Company.

Dear Mr. Beasley:

By this letter, the Commission staff requests that Tampa Electric Company (TECO) provide responses to the following data requests.

For the purpose of this question and sub-parts, please refer to the Direct Testimony and Exhibits of R. James Rocha, on behalf of Tampa Electric Company, as filed on June 29, 2018.

1. Page 12, Line 11 and Document Number 3 of Exhibit RJR-1 reflect \$46,045,000 as the amount of revenue requirements for the Second SoBRA with Sharing Mechanism. Please provide worksheets and/or schedules with formulas intact to demonstrate how:
 - A. The Capital RR and FOM amounts (\$11,205,000, and \$547,000, respectively) were calculated for Lithia.
 - B. The Capital RR and FOM amounts (\$9,223,000, and \$448,000, respectively) were calculated for Grange Hall.
 - C. The Capital RR and FOM amounts for (\$8,155,000, and \$407,000, respectively) were calculated for Peace Creek.
 - D. The Capital RR and FOM amounts (\$5,848,000, and \$275,000, respectively) were calculated for Bonnie Mine.

- E. The Capital RR and FOM amounts (\$4,786,000, and \$233,000, respectively) were calculated for Lake Hancock.
- F. The Land RR (\$4,917,000) was calculated.

For the purpose of this question and sub-parts, please refer to the Direct Testimony and Exhibits of Mark D. Ward, on behalf of Tampa Electric Company, as filed on June 29, 2018.

2. Page 15, Line 8 through Page 16, Line 6. Please answer the following.

- A. The witness asserts that recent steel tariffs could have a monetary impact of \$20 to \$30 per kilowatt-hour alternating current (kW_{ac}), and this will affect the project costs for Peace Creek. Does the estimated cost of \$1,492/ kW_{ac} for Peace Creek reflect the added cost of the steel tariffs? Please explain your response.
- B. The witness asserts that recent steel tariffs could have a monetary impact of \$20 to \$30 per kilowatt-hour alternating current (kW_{ac}), and this will affect the project costs for Bonnie Mine. Does the estimated cost of \$1,464/ kW_{ac} for Bonnie Mine reflect the added cost of the steel tariffs? Please explain your response.
- C. The witness asserts that recent steel tariffs could have a monetary impact of \$20 to \$30 per kilowatt-hour alternating current (kW_{ac}), and this will affect the project costs for Lake Hancock. Does the estimated cost of \$1,494/ kW_{ac} for Lake Hancock reflect the added cost of the steel tariffs? Please explain your response.
- D. When will the Company be able to quantify the monetary impact of steel tariffs that could have the Peace Creek, Bonnie Mine, and Lake Hancock project costs?

For the purpose of questions 3-7 and sub-parts, please refer to Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, on behalf of Tampa Electric Company, as filed on June 29, 2018.

3. Please answer the following questions regarding the Lithia property:

- A. How many total acres are in the Lithia property?
- B. How many acres in the Lithia property are planned for this solar installation?
- C. How many acres in the Lithia property would be suitable for future development as a solar installation, or for other utility purposes?
- D. How many acres in the Lithia property are not suitable for a solar installation, or for any other utility purpose?

- E. How long has Tampa Electric Company owned the Lithia property?
 - F. Document 3 of Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, reflects that nearly \$2.4 million is planned for development of the Lithia property. Please describe the work activities that are needed to develop the Lithia property.
 - G. Document 3 of Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, reflects that nearly \$4 million is planned for developing the transmission interconnection for the Lithia property. Please describe the work needed to develop the transmission interconnection for the Lithia property.
 - H. Document 3 of Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, reflects that nearly \$900,000 is planned for owner costs for the Lithia property. Please describe the costs, citing examples.
4. Please answer the following questions regarding the Grange Hall property:
- A. How many total acres are in the Grange Hall property?
 - B. How many acres in the Grange Hall property are planned for this solar installation?
 - C. How many acres in the Grange Hall property would be suitable for future development as a solar installation, or for other utility purposes?
 - D. How many acres in the Grange Hall property are not suitable for a solar installation, or for any other utility purpose?
 - E. How long has Tampa Electric Company owned the Grange Hall property?
 - F. Document 3 of Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, reflects that nearly \$1.8 million is planned for development of the Grange Hall property. Please describe the work activities that are needed to develop this property.
 - G. Document 3 of Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, reflects that nearly \$4.6 million is planned for developing the transmission interconnection for the Grange Hall property. Please describe the work needed to develop the transmission interconnection for this property.
 - H. Document 3 of Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, reflects that nearly \$500,000 is planned for owner costs for the Grange Hall property. Please describe the costs, citing examples.

5. Please answer the following questions regarding the Peace Creek property:

- A. How many total acres are in the Peace Creek property?
- B. How many acres in the Peace Creek property are planned for this solar installation?
- C. How many acres in the Peace Creek property would be suitable for future development as a solar installation, or for other utility purposes?
- D. How many acres in the Peace Creek property are not suitable for a solar installation, or for any other utility purpose?
- E. How long has Tampa Electric Company owned the Peace Creek property?
- F. Document 3 of Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, reflects that nearly \$1.8 million is planned for development of the Peace Creek property. Please describe the work activities that are needed to develop this property.
- G. Document 3 of Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, reflects that nearly \$4.7 million is planned for developing the transmission interconnection for the Peace Creek property. Please describe the work needed to develop the transmission interconnection for this property.
- H. Document 3 of Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, reflects that nearly \$400,000 is planned for owner costs for the Peace Creek property. Please describe the costs, citing examples.

6. Please answer the following questions regarding the Bonnie Mine property:

- A. How many total acres are in the Bonnie Mine property?
- B. How many acres in the Bonnie Mine property are planned for this solar installation?
- C. How many acres in the Bonnie Mine property would be suitable for future development as a solar installation, or for other utility purposes?
- D. How many acres in the Bonnie Mine property are not suitable for a solar installation, or for any other utility purpose?
- E. How long has Tampa Electric Company owned the Bonnie Mine property?

- F. Document 3 of Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, reflects that nearly \$1.4 million is planned for development of the Bonnie Mine property. Please describe the work activities that are needed to develop this property.
 - G. Document 3 of Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, reflects that nearly \$900,000 is planned for developing the transmission interconnection for the Bonnie Mine property. Please describe the work needed to develop the transmission interconnection for this property.
 - H. Document 3 of Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, reflects that nearly \$300,000 is planned for owner costs for the Bonnie Mine property. Please describe the costs, citing examples.
7. Please answer the following questions regarding the Lake Hancock property:
- A. How many total acres are in the Lake Hancock property?
 - B. How many acres in the Lake Hancock property are planned for this solar installation?
 - C. How many acres in the Lake Hancock property would be suitable for future development as a solar installation, or for other utility purposes?
 - D. How many acres in the Lake Hancock property are not suitable for a solar installation, or for any other utility purpose?
 - E. How long has Tampa Electric Company owned the Lake Hancock property?
 - F. Document 3 of Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, reflects that nearly \$1.6 million is planned for development of the Lake Hancock property. Please describe the work activities that are needed to develop this property.
 - G. Document 3 of Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, reflects that nearly \$4.1 million is planned for developing the transmission interconnection for the Lake Hancock property. Please describe the work needed to develop the transmission interconnection for this property.
 - H. Document 3 of Exhibit MDW-1, attached to the Prepared Direct Testimony of Mark D. Ward, reflects that nearly \$300,000 is planned for owner costs for the Lake Hancock property. Please describe the costs, citing examples.

8. **Land.** Please refer to Page 13, Lines 10 – 20 , of the direct testimony of witness Ward. Please explain how existing sites were chosen as suitable for solar development.
9. **Cost Effectiveness.** Please refer to EXH MDW-1. Explain what transmission upgrades are necessary for completing each 2019 SoBRA Project and all associated costs. Provide this in electronic (Excel) format.
10. **Resource Planning.** Please refer to EXH RJR-1. Provide the reserve margin in percentage of net firm system peak for the years 2019 to 2048 (30-year period) in an Excel table comparing the reserve margin with only the 2018 Solar Tranche versus the reserve margin with the 2018 and 2019 Solar Tranches.
11. **Resource Planning.** Please complete the table below based on your most recent planning for the life of the proposed solar tranche from 2019 to 2048 (30-year life) and provide in electronic format.

Year	Installed Capacity (MW)	Firm Import Capacity (MW)	Firm Export Capacity (MW)	QF Capacity (MW)	Total Available Capacity (MW)	System Firm Summer Peak Demand (MW)	Reserve Margin Before Maintenance (MW)	Scheduled Maintenance (MW)	Reserve Margin After Maintenance (MW)

12. **Resource Planning.** Please refer to EXH RJR-1. Provide a table comparing TECO's resource plan with the 2019 Solar Tranche included and with the 2019 Solar Tranche excluded.
13. **Cost Effectiveness.** Please refer to Page 19, Lines 15 – 23, of the direct testimony of witness Ward. Provide a comparison of the 2019 Solar Plan to customer-owned residential rooftop installations with an equivalent installed capacity. Please assume a residential customer installs 5kW rooftop systems at each residence. Include any assumptions and how these assumptions were made.
14. **Cost Effectiveness.** For all planned solar generation, please detail the depreciation life and actual life of each individual unit.

- 15. Cost Effectiveness.** Please refer to EXH RJR-1, Document No. 5. For all planned solar generation, please provide the annual and cumulative values over a 30-year period (in nominal and net present value) for each of the following categories: Equipment and Installation, Incremental Fixed O&M, Fuel Savings, Emissions Savings, separated by type (CO₂, etc.), Avoided Replacement Costs, Avoided Capacity Purchases, Avoided Fixed O&M, Avoided Variable O&M and Transmission Upgrades. Please provide this response in electronic (Excel) format.
- a. Please explain in detail the assumptions, facts, and figures used to determine the value of each of the components evaluated in this analysis.
 - b. Please explain whether TECO's emissions savings include CO₂ or CO₂ equivalent emissions. If so, please provide a sensitivity of the analysis without these costs and provide the revised annual and cumulative values (in nominal and net present value) for each category in electronic (Excel) format.
 - c. Please explain whether TECO reviewed the cost-effectiveness of the generation upgrades using fuel price sensitivities. As part of this response, please provide a sensitivity of the fuel savings based upon a low fuel price forecast and a high fuel price forecast, with revised annual and cumulative values (in nominal and net present value) for each category in electronic (Excel) format
- 16. Cost Effectiveness.** Please refer to EXH RJR-1, Document No. 5. Provide the avoided fossil fuels (avoided oil barrels, avoided natural gas MMcf, avoided coal short tons) from the years 2019 to 2048 (30-year period). Please explain how calculations were made for each fuel and provide an example using 2020. Provide the response in tabular electronic format in Excel.
- 17. Cost Effectiveness.** Please refer to Page 22, Lines 4– 9, of the direct testimony of witness Ward. Provide the avoided air emissions (CO₂, SO₂, NO_x) for the 30-year period. Show how each was calculated using the year 2020 as an example. Please provide the response in tabular electronic format in Excel.
- 18. Resource Planning.** Please refer to Schedule 8.1 of TECO's 2018 Ten-Year Site Plan, provided in response to POD No. 1, and EXH MDW-1, Document No. 1, Page 1 of 3 to the direct testimony of witness Ward. Why was the in-service date of the Lake Hancock Solar Project changed from January 2021 to January 2019? If this change is related to the status of the Mountain View Solar Project, please state so, and provide an explanation of the circumstances leading to the decision.

- 19. Customer Bills.** Please refer to EXH WRA-1, Document No. 4, Page 1 of 4 to the direct testimony of witness Ashburn. Provide a break down of a residential customer's 1000 kWh bill, identifying what portion of the proposed rate increase and bill total are attributable to the additional revenue requirements from the sharing mechanism. Please provide all calculations in Excel format, with formulas intact.
- 20. Land.** Please refer to Page 12, Lines 12-16, of the direct testimony of witness Ward.
- a. When is the permitting process for the Bonnie Mine Solar and Lake Hancock Solar Projects expected to be complete?
 - b. Does TECO anticipate any delays in the permitting process for either project?
- 21. Cost-effectiveness.** Please refer to Page 11, Lines 17-18, of the direct testimony of witness Ward. Explain what the phrase "because they originated their respective project sites" means.
- 22. Cost-effectiveness.** Please refer to POD No. 3. Identify those costs in the "other traditionally allowed rate base costs" category.
- 23.** Please refer to the Direct Testimony of Tampa Electric Company (TECO or Company) witness R. James Rocha, page 21, lines 15-25.
- a. Please fully explain how the Company developed the \$324.9 million projected value of fuel savings presented in this section of testimony.
 - b. Please identify the source and date of TECO's fuel price forecast used in developing the Current Present Value of Revenue Requirements (CPVRR) analysis of the proposed Second Solar Base Rate Adjustment (SoBRA) Transaction.
 - c. Please identify the date, if known, of TECO's next/updated fuel price forecast that will be used for Company/business planning purposes.
 - d. Please discuss TECO's fuel forecast methodology. Please also remark on approximate the length of time TECO has employed this same or very similar fuel forecasting methodology for Company planning purposes.
 - e. Please fully explain how TECO developed the \$24.8 million projected value of reduced emissions presented in this section of testimony.

- f. Please identify the sources and dates of all environmental compliance cost related forecasts TECO used in developing its CPVRR analysis of the proposed Second SoBRA Transaction.
 - g. Please discuss TECO's environmental compliance cost related forecast methodology. Please also remark on approximate the length of a time TECO has employed this same or very similar methodology.
 - h. Please provide a detailed explanation (with specificity) of the sensitivity analyses TECO performed with regard to forecasted fuel prices and forecasted market prices for carbon dioxide (CO₂) in testing the robustness of the projected cost savings.
24. Please provide a summary of all the existing federal, state, and local government policies and rules regarding the regulation of CO₂ emissions. Please also discuss the economic impacts of any such policies or rules.
25. To date, has TECO incurred any costs related to emissions of CO₂? If so, please discuss the economic details as well as the method of cost recovery.
- a. If the response is negative, when does TECO believe it will be affected by CO₂ emissions regulation/costs for emitting?
26. Please refer to the Direct Testimony of TECO witness Rocha, Exhibit RJR-1, Document No. 2, Page 1 of 1. Has TECO compared the fuel price forecast shown on Document No. 2 to any other publically available source of forecasted fuel prices, such as the Energy Information Administration? If so, please discuss the results of any analysis performed.
27. Please refer to the Direct Testimony of TECO witness Rocha, Exhibit RJR-1, Document No. 5, Page 1 of 1. Please discuss how the CO₂ and nitrogen oxide (NO_x) reduction amounts presented in this exhibit were formulated.
- a. Please provide the percent error in TECO's delivered natural gas price forecasts 3 to 5 years out using data which supported TECO's 2010 through 2014 Ten Year Site Plans, per the following tables. Please provide an explanation for any forecast error rate in excess of 20 percent.

Accuracy of Natural Gas Price Forecasts

Year	Natural Gas Price Annual Forecast Error Rate (%)		
	Years Prior		
	5	4	3
2015			
2016			
2017			
Average			

Natural Gas Price Forecasts

Year	Natural Gas Price Annual Forecast (\$/MMbtu)		
	Years Prior		
	5	4	3
2015			
2016			
2017			
Average			

Natural Gas Price

Year	Natural Gas Price Annual Actuals (\$/MMbtu)		
	Years Prior		
	5	4	3
2015			
2016			
2017			
Average			

28. Please provide the percent error in TECO's delivered coal price forecasts 3 to 5 years out using data which supported TECO's 2010 through 2014 Ten Year Site Plans, per the following tables. Please provide an explanation for any forecast error rate in excess of 15 percent.

Accuracy of Coal Price Forecasts

Year	Coal Price Annual Forecast Error Rate (%)		
	Years Prior		
	5	4	3
2015			
2016			
2017			
Average			

Coal Price Forecasts

Year	Coal Price Annual Forecast (\$/MMbtu)		
	Years Prior		
	5	4	3
2015			
2016			
2017			
Average			

Coal Price

Year	Coal Price Annual Actuals (\$/MMbtu)		
	Years Prior		
	5	4	3
2015			
2016			
2017			
Average			

Production of Documents

- Resource Planning.** Please provide a copy of TECO's 2018 Ten-Year Site Plan in PDF format.
- Cost-effectiveness.** Please refer to Page 10, Lines 11-15, of the direct testimony of witness Ward. Provide the pricing information received from the shortlisted developers for the seven solar PV projects, broken out into engineering and permitting, equipment, balance of system, installation, and interconnection.

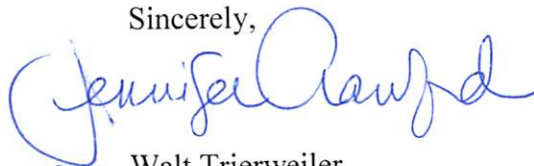
3. **Cost-effectiveness.** Please refer to Page 16, Lines 10-25, and Page 17, Lines 1-2, of the direct testimony of witness Ward. Provide the calculations and workpapers used to determine the projected total installed cost of each of the Second SoBRA Projects, broken down into EPC costs, development costs, third party development fees, permitting costs, land acquisition costs, taxes, utility costs to support or complete development, transmission interconnection costs, modules and equipment costs, costs associated with electrical balance of system, costs associated with structural balance of system, allowance for funds used during construction, and other traditionally allowed rate base costs. If the documents are available in Excel format, please provide them as such with all formulas intact.
4. **Cost-effectiveness.** Please refer to Page 18, Lines 11-17, of the direct testimony of witness Ward. Provide the calculations used to determine the projected weighted average costs of the First SoBRA, the Second SoBRA, and the First and Second SoBRAs together. If the document is available in Excel format, please provide it as such with all formulas intact.
5. Please refer to the Direct Testimony of TECO witness Rocha, page 21, lines 15-25. Please provide copies of the Company's high and low fuel forecasts relied upon in developing its CPVRR analysis discussed in this section of testimony.
6. Please refer to the Direct Testimony of TECO witness Rocha, page 21, lines 15-25. Please provide copies of the Company's base, high, and low environmental compliance cost forecasts relied upon in developing its CPVRR analysis referenced in this section of testimony.
7. Please refer to the Direct Testimony of TECO witness Rocha, page 16, lines 21-25. Please provide all (if any) alternative fuel and emissions forecasts TECO used to gauge the robustness of its proposed SoBRA transaction.
8. Appendix B (Typical Bill Analysis) to the petition indicates a bill increase of \$1.28 per month for residential customers who use 1,000 kWh per month. Considering the proposed bill impacts stated above, please discuss how and when TECO will inform its customers about the proposed changes. Also, please provide examples of a customer letter, website information, door hanger, press release etc. that are considered TECO's communication methods to inform customers of bill impacts.
9. TECO requests that the proposed tariff changes if approved be effective with the first billing cycle of January 2019. Please indicate when the first billing cycle of January will begin.

10. Twenty-fourth revised tariff sheet 6.030 indicates that the energy and demand charge for the first 1,000 kWh for residential service will increase from 4.896 cents per kWh to 5.143 cents per kWh. Please discuss the reason for this increase.

11. Page 9 of witness Ashburn's direct testimony states that certain rates in each rate class were increased to recover the identified revenue requirement. Please expand on this statement.

Please file all responses electronically no later than August 1, 2018 from the Commission's website at www.floridapsc.com, by selecting the Clerk's Office tab and Electronic Filing Web Form. Please feel free to call me at (850) 413-6584 if you have any questions.

Sincerely,



fer Walt Trierweiler
Senior Attorney

WLT/lms

cc: Office of Commission Clerk
Office of the Public Counsel
Moyle Law Firm