

# AUSLEY & McMULLEN

ATTORNEYS AND COUNSELORS AT LAW

123 SOUTH CALHOUN STREET  
P.O. BOX 391 (ZIP 32302)  
TALLAHASSEE, FLORIDA 32301  
(850) 224-9115 FAX (850) 222-7560

May 16, 2022

**VIA: ELECTRONIC FILING**

Mr. Adam J. Teitzman  
Commission Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399-0850

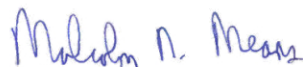
Re: Petition of Tampa Electric Company for approval of a new environmental program for cost recovery through the Environmental Cost Recovery Clause Docket 20220055-EI

Dear Mr. Teitzman:

Attached please find Tampa Electric Company's Response to Staff's First Data Request (Nos. 1-4), propounded by email on April 26, 2022.

Thank you for your assistance in connection with this matter.

Sincerely,



Malcolm N. Means

MNM/bmp  
Attachments

cc: All parties of record

**CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that a true and correct copy of Tampa Electric Company's Response to Staff's First Data Request (Nos. 1-4), filed on behalf of Tampa Electric Company, has been furnished by electronic mail on this 16th day of May 2022 to the following:

Ms. Ashley Weisenfeld  
Mr. Jacob Imig  
Office of the General Counsel  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399-0850  
[awaisenf@psc.state.fl.us](mailto:awaisenf@psc.state.fl.us)  
[jimig@psc.state.fl.us](mailto:jimig@psc.state.fl.us)

Richard Gentry  
Patricia Christensen  
Office of Public Counsel  
111 West Madison Street – Room 812  
Tallahassee, FL 32399-1400  
[gentry.richard@leg.state.fl.us](mailto:gentry.richard@leg.state.fl.us)  
[christensen.patty@leg.state.fl.us](mailto:christensen.patty@leg.state.fl.us)



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ATTORNEY

**TAMPA ELECTRIC COMPANY  
DOCKET NO. 20220055-EI  
STAFF'S FIRST DATA REQUEST  
REQUEST NO. 1  
BATES PAGE: 1  
FILED: MAY 16, 2022**

1. Please refer to page 4, paragraph 8 of the petition. Please identify when TECO anticipates receiving the results of the compliance requirement study.
  - A. Tampa Electric's compliance requirements study began on April 12, 2022 and continued through April 14, 2022. Based on the preliminary data, Tampa Electric will need to perform additional engineering testing to complete the compliance requirement study. The engineering test data will allow Tampa Electric the ability to evaluate the relationship between the monitoring process variables and formaldehyde concentrations while also providing data to the combustion turbine ("CT") vendor to adjust the CT accordingly to meet the formaldehyde limit. Tampa Electric anticipates having final results of the compliance testing early this summer but no later than September 2022.

**TAMPA ELECTRIC COMPANY  
DOCKET NO. 20220055-EI  
STAFF'S FIRST DATA REQUEST  
REQUEST NO. 2  
BATES PAGE: 2  
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2. Please refer to page 4, paragraphs 7 and 8 of the petition. The petition states on page 7 that Units 5 and 6 appear to only require lean-premix combustion technology to comply with the standard. However, on page 8, the petition states “[t]he estimated capital cost includes oxidation catalyst and Fourier Transform Infrared Spectroscopy (“FTIR”), formaldehyde analyzing equipment, for Big Bend CT Units 4A, 4B, 5, and 6 and CO monitoring equipment and data acquisition system (“DAS”) for Big Bend Units CT 5 and CT 6.”
- a. Please explain if the estimated capital cost includes the costs of oxidation catalysts for Big Bend CT Units 5 and 6. If so, why?
  - b. Please explain whether separate infrared spectroscopy equipment will be installed at each site.

**A.**

- a. The estimated capital costs do not include oxidation catalysts for Big Bend CT Units 5 and 6. Big Bend CT Units 4A and 4B will utilize oxidation catalysts to comply with the formaldehyde standard. The company anticipates that Big Bend CT Units 5 and 6 will use lean-premix combustion technology to comply with the standard. Therefore, the estimated capital costs for oxidation catalyst are only applicable to Big Bend CT Units 4A and 4B. The completion of the compliance requirement study will confirm whether lean-premix combustion technology or oxidation catalyst will be required on Big Bend CT Units 5 and 6. The capital cost estimate on page 8 could have been more clearly described as “oxidation catalysts for Big Bend CT Units 4A and 4B, and Fourier Transformation Infrared Spectroscopy (“FTIR”), formaldehyde analyzing equipment for Big Bend CT Units, 4A, 4B, 5 and 6”.
- b. The formaldehyde analyzing equipment consists of one mobile, trailer-mounted, FTIR gas analyzer. The equipment will not be installed on each site but will be mobilized at each site as needed to conduct the annual performance tests.

Tampa Electric does not have a commercial FTIR gas analyzer to conduct formaldehyde tests. The analyzer will be purchased to conduct the annual performance tests on Big Bend CT Units 4A, 4B, 5, and 6.

**TAMPA ELECTRIC COMPANY  
DOCKET NO. 20220055-EI  
STAFF'S FIRST DATA REQUEST  
REQUEST NO. 3  
BATES PAGE: 3 - 4  
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- 3.** Please refer to page 5, the estimated costs table included in the petition, for the following questions.
  - a. Please explain how the capital, operation and maintenance (O&M), and compliance requirement study costs were estimated.
  - b. Please explain why the MKS Starboost FTIR O&M costs were not included in the O&M Total.
  
- A.**
  - a. The capital costs for catalyst equipment, FTIR analyzing equipment and the compliance requirement study were developed using vendor estimates. The O&M costs for annual stack tests were developed using vendor estimates. All other capital and O&M cost estimates were based on experience and historical costs of similar projects.
  - b. Though listed in the estimated project cost table, the MKS Starboost FTIR O&M costs were not included in the total O&M due to a calculation error in the excel file. The revised estimated cost table is shown below. The total now includes \$5,000 annually beginning in 2023 for this line item.

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|  | 2022<br>(\$000) | 2023<br>(\$000) | 2024<br>(\$000) | 2025<br>(\$000) | 2026<br>(\$000) | Total<br>(\$000) |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| <b>Capital</b>                               |                 |                 |                 |                 |                 |                  |
| Catalyst Equipment & Installation            | 250             | -               | -               | -               | -               | 250              |
| DAS Installation & Intergration              | 50              | -               | -               | -               | -               | 50               |
| CO Monitors Installation                     | 150             | -               | -               | -               | -               | 150              |
| MKS Starboost FTIR                           | 135             | -               | -               | -               | -               | 135              |
| <i>Total</i>                                 | 585             | -               | -               | -               | -               | 585              |
|  |                 |                 |                 |                 |                 |                  |
| <b>Compliance Test Study<sup>1</sup></b>     | 45              | -               | -               | -               | -               | 45               |
|  |                 |                 |                 |                 |                 |                  |
| <b>In-Service Annual O&amp;M<sup>2</sup></b> |                 |                 |                 |                 |                 |                  |
| Air Permitting                               | 20              | -               | -               | -               | -               | 20               |
| Annual Stack Tests                           | -               | 40              | 40              | 40              | 40              | 160              |
| Catalyst Tests                               | -               | -               | -               | -               | 20              | 20               |
| Catalyst O&M (labor & materials)             | -               | 10              | 10              | 10              | 10              | 40               |
| Catalyst Wash (labor & materials)            | -               | -               | -               | -               | 125             | 125              |
| Monitor Maintenance (labor & materials)      | -               | 20              | 20              | 20              | 20              | 80               |
| MKS Starboost FTIR O&M                       | -               | 5               | 5               | 5               | 5               | 20               |
| <i>Total</i>                                 | 20              | 75              | 75              | 75              | 220             | 465              |

1 Estimated study costs incurred to ensure that measures implemented include best available technology to comply with the rule.

2 Estimated annual O&M expense after commercial in-service date to continue through life of compliance equipment.

**TAMPA ELECTRIC COMPANY  
DOCKET NO. 20220055-EI  
STAFF'S FIRST DATA REQUEST  
REQUEST NO. 4  
BATES PAGE: 5  
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4. Please complete Table 1 below listing the estimated residential customer bill impact resulting from the activities requested by TECO in the instant Petition.

Table 1: Estimated Residential Customer Bill Impact

|      | \$ / 1,000 kWh | \$ / 1,200 kWh |
|------|----------------|----------------|
| 2022 |                |                |
| 2023 |                |                |
| 2024 |                |                |
| 2025 |                |                |
| 2026 |                |                |

- A. Please see the table below for the Estimated Residential Customer Bill Impact.

Table 1: Estimated Residential Customer Bill Impact

|      | \$ / 1,000 kWh | \$ / 1,200 kWh |
|------|----------------|----------------|
| 2022 | \$0.00         | \$0.00         |
| 2023 | \$0.01         | \$0.01         |
| 2024 | \$0.01         | \$0.01         |
| 2025 | \$0.01         | \$0.01         |
| 2026 | \$0.01         | \$0.02         |