



January 18, 2024

VIA: ELECTRONIC FILING

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

Re: Dkt.: 20230129-EI
Petition for Approval of Purchased Power Agreement with Pasco County by Tampa Electric Company

Dear Mr. Teitzman:

Attached for filing in the above-styled matter is Tampa Electric Company's response to Staff's First Data Request (Nos. 1-6), propounded on December 15, 2023.

Thank you for your assistance in connection with this matter.

Sincerely,

A handwritten signature in blue ink that reads 'Malcolm N. Means'.

Malcolm N. Means

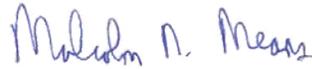
MNM/bml
Attachment
cc: All Parties of Record

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing response to Staff's First Data Request (Nos. 1-6), filed on behalf of Tampa Electric Company, has been served by electronic mail on this 18th day of January 2024 to the following:

Jacob Imig
Walter Trierweiler
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ATTORNEY

**TAMPA ELECTRIC COMPANY
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STAFF'S FIRST DATA REQUEST
REQUEST NO. 1
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1. Please refer to the Company's petition, paragraphs 11 - 15. Detail the differences between the 2022 purchased power agreement (PPA) and the proposed revised PPA. As a part of this response, detail how this revised PPA specifically addresses the Commission's concerns about the 2022 PPA.

A. There are three differences between the 2022 PPA and the proposed revised PPA that was included in the company's November 17, 2023 petition. Those differences are as follows:

Category	2022 PPA	Revised PPA
Capacity	Starts at 21 MW with the potential to increase to 25 MW.	18 MW flat.
Transmission	Tampa Electric pays third-party transmission costs that exceed a stated transmission cost cap.	Tampa Electric will not pay for third-party transmission.
Renewable Energy Credits (RECs)	Tampa Electric owns the RECs at zero cost unless the state or federal government establishes a market price a federal or state market price, at which point Tampa Electric pays Pasco the higher of the two prices going forward. Barring the establishment of a state or federal price, Pasco may remarket (i.e., seek a market price for) the RECs with Tampa Electric having the right of first refusal to retain the RECs by purchasing them from Pasco at that market price.	Tampa Electric owns the RECs outright at zero cost. There is no future REC payment trigger and no right for Pasco to remarket them.

As noted in paragraph 24 of the petition, the revised PPA addresses the two areas for which the Commission denied full cost recovery. It eliminates both third-party transmission and future REC costs risk to the customer.

- 2. Please refer to the Company's petition, paragraph 22(c) for the questions below:
 - a. Provide a copy of the analysis used to determine the \$7.3 million customer saving value. As part of this response, please provide supporting documents and describe what sensitivities, if any, the Company conducted for the saving value
 - b. Provide the Company's annual seasonal Reserve Margins and unit additions, retirements, and uprates/derates over the period of the contract for scenarios with and without the PPA.
 - c. Please verify if the avoided unit at the time that contract negotiation began is the same avoided unit identified by the Company in Commission Order No. PSC-2023-0132-PAA-EI. If not, please identify the unit, its in-service date, and provide operational and financial data similar to the Ten-Year Site Plan's Schedule 9.

- A. a. Please see the table below for the summary of the analysis used to determine the \$7.3 million customer savings. The Company also performed high fuel and low fuel sensitivities for this analysis. All scenarios show savings to customers.

Mid Fuel Analysis

COST-EFFECTIVENESS

Pasco WTE 18 MW PPA

Mid Fuel Scenario

Base Fuel Forecast	Cost/(Savings) (2025 US \$ millions)
Payments - Pasco Waste-to-Energy PPA	
Capital RR - New Recip Units	
System FOM	
System VOM	
System Fuel	
Start Costs	
Sub Total w/o NO _x or CO ₂ Cost	(\$7.3)
Plus Emissions Costs	
CO ₂ - Base	
NO _x - Base	
Total w/ CO ₂ (Base) Cost	

Low Fuel Analysis

COST-EFFECTIVENESS

**Pasco WTE 18 MW PPA
Low Fuel Scenario**

Low Fuel Forecast	Cost/(Savings) (2025 US \$ millions)
Payments - Pasco Waste-to-Energy PPA	
Capital RR - New Recip Units	
System FOM	
System VOM	
System Fuel	
Start Costs	
Sub Total w/o NOX or CO2 Cost	
Plus Emissions Costs	
CO2 - Base	
NOX - Base	
Total w/ CO2 (Base) Cost	

High Fuel Analysis

COST-EFFECTIVENESS

**Pasco WTE 18 MW PPA
High Fuel Scenario**

High Fuel Forecast	Cost/(Savings) (2025 US \$ millions)
Payments - Pasco Waste-to-Energy PPA	
Capital RR - New Recip Units	
System FOM	
System VOM	
System Fuel	
Start Costs	
Sub Total w/o NOX or CO2 Cost	
Plus Emissions Costs	
CO2 - Base	
NOX - Base	
Total w/ CO2 (Base) Cost	

- b.** Please see the table below for Tampa Electric’s annual seasonal Reserve Margins and unit additions, retirements, and uprates/derates over the period of the contract for scenarios with and without the PPA. The change case (i.e., with PPA case) shows the PPA deferring an 18.7 MW reciprocating engine from 2030 to 2035.

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Base Case (without PPA)

Pasco 18MW Base Case (without PPA)

Year	Capacity Additons	Retirements	Reserve Margin	
			Winter	Summer
2025	100MW Battery Storage 37.4 MW Reciprocating Engines 137.5MW Solar	–	23.3%	37.8%
2026	223.5MW Solar	–	22.8%	39.6%
2027	74.5MW Solar	–	21.7%	39.5%
2028	74.5MW Solar	–	20.6%	39.4%
2029	74.5MW Solar	–	19.6%	39.4%
2030	56.1 MW Reciprocating Engines 74.5MW Solar	–	19.9%	40.8%
2031	40MW Battery Storage 74.5MW Solar	–	19.9%	41.8%
2032	40MW Battery Storage	–	20.0%	41.9%
2033	40MW Battery Storage	–	20.1%	42.0%
2034	40MW Battery Storage	–	20.2%	42.1%
2035	40MW Battery Storage	–	20.3%	42.2%

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Change Case (with PPA)

Pasco 18MW Change Case (with PPA)

Year	Capacity Additions	Retirements	Reserve Margin	
			Winter	Summer
2025	100MW Battery Storage Pasco WTE PPA 37.4 MW Reciprocating Engines 137.5MW Solar	–	23.7%	38.2%
2026	223.5MW Solar	–	23.2%	40.0%
2027	74.5MW Solar	–	22.1%	39.9%
2028	74.5MW Solar	–	21.0%	39.9%
2029	74.5MW Solar	–	20.0%	39.9%
2030	37.4 MW Reciprocating Engines 74.5MW Solar	–	19.9%	40.8%
2031	40MW Battery Storage 74.5MW Solar	–	19.9%	41.8%
2032	40MW Battery Storage	–	20.0%	41.9%
2033	40MW Battery Storage	–	20.1%	42.0%
2034	40MW Battery Storage	–	20.2%	42.1%
2035	40MW Battery Storage 18.7 MW Reciprocating Engine	–	20.3%	42.2%

- c. For the revised PPA, Tampa Electric did not use the same Avoided Unit as used in the 2022 PPA analysis. Tampa Electric used the Avoided Unit as identified in the table below. The benefit of the current Pasco PPA analysis is based upon the current Standard Offer Contract (Avoided Unit). The information in the tables below is from Tampa Electric's Ten-Year Site Plans.

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Original Avoided Unit Information (2021TYSP)

Commerical In Service Date	Dec-24
Projected Unit Performance Data	
Planned Outage Factor (POF)	2%
Forced Outage Factor (FOF)	2%
Equivalent Availability Factor (EAF)	98%
Resulting Capacity Factor (2023)	0.64%
Average Net Operating Heat Rate (In-Service Year ANOHR)	8,117 Btu/kWh
Projected Unit Financial Data	
Book Life (Years)	30
Total Installed Cost (In Service Year \$/kW)	1,402
Direct Construction Cost (\$/kW)	1,080
AFUDC Amount (\$/kW)	139
Escalation (\$/kW)	182.96
Fixed O&M (In Service Year \$/kW - Yr)	22.04
Variable O&M (In Service Year \$/MWh)	2.47
K-Factor	1.51

Updated Avoided Unit Information (2023TYSP)

Commerical In Service Date	Jan-30
Projected Unit Performance Data	
Planned Outage Factor (POF)	2%
Forced Outage Factor (FOF)	2%
Equivalent Availability Factor (EAF)	96%
Resulting Capacity Factor (2028)	0.64%
Average Net Operating Heat Rate (In-Service Year ANOHR)	8,117 Btu/kWh
Projected Unit Financial Data	
Book Life (Years)	30
Total Installed Cost (In Service Year \$/kW)	1,505
Direct Construction Cost (\$/kW)	1,279
AFUDC Amount (\$/kW)	77
Escalation (\$/kW)	149.49
Fixed O&M (In Service Year \$/kW - Yr)	33.74
Variable O&M (In Service Year \$/MWh)	2.77
K-Factor	1.34

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- 3.** Please refer to the Company's petition, paragraph 24. Explain if TECO intends to sell the renewable energy credits (RECs) generated from this PPA. If so, explain if the profit generated from selling RECs is included in the Company's current economic analysis. If not, detail what TECO intends to do with the RECs generated by the PPA. As part of this response, provide the estimated value of RECs that could be associated with the project.
- A.** Presently, there is not a defined REC requirement (e.g., renewable portfolio standard) in Florida, Tampa Electric intends to sell the RECs as it receives them and pass the revenues on to customers. Although the PPA does not begin until 2025, Tampa Electric has done preliminary research regarding the market value of biomass RECs from this PPA and finds that value is currently in the range of \$1.00 or less per REC. Tampa Electric did not include REC sales revenues in its economic evaluation of the PPA.

Beyond its intention to sell the RECs, Tampa Electric recognizes the PPA has a 10-year term and that events could materialize that result in the company no longer selling the RECs. For instance, during the term a statewide or federal renewable requirement could go in effect. If such an event were to occur, the company may retain the RECs instead of selling them.

4. Please refer to Section 5 of the PPA, regarding interconnection and transmission service. Please provide the estimated cost of a transmission study, and explain whether it was included in the Company's cost analysis.
 - a. If TECO elects to pay for transmission upgrades, would the Commission be able to review the decision to incur those costs before cost recovery, or would TECO consider the Commission's approval of the proposed PPA as approval of any and all transmission upgrade costs?
 - b. Discuss how this section of the PPA complies with Rule 25-17.0889, Florida Administrative Code (F.A.C.). Specifically, explain how the PPA is consistent with the requirements that a Qualifying Facility (QF) seek these services.
 - c. Discuss how this section of the PPA complies with Rule 25-17.0883, F.A.C. Specifically, explain how the PPA is consistent with the requirements that a QF seek these services.

- A. Tampa Electric did not include the cost of the transmission study in its economic evaluation of the PPA. Tampa Electric is unable to quantify the estimated cost of the transmission study as these are request specific (i.e., the location of the source, the delivery path, the term, etc.), and each transmission service provider computes the cost for each study at the time of the transmission service request. Tampa Electric has not requested third-party transmission service for this PPA. When Tampa Electric requests such service, those costs would be identified then.
 - a. Tampa Electric will not pass transmission upgrade costs through to its customers and would not seek a separate approval from the Commission for such costs.
 - b. It is not uncommon for the purchaser of the power to arrange for the transmission service. Rule 25-17.0889 of the Florida Administrative Code requires each electric utility to provide transmission service to wheel as available energy or firm energy and capacity produced by a QF to another electric utility upon request by a QF. Tampa Electric does not view this Rule as one that requires the QF to arrange for transmission service. Instead, Tampa Electric views this Rule being in place to prohibit a transmission service provider from denying transmission service to a QF without a justifiable reason. Tampa Electric agreed within the terms of the PPA to arrange for the third-party transmission service.

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- c. Rule 25-17.0883 is inapplicable to the PPA at issue in this docket. The Rule requires each public utility to provide transmission and distribution services “to enable a retail customer to transmit electrical power generated at one location to the customer’s facilities at another location.” The Rule refers to this type of arrangement as “transmission service for self-service.” Here, Pasco is selling power to Tampa Electric, not generating power at one Pasco location and asking for transmission and/or distribution service(s) to transmit that power to another Pasco facility. Thus, Tampa Electric believes this rule does not apply.

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5. Please refer to Exhibit I of the proposed PPA, titled Payment and Rates. Provide the annual and cumulative revenue requirements (in nominal and net present value) over the life of the revised Purchase Power Agreement for each resource plan (“Base Case” without the PPA and “PPA Case” with the PPA), and the difference between the two plans for each of the scenarios listed below. As a part of this response, please complete the table below and provide it in electronic (Excel) format for each scenario.

- a. Low Fuel Scenario
- b. Mid Fuel Scenario
- c. High Fuel Scenario

[Scenario Name] – ([Nominal/NPV] \$ millions)														
Year	Pasco PPA		Company's System								System Total (w/out Carbon & RECs)	Emissions (Carbon)	REC Proceeds	System Total (With Carbon & RECs)
	PPA Payments	Transmission Study /	Generation	Transmission	Fuel	Fuel	Start up & VOM	O&M	Emissions (Non-	Total				
2025														
...														
Total														

- A. a. Low Fuel Scenario – Please see tab Q5 Low Fuel in the provided Excel file, (BS_11) CONF_Staff's 1st DR Question 5 Response.xlsx.
- b. Mid Fuel Scenario – Please see tab Q5 Mid Fuel in the provided Excel file, (BS_11) CONF_Staff's 1st DR Question 5 Response.xlsx.
- c. High Fuel Scenario – Please see tab Q5 High Fuel in the provided Excel file, (BS_11) CONF_Staff's 1st DR Question 5 Response.xlsx.

6. Please refer to Exhibit II of the proposed PPA, Termination Payment Table. Given the requirement by Rule 25-17.0832(3)(c), Florida Administrative Code, that early payments for capacity be secured, provide an annual comparison of the Termination Security to the equivalent capacity payments in excess of the standard offer's avoided unit normal capacity payments. As part of this analysis, provide the methodology used to determine the equivalent capacity payment amounts.
- a. If the Termination Security is less than the equivalent capacity payments in excess of the standard offer's avoided unit, please explain why.
- A. The following table shows the comparison of the capacity payment for the standard offer contract ("SOC") and the Pasco termination payment schedule:

Comparison of SOC Capacity Payment and Pasco Termination Payment					
Year	SOC Early Capacity Payment Starting 01/1/25 \$/kW-mo	Pasco Capacity (kW)	Capacity Payment Under SOC (\$)	Pasco Termination Payment (\$)	Delta (\$)
	A	B	C = A x B x 12	D	E = C - D
2025	10.18	18,000	2,198,880		
2026	10.39	18,000	2,244,240		
2027	10.60	18,000	2,289,600		
2028	10.81	18,000	2,334,960		
2029	11.03	18,000	2,382,480		
2030	11.26	18,000	2,432,160		
2031	11.49	18,000	2,481,840		
2032	11.72	18,000	2,531,520		
2033	11.96	18,000	2,583,360		
2034	12.20	18,000	2,635,200		

The stream of SOC capacity payments in the table (column "A") are from the Sixteenth Revised Sheet No. 8.426 contained within Section 8 of Tampa Electric's Retail Tariff. The sheet has the effective date of June 13, 2023, and utilizes the designated avoided unit referenced in the PPA. Tampa Electric uses the early payment capacity payment stream that starts in 2025 to give the SOC payments the same start year as the PPA. In all but the last year, the Pasco termination payment is more than the SOC payments.

- a. The Pasco termination payment is less than the SOC payments in the year 2034, the final year of the PPA. There are two drivers behind why the termination payment in the final year is less: 1) the SOC payments reflect the full avoidance of the designated avoided unit while the termination payment schedule only considers a 5-year unit deferral; and 2) the structure of the termination payment schedule.

When evaluating the PPA, the Pasco capacity allowed Tampa Electric to defer the 2030 designated unit to the year 2035, i.e., a 5-year deferral. Thus, since the SOC capacity payment reflects the dollars associated with avoiding the unit completely, and the termination payment schedule reflects only a 5-years' worth of unit deferral, the termination payment is less in the final year. Tampa Electric based the termination payment schedule on the value to its customers over the term. Tampa Electric designed the schedule to help cover the risk of customers not realizing that value because Pasco did not perform. As such, the first year has the largest payment and, as Pasco performs and the PPA progresses through time, the termination payment schedule declines because customers have realized the value of the previous year(s).