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February 6, 2020

VIA: ELECTRONIC FILING

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

Re: Petition of Tampa Electric Company for Approval of Waiver of CIAC Rule No. 25-6.064, F.A.C. for Certain New Electric Vehicle Recharging Stations, FPSC Docket No. 20200011-EI

Dear Mr. Teitzman:

Attached for filing in the above docket is Tampa Electric Company's Responses to Staff's First Data Request (Nos. 1-37) dated January 24, 2020.

Thank you for your assistance in connection with this matter.

Sincerely,

Malcolm N. Means

Malcolm N. Means

MNM/bmp
Attachment

cc: Kathryn G.W. Cowdery, Senior Attorney
J.R. Kelley, Public Counsel
Mireille Fall-Fry, Associate Public Counsel

1. Section 120.542(5)(a), F.S., requires a petition to specify the rule from which a variance or waiver is requested. It appears from a review of your petition that you are seeking a variance, as defined in section 120.52(21), F.S., from paragraph 25-6.064(2)(c), F.A.C. Please verify that this is correct.

A. Section 120.52(22) defines a "waiver" as "a decision by an agency not to apply all or part of a rule to a person who is subject to the rule." The Petition asks the Commission to refrain from applying the 5-year estimation period in Rule 25-6.064 to Tampa Electric for electric-vehicle fast chargers. As such, the Petition was framed as a request for a waiver.

Tampa Electric agrees that this Petition could also be treated as a request for a variance. A "variance" is defined as "a decision by an agency to grant a modification to all or part of the literal requirements of an agency rule to a person who is subject to the rule." § 120.52(21), Fla. Stat. This Petition could be fairly characterized as a request to modify the 5-year estimation period in Rule 25-6.064 for electric-vehicle fast chargers.

Regardless of whether the Commission treats the Petition as a request for a variance or a waiver, the standard for assessing the Petition is the same. *See* § 120.542, Fla. Stat. ("Variances and waivers shall be granted when…"). Tampa Electric, therefore, does not object if the Commission treats the Petition as a request for a variance.

2. Section 120.542(5)(b), F.S., requires a petition to give the specific facts that would justify a waiver or variance for the petitioner. Please explain how application of paragraph 25-6.064(2)(c), F.A.C., would create a substantial hardship to TECO or would violate principles of fairness, as defined in section 120.542(2), F.S.

A. As was stated in the petition, strict application of the CIAC Rule to new high-voltage fast chargers would create a substantial hardship. The term "substantial hardship" is defined as a "demonstrated economic, technological, legal, or other type of hardship to the person requesting the variance or waiver." § 120.542(2), Fla. Stat. Use of only a five-year estimation period in the CIAC Rule raises the initial cost to establish new high-voltage fast chargers, which in turn discourages adoption of EVs. This creates a significant barrier to achieving the reduced emissions, reduced reliance on petroleum-based fuels, and potential load growth in Tampa Electric's service territory that would benefit both Tampa Electric and its ratepayers. Given the projected acceleration in the EV adoption rate over the next ten years, and the potential benefit the variance or waiver could provide to improving that adoption rate, moving to a 10-year estimation period would lower the CIAC barrier for construction of new high-voltage EV chargers, increase the number of such chargers in the service territory and result in faster adoption of electric vehicles.

3. Section 120.542(5)(d), F.S., requires a petition to give the reason why the variance or the waiver requested would serve the purposes of the underlying statute. Please provide this explanation.

A. The underlying statute is Section 366.05(1)(a), F.S., which states:

> "In the exercise of such jurisdiction, the commission shall have power to prescribe fair and reasonable rates and charges, classifications, standards of quality and measurements, including the ability to adopt construction standards that exceed the National Electrical Safety Code, for purposes of ensuring the reliable provision of service, and service rules and regulations to be observed by each public utility; to require repairs, improvements, additions, replacements, and extensions to the plant and equipment of any public utility when reasonably necessary to promote the convenience and welfare of the public and secure adequate service or facilities for those reasonably entitled thereto; to employ and fix the compensation for such examiners and technical, legal, and clerical employees as it deems necessary to carry out the provisions of this chapter; and to adopt rules pursuant to ss. 120.536(1) and 120.54 to implement and enforce the provisions of this chapter." (emphasis supplied)

There are two aspects of the underlying statute which have a bearing on the Commission's policy on CIAC, and which Tampa Electric believes would continue to be served by Tampa Electric's variance or waiver request.

First, Section 366.05(1)(a), F.S., gives the Commission the power to prescribe fair and reasonable rates and charges. Tampa Electric believes the requested variance or waiver would not result in unfair or unreasonable charges. CIAC fees are intended to protect the general body of ratepayers from subsidizing special requests. The Commission's policy of estimating the expected future revenues and applying a credit within the CIAC formula is a way of reducing the burden on the applicant commensurate with and proportionate to the amount of revenues that the applicant is expected to pay in connection with the service extension. In the context of Tampa Electric's petition, the company is not asking to do away with the revenue credit or to even reduce the number of years over which expected revenues are to be counted; rather, the company is seeking to expand the period of time over which the four years of expected incremental base energy revenue can be

counted. Therefore, while the company does expect a higher revenue credit to be realized, the concept behind the requested waiver or variance is not materially different than the current policy. Moreover, the company expects a de minimis impact as a result of the revised CIAC tariff with respect to EVs because Tampa Electric does not expect the revised tariff to result in a number of line extensions for high voltage EV chargers that would cause a material impact on the amount of CIAC collected relative to the company's overall invested capital.

Second, Section 366.05(1)(a), F.S., addresses the Commission's authority to "require repairs, improvements, additions, replacements, and extensions to the plant and equipment of any public utility when reasonably necessary to promote the convenience and welfare of the public." Tampa Electric's requested variance or waiver is seeking to ensure that improvements, additions and extensions of public utility plant promotes the convenience and welfare of the public. The waiver/variance requested would encourage the development of high-voltage EV chargers during this important period where there is need for more such chargers to encourage the market for electric vehicles to grow.

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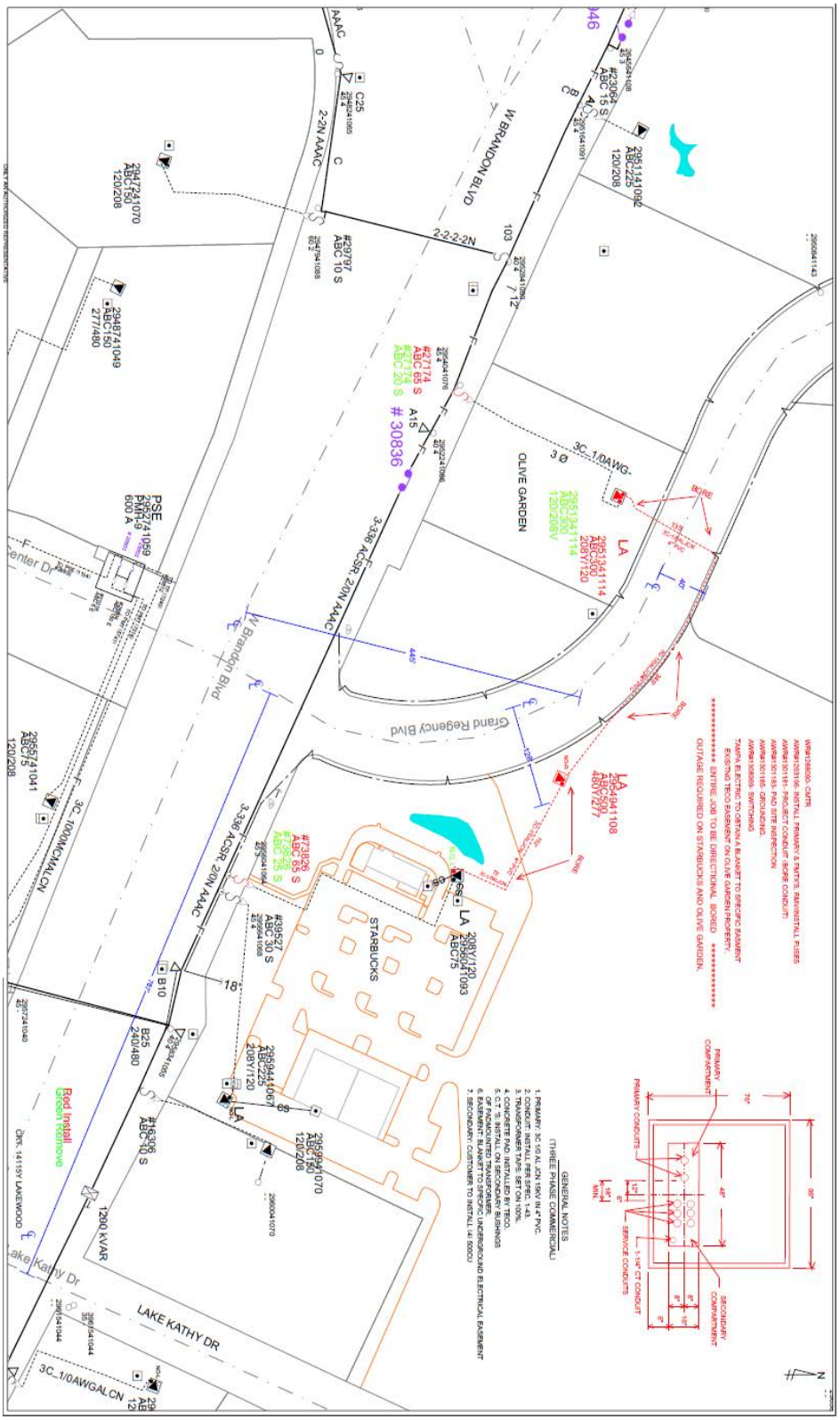
4. Are the line extension projects referenced in TECO's proposed tariff, Fourth Revised Sheet No. 5.505, capable of serving only EV fast chargers, or may the line extensions serve other general electrical needs of the customer? Please explain.

A. The purpose of this pilot is to encourage more development of EV fast chargers and at this time Tampa Electric cannot predict how many such line extensions will serve other general electric needs of the customer, or of neighboring customers. However, it is most likely that if such a line extension is going to serve additional electrical needs of such customers that the load associated with such customers added at the same time as the EV fast chargers will reduce significantly the CIAC required for the line extension, perhaps frequently to zero. The electrical capacity of a primary voltage line needed to provide service to an EV fast charger is almost always significantly higher than the capacity required for one or more EV fast chargers so there would be most likely more than enough remaining capacity on such a line extension to provide service for other general electric needs of the customer.

5. Please provide a diagram of the proposed typical line extension and/or upgrade project to serve EV fast chargers. In addition to line extension and related facilities, include service drop, meter, and charger in the diagram. Identify any existing equipment that may be removed and/or retired as a result of the line extension or upgrade.

A. The design of each line extension is unique. See diagram on Bates page 7. Construction drawing represents a completed line extension for an EV fast charger location. Equipment removed is indicated on the drawing, however this is not expected to be common for such line extensions. The final design used to meet the customer's needs created an opportunity to improve system reliability in the immediate area. A portion of the overall work, including equipment removal, was not directly attributed to the EV fast charger project.


W BRANDON BLVD
OLIVE GARDEN
STARBUCKS
LAKE KATHY DR
Grand Regency Blvd
W Brandon Blvd
3C_1/0AWG
3-336 ACSR 2-2N AAAC
3C_1/0AWGALCN
1200 KVAR
BORE
GENERAL NOTES
(THREE PHASE COMMERCIAL)
PRIMARY COMPARTMENT
SECONDARY COMPARTMENT
PRIMARY CONDUITS
SERVICE CONDUITS

6. Please provide a description of required equipment and materials for a typical line extension and/or upgrade project to serve TECO's EV fast charger customers, as well as any equipment or materials that may be retired and/or removed as a result of the project.

A. While the design of each line extension is unique, the table below lists equipment and materials that could be included to serve an EV fast charger. Removal or retirement of existing equipment is not expected to be common.

Quantity	Material Description
1	300 kVA, 3ø Open delta transformer bank
200 feet	3ø, #2 AWG & #2 AWG N conductor
1	Framing for 3ø tangent pole
1	Framing for 3ø #2 to 3ø #2 slack span - both poles
1	Framing for 3ø crossarm deadend pole with guys
3	Install 45' Class 3 wood pole 2002860
1	Install one set of three PLFs (3ø cutouts)
1	Install anchor and triple down guys for a 3ø primary deadend on a wood pole

7. Explain whether the typical line extension project to serve a customer seeking to install EV fast chargers is likely to add additional electric customers after the first customer, and whether such customers are expected to be serving load other than EV fast chargers.

A. Line extensions for EV fast chargers would not be constructed with a determined likelihood to serve additional electric customers nor electric loads other than EV fast chargers. However, as is currently the case for line extension projects, if additional electric customers require service which relies on the line extension constructed to serve the EV fast chargers, Tampa Electric would utilize existing engineering practices and apply existing FPSC rules to determine the appropriateness of utilizing the EV fast charger line extension.

8. Explain whether TECO expects that the load to serve the typical line extension customer is expected to increase over time via the addition of EV fast chargers by that customer, and to what extent the line extension would have the capacity to accommodate such increases.

A. Line extension projects are designed to accommodate new and/or upgraded electrical service being requested by customers. Tampa Electric estimates electrical loads by reviewing customer provided electrical plans and equipment specifications, as well as consulting with the customer and their electrical engineers. Tampa Electric does not assume electrical loads will increase overtime unless it is discussed and coordinated as part of the initial design. It is the customer's responsibility to communicate and provide supporting documentation of potential and/or future load expansion.

9. Provide the physical description and specifications of EV fast chargers associated with the anticipated projects.

A. While Tampa Electric does not set specifications for the type of EV fast charger customers may choose to install, we anticipate that line extensions would serve locations with one or more direct current fast chargers (DCFC) operating at 50kW or greater. DCFC chargers require three-phase utility service at 120/208V or 277/480V. Charger specifications are determined by the manufacturers and typically consist of one or more charging connectors, information screens, point-of-sale capability and safety disconnects.

10. Please refer to Paragraph 10 of TECO's Petition. Please explain how spurring the development for EVs might be a source of energy storage and load shaping?

A. As recognized by manufacturers within the overall EV supply chain, EV battery systems, particularly in aggregate, are mobile versions of fixed battery storage. Increased adoption of EVs, along with a better understanding by utilities of EV grid interactions, could create future opportunities for both utilities and customers to benefit from utilizing EV battery systems in ways similar to fixed battery storage (i.e. the development of vehicle-to-grid (V2G) technologies).

11. Please provide TECO's anticipated base energy and demand revenues associated with new fast EV charging station line extensions under both the current rule and TECO's proposed tariff.

A. Tampa Electric does not know what base energy and demand revenues could accrue as a result of this pilot. Each line extension project is unique and requires customer input to help estimate base energy and demand revenues. This is the case under the current rule and would remain the same under the proposed temporary waiver.

12. Please provide the average total estimated work order job cost of installing EV fast charging station line extensions. As part of your response, please provide the assumptions used to calculate the cost.

A. The total estimated work order cost of installing an EV fast charging line extension is $21,661.81. This assumes a customer is installing two (2) 50kW DC fast chargers and using a 3% load factor. Cost assumptions are listed in the table below.

Quantity	Material Description	Cost
1	300 kVA, 3ø Open delta transformer bank	$13,129.30
200 feet	3ø, #2 AWG & #2 AWG N conductor	$ 638.00
1	Framing for 3ø tangent pole	$ 541.92
1	Framing for 3ø #2 to 3ø #2 slack span - both poles	$ 2,105.77
1	Framing for 3ø crossarm deadend pole with guys	$ 1,479.87
3	Install 45' Class 3 wood pole 2002860	$ 2,475.24
1	Install one set of three PLFs (3ø cutouts)	$ 604.87
1	Install anchor and triple down guys for a 3ø primary deadend on a wood pole	$ 686.84
	Total Line Extension Cost	$ 21,661.81

13. Please explain the type of customers TECO expects to own the EV fast charging stations, and who would have access to them.

A. Customers may include those with non-EV utility service already established at the proposed site, such as a storefront customer or property owner, or could be an EV charging services provider, such as Electrify America or Tesla. Except for Tesla locations which are proprietary to Tesla vehicles, EV fast charging stations are capable of providing service to any EV equipped with fast charging capability. Customer access is ultimately determined by the owner of the charging stations.

14. Does TECO anticipate that EV fast charging stations will be compatible with all makes (i.e. Nissan, Toyota, Tesla, etc.) of electric vehicles?

A. As is currently the case, except for Tesla chargers which are proprietary to Tesla vehicles, EV fast charging stations are capable of providing service to any EV equipped with fast charging capability. The capability to physically recharge an EV is determined by the compatibility of the connector(s) available on the charging equipment and the charging port available on the EV, and each is determined by the respective manufacturers. Non-Tesla EV charging stations typically offer interoperability across all vehicle makes.

15. What is the current demand (in both total number and total rated kW) for EV fast charging stations?

A. Forecasts of demand and energy for EV charging are projected in aggregate and not separated by type of EV charging station. Tampa Electric does not have load research metering at all fast charging locations. However, for rated capacity, the total capacity of the stations listed on Question 33 is 6.1MW.

16. What is TECO's definition of an EV fast charging station?

A. Tampa Electric views EV fast charging stations as direct current fast chargers (DCFC) operating at 50kW or greater and requiring three-phase utility service at 120/208V or 277/480V.

17. At Paragraph 14 of the Petition, TECO states the following: "The selection of a further advanced period to calculate expected base revenues simply defers the period such a subsidy is in place for the period before the four years of base revenues actually occurs. At this point the subsidy ends and the purposes of the rule are implemented." Does this mean that the subsidy period associated with the CIAC credit mechanism normally ends in Years 4 or 5 after installation under the rule, but for the applicable fast charger line extensions under the proposed CIAC credit mechanism via the temporary waiver, this subsidy period is extended to as late as Year 10? If staff's understanding is not correct, please explain and provide a concrete example of the duration of the subsidy mechanism (point in time when the cross subsidy ends).

A. Staff's understanding of Paragraph 14 is correct.

18. Rule 25-6.064(7), F.A.C., allows utilities to waive all or a portion of CIAC for customers, but requires the utility to determine a quantifiable benefit to the general body of ratepayers commensurate with the waived CIAC if the utility reduces net plant in service as though CIAC had been collected. Please explain why this portion of the rule is or is not an acceptable alternative method for achieving the purposes of TECO's Petition.

A. Tampa Electric believes there are benefits to the general body of ratepayers associated with this requested waiver or variance, but the extent to which the benefits will materialize and the amount of the benefits that do materialize is not quantifiable at this time. The purpose of the pilot is to determine if those benefits will accrue as a result of the proposal and in what amount. The benefits are associated with the installation of more Tier 3 charging stations, which in this case will occur if third parties avail themselves of this change during the pilot period. If they do not, then there is no harm but no benefit. If they do, Tampa Electric will endeavor to determine whether the benefits are sufficient to exceed what little subsidy is provided. Under section 7 of the current rule, Tampa Electric must rely on future events out of its control to see whether the pilot is successful. Tampa Electric desires PSC approval of this waiver or variance now with a limited time period to evaluate whether it will be successful or not.

19. Has TECO ever waived of a portion of CIAC for any customers per Rule 25-6.064(7), F.A.C.? If so, please identify one or more such waivers, and if applicable, identify waivers followed by reductions in net plant in service and waivers not followed by reductions in net plant in service.

A. Yes. All such waivers resulted in a reduction of net plant in service per Rule 25-6.064(7), F.A.C. Three work requests of this nature are:

WR# 1121904	$15,635.74
WR# 1278286	$ 243.14
WR# 2135311	$ 1,292.97

20. Please explain how TECO's proposed temporary rule waiver in this docket complies with Rule 25-6.064(8), F.A.C., including the requirement that tariffs shall have uniform application and be nondiscriminatory. Does the allowance of a different credit period for serving customers seeking to connect EV fast chargers in TECO's proposed tariff introduce a nonuniform and/or discriminatory tariff? Please explain.

A. Tampa Electric does not believe the proposed tariff will introduce a nonuniform and/or discriminatory tariff because the proposal will be applied to any customer seeking a line extension to serve a Level 3 EV charging station during the pilot period. Other than changing the 5-year period to 10 years for such customers, nothing else in the rule application is changing. It will be uniformly applied to such Level 3 EV charging station customers and will not discriminate between them.

21. Please refer to TECO's proposed tariff, Fourth Revised Sheet No. 5.505.

a. Does TECO intend the phrase "For most projects" to include all applicable projects other than line extensions for electric vehicle fast charging projects? Should this be clarified in proposed tariff changes?

b. Does TECO intend the proposed new statement to mean the investment allowance shall include four years of expected base energy charge and demand charge revenue collected over a consecutive four (4) year period within ten (10) years of the in-service date of the fast charger(s)? Should this be clarified in proposed tariff changes?

c. Please clarify whether "electric vehicle fast charger projects including associated line extensions" include or do not include electric vehicle fast chargers. Should this be clarified in proposed tariff changes?

A. a. Yes, however clarifying language could be helpful.

b. Yes, however clarifying language could be helpful.

c. A more clear statement could be "line extensions associated with electric vehicle fast charger projects".

22. Please refer to Paragraph 7 of the Petition. Explain what customer interactions, historical line extension sales data, or other information have led TECO to conclude that potential EV fast charger customers would opt to not pay the substantial line extension cost under the current CIAC rule.

A. In response to customer requests, Tampa Electric has engaged in exploratory conversations for opportunities to add fast chargers at customer locations. Although detailed analysis was not requested by customers, high-level evaluations confirmed that utility services would need to be constructed including line extensions. Customers already recognize the higher costs associated with fast charging stations, as compared to Level 2 (240V) stations, and uncertainty around utility construction costs adds to the concern of overall project costs. Additionally, as discussions continue at the state level for expanding the number of fast charging sites in Florida (including for emergency preparedness), Tampa Electric recognizes that some fast chargers will likely need to be located in rural or remote locations where existing utility infrastructure may not provide adequate service. As funding for such statewide projects will be limited (through VW settlement funding or other programs), Tampa Electric believes the proposed temporary waiver directly supports statewide expansion of EV fast chargers.

23. Please provide any EV and EV fast charger market studies TECO (internal or external) relied upon to support its Petition in this docket, especially as relates to TECO's service territory.

A. Tampa Electric did not rely on market studies to support the petition. The temporary waiver removes a barrier to the development of new EV fast chargers where the current rule could make such projects cost prohibitive for customers.

24. What is the cost of removal and net salvage, if any, expected to take place as part of an EV fast charger project?

A. It is very unlikely that any removal or net salvage would be incurred as part of a line extension to provide primary service to an EV fast charger.

25. Please provide a detailed revenue requirement calculation for a line extension under the current rule. Also, provide a detailed revenue requirement for a typical line extension project under the proposed temporary rule waiver.

A. There are no “typical” line extension projects for EV fast chargers. First because there are so few such projects from which to determine what might be typical. Also, part of the pilot project nature of this request for a waiver/variance is to see if this change encourages new projects which might not have been done absent the reduced CIAC payments. In addition, the revenue requirement requested is not utilized for calculation of CIAC owed, that is based on the line extension capital cost. However, Tampa Electric will provide in response to this question a spreadsheet that calculates a revenue requirement for a distribution line extension to serve an EV charging station. The revenue requirement is the same under the current rule and the proposed rule waiver/variance. What is different is whether and when a CIAC is paid.

See table on Bates page 28 of the detailed revenue requirement. Also enclosed for your reference is the Excel file titled: (BS 29) Primary Line Extension Spreadsheet.xlsx.

Financial Template
Primary Line Extension - Results

Assumptions:

Capex	$100,000 per year
Book Life	32 years
Tax Life	20 years

In-Service Start of the Year
Property Tax is in Effect Day 1 Unlike the Usual Lag

O&M	$1,000 per year
Debt	54%
Equity	46%
ROE	10.25%

No CIAC	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Revenue - ROE Based										
O&M Expense	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Depreciation, Book	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125
Property Taxes	1,138	1,102	1,066	1,031	995	960	924	889	853	818
Debt	2,136	2,090	2,000	1,913	1,828	1,745	1,666	1,588	1,511	1,435
Equity	7,093	6,941	6,716	6,422	6,137	5,861	5,592	5,331	5,074	4,817
Revenue Requirement	14,491	14,258	13,907	13,490	13,085	12,691	12,307	11,932	11,563	11,194
ROE	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%

5000 CIAC	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Revenue - ROE Based										
O&M Expense	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Depreciation, Book	2,969	2,969	2,969	2,969	2,969	2,969	2,969	2,969	2,969	2,969
Property Taxes	1,081	1,047	1,013	979	946	912	878	844	810	777
Debt	2,029	1,986	1,900	1,817	1,736	1,658	1,582	1,508	1,435	1,363
Equity	6,738	6,594	6,380	6,101	5,830	5,568	5,313	5,065	4,820	4,576
Revenue Requirement	13,816	13,595	13,262	12,866	12,481	12,107	11,742	11,386	11,035	10,684
ROE	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%

20,000 CIAC	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Revenue - ROE Based										
O&M Expense	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Depreciation, Book	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Property Taxes	910	882	853	825	796	768	739	711	683	654
Debt	1,708	1,672	1,600	1,530	1,462	1,396	1,332	1,270	1,209	1,148
Equity	5,674	5,553	5,373	5,138	4,910	4,689	4,474	4,265	4,059	3,854
Revenue Requirement	11,793	11,607	11,326	10,992	10,668	10,353	10,046	9,746	9,450	9,155
ROE	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%

More Assumptions:

Annual Base Revenue	500	1,000	1,250	1,250	1,500	4,000	5,000	5,000	5,000	5,000
CIAC Payment 1	5,000	0	0	0	0	0	0	0	0	0
CIAC Payment 2	20,000	0	0	0	0	0	0	0	0	0
Net to Rev Req 1	13,316	12,595	12,012	11,616	10,981	8,107	6,742	6,386	6,035	5,684
Net to Rev Req 2	11,293	10,607	10,076	9,742	9,168	6,353	5,046	4,746	4,450	4,155
Reduction in subsidy by year		721	584	396	635	2,874	1,365	356	351	350
Reduction in differential by year		1,989	1,936	1,874	1,813	1,754	1,696	1,640	1,584	1,529

Shows growth in sales last 5 years

Revenue Vs Reduced CIAC ($5,000) Revenue Requirement
Revenue Vs Reduced CIAC ($20,000) Revenue Requirement
How Yearly Net Decreases in Total As Revenue Grows Between $5K and $20K CIAC
How Differential Reduces Each Year
Both Show How Subsidy Differential In Early Years Declines in Later Years

26. Identify the customer class(es) TECO expects will purchase the line extensions for EV fast chargers. Identify the profile of typical customer. Identify the applicable rates for energy and demand for such customers.

A. Tampa Electric would expect most EV fast charger customers to take electric service under the GSD rate class though some could take service under GS. Though all such EV fast chargers could be expected to be rather low load factor, the load profile is not expected to be “typical” as it would be reliant on the location of the charger with respect to likely charging customers. The rates for energy and demand would be the tariff rates under the GSD and GS rate schedules, though it is most likely that those supplied under GSD would be the energy only rates under the GSD-optional service which does not include a demand charge.

27. See Pages 5 and 6 of TECO's Petition. TECO states that cross subsidy may occur initially under the rule waiver, but the result will be beneficial to TECO's ratepayers now and in the future.

a. Explain the nature of the cross subsidy referenced here.

b. Explain how current customers may be benefitted now despite such cross-subsidy.

A. a. The CIAC rule provides credits for line extensions based on base revenues expected to be received from the load at the end of a line extension over 4 of the next 5 years (most likely years 2-5 as the first year is expected to be the construction year of the load which may take a year to reach full expected purchases.) By seeking to extend the period during which the 4 years of base revenues are calculated, the revenue requirements associated with the line extension over the first 10 years are not as covered by new base revenues as they would be if the revenues were over the first 5 years. In this regard, the revenue requirement impact is covered more by the general body of ratepayers, at least for those first 5 years.

b. Despite such increased cross-subsidy, ratepayers benefit from the addition of more EV fast chargers in the company service territory which can incent the faster acceptance and choice of EVs by customers. EVs provide a cleaner transportation option reducing emissions from combustion engine powered vehicles and utilizing cleaner energy generation by Tampa Electric, including by solar photovoltaic sites. Facilitating a faster adoption of EVs will increase energy throughput of the electric grid increasing efficiency of use and reducing future rates required for all customers.

28. What is the estimated cross subsidy under the (a) current rule and (b) the proposed temporary rule waiver for a typical line extension. Show calculation of these amounts in an Excel file.

A. Please see Tampa Electric's response to Staff's First Data Request No. 25.

29. What is the estimated historic and projected annual EV and EV fast charging stations in TECO's service territory? Identify and describe the method for estimation, related assumptions. Identify the data source and date.

A. As of 2019, Tampa Electric had approximately 280 EV charging stations of which 50 are fast charging. An annual average growth rate of 10 percent is projected through 2028 for EVs and EV fast charging stations. A simple linear regression, using a time trend, was used to project the growth of charging stations. This information was provided within the TYSP's Supplemental Data Request, No. 15., filed May 15, 2019.

30. What are TECO's annual estimated number of historic and projected line extension projects under (a) the current rule and (b) the proposed temporary rule waiver to serve EV fast chargers? Identify the associated method for such projections. What are the related assumptions for such projections?

A. Tampa Electric has completed one (1) line extension project for EV fast charging locations and has not estimated the number of potential line extensions under the proposed temporary rule waiver. The intent of the proposed waiver is to eliminate a barrier to the construction of new EV fast chargers. Tampa Electric will utilize the waiver period to monitor the applicability to new EV fast charger installations which will assist in future projections.

31. What is the annual impact on TECO's load, by rate class, of line extensions for EV fast chargers under (a) the temporary rule waiver and (b) under the current rule without the waiver?

A. Tampa Electric does not have existing or known future projects to be considered under the temporary rule waiver. As such, the company does not have an estimated annual load impact if the petition is approved.

32. Please see Paragraph 9 of the Petition.

a. Does TECO agree that projections of the quantity of adoptions of new technologies, such as EVs and EV fast charging stations, may be subject to high forecast error, and the accuracy of such projections typically becomes less accurate as the forecast horizon is extended? If not, please explain.

b. If so, why does TECO believe its projection of demand for EVs and EV fast charging stations, if used to support its projection of line extensions to serve EV fast charging stations, can be relied upon to avoid cross-subsidy?

A. a. Yes, this risk is true for all projections.

b. Even though projections can be subject to forecast error, and longer forecasts increase the risk of inaccuracy, for the purposes of this relatively minor, time limited waiver or variance, the projection provided by Tampa Electric is sufficient to support the request for a pilot program. One of the results of the pilot will be to see if the change has any substantial impact on the projection.

33. Identify the number and location of EV fast chargers in TECO's service territory that are (a) owned by TECO and (b) owned by entities other than TECO.

A. The table below lists the location of current EV fast chargers in Tampa Electric's service territory. All chargers listed are owned by other entities.

Street Address	City	ZIP	No. of Chargers
3800 W Hillsborough Ave	Tampa	33614	1
6401 Cypress Gardens Blvd	Winter Haven	33884	1
9920 Adamo Dr	Tampa	33619	1
1202 N Broadway Ave	Bartow	33830	1
3820 S Dale Mabry Hwy	Tampa	33611	1
1346 W Brandon Blvd	Brandon	33511	1
3720 Tampa Rd	Oldsmar	34677	1
1622 W Kennedy Blvd	Tampa	33606	1
2400 W Brandon Blvd	Brandon	33511	8
2502 North 50th Street	Tampa	33619	8
2100 West Swann Avenue	Tampa	33606	10
10665 Big Bend Road	Riverview	33578	10
18001 Highwoods Preserve Pkwy	Tampa	33647	8

Tampa Electric has purchased one EV fast charger with the intent to install the charger at the company's Manatee Viewing Center located at 6990 Dickman Rd, Apollo Beach, FL 33572. An installation schedule has not yet been established.

34. Identify the locations in TECO's service territory where TECO expects will have the greatest number of EV fast chargers installed in the next 5 years, and what facts and assumptions underlie its answer.

A. While Tampa Electric includes a projection for the number of EV fast chargers as part of the company's Ten Year Site Plan Supplemental Data, no determinations are made with respect to geographic locations where those stations may be installed.

35. Is the Company at this time planning to provide EV fast charger installations for its customers? If so, please provide any details that may be known, such as schedule, amounts, type, locations, anticipated cost recovery method, and timing of depreciation rate request filing.

A. Tampa Electric has purchased one EV fast charger with the intent to install the charger at the company's Manatee Viewing Center and with availability to the visiting public. An installation schedule, cost recovery method and timing of depreciation rate request filing has not yet been established.

36. Please refer to Paragraph 4 of the Petition. Please describe in detail any cost-benefit study or analysis that contributed to TECO's determination that the cost of the primary voltage power line represents a "barrier" to new customers?

A. Tampa Electric has no such cost-benefit study or analysis to provide. What Tampa Electric does have is anecdotal evidence consisting of discussions with advocates in the EV charging industry that the cost of primary voltage line extensions represents a barrier to the installation of new high voltage EV chargers.

37. Where in TECO's territory are electric vehicles currently getting their fast charging?

A. EV fast charging in Tampa Electric's service territory is currently taking place at existing customer locations offering such services. Please refer to Question 33 for a current list of locations.