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September 15, 2021

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 Revised Underground Residential Distribution Tariff
Dkt.: 20210064-EI

Dear Mr. Teitzman:

Attached for filing in the above docket is Tampa Electric Company's Supplement to Response No. 1 to Staff's First Data Request (Nos. 1-5), originally filed on May 19, 2021.

Thank you for your assistance in connection with this matter.

Sincerely,

Malcolm N. Means

MNM/bmp
Attachment

cc: All Parties of Record (w/attachment)
Holly Forrest, FPSC (w/attachment)

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing supplemental response of Tampa Electric Company's to Staff's 1st Data Request (No. 1), has been furnished by electronic mail on this 15th day of September, 2021 to the following:

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TAMPA ELECTRIC COMPANY
DOCKET NO. 20210064-EI
STAFF'S FIRST DATA REQUEST
REQUEST NO. 1
BATES PAGES: 1 - 3
FILED: MAY 19, 2021
SUPPLEMENTED: SEPTEMBER 15, 2021

1. In paragraph 7 of the petition, TECO highlights that Rule 25-6.078(10), F.A.C., states:

> a utility can waive all or any portion of a cost differential for providing underground facilities, as long as it reduces net plant in service as if the differential had been collected, with an exception provided to this requirement if the Commission determines that "… there is a quantifiable benefit to the general body of ratepayers commensurate with the waived differential."

Please provide the analysis quantifying the benefit to the general body of ratepayers for waiving the low density lot charge.

A. There are several quantifiable benefits to the general body of ratepayers that will result from waiving the low density lot charge.

First, the general body of ratepayers will receive a financial benefit in the form of a reduction in storm restoration costs. Tampa Electric incurred over $97 million in storm related restoration costs caused by the string of five named tropical storms that occurred in the period 2015-2017. The company sought recovery of these costs through the storm reserve in Docket No. 20170271-EI. Tampa Electric also recovered an additional $12 million of storm restoration costs related to these storms through base rates. During the restoration following Hurricane Irma, Tampa Electric replaced 24.8 miles of overhead distribution lines as compared to only 0.1 miles of underground distribution lines. Based on this difference in performance between overhead and underground lines, initial underground construction will clearly help mitigate future storm restoration costs.

Second, the general body of ratepayers may avoid the cost of converting overhead lines to underground in the future. One component of the company's 2020-2029 Storm Protection Plan ("SPP") is a Distribution Lateral Undergrounding Program that involves conversion of existing overhead facilities to underground. Conversion projects are prioritized using a methodology that factors in the probability or likelihood of failure and the impact or consequence if a failure occurs during a major weather event. Imposing a low density lot charge for underground service will incentivize construction of new overhead lateral facilities. These new overhead lateral facilities will be evaluated under the company's prioritization methodology and may eventually be converted to underground through the SPP program. Furthermore, if these overhead lines suffer severe damage as the result of a storm they could rise within the prioritized project ranking. The cost to initially install lines

underground is lower than the future cost to convert the line to underground. There are many reasons why conversions are more expensive, including: (1) conversions require a more complex design as compared to greenfield construction due to the presence of structures, trees, and other utilities; (2) the company must obtain individual easements from each customer, as opposed to obtaining a single utility easement from the subdivision developer at the outset; (3) construction around existing structures, mature trees, etc. is more complex than construction in an empty lot; and (4) there is additional labor associated with removing the existing overhead facilities. The following calculations are provided to illustrate the difference between initial underground construction and conversion from overhead to underground:

High Density Scenario – Initial OH Construction and Conversion to UG	
Cost of Initial OH Construction	$204,639
Cost to Convert OH to UG	$1,404,000[1]
Total	$1,608,639
Cost of Initial UG Construction	$318,485
Incremental Cost to Convert	$1,290,154

Low Density Scenario – Initial OH Construction and Conversion to UG	
Cost of Initial OH Construction	$326,581
Cost to Convert from OH to UG	$2,304,000[2]
Total	$2,630,581
Cost of Initial UG Construction	$519,383
Incremental Cost to Convert	$2,111,198

Third, customers will experience improved reliability from the performance of underground facilities. The numbers below describe Tampa Electric's overhead reliability compared to underground lateral reliability. If line miles are taken into account, Tampa Electric has five (5) times as many outages and three to four (3-4) times as much System Average Interruption Duration Index ("SAIDI") per mile of overhead lines than per underground mile. It is important to take into account

[1] Assuming 1.17 miles of line at a cost of $1.2 million per mile to convert to UG.
[2] Assuming 1.92 miles at a cost of $1.2 million per mile to convert to UG.

that most underground outages occur due to deteriorating condition (e.g. old switchgear, old cable with non-jacketed, concentric neutral, etc.) Newly installed underground cable is likely to have much better reliability.

This improved reliability is quantifiable using statistics below and benefits the customer with more reliable service as such. The fewer resulting outages also benefit all ratepayers by improving their return to service, since fewer resources are needed after storms to repair damage to underground equipment and restore power back to underground served customers.

2016-2021 Outages		
Values	Overhead	Underground
Outage Count	42,180	10,221
Total Line Miles	4,460	5.091
Outage Count per Line Mile	9.5	2.0

2016-2021 SAIDI		
Values	Overhead	Underground
System Impact SAIDI	183	64
Total Line Miles	4,460	5,091
SAIDI per Line Mile	0.0410	0.0126