BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20210034-EI

IN RE: PETITION FOR RATE INCREASE

BY TAMPA ELECTRIC COMPANY

DIRECT TESTIMONY AND EXHIBIT

OF

DAVICEL AVELLAN

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

DAVICEL AVELLAN

Q. Please state your name, address, occupation, and employer.

A. My name is Davicel "David" Avellan. My business address is 702 North Franklin Street, Tampa, Florida 33602. I am employed by Tampa Electric Company ("Tampa Electric" or "company") as Director, Regulatory Plant and Tax Accounting.

Q. Please describe your duties and responsibilities in that position.

A. I am responsible for overseeing all of the regulatory asset accounting and reporting, which includes maintaining the financial books and records of Tampa Electric and its natural gas distribution division - Peoples Gas System - relating to property, plant, and equipment, including depreciation, amortization, and asset retirement obligations. I am responsible for all depreciation and dismantlement studies filed with the Florida Public Service Commission ("Commission") and the Federal Energy

Regulatory Commission ("FERC"). I am also responsible for providing tax services to Tampa Electric Company, Peoples Gas System, and New Mexico Gas Company. My responsibilities include the preparation and filing of tax returns, tax accounting for internal and external purposes, tax planning, and managing federal and state income tax audits.

Q. Please provide a brief outline of your educational background and business experience.

A. I attended the University of Tampa and graduated from the American Intercontinental University with a bachelor's degree in Accounting and Finance in 2006. I have worked in the Accounting groups at Tampa Electric; TECO Services, Inc.; TECO Energy, Inc.; and TECO Power Services Corporation for the last 26 years, with increasing responsibilities as Coordinator, Supervisor, Manager, and my current position of Director – Regulatory Plant & Tax Accounting. I have been active at the Edison Electric Institute ("EEI") and American Gas Association on their respective accounting committees, and currently serve as Chairman of EEI's Tax Systems and Technology Subgroup. I am also a member of the Society of Depreciation Professionals.

Q. Have you previously testified before the Florida Public Service Commission or other regulatory authority?

A. Yes. I have filed direct testimony with and been a sworn witness on behalf of New Mexico Gas Company for proceedings at the New Mexico Public Regulation Commission ("NMPRC") with the primary focus of my direct testimony related to income taxes. In addition, I have filed testimony in two depreciation-related dockets at the FERC. Those testimonies were filed in Docket No. ER20-1935-000 on May 29, 2020, in support of the company's request to add an intangible solar depreciation rate to its Open Access Transmission Tariff ("OATT") as of January 1, 2019, and in Docket No. ER20-1960-000 on June 2, 2020, to add a transmission energy storage depreciation rate to the same tariff as of May 15, 2020. They were accepted for filing by the FERC, respectively, on July 14, 2020, and July 2, 2020.

Q. What are the purposes of your direct testimony?

A. The purposes of my testimony are to: (1) provide background information about the company's current depreciation rates, (2) describe the process and results of the depreciation and dismantlement study prepared by Tampa

Electric and filed in Docket No. 20200264-EI on December 30, 2020, (3) support and justify the depreciation rates proposed by Tampa Electric to be effective January 1, 2022, and used in the Minimum Filing Requirements ("MFR") schedules for the 2022 test year, and (4) describe the capital recovery schedules proposed by Tampa Electric for the undepreciated net book value of assets, such as the portions of Big Bend Units 1, 2, and 3 electric generating units that are being retired, as described by Tampa Electric witness J. Brent Caldwell, and Automated Meter Reading ("AMR") meter retirements as described by Tampa Electric witness Regan B. Haines. I also support the amount of depreciation expense and amortization of capital cost recovery included in the calculation of 2022 test year net operating income.

Q. Have you prepared an exhibit to support your direct testimony?

A. Yes. Exhibit No. DA-1, entitled "Exhibit of Davicel Avellan" was prepared under my direction and supervision. The contents of my exhibit were derived from the books and records of the company and are true and correct to the best of my information and belief. My exhibit consists of two documents, as follows.

Document No. 1	List of Minimum Filing Requirement Schedules Sponsored or Co-Sponsored by Davicel Avellan
Document No. 2	Investment and cost associated with retirement of Big Bend Unit 1, 2, and 3, and AMR meter net book value proposed reclassification to FERC 182.2(Unrecovered Plant).

Q. Are you sponsoring any sections of Tampa Electric's MFR schedules?

A. Yes. I am sponsoring or co-sponsoring the MFR schedules listed in Document No. 1 of my exhibit.

TAMPA ELECTRIC'S CURRENT DEPRECIATION RATES

Q. When were the company's current depreciation rates approved by the Commission?

A. Tampa Electric filed its last depreciation study in 2011. The Commission approved depreciation rates for the company on April 3, 2012, by Order No. PSC-2012-0175-PAA-EI in Docket No. 20110131-EI. That Order became final on April 30, 2012, by Order No. PSC-2012-0226-CO-EI. The company used the rates approved in Docket No. 20110131-EI when it

filed its most recent general rate case in 2013, Petition of Tampa Electric Company for an Increase in Base Rates and Service Charges, Docket No. 20130040-EI ("2013 rate case").

The company's 2013 rate case was resolved by stipulation. On September 8, 2013, Tampa Electric and the Consumer Parties – the Office of Public Counsel ("OPC"), Florida Industrial Power Users Group ("FIPUG"), Florida Retail Federation ("FRF"), Federal Executive Agencies ("FEA"), and West Central Florida Hospital Utility Alliance ("HUA") - filed a Stipulation and Settlement Agreement ("2013 Stipulation") that resolved all issues in Tampa Electric's 2013 rate case.

Paragraph 8 of the 2013 Agreement states:

> Notwithstanding any requirements of Rules 25-6.0436 and 25-6.04364, F.A.C., the company shall not be required during the Term of this Agreement to file any depreciation study or dismantlement study. The depreciation and amortization accrual rates in effect as of the effective date of this Agreement (except as modified for software by paragraph 11(b)) shall remain in effect throughout the Term. The Parties agree that the provisions of Rules 25-6.0436 and 25-

6.04364, F.A.C., pursuant to which depreciation and dismantlement studies are filed at least every four years will not apply to the company during the Term and that the Commission's approval of this Agreement shall excuse the company from compliance with the filing requirement of these rules during the Term. The company shall file a depreciation study no more than one year nor less than 60 days before the filing of its next general rate proceeding under Sections 366.06 and 366.07, Florida Statutes, such that the proposed depreciation rates can be considered contemporaneously with the company's next general rate proceeding.

Q. Is this provision still in effect today?

A. Yes. Tampa Electric amended and restated the 2013 Stipulation in 2017 and executed an agreement called the 2017 Amended and Restated Stipulation and Settlement Agreement ("2017 Agreement"). The Commission approved the 2017 Agreement by Order No. PSC-2017-0456-S-EI, issued on November 27, 2017, in Docket Nos. 20170210-EI and 20160160-EI. Paragraph 8 of the 2013 Stipulation, as detailed above, was included as paragraph 8 of the 2017 Agreement with certain clarifications.

Paragraph 8 of the 2017 Agreement states:

> (a) The Parties agree and intend that, notwithstanding any requirements of Rules 25-6.0436 and 25-6.04364, F.A.C., the company shall not be required during the Term of this 2017 Agreement to file any depreciation study or dismantlement study. The depreciation and amortization accrual rates approved by the FPSC and currently in effect as of the Effective Date of this 2017 Agreement shall remain in effect during the Term or the company's next depreciation study, whichever is later. The Parties further agree that the provisions of Rules 25-6.0436 and 25-6.04364, F.A.C., which otherwise require depreciation and dismantlement studies to be filed at least every four years, will not apply to the company during the Term, and that the Commission's approval of this 2017 Agreement shall excuse the company from compliance with the filing requirement of these rules during the Term.
>
> (b) Notwithstanding the non-deferral language in Paragraph 4, unless the company proposes a special capital recovery schedule and the Commission approves it, if coal-fired generating assets or other assets are retired or planned for retirement of a magnitude that would ordinarily or otherwise require a special

capital recovery schedule, such assets will continue to be depreciated using their then existing depreciation rates and special capital recovery issues will be addressed in conjunction with the company's next depreciation study. If the company installs Automated Meter Infrastructure ("AMI") meters and retires Automated Meter Reading ("AMR") meters during the Term, such assets will continue to be depreciated using their then existing depreciation rates and special capital recovery issues will be addressed in conjunction with the company's next depreciation study.

(c) Notwithstanding the provisions of Subparagraph 8(a) above, the company shall file a depreciation and dismantlement study or studies no more than one year nor less than 90 days before the filing of its next general rate proceeding under Sections 366.06 and 366.07, Florida Statutes, such that there is a reasonable opportunity for the Consumer Parties to review, analyze and potentially rebut depreciation rates or other aspects of such depreciation and dismantlement studies contemporaneously with the company's next general rate proceeding. The depreciation and dismantlement study period shall match the test year in the company's MFRs, with all

supporting data in electronic format with links, cells and formulae intact and functional, and shall be served upon all Consumer Parties and all intervenors in such subsequent rate case.

This explains why the company has not filed a depreciation study since 2011 and why the company filed a depreciation and dismantlement study on December 30, 2020 in anticipation of the current rate case filing.

Q. Other than approving the 2013 Stipulation and 2017 Agreement, has the Commission taken any other actions that affect the company's depreciation and amortization rates over this same period?

A. Yes. The Commission has entered orders addressing the depreciation of the company's Advanced Metering Infrastructure ("AMI") system, amortization of intangible software, and new depreciation rates for three new categories of plant assets.

Q. What action did the Commission take on depreciation of the company's AMI system?

A. The Commission approved a commencement date of January 1,

2022, for the depreciation of Tampa Electric's AMI program assets in Order No. PSC-2019-0327-PAA-EI, issued on August 9, 2019, in Docket No. 20190107-EI. The AMI meters will be fully functional and in-service at that time, meaning the system will be able to provide customer service tools, remote connection or disconnection of service, and information regarding customer energy usage.

As a part of this order, the Commission also directed Tampa Electric to continue to record depreciation expense on its existing AMR assets if replaced by AMI assets during the term of the 2017 Agreement, as addressed in Section 8 and described above.

Q. What actions did the Commission take regarding amortization of the company's intangible software?

A. In Order No. PSC-2013-0443-FOF-EI, issued September 30, 2013, the Commission approved the 2013 Stipulation and accordingly directed the company to begin using a 15-year amortization period for all intangible software.

In Order No. PSC-2015-0573-PAA-EI, the Commission approved the Company's Petition for Approval of Depreciation Rates for Solar Photovoltaic ("PV") generating units and

associated units over a 30-year period with a whole life depreciation rate of 3.3 percent. As a result, the company created subaccount 303.99 for the intangible software associated with its solar PV facilities and is amortizing that software over 30 years.

In Docket No. 20200065-EI, the Commission approved the company's petition to eliminate the accumulated amortization reserve surplus for intangible software assets of approximately $16.0 million and to amortize it over 12 months, beginning in January 2020.

Q. What actions did the Commission take to approve depreciation rates for new categories of plant assets since 2013?

A. In Order No. PSC-2017-0391-PAA-EI, the Commission approved a 35-year average service life and a whole life depreciation rate of 2.9 percent for the Polk 2 combined cycle ("CC") unit, including heat recovery steam generator, steam turbine, and associated equipment. The combined cycle assets are unitized in the following plant account depreciation groups:

341.86 Structures and Improvements

342.86 Fuel Holders, Producers and Accessories

343.86 Prime Movers

345.86 Accessory Electric Equipment

346.86 Miscellaneous Power Plant Equipment

In Order No. PSC-2020-0116-PAA-EI, the Commission approved a 10-year average service life and a whole life depreciation rate of 10 percent for the company's energy storage equipment. The energy storage asset accounts include the following plant account depreciation groups:

348-Energy Storage Equipment-Production

351-Energy Storage Equipment-Transmission

363-Energy Storage Equipment-Distribution

The company's current battery storage assets are unitized into the plant account depreciation group 348.99 Energy Storage Equipment-Production.

As I previously stated, the Commission approved new depreciation rates for solar generating units by Order No. PSC-2015-0573-PAA-EI, including a 30-year service life and a whole life depreciation rate of 3.3 percent. The solar assets are unitized into the following plant account depreciation groups:

303.99 Intangible Plant

341.99 Structures and Improvements

343.99 Other Generation Plant

345.99 Accessory Electric Equipment

Q. Does the 2020 and 2021 financial information in the MFR schedules filed in this case reflect the Commission actions discussed above?

A. Yes.

TAMPA ELECTRIC'S 2020 DEPRECIATION AND DISMANTLEMENT STUDIES

Q. Did the company file a depreciation and dismantlement study "no more than one year nor less than 90 days before the filing of its next general rate proceeding under Sections 366.06 and 366.07, Florida Statutes, such that there is a reasonable opportunity for the Consumer Parties to review, analyze and potentially rebut depreciation rates or other aspects of such depreciation and dismantlement studies contemporaneously with [this] rate proceeding" as required in the 2017 Agreement?

A. Yes. The company filed a depreciation and dismantlement study on December 30, 2020 in Docket No. 20200264-EI. I will refer to this study as the "2020 Depreciation Study" during the remainder of my testimony. Consistent with the 2017 Agreement, the company will file a motion to

consolidate Docket No. 20200264-EI with this rate case docket shortly after the petition, testimony and MFRs are filed in this docket.

Q. Please generally describe the 2020 Depreciation Study and summarize the results of the study.

A. We employed generally accepted standard depreciation methods, procedures, and techniques in preparing the 2020 Depreciation Study. The table below shows the proposed changes in annual depreciation, based on 2019 Ending Gross Plant Balances, resulting from the proposed changes to depreciation rates and dismantlement accruals. The company has proposed to establish amortization schedules for: (1) the remaining net book values and dismantlement reserve deficiencies for Big Bend Unit 1, Big Bend Unit 2, and Big Bend Unit 3; and (2) the remaining net book value for AMR meters resulting from the systemwide conversion to AMI meters. The following change in expense levels does not include any impacts of these proposed amortization recovery schedules.

Steam Production Plant	$ 8,510,671
Other Production Plant	18,609,414
Subtotal Change in Generation	**27,120,085**

Transmission Plant	1,203,427
Distribution Plant	1,180,333
General Plant	95,468
Subtotal Change in TD&G	**2,479,228**
Dismantlement	$ 6,828,649
Total Change in Depreciation & Dismantlement	**$36,427,962**

The depreciation study is organized by functional group: Generation Production; Transmission, Distribution, and General Plant; and Dismantlement. Each of these groups also contains subdivisions. Generation Production plant is organized by Energy Supply power stations, units, and accounts stratified by life category composites. Transmission, Distribution & General plant is organized by plant accounts or sub-accounts. Dismantlement is organized by power station units.

The effective date of the implementation requested for changing depreciation rates and dismantlement accruals is January 1, 2022.

Q. Was the 2020 Depreciation Study prepared in accordance with FPSC Rules 25-6.0142, 25-6.0143, 25-6.0436, 25-

6.04361 and 25-6.04364?

A. Yes.

Q. What role did you play in preparing the 2020 Depreciation Study?

A. The 2020 Depreciation Study was prepared by Tampa Electric staff under my direct supervision.

Q. What definition of "depreciation" have you used in the preparation of the 2020 Depreciation Study and this testimony?

A. Utility depreciation recognizes the wear and tear on plant or equipment as it performs its intended function. Annual depreciation represents the reduction in useful life of the plant or equipment during one year of operation. The net of interim salvage value and cost of removal is adjusted against the reserve and is factored into the whole-life or remaining-life formulas used to calculate the annual depreciation rate of accrual per category of plant or equipment.

Q. What is the purpose of a depreciation and dismantlement

study?

A. The purpose of a depreciation study is to estimate the useful service lives (average service life and average remaining life) of different components of plant or equipment. Each category of plant or equipment is based on the Code of Federal Regulations - Title 18: Conservation of Power and Water Resources, Chapter I, Subchapter C, Part 101, Electric Plant Chart of Accounts segregated by FERC function and designated by account numbers 301-399. The plant account in total, or stratification of equipment within a plant account, is analyzed for useful service life, net of interim salvage value and cost of removal factors in conjunction with vintage year plant costs and Iowa survivor curve plotting to calculate the annual depreciation rate for that plant account.

The purpose of the dismantlement study, which applies to all generating plant (Production Steam and Production Other), is to reserve funds for the final disposition and removal of a generating station or unit during end-of-life decommissioning. Each generating unit has its own terminal year based on when the unit was placed in-service and its estimated maximum life span. Each unit is provided an estimated cost for final disposition and removal that is

escalated to the terminal year for calculating the annual dismantlement accrual. The standard dismantlement study determines these costs based on removal or demolition at the end of life of the entire station. Additional costs are incurred if units are removed while units at the station continue to operate, as described in the direct testimony of witness Charles R. Beitel.

Q. What steps, inputs, and data did you use to prepare the 2020 Depreciation Study?

A. The 2020 Depreciation Study is based on the continuing property record details per each plant account as of December 31, 2019. Generating unit (Production Steam and Production Other) plant accounts and equipment are stratified by retirement unit into varying average service lives and Iowa curve types for analysis, and the results are then aggregated into a composite rate for each plant account. An additional data point, called the terminal date of the generating unit, is also taken into consideration. The terminal date is the year when the generating unit will be taken out of service and dismantled. Using the terminal date, the Iowa curve analysis will begin to truncate the remaining life per vintage to fully recover the invested cost of each

generating unit. Transmission, Distribution and General Plant equipment is studied at the plant account level for average service life and curve analysis. The underlying plant account retirement unit details are reviewed for primary drivers, each is assigned an average service life, and weighted averages are calculated, resulting in a composite average service life for curve type study purposes. Terminal dates are not used when studying perpetual Transmission, Distribution and General Plant account equipment. Annual salvage and cost of removal of historical information through 2019 and corresponding 5-year rolling averages are reviewed and input selections are made for net salvage factors to complete the whole life and remaining life formula calculations.

The dismantlement study is projected through a December 31, 2021, reserve starting point for modeling the change in annual accrual. The projection uses vendor-provided cost estimates in 2020 dollars subject to cost escalations using Moody's Analytics October 2020 indices for the GDP Chain Price Deflator (2012=100); Intermediate Goods, Producer Prices (1982=100); and Compensation Per Hour, Productivity and Costs (2012=100). The model performs a present value annual accrual calculation based on the estimated future cash flows that were escalated to each

generating unit's terminal date. The dismantlement annual accrual per generating unit is based on an average of the next four years of projected annual accruals between 2022 and 2025.

Q. What classes of property are included in the 2020 Depreciation Study?

A. Tampa Electric plant or equipment is categorized by function into FERC electric plant accounts, specifically Steam Production Plant (311-317), Other Production Plant (341-348), Transmission Plant (350-359.1), Distribution Plant (361-374), General Plant (390-399.1), and Intangible Plant (303).

Q. What classes of property were not included in the 2020 Depreciation Study?

A. Tampa Electric does not have any plant or equipment categorized by the following FERC functions of electric plant accounts: Nuclear Production Plant (320-326), Hydraulic Production Plant (330-337), Regional Transmission and Market Operation Plant (380-387), and Intangible Plant (301-302). In addition, non-depreciable land costs assigned to FERC electric plant accounts 310,

340, 350, 360, and 389 were not included and utilize a zero percent depreciation rate.

Q. What depreciation systems did you use when preparing the 2020 Depreciation Study?

A. In 2016, Tampa Electric implemented a new depreciation software solution, PowerPlan's Depreciation Study module. The company utilizes Excel spreadsheets to aggregate the results of the module. We accomplish inclusion of our consultant dismantlement study results in the 2020 Depreciation Study through an Excel spreadsheet model that has been used in the company's previous depreciation study filings.

Q. What is a survivor curve, and how were survivor curves used in preparation of the 2020 Depreciation Study?

A. Iowa survivor curve analysis is a standard method for determining utility plant remaining life. The Iowa survivor curves were developed at the Iowa State College Engineering Experiment Station in the 1950s through the process of observation and classification of ages at which industrial property had been retired. These standardized patterns of asset retirement dispersion are organized into

four broad classes of curve types: Right-Modal "R" curve, Left-Modal "L" curve, Symmetrical "S" curve, and Original Modal "O" curve. The purpose of Iowa curves is to enable the calculation of an average remaining life based on the average service life chosen. Remaining life calculations take the current age of each vintage of equipment within a plant account and then use the retirement rate projected by the appropriate Iowa curve to project the remaining life per each vintage. We chose the Iowa survivor curve for each plant account or stratified plant account based on historical precedent, comparable industry best practices, or advanced analytics, if available.

Q. What is the depreciation rate formula, *i.e.*, how are depreciation rates developed?

A. There are two depreciation rate formula techniques – whole life and remaining life. Under the whole life method, depreciation expense must cover invested capital and recognize credit for salvage and recover cost of removal over the average service life. This is expressed by the following formula:

$$\frac{100\% - (\text{Salvage \%} + \text{Cost of Removal \%})}{\text{Average Service Life}}$$

Using the remaining life method, depreciation expense must cover invested capital, recognize credit for salvage, recover cost of removal, and be adjusted for the actual book reserve ratio over the average remaining life. This is expressed by the following formula:

$$\frac{100\% - (\text{Salvage \%} + \text{Cost of Removal \%}) - \text{Reserve \%}}{\text{Average Remaining Life}}$$

Q. What portion of the formula used to derive depreciation rates is supported by the study?

A. The study utilizes plant and depreciation reserve balances as of December 31, 2019. The study supports the remaining life formula calculation of depreciation rates and determines the average remaining life and theoretical reserve amounts based on inputs for vintage surviving plant balances, Iowa curve type, net salvage percentages, and average service life estimation.

Q. Please describe the work you performed in the first step of the 2020 Depreciation Study, *i.e.,* data collection.

A. Tampa Electric files an annual depreciation status report with the Commission. We extracted plant and depreciation

reserve balances as of December 31, 2019, as seen on the annual status report pages B-7 and B-9, submitted on June 1, 2020, from the continuing property record in detail by asset retirement unit. We calculated historical net salvage activities for gross salvage and gross cost of removal, as seen on annual status report page B-9 and recorded them by year and 5-year rolling averages.

Q. Please describe the work you performed in the second step of the 2020 Depreciation Study, *i.e.*, analysis.

A. For production plant accounts, we analyzed the generating units for terminal date (end of life) year changes. Then we stratified each production generating unit plant account's asset retirement unit records into short, medium, and long-life categories. Each category is applied a different Iowa curve type, average service life and results aggregated by plant account. We analyzed the Transmission, Distribution and General Plant accounts on a non-stratified, perpetual (no terminal date) basis for applying a singular Iowa curve type, average service life and net salvage factor.

Q. Please describe the work you performed in the third step of the 2020 Depreciation Study, i.e. evaluation.

A. We performed initial analyses and had them reviewed internally by company engineers. The production generating unit terminal date assessments are critical for determining whether depreciation recovery of a specific unit needs to accelerate due to early shutdown or decelerate due to life extension. We compared Transmission, Distribution and General Plant account average service life assessments for property group cross-functional similarities or differences and for future program initiatives that could impact average service lives.

Tampa Electric considered its new Storm Protection Plan ("SPP") program initiative for this study. The activities were determined to be mostly wind mitigation outage prevention activities that would not cause average service life extension.

Q. Please describe the work you performed in the fourth step of the 2020 Depreciation Study, *i.e.*, calculation.

A. After evaluations were completed, we finalized inputs and factored them into the depreciation study software to produce the necessary output reports that yield the average remaining lives, theoretical reserves, and

remaining life formula calculation of depreciation rates. We then summarized the study outputs on a spreadsheet in order to perform comparisons using existing depreciation rates and the study's proposed depreciation rates for the annual accrual change impacts.

Q. Did Tampa Electric commission a 2020 dismantlement study to be performed?

A. Yes. The company contracted with 1898 & Co. to perform the standard dismantlement study. This study considers the costs and accrual needed for dismantlement of each entire station at the end of the life of the longest-lived unit. Tampa Electric also contracted with Sargent & Lundy to perform a dismantlement study for the cost estimates related to the near-term dismantlement of Big Bend Units 1, 2, and 3 within a functioning power station. Witness Jeffrey S. Kopp with 1898 & Co. sponsors and describes the dismantlement study where removal is completed at the end of the entire plant life in his direct testimony. In his prepared direct testimony, Mr. Beitel with Sargent & Lundy sponsors and describes the dismantlement studies that provide the demolition and removal costs of Big Bend Units 1, 2, and 3 while the remaining units at the plant continue operating.

Q. Please explain how you incorporated the results of the 1898 & Co. and Sargent & Lundy dismantlement studies in the 2020 Depreciation Study.

A. We used the 1898 & Co. dismantlement cost estimates for all generating assets except for Big Bend Units 1, 2, and 3. We used the cost estimates from Sargent & Lundy for the Big Bend Units 1, 2, and 3 assets because these units will be demolished within an operating power plant, as described earlier in my testimony and in the testimony of Mr. Beitel.

PROPOSED DEPRECIATION RATES AND EXPENSE FOR 2022 TEST YEAR

Q. What depreciation rates does the company propose to use for its 2022 test year in this proceeding?

A. The company proposes to use the depreciation rates developed in its 2020 Depreciation Study as described above. Those rates are set forth by category of plant asset. The use of these rates is reflected in the 2022 financial data included in the company's MFR schedules filed in this case.

Q. Are the depreciation rates proposed for 2022 by the company reasonable?

A. Yes, based on the analyses performed to prepare the 2020 Depreciation Study filing and review and comparisons to other utilities' rates, the depreciation rates and expense levels proposed for 2022 are reasonable and should be approved.

Q. Have you compared the depreciation rates proposed by the company for 2022 to the depreciation rates being used by other public electric utilities in Florida?

A. Yes. Tampa Electric compared Production Steam, Production Other, Transmission, Distribution, and General Plant account metrics to other public utilities for depreciation rate, average service life, average remaining life, future net salvage, reserve ratio, and curve type, if data was available. The purpose was to compare proposed study metrics looking for outlier low or high data points, and focus was placed on average service life and future net salvage differences. Tampa Electric's proposed rates are comparable to those used by other electric utilities.

Q. Using the company's proposed depreciation rates, what is the amount of depreciation expense in the 2022 test year?

A. The amount of depreciation expense in the 2022 test year

using the company's proposed depreciation rates and the proposed 10-year amortization period for recovery of the special capital recovery schedules for retiring assets is $493,324,106 as shown on MFR Schedule B-9. The table below is the detail by group:

PowerPlant Depr Group	2022	10-year Amortization Capital Recovery Schedule	Total 2022 Depreciation
Dismantlement	8,014,742	11,108,881	19,123,623
Acquisition Adjustments	236,709		236,709
SOFTWARE - Intangibles	29,516,555		29,516,555
ARO - Intangibles	5,493,447		5,493,447
GENERATION - Steam	45,258,426	47,619,458	92,877,884
GENERATION - Other	155,342,425		155,342,425
TRANSMISSION	33,038,697	532,506	33,571,203
DISTRIBUTION	123,196,423	3,614,687	126,811,110
VEHICLES - General	4,986,730		4,986,730
GENERAL - General	25,363,122	1,298	25,364,420
TOTAL	**430,447,276**	**62,876,830**	**493,324,106**

Q. How does the proposed depreciation expense amount for 2022 compare with the projected amount of depreciation expense for 2021, and how much of the increase is due to changes in depreciation rates?

A. The difference between the 2022 depreciation expense and

the projected amount of 2021 depreciation expense, excluding the amortization of the capital recovery schedules, is $51,878,413. The table below sets out the differences in detail by group:

PowerPlant Depr Group	2021	2022	Difference
Dismantlement	1,186,094	8,014,742	6,828,648
Acquisition Adjustments	236,709	236,709	-
SOFTWARE - Intangibles	18,018,310	29,516,555	11,498,245
ARO - Intangibles	5,493,447	5,493,447	-
GENERATION - Steam	72,734,684	45,258,426	-27,476,259
GENERATION - Other	114,509,070	155,342,425	40,833,355
TRANSMISSION	29,412,703	33,038,697	3,625,994
DISTRIBUTION	109,213,822	123,196,423	13,982,601
VEHICLES - General	4,017,007	4,986,730	969,724
GENERAL - General	23,747,016	25,363,122	1,616,106
TOTAL	**378,568,863**	**430,447,276**	**51,878,413**

COST RECOVERY SCHEDULES

Q. Is the company proposing special cost recovery schedules for the portions of Big Bend Units 1, 2, and 3 to be retired, as discussed in the direct testimony of witness Caldwell?

A. Yes. Mr. Caldwell has shown that the early retirement of portions or all of Big Bend Units 1, 2, and 3 are prudent and that the associated investment will not be recovered by the time of retirement through the current depreciation rates. Accordingly, pursuant to FPSC Rule 25-6.0436(7),

the company is requesting that the Commission approve a capital recovery schedule for the $481,532,619 of undepreciated Big Bend Units 1, 2, and 3 assets to be retired.

Q. Over what period does the company propose to recover the $481,532,619 of undepreciated Big Bend Units 1, 2, and 3 assets to be retired and why?

A. The company proposes to recover the $481,532,619 of the Big Bend Units 1, 2, and 3 remaining net book value over a 10-year period as reflected on MFR C-19. The company analyzed various alternatives and concluded that the 10-year amortization period reflects a prudent and reasonable time period that would mitigate the rate impact on customers.

Q. What is the resulting annual cost recovery amount if the FPSC approves the company's proposal?

A. The annual cost recovery amount if the FPSC approved the company's proposal is $48,153,263:

	12/31/2021 NBV	Recovered through ECRC Clause	Rate Base	10 Years Annual Amortization
BB1-Boiler 1	86,841,738		86,841,738	8,684,174
BB1-SCR 1	36,027,477	42,029,496	-6,002,019	3,602,748
BB2-Boiler 2	89,024,459		89,024,459	8,902,446
BB2-SCR 2	51,391,691	50,765,849	625,842	5,139,169
BB2-FGD 1/2	30,890,328	19,351,304	11,539,024	3,089,033
BB3-Boiler 3	145,197,790		145,197,790	14,519,779
BB3-SCR 3	**42,159,136**	41,726,353	432,783	**4,215,914**
Total	**$481,532,619**	**$153,873,002**	**$327,659,617**	**$48,153,263**

Q. Is the company proposing a special cost recovery schedule for the unrecovered value of AMR meters that were retired during the period the 2017 Settlement Agreement was effective?

A. Yes, the company is requesting that the Commission approve a capital recovery schedule to recover $36,146,873 for the remaining net book value of the AMR meters as reflected on MFR Schedule C-19.

Q. Over what period does the company propose to recover the $36,146,873 of undepreciated retired AMR meter assets and why?

A. The company proposes to recover the $36,146,873 of the AMR

remaining net book value over a 10-year period. The company analyzed various alternatives and determined that a 10-year amortization period is prudent and reasonable because it provides a reasonable balance between timely recovery of the costs while mitigating the rate impact on customers.

Q. What is the resulting annual cost recovery amount if the Commission approves the company's proposal?

A. The annual cost recovery amount if the Commission approved the company's proposal would be $3,614,687.

	12/31/2021 NBV	10 Years Annual Amortization
AMR	36,146,873	3,614,687

Q. Is the company proposing a special cost recovery schedule for the Dismantlement Reserve Deficiency related to the early retirement of Big Bend Units 1, 2, and 3?

A. Yes, the company requests that the Commission approve a capital recovery schedule of $111,088,808 related to the Dismantlement Reserve Deficiency for the early retirement of Big Bend Units 1, 2, and 3.

Q. Over what period does the company propose to recover the $111,088,808 Dismantlement Reserve Deficiency for the early retirement of Big Bend Units 1, 2, and 3 and why?

A. The company proposes to recover the $111,088,808 Dismantlement Reserve Deficiency over a 10-year period. The company analyzed various alternatives and determined that a 10-year amortization period reflects a prudent and reasonable time period that would mitigate the rate impact on customers.

Q. What is the resulting annual cost recovery amount if the Commission approves the company's proposal?

A. The annual cost recovery amount if the Commission approves the company's proposal is $11,108,881:

Dismantlement Reserve Deficiency	12/31/2021 NBV	10 Years Annual Amortization
Big Bend Unit #1	28,471,852	2,847,185
Big Bend Unit #2	39,642,284	3,964,228
Big Bend Unit #3	42,974,672	4,297,467
	111,088,808	**11,108,881**

Q. What investments and costs associated with the retirement of Big Bend Units 1, 2, and 3, and AMR need to be considered

as part of the ratemaking activity in this docket?

A. In general, there are two. The first is the projected undepreciated net book values of the Big Bend Units 1, 2, and 3, and AMR assets to be retired as of December 31, 2021, which are $517,679,493 is reflected on Document No. 2 of my exhibit. The second is the Dismantlement Reserve Deficiencies associated with the portions of Big Bend Units 1, 2, and 3 to be retired, which are $111,088,808 shown in our depreciation and dismantlement study and in Document No. 2 of my exhibit. The total of these amounts is $628,768,301 and represents the total amount the company proposes to include for a capital recovery schedule over ten years. This amount is shown on Document No. 2 of my exhibit.

Q. What is the total annual amortization expense associated with the company's proposed capital recovery schedule in the 2022 test year?

A. The total annual amortization expense in 2022 associated with our proposed capital recovery schedule is $62,876,830. Approximately $51,767,949 of this amount is attributable to recovery of the remaining net book value of the assets to be retired and $11,108,881 is for recovery

of the dismantlement reserve deficiency associated with the Big Bend assets to be retired. These amounts are reflected on Document No. 2 of my exhibit and on MFR Schedule B-9.

Q. How are the Big Bend Unit 1, 2, and 3, and AMR meter net book values as of December 31, 2021 proposed for capital recovery schedules reflected in the 2022 test year MFR schedules submitted with this filing?

A. We accounted for the planned retirement of these assets by removing the asset costs from FERC account number 101 (Plant-in-Service) and recording them in FERC account number 108 (Accumulated Reserve) of December 31, 2021. The retirement of these assets is shown on MFR Schedules B-7 and B-9, and their net book values are embedded in the December 31, 2021 balances shown on MFR Schedule B-9. We reflected our proposed level of capital recovery schedule amortization (over ten years) in the reserve accruals for FERC account number 403 (Depreciation Expense) and FERC account number 108. For the 2022 test year, our proposed level of capital recovery schedule amortization and depreciation expense for the portion of Big Bend Units 1, 2, and 3 that will remain in service are shown on MFR Schedules B-7 and B-9. We used this approach to facilitate

reforecasting actual monthly work order activities that have not been unitized from 107 CWIP ("Construction Work in Progress") or 108 RWIP ("Retirement Work in Progress") and to true-up final net book values as of December 31, 2021.

Once the Commission approves our proposed Net Book Value ("NBV") amounts for capital recovery schedules and an amortization period, the net book value amounts, and amortization recovery period, we will record the actual retirements in our accounting records as of December 31, 2021, adjust the accumulated reserve for the net book values, create a regulatory debit account balance in FERC Account 182.2 (Unrecovered Plant) in December 2021, and begin amortizing the regulatory debit in January 2022. The company did not reflect the movement of the net book values into FERC account number 182.2 in its 2022 MFR schedules to maintain visibility to the asset groups in which each proposed amount resides. When the reclassification to 182.2 occurs, we will begin posting the amortization expenses to FERC 407 (Amortization of Property Losses for Unrecovered Plant). The journal entries we propose to account for the NBV portion of our proposed capital recovery schedule are reflected in Document No. 2 of my exhibit.

Q. How are the Big Bend Unit 1, 2, and 3 dismantlement reserve deficiencies proposed for capital recovery reflected in the projected 2022 MFR schedules submitted with this filing?

A. The company has included proposed amount of its annual amortization for the projected dismantlement reserve deficiency (approximately $11.1 million) in FERC account number 403 (Depreciation Expense) and FERC account number 108 (Accumulated Reserve). These amounts are included in MFR Schedule B-9. The company did not project in the forecasted balance sheet a movement of the dismantlement reserve deficiencies into FERC 182.2 Unrecovered plant (regulatory debit). When the reclassification to FERC 182.2 occurs, we will post the related amortization expenses to FERC 407 Amortization of property losses for unrecovered plant. The journal entries the company proposes to use to account for the dismantlement reserve deficiency portion of its proposed capital recovery schedule are shown in Document No. 2 of my exhibit.

Q. Are there any retirement amounts in the company's filing that need further explanation?

A. Yes, as reflected in the 2021 MFR Schedules B-7 and B-9

in account 31140 there is a $68.3 million retirement on line 5 related to Big Bend Common Structures and Improvements. As reflected on MFR Schedule F-8 budget assumptions, retirements of plant-in-service are based on a ratio of retirements to additions historical averages that is applied to infrastructure replacement projects additions. New expansion project additions have zero retirement budgeted. However, the Big Bend Modernization CT 5 and CT 6 project additions were considered a replacement activity and triggered an automatic budget retirement to occur out of Big Bend common.

Q. Does the $68.3 million retirement alter total rate base?

A. No, the $68.3 million retirement does not alter total rate base in 2022 since we debited accumulated reserve account 108 and credited gross plant account 101.

Q. What impact did this retirement have on book depreciation expense in 2022?

A. As a result of this retirement total book depreciation expense was reduced by $2.2 million:

	B-7 / B-9 Asset Retirement		2022 Depreciation Rate	2022 Depreciation Expense
311.40 Str & Improvements-BBCM	(68,339,560)	X	3.2%	(2,186,866)

GAINS AND LOSSES ON DISPOSITION OF PROPERTY

Q. Did the company have gains or losses on the disposition of plant and property previously used in providing electric service from 2018 to 2020?

A. No. See MFR Schedule C-29.

Q. Does the company project gains or losses on the disposition of plant and property previously used in providing electric service in 2021 and 2022?

A. No. See MFR Schedule C-29.

SUMMARY

Q. Please summarize your direct testimony.

A. The 2020 Depreciation Study and analysis performed under my supervision fully supports setting depreciation rates as I have described in my testimony. The depreciation rates proposed by Tampa Electric to be effective January 1, 2022

and used in the MFR schedules for the 2022 test year are reasonable and should be approved. For the reasons described in my direct testimony and the direct testimony of Mr. Caldwell and Mr. Haines, the capital recovery schedules proposed by Tampa Electric for the undepreciated net book value of retiring assets are reasonable and prudent and should be approved.

Q. Does this conclude your direct testimony?

A. Yes, it does.

TAMPA ELECTRIC COMPANY
DOCKET NO. 20210034-EI
FILED: 04/09/2021

EXHIBIT

OF

DAVICEL AVELLAN

Table of Contents

TAMPA ELECTRIC COMPANY
DOCKET NO. 20210034-EI
EXHIBIT NO. DA-1
WITNESS: AVELLAN
DOCUMENT NO. 1
PAGE 1 OF 1
FILED: 04/09/2021

LIST OF MINIMUM FILING REQUIREMENT SCHEDULES

SPONSORED OR CO-SPONSORED BY DAVICEL AVELLAN

MFR Schedule	**Title**
B-07	Plant Balances by Account and Sub-account
B-08	Monthly Plant Balances Test Year - 13 Months
B-09	Depreciation Reserve Balances by Account and Sub-account
B-10	Monthly Plant (Reserve) Balances Test Year - 13 Months
B-11	Capital Additions and Retirements
B-12	Production Plant Additions
B-13	Construction Work in Progress
B-15	Property Held for Future Use – 13 Month Average
C-06	Budgeted Versus Actual Operating Revenues And Expenses
C-08	Detail Of Changes In Expenses
C-09	Five Year Analysis-Change In Cost
C-19	Amortization/Recovery Schedule - 12 Months
C-29	Gains and Losses on Disposition of Plant or Property
F-08	Assumptions

TAMPA ELECTRIC COMPANY
DOCKET NO. 20210034-EI
EXHIBIT NO. DA-1
WITNESS: AVELLAN
DOCUMENT NO. 2
PAGE 1 OF 1
FILED: 04/09/2021

INVESTMENT AND COST ASSOCIATED WITH RETIREMENT OF BIG BEND UNIT 1, 2, AND 3, AND AMR METER NET BOOK VALUE PROPOSED RECLASSIFICATION TO FERC 182.2(UNRECOVERED PLANT)

	Dec-21 Set up Reg Asset		Annual 2022 Undo PPE Amort		Annual 2022 Reg Asset Amort	
	108	182.2	108	403	407	182.2
Asset NBV Recovery						
BB1 Boiler	(86,841,739)	86,841,739	8,684,174	(8,684,174)	8,684,174	(8,684,174)
BB1 SCR	(36,027,477)	36,027,477	3,602,748	(3,602,748)	3,602,748	(3,602,748)
BB1	**(122,869,216)**	**122,869,216**	**12,286,922**	**(12,286,922)**	**12,286,922**	**(12,286,922)**
	-					
BB2 Boiler	(89,024,462)	89,024,462	8,902,446	(8,902,446)	8,902,446	(8,902,446)
BB2 SCR	(51,391,691)	51,391,691	5,139,169	(5,139,169)	5,139,169	(5,139,169)
BB FDG 1&2	(30,890,328)	30,890,328	3,089,033	(3,089,033)	3,089,033	(3,089,033)
BB2	**(171,306,481)**	**171,306,481**	**17,130,648**	**(17,130,648)**	**17,130,648**	**(17,130,648)**
	-					
BB3 Boiler	(145,197,789)	145,197,789	14,519,779	(14,519,779)	14,519,779	(14,519,779)
BB3 SCR	(42,159,136)	42,159,136	4,215,914	(4,215,914)	4,215,914	(4,215,914)
BB3	**(187,356,924)**	**187,356,924**	**18,735,692**	**(18,735,692)**	**18,735,692**	**(18,735,692)**
	-					
AMR	**(36,146,871)**	**36,146,871**	3,614,687	(3,614,687)	3,614,687	(3,614,687)
Total	**(517,679,493)**	**517,679,493**	**51,767,949**	**(51,767,949)**	**51,767,949**	**(51,767,949)**
Dismantlement Deficiency						
BB1	(28,471,852)	28,471,852	2,847,185	(2,847,185)	2,847,185	(2,847,185)
BB2	(39,642,284)	39,642,284	3,964,228	(3,964,228)	3,964,228	(3,964,228)
BB3	(42,974,672)	42,974,672	4,297,467	(4,297,467)	4,297,467	(4,297,467)
Total	**(111,088,808)**	**111,088,808**	**11,108,881**	**(11,108,881)**	**11,108,881**	**(11,108,881)**