

State of Florida



Public Service Commission

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TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: February 17, 2022

TO: Office of Commission Clerk (Teitzman)

FROM: Division of Economics (Wu) *JGH*
Office of the General Counsel (Brownless) *JSC*

RE: Docket No. 20210181-EI – Petition for approval of depreciation rates for direct current microgrid pilot equipment by Tampa Electric Company.

AGENDA: 03/01/22 – Proposed Agency Action – Interested Persons May Participate

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: La Rosa

CRITICAL DATES: None

SPECIAL INSTRUCTIONS: None

Case Background

Pursuant to Rule 25-6.0436(3)(a), Florida Administrative Code (F.A.C.), Florida's investor-owned electric utilities are required to maintain depreciation rates and accumulated depreciation reserves in accounts or subaccounts in accordance with the Uniform System of Accounts for Public Utilities and Licensees, as found in the Code of Federal Regulations, which is incorporated by reference in Rule 25-6.014(1), F.A.C.¹ In addition to this requirement, Rule 25-6.0436(3)(b), F.A.C., requires that: "[u]pon establishing a new account or subaccount classification, each utility shall request Commission approval of a depreciation rate for the new plant category.

¹ Code of Federal Regulations, Title 18, Subchapter C, Part 101, for Major Utilities, as revised April 1, 2013.

On June 30, 2021, the Commission approved Tampa Electric Company's (TECO or Company) Direct Current Microgrid Pilot (DC Microgrid or Pilot) by Order No. PSC-2021-0237-PAA-EI.² The Order notes that TECO will request approval from the Commission for establishing new depreciation accounts/subaccounts, with corresponding depreciation rates, to record certain new categories of plant assets associated with the pilot program implementation.

On November 15, 2021, TECO filed its Petition for Approval of Depreciation Rates for Direct Current Microgrid Pilot Equipment (Petition), consistent with Section 366.04, Florida Statutes, Rules 25-6.0436(3)(a)(b), F.A.C., and Order No. PSC-2021-0237-PAA-EI.

The Pilot involves installation of new direct current electric microgrid technology and associated generating equipment, known as the Block Energy System. This system will utilize rooftop photovoltaic solar arrays, natural gas-fueled reciprocating generating units and distributed energy storage. The Petition notes that TECO does not currently have a depreciation subaccount for the reciprocating generators. It also needs to create new subaccounts for the Company-owned rooftop solar panels and related battery storage utilized in the Pilot to isolate those plant assets from the existing accounts for the utility-scale solar panels and utility-scale battery storage.

Staff is not aware of any public comments or concerns regarding this matter.

The Florida Public Service Commission has jurisdiction in this matter pursuant to Sections 366.04, 366.05 and 366.06, F.S.

² Order No. PSC-2021-0237-PAA-EI, issued June 30, 2021, in Docket No. 20200234-EI, *In re: Petition for approval of direct current microgrid pilot program and for variance from or waiver of Rule 25-6.065, F.A.C., by Tampa Electric Company.*

Discussion of Issues

Issue 1: Should TECO’s request to establish new depreciation subaccounts applicable to its Direct Current Microgrid Pilot be approved, and, if so, what are the appropriate corresponding depreciation rates?

Recommendation: Yes. Staff recommends that the Commission approve TECO’s request to establish the Pilot-related new depreciation subaccounts with corresponding depreciation parameters and annual depreciation rates as listed in Table 1 below. (Wu)

Staff Analysis: TECO seeks the Commission’s approval to establish four depreciation subaccounts for certain new categories of plant assets associated with its Block Energy System of the Pilot program:

- 341.98 Structure and Improvements – DC Microgrid,
- 343.98 Prime Movers – DC Microgrid,
- 345.98 Accessory Electric Equipment – DC Microgrid, and
- 348.98 Energy Storage Battery Equipment – DC Microgrid.

Subaccount 341.98 is for the Pilot-related Block Energy System structural steel and foundations.³ TECO proposed an initial Average Service Life (ASL) of 30 years and Net Salvage (NS) of zero percent, which derives a 3.3 percent annual depreciation rate for the subaccount.⁴ Staff concurs with this proposal as it is in line with the Commission’s previous decision.⁵

Subaccount 343.98 will be used to book the rooftop solar panels and the natural gas-fueled reciprocating generating units used in the Block Energy System.⁶ Regarding the rooftop solar assets, paragraph 15 of the Petition reads “[i]n accordance with the 2021 Agreement, Tampa Electric requests a service life of 35 years for the Pilot rooftop solar assets, or an annual depreciation rate of 2.9 percent.”⁷ However, in response to staff’s data request, TECO revised this request by proposing an initial ASL of 30 years and NS of zero, which derives an annual depreciation rate of 3.3 percent for the rooftop solar assets in discussion.⁸ The Company explained the basis of the revision as follows:

Utility Scale solar plant subaccounts have moved from ASL [of] 30-years to ASL [of] 35 years per the 2021 Agreement. Roof Top solar panels, per the

³ Document No. 00109-2022, TECO’s response to Staff’s First Data Request, No. 1.a.

⁴ Document No. 00109-2022, TECO’s response to Staff’s First Data Request, No. 1.c.

⁵ Order No. PSC-15-0573-PAA-EI, in Docket No. 20150211-EI, issued December 18, 2015, *In re: Petition for approval of depreciation rates for solar photovoltaic generating units, by Tampa Electric Company*.

⁶ Document No. 00109-2022, TECO’s response to Staff’s First Data Request, No. 1.a.

⁷ The “2021 Agreement” was approved by Order No. PSC-2021-0423-S-EI, issued: November 10, 2021, *In re: Petition for rate increase by Tampa Electric Company*.

⁸ Document No. 00109-2022, TECO’s response to Staff’s First Data Request, No. 1.c.

manufacturer, have a 25-year product warranty and 30-year performance warranty.⁹

Generally, in a rate case settlement, the agreed upon depreciation parameters sometimes result from the parties' negotiations in the context of the entire rate case. For the instant docket, staff notes that TECO's revised service life proposal does reflect the plant assets' life characteristic; it is also within the industry range and consistent with the Commission's approval of ASL and NS for similar assets for TECO in 2015.¹⁰ As such, staff recommends that an initial ASL of 30 years, deriving a depreciation rate of 3.3 percent, is appropriate for the Pilot-related rooftop solar panels.

With respect to the natural gas-fueled reciprocating generating units, TECO indicated that the life is between 10,000 and 15,000 operating hours (3.4 to 5.1 years); and as they are considered to be stand-by units, the expected life of these units is 20-25 years.¹¹

TECO proposed to use the same subaccount, 343.98 Prime Movers – DC Microgrid, for both solar panels and the reciprocating generating units. It claimed that heterogeneous equipment (retirement units) can exist in the same plant subaccount to avoid use of redundant plant accounts/subaccounts.¹² The Company further explained that

Since future depreciation studies can analyze the stratification of retirement units for long, medium and short categories, roof top solar panels would be classified as long using an ASL 30-35 years and generators would be classified as medium using an ASL 20-25 years. This creates a blending of average service lives and an initial 30-year ASL would be appropriate.¹³

Stratification, which groups together, for depreciation study purposes, items of plants having similar life and salvage characteristics, has been used in TECO's previous depreciation studies.¹⁴ It is consistent with Rule 25-6.04361(5)(c), F.A.C., and allows cost recovery provisions to be more closely matched to the life characteristics of specific categories of investment made to provide for the generation of electric power. Staff believes that TECO's proposal for the subaccount and the associated service life is reasonable.

Subaccount 345.98 will be used to book the accessory electric equipment associated with the Block Energy System. TECO proposed an initial ASL of 30 years and NS of zero percent, deriving a 3.3 percent annual depreciation rate.¹⁵ These are in line with what TECO proposed for the electric equipment discussed above. Staff believes the proposed depreciation parameters and rate are reasonable.

⁹ Document No. 00785-2022, TECO's response to Staff's Second Data Request, No. 2.a.

¹⁰ Order No. PSC-15-0573-PAA-EI, issued December 18, 2015, *In re: Petition for approval of depreciation rates for solar photovoltaic generating units, by Tampa Electric Company.*

¹¹ Document No. 00109-2022, TECO's response to Staff's First Data Request, No. 2.c.

¹² Document No. 00785-2022, TECO's response to Staff's Second Data Request, No. 1.

¹³ *Id.*

¹⁴ Document Nos. 05429-2021, in Docket No. 20110131-EI, Bates-stamped pages 1-3, and 12501-2021, in Docket No. 20200264-EI, Bates-stamped pages 2463-2464.

¹⁵ Document No. 00109-2022, TECO's response to Staff's First Data Request, No. 1.a.

Subaccount 348.98 will be used to book the energy storage battery equipment associated with the Pilot.¹⁶ The design life estimate for the asset is about 10 years, and there are no differences between the asset and the battery storage equipment currently in-service in TECO’s system.¹⁷ According to TECO, the battery storage associated with the Block Energy System is relatively new equipment technology deployed by the Company, and there is not enough operational experience at this time.¹⁸ Consequently, TECO proposed an initial ASL of 10 years and NS of zero percent, resulting in a 10.0 percent annual depreciation rate, in accordance with what was approved for TECO’s utility-scale battery storage.^{19,20} Staff concurs with TECO’s proposals.

Table 1: Staff Recommended Depreciation Parameters and Rates

Acct. No.	Account Description	ASL (year)	NS (%)	Depreciation Rate (%)
341.98	Structure and Improvements – DC Microgrid	30	0	3.3
343.98	Prime Movers – DC Microgrid	30	0	3.3
345.98	Accessory Electric Equipment – DC Microgrid	30	0	3.3
348.98	Energy Storage Battery Equipment – DC Microgrid	10	0	10.0

TECO will include the new subaccounts, if approved, in its next depreciation study filed with the Commission.²¹ Consistent with Order No. PSC 2021-0237-PAA-EI, the Company will pursue cost recovery for the Pilot in its next general base rate case.²²

When the Pilot is suspended by TECO, either at the end of year one or four,²³ the undepreciated amount of the plant assets will stay in service at their current location to serve the customers and provide generation as needed to the grid.²⁴ When a Pilot customer chooses to terminate their DC service, the affected equipment, excepting the solar panels, will be relocated and placed into service, provided that the equipment can be repurposed within the Company’s operating system. Otherwise, the remaining net book value of the equipment will be imputed and written-off to Account 421.2, Loss on Disposition of Property.²⁵ With respect to the solar panels, the Pilot customer can opt to keep them by paying TECO a nominal value of \$1.00. Hence, the panels could be repurposed to provide that Pilot customer with solar power that would be subject to an interconnection agreement with TECO.²⁶

¹⁶ Document No. 00109-2022, TECO’s response to Staff’s First Data Request, No. 1.a.

¹⁷ Document No. 00109-2022, TECO’s response to Staff’s First Data Request, Nos 4.a and 4.b.

¹⁸ Document No. 00109-2022, TECO’s response to Staff’s First Data Request, No. 4.b.

¹⁹ *Id* and Petition, paragraph 16.

²⁰ Order No. PSC-2020-0156-PAA-EI, issued April 20, 2020, in Docket No. 20190215-EI, *In re: In re: Petition for approval of depreciation rates for energy storage equipment, by Tampa Electric Company*, and Order No. PSC-2021-0423-S-EI; and Order No. PSC-2021-0423-S-EI.

²¹ Petition, paragraph 17.

²² See Order No. PSCPSC 2021-0237-PAA-EI, page 6; and *Id*.

²³ See Order No. PSC-2021-0237-PAA-EI, page 5.

²⁴ Document No. 00109-2022, TECO’s response to Staff’s First Data Request, Nos. 2.e and 4.c.

²⁵ *Id*.

²⁶ See Order No. PSC-2021-0237-PAA-EI, page 5.

Issue 2: What should be the effective date if TECO’s petitioned new depreciation subaccounts, parameters and rates discussed in Issue 1 are approved?

Recommendation: Staff recommends that the newly-approved depreciation subaccounts and the corresponding parameters and rates become effective on the date that Pilot-related Block Energy System is placed in-service. (Wu)

Staff Analysis: Depreciation is the recovery of invested capital representing equipment that is providing service to the public. This recovery is designed to take place over the related period of service to the public, which begins with the equipment’s in-service date. The Pilot-related Block Energy System is currently in the final stages of commissioning and testing. The target in-service date is February 8, 2022, according to the Company’s latest data request response.²⁷ Staff recommends that if the Commission authorizes the petitioned depreciation subaccounts and the corresponding depreciation parameters and annual depreciation rates, the effective date of the implementation should be the in-service date of the Block Energy System.

²⁷ Document No. 00785-2022, TECO’s response to Staff’s Second Data Request, No. 3.

Issue 3: Should this docket be closed?

Recommendation: If no person whose substantial interests are affected by the proposed agency action files a protest within 21 days of the issuance of the order, this docket should be closed upon the issuance of a consummating order. (Brownless)

Staff Analysis: At the conclusion of the protest period, if no protest is filed, this docket should be closed upon the issuance of a consummating order.