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April 5, 2021

VIA: ELECTRONIC FILING

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

In re: Petition of Tampa Electric Company for approval of Direct Current Microgrid
Pilot Program; Docket No. 20200234-EI;

Dear Mr. Teitzman:

Attached for filing in the above docket, we are providing Tampa Electric Company's
Supplemental Response to Staff's Seventh Data Request No. 3a.

Thank you for your assistance in connection with this matter.

Sincerely,



Malcolm N. Means

MNM/bmp
Attachment

cc: All Parties of Record (w/attachment)
Suzanne Brownless, Special Counsel, FPSC (w/attachment)

**TAMPA ELECTRIC COMPANY
DOCKET NO. 20200234-EI
STAFF'S SEVENTH DATA REQUEST
REQUEST NO. 3
BATES PAGE: 3a – 3c
FILED: MARCH 29, 2021
SUPPLEMENTED: APRIL 5, 2021**

3. Please refer to TECO's response to Staff's First Data Request, No. 25.
 - a. Please provide an up-to-date economic analysis of the Block Energy System versus traditional generation. This response should provide the annual and cumulative values over the life of the Block Energy System (in nominal and net present value). This should include the following categories: Avoided Capital, O&M, Avoided O&M, Fuel Costs, Fuel Savings and Avoided Transmission and Distribution Capital. Provide this response in electronic (Excel) format.
 - b. Please identify and provide the installed cost for each piece of equipment used in Block Energy System. As a part of this response please provide the total installed cost of the Block Energy System. Provide this response in electronic (Excel) format.

- A.
 - a. Tampa Electric prepared the requested updated economic analysis, which is attached to this response. Tampa Electric is also providing the same analysis in Excel format as requested, "(BS_3c) Annual Cost-Benefit Data (04-05-2021)." Note that this analysis does not include the internal labor costs referred to in Tampa Electric's Response to Staff's Seventh Data Request No. 4.b.
 - b. *A response was provided on March 29, 2021.*

Results Summary

Updated: 04/5/2021

	Cost / (Benefit) (\$000)	Notes
Capital RR	2,389.3	Indicative 37 home community in South Hillsborough with coincident peak load of 190 kW, and a total of 1,535 kW of generation consisting of: <ul style="list-style-type: none"> - 289 kW solar per site (7.8 KW rooftop solar per home) - 240 kW / 0.5 C-Rating battery storage (17.7 kWh per home) - 657 kW / 1 C-Rating central battery storage per site - 350 kW central reciprocating engine (2 x 150 kW) per site
System O&M Impacts	(20.5)	Based on an optimized, hourly production cost simulation with a 400 kW Bi-Directional flow interface
Fuel	(171.5)	Benefit based on fuel savings from the solar energy produced by the microgrid.
Avoided Generation	(853.6)	Based on 200 kW interface plus 228 kW (Avoided load of 190 kW + 20% RM on the avoided load)
Avoided T&D Losses	(20.0)	Using approximately 7.6% T&D loss
Avoided T&D future capital	(569.3)	Based on 400 kW interface
Avoided service drop and meter	(94.8)	Approximately \$2k per home
Ancillary Services	(81.9)	Contribution to operational reserves
Environmental	(76.8)	Benefits from lower CO ₂ / NO _x / SO ₂ emissions using 2021 Q1 ICF Cost of Carbon Report
Total CPWRR	500.9	