

**TAMPA ELECTRIC COMPANY
UNDOCKETED: REVIEW OF TYSP'S
FOURTH SUPPLEMENTAL DATA REQUEST
REQUEST NO. 2
PAGE 1 OF 8
FILED: JULY 06, 2020**

- 2.** Please refer to pages 9 and 13-18 of Schedule 9 of TECO's 2020 TYSP. Please provide updated schedules that replace all values marked "TBD" with those values used by TECO in their most recent planning process.

- A.** Please see the following pages for the updated schedules.

**Schedule 9
 (Page 9 of 18)**

Status Report and Specifications of Proposed Generating Facilities

(1)	Plant Name and Unit Number	Battery Storage
(2)	Net Capability	
	A. Summer	30 MW
	B. Winter	30 MW
(3)	Technology Type	Battery
(4)	Anticipated Construction Timing	
	A. Field Construction Start Date	December 2020
	B. Commercial In-Service Date	December 2021
(5)	Fuel	
	A. Primary Fuel	N/A
	B. Alternate Fuel	N/A
(6)	Air Pollution Control Strategy	N/A
(7)	Cooling Method	N/A
(8)	Total Site Area	Undetermined
(9)	Construction Status	Proposed
(10)	Certification Status	N/A
(11)	Status with Federal Agencies	N/A
(12)	Projected Unit Performance Data	
	Planned Outage Factor (POF)	N/A
	Forced Outage Factor (FOF)	N/A
	Equivalent Availability Factor (EAF)	N/A
	Resulting Capacity Factor (2026)	N/A
	Average Net Operating Heat Rate (In-Service Year ANOHR)	N/A
(13)	Projected Unit Financial Data	
	Book Life (Years)	10
	Total Installed Cost (In-Service Year \$/kW)	911.10
	Direct Construction Cost (\$/kW)	836.04
	AFUDC ¹ Amount (\$/kW)	39.25
	Escalation (\$/kW)	35.82
	Fixed O&M (In-Service Year \$/kW – Yr)	33.16
	Variable O&M (In-Service Year \$/MWh)	N/A
	K-Factor	1.452

¹ Based on the current AFUDC rate of 6.46%

Schedule 9
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Status Report and Specifications of Proposed Generating Facilities

(1)	Plant Name and Unit Number	Reciprocating Engine
(2)	Net Capability	
	A. Summer	18.5 MW
	B. Winter	18.5 MW
(3)	Technology Type	Combustion Turbine
(4)	Anticipated Construction Timing	
	A. Field Construction Start Date	January 2024
	B. Commercial In-Service Date	January 2025
(5)	Fuel	
	A. Primary Fuel	Natural Gas
	B. Alternate Fuel	N/A
(6)	Air Pollution Control Strategy	N/A
(7)	Cooling Method	N/A
(8)	Total Site Area	Undetermined
(9)	Construction Status	Proposed
(10)	Certification Status	N/A
(11)	Status with Federal Agencies	N/A
(12)	Projected Unit Performance Data	
	Planned Outage Factor (POF)	0.02
	Forced Outage Factor (FOF)	0.02
	Equivalent Availability Factor (EAF)	0.96
	Resulting Capacity Factor (2023)	0.44%
	Average Net Operating Heat Rate (In-Service Year ANOHR)	8,100 Btu/kWh
(13)	Projected Unit Financial Data	
	Book Life (Years)	30
	Total Installed Cost (In-Service Year \$/kW)	1,266.32
	Direct Construction Cost (\$/kW)	1,027.76
	AFUDC ¹ Amount (\$/kW)	80.09
	Escalation (\$/kW)	158.48
	Fixed O&M (In-Service Year \$/kW – Yr)	23.02
	Variable O&M (In-Service Year \$/MWh)	9.52
	K-Factor	1.340

¹ Based on the current AFUDC rate of 6.46%

Schedule 9
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Status Report and Specifications of Proposed Generating Facilities

(1)	Plant Name and Unit Number	Battery Storage
(2)	Net Capability	
	A. Summer	10 MW
	B. Winter	10 MW
(3)	Technology Type	Battery
(4)	Anticipated Construction Timing	
	A. Field Construction Start Date	January 2024
	B. Commercial In-Service Date	January 2025
(5)	Fuel	
	A. Primary Fuel	N/A
	B. Alternate Fuel	N/A
(6)	Air Pollution Control Strategy	N/A
(7)	Cooling Method	N/A
(8)	Total Site Area	Undetermined
(9)	Construction Status	Proposed
(10)	Certification Status	N/A
(11)	Status with Federal Agencies	N/A
(12)	Projected Unit Performance Data	
	Planned Outage Factor (POF)	N/A
	Forced Outage Factor (FOF)	N/A
	Equivalent Availability Factor (EAF)	N/A
	Resulting Capacity Factor (2026)	N/A
	Average Net Operating Heat Rate (In-Service Year ANOHR)	N/A
(13)	Projected Unit Financial Data	
	Book Life (Years)	10
	Total Installed Cost (In-Service Year \$/kW)	781.79
	Direct Construction Cost (\$/kW)	660.18
	AFUDC ¹ Amount (\$/kW)	33.68
	Escalation (\$/kW)	87.93
	Fixed O&M (In-Service Year \$/kW – Yr)	29.33
	Variable O&M (In-Service Year \$/MWh)	N/A
	K-Factor	1.180

¹ Based on the current AFUDC rate of 6.46%

Schedule 9
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Status Report and Specifications of Proposed Generating Facilities

(1)	Plant Name and Unit Number	Battery Storage
(2)	Net Capability	
	A. Summer	60 MW
	B. Winter	60 MW
(3)	Technology Type	Battery
(4)	Anticipated Construction Timing	
	A. Field Construction Start Date	January 2025
	B. Commercial In-Service Date	January 2026
(5)	Fuel	
	A. Primary Fuel	N/A
	B. Alternate Fuel	N/A
(6)	Air Pollution Control Strategy	N/A
(7)	Cooling Method	N/A
(8)	Total Site Area	Undetermined
(9)	Construction Status	Proposed
(10)	Certification Status	N/A
(11)	Status with Federal Agencies	N/A
(12)	Projected Unit Performance Data	
	Planned Outage Factor (POF)	N/A
	Forced Outage Factor (FOF)	N/A
	Equivalent Availability Factor (EAF)	N/A
	Resulting Capacity Factor (2026)	N/A
	Average Net Operating Heat Rate (In-Service Year ANOHR)	N/A
(13)	Projected Unit Financial Data	
	Book Life (Years)	10
	Total Installed Cost (In-Service Year \$/kW)	763.38
	Direct Construction Cost (\$/kW)	631.35
	AFUDC ¹ Amount (\$/kW)	32.88
	Escalation (\$/kW)	99.14
	Fixed O&M (In-Service Year \$/kW – Yr)	28.96
	Variable O&M (In-Service Year \$/MWh)	N/A
	K-Factor	1.180

¹ Based on the current AFUDC rate of 6.46%

Schedule 9
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Status Report and Specifications of Proposed Generating Facilities

(1)	Plant Name and Unit Number	Reciprocating Engine
(2)	Net Capability	
	A. Summer	74 MW (Consisting of 4 engines)
	B. Winter	74 MW (Consisting of 4 engines)
(3)	Technology Type	Combustion Turbine
(4)	Anticipated Construction Timing	
	A. Field Construction Start Date	January 2026
	B. Commercial In-Service Date	January 2027
(5)	Fuel	
	A. Primary Fuel	Natural Gas
	B. Alternate Fuel	N/A
(6)	Air Pollution Control Strategy	N/A
(7)	Cooling Method	N/A
(8)	Total Site Area	Undetermined
(9)	Construction Status	Proposed
(10)	Certification Status	N/A
(11)	Status with Federal Agencies	N/A
(12)	Projected Unit Performance Data	
	Planned Outage Factor (POF)	0.02
	Forced Outage Factor (FOF)	0.02
	Equivalent Availability Factor (EAF)	0.96
	Resulting Capacity Factor (2023)	0.38%
	Average Net Operating Heat Rate (In-Service Year ANOHR)	8,100 Btu/kWh
(13)	Projected Unit Financial Data	
	Book Life (Years)	30
	Total Installed Cost (In-Service Year \$/kW)	1,317.48
	Direct Construction Cost (\$/kW)	1,024.53
	AFUDC ¹ Amount (\$/kW)	83.32
	Escalation (\$/kW)	209.64
	Fixed O&M (In-Service Year \$/kW – Yr)	24.05
	Variable O&M (In-Service Year \$/MWh)	9.94
	K-Factor	1.340

¹ Based on the current AFUDC rate of 6.46%

Schedule 9
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Status Report and Specifications of Proposed Generating Facilities

(1)	Plant Name and Unit Number	Battery Storage
(2)	Net Capability	
	A. Summer	60 MW
	B. Winter	60 MW
(3)	Technology Type	Battery
(4)	Anticipated Construction Timing	
	A. Field Construction Start Date	January 2027
	B. Commercial In-Service Date	January 2028
(5)	Fuel	
	A. Primary Fuel	N/A
	B. Alternate Fuel	N/A
(6)	Air Pollution Control Strategy	N/A
(7)	Cooling Method	N/A
(8)	Total Site Area	Undetermined
(9)	Construction Status	Proposed
(10)	Certification Status	N/A
(11)	Status with Federal Agencies	N/A
(12)	Projected Unit Performance Data	
	Planned Outage Factor (POF)	N/A
	Forced Outage Factor (FOF)	N/A
	Equivalent Availability Factor (EAF)	N/A
	Resulting Capacity Factor (2026)	N/A
	Average Net Operating Heat Rate (In-Service Year ANOHR)	N/A
(13)	Projected Unit Financial Data	
	Book Life (Years)	10
	Total Installed Cost (In-Service Year \$/kW)	1,100.64
	Direct Construction Cost (\$/kW)	873.10
	AFUDC ¹ Amount (\$/kW)	47.41
	Escalation (\$/kW)	180.13
	Fixed O&M (In-Service Year \$/kW – Yr)	39.40
	Variable O&M (In-Service Year \$/MWh)	N/A
	K-Factor	1.180

¹ Based on the current AFUDC rate of 6.46%

Schedule 9
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Status Report and Specifications of Proposed Generating Facilities

(1)	Plant Name and Unit Number	Battery Storage
(2)	Net Capability A. Summer B. Winter	60 MW 60 MW
(3)	Technology Type	Battery
(4)	Anticipated Construction Timing A. Field Construction Start Date B. Commercial In-Service Date	January 2028 January 2029
(5)	Fuel A. Primary Fuel B. Alternate Fuel	N/A N/A
(6)	Air Pollution Control Strategy	N/A
(7)	Cooling Method	N/A
(8)	Total Site Area	Undetermined
(9)	Construction Status	Proposed
(10)	Certification Status	N/A
(11)	Status with Federal Agencies	N/A
(12)	Projected Unit Performance Data Planned Outage Factor (POF) Forced Outage Factor (FOF) Equivalent Availability Factor (EAF) Resulting Capacity Factor (2026) Average Net Operating Heat Rate (In-Service Year ANOHR)	N/A N/A N/A N/A N/A
(13)	Projected Unit Financial Data Book Life (Years) Total Installed Cost (In-Service Year \$/kW) Direct Construction Cost (\$/kW) AFUDC ¹ Amount (\$/kW) Escalation (\$/kW) Fixed O&M (In-Service Year \$/kW – Yr) Variable O&M (In-Service Year \$/MWh) K-Factor	10 1,094.05 849.93 47.13 197.00 39.41 N/A 1.180

¹ Based on the current AFUDC rate of 6.46%