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FPSC - COMMISSION CLERK

City of Tallahassee
Your Own Utilities℠

#1 Public Utility in America

Electric & Gas Utility | 2602 Jackson Bluff Road | Tallahassee | FL | 32304 | 850-891-4968

June 28, 2022

Clerk's Office
State of Florida Public Service Commission

Dear Sir/Madam:

The following pages are the City of Tallahassee Electric & Gas Utilities' (TAL) responses to the "DN 20220000-OT (Undocketed filings for 2022) Ten-Year Site Plan Review - Staff's Data Request #3" pursuant to the request received from Florida Public Service Commission (FPSC) Staff member Ms. Patti Zellner. Please note that copies of all narrative and non-narrative responses have been separately provided to Mr. Donald Phillips in the FPSC's Division of Engineering via e-mail per Ms. Zellner's request.

If you should have any questions regarding this report, please feel free to contact me at (850) 891-3130 or paul.clark@talgov.com. Thank you.

Sincerely,

Paul D. Clark, II
Principal Engineer

Attachments

1. Please refer to TAL's 2022 TYSP, pages 16 – 17, and Table 1. Compared to all the other years in forecasting horizon, 2022 shows a significant projected growth in energy sales, please explain the reason or cause behind.

Table 1: TAL's Projections of Retail Sales

Data Source:	Schedule 2.1 Rural & Residential			Schedule 2.2 Commercial			Schedule 2.2 Total Sales to Ultimate Customers		
Year	GWH	Annual Increased GWH	Annual Increased (%)	GWH	Annual Increased GWH	Annual Increased (%)	GWH	Annual Increased GWH	Annual Increased (%)
2021	1,139			1,426			2,590		
2022	***1,175***	***36***	***3.16%***	***1,520***	***94***	***6.59%***	***2,720***	***130***	***5.02%***
2023	*1,176*	*1*	*0.09%*	*1,568*	*48*	*3.16%*	*2,769*	*49*	*1.80%*
2024	1,178	2	0.17%	1,593	25	1.59%	2,796	27	0.98%
2025	1,179	1	0.08%	1,607	14	0.88%	2,811	15	0.54%
2026	1,179	0	0.00%	1,616	9	0.56%	2,820	9	0.32%
2027	1,179	0	0.00%	1,625	9	0.56%	2,829	9	0.32%
2028	1,179	0	0.00%	1,633	8	0.49%	2,837	8	0.28%
2029	1,182	3	0.25%	1,641	8	0.49%	2,848	11	0.39%
2030	1,187	5	0.42%	1,649	8	0.49%	2,861	13	0.46%
2031	1,192	5	0.42%	1,654	5	0.30%	2,871	10	0.35%

For the residential class, calendar 2021 was a historically mild weather year, in terms of both heating and cooling degree days. Hence, a significant portion of the growth from 2021 to 2022 represents a weather-normalization effect.

For the commercial class, while there is a small weather-normalization effect, the primary driver of the above-normal growth in 2022 is a recovery from lingering impacts of the COVID pandemic. Activity and load levels at the major universities TAL serves is expected to return to more normal levels over 2022-23, which can also be expected to lead to a broader recovery in related commercial activity. After 2022, the recovery in commercial activity is expected to slow, thereby leading to lower growth rates in the later years.

2. Please refer to TAL's Response to Staff's First Data Request, No. 19. Please generally describe the methodology for how TAL utilizes the listed data sources to arrive at the PEV forecast presented in its 2022 TYSP.

TAL developed estimates of the historical adoption of PEVs in its service area based on data from the Atlas EV Hub, trended adoption levels based on national projections obtained from the Energy Information Administration's (EIA) 2021 Annual Energy Outlook (AEO) and the Electric Power Research Institute (EPRI), and translated the resulting stock of PEVs into load impacts using charging profiles obtained from the National Renewable Energy Laboratory.

3. Please cite and identify any sources that support TAL's PEV forecast methodology.

   Data sources are as follows:

   - *Historical PEV adoption – Atlas EV Hub*
   - *Projected PEV adoption trend – EIA's 2021 AEO and EPRI*
   - *PEV charging profiles – NREL's EVi Pro Lite tool*

4. Please refer to TAL's Response to Staff's First Data Request, No. 19 (TAL's 2021 TYSP) and TAL's Response to Staff's First Data Request No. 20 (TAL's 2022 TYSP). Comparing TAL's 2021 and 2022 TYSP's, the Company has increased its PEV forecast for 2030 by 237.8 percent (see charts/calculations below). Please identify and explain the major drivers/factors in TAL's PEV forecasting models that have contributed to this significant increase.

   Prior to the 2022 TYSP, TAL had not performed a formal analysis of the trend or impacts of PEV adoption. The forecast provided in the 2021 TYSP was instead a simplified representation of a potential trend of adoption, based on the low level of adoption that was anticipated at the time, and approximate expectations around charging infrastructure. For the 2022 TYSP, TAL has developed a more rigorous analysis and review of the national PEV adoption projections of others and has adapted this projection to its system.

TAL's 2021 TYSP

Year	Number of PEVs	Number of Public PEV Charging Stations[1]	Number of Public DCFC PEV Charging Stations.	Cumulative Impact of PEVs		
				Summer Demand	Winter Demand	Annual Energy
				(MW)	(MW)	(GWh)
2021	1,420	34	2	NA[2]		
2022	1,435	34	4			
2023	1,449	34	4			
2024	1,463	34	6			
2025	1,478	38	6			
2026	1,493	38	6			
2027	1,508	38	8			
2028	1,524	40	8			
2029	1,600	40	10			
2030	1,616	40	15			
Notes						

[1] Public PEV Charging Station count includes hotels that provide charging for registered guests, automobile dealers that offer charging for specific makes/models and public spaces such as Leon County Library and the Tallahassee International Airport, etc.

[2] Due to the low expected penetration of EVs within the service area, TAL has not performed any formal analysis of the impact of PEVs or PEV charging stations on system load and energy requirements.

TAL's 2022 TYSP

Year	Number of PEVs	Number of Public PEV Charging Stations[1]	Number of Public DCFC PEV Charging Stations[2]	Cumulative Impact of PEVs		
				Summer Demand	Winter Demand	Annual Energy
				(MW)	(MW)	(GWh)
2022	1,158	88	4	0.75	0.44	3.50
2023	1,469	90	6	0.95	0.55	4.46
2024	1,832	92	8	1.19	0.69	5.58
2025	2,253	94	8	1.46	0.85	6.89
2026	2,736	96	12	1.77	1.03	8.40
2027	3,288	98	12	2.13	1.24	10.13
2028	3,921	100	15	2.54	1.48	12.11
2029	4,640	103	15	3.00	1.75	14.38
2030	5,459	106	18	3.53	2.05	16.97
2031	6,378	109	18	4.13	2.40	19.88

Notes

[1] Public PEV Charging Station count includes hotels that provide charging for registered guests, automobile dealers that offer charging for specific makes/models and public spaces such as Leon County Library and the Tallahassee International Airport, etc. Reporting number of stations, not charging ports, which would be higher.

[2] Reported number of charging stations is not the number of charging ports, which would be higher.

Year-over-year forecast variance:
(2022 TYSP forecast of 2030 PEV's – 2021 TYSP forecast of 2030 PEV's)/ 2021 TYSP forecast of 2030 PEV's = (5,459 – 1,616)/1,616 = 237.8 Percent