

TENNESSEE-AMERICAN WATER COMPANY, INC.

DOCKET NO. 24-00032

DIRECT TESTIMONY

OF

PATRICK L. BARYENBRUCH

ON

SERVICE COMPANY CHARGES

SPONSORING PETITIONER'S EXHIBITS:

SCHEDULE PLB-1

SCHEDULE PLB-2

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Patrick L. Baryenbruch. My business address is 2832 Claremont
3 Road, Raleigh, North Carolina 27608.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY.**

5 A. I am the President of my own consulting practice, Baryenbruch & Company, LLC,
6 which was established in 1985. In that capacity, I provide consulting services to
7 utilities and their regulators.

8 **Q. PLEASE STATE YOUR PROFESSIONAL AND EDUCATIONAL**
9 **BACKGROUND.**

10 A. I am a Certified Public Accountant (“CPA”) and a Certified Information
11 Technology Professional (“CITP”), an accreditation awarded by the American
12 Institute of Certified Public Accountants to CPA professionals who can
13 demonstrate expertise in cybersecurity and information technology
14 management.

15 I received a Bachelor’s degree in Accounting from the University of
16 Wisconsin Oshkosh and a Master’s in Business Administration degree from the
17 University of Michigan. I am a member of the American Institute of Certified
18 Public Accountants and the North Carolina Association of Certified Public
19 Accountants.

20 I began my career with Arthur Andersen & Company, where I performed
21 financial audits of utilities, banks and finance companies. I left to pursue an
22 M.B.A. degree. Upon graduation from business school, I worked with the

1 management consulting firms of Theodore Barry & Associates and Scott
2 Consulting Group (now ScottMadden) before establishing my own consulting
3 practice.

4 **Q. WHAT OTHER WORK EXPERIENCE DO YOU HAVE WITHIN THE UTILITY**
5 **INDUSTRY?**

6 A. In addition to my work supporting rate cases, much of my career has been spent
7 as a management consultant for projects related to the utility industry. I have
8 performed consulting assignments for more than 70 utilities and 10 public service
9 commissions. I have participated as project manager, lead consultant or staff
10 consultant for 24 commission-ordered management and prudence audits of
11 public utilities. Of these, I was responsible for evaluating the area of affiliate
12 charges and allocation of corporate expenses in the commission-ordered audits
13 of Connecticut Light and Power (now Eversource), Connecticut Natural Gas,
14 General Water Corporation (now Veolia), Philadelphia Suburban Water
15 Company (now Essential Utilities), and Pacific Gas & Electric Company.

16 My firm performed the commission-ordered audit of Southern California
17 Edison's 2002, 2003, 2004 and 2005 transactions with its non-regulated affiliate
18 companies.

19 For 20 years, I was heavily involved in providing consulting services
20 related to information technology ("IT") infrastructure within the utility industry.
21 These projects involved improvements in business management practices of
22 utility IT organizations, covering processes such as business planning, risk

1 management, performance measurement and reporting, cost recovery,
2 budgeting, cost management and personnel development.

3 I acted as the project manager and a member of the project management
4 team for twenty large-scale IT implementation projects for a large electric utility.

5 **Q. HAVE YOU PRESENTED TESTIMONY BEFORE REGULATORS ON THE**
6 **TOPIC OF AFFILIATE TRANSACTIONS?**

7 Yes. During my career, I have performed more than 150 evaluations of affiliate
8 charges to 46 utility companies, including on behalf of Tennessee-American
9 Water Company (“TAWC” or the “Company”) before the Tennessee Public Utility
10 Commission (“TPUC” or the “Commission”). I have acted as an expert witness
11 on utility/affiliate charges in 100 rate case proceedings before regulators in 21
12 states. SCHEDULE PLB-1 presents my previous affiliate transaction-related
13 assignments.

14 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

15 A. I am presenting the results of my evaluation of the necessity of services provided
16 by the American Water Work Service Company, Inc. (“AWWSC” or the “Service
17 Company”) to TAWC and the reasonableness of the associated charges during
18 the 12 months ended December 31, 2023. The Service Company is a subsidiary
19 of American Water Works Company, Inc. (“American Water”) that provides
20 shared services to American Water’s water and wastewater utility subsidiaries,
21 including TAWC.

22 **Q. ARE YOU SPONSORING ANY EXHIBITS IN YOUR TESTIMONY?**

1 A. Yes. I am sponsoring SCHEDULE PLB-1, which presents my previous affiliate
2 transaction-related assignments, and SCHEDULE PLB-2, which is my Market-
3 to-Cost-Comparison of Service Company charges to TAWC during 2023. This
4 study was undertaken in conjunction with TAWC's rate case and the results are
5 true to the best of my knowledge and belief.

6 **Q. WHAT WERE THE OBJECTIVES OF YOUR STUDY?**

7 A. This study was undertaken to answer the following six (6) questions concerning
8 the services provided by the Service Company to TAWC, each of which bears
9 on the reasonableness of those charges as incurred during 2023.

- 10 1) Are TAWC's 2023 total expenses, including those incurred directly and
11 those allocated from the Service Company, reasonable compared to total
12 expenses of other water companies?
- 13 2) Are the services provided by the Service Company similar to those provided
14 by service companies of other utility holding companies?
- 15 3) Are the Service Company's customer service and administrative and
16 general ("CS/A&G")-related charges to TAWC during 2023 in line with, or
17 reasonably comparable to, charges by other service companies to their
18 regulated affiliate operating companies?
- 19 4) Was TAWC charged the lower of cost or market for managerial and
20 professional services provided by the Service Company during 2023?
- 21 5) Are the services TAWC receives from Service Company necessary? Is
22 there any duplication or overlap between the services provided by the
23 Service Company and the work activities of TAWC?

1 6) Are the governance practices applied to total Service Company expenses
2 and charges to TAWC appropriate?

3 **Q. PLEASE SUMMARIZE YOUR FINDINGS.**

4 A. Based on my evaluation, I have concluded that the services that Service
5 Company provides are necessary, consistent with services customarily
6 provided by service companies of other utility holding companies and are
7 reasonable in cost. TAWC's total expenses, including those incurred directly
8 and those allocated from the Service Company, are reasonable compared to
9 total expenses of other water companies. The Service Company's 2023
10 customer service and administrative and general ("CS/A&G") charges per
11 TAWC customer are reasonable compared to costs per customer for other
12 utility service companies, and TAWC was also charged the lower of cost or
13 market for managerial and professional services. Not only would it be difficult
14 for TAWC to find local service providers with the same specialized water and
15 wastewater industry expertise as that possessed by Service Company staff,
16 but if all the managerial and professional services now provided by the Service
17 Company had been outsourced during 2023, TAWC and its customers would
18 have incurred approximately \$3.8 million in additional expenses.

19 **Q. WHAT IS YOUR PHILOSOPHY WITH RESPECT TO UTILITY COST**
20 **COMPARISONS?**

21 A. First of all, I use information and data that is publicly available so it can be
22 examined and validated by all parties to a rate case proceeding. Second, I use

1 cost data that is relevant to the utility industry, in general, and water companies,
2 in particular. This approach is applied in my work to answer Questions 1, 2, 3
3 and 4. I believe that any attempt to restrict this cost comparison scope limits
4 the evaluative view of TAWC's charges from the Service Company.

5 **Q. HOW MUCH DID THE SERVICE COMPANY CHARGE TAWC DURING**
6 **2023?**

7 A. The Service Company charged TAWC approximately \$11.2 million during 2023.
8 The table below shows how that breaks down by service function and between
9 operations and maintenance ("O&M") and capital:

Table 1

Service Function	2023 Service Company Charges to TAWC		
	O&M	Capital	Total
Customer Service	\$ 2,114,710	\$ 8,520	\$ 2,123,229
Administrative & General			
Accounting	\$ 593,951	\$ 31,554	\$ 625,505
Administration	\$ 1,119,994	\$ 371,344	\$ 1,491,338
Audit	\$ 114,924	\$ 205	\$ 115,130
Business Development	\$ 73,706	\$ 256	\$ 73,962
Communications	\$ 147,706	\$ 343	\$ 148,049
External Affairs	\$ 633	\$ 231	\$ 864
Finance	\$ 386,911	\$ 168,685	\$ 555,597
Human Resources	\$ 590,219	\$ 3,120	\$ 593,339
Information Technology	\$ 1,564,971	\$ 2,099,859	\$ 3,664,829
Legal	\$ 517,255	\$ 5,905	\$ 523,160
Rates & Regulatory	\$ 3,548	\$ 164	\$ 3,712
Supply Chain	\$ 120,455	\$ 97,056	\$ 217,511
Utility Operations & Maintenance			
Engineering	\$ 70,586	\$ 247,762	\$ 318,348
Operations	\$ 584,465	\$ 114,193	\$ 698,658
Water Quality	\$ 71,276	\$ -	\$ 71,276
Total Charges	\$ 8,075,310	\$ 3,149,197	\$ 11,224,507

10 Source: Company Information

11 **Q. HOW MUCH HAVE SERVICE COMPANY CHARGES INCREASED IN THE**
12 **PAST FIVE YEARS?**

1 A. Between 2019 and 2023, Service Company O&M-related charges to TAWC
 2 increased by 15%. That is far less than the inflation rate of 19%, as measured
 3 by the Consumer Price Index. The table below presents the calculation in these
 4 growth rates.

Table 2

Change in TAWC's Service Company O&M Charges Versus Inflation

Service Company O&M-Related Charges to TAWC					Change 2019 to 2023	
2019	2020	2021	2022	2023	Amount	Percent
\$7,030,135	\$7,844,974	\$8,381,961	\$8,039,750	\$8,075,310	\$1,045,175	15%

Consumer Price Index (December)					Change 2019 to 2023	
2019	2020	2021	2022	2023	Amount	Percent
256.974	260.474	278.802	296.797	306.746	49.772	19%

Source: Company Information; BLS - CPI for All Urban Consumers (CPI-U) 1982-84=100
 (Unadjusted) - CUUR0000SA0

6 **QUESTION ONE: ARE TAWC'S 2023 TOTAL EXPENSES, INCLUDING THOSE**
 7 **INCURRED DIRECTLY AND THOSE ALLOCATED FROM THE SERVICE**
 8 **COMPANY, REASONABLE COMPARED TO TOTAL EXPENSES OF OTHER**
 9 **WATER COMPANIES? (SCHEDULE PLB-2 PGS. 9-14)**

10 **Q. CONCERNING QUESTION NUMBER 1, HOW DID YOU PERFORM YOUR**
 11 **COMPARISON OF TAWC'S TOTAL EXPENSES TO THOSE OF OTHER**
 12 **WATER COMPANIES?**

13 A. TAWC's total expenses include those charged to it by the Service Company plus
 14 those incurred directly by TAWC. I determined that the following total expenses
 15 metrics are most appropriate for this comparison:

- 16 • Total CS/A&G Expenses per Customer – This measure covers functions
 17 such as customer service, information technology, human resources,

1 regulatory, supply chain and executive management. Most Service
2 Company O&M-related charges to TAWC are for these services. A large
3 portion of TAWC's total CS/A&G expenses are charged to it by the Service
4 Company.

- 5 • Total Utility Expenses per Customer – This is the most comprehensive cost
6 measure. It includes CS/A&G and Utility Operations and Maintenance
7 expenses (e.g., supply, treatment, transmission and distribution).
8 Essentially, this metric covers all expenses of running a utility. From a
9 customer's standpoint, this is the most meaningful expense measure
10 because it represents a significant portion of a customer's total bill. My
11 comparison does not include expenses other than operations and
12 maintenance ("O&M") expenses, such as depreciation, amortization, interest
13 expenses, regulatory debits/credits and federal income taxes.

14 **Q. WHAT WATER UTILITIES HAVE YOU INCLUDED IN THE COMPARISON**
15 **GROUP?**

16 A. My comparison group includes 28 investor-owned water companies from the
17 Southeast and Midwest regions of the US with 2022 water revenues of \$700,000
18 or more.¹ Based on this selection criteria, the following water companies are in
19 my comparison group.

¹ American Water subsidiaries were excluded from the comparison group because their inclusion would bias the results.

Table 3

Comparison Group Companies	State	2022 Water	
		Customers	Revenues
Aqua Ohio, Inc.	OH	158,833	\$ 113,113,254
Baton Rouge Water Company	LA	118,729	\$ 39,159,220
Aqua North Carolina, Inc.	NC	85,638	\$ 50,881,494
Aqua Illinois, Inc.	IL	68,834	\$ 71,497,709
Carolina Water Service, Inc. of North Carolina	NC	34,799	\$ 23,133,246
Sunshine Water Services Company	FL	34,791	\$ 19,326,335
Aqua Virginia, Inc.	VA	26,284	\$ 14,686,536
Beckley Water Company	WV	22,517	\$ 14,587,793
Magnolia Water Utility Operations Company	LA	19,942	\$ 7,778,451
Blue Granite Water Company	SC	17,217	\$ 16,102,834
Liberty Utilities (Pine Bluff Water), Inc.	AR	15,097	\$ 9,354,900
Peoples Water Service Company of Florida, Inc.	FL	13,419	\$ 4,022,015
Prairie Path Water Company	IL	13,056	\$ 11,346,987
Liberty Utilities (Missouri Water) LLC	MO	12,095	\$ 6,391,726
The Raytown Water Company	MO	6,541	\$ 4,427,477
Water Service Corporation of Kentucky	KY	6,423	\$ 3,276,585
Community Utilities of Indiana Inc.	IN	5,368	\$ 2,520,451
Kiawah Island Utility, Inc.	SC	4,438	\$ 8,127,312
Confluence Rivers Utility Operating Company, Inc.	MO	4,187	\$ 2,157,596
Massanutten Public Service Company	VA	3,013	\$ 1,847,177
Liberty Utilities (Arkansas Water) Corp.	AR	2,368	\$ 1,194,440
Water Management Services, Inc.	FL	2,106	\$ 2,366,807
Diversion Water Company, LLC	LA	2,037	\$ 1,020,055
Pluris Wedgefield, LLC	FL	1,743	\$ 1,627,619
Daufuskie Island Utility Company, Inc.	SC	1,648	\$ 1,132,844
Aqua Indiana, Inc.	IN	1,431	\$ 1,032,758
South Carolina Water Utilities, Inc.	SC	1,313	\$ 1,020,605
Royal Waterworks, Inc.	FL	931	\$ 704,462

Source: Annual reports to state regulators

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Q. WHERE DID YOU OBTAIN INFORMATION FOR COMPARISON GROUP WATER COMPANIES?

A. I obtained the necessary data from the 2022 annual reports each utility files with its state regulator. Their reports for 2023 were not available at the time of my

1 cost comparison. The table below shows the calculation of per-customer total
 2 expenses for TAWC (2023) and each comparison group water company (2022).

Table 4

		Cust Service + A&G Exp	Total Utility Exp	Total Customers	Expenses Per Customer	
					CS + A&G	Tot Utility Exp
Tennessee American Water Company (2023)		\$ 14,191,728	\$ 25,387,935	87,099	\$ 163	\$ 291
Comparison Group (2022) (A)		State				
Aqua Ohio, Inc.	OH	\$ 27,623,720	\$ 42,782,185	158,833	\$ 174	\$ 269
Baton Rouge Water Company	LA	\$ 12,126,786	\$ 25,373,832	118,729	\$ 102	\$ 214
Aqua North Carolina, Inc.	NC (B)		\$ 29,070,035	85,638		\$ 339
Aqua Illinois, Inc.	IL	\$ 9,863,517	\$ 22,853,964	68,834	\$ 143	\$ 332
Carolina Water Service, Inc. of North Carolina	NC (B)		\$ 16,462,237	34,799		\$ 473
Sunshine Water Services Company	FL	\$ 8,280,881	\$ 12,927,104	34,791	\$ 238	\$ 372
Aqua Virginia, Inc.	VA	\$ 3,739,510	\$ 6,635,191	26,284	\$ 142	\$ 252
Beckley Water Company	WV	\$ 2,749,392	\$ 11,241,510	22,517	\$ 122	\$ 499
Magnolia Water Utility Operations Company	LA	\$ 1,546,259	\$ 4,557,714	19,942	\$ 78	\$ 229
Blue Granite Water Company	SC	\$ 7,050,293	\$ 12,312,881	17,217	\$ 409	\$ 715
Liberty Utilities (Pine Bluff Water), Inc.	AR	\$ 4,722,236	\$ 6,698,352	15,097	\$ 313	\$ 444
Peoples Water Service Company of Florida, Inc.	FL	\$ 1,881,471	\$ 2,918,237	13,419	\$ 140	\$ 217
Prairie Path Water Company	IL	\$ 4,968,686	\$ 5,660,873	13,056	\$ 381	\$ 434
Liberty Utilities (Missouri Water) LLC	MO	\$ 2,725,387	\$ 5,488,927	12,095	\$ 225	\$ 454
The Raytown Water Company	MO (B)		\$ 3,597,069	6,541		\$ 550
Water Service Corporation of Kentucky	KY	\$ 1,238,136	\$ 2,703,116	6,423	\$ 193	\$ 421
Community Utilities of Indiana Inc.	IN	\$ 724,000	\$ 2,067,668	5,368	\$ 135	\$ 385
Kiawah Island Utility, Inc.	SC	\$ 2,382,606	\$ 6,204,216	4,438	\$ 537	\$ 1,398
Confluence Rivers Utility Operating Company, Inc.	MO (B)		\$ 2,129,457	4,187		\$ 509
Massanutten Public Service Company	VA	\$ 564,652	\$ 1,338,512	3,013	\$ 187	\$ 444
Liberty Utilities (Arkansas Water) Corp.	AR	\$ 485,677	\$ 927,765	2,368	\$ 205	\$ 392
Water Management Services, Inc.	FL	\$ 841,388	\$ 1,755,675	2,106	\$ 400	\$ 834
Diversion Water Company, LLC	LA (B)		\$ 891,059	2,037		\$ 437
Pluris Wedgefield, LLC	FL	\$ 1,273,977	\$ 1,749,161	1,743	\$ 731	\$ 1,004
Daufuskie Island Utility Company, Inc.	SC	\$ 557,953	\$ 741,757	1,648	\$ 339	\$ 450
Aqua Indiana, Inc.	IN (B)		\$ 771,063	1,431		\$ 539
South Carolina Water Utilities, Inc.	SC	\$ 237,049	\$ 568,982	1,313	\$ 181	\$ 433
Royal Waterworks, Inc.	FL	\$ 158,517	\$ 550,497	931	\$ 170	\$ 591
Comparison Group Total		\$ 95,742,093	\$ 230,979,039	684,798		

Note A: Source is 2022 Annual Reports from the following regulators:

Arkansas Public Service Commission
 Florida Public Service Commission
 Illinois Commerce Commission
 Indiana Utility Regulatory Board
 Kentucky Public Service Commission
 Louisiana Public Service Commission
 Missouri Public Utilities Commission
 North Carolina Public Utilities Commission
 South Carolina Public Service Commission
 Virginia State Corporation Commission
 Public Service Commission of West Virginia

Note B: Annual report does not show a functional breakout of expenses

Q. HOW DO TAWC'S TOTAL 2023 EXPENSES COMPARE TO THOSE OF THE COMPARISON GROUP?

A. TAWC compares favorably for each metric as shown in the table below, which ranks TAWC's total expenses per customer against comparison group expenses.

Table 5

Ranking of Expenses per Customer

Total Cust Svc and A&G Expenses			Total Utility Expenses	
Company	Exp/Customer		Company	Exp/Customer
Pluris Wedgefield	\$ 731		Kiawah Island Utility	\$ 1,398
Kiawah Island Utility	\$ 537		Pluris Wedgefield	\$ 1,004
Blue Granite Water	\$ 409		Water Management Svcs	\$ 834
Water Management Svcs	\$ 400		Blue Granite Water	\$ 715
Prairie Path Water	\$ 381		Royal Waterworks	\$ 591
Daufuskie Island Utility	\$ 339		The Raytown Water	\$ 550
Liberty Utilities (Pine Bluff)	\$ 313		Aqua Indiana	\$ 539
Sunshine Water Services	\$ 238		Confluence Rivers Utility	\$ 509
Liberty Utilities (MO Water)	\$ 225		Beckley Water	\$ 499
Liberty Utilities (AR Water)	\$ 205		Carolina Water Svc NC	\$ 473
Water Service Corp. KY	\$ 193		Liberty Utilities (MO Water)	\$ 454
Massanutten Public Svc	\$ 187	< Midpoint	Daufuskie Island Utility	\$ 450
South Carolina Water	\$ 181		Liberty Utilities (Pine Bluff)	\$ 444
Aqua Ohio	\$ 174		Massanutten Public Svc	\$ 444
Royal Waterworks	\$ 170		Diversion Water	\$ 437
TAWC	\$ 163		Prairie Path Water	\$ 434
Aqua Illinois	\$ 143		South Carolina Water	\$ 433
Aqua Virginia	\$ 142		Water Service Corp. KY	\$ 421
Peoples Water Service FL	\$ 140		Liberty Utilities (AR Water)	\$ 392
Community Utilities IN	\$ 135		Community Utilities IN	\$ 385
Beckley Water	\$ 122		Sunshine Water Services	\$ 372
Baton Rouge Water	\$ 102		Aqua North Carolina	\$ 339
Magnolia Water Utility	\$ 78		Aqua Illinois	\$ 332
			TAWC	\$ 291
			Aqua Ohio	\$ 269
			Aqua Virginia	\$ 252
			Magnolia Water Utility	\$ 229
			Peoples Water Service FL	\$ 217
			Baton Rouge Water	\$ 214

Number Higher than TAWC:	15
Number Lower than TAWC:	7

Number Higher than TAWC:	23
Number Lower than TAWC:	5

Source: 2022 Annual Reports from state regulators; TAWC 2023 information; Baryenbruch & Company

TAWC's total 2023 CS/A&G expenses per customer are lower than the 2022 expenses of 15 of 22 total water companies. For Total Utilities Expenses, TAWC's 2023 expenses per customer are lower than the 2022 expenses of 23

1 of 28 comparison group water companies. Both of TAWC's measures are well
2 below the comparison group midpoints, which is evidence of reasonableness.

3 **Q. WHAT IS THE IMPACT OF COMPARING TAWC'S 2023 EXPENSES TO THE**
4 **2022 EXPENSES OF THE COMPARISON GROUP?**

5 A. The inflation rate from 2022 to 2023 was 3.4%, as measured by the consumer
6 price index (see calculation below):

Table 6

2022 to 2023 Increase	
Dec 2022 CPI	296.797
Dec 2023 CPI	306.746
Increase Amount	9.949
Percent Increase	3.4%

Source: Bureau of Labor Statistics

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8 If the comparison group's expenses had increased in line with this inflation
9 rate, then TAWC's favorable total 2023 cost position would be even more
10 significant.

11 **Q. DO SERVICE COMPANY CHARGES REPRESENT A LARGE COMPONENT**
12 **OF TAWC'S TOTAL EXPENSES?**

13 A. Yes. Service Company charges represent a substantial portion of TAWC's total
14 expenses. As shown below, for 2023, Service Company charges represent 52%
15 of total CS/A&G expenses and 32% of total O&M expenses.

Table 7

	TAWC 2023 Total O&M Expenses	
	Customer Svc and A&G Exp	Total Utility Exp
Service Company O&M Charges	\$ 7,348,984	\$ 8,075,310
Total TAWC Expenses	\$ 14,191,728	\$ 25,387,935
Percent Service Company Charges	52%	32%

Source: Company information; Baryenbruch & Company, LLC, analysis

1 **Q. CAN YOU ELABORATE FURTHER ON YOUR TOTAL COST**
2 **COMPARISON?**

3 A. Yes. My total cost comparison is intentionally composed of an appropriately
4 broad group size and is sufficiently geographically diverse. A smaller and less
5 diverse comparison group will likely, by its inherent limitations, be less
6 representative than my comparison group. As shown in the table below, my
7 comparison group includes 28 water companies in 12 states in the US
8 Southeast and Midwest with around 684,800 total customers. As a result, my
9 group is more broadly representative of the water industry's expense levels.

Table 8

Water Company Comparison Group Overview		
State	Number	% Total
AR	2	7%
FL	5	18%
IL	2	7%
IN	2	7%
KY	1	4%
LA	3	11%
MO	3	11%
NC	2	7%
OH	1	4%
SC	4	14%
VA	2	7%
WV	1	4%
Total	28	100%

Total Customers 684,798

Source: 2022 annual reports to
regulators

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11 **Q. ARE YOUR TOTAL COST COMPARISON METRICS APPROPRIATE?**

12 A. Yes. The metrics I use for my total cost comparison are: (1) Total CS and A&G
13 expenses per customer and (2) Total Utility expenses per customer. I have

1 found these two provide a dependable view of a water company's major cost
2 categories. More detailed metrics, such as CS expenses per customer, present
3 comparability problems due to differences in accounts to which these expenses
4 are recorded. Some water companies endeavor to split out CS expenses in
5 detail in CS accounts while others aggregate some CS and A&G expenses into
6 A&G accounts.

7 **Q. WHAT CONCLUSIONS ARE YOU ABLE TO DRAW CONCERNING**
8 **QUESTION NUMBER 1, ARE TAWC'S TOTAL EXPENSES REASONABLE**
9 **COMPARED TO OTHER WATER COMPANIES?**

10 A. My total cost comparisons clearly demonstrate TAWC's 2023 total expenses are
11 reasonable compared to those of other water companies. This conclusion can
12 also be extended to 2023 Service Company charges, which make up a
13 substantial portion of TAWC's total expenses.

14 **QUESTION TWO: ARE THE SERVICES PROVIDED BY THE SERVICE COMPANY**
15 **SIMILAR TO THOSE PROVIDED BY SERVICE COMPANIES OF OTHER UTILITY**
16 **HOLDING COMPANIES? (SCHEDULE PLB-2, PGS. 13-17)**

17 **Q. WHAT CONCLUSIONS WERE YOU ABLE TO DRAW CONCERNING**
18 **QUESTION NUMBER 2, WHETHER THE SERVICE COMPANY SERVICES**
19 **ARE SIMILAR TO THOSE PROVIDED BY SERVICE COMPANIES OF OTHER**
20 **UTILITY HOLDING COMPANIES?**

21 A. The services provided to TAWC by the Service Company are similar to those
22 provided by other utility service companies to their affiliate operating utilities.

1 This is based on an analysis of information in the Form 60 that each company
2 files with the Federal Energy Regulatory Commission (FERC). The schedule
3 below compares service categories for the Service Company and the service
4 companies of other utility holding companies.

Table 9

A&G Service Categories	AWWSC	AEP	AES	Algonquin	Alliant	Ameren	Avangrid	Black Hills	Dominion	Duke	Entergy	Eversource	Exelon	FirstEnergy	National Grid	NiSource	PPL	Southern Co	Unitil	WEC	Xcel
Executive/Management	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Corporate Planning and Budgeting	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X			X
Legal	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X
Corporate/External Affairs	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Human Resources	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Financial Services																					
Finance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accounting	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Taxes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Investor Relations	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X		X	X
Corporate Risk Management	X	X	X	X	X	X	X	X	X	X				X	X	X			X		X
Audit Services	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X			X	X
Rates and Regulatory Affairs	X	X	X		X		X	X	X	X			X	X	X	X	X	X	X	X	X
Customer Service	X	X	X		X			X	X	X	X	X	X	X	X	X	X		X	X	X
Information Technology	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Environment and Safety	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X
Supply Chain	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
Other (A)	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
Total Services	17	17	16	15	17	15	16	16	17	17	15	16	14	17	16	16	17	13	11	15	17

Note A: includes services such as transportation/fleet, aviation, real estate, facilities and rights of way.

5 Source: FERC Form 60 (2022); company information; Baryenbruch & Company, LLC, analysis

6 **QUESTION THREE: ARE THE SERVICE COMPANY'S CUSTOMER SERVICE AND**
7 **ADMINISTRATIVE AND GENERAL-RELATED CHARGES TO TAWC DURING 2023**
8 **IN LINE WITH, OR REASONABLY COMPARABLE TO, CHARGES BY OTHER**
9 **SERVICE COMPANIES TO THEIR REGULATED AFFILIATE OPERATING**
10 **COMPANIES? (SCHEDULE PLB-2, PGS. 18-20)**

11 **Q. WHAT CONCLUSION WERE YOU ABLE TO DRAW CONCERNING**
12 **QUESTION NUMBER 3, WHETHER THE SERVICE COMPANY CHARGES**
13 **TO TAWC ARE REASONABLE?**

1 A I was able to determine that the Service Company's 2023 CS/A&G-related
2 charges per TAWC customer is reasonable because it is in line with, albeit lower
3 than, the average cost per customer for the proxy service companies. During
4 2023, TAWC was charged \$84 per customer for CS/A&G-related services
5 provided by the Service Company. This compares to an average of \$90 per
6 customer in 2022 for the service company proxy group. As shown below, four
7 of the eight utility service company comparison group had a higher per-customer
8 CS/A&G cost than TAWC's charges from the Service Company.

Table 10

For Testimony --
Service Company CS/A&G
Charges per Customer

AEP	\$113
Xcel	\$110
Southern Co	\$102
AES	\$99
Group Average	\$90
TAWC	\$84
Avangrid	\$79
Ameren	\$72
Dominion	\$72
FirstEnergy	\$66

Source: FERC Form 60; company
information; Baryenbruch &
Company, LLC, analysis

9

10 **Q. HOW DID YOU MAKE THIS DETERMINATION?**

11 A. I developed a cost comparison using data from the Form 60, which is designed
12 to collect financial information from service companies within a holding company
13 structure. Every centralized service company in a holding company system
14 subject to regulation by the FERC must file a Form 60 in accordance with Section
15 1270 of the Public Utility Holding Company Act of 2005, Section 390 of the

1 Federal Power Act, and Section 18 Code of Federal Regulations paragraph
2 366.23. For 2022, a Form 60 was filed by service companies associated with 22
3 utility holding companies. These service companies support utilities that provide
4 regulated electric and, in some cases, gas service to retail customers.

5 **Q. WHY DID YOU CHOOSE TO COMPARE SERVICE COMPANY EXPENSES**
6 **TO THOSE OF ELECTRIC UTILITIES?**

7 A. While the utility infrastructure for an electric utility is completely different from that
8 of a water utility and it is impossible to make a relevant comparison of the system
9 O&M expenses for the two types of utilities, I compare CS/A&G expenses, not
10 utility O&M expenses. All utility service companies provide CS/A&G services,
11 and the cost of those services generally makes up a large majority of total
12 charges to the utility affiliates. This is the case because considerable economies
13 of scale derive from centralizing the management of corporate CS/A&G services.

14 I do not benchmark against service companies that provide services to
15 water utility affiliates because there are no publicly available sources of
16 information. Water companies with a centralized service company arrangement
17 are not overseen by a single regulatory authority that requires standard
18 informational filings as does the FERC for the electric utility industry. The annual
19 reports that water utilities file with state regulators generally do not require
20 disclosure of charges from affiliates. If a source of cost data similar to the Form
21 60 existed for water service companies, I would include them in the CS/A&G
22 cost-per-customer comparison.

1 **Q. DOES THE FACT THAT ELECTRIC AND WATER UTILITIES ARE SUBJECT**
2 **TO DIFFERENT REGULATION UNDERMINE YOUR COST COMPARISON?**

3 A. No, and I will explain why. Each has a set of regulations with which to comply.
4 Water utilities are subject to significant regulation. Water is ingested and is
5 highly regulated by federal and state authorities. For instance, TAWC must
6 comply with many regulations established by the Tennessee Department of
7 Environment and Conservation's Division of Water Resources and the US
8 Environmental Protection Agency ("EPA"). In states where American Water
9 utilities have water impoundments or stream supplies, they may face regulation
10 related to dams and fish and wildlife agencies. Some American Water utilities
11 are also subject to regulation by the Army Corps of Engineers and National
12 Oceanic and Atmospheric Administration.

13 Different regulations impact operations and maintenance expenses for
14 the utility infrastructure. However, my cost comparison does not include these
15 expenses, only CS/A&G expenses. With respect to CS/A&G expenses,
16 compliance primarily affects two functions—legal and rates and regulatory. As
17 you can see in the analysis below, these represent only 7.0% and less than
18 0.1%, respectively, of total Service Company CS/A&G charges to TAWC during
19 2023. This level of charges does not impair the validity of my comparison of total
20 service company CS/A&G charges.

Table 11

2023 Service
Company
Charges to
TAWCPercent of
Total

Service Function		
Customer Service	\$ 2,114,710	28.8%
Administrative & General		
Accounting	\$ 593,951	8.1%
Administration	\$ 1,119,994	15.2%
Audit	\$ 114,924	1.6%
Business Development	\$ 73,706	1.0%
Communications	\$ 147,706	2.0%
External Affairs	\$ 633	0.0%
Finance	\$ 386,911	5.3%
Human Resources	\$ 590,219	8.0%
Information Technology	\$ 1,564,971	21.3%
Legal	\$ 517,255	7.0%
Rates & Regulatory	\$ 3,548	0.0%
Supply Chain	\$ 120,455	1.6%
Total CS/A&G Charges	\$ 7,348,984	100.0%

Source: Company Information; Baryenbruch & Company, LLC analysis

Q. DO ELECTRIC UTILITIES HAVE A DIFFERENT PAY SCALE THAN WATER UTILITIES?

A. Pay for jobs in electric utility generation, transmission and distribution can differ from those in water treatment and distribution. But, as I noted earlier, my cost comparison does not include utility operations and maintenance expenses. My scope is the CS/A&G organization, where corporate services positions have similar responsibilities between electric and water utilities. Job similarity requires pay similarity or it will be hard to attract and retain employees. For instance, American Water benchmarks compensation for its executive officers with the following comparison group, most of which are electric and gas utilities.

Table 12

2022 American Water Works Company, Inc. Compensation Peer Group		
Alliant Energy Corporation	Entergy Corporation	OGE Energy Corp.
Ameren Corporation	Essential Utilities, Inc.	Pinnacle West Capital Corporation
Atmos Energy Corporation	Eversource Energy	PPL Corporation
CenterPoint Energy, Inc.	NiSource Inc.	UGI Corporation
CMS Energy Corporation		WEC Energy Group, Inc.

Source: 2023 Proxy Statement, American Water Works Company, Inc.

Job salaries are pegged top to bottom to one another throughout an organization.

The reasonableness of American Water's compensation program is supported by Company witness Mustich, who performed a compensation study for this rate case.

Q. WHAT CONSTITUTES A CS/A&G EXPENSE FOR A UTILITY SERVICE COMPANY?

A. CS/A&G expenses costs are those associated with the customer-facing functions and overall management and administration of a utility company. These are expenses that are not associated with the operation and maintenance of the utility infrastructure.

For example for electric utilities, FERC defines the type of expenses that should be charged to four of the primary CS/A&G accounts as follows:

Account 903 Customer Records and Collections Expenses – This account shall include the cost of labor, materials used and expenses incurred in work on customer applications, contracts, orders, credit investigations, billing and accounting, collections and complaints.

1 *Account 920 Administrative and General Salaries – This account*
2 *shall include the compensation (salaries, bonuses, and other*
3 *consideration for services, but not including directors' fees) of*
4 *officers, executives, and other employees of the utility properly*
5 *chargeable to utility operations and not chargeable directly to a*
6 *particular operating function. (emphasis added)*

7 *Account 921 Office Supplies and Expenses – This account shall*
8 *include office supplies and expenses incurred in connection with*
9 *the general administration of the utility's operations which are*
10 *assignable to specific administrative or general departments and*
11 *are not specifically provided for in other accounts. This includes*
12 *the expenses of the various administrative and general*
13 *departments, the salaries and wages of which are includible in*
14 *account 920. (emphasis added)*

15 *Account 923 Outside Services Employed – This account shall*
16 *include the fees and expenses of professional consultants and*
17 *others for general services which are not applicable to a particular*
18 *operating function or to other accounts. (emphasis added)*

19 Source: Part 101 – Uniform System of Accounts prescribed for
20 public utilities and licensees subject to provisions of the Federal
21 Power Act.

The National Association of Regulatory Utility Commissions (“NARUC”) specifies that expenses be recorded separately by the following water company functions:

- Source of Supply Operations and Maintenance
- Water Treatment Operations and Maintenance
- Transmission and Distribution Operations and Maintenance
- Customer Accounts
- Administrative and General

Within these functions, NARUC calls for expenses to be further recorded by the following expense categories:

Table 13

NARUC Accounts

601 Salaries and Wages - Employees	642 Rental of Equipment
603 Salaries and Wages - Officers	650 Transportation Expenses
604 Employee Pensions and Benefits	656 Insurance - Vehicle
615 Purchased Power	657 Insurance - General Liability
616 Fuel for Power Production	658 Insurance - Workman's Comp.
620 Materials and Supplies	659 Insurance - Other
631 Contractual Services - Engineering	660 Advertising Expense
632 Contractual Services - Accounting	666 Regulatory Commission Expenses -
633 Contractual Services - Legal	Amortization of Rate Case Expense
634 Contractual Services - Management	667 Regulatory Commission Expenses -
Fee	Other
635 Contractual Services - Testing	668 Water Resource Conservation
636 Contractual Services - Other	670 Bad Debts
641 Rental of Building/Real Property	675 Miscellaneous

Source: NARUC Uniform System of Accounts for Class A Water Utilities

All of this illustrates the clear distinction in the entire utility industry between expenses to operate and maintain the functions that produce the utility service (e.g., power, water) and CS/A&G expenses.

Q. WHICH CS/A&G EXPENSES OF COMPARISON GROUP SERVICE COMPANIES ARE IN YOUR COST COMPARISON?

1 A. I included the same CS/A&G expenses as those in the Service Company's 2023
2 CS/A&G charges to TAWC. For the comparison group, those expenses are
3 recorded in the designated FERC accounts below:

Table 14

FERC Account	Included In Cost Calculation
901 - Supervision	
902 - Meter Reading Expenses	
903 - Customer Records and Collection Expenses	X
904 - Uncollectible Accounts	
905 - Miscellaneous Customer Accounts Expenses	X
907 - Supervision	
908 - Customer Assistance Expenses	
909 - Informational And Instructional Advertising Expenses	
910 - Miscellaneous Customer Service And Info Exp	X
911 - Supervision	
912 - Demonstrating and Selling Expenses	
913 - Advertising Expenses	
916 - Miscellaneous Sales Expenses	
920 - Administrative and General Salaries	X
921 - Office Supplies and Expenses	X
923 - Outside Services Employed	X
924 - Property Insurance	X
925 - Injuries and Damages	
926 - Employee Pensions and Benefits	X (A)
928 - Regulatory Commission Expenses	
930.1 - General Advertising Expenses	
930.2 - Miscellaneous General Expenses	X
931 - Rents	X
935 - Maintenance of Structures and Equipment	X

4 Note A: Only the A&G-related portion is included in the cost pool

5 **Q. PLEASE DESCRIBE THE EXPERIENCE YOU HAVE TO MAKE THE**
6 **DETERMINATION THAT CS/A&G SERVICES ARE SIMILAR ACROSS**
7 **UTILITY TYPES.**

8 A. For over 45 years, I have provided services to over 70 investor-owned and
9 publicly owned utilities. The following are examples of the work that provides me
10 with a deep understanding of utility CS/A&G functions:

- 11 • Financial Audits – My career began in public accounting performing financial
12 audits of gas and electric utilities and banks.

- 1 • Commission-Ordered Management Audits – I have been a project manager
2 or team member for 22 commission-ordered management and prudence
3 audits of electric, gas and water utilities. In these audits, I was the lead
4 consultant in evaluating A&G-related functions, including finance,
5 accounting, financial planning and analysis, internal audit, taxes and human
6 resources.
- 7 • IT Project Management – For one of the largest US electric utilities, I was the
8 project manager or a member of the project management team for twenty
9 large IT projects involving over 800,000 hours of work performed by hundreds
10 of client employees, contractors and consultants. This work required a deep
11 understanding of the CS/A&G business processes impacted by new or
12 upgraded business applications.
- 13 • Operational and Business Management Improvements – I have undertaken
14 many projects that involved evaluating the effectiveness of CS/A&G functions
15 and designing and implementing performance improvement solutions for
16 utilities. For instance, for one utility's IT organization, I designed and
17 implemented improvements in its budgeting and cost-management process.
18 I identified and implemented improvements in another utility's corporate-wide
19 capital budgeting program. I implemented an improved methodology for
20 evaluating the performance and qualifications of staff members for IT staff
21 members. For a large public power company, I evaluated the configuration
22 of its warehouses and identified improvements. For another large utility, I
23 evaluated and implemented improvements to the budgeting process for its

1 nuclear operations group. On a two-year assignment for a utility's nuclear
2 construction project, I managed a team of cost engineers preparing
3 information that was used in my client's rate case once the plant went into
4 service.

- 5 • Implementation of Sarbanes-Oxley 404 – I was on the project management
6 team that implemented SOX 404 for a large electric utility. This project, which
7 involved hundreds of client employees and outside consultants, evaluated
8 management controls and designed and implemented improvements, where
9 necessary.
- 10 • Rate Cases – I have acted as expert witness on the topic of affiliate
11 transactions in over 100 rate cases in 21 states for 46 water, gas and electric
12 utility clients. Most of these involved service company services/charges. In
13 these cases, I developed an understanding of the nature of services they
14 provide to regulated affiliates. Recent water company rate-case clients
15 include regulated operating companies of American Water, Liberty Utilities
16 and Corix Infrastructure. Recent electric and gas company rate-case clients
17 include American Electric Power, NiSource, Dominion Energy and PPL
18 Energy.

19 Through this direct, hands-on experience, I have gained a thorough
20 understanding of the structure, organization, operations and business processes
21 for all types of utilities and their CS/A&G functions.

22 **Q. PLEASE PROVIDE EXAMPLES OF CS/A&G-RELATED SERVICES THAT**
23 **ARE SIMILAR ACROSS UTILITY TYPES.**

1 A. Take, for instance, accounting services. Regardless of utility type, the work of
2 accountants revolves around their assigned set of general ledger accounts; they
3 ensure transactions have been processed and properly posted to their accounts,
4 reconcile accounts to subsidiary ledgers, prepare journal entries, compile budget
5 versus actual data, research variances and prepare cost performance reports for
6 operating managers. These activities take place in water utilities in the same
7 way as in electric utilities.

8 Investor-owned utilities of any type have similar processes for tax
9 accounting and compliance. They all have to deal with federal and state income,
10 property, sales and use taxes. In general, tax personnel are responsible for
11 determining tax provisions and preparing and filing various tax returns.

12 Information technology services cover a broad range of activities that are
13 also generally quite similar among utilities. Employees are provided with
14 workstations, email, Microsoft Office, phone service, internet connections and
15 access to financial, human resources and various other corporate applications.
16 Many of the same applications are used by different utilities. For example,
17 American Water's enterprise resource planning system ("ERP") is SAP, which is
18 also used by my electric clients Dominion Energy and Southern California
19 Edison. American Water also uses an application called PowerPlant for project
20 and fixed asset accounting. My past client Duke Energy uses the same
21 application.

22 Corporate IT hardware and software is operated and supported in the
23 same way regardless of utility type. Any type of utility company's computing

1 infrastructure consists of a corporate data center or a cloud-based computing
2 service. The computing infrastructure is operated and supported by the central
3 IT organization. Telecom and network services are handled in the same
4 centralized way. Corporate applications and the cyber security programs to
5 protect Company and customer data are supported by technical personnel in the
6 central IT organizations of any type of utility.

7 The processes and activities associated with delivering other CS/A&G
8 services, such as legal, procurement, human resources, customer services and
9 executive management are likewise similar among different types of utilities.

10 For all these reasons, my comparison provides a valid and useful way to
11 put into perspective the CS/A&G-related charges from American Water's service
12 company compared to the cost of other utility service companies.

13 **Q. How did you select utility companies for the comparison group?**

14 A. For 2022, 29 service companies associated with 22 utility holding companies
15 filed a Form 60 with the FERC. I selected the service companies for 10 of these
16 holding companies for the comparison group based on the percent that service
17 company CS/A&G charges make up of total CS/A&G expenses for their
18 regulated utility affiliates. The table below shows the percentage for each
19 comparison group utility company.

Table 15

Comparison Group (2022)	Service Company A&G Charges as a % of Total A&G
FirstEnergy Corporation	29%
Avangrid, Inc.	35%
AES Corporation	35%
Ameren Corporation	36%
Xcel Energy Inc.	46%
Dominion Energy, Inc.	52%
Southern Company	63%
American Electric Power Corporation	65%
Comparison Group Average	45%
TAWC (2023)	52%

Source: FERC Form 60, Form 1; Company information;
Baryenbruch & Company, LLC, analysis

**Q. HAS YOUR CS/A&G COST COMPARISON METHODOLOGY BEEN
ACCEPTED IN RATE CASES IN OTHER STATES?**

A. Yes, I have successfully employed this CS/A&G cost comparison in over 100 rate cases in 20 other states. Many of these cases involved water utility clients. A number of my cases have been before the Virginia State Corporation Commission ("VSCC"), which is very particular about affiliate transactions. For one of my Virginia utility clients, for 20 straight years I have performed a market-cost comparison, which this client files my report along with its annual report of affiliate transactions to the VSCC as evidence of compliance with affiliate transactions rules. VSCC would not continue to accept my work if it had any doubt of its validity. Furthermore, the VSCC staff has recommended me as a consultant to other utilities doing business in Virginia. This is just one example of the regulatory acceptance of my work.

1 **QUESTION FOUR: WAS TAWC CHARGED THE LOWER OF COST OR MARKET**
2 **FOR MANAGERIAL AND PROFESSIONAL SERVICES PROVIDED BY THE**
3 **SERVICE COMPANY DURING 2023? (SCHEDULE PLB-2, PGS. 21-33)**

4 **Q. WHAT CONCLUSIONS WERE YOU ABLE TO DRAW CONCERNING**
5 **QUESTION NUMBER 4, WHETHER TAWC WAS CHARGED THE LOWER**
6 **OF COST OR MARKET SERVICES PROVIDED BY THE SERVICE**
7 **COMPANY?**

8 **A.** I was able to draw the following conclusions:

9 1) TAWC was charged the lower of cost or market for managerial and
10 professional services during 2023.

11 2) On average, the hourly rates for outside service providers are 73% higher
12 than the Service Company's hourly rates. If all the managerial and
13 professional services now provided by the Service Company had been
14 outsourced during 2023, TAWC and its customers would have incurred
15 approximately \$3.8 million in additional expenses, as calculated below.

Table 16

Service Provider	2023		
	Service Company	Outside Provider	Difference-- Service Co. Greater(Less) Than Outside
Attorney	\$ 212	\$ 260	\$ (48)
Management Consultant	\$ 220	\$ 355	\$ (135)
Certified Public Accountant	\$ 100	\$ 188	\$ (88)
IT Professional	\$ 109	\$ 224	\$ (115)
Professional Engineer	\$ 105	\$ 159	\$ (54)

Service Provider	2023		
	Hourly Rate Difference-- Service Co. Greater(Less) Than Outside	Service Company Hours Charged	Dollar Difference
Attorney	\$ (48)	2,214	\$ (106,272)
Management Consultant	\$ (135)	8,829	\$ (1,191,915)
Certified Public Accountant	\$ (88)	12,428	\$ (1,093,664)
IT Professional	\$ (115)	10,292	\$ (1,183,580)
Professional Engineer	\$ (54)	3,433	\$ (185,382)
Service Company Less Than Outside Providers			\$ (3,760,813)

Source: Company information; Baryenbruch & Company, LLC, analysis

3) It should be noted that outside providers could possibly offer a discount on their hourly rates in return for the amount of work associated with Service Company services. However, provider discounts would certainly not be greater than current 73% difference between the hourly rates of the Service Company and outside providers. Also, provider discounts would be offset by the need for TAWC to add staff to administer commercial relationships and provide direction, guidance and feedback to the outside service providers. The workload associated with the Service Company's 2023 charges represents 21 full-time equivalents (FTE) (37,195 hours / 1,800 hours per FTE) performed by several outside providers. For a workload of this size, TAWC would have to maintain additional staff to ensure outside providers perform their assigned work assignments in a timely and effective manner.

1 4) This study's hourly rate comparison understates the cost advantages that
2 accrue to TAWC from its use of the Service Company. Outside service
3 providers generally bill for every hour worked. Service Company exempt
4 personnel, on the other hand, charge a maximum of eight hours per day even
5 when they work more hours. If all overtime hours of Service Company
6 personnel were factored into the hourly rate calculation, the Service
7 Company would have had an even greater annual dollar advantage than the
8 \$3.8 million cited above.

9 5) It would be difficult for TAWC to find local service providers with the same
10 specialized water industry expertise as possessed by the Service Company
11 staff. Service Company personnel spend substantially all their time serving
12 operating water companies. This specialization brings with it a unique
13 knowledge of water utility operations and regulation that may not be available
14 from local service providers.

15 6) Unlike service providers in the general business community, Service
16 Company fees do not include any profit markup. Only its actual cost of
17 service is being recovered from TAWC customers.

18 **Q. WHY DO YOU PERFORM A LOWER-OF-COST-OR-MARKET ANALYSIS?**

19 A. There are several ways by which to evaluate the pricing of affiliate transactions
20 involving services provided by a nonregulated affiliate to a regulated utility. I
21 utilize the method recommended by National Association of Regulatory Utility

1 Commissions (NARUC), which recommends pricing at the lower of cost or
2 market, as described below:

3 *Generally, the price for services, products and the use of assets*
4 *provided by a non-regulated affiliate to a regulated affiliate*
5 *should be at the lower of fully allocated cost or prevailing market*
6 *prices. Under appropriate circumstances, prices could be based*
7 *on incremental cost, or other pricing mechanisms as determined*
8 *by the regulator.*

9 "Guidelines for Cost Allocations," National Association of
10 Regulatory Utility Commissioners.

11 Notice, NARUC's guideline does not limit its recommendation by
12 exempting functions and work activities that may be operationally difficult to
13 outsource. My market comparison is straightforward. It assumes that the
14 services provided by a service company affiliate are entirely outsourced to
15 outside providers. This is in line with NARUC's recommendation.

16 **QUESTION FIVE: ARE THE SERVICES TAWC RECEIVES FROM SERVICE**
17 **COMPANY NECESSARY? IS THERE ANY DUPLICATION OR OVERLAP**
18 **BETWEEN THE SERVICES PROVIDED BY THE SERVICE COMPANY AND THE**
19 **WORK ACTIVITIES OF TAWC? (SCHEDULE PLB-2, PGS. 34-37)**

20 **Q. WHAT CONCLUSIONS WERE YOU ABLE TO DRAW CONCERNING**
21 **QUESTION NUMBER 5, WHETHER THE SERVICES TAWC RECEIVES**
22 **FROM THE SERVICE COMPANY ARE NECESSARY**

23 **A.** I was able to draw the following conclusions:

1 1) The services that the Service Company provides are necessary and are
2 required for a water utility. These services are customarily provided by
3 service companies of other utility holding companies.

4 2) There is no redundancy or overlap in the services provided by the Service
5 Company to TAWC. A detailed analysis of all the functional work activities
6 required to deliver service to customers showed just one of the entities—
7 Service Company or TAWC—with primary responsibility.

8 **Q. HOW DID YOU MAKE THIS DETERMINATION?**

9 A. I defined all the processes required to ultimately provide customers with water
10 service. Using the list of over 100 processes, I interviewed company personnel
11 to identify which entity, TAWC itself or a unit of the Service Company, is primarily
12 responsible for carrying it out. I looked for overlaps or inconsistencies. The
13 results of this work are documented in a responsibility matrix shown in
14 SCHEDULE PLB-2, pgs. 35-37.

15 **QUESTION SIX: ARE THE GOVERNANCE PRACTICES APPLIED TO TOTAL**
16 **SERVICE COMPANY EXPENSES AND CHARGES TO TAWC APPROPRIATE?**
17 **(SCHEDULE PLB-2, PGS. 38-40)**

18 **Q. WHAT CONCLUSIONS WERE YOU ABLE TO DRAW CONCERNING**
19 **QUESTION NUMBER 6, WHETHER GOVERNANCE PRACTICES APPLIED**
20 **TO SERVICE COMPANY EXPENSES AND CHARGES TO TAWC ARE**
21 **APPROPRIATE?.**

1 A. Governance practices are internal controls designed to provide assurance that
2 objectives are being achieved relating to operations, reporting and compliance.
3 Among other things, this is achieved through control activities, which are
4 defined as follows:

5 *Control activities are the actions established through policies*
6 *and procedures that help ensure that management's*
7 *directives to mitigate risks to the achievement of objectives*
8 *are carried out. Control activities are performed at all levels*
9 *of the entity, at various stages within business processes, and*
10 *over the technology environment.*

11 Source: "Internal Control – Integrated Framework, Executive
12 Summary," Committee of Sponsoring Organizations of the
13 Treadway Commission

14 Control activities include authorizations, approvals, verifications and
15 business performance reviews. Control activities that are applied to Service
16 Company charges to TAWC include the following:

- 17 • Chief Operating Officer Oversight
- 18 • Operating Company Board Oversight
- 19 • TAWC President's Oversight
- 20 • CFO Operations and Supporting Staff (Finance Team)
- 21 • Service Company Budget Review/Approval
- 22 • Major Project Review and Approval

- 1 • Capital Program Management (CPM)
- 2 • Accounting and Financial Reporting Processes
- 3 • Operating Company Budget Variance Analysis
- 4 • Service Company Budget Variance Analysis

5 These are the type of control activities that I expected to be in place when I
6 helped manage the implementation of Sarbanes-Oxley 404 for Duke Energy. In
7 my opinion, they are effective practices that help ensure that Service Company
8 charges to TAWC are necessary and reasonable.

9 **Q. WHAT IS YOUR OVERALL CONCLUSION REGARDING THE SERVICES**
10 **PROVIDED BY SERVICE COMPANY TO TAWC AND THE COST OF THOSE**
11 **SERVICES?**

12 A. The Service Company's services are essential to TAWC's ability to deliver water
13 service to its customers. These services are customarily provided by other
14 service companies to their affiliate utility companies.

15 For each cost comparison I performed, the Service Company's 2023
16 charges were shown to be reasonable and enable TAWC to operate cost
17 efficiently compared to other investor-owned water utilities.

18 **Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?**

19 A. Yes.

20

SCHEDULE PLB-1

Patrick Baryenbruch's Previous Affiliate Transactions and Rate Case Engagements

Client	State	Year	Purpose	Rate Case Witness?	Client	State	Year	Purpose	Rate Case Witness?
1 Connecticut American Water	Connecticut	1999	Rate Case	Yes	23 Columbia Gas of Virginia	Virginia	2003	Compliance	No
2 Illinois American Water	Illinois	2007	Internal Info	No		Virginia	2004	Compliance	No
	Illinois	2021	Rate Case	Yes		Virginia	2005	Rate Case	Yes
	Illinois	2023	Rate Case	Yes		Virginia	2006	Compliance	No
3 Indiana American Water	Indiana	2017	Rate Case	Yes		Virginia	2007	Compliance	No
	Indiana	2022	Rate Case	Yes		Virginia	2008	Compliance	No
4 Iowa American Water	Iowa	2020	Rate Case	Yes		Virginia	2009	Rate Case	Yes
5 Kentucky American Water	Kentucky	2003	Rate Case	Yes		Virginia	2010	Compliance	No
	Kentucky	2006	Rate Case	Yes		Virginia	2011	Compliance	No
	Kentucky	2008	Rate Case	Yes		Virginia	2012	Compliance	No
	Kentucky	2009	Rate Case	Yes		Virginia	2013	Rate Case	Yes
	Kentucky	2018	Rate Case	Yes		Virginia	2014	Compliance	No
	Kentucky	2022	Rate Case	Yes		Virginia	2015	Rate Case	Yes
6 Massachusetts American Water	Massachusetts	2000	Rate Case	Yes		Virginia	2016	Compliance	No
7 Missouri American Water	Missouri	2002	Rate Case	Yes		Virginia	2017	Rate Case	Yes
	Missouri	2008	Rate Case	Yes		Virginia	2018	Compliance	No
	Missouri	2014	Rate Case	Yes		Virginia	2019	Compliance	No
	Missouri	2016	Rate Case	Yes		Virginia	2020	Compliance	No
	Missouri	2019	Rate Case	Yes		Virginia	2021	Rate Case	Yes
	Missouri	2019	Rate Case	Yes		Virginia	2022	Compliance	No
8 New Jersey American Water	New Jersey	2005	Rate Case	Yes	24 Columbia Gas of Pennsylvania	Pennsylvania	2015	Internal Info	No
	New Jersey	2007	Rate Case	Yes		Pennsylvania	2020	Rate Case	Yes
	New Jersey	2009	Rate Case	Yes	25 Dominion Energy, Inc.	Virginia	2008	Rate Case	Yes
	New Jersey	2010	Rate Case	Yes		Virginia	2009	Compliance	No
	New Jersey	2014	Rate Case	Yes		Virginia	2010	Compliance	No
	New Jersey	2017	Rate Case	Yes		Virginia	2011	Compliance	No
	New Jersey	2019	Rate Case	Yes		Virginia	2012	Compliance	No
	New Jersey	2023	Rate Case	Yes		Virginia	2014	Compliance	No
9 New Mexico American Water	New Mexico	2007	Rate Case	Yes		Virginia	2017	Compliance	No
10 New York American Water	New York	2006	Rate Case	Yes		Virginia	2019	Compliance	No
	New York	2010	Rate Case	Yes		Virginia	2022	Compliance	No
	New York	2013	Rate Case	Yes	26 Duke Energy	North Carolina	2006	Compliance	No
	New York	2015	Rate Case	Yes	27 Elizabethtown Gas (Southern Co)	New Jersey	2008	Rate Case	Yes
11 Ohio American Water	Ohio	2006	Rate Case	Yes	28 Electric Transmission Texas	Texas	2016	Rate Case	Yes
	Ohio	2010	Rate Case	Yes		Texas	2020	Rate Case	Yes
12 Pennsylvania American Water	Pennsylvania	2008	Compliance	No		Texas	2022	Rate Case	Yes
	Pennsylvania	2011	Compliance	No	29 General Water Works of Rio Rancho	New Mexico	1993	Rate Case	Yes
	Pennsylvania	2014	Compliance	No	30 General Water Works of Virginia	Virginia	1992	Rate Case	Yes
	Pennsylvania	2017	Compliance	No	31 Po River Water and Sewer	Virginia	1993	Rate Case	Yes
	Pennsylvania	2020	Compliance	No		Virginia	2007	Rate Case	Yes
13 Tennessee American Water	Tennessee	2006	Rate Case	Yes		Virginia	2008	Rate Case	Yes
	Tennessee	2010	Rate Case	Yes	32 Progress Energy	North Carolina	2001	Internal Info	No
14 Virginia-American Water	Virginia	1996	Rate Case	Yes	33 Roanoke Gas	Virginia	2006	Compliance	No
	Virginia	1999	Rate Case	Yes	34 Southern California Edison	California	2002	Compliance	No
	Virginia	2000	Rate Case	Yes		California	2003	Compliance	No
	Virginia	2001	Rate Case	Yes		California	2004	Compliance	No
	Virginia	2003	Rate Case	Yes		California	2005	Compliance	No
	Virginia	2007	Rate Case	Yes	35 AEP Texas	Texas	2018	Rate Case	Yes
	Virginia	2009	Rate Case	Yes	36 Appalachian Power	Virginia	2021	Rate Case	Yes
	Virginia	2011	Rate Case	Yes	37 Southwestern Electric Power	Texas	2016	Rate Case	Yes
	Virginia	2015	Rate Case	Yes		Texas	2020	Rate Case	Yes
	Virginia	2018	Rate Case	Yes	38 Kentucky Utilities	Virginia	2020	Rate Case	Yes
	Virginia	2021	Rate Case	Yes	39 Virginia Natural Gas (Southern Co)	Virginia	2004	Compliance	No
	Virginia	2023	Rate Case	Yes		Virginia	2005	Rate Case	Yes
15 West Virginia American Water	West Virginia	2002	Rate Case	Yes		Virginia	2010	Rate Case	Yes
	West Virginia	2006	Rate Case	Yes	40 United Water of Pennsylvania	Pennsylvania	2004	Rate Case	Yes
	West Virginia	2007	Rate Case	Yes	41 Corix Infrastructure/Water Services Corp.	Enterprise	2018	Internal Info	No
	West Virginia	2009	Rate Case	Yes		Enterprise	2019	Internal Info	No
	West Virginia	2012	Rate Case	Yes		Enterprise	2021	Internal Info	No
	West Virginia	2014	Rate Case	Yes	42 Community Utilities of Indiana	Indiana	2020	Rate Case	No
	West Virginia	2017	Rate Case	Yes	43 Massanutton Public Service Company	Virginia	2006	Rate Case	Yes
	West Virginia	2020	Rate Case	Yes		Virginia	2008	Rate Case	Yes
	West Virginia	2022	Rate Case	Yes		Virginia	2013	Rate Case	Yes
16 Atlanta Gas Light (Southern Co)	Georgia	2009	Rate Case	Yes		Virginia	2019	Rate Case	Yes
17 Atmos Energy Corporation	Virginia	2004	Compliance	No	44 Water Service Corporation	Kentucky	2010	Rate Case	Yes
18 Columbia Gas of Kentucky	Kentucky	2015	Rate Case	Yes		Kentucky	2012	Rate Case	Yes
19 Columbia Gas of Maryland	Maryland	2015	Rate Case	Yes		Kentucky	2019	Rate Case	Yes
20 Columbia Gas of Massachusetts	Massachusetts	2004	Rate Case	Yes		Kentucky	2021	Rate Case	Yes
	Massachusetts	2006	Internal Info	No	45 Corix Utilities Oklahoma	Oklahoma	2019	Compliance	Yes
	Massachusetts	2011	Internal Info	No	46 Great Basin Water Company	Nevada	2019	Rate Case	Yes
	Massachusetts	2012	Internal Info	No		Nevada	2021	Rate Case	Yes
	Massachusetts	2014	Internal Info	No				Total Studies	151
	Massachusetts	2017	Internal Info	No				Number of Rate Cases	107
21 Northern Indiana Public Service	Indiana	2015	Internal Info	No				Number of Utility Clients	46
	Indiana	2016	Rate Case	Yes				Number of States	21
	Indiana	2020	Rate Case	Yes					
	Indiana	2021	Rate Case	Yes					
	Indiana	2022	Rate Case	Yes					
	Indiana	2023	Rate Case	Yes					
22 Liberty Utilities New York Water	New York	2022	Rate Case	Yes					

**Market-to-Cost Comparison of Service Company Charges to
Tennessee American Water Company, Inc.**

12 Months Ended December 31, 2023

April 2024



Tennessee American Water Company, Inc.
Market-to-Cost Comparison of Service Company Charges
12 Months Ended December 31, 2023

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Purpose of This Study

This market-to-cost comparison of the 12 months ended December 31, 2023, of Service Company charges to Tennessee American Water Company, Inc., (TAWC) was undertaken to answer six questions concerning the services provided by American Water Works Service Company, Inc., (Service Company) to TAWC:

1. Are TAWC's 2023 total expenses, including those incurred directly and those allocated from the Service Company, reasonable compared to total expenses of other water companies?
2. Are the services provided by the Service Company similar to those provided by service companies of other utility holding companies?
3. Are the Service Company's customer service and administrative and general ("CS/A&G") related charges to TAWC during 2023 in line with charges by other service companies to their regulated affiliate operating companies?
4. Was TAWC charged the lower of cost or market for managerial and professional services provided by the Service Company during 2023?
5. Are the services TAWC receives from Service Company necessary? Is there any duplication or overlap between the services provided by the Service Company and the work activities of TAWC?
6. Are the governance practices applied to total Service Company expenses and the allocation of charges to TAWC appropriate?

Study Results

Concerning question 1, the following conclusion was reached:

- TAWC's 2023 total expenses are reasonable compared to those of other water companies. This conclusion can also be extended to 2023 Service Company charges, which make up a large portion of TAWC's total expenses.

Concerning question 2, the following conclusion was reached:

- The services provided to TAWC by the Service Company are similar to those provided by other utility service companies to their affiliate operating utilities. This is based on an analysis of information in the Form 60 that each company files with the Federal Energy Regulatory Commission (FERC).

Concerning question 3, the following conclusion was reached:

- The Service Company's 2023 customer service and administrative and general ("CS/A&G") charges per TAWC customer are reasonable compared to costs per customer for other utility service companies. During 2023, TAWC was charged \$84 per customer for CS/A&G-related services provided by the Service Company. This compares to an average of \$90 per customer in 2022 for service companies reporting to the Federal Energy Regulatory Commission (FERC). Four of the comparison group's eight utility service companies had higher per-customer CS/A&G costs than TAWC's charges from the Service Company.

Concerning question 4, the following conclusions were reached from this study:

- TAWC was charged the lower of cost or market for managerial and professional services during 2023.
- On average, the hourly rates for outside service providers are 73% higher than the Service Company's hourly rates. If all the managerial and professional services now provided by the Service Company had been outsourced during 2023, TAWC and its customers would have incurred approximately \$3.8 million in additional expenses.
- It should be noted that outside providers could possibly offer a discount on their hourly rates in return for the amount of work associated with Service Company services. However, provider discounts would certainly not be greater than current 73% difference between the hourly rates of the Service Company and outside providers. Also, provider discounts would be offset by the need for TAWC to add staff to administer commercial relationships and provide direction, guidance and feedback to the outside service providers. The workload associated with the Service Company's 2023 charges represents 21 full-time equivalents (FTE) (37,195 hours / 1,800 hours per FTE) performed by several outside providers. For a workload of this size, TAWC would have to maintain additional staff to ensure outside providers perform their assigned work assignments in a timely and effective manner.
- This study's hourly rate comparison understates the cost advantages that accrue to TAWC from its use of the Service Company. Outside service providers generally bill for every hour worked. Service Company exempt personnel, on the other hand, charge a maximum of eight hours per day even when they work more hours. If all overtime hours of Service Company personnel were factored into the hourly rate calculation, the Service Company would have had an even greater annual dollar advantage than the approximately \$3.8 million cited above.
- It would be difficult for TAWC to find local service providers with the same specialized water industry expertise as possessed by the Service Company staff. Service Company personnel spend substantially all their time serving operating water companies. This specialization brings with it a unique knowledge of water utility operations and regulation that may not be available from local service providers.
- Unlike service providers in the general business community, Service Company fees do not include any profit markup. Only its actual cost of service is being recovered from TAWC customers.

Concerning question 5, the following conclusions were drawn:

- The services that the Service Company provides are necessary and are required for water and wastewater utilities. These services are customarily provided by service companies of other utility holding companies.
- Furthermore, there is no redundancy or overlap in the services provided by the Service Company to TAWC. For all the services provided (Schedule 12), there was only one entity primarily responsible for the service. A detailed analysis of all the functional work activities required to deliver service to customers showed just one of the entities—Service Company or TAWC—with primary responsibility.

Concerning question 6, the following conclusion was drawn:

- Existing governance practices are effective internal controls and are sufficient to help ensure that Service Company charges to TAWC are necessary and reasonable.

Overview of American Water Works Service Company

American Water's Service Company exists to provide certain shared services to American Water subsidiaries. It follows a service company model used by many utility holding companies that own multiple regulated utilities. By consolidating executive and professional services into a single service company, utility holding companies are able to realize the following benefits for customers:

- **Purchasing Economies** – Common expenses (e.g., insurance, chemicals, piping) can be procured on a much larger scale, thereby providing greater bargaining power for the combined entity compared to individual utility operating companies. A service company facilitates enterprise-wide purchasing programs through its procurement and contract administration functions.
- **Operating Economies of Scale** – A service company is able to deliver services more efficiently because workloads can be balanced across more persons and facilities. For instance, American Water's Service Company can maintain one principal water testing laboratory for the entire organization. This is much more cost-efficient than each operating utility funding its own testing arrangements.
- **Continuity of Service** – Centralizing service company personnel who perform similar services facilitates job cross-training and sharing of knowledge and expertise. This makes it easier to manage staff turnover and absences and to sustain high levels of service to operating utilities. An individual operating utility might experience considerable disruption if a key professional left and it were necessary to hire outside to fill the vacancy.
- **Maintenance of Enterprise-Wide Standards** – Personnel in American Water's Service Company establish standards for many functions (e.g., engineering designs, operating procedures and maintenance practices). It is easier to align operating utility operations because the Service Company supports their implementation.
- **Improved Support and Guidance** – American Water's Service Company provides another dimension of management and financial support and guidance that supplements local operating utility management. The Service Company facilitates standard planning and reporting, which helps ensure that operating utilities meet the requirements of their customers in a cost-effective manner.
- **Retention of Personnel** – A service company organization provides operating utility personnel with another career path beyond what may be available on a local level. These opportunities tend to improve employee retention.

American Water follows the model for other utility service companies in another important regard: Its services are provided to affiliate operating utilities, like TAWC, at cost. American Water's Service Company is not a profit-making entity. It assigns only its actual expenses to the American Water subsidiaries it services.

The Service Company provides services to American Water operating companies from the following locations:

- **One Water Street** – Service Company employees at One Water Street provide corporate governance and service functions, including executive management, finance, accounting, audit, tax, regulatory, external affairs, engineering, supply chain, legal, human resources and benefits services. One Water Street also includes American Water's main Information Technology (IT) Services center for employees, which provides software

delivery and enhancements. It also provides local on-site support and an IT Service Desk for remote assistance. Further, One Water Street supports critical systems such as supervisory control and data acquisition (SCADA) as well as emerging technologies such as geographic information systems and mobility. It provides technical expertise in project governance and release management while ensuring compliance with all governmental regulations.

- Central Lab – The national trace substance laboratory is located in Belleville, Illinois, and performs testing for all American Water operating companies.
- Customer Relations and Customer Service – Provide customer relations, field resource coordination services, customer communication and billing and collection services from various locations.
- Information Technology Services Center – The IT Services Center supports the technology infrastructure required to run business applications and communications systems for American Water's operating companies. It is also responsible for enterprise IT security.
- Regional Support Services – Operating companies are provided with certain support services that are delivered more effectively on a regional basis because individual operating company workloads are not sufficient to warrant maintaining their own full-time staff for these activities. These services require closer proximity to operating companies and therefore are located near the operating companies to which the employees provide service.

Service Company Accounting

Service Company maintains an accounting ledger for recording transactions (e.g., labor, expenses, overhead, capital and other assets, liabilities and equity) in a Service Company ledger separate from affiliates' ledgers. Monthly financial statements are prepared that summarize month-to-date and year-to-date costs, budgets and prior year, with variances and explanations, by category and function. Accounting categories by transaction type are described below:

- Service Company Labor: The Service Company utilizes a system that tracks time and attendance. Employees electronically enter hours worked (including vacation, sick, family leave, etc.) and accounting information (e.g., business unit; formula; pay type) and electronically submit the timesheet for approval. Submitted timesheets are electronically routed to authorized approvers. Time sheets require approval (of hours and accounting information such as formulas, etc.) by an authorized timesheet approver in the employee's home business unit.
- Service Company Expenses: Expenditures (i.e., standard invoices, purchase orders, electronic disbursements, miscellaneous invoices, recurring invoices, recurring vouchers, and procurement cards) and journal entries require a preparer to enter accounting coding details (e.g., cost center, cost element and Work Breakdown Structure (WBS)) and a reviewer to approve the information in accordance with the Delegation of Authority Policy. Expenditures are processed electronically and are automatically routed to the employee's supervisor for approval. Costs are posted many times daily, in detail, in the business unit selected. Journal entries are submitted as prepared to the appropriate reviewer and posted as approved.

- **Service Company Assets:** Service Company assets are procured directly by Service Company or through a capital leasing arrangement with Laurel Oak Properties (LOP). Service Company capitalizes these LOP leases as Non-Utility Plant assets in accordance with generally accepted accounting principles. Generally speaking, Service Company assets (including hardware, servers, laptops, desktops, servers, storage racks, furniture, laboratory and test equipment, security cameras, monitors and leasehold improvements) are acquired directly or through LOP via a capital lease. LOP, on behalf of the Service Company, will acquire the necessary materials and services to build the assets that are needed for the Service Company to meet its business needs. One Water Street (OWS), which owns the Camden headquarters, is providing furniture, fixtures and office-related equipment for the first 7 years of the lease with the Service Company.
- **Service Company Overhead:** Costs for support personnel (e.g., administrative assistants, mailroom clerks), rents, facility expenses, pension, medical insurance, taxes, general office supplies and other similar expenses are recorded in the ledger of the cost center responsible for incurring the charge. Overhead expenditures are posted using the labor and expense processes noted above, and are recorded, in detail, in the ledger of the cost center responsible for the charge, using an overhead WBS.

Service Company Billing and Clearing

Service Company has developed a billing system that charges directly or allocates costs for services provided to Affiliates. Service Company billing is processed monthly and includes all Service Company costs charged to Affiliates using the WBS element selected for each transaction.

- **WBS element:** Every Service Company transaction (vouchers, journal entries, payroll batch, etc.) requires a WBS element within the account coding string. Each WBS element is configured in SAP with the following: Affiliate(s) to be charged, percent of charge to be billed to each Affiliate (total must equal 100%), receiving object (e.g., Affiliate's cost center) for O&M costs or an Affiliate's WBS element for capital expenditures (CAPEX). WBS elements are configured in SAP with an end date (month/year) to prevent transactions from using an expired WBS during data input.
- **Affiliate Billing Process:** Service Company billing is a two-step process that first calculates allocations of transactions for all non-overhead WBS elements. The second step calculates transaction allocations using the ratio of direct labor allocations to Affiliates (Cost Element 5012000) from the first step above multiplied by the pool of overhead expenses by physical location.
- **Bill Clearing Process:** Service Company billings are cleared through American Water Capital Corp. (an affiliate) monthly via an intercompany journal entry to GL Account 23120000 (Notes Payable – Associated Companies) posted on the last day of the month. Payments are estimated for each Affiliate using the prior month actual billing (current month estimate) with adjustment for prior month actual to estimate (previous month funding) true-up.

III – Service Company Cost Evaluation Approach

Service Company 2023 Charges

During 2023, the Service Company billed TAWC a total of approximately \$11.2 million, as shown in the table below. These charges were subjected to a market-to-cost comparison.

	2023
Management Fees - O&M	\$ 8,075,310
Management Fees - Capital	\$ 3,149,197
Total AWWSC Charges	\$ 11,224,507

Source: Company information

For purposes of comparing these charges to certain outside benchmarks, Service Company services were placed into three categories:

- Managerial and Professional Services – Includes such services as management, accounting, legal, human resources, engineering and information technology.
- Customer Account Services – Includes customer-related services, such as call handling, credit, billing, collection and payment processing.
- Field Resource Coordination Services – Includes tracking and dispatching service orders for field representatives and distribution crews to carry out.

Total 2023 Service Company dollar and hour charges break down between management and professional, customer account and field resource coordination services as follows:

	2023	
	Charges	Hours
Management and Professional Services	\$ 8,502,904	39,121
Customer Account Services	\$ 2,306,459	22,802
Field Resource Coordination Services	\$ 415,143	5,919
Total Service Company Charges	\$ 11,224,507	67,842

Source: Company information

Between 2019 and 2023, total Service Company O&M-related charges to TAWC increased 15% percent, as calculated below. That is far less than the 19% rate of inflation experienced during the same period.

Change in TAWC's Service Company O&M Charges Versus Inflation

Service Company O&M-Related Charges to TAWC					Change 2019 to 2023	
2019	2020	2021	2022	2023	Amount	Percent
\$7,030,135	\$7,844,974	\$8,381,961	\$8,039,750	\$8,075,310	\$1,045,175	15%

Consumer Price Index (December)					Change 2019 to 2023	
2019	2020	2021	2022	2023	Amount	Percent
256.974	260.474	278.802	296.797	306.746	49.772	19%

Source: Company Information; BLS - CPI for All Urban Consumers (CPI-U) 1982-84=100 (Unadjusted)
- CUUR0000SA0



Evaluation Methodology

The first question—whether TAWC’s 2023 total expenses are reasonable—was determined by comparing TAWC’s total expenses to those of other water companies in the Southeast and Midwest regions of the US.

The second question—if the Service Company services are similar to those of other service companies of other utility holding companies—was determined by comparing the services provided by other utility holding companies to those of the Service Company.

This third question—whether the Service Company 2023 charges are reasonable—was determined by comparing TAWC’s CS/A&G-related Service Company charges per regulated retail customer to the same charges for a comparison group of utility service companies that must file the FERC Form 60 – Annual Report of Service Companies.

The fourth question—whether the Service Company charges during 2023 were priced at the lower of cost or market—was evaluated by comparing the cost per hour for managerial and professional services provided by Service Company personnel to hourly billing rates that would be charged by outside providers of equivalent services. Service Company costs per hour were based on actual charges to TAWC during 2023. Outside providers’ billing rates came from surveys or other information from professionals who could perform the services now provided by the Service Company.

The fifth question—the necessity of Service Company services—was investigated by defining the services provided to TAWC and determining if these services would be required if TAWC were not part of the American Water organization. This work involved interviewing Company staff members with knowledge of Service Company and operating company business processes.

The sixth question—whether governance practices applied to Service Company charges are appropriate—was evaluated by determining if they are in line with control activities envisioned by the Committee of Sponsoring Organizations’ (COSO) Internal Control Integrated Framework. Here too, interviews were conducted with knowledgeable Company staff to fully understand the control activities.

IV – Question 1 – Reasonableness of Total TAWC Expenses

Comparison Metrics

This question evaluates TAWC's total expenses, including those incurred directly by TAWC and those charged to it by the Service Company. This broader cost comparison uses the following two metrics to compare TAWC's total expenses to those of other water companies:

Functions	Total Expenses per Customer Metrics	
	Cust Svc + A&G	Total Utility Expenses
Water Supply Operations		X
Water Supply Maintenance		X
Treatment Operations		X
Treatment Maintenance		X
T&D Operations		X
T&D Maintenance		X
Customer Service	X	X
Administrative & General	X	X

It should be noted that these expenses represent the cost of operating and maintaining the utility. Excluded are depreciation, amortization, interest expenses and income taxes. Information necessary to develop this cost comparison was obtained from the annual reports other water companies filed with their state regulators for 2022 (the latest available data). These expenses are compared to TAWC's 2023 expenses.

Comparison Group

Selection criteria for the comparison group included: (1) 2022 revenues of \$700,000 or more, (2) situated in Southeast and Midwest states and (3) filed with state regulators, an annual report that contained the data necessary for cost calculations. The following water companies met this criteria:

Comparison Group Companies	State	2022 Water		Type
		Customers	Revenues	
Aqua Ohio, Inc.	OH	158,833	\$ 113,113,254	IOU
Baton Rouge Water Company	LA	118,729	\$ 39,159,220	IOU
Aqua North Carolina, Inc.	NC	85,638	\$ 50,881,494	IOU
Aqua Illinois, Inc.	IL	68,834	\$ 71,497,709	IOU
Carolina Water Service, Inc. of North Carolina	NC	34,799	\$ 23,133,246	IOU
Sunshine Water Services Company	FL	34,791	\$ 19,326,335	IOU
Aqua Virginia, Inc.	VA	26,284	\$ 14,686,536	IOU
Beckley Water Company	WV	22,517	\$ 14,587,793	IOU
Magnolia Water Utility Operations Company	LA	19,942	\$ 7,778,451	IOU
Blue Granite Water Company	SC	17,217	\$ 16,102,834	IOU
Liberty Utilities (Pine Bluff Water), Inc.	AR	15,097	\$ 9,354,900	IOU
Peoples Water Service Company of Florida, Inc.	FL	13,419	\$ 4,022,015	IOU
Prairie Path Water Company	IL	13,056	\$ 11,346,987	IOU
Liberty Utilities (Missouri Water) LLC	MO	12,095	\$ 6,391,726	IOU
The Raytown Water Company	MO	6,541	\$ 4,427,477	IOU
Water Service Corporation of Kentucky	KY	6,423	\$ 3,276,585	IOU
Community Utilities of Indiana Inc.	IN	5,368	\$ 2,520,451	IOU
Kiawah Island Utility, Inc.	SC	4,438	\$ 8,127,312	IOU
Confluence Rivers Utility Operating Company, Inc.	MO	4,187	\$ 2,157,596	IOU
Massanutten Public Service Company	VA	3,013	\$ 1,847,177	IOU
Liberty Utilities (Arkansas Water) Corp.	AR	2,368	\$ 1,194,440	IOU
Water Management Services, Inc.	FL	2,106	\$ 2,366,807	IOU
Diversion Water Company, LLC	LA	2,037	\$ 1,020,055	IOU
Pluris Wedgefield, LLC	FL	1,743	\$ 1,627,619	IOU
Daufuskie Island Utility Company, Inc.	SC	1,648	\$ 1,132,844	IOU
Aqua Indiana, Inc.	IN	1,431	\$ 1,032,758	IOU
South Carolina Water Utilities, Inc.	SC	1,313	\$ 1,020,605	IOU
Royal Waterworks, Inc.	FL	931	\$ 704,462	IOU

Source: Annual reports to state regulators

This group contains a mix of investor-owned water companies in the Southeast and Midwest.



IV – Question 1 – Reasonableness of Total TAWC Expenses

Comparison Results

Total expenses per customer are calculated in Exhibit 1 (page 11) for TAWC and each comparison group water company. Exhibit 2 (page 12) shows the ranking of each water company's total expenses per customer. TAWC's expenses compare favorably, as described below:

- Total CS/A&G Expenses – TAWC's 2023 \$163 cost per customer is well below the comparison group's midpoint of \$187. TAWC's 2023 cost is lower than the 2022 cost for 15 comparison group water utilities and higher than 7.
- Total Utility Expenses – TAWC's 2023 \$291 cost per customer is well below the comparison group's midpoint of \$437. TAWC's 2023 cost is lower than the 2022 cost for 23 comparison group water utilities and higher than 5.

TAWC's favorable total cost position is noteworthy considering that its 2023 expenses are compared to the 2022 expenses for other water companies. Inflation from 2022 to 2023 was 3.4%, as measured by the consumer price index, as calculated below:

2022 to 2023 Increase	
Dec 2022 CPI	296.797
Dec 2023 CPI	306.746
Increase Amount	9.949
Percent Increase	3.4%

Source: Bureau of Labor Statistics

For TAWC, Service Company charges represent a substantial portion of TAWC's total expenses. As shown below, in 2023, Service Company O&M charges were 52% of total CS/A&G expenses and 32% of its O&M expenses.

	TAWC 2023 O&M Expenses	
	Customer Svc \$ A&G Exp	Total Utility Exp
Service Company O&M Charges	\$ 7,348,984	\$ 8,075,310
Total TAWC Expenses	\$ 14,191,728	\$ 25,387,935
Percent Service Company Charges	52%	32%

Source: Company information

This comparison evidences the fact that TAWC's total expenses, including those charged to it by the Service Company, are reasonable compared to expenses of other water utilities.

Exhibit 1

Tennessee American Water Company, Inc.
Calculation of Total Expenses Per Customer

		Cust Service + A&G Exp	Total Utility Exp	Total Customers	Expenses Per Customer	
					CS + A&G	Tot Utility Exp
Tennessee American Water Company (2023)		\$ 14,191,728	\$ 25,387,935	87,099	\$ 163	\$ 291
Comparison Group (2022) (A)						
	State					
Aqua Ohio, Inc.	OH	\$ 27,623,720	\$ 42,782,185	158,833	\$ 174	\$ 269
Baton Rouge Water Company	LA	\$ 12,126,786	\$ 25,373,832	118,729	\$ 102	\$ 214
Aqua North Carolina, Inc.	NC (B)		\$ 29,070,035	85,638		\$ 339
Aqua Illinois, Inc.	IL	\$ 9,863,517	\$ 22,853,964	68,834	\$ 143	\$ 332
Carolina Water Service, Inc. of North Carolina	NC (B)		\$ 16,462,237	34,799		\$ 473
Sunshine Water Services Company	FL	\$ 8,280,881	\$ 12,927,104	34,791	\$ 238	\$ 372
Aqua Virginia, Inc.	VA	\$ 3,739,510	\$ 6,635,191	26,284	\$ 142	\$ 252
Beckley Water Company	WV	\$ 2,749,392	\$ 11,241,510	22,517	\$ 122	\$ 499
Magnolia Water Utility Operations Company	LA	\$ 1,546,259	\$ 4,557,714	19,942	\$ 78	\$ 229
Blue Granite Water Company	SC	\$ 7,050,293	\$ 12,312,881	17,217	\$ 409	\$ 715
Liberty Utilities (Pine Bluff Water), Inc.	AR	\$ 4,722,236	\$ 6,698,352	15,097	\$ 313	\$ 444
Peoples Water Service Company of Florida, Inc.	FL	\$ 1,881,471	\$ 2,918,237	13,419	\$ 140	\$ 217
Prairie Path Water Company	IL	\$ 4,968,686	\$ 5,660,873	13,056	\$ 381	\$ 434
Liberty Utilities (Missouri Water) LLC	MO	\$ 2,725,387	\$ 5,488,927	12,095	\$ 225	\$ 454
The Raytown Water Company	MO (B)		\$ 3,597,069	6,541		\$ 550
Water Service Corporation of Kentucky	KY	\$ 1,238,136	\$ 2,703,116	6,423	\$ 193	\$ 421
Community Utilities of Indiana Inc.	IN	\$ 724,000	\$ 2,067,668	5,368	\$ 135	\$ 385
Kiawah Island Utility, Inc.	SC	\$ 2,382,606	\$ 6,204,216	4,438	\$ 537	\$ 1,398
Confluence Rivers Utility Operating Company, Inc.	MO (B)		\$ 2,129,457	4,187		\$ 509
Massanutten Public Service Company	VA	\$ 564,652	\$ 1,338,512	3,013	\$ 187	\$ 444
Liberty Utilities (Arkansas Water) Corp.	AR	\$ 485,677	\$ 927,765	2,368	\$ 205	\$ 392
Water Management Services, Inc.	FL	\$ 841,388	\$ 1,755,675	2,106	\$ 400	\$ 834
Diversion Water Company, LLC	LA (B)		\$ 891,059	2,037		\$ 437
Pluris Wedgefield, LLC	FL	\$ 1,273,977	\$ 1,749,161	1,743	\$ 731	\$ 1,004
Daufuskie Island Utility Company, Inc.	SC	\$ 557,953	\$ 741,757	1,648	\$ 339	\$ 450
Aqua Indiana, Inc.	IN (B)		\$ 771,063	1,431		\$ 539
South Carolina Water Utilities, Inc.	SC	\$ 237,049	\$ 568,982	1,313	\$ 181	\$ 433
Royal Waterworks, Inc.	FL	\$ 158,517	\$ 550,497	931	\$ 170	\$ 591
Comparison Group Total		\$ 95,742,093	\$ 230,979,039	684,798		

Note A: Source is 2022 Annual Reports from the following regulators:

Arkansas Public Service Commission
Florida Public Service Commission
Illinois Commerce Commission
Indiana Utility Regulatory Board
Kentucky Public Service Commission
Louisiana Public Service Commission
Missouri Public Utilities Commission
North Carolina Public Utilities Commission
South Carolina Public Service Commission
Virginia State Corporation Commission
Public Service Commission of West Virginia

Note B: Annual report does not show a functional breakout of expenses



Tennessee American Water Company, Inc.
Ranking of Total Expenses Per Customer

Total Cust Svc and A&G Expenses		Total Utility Expenses	
Company	Exp/Customer	Company	Exp/Customer
Pluris Wedgefield	\$ 731	Kiawah Island Utility	\$ 1,398
Kiawah Island Utility	\$ 537	Pluris Wedgefield	\$ 1,004
Blue Granite Water	\$ 409	Water Management Svcs	\$ 834
Water Management Svcs	\$ 400	Blue Granite Water	\$ 715
Prairie Path Water	\$ 381	Royal Waterworks	\$ 591
Daufuskie Island Utility	\$ 339	The Raytown Water	\$ 550
Liberty Utilities (Pine Bluff)	\$ 313	Aqua Indiana	\$ 539
Sunshine Water Services	\$ 238	Confluence Rivers Utility	\$ 509
Liberty Utilities (MO Water)	\$ 225	Beckley Water	\$ 499
Liberty Utilities (AR Water)	\$ 205	Carolina Water Svc NC	\$ 473
Water Service Corp. KY	\$ 193	Liberty Utilities (MO Water)	\$ 454
Massanutten Public Svc	\$ 187	Daufuskie Island Utility	\$ 450
South Carolina Water	\$ 181	Liberty Utilities (Pine Bluff)	\$ 444
Aqua Ohio	\$ 174	Massanutten Public Svc	\$ 444
Royal Waterworks	\$ 170	Diversion Water	\$ 437
TAWC	\$ 163	Prairie Path Water	\$ 434
Aqua Illinois	\$ 143	South Carolina Water	\$ 433
Aqua Virginia	\$ 142	Water Service Corp. KY	\$ 421
Peoples Water Service FL	\$ 140	Liberty Utilities (AR Water)	\$ 392
Community Utilities IN	\$ 135	Community Utilities IN	\$ 385
Beckley Water	\$ 122	Sunshine Water Services	\$ 372
Baton Rouge Water	\$ 102	Aqua North Carolina	\$ 339
Magnolia Water Utility	\$ 78	Aqua Illinois	\$ 332
		TAWC	\$ 291
		Aqua Ohio	\$ 269
		Aqua Virginia	\$ 252
		Magnolia Water Utility	\$ 229
		Peoples Water Service FL	\$ 217
		Baton Rouge Water	\$ 214

Number Higher than TAWC:	15
Number Lower than TAWC:	7

Number Higher than TAWC:	23
Number Lower than TAWC:	5

Source: 2022 Annual Reports from state regulators; TAWC 2023 information; Baryenbruch & Company LLC, analysis



Utility service companies deliver a range of services to their regulated utility affiliates. Some may support their regulated utility affiliate's operations-related functions (e.g., transmission, distribution). In contrast, however, utility service companies, however, provide CS/A&G services to their affiliates. This is the case because considerable economies of scale derive from centralizing the management of corporate CS/A&G services such as finance, human resources and information technology. Because CS/A&G-related services are delivered by all utility service companies, this study uses CS/A&G charges per customer as the metric by which to test the reasonableness of affiliate charges.

Services Provided by the Service Company

The Service Company provides a wide array of services that are described in Exhibit 3 (pages 14-16).

Tennessee American Water Company
Description of Service Company Services

Internal Audit – Internal Audit provides services to assist management in evaluating and improving the effectiveness of governance, control, and risk management processes of American Water. Internal Audit also assists management and the Board of Directors in the effective discharge of their responsibilities by furnishing them with analyses, appraisals, recommendations, advice, and information concerning the activities that they audit and by promoting effective controls and sound business practices. Internal Audit's objectivity is sustained by its independence from management. The authority and responsibilities of Internal Audit are established by the Audit, Finance and Risk Committee of the Board of Directors. Service Company's Internal Audit activities are the responsibility of the Vice President, Internal Audit who reports functionally to the Chairperson of the Audit, Finance and Risk Committee and administratively to the Chief Financial Officer.

Business Development - Provides coordination, tools, training, and support to affiliates by assisting in identifying opportunities that facilitate orderly and continued growth as well as other appropriate business opportunities that can benefit the affiliates and their customers through creation of synergies and economies of scale. Business Development engages in competitor and water market trend research, direct pursuit of strategic growth opportunities, development, and communication of company growth strategy.

Customer Service - Provides customer service for public utility customers. Services include customer call processing, service order processing, billing services, correspondence processing, customer relations, field resource coordination, operations support, process and test all tariff changes in SAP, oversight of major accounts program, customer insights, and customer data, and credit and collections.

External Affairs, Communications and Public Policy - Serves as a center of expertise providing affiliates with strategy, tools, and templates to provide effective and consistent communications and education for customers, employees, and other key stakeholders. Provides assistance on regulatory and federal/state public policy issues. Additionally, provides resources and tactical direction in media relations, social media, educational campaigns, emergency events, community events, public forums, customer communications, research, environmental, social and governance (ESG), and employee communications and engagement.

Accounting & Finance – Provides affiliates with analysis and decision support, including guidance and coordination activities in areas such as: accounting, treasury, financial planning and analysis, external reporting, risk management, accounts payable and purchase card services, fixed asset processing, cash management, income tax, payroll (payroll related services includes payroll processing, compliance reporting, payroll system maintenance, and employee payroll data maintenance), and assistance in the preparation of financial statements, SEC and other regulatory filings. Also included are Corporate, General and Property tax professionals who analyze and prepare the associated tax, regulatory and compliance filings in these areas.

Human Resources (HR) - Provides affiliates' employees with strategy, support, guidance, coordination of all employee-related actions and planning, including recruiting, on/off boarding employee relations, total rewards, learning and organizational development, and inclusion, diversity and equity. This includes involvement in negotiations for new contracts with bargaining units, due diligence and integration support related to mergers and acquisitions, succession planning, employee development, employee experience, performance management, compliance, reporting, and HR project management, and development and implementation of policies and practices affecting affiliates' employees. In addition, HR provides employees access to HR information through self-service tools and manages all employee data. HR builds a positive employee experience and cultivates an effective and impactful culture of inclusion and diversity through communication, engagement, employee well-being, training and workforce and succession planning.

Tennessee American Water Company
Description of Service Company Services

<p>Information Technology (IT) – Provides information technology systems and support for affiliates. IT provides local onsite support as well as the IT Service Desk for remote assistance for all employees using company issued computers in the performance of their day-to-day activities. IT supports mission-critical systems such as SCADA, as well as emerging technologies such as GIS and Mobility. IT Operations provides the network, storage, and servers to enable communication systems (telephone/smart phone/mobile devices) for all American Water affiliate employees. Additionally, IT ensures effective project governance and release management while ensuring compliance with all policies and regulations.</p>
<p>Environmental Compliance - Provides expertise and centralized coordination of the environmental program to ensure compliance with all water quality and environmental regulations, supports development of audit-ready operations, interfaces with regulators at the national level, and provides cross-functional communications and resources to facilitate end-to-end process efficiency. Provides guidance in maintaining and establishing new AW environmental policies, practices, and procedures.</p>
<p>Central Laboratory - Employs chemists, lab technicians, analysts, and support employees to perform water quality testing and research. The lab, which is Environmental Protection Agency Service Company Cost Accounting Manual 28 ("EPA") and state certified, uses state of the art water testing equipment to test source water and finished water from all affiliates.</p>
<p>Investor Relations – Responsible for preparation and distribution of company and industry information that is periodically released to current or potential holders of financial securities of American Water.</p>
<p>Financial Planning & Analysis (FP&A) - Consists of support areas to the affiliates related to FP&A activities: 1) State Finance Teams: Finance resources embedded in the affiliates, providing state leadership and operations a wide range of financial analysis and decision support, including accounting, finance, budgeting, and planning; as well as collaborating and supporting key functions within the state. Examples include: (Capital teams, Rates teams, BD teams) 2) BIRS Group which is comprised of several support areas: a. Revenue Analytics Team which is responsible for Regulated Revenues (budgeting, analysis, rate case support) b. Service Company Team which is responsible for FP&A support to Service Company Functions c. Corporate team which is responsible for consolidated FP&A activities.</p>
<p>Legal - Provides legal guidance and support for American Water and affiliates, including on governance, ethics and compliance matters, rate and regulatory matters, real estate, contract and commercial, litigation, intellectual property, labor, and employment, environmental, acquisitions and divestitures, and any other matters that require support.</p>
<p>Regulatory Services – Provides affiliates with assistance, support and guidance in the preparation and litigation of regulatory proceedings, implementation of rates, and compliance filings associated with regulatory rulings. Stays apprised of economic and regulatory developments and conditions that may affect regulated water utilities and provides analysis, support and guidance related thereto; performs rates and regulatory policy analysis; provides support, guidance, and coordination of process improvements to support continuous improvement of rates and regulatory processes and services, as well as data compilation and reporting, data and revenue analysis, and training.</p>
<p>Engineering - Provides affiliates with support, guidance and coordination of Asset Planning, Design Service, Construction Service, and Capital Program Management.</p>
<p>Enterprise Security - Supports and enhances business operations through the management of risks which derive from physical and cyber security and business continuity-related vulnerabilities. The group develops facility focused solutions, within an established corporate framework of standardized technologies, methodologies, integrators, programs, policies, and practices. The group operates and manages an Integrated Operation Center and monitors security alarms enterprise-wide and supports the business in the response to emergencies and events.</p>

Tennessee American Water Company
Description of Service Company Services

Health and Safety - Provides strategy development; technical support; enterprise safety program design, development and implementation; safety, health and training practice development; Service Company Cost Accounting Manual 29 incident investigations with corrective action recommendations; monitoring of regulatory compliance requirements; and industry best practices for occupational health and safety.

Facilities – Provides facility management services for owned and leased buildings. This includes administering facility and space planning and utilization, developing and administering capital and expense budgets for facilities, negotiating and administering leases, completing large scale fit outs of office space, housekeeping, utilities, receptionist, mail distribution, reprographics, and related functions in addition to providing direction and capital program management to other Service Company locations. Facilities are also responsible for procuring and overseeing maintenance such as landscaping, snow removal, electrical, HVAC, and other building repairs, as well as building upgrades and building related capital costs.

Operational Excellence - Provides affiliates with support and guidance with the development of operating procedures to ensure regulatory compliance and to promote the efficient operation of public utility companies. Enterprise support & guidance over Production Asset & Work Management, T&D Asset & Work Management, Field Operations (FSR) Work Management and Operational Support, Metering Operations and Operational Business Performance Reporting.

Supply Chain - Provides affiliates with support, guidance and coordination of procurement, supplier management, supplier diversity and development, inventory management and asset disposition; and manages certain vendor relationships for affiliates. Supply chain services include traditional procurement activities, such as sourcing and contracting, as well as assisting the affiliates in analyzing and implementing cost reduction opportunities and managing supply chain related risk components.

Source: American Water Works Service Company, Inc. Cost Allocation Manual (July 2023)

V – Question 2 – Similarity of Service Company Services

Services Provided by Other Service Companies

Service companies owned by the following 22 utility holding companies filed a Form 60 with the FERC for 2022:

AES Corporation	Eversource Energy
Algonquin Power & Utilities Corporation	Exelon Corporation
Alliant Energy Corporation	FirstEnergy Corporation
Ameren Corporation	National Grid PLC
American Electric Power Corporation	NiSource Inc.
Avangrid, Inc.	PPL Corporation
Black Hills Corporation	PNM Resources, Inc.
CenterPoint Energy, Inc.	Southern Company
Dominion Energy, Inc.	Unitil Corporation
Duke Energy Corporation	WEC Energy Group, Inc.
Entergy Corporation	Xcel Energy Inc.

Source: FERC Form 60

The 2022 Form 60 for service companies of 20 holding companies contains information on the services each offers affiliates. That information was analyzed and table below was prepared to compare the Service Company's services to those of the other service companies. The table shows that the Service Company's A&G services are provides a similar set of services to those provided by other utility service companies.

A&G Service Categories	AWWSC	AEP	AES	Algonquin	Alliant	Ameren	Avangrid	Black Hills	Dominion	Duke	Entergy	Eversource	Exelon	FirstEnergy	National Grid	NiSource	PPL	Southern Co	Unitil	WEC	Xcel
Executive/Management	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Corporate Planning and Budgeting	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X			X
Legal	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X
Corporate/External Affairs	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Human Resources	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Financial Services																					
Finance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accounting	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Taxes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Investor Relations	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X		X	X
Corporate Risk Management	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X		X		X
Audit Services	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X			X	X
Rates and Regulatory Affairs	X	X	X		X		X	X	X	X	X		X	X	X	X	X	X	X	X	X
Customer Service	X	X	X		X			X	X	X	X	X	X	X	X	X	X		X	X	X
Information Technology	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Environment and Safety	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X
Supply Chain	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X
Other (A)	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
Total Services	17	17	16	15	17	15	16	16	17	17	15	16	14	17	16	16	17	13	11	15	17

Note A: includes services such as transportation/fleet, aviation, real estate, facilities and rights of way.

Source: FERC Form 60 (2022); company information; Baryenbruch & Company, LLC, analysis

TAWC's Service Company CS/A&G Cost per Customer

During 2023, TAWC was charged \$84 per customer by the Service Company for CS/A&G-related services. The calculation of this amount, shown in the table below, starts with total Service Company charges and adjusts for capital and non-CS/A&G function (e.g., engineering, operations and water quality) charges. These adjustments are necessary to develop a per-customer cost that can be compared to the cost of the utility service company comparison group.

	2023
Total Service Company charges	\$ 11,224,507
Less: Capital charges	\$ (3,149,197)
Less: Non-A&G charges	
Engineering	\$ (70,586)
Operations	\$ (584,465)
Water Quality	\$ (71,276)
A&G Service Company Charges	\$ 7,348,984
TAWC Customer Count	87,099
TAWC A&G SC Charges per Customer	\$ 84

Source: Company information

As shown below, Service Company CS/A&G-related charges comprise 52% of TAWC's total CS/A&G expenses (those incurred directly by TAWC and those charged to it by the Service Company).

	2023
Service Company Cust Service and A&G Charges	\$ 7,348,984
Total TAWC Cust Service and A&G Expenses	\$14,191,728
Percent of Service Co Charges	52%

Source: Company information; Baryenbruch & Company, LLC, analysis

Comparison Group Cost Per Customer

Every centralized service company in a holding company system subject to regulation by the FERC must file a Form 60 in accordance with the Public Utility Holding Company Act of 2005, Section 1270, Section 390 of the Federal Power Act, and Section 18 Code of Federal Regulations paragraph 366.23. Form 60 is designed to collect financial information from service companies within a holding company structure.

Charges to utility affiliates for the comparison group service companies were obtained from Schedule XVI – Analysis of Charges for Service Associate and Non-Associate Companies (p. 303 to 306) of each entity's FERC Form 60. Information from Form 60 Schedule Account 457 – Analysis of Billing – Associate Companies was also used to isolate and eliminate charges to non-regulated affiliates from the cost pool used to calculate CS/A&G expenses per regulated service customer.

For 2022, a Form 60 was filed by service companies associated with 22 utility holding companies. Of these, the 8 shown below have a similar proportion of service company charges/total expenses for CS/A&G expenses. On average, CS/A&G-related charges from affiliate service companies represented an average of 45% of the comparison group's total CS/A&G expenses. The comparison group is shown in the table below.



VI – Question 3 – Reasonableness of Service Company Charges

Comparison Group (2022)	Service Company CA/A&G Charges as a Percent of Total CA/A&G Expenses
FirstEnergy Corporation	29%
Avangrid, Inc.	35%
AES Corporation	35%
Ameren Corporation	36%
Xcel Energy Inc.	46%
Dominion Energy, Inc.	52%
Southern Company	63%
American Electric Power Corporation	65%
Comparison Group Average	45%
TAWC (2023)	52%

Source: FERC Form 60, Form 1; Company information;
Baryenbruch & Company, LLC, analysis

FERC Form 60 shows service company charges to affiliates by FERC account. The table below shows a list of FERC CS/A&G accounts and designates which correspond to services the Service Company provides to TAWC. Amounts in the designated FERC accounts are included in the calculation of service company CS/A&G expenses per regulated customer.

FERC Account	Included In Cost Calculation
901 - Supervision	
902 - Meter Reading Expenses	
903 - Customer Records and Collection Expenses	X
904 - Uncollectible Accounts	
905 - Miscellaneous Customer Accounts Expenses	X
907 - Supervision	
908 - Customer Assistance Expenses	
909 - Informational And Instructional Advertising Expenses	
910 - Miscellaneous Customer Service And Info Exp	X
911 - Supervision	
912 - Demonstrating and Selling Expenses	
913 - Advertising Expenses	
916 - Miscellaneous Sales Expenses	
920 - Administrative and General Salaries	X
921 - Office Supplies and Expenses	X
923 - Outside Services Employed	X
924 - Property Insurance	X
925 - Injuries and Damages	
926 - Employee Pensions and Benefits	X (A)
928 - Regulatory Commission Expenses	
930.1 - General Advertising Expenses	
930.2 - Miscellaneous General Expenses	X
931 - Rents	X
935 - Maintenance of Structures and Equipment	X

Note A: Only the A&G-related portion is included in the cost pool

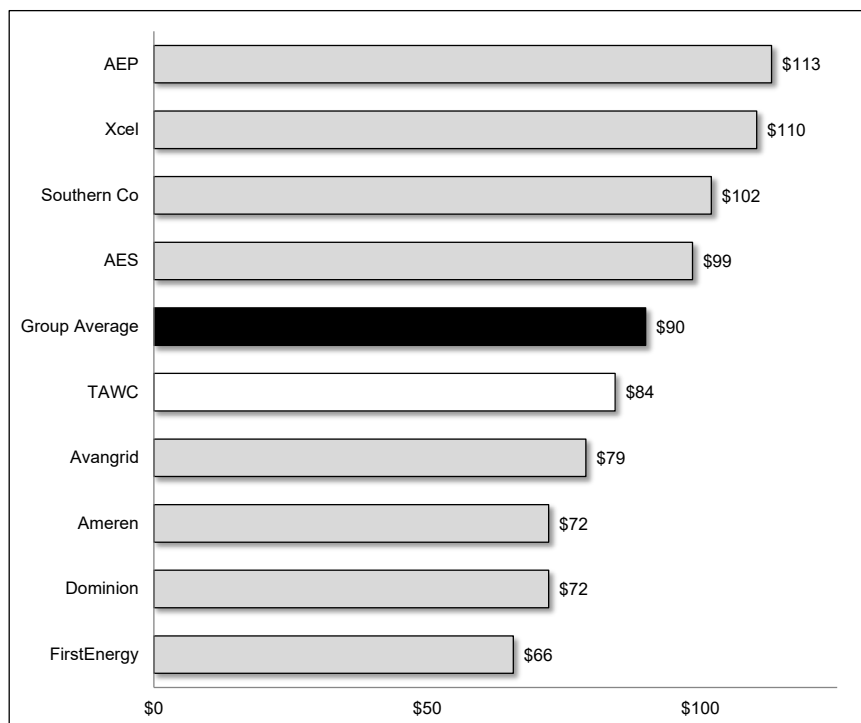
VI – Question 3 – Reasonableness of Service Company Charges

The CS/A&G expenses per regulated utility customer for the comparison group are calculated in the table below.

Utility Company	2022 Regulated Retail Service Company A&G Expenses	Regulated Retail Customers	Cost per Customer
AEP	\$632,784,802	5,600,000	\$ 113
AES	\$104,032,443	1,056,000	\$ 99
Ameren	\$238,336,754	3,300,000	\$ 72
Avangrid	\$260,799,910	3,300,000	\$ 79
Dominion	\$505,419,692	7,000,000	\$ 72
FirstEnergy	\$394,543,088	6,000,000	\$ 66
Southern Co	\$894,885,151	8,775,000	\$ 102
Xcel	\$650,580,582	5,900,000	\$ 110
Total/Average	\$3,681,382,422	40,931,000	\$ 90

Source: FERC Form 60; Baryenbruch & Company, LLC, analysis

The chart below shows TAWC's 2023 Service Company charges per customer of \$84 are not only consistent with the cost per customer for comparison group service companies, but they are actually lower than the 2022 average of \$90 per customer. Four of the eight comparison group service companies had higher 2022 per-customer CS/A&G charges than TAWC's 2023 charges from the Service Company. Based on this result, it is possible to conclude that the Service Company's charges to TAWC are reasonable.



Source: Company information; 2022 FERC Form 60; Baryenbruch & Company, LLC, analysis

Methodology

There are several ways by which to evaluate the pricing of affiliate transactions involving services provided by a nonregulated affiliate to a regulated utility. One basis is provided by the National Association of Regulatory Commission's (NARUC) guidelines for cost allocations and affiliate transactions, which states:

2. Generally, the price for services, products and the use of assets provided by a non-regulated affiliate to a regulated affiliate should be at the lower of fully allocated cost or prevailing market prices. Under appropriate circumstances, prices could be based on incremental cost, or other pricing mechanisms as determined by the regulator.

Source: "Guidelines for Cost Allocations and Affiliate Transactions," National Association of Regulatory Utility Commissioners <https://pubs.naruc.org/pub.cfm?id=539BF2CD-2354-D714-51C4-0D70A5A95C65>

The lower-of-cost-or-market comparison is accomplished by comparing the cost per hour for Service Company managerial and professional services to those of outside service providers to whom these duties could be assigned. Based on the nature of the Service Company services, it was determined that the following outside providers could perform the categories of services indicated below:

- Management Consultants – executive and administrative management, risk management, human resources and communications services
- Attorneys – legal services
- Certified Public Accountants – accounting, financial, rates and regulatory services
- IT Professionals – information technology services
- Professional Engineers – engineering, operations and water quality services.

Service Company's hourly rates were calculated for each of the five outside service provider categories, based on the dollars and hours charged to TAWC during 2023. Hourly billing rates for outside service providers were developed using third party surveys or directly from information furnished by outside providers themselves.

It should be noted that by using the Service Company's hours charged to TAWC during 2023, its hourly rates are overstated because some Service Company personnel charge a maximum of 8 hours per day even when they work more. Outside service providers generally bill for every hour worked. If all overtime hours of Service Company personnel had been factored into the hourly rate calculation, Service Company hourly rates would have been lower.

The last step in the lower-of-cost-or-market comparison was to compare the Service Company's average cost per hour to the average cost per hour for outside providers.

Service Company Hourly Rates

Exhibit 4 (page 23) analyzes the assignment of 2023 management and professional Service Company charges by outsider provider category. Exhibit 5 (page 24) shows the same assignment for Service Company management and professional hours charged to TAWC during 2023 (these hours do not include vacation, holiday, sick time).

VII – Question 4 – Provision of Services at the Lower of Cost or Market

Adjustments to these dollar amounts were necessary to calculate Service Company hourly rates that are directly comparable to those of outside providers. Adjustments were made to the following non-labor Service Company charges for 2023:

- **Contract Services** – 2023 Service Company charges to TAWC include expenses associated with the use of outside professional firms to perform certain enterprise-wide services (e.g., legal, financial audit, actuarial services). These professional fees are excluded from the Service Company hourly rate calculation because the related services have effectively been out-sourced already.
- **IT Infrastructure Expenses** – Included in 2023 Service Company charges to TAWC are leases, maintenance fees and depreciation related to American Water's enterprise computing and network infrastructure and business applications. An outside provider that takes over operation of this infrastructure would recover these expenses over and above the cost of personnel necessary to operate the data center.
- **Travel Expenses** – In general, client-related travel expenses incurred by outside service providers are not recovered through their hourly billing rates. Rather, actual out-of-pocket travel expenses are billed to clients in addition to fees for professional services. Thus, it is appropriate to remove these Service Company charges from the hourly rate calculation.
- **Other Expenses** – These are corporate expenses such current and deferred income tax expense, line-of-credit fees and board expenses. These are ancillary to the provision of services by Service Company personnel and have been excluded.

Exhibit 6 (page 25) shows how contract services, travel expenses, IT infrastructure and non-service-related Service Company charges are assigned to the five outside provider categories.

Based on the assignment of expenses and hours shown in Exhibits 4 and 5 and the excludable items shown in Exhibit 6, the Service Company's equivalent costs per hour for 2023 are calculated below.

	2023 Service Company Hourly Rates					
	Attorney	Management Consultant	Certified Public Accountant	IT Professional	Professional Engineer	Total
Total management, professional & technical services charges	\$ 557,830	\$ 2,343,451	\$ 1,410,898	\$ 3,767,688	\$ 423,038	\$ 8,502,904
Less: Exclusions						
Contract services	\$ 35,654	\$ 190,668	\$ 135,627	\$ 1,783,363	\$ 11,056	\$ 2,156,368
IT infrastructure expenses	\$ 3	\$ 187,200	\$ 36	\$ 839,272	\$ 14	\$ 1,026,525
Travel expenses	\$ 48,134	\$ (18,489)	\$ 20,284	\$ 11,777	\$ 32,069	\$ 93,774
Other expenses	\$ 5,782	\$ 40,181	\$ 18,314	\$ 15,263	\$ 20,245	\$ 99,786
Total Exclusions	\$ 89,574	\$ 399,560	\$ 174,261	\$ 2,649,674	\$ 63,384	\$ 3,376,453
Net Service-Related Charges (A)	\$ 468,257	\$ 1,943,891	\$ 1,236,636	\$ 1,118,013	\$ 359,654	\$ 5,126,451
Total Hours (B)	2,214	8,829	12,428	10,292	3,433	37,195
Average Hourly Rate (A / B)	\$ 212	\$ 220	\$ 100	\$ 109	\$ 105	

Tennessee American Water Company, Inc.
2023 Service Company Charges by Location and Function

Group	Function	2023 Service Company Charges					
		Attorney	Management Consultant	Certified Public Accountant	IT Professional	Professional Engineer	Total
Belleville Lab	Water Quality	\$ -	\$ -	\$ -	\$ -	\$ 71,276	\$ 71,276
Customer Service	Human Resources	\$ -	\$ 168	\$ -	\$ -	\$ -	\$ 168
Corporate	Accounting	\$ -	\$ -	\$ 625,505	\$ -	\$ -	\$ 625,505
	Administration	\$ -	\$ 937,769	\$ -	\$ -	\$ -	\$ 937,769
	Audit	\$ -	\$ -	\$ 115,130	\$ -	\$ -	\$ 115,130
	Business Development	\$ -	\$ 74,080	\$ -	\$ -	\$ -	\$ 74,080
	Communications	\$ -	\$ 148,049	\$ -	\$ -	\$ -	\$ 148,049
	Engineering	\$ -	\$ -	\$ -	\$ -	\$ 346,535	\$ 346,535
	External Affairs	\$ -	\$ 529	\$ -	\$ -	\$ -	\$ 529
	Finance	\$ -	\$ 12,024	\$ 186,835	\$ -	\$ -	\$ 198,859
	Human Resources	\$ -	\$ 590,625	\$ -	\$ -	\$ -	\$ 590,625
	Information Technology	\$ -	\$ -	\$ -	\$ 42,717	\$ -	\$ 42,717
	Legal	\$ 403,300	\$ -	\$ -	\$ -	\$ -	\$ 403,300
	Operations	\$ -	\$ 259,904	\$ -	\$ -	\$ -	\$ 259,904
	Supply Chain	\$ -	\$ -	\$ 203,838	\$ -	\$ -	\$ 203,838
Regional Offices	Administration	\$ -	\$ 293,929	\$ -	\$ -	\$ -	\$ 293,929
	Business Development	\$ -	\$ (118)	\$ -	\$ -	\$ -	\$ 118
	Engineering	\$ -	\$ -	\$ -	\$ -	\$ 5,227	\$ 5,227
	External Affairs	\$ -	\$ 335	\$ -	\$ -	\$ -	\$ 335
	Finance	\$ -	\$ -	\$ 275,878	\$ -	\$ -	\$ 275,878
	Human Resources	\$ -	\$ 2,546	\$ -	\$ -	\$ -	\$ 2,546
	Legal	\$ 154,530	\$ -	\$ -	\$ -	\$ -	\$ 154,530
	Operations	\$ -	\$ 23,610	\$ -	\$ -	\$ -	\$ 23,610
Information Technology	Rates & Regulatory	\$ -	\$ -	\$ 3,712	\$ -	\$ -	\$ 3,712
	Information Technology	\$ -	\$ -	\$ -	\$ 3,724,970	\$ -	\$ 3,724,970
Total Dollars Charged		\$ 557,830	\$ 2,343,451	\$ 1,410,898	\$ 3,767,688	\$ 423,038	\$ 8,502,904

Source: Company information; Baryenbruch & Company, LLC, analysis

Tennessee American Water Company, Inc.
2023 Service Company Hours by Location and Function

Group	Function	2023 Service Company Hours					Total
		Attorney	Management Consultant	Certified Public Accountant	IT Professional	Professional Engineer	
Belleville Lab	Water Quality	-	-	-	-	550	550
Customer Service	Human Resources	-	-	-	-	-	-
Corporate	Accounting	-	-	5,900	-	-	5,900
	Administration	-	457	-	-	-	457
	Audit	-	-	483	-	-	483
	Business Development	-	371	-	-	-	371
	Communications	-	792	-	-	-	792
	Engineering	-	-	-	-	2,883	2,883
	External Affairs	-	-	-	-	-	-
	Finance	-	194	2,139	-	-	2,332
	Human Resources	-	4,013	-	-	-	4,013
	Information Technology	-	-	-	395	-	395
	Legal	1,013	-	-	-	-	1,013
	Operations	-	952	-	-	-	952
	Supply Chain	-	-	1,844	-	-	1,844
Regional Offices	Administration	-	1,872	-	-	-	1,872
	Business Development	-	-	2,021	-	-	2,021
	Engineering	-	-	-	-	-	-
	External Affairs	-	-	-	-	-	-
	Finance	-	-	-	-	-	-
	Human Resources	-	2	-	-	-	2
	Legal	1,201	-	-	-	-	1,201
	Operations	-	176	-	-	-	176
Information Technology	Rates & Regulatory	-	-	40	-	-	40
	Information Technology	-	-	-	9,897	-	9,897
Total Hours Charged		2,214	8,829	12,428	10,292	3,433	37,195

Source: Company information; Baryenbruch & Company, LLC, analysis

Tennessee American Water Company, Inc.
2023 Service Company Charges Excludable from the Hourly Rate Calculation

Group	Exclusions From Hourly Rate Calculation					Outside Service Provider Category
	Contract Services	Enterprise IT Expenses	Travel Expenses	Other Expenses	Total	
Accounting	\$ 68,006	\$ 26		\$ 8,145	\$ 76,176	Certified Public Accountant
Administration	\$ 80,410	\$ 187,200	\$ (27,866)	\$ 28,230	\$ 267,974	Management Consultant
Audit	\$ 28,905		\$ 4,541	\$ 1,580	\$ 35,025	Certified Public Accountant
Business Development	\$ 2,363		\$ 2,829	\$ 1,614	\$ 6,805	Management Consultant
Communications	\$ 17,780			\$ 1,169	\$ 18,949	Management Consultant
Engineering	\$ 7,142	\$ 14	\$ 3,227	\$ 13,898	\$ 24,281	Professional Engineer
External Affairs				\$ (5)	\$ (5)	Management Consultant
Finance	\$ 34,491		\$ 15,743	\$ 5,474	\$ 55,708	Certified Public Accountant
Human Resources	\$ 90,116		\$ 6,547	\$ 9,173	\$ 105,836	Management Consultant
Information Technology	\$ 1,783,363	\$ 839,272	\$ 11,777	\$ 15,263	\$ 2,649,674	IT Professional
Legal	\$ 35,654	\$ 3	\$ 48,134	\$ 5,782	\$ 89,574	Attorney
Operations	\$ 6,618		\$ 7,291	\$ 6,080	\$ 19,988	Professional Engineer
Rates & Regulatory	\$ 12	\$ 10		\$ 36	\$ 58	Certified Public Accountant
Supply Chain	\$ 4,214			\$ 3,080	\$ 7,294	Certified Public Accountant
Water Quality	\$ (2,704)		\$ 21,551	\$ 267	\$ 19,114	Professional Engineer
Total	\$ 2,156,368	\$ 1,026,525	\$ 93,774	\$ 99,786	\$ 3,376,453	

Recap By Outside Provider	Exclusions From Hourly Rate Calculation				
	Contract Services	Enterprise IT Expenses	Travel Expenses	Other Expenses	Total
Attorney	\$ 35,654	\$ 3	\$ 48,134	\$ 5,782	\$ 89,574
Management Consultant	\$ 190,668	\$ 187,200	\$ (18,489)	\$ 40,181	\$ 399,560
Certified Public Accountant	\$ 135,627	\$ 36	\$ 20,284	\$ 18,314	\$ 174,261
IT Professional	\$ 1,783,363	\$ 839,272	\$ 11,777	\$ 15,263	\$ 2,649,674
Professional Engineer	\$ 11,056	\$ 14	\$ 32,069	\$ 20,245	\$ 63,384
Total	\$ 2,156,368	\$ 1,026,525	\$ 93,774	\$ 99,786	\$ 3,376,453

Outside Service Provider Hourly Rates

The next step in the lower-of-cost-or-market comparison is to obtain the average billing rates for outside service providers. The source of this information and the determination of the average rates are described in the paragraphs that follow.

It should be noted that professionals working for three of the five outside provider categories may be licensed to practice by state regulatory bodies. However, not every professional working for these firms is licensed. For instance, among US certified public accounting firms, only more experienced staff are predominantly licensed CPAs (see table below). Some Service Company employees also have professional licenses. Thus, it is valid to compare the Service Company's hourly rates to those of the outside professional service providers included in this study.

Position	US Average
Partners/Owners	98%
Directors (11+ years experience)	87%
Managers (6-10 years experience)	79%
Sr Associates (4-5 years experience)	50%
Associates (1-3 years experience)	22%
New Professionals	10%

Source: AICPA's National PCPS/TSCPA Management of an Accounting Practice Survey (2010)

Attorneys

An estimate of Tennessee attorney billing rates is developed from actual rates compiled by Clio, a practice management service provider to law firms. The 2023 average rate of relevant practice areas is calculated in Exhibit 7 (page 28).

Management Consultants

The cost per hour for management consultants is developed from a survey performed by Rodenhauer & Company, LLC, a research company that monitors the consulting industry. The survey includes rates that were in effect during 2022 for firms throughout the United States. Consultants typically do not limit their practice to any one region and must travel to a client's location. Thus, the U.S. national average is appropriate for comparison.

The first step in the calculation, presented in Exhibit 8 (page 29), is to determine an average rate by consultant position level. From these rates, a single weighted average hourly rate is calculated based upon the percentage of time that is typically applied to a consulting assignment by each consultant position level. This survey covered hourly rates in effect during 2022. The calculated average rate is escalated to June 30, 2023—the midpoint of the 2023.

Certified Public Accountants

The average hourly rate for Illinois certified public accountants was developed from a 2023 survey conducted by the American Institute of Certified Public Accountants (AICPA) every two years. The national average hourly rate was calculated for a range of accountant positions and adjusted for cost-of-living differences with Chattanooga, Tennessee, as shown in Exhibit 9 (page 30). Based on a typical staff assignment by each accountant position, a weighted average hourly rate was calculated. This survey covered hourly rates in effect during 2022. The calculated average rate is escalated to June 30, 2023—the midpoint of Test Year 2023.

Information Technology Professionals

The average hourly rate for information technology contractors and consultants during the 2023 Historical Period was developed from two sources: The Service Company's IT contractor rates and a survey performed by Rodenhauser & Company, LLC, for IT consultants. As shown in Exhibit 10 (page 31), that data was compiled and a weighted average was calculated based on a percent of time that is typically applied to an IT consulting assignment, based on Baryenbruch & Company, LLC's, experience.

Professional Engineers

TAWC and the Service Company provided hourly rate information for outside engineering firms that provided their rate schedules. As presented in Exhibit 11 (page 32), an average rate was developed for each engineering position level. Then, using the Service Company's percentage mix by engineering position, a weighted average cost per hour was calculated.

Tennessee American Water Company, Inc.
Hourly Billing Rates for Attorneys

Average Billing Rates - Tennessee (2023)

Practice Area	Average Hourly Rate (A)	
	Lawyer	Non-Lawyer
Administrative	\$ 300	
Appellate	\$ 319	
Bankruptcy	\$ 323	
Business	\$ 303	
Civil Litigation	\$ 283	
Collections	\$ 314	
Commercial/Sale of Goods	\$ 302	
Construction	\$ 321	
Contracts	\$ 288	
Corporate	\$ 323	
Employment/Labor	\$ 326	
Intellectual Property	\$ 369	
Mediation/Arbitration	\$ 295	
Real Estate	\$ 316	
Tax	\$ 349	
Average Hourly Rate	\$ 315	\$ 127

Lawyer/Non-Lawyer SC Hours	Lawyer	Non-Lawyer	Total
2023 Hours	1,567	647	2,214
Percent of Hours	70.8%	29.2%	100.0%
Weighted Average			
Percent x Hourly Rate	\$ 223	\$ 37	\$ 260

Note A: Source is Themis Solutions Inc. (Clio)



Tennessee American Water Company, Inc.
Hourly Billing Rates of U.S. Management Consultants

Survey billing rates in effect in 2022 (A)					
A. Calculation of Average Hourly Billing Rate by Consultant Position					
Average	Average Hourly Rates (Note A)				
	Analyst Consultant	Associate	Sr. Assoc/ Manager	Principal	Partner
	\$ 247	\$ 299	\$ 366	\$ 553	\$ 688
B. Calculation of Overall Average Hourly Billing Rate Based on a Typical Distribution of Time on an Engagement					
Average Hourly Billing Rate (from above)	Entry-Level Consultant	Associate Consultant	Senior Consultant	Junior Partner	Senior Partner
	\$ 247	\$ 299	\$ 366	\$ 553	\$ 688
Percent of Consulting Assignment	30%	30%	25%	10%	5%
	\$ 74	\$ 90	\$ 91	\$ 55	\$ 34
					Weighted Average
					\$ 345
Escalation to Test Period Midpoint (June 30, 2023)					
CPI at December 31, 2022					296.8
CPI at June 30, 2023					305.1
Inflation/Escalation (B)					2.8%
Average Hourly Billing Rate For Management Consultants At June 30, 2023					\$ 355

Note A: Source is Rodenhauser & Company LLC; Baryenbruch & Company, LLC, analysis

Note B: Source is U.S. Bureau of Labor Statistics (<https://data.bls.gov/cgi-bin/surveymost>)

Tennessee American Water Company, Inc.
Hourly Billing Rates of Certified Public Accountants

A. Calculation of Average Hourly Billing Rate by Public Accounting Position Survey billing rates were those in effect in 2022 (Note A)				
Average Hourly Billing Rate by CPA Firm Position	Average Hourly Billing Rate (A)			
	Staff Accountant	Senior Accountant	Manager	Partner
	\$ 119	\$ 158	\$ 233	\$ 331
Percent of Accounting Assignment	30%	30%	20%	20%
	\$ 36	\$ 47	\$ 47	\$ 66
				Weighted Average
				\$ 196
National Average Hourly Billing Rate (above)				\$ 196
Cost of Living Adjustment				
COL Index for Chattanooga, Tennessee (B)				93.1
Average COL Index				100.0
Adjustment Percentage				93.1%
Cost of Living Adjusted 2022 Hourly Rate				\$ 183
Escalation to 2023 Midpoint (June 30, 2023)				
CPI at December 31, 2022				296.8
CPI at June 30, 2023				305.1
Inflation/Escalation (C)				2.8%
Average Hourly Billing Rate For CPAs At June 30, 2023				\$ 188

Note A: Source is AICPA's 2022 National PCPS/TSCPA Management of an Accounting Practice Survey

Note B: Source is Cost of Living Index, Source Council for Community and Economic Research

Note C: Source is U.S. Bureau of Labor Statistics (<https://data.bls.gov/cgi-bin/surveymost>)



Tennessee American Water Company, Inc.
Hourly Billing Rates for Information Technology Professionals

A. Calculation of Average Hourly Billing Rate by Information Technology Position Survey billing rates were those in effect during 2023						
Average Hourly Billing Rate (A)						
Contractor Positions		Consultant Positions				
	Senior					
Average Hourly Billing Rate by IT Position Category	Contractor	Contractor	Associate	Manager	Partner	
	\$ 100	\$ 144	\$ 274	\$ 351	\$ 418	
Percent of IT Assignment	25%	25%	25%	15%	10%	Weighted Average
	\$ 25	\$ 36	\$ 69	\$ 53	\$ 42	\$ 224
Average Hourly Billing Rate For IT Professionals During 2023						\$ 224

Note A: Source is American Water Works Service Company, Rodenhauser & Company, LLC, and Baryenbruch & Company, LLC



Tennessee American Water Company, Inc.
Hourly Billing Rates of Professional Engineers

A. Calculation of Average 2023 Hourly Rate by Engineer Position (A)

Name of Firm	Average Hourly Billing Rates			
	Technician	Engineer	Project Manager	Officer
	Senior Technician	Design Engineer Project Engineer	Sr. Mgr. Engineer	Principal Engineer
Firm #1	\$108	\$151	\$199	\$261
Firm #2	\$90		\$170	\$300
Firm #3	\$98	\$117	\$165	\$210
Firm #4	\$99	\$123	\$171	\$200
Firm #5	\$100	\$125	\$180	\$210
Firm #6	\$71	\$127	\$168	\$210
Firm #7	\$105	\$156	\$195	\$236

B. Calculation of Overall Average Engineering Hourly Billing Rate

	Technician	Engineer	Project Manager	Officer	
	Senior Technician	Design Engineer Project Engineer	Sr. Mgr. Engineer	Principal Engineer	
Average Hourly Billing Rate (From Above)	\$96	\$133	\$178	\$233	
Typical Percent of Time on an Engineering Assignment	13%	31%	46%	10%	Weighted Average
	\$13	\$41	\$81	\$24	\$159

Note A: Source is American Water Service Company information.

Service Company Versus Outside Provider Cost Comparison

As shown in the table below, Service Company costs per hour are considerably lower than those of outside providers.

Service Provider	2023		
	Service Company	Outside Provider	Difference-- Service Co. Greater(Less) Than Outside
Attorney	\$ 212	\$ 260	\$ (48)
Management Consultant	\$ 220	\$ 355	\$ (135)
Certified Public Accountant	\$ 100	\$ 188	\$ (88)
IT Professional	\$ 109	\$ 224	\$ (115)
Professional Engineer	\$ 105	\$ 159	\$ (54)

Source: Company information; Baryenbruch & Company, LLC, analysis

Based on these cost-per-hour differentials and the number of managerial and professional services hours billed to TAWC during 2023, outside service providers would have cost \$3,760,813 more than the Service Company (see table below). Thus, on average, outside providers' hourly rates are 73% higher than those of the Service Company (\$3,760,813 / \$5,126,461).

Service Provider	2023		
	Hourly Rate Difference-- Service Co. Greater(Less) Than Outside	Service Company Hours Charged	Dollar Difference
Attorney	\$ (48)	2,214	\$ (106,272)
Management Consultant	\$ (135)	8,829	\$ (1,191,915)
Certified Public Accountant	\$ (88)	12,428	\$ (1,093,664)
IT Professional	\$ (115)	10,292	\$ (1,183,580)
Professional Engineer	\$ (54)	3,433	\$ (185,382)
Service Company Less Than Outside Providers			\$ (3,760,813)

Source: Company information; Baryenbruch & Company, LLC, analysis

It bears repeating that the cost differential associated with using outside providers is even greater because exempt Service Company personnel do not charge more than eight hours per day even when they work more. Outside providers generally charge clients for all hours worked. Thus, TAWC would have been charged by outside providers for overtime worked by Service Company personnel who are not paid for that time.

It should be noted that outside providers could possibly offer a discount on their hourly rates in return for the large amount of work associated with Service Company services. However, this discount would be offset by the need for TAWC to add staff to administer commercial relationships and provide direction, guidance and feedback to the outside service providers. The workload associated with the Service Company's 2023 charges represents an outside provider staff of 21 full-time equivalents (FTE) (37,195 outside provider hours / 1,800 hours per FTE). To ensure that outsourcing on this scale would work, TAWC would have to maintain additional staff to ensure outside providers perform their assigned work assignments in a timely and effective manner.

Based on the results of this comparison, it is possible to conclude that the Service Company charged TAWC at the lower of cost or market for services provided during 2023.

VIII – Question 5 – Necessity of Service Company Services

The assessment determines whether the services provided to TAWC by the Service Company would be necessary if TAWC were not part of the American Water organization. The first step in this evaluation was to determine specifically what the Service Company does for TAWC. Based on discussions with Service Company personnel, the matrix in Exhibit 12 (pages 35-37) was created showing which entity—TAWC or a Service Company location—is responsible for each of the functions TAWC requires to ultimately provide service to its customers. This matrix was reviewed to determine: (1) if there is redundancy or overlap in the services being provided by the Service Company and (2) if Service Company services are typical of those needed by a water utility.

Upon review of Exhibit 12, the following conclusions can be drawn:

- The services that the Service Company provides are necessary and are required for water and wastewater utilities. These services are customarily provided by service companies of other utility holding companies.
- There is no redundancy or overlap in the services provided by the Service Company to TAWC. For all the services listed in Exhibit 12, there is only one entity that is primarily responsible for the service.

Tennessee American Water Company, Inc.
Designation of Responsibility for Water Utility Functions

P - Primarily Responsible S - Provides Support	TAWC	Performed By:			
		American Water Service Company			
		Customer Call Center	Other Service Company	IT Service Centers	Central Lab
Water Company Function					
Engineering and Construction Management					
CPS Preparation	S		P		
Five-Year System Planning	P		S		
Engineering Standards & Policies Development			P		
Project Design					
Major Projects (e.g., new treatment plant)	P		S		
Special Projects	P		S		
Minor Projects (e.g., pipelines)	P				
Construction Project Management					
Major Projects	P		S		
Special Projects	P				
Minor Projects	P				
Hydraulics Review	P		S		
Developers Extensions	P				
Tank Painting	P		S		
Water Quality and Purification					
Water Quality Standards Development	P (1)		S (1)		S
Research Studies	S		P		S
Water Quality Program Implementation	P		S		S
Water Treatment Operations & Maintenance	P		S		
Compliance Sampling	P				S
Testing/Other Sampling	P (2)				S (2)
Transmission and Distribution					
Preventive Maintenance Program Development	P		S		
System Maintenance	P				
Leak Detection	P				
Customer Service					
Community Relations	P		S		
Customer Contact	S (3)	P (3)			
Call Processing		P			
Service Order Processing	P	S			
Customer Credit	S (4)	P (4)			
Meter Reading	P			S	
Customer Bill Preparation		S		P	
Bill Collection	S	P		S	
Customer Payment Processing	S		P	S	
Meter Standards Development	S		P		
Meter Testing, Maintenance & Replacement	P				

Note 1: TAWC is responsible for State regulations, Service Company responsible for Federal regulations.

Note 2: Shared responsibility between TAWC's in-house laboratories and the Central Lab.

Note 3: TAWC provides in-person and phone customer contact while Service Company call centers provide customer phone contact.

Note 4: TAWC is primary for informal complaints and secondary for dispute resolution.

Tennessee American Water Company, Inc.
Designation of Responsibility for Water Utility Functions

P - Primarily Responsible S - Provides Support	TAWC	Performed By:			
		American Water Service Company			
		Customer Call Center	Other Service Company	IT Service Centers	Central Lab
Water Company Function					
Financial Management					
Financial Planning	P		S		
Financings--Equity	S		P		
Financings--Long Term Debt & Preferred	S (5)		P (5)		
Short Term Lines of Credit Arrangements	S (5)		P (5)		
Investor Relations			P		
Insurance Program Administration			P		
Loss Control/Safety Program Administration	P		S		
Pension Fund Asset Management			P		
Cash Management/Disbursements			P		
Internal Auditing			P		
Budgeting and Variance Reporting					
Corporate Guidelines & Instructions			P		
Regional Guidelines & Instructions			P		
Budget Preparation					
Revenue and O&M	P (6)		S (6)		
Depreciation and Interest Expense	P (6)		S (6)		
Budget Preparation--Service Company Charges	S	S	P	S	S
Capital Budget Preparation—Projects	P		S		
Capital Budget Preparation—Non-Project Work	P		S		
Prepare Monthly Budget Variance Report ("Budget/Plan Analysis")	P		S		
Prepare Capital Project Budget Status Report	P		S		
Year-End Projections	P		S		
Accounting and Taxes					
Accounts Payable Accounting	S		P		
Payroll Accounting	S		P		
Work Order Accounting	S		P		
Fixed Asset Accounting	S		P		
Journal Entry Preparations--Billing Corrections	S		P		
Journal Entry Preparation--All Others	S		P		
Financial Statement Preparation	S		P		
State Commission Reporting	S		P		
Income Taxes--State			P		
Income Taxes--Federal			P		
Property Taxes	S		P		
Gross Receipts (Town) Taxes	S		P		

Note 5: Lines of credit are the responsibility of American Water Capital Corporation ("AWCC"). AWCC is also responsible for Corporate financings which may be distributed to the regulated subsidiaries. TAWC has the ability to issue long term debt.

Note 6: TAWC is responsible for the individual state budget. Service Company is responsible for the consolidated enterprise budget.

Tennessee American Water Company, Inc.
Designation of Responsibility for Water Utility Functions

P - Primarily Responsible S - Provides Support		Performed By:			
		American Water Service Company			
Water Company Function	TAWC	Customer Call Center	Other Service Company	IT Service Centers	Central Lab
Rates					
Rate Studies & Tariff Change Administration	P		S		
Rate Case Planning and Preparation	S		P		
Rate Case Administration	S		P		
Commission Inquiry Response	S		P		
Legal	P		S		
Purchasing and Materials Management – National (pipe, chemicals, meters, etc.)					
Specification Development	S		P		
Bid Solicitation	S		P		
Contract Administration	S		P		
Purchasing and Materials Management – State (state supplier service agreements)					
Specification Development	P		S		
Bid Solicitation	P				
Contract Administration	P		S		
Ordering	P				
Inventory Management	P				
Human Resources Management					
Benefit Program Development			P		
Benefits Program Administration			P		
Management Compensation Administration			P		
Wage & Salary Program Design			P		
Wage & Salary Administration	S		P		
Labor Negotiations--Wages	S		P		
Labor Negotiations--Benefits			P		
Labor Negotiations-- Work Rules	S		P		
Training Program Development	S		P		
Training--Course Delivery	S		P		
Affirmative Action/EEO--Plan Development			P		
Affirmative Action/EEO--Implementation	S		P		
Information Systems Services					
Service Company Data Centers					
System Operations & Maintenance				P	
Software Maintenance				P	
Network Administration	S			P	
PC Acquisition & Support	S			P	
Help Desk				P	

Definition of Governance Practices

Governance practices are internal controls designed to provide assurance that objectives are being achieved relating to operations, reporting and compliance. Among other things, this is achieved through control activities, which are defined as follows:

Control activities are the actions established through policies and procedures that help ensure that management's directives to mitigate risks to the achievement of objectives are carried out. Control activities are performed at all levels of the entity, at various stages within business processes, and over the technology environment.

Source: "Internal Control – Integrated Framework, Executive Summary," Committee of Sponsoring Organizations of the Treadway Commission

Governance Practices Applied to Service Company Charges

Management oversight practices and internal controls exist to ensure that Service Company charges to TAWC are necessary and reasonable. The most important of these are described below.

1. Chief Operating Officer Oversight - The Chief Operating Officer (COO) is on the Executive Leadership Team (ELT) of American Water. This position is responsible for the overall performance of each operating company in American Water. As part of the ELT, the COO participates in the major business decisions of American Water and has the ability to monitor Service Company performance quality and spending. The COO also addresses local concerns with each operating company president.
2. Operating Company Board Oversight – The Tennessee-American board of directors is comprised of members of the Tennessee-American management team. The Tennessee-American board has semi-annual scheduled meetings each year to review and discuss financial, operational and other matters.
3. Tennessee American President Oversight – The Tennessee-American President is responsible for the overall performance of Tennessee-American, and, as such, monitors services and charges received from the Service Company. Tennessee-American's President reports to the Deputy Chief Operating Officer who, in turn, reports to the Chief Operating Officer who has a significant voice in major business decisions that impact the Service Company's quality and cost of services.
4. CFO Operations and Supporting Staff (Finance team) - The Finance team is responsible for monitoring the overall financial performance of Tennessee American. This includes overseeing Tennessee American's financial reporting process, performing revenue and expense analysis, the annual budgeting process, and monitoring internal control performance. Every month, the Finance team performs a detailed expense analysis that includes Service Company charges. Month-to-date actual and year-to-date actual performance is compared against budget and prior period actuals. The Finance team also reviews and investigates monthly Service Company charges based on the results of the team's analytical procedures in order to determine the appropriateness of the charges.
5. Service Company Budget Review/Approval – The Service Company Board of Directors (BOD) formally reviews and approves the budget for Service Company on an annual basis. The Service Company BOD consists of: (a) the AW ELT and (b) key Executive

Management representatives from the Service Company. The Service Company's overall budget is assigned to each operating company, and the operating company consolidates the Service Company charges with its own direct spending to arrive at a total operating company budget. This is presented to the operating company's board of directors (e.g., Tennessee American) for their approval.

6. Major Project Review and Approval – Before major Service Company non-capital projects are undertaken, they must be reviewed and approved by American Water's Executive Leadership Team which includes the Deputy and Chief Operating Officers. The Deputy Chief Operating Officer, with significant input from his direct reports, has the ability to impact all new initiatives and projects before they are authorized. Major non-capital projects and initiatives for the Service Company are approved through the business planning process. As part of the business planning process a technology roadmap of initiatives is developed from American Water's vision, strategy, operational objectives and key business programs. The alignment of these initiatives with enterprise goals is approved by the Executive Leadership Team and key business leaders from various operational and functional areas of American Water. The roadmap is updated annually to produce a rolling roadmap and investment plan.
7. Capital Program Management ("CPM") – CPM covers capital and asset planning and is employed throughout American Water, including Service Company. CPM provides a full range of governance practices, including a formal protocol for assessing system needs, prioritizing expenditures, managing the capital program, approving project spending, delivering projects and measuring outputs. CPM ensures that:
 - Capital expenditure plans are aligned with the strategic intent of the business
 - The impact of capital expenditures is fully reflected in operating expense plans
 - The impacts of these plans on state operating company budgets and operating results are understood
 - Effective controls are in place over budgets (through business plans) and individual capital projects (through appropriate authorization thresholds, management and reporting processes).

The CPM process was designed to optimize the effectiveness of asset investment. The process is managed at two levels for all American Water companies, including all Tennessee-American Operating Units. Monthly meetings of the CPM are held to review capital spending compared to plan, review new project requests and review updates or modifications to existing projects. The Tennessee-American management team participates, as necessary, and provides the data used in the monthly review schedules.

8. Accounting and Financial Reporting – The Service Company follows the same accounting and financial reporting processes as American Water's regulated utilities. At month-end, the Service Company Finance team reviews all transactions and analyzes month to date variance to budget to ensure accuracy before the billing process takes place. Once completed, the Service Company bill is produced and shows the actuals that are directly charged or allocated to the states based on predetermined formulas. At this time, the operating companies may question expenses and spending for better understanding of results. Tennessee American's Finance team reviews the monthly Service Company bill for accuracy and reasonableness on a monthly basis. Any errors or overcharges are corrected on a subsequent billing.
9. Operating Company Budget Variance Analysis – Each month a Service Company Affiliate Billing Analysis Report is prepared and available to operating companies. This report

allows operating companies to monitor their Service Company budget-versus-actual charges for the month and year-to-date.

10. Service Company Budget Variance Analysis - Each function within a Service Company is responsible for reviewing the budget-versus-actual charges for the month and year-to-date. On a monthly basis, Service Company actual results vs budget variances are reviewed with State Presidents as well as the ELT. Key variances by function are presented and discussed.

These are control activities that help ensure that Service Company charges to TAWC are necessary and reasonable.

**BEFORE THE TENNESSEE PUBLIC UTILITY COMMISSION
NASHVILLE, TENNESSEE**

**PETITION OF TENNESSEE-
AMERICAN WATER COMPANY TO
CHANGE AND INCREASE CERTAIN
RATES AND CHARGES**

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DOCKET NO. 24-_____

VERIFICATION

STATE OF NORTH CAROLINA)

COUNTY OF WAKE)

I, PATRICK L. BARYENBRUCH, being duly sworn, state that I am authorized to testify on behalf of Tennessee-American Water Company in the above-referenced docket, that if present before the Commission and duly sworn, my testimony would be as set forth in my pre-filed testimony in this matter, and that my testimony herein is true and correct to the best of my knowledge, information, and belief.

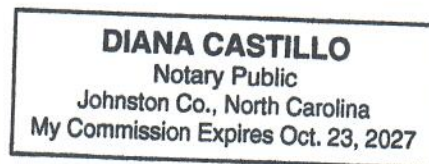


PATRICK L. BARYENBRUCH

Sworn to and subscribed before me
this 26 day of April, 2024.



Notary Public



My Commission Expires: October 23 2027