

Tennessee American Water Company

**1. Q. Please state your name and business address.**

A. Patrick L. Baryenbruch, 302 East Park Drive, Raleigh, North Carolina 27605.

**2. Q. Please describe your educational and professional background.**

A. I received a Bachelors degree in accounting from the University of Wisconsin-Oshkosh in 1974 and a Masters in Business Administration degree from the University of Michigan in 1979.

I am a certified public accountant and am a member of the American Institute of Certified Public Accountants and the North Carolina Association of Certified Public Accountants.

I began my career as a staff accountant with Arthur Andersen & Company where I performed financial audits of utilities, banks and finance companies. After three years I left to pursue an M.B.A. degree. Upon graduation from business school, I worked with the consulting firms of Theodore Barry & Associates and Scott, Madden & Associates.

During my consulting career, I have performed consulting assignments for approximately 50 utilities and 10 public service commissions. I have participated as project manager, lead or staff consultant for 24 commission-ordered management and prudence audits of public utilities. Of these, I have been responsible for evaluating the area of affiliate charges and allocation of corporate expenses in the Commission-ordered audits of Connecticut Light and Power, Connecticut Natural Gas, General Water Corporation (Pennsylvania Operations), Philadelphia Suburban Water Company (now Aqua America), Pacific Gas & Electric Company and Southern California Edison.

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

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**3. Q. What are your duties and responsibilities in your current position?**

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

**4. Q. Please describe the reason for your testimony in this case.**

A. I am presenting the results of my study which evaluated the services provided by American Water Service Company, Inc. ("Service Company") during the 12-months ended June 30, 2006 to Tennessee American Water Company ("TAWC"). This study was undertaken in conjunction with TAWC's rate case and is true to the best of my knowledge and belief. The study is attached as Exhibit PLB-1.

**5. Q. What were the objectives of your study?**

A. This study was undertaken to answer three questions. First, was TAWC charged the lower of cost or market for managerial and professional services provided by the Service Company during the 12-months ended June 30, 2006? Second, were the 12-months ended June 30, 2006 costs of the Service Company's customer accounts services, including those of the National Call Centers, reasonable? Third, are the services TAWC receives from Service Company necessary?

**6. Q. What conclusions were you able to draw concerning question number 1, the economic impact of outsourcing all the services provided by the Service Company?**

A. I was able to draw the following conclusions:

(1) TAWC was charged the lower of cost or market for managerial and professional services during the 12-months ended June 30, 2006.

(2) On average, the hourly rates for outside service providers are 34% higher than the Service Company's hourly rates.

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- (3) The managerial and professional services provided by the Service Company are vital and could not be procured externally by TAWC without careful supervision on the part of TAWC. If these services were contracted entirely to outside providers, TAWC would have to add one position to manage activities of outside firms. This position would be necessary to ensure the quality and timeliness of services provided.
- (4) If all the managerial and professional services now provided by the Service Company had been out-sourced during the 12-months ended June 30, 2006, TAWC and its ratepayers would have incurred an additional \$1.6 million in expenses. This amount includes the higher cost of outside providers and the cost of a TAWC position needed to direct the outsourced work.
- (5) This study's hourly rate comparison actually 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 personnel, on the other hand, charge a maximum 8 per day even when they work more. If the overtime hours of Service Company personnel had been factored into the hourly rate calculation, the Service Company would have had an even greater annual dollar advantage than the \$1.6 million cited above.
- (6) It would be difficult for TAWC to find local service providers with the same specialized water industry expertise as that 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 is most likely unavailable from local service providers.

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(7) Service Company fees do not include any profit markup. Only its actual cost of service is being recovered from TAWC ratepayers.

**7. Q. What is your conclusion regarding the reasonableness of the costs of the National Call Center that provides service to TAWC?**

A. I was able to determine that the cost of the Service Company's customer accounts services, including those provided by the National Call Center, is below the average of the comparison group of neighboring electric utilities. As will be explained further herein, this group of companies provides a reasonable proxy group for comparison to a regulated utility of the size and scope of TAWC. During the 12-months ended June 30, 2006, the customer accounts cost for TAWC customers was \$28.32 compared to the 2005 average of \$31.73 for neighboring electric utilities. The highest comparison group 2005 per customer cost was \$65.51 and the lowest \$12.61.

**8. Q. What conclusions were you able to draw concerning the necessity of the services TAWC receives from the Service Company?**

A. I was able to draw the following conclusions:

- (1) The services that the Service Company provides are necessary and would be required even if TAWC were a stand-alone water utility.
- (2) There is no redundancy or overlap in the services provided by the Service Company to TAWC. For all of the services listed in Schedule 10 of my report, there was only one entity that was primarily responsible for the service.

**9. Q. Does this complete your testimony?**

A. Yes.


**TENNESSEE REGULATORY AUTHORITY**

**STATE OF NORTH CAROLINA**

**COUNTY OF WAKE**

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Patrick L. Baryenbruch, being by me first duly sworn deposed and said that:

He is appearing as a witness on behalf of Tennessee-American Water Company before the Tennessee Regulatory Authority, and if present before the Authority and duly sworn, his testimony would set forth in the annexed transcript consisting of 4 pages.

  
Patrick L. Baryenbruch

Sworn to and subscribed before me  
this 13 day of November 2006.

  
Notary Public

My commission expires 12-17-06.

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**Market Cost Comparison of Service Company Charges  
Provided to Tennessee American Water Company**

**12-Months Ended June 30, 2006**

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**Tennessee American Water Company  
Market Cost Comparison of Service Company Charges  
12-Months Ended June 30, 2006**

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## I - Introduction

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### Purpose Of This Study

This study was undertaken to answer three questions concerning the services provided by American Water Works Service Company, Inc. (Service Company) to Tennessee American Water Company (TAWC):

1. Was TAWC charged the lower of cost or market for managerial and professional services provided by the Service Company during the 12-months ended June 30, 2006?
2. Were the 12-months ended June 30, 2006 costs of the Service Company's customer accounts services, including those of the National Call Centers, reasonable?
3. Are the services TAWC receives from Service Company necessary?

### Study Results

Concerning question 1, the following conclusions can be drawn from this study:

- TAWC was charged the lower of cost or market for managerial and professional services during the 12-months ended June 30, 2006.
- On average, the hourly rates for outside service providers are **34% higher** than the Service Company's hourly rates.
- The managerial and professional services provided by the Service Company are vital and could not be procured externally by TAWC without careful supervision on the part of TAWC. If these services were contracted entirely to outside providers, TAWC would have to add one position to manage activities of outside firms. This position would be necessary to ensure the quality and timeliness of services provided.
- If all the managerial and professional services now provided by the Service Company had been out-sourced during the 12-months ended June 30, 2006, TAWC and its ratepayers would have incurred an **additional \$1.6 million** in expenses. This amount includes the higher cost of outside providers and the cost of a TAWC position needed to direct the outsourced work.
- This study's hourly rate comparison actually 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 personnel, on the other hand, charge a maximum 8 per day even when they work more. If the overtime hours of Service Company personnel had been factored into the hourly rate calculation, the Service Company would have had an even greater annual dollar advantage than the \$1.6 million cited above.
- It would be difficult for TAWC to find local service providers with the same specialized water industry expertise as that 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 is most likely unavailable from local service providers.



- Service Company fees do not include any profit markup. Only its actual cost of service is being recovered from TAWC ratepayers.

Concerning question 2, it was determined that the cost of the Service Company's customer accounts services, including those provided by the National Call Center, **is below the average of the comparison group of neighboring electric utilities.** As will be explained further herein, this group of companies provides a reasonable proxy group for comparison to a regulated utility of the size and scope of TAWC. During the 12-months ended June 30, 2006, the customer accounts cost for TAWC customers was \$28.32 compared to the 2005 average of \$31.73 for neighboring electric utilities. The highest comparison group 2005 per customer cost was \$65.51 and the lowest \$12.61.

Concerning question 3, the following conclusions can be drawn:

- The services that the Service Company provides are necessary and would be required even if TAWC were a stand-alone water utility.
- There is no redundancy or overlap in the services provided by the Service Company to TAWC. For all of the services listed in Schedule 10, there was only one entity that was primarily responsible for the service.

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## II - Background

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### Overview Of American Water Service Company

The Service Company maintains several types of offices from which it provides services to American Water operating companies. They include:

- **Corporate Office** – Includes American Water's executive management and personnel from the various corporate support services. American Water's corporate office is located in Voorhees, New Jersey.
- **National Call Centers** – Perform customer service functions, including: customer call processing, service order processing, correspondence processing, credit and collections. American Water maintains two call centers. One in Alton, Illinois that went into operation in the second quarter of 2001 a second in Pensacola, Florida that went into operation in April 2005. Prior to the establishment of these national call centers, customer service functions were performed by employees of TAWC, which incurred the expense on its books. TAWC transitioned to the Alton Call Center during July and August 2003. During the test period, TAWC also utilized the Pensacola Call Center.
- **National Shared Services Center** – The Shared Services Center, located in Mount Laurel, New Jersey during 2005 and moved to Cherry Hill, New Jersey in January 2006, provides various financial, accounting and treasury functions that had been performed by individual operating companies. This arrangement has improved and streamlined the Company's financial processes and allowed operating companies to focus on providing utility service.
- **Regional Offices** – Regional offices provide operating companies with certain support services that can be performed more effectively on a regional basis because individual operating company/center workloads are not sufficient to warrant a full-time staff for these activities. At the same time, these services require closer proximity to operating companies served so they have not been consolidated into the National Shared Services Center. Examples of regional office services include rates and revenues, engineering and operations. There are four regional offices—Northeast, Southeast, Central and West.
- **Belleville Lab** – The national trace substance laboratory is located in Belleville, Illinois and performs testing for all American Water operating companies.
- **Information Technology Service Centers** – American Water's principal data center, located in Voorhees, New Jersey, supports the IT infrastructure required to run corporate and operating company business applications and the email system. Two smaller data centers, located in Hershey, Pennsylvania and Richmond, Indiana host some Company servers and print customer bills. IT personnel rotate, as needed, throughout the regional offices and operating companies.

### Service Company Expense Categories

The Service Company renders a monthly bill to operating companies. Charges are broken down into the following expense categories:

- **Labor** – base pay (salaries) of managerial and professional employees
- **Labor-Related Overheads** - employee benefit costs (payroll taxes, medical coverage, pensions, disability insurance) and other general expenses

- Support - wages and salaries of office support personnel, including secretaries, clerical personnel, telephone operators and mail clerks
- Office Expenses - office rent, equipment leases, telephone, electric, office supplies, property taxes, office maintenance
- Vouchers/Journal Entries – (1) travel expenses incurred by Service Company personnel, (2) other items submitted for reimbursement by employees, including professional association dues, (3) outside service contracts for such things as actuarial services, and (4) various other expenditures, including data center expenses for software licenses and hardware maintenance.

Service Company expenses are either assigned directly or allocated to operating companies, as shown in the table below.

Expense Category	Direct Charged	Allocated	Comments
Labor	X	X	Professional personnel working for one or several operating companies
Labor-Related Overheads	X	X	These are primarily employee benefit costs that relate directly to labor
Support		X	Administrative personnel support the professional staff, thus support costs are allocated on the basis of professional labor
Office Expense		X	Are all allocated on the basis of professional labor
Vouchers/Journals	X	X	May be either directly in support of one operating company (e.g., an engineer traveling from the Corporate Office to the operating company) or allocated to several operating companies

A direct charge occurs when Service Company work or expenses are incurred in support of only one operating company. Direct charge examples include work in support of an operating company's rate case, engineering design work on an operating company's project and the preparation of an operating company's financial statements.

Service Company expenses are allocated when more than one operating company benefits from the underlying work. Examples include assessments of new Federal water quality regulations, development of the company-wide materials procurement contracts and creation of company-wide engineering design standards.

### Charging and Assignment Of Service Company Time and Expenses

Service Company transactions are assigned with the following information so there is a proper accounting and eventual charging to an operating company:

- Operating company number, if transaction is a direct charge
- Formula number if transaction is allocated
- Employee hours worked
- Account number for non-labor charges.

Charges can originate from the following systems:

- Payroll System
- RVI System (outside vendor payments)
- PCard System (credit card payments)
- Internal Purchase Order System
- Journal entries.

The Service Company's time reporting process enables labor and support charges to be assigned to the proper operating company. Labor charges are based on the time reported by managerial and professional Service Company employees. Every week, Service Company professional employees complete an electronic time sheet (see example in Schedule 1) that shows:

- Operating company (for direct charge)
- Formula number (for allocation)
- Work order (where applicable)
- Authorization number (where applicable).

At month-end, time report information is processed and direct and allocated professional labor hours tabulated for each operating company. Dollar charges are then calculated using the hourly rate of each Service Company professional employee based upon their base salary (i.e., an employee's hours times their hourly rate of pay).

Support (administrative) personnel charge their time to the activity "General Admin." As described in the table on page 4, their labor charges are allocated to operating companies based upon how their office's professional personnel labor charges are assigned. For instance, if 2% of the Voorhees Data Center's professional labor is assigned to TAWC during a month, then 2% of that office's monthly administrative labor charges also is assigned to the operating company.

The overhead cost category is next assigned based on professional and administrative labor costs. Thus, if 2% of the Corporate Office's accumulated professional and support labor is charged to TAWC during the month, then 2% of that month's overhead expenses will be assigned to TAWC.

Each Service Company location's office expenses are allocated to operating companies based on how professional labor charges for that office have been assigned. For instance, if 2% of professional labor from one Service Company office is assigned to TAWC, then 2% of that office's office expenses would be assigned to TAWC. Thus, office expenses are allocated in the very same way as administrative labor.

Vouchers/journal entries may be charged directly or allocated, depending on who benefits from the expenditure. For instance, the cost of a continuing professional education course taken by a professional in a regional office is allocated to the operating companies served by that office. Travel expenses by that same professional to a state rate case proceeding are charged directly to the operating company whose case is being heard.

**Tennessee American Water Company**  
**Sample Electronic Time Sheet**

**American Water Works Company (581020) - 1/26/06**

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		Time Entry							17:00:09	
Week Ending:		1/23/05		Andes, Kathleen				Emp#: 19507071		
Dept:		036518		NE-Human Resources				View Mode		
Totals:		Mo	Tu	We	Th	Fr	Sa	Su	Total	
		0.00	0.00	0.00	0.00	0.00			40.00	
Formula		Typ	1/17	1/18	1/19	1/20	1/21	1/22	Hours	
100002		001	1.00	1.00	1.00	1.00			5.00	
Account:		036518.501200.16		Regular						
100229		001	6.00	6.00	6.00	6.00			30.00	
Account:		036518.501200.16		Regular						
100231		001	1.00	1.00	1.00	1.00			5.00	
Account:		036518.501200.16		Regular						
100229		250							.00	
Account:		036518.501200.16		Sick						
100229		300							.00	
Account:		036518.501200.16		Holiday						
100229		400							.00	
Account:		036518.501200.16		Vacation						

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### III – Service Company Cost Comparison Approach

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During the 12-months ended June 30, 2006, Service Company charged TAWC \$4,536,342. For purposes of comparing these charges to outside benchmarks, Service Company services were placed into two categories:

- Managerial and Professional Services – Includes such services as management, accounting, legal, human resources, information technology, and engineering.
- Customer Accounts Services – Includes customer-related services, such as call center, credit, billing, collection and payment processing.

Total test period Service Company charges break down between management/professional services and customer account services as follows:

	12-Months Ended June 30, 2006	
	Amount	Hours
Management and Professional Services	\$ 3,580,292	31,995
Customer Account Services	\$ 956,050	29,476
Total Charges	\$ 4,536,342	61,471

This study's first question—whether the Service Company charges 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 the 12-months ended June 30, 2006. Outside providers' billing rates came from surveys or other information from professionals that could perform the services now provided by the Service Company.

The second question—reasonableness of the National Call Center costs—was addressed by comparing TAWC's customer accounts services expenses to those of neighboring electric utilities. This approach was selected because the costs of outside providers of call center services are not publicly available. However, electric utility customer account services expenses can be obtained from the FERC Form 1. The availability and transparency of FERC data adds to the validity of its use in this comparison.

The third question—the necessity of Service Company services—was first investigated by determining the services provided to TAWC. A determination was then made as to whether these services would be required if TAWC were a stand-alone utility.

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## IV – Managerial And Professional Services Hourly Rate Comparison

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### Methodology

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 services, human resources and communications services
- Attorneys – legal services
- Certified Public Accountants – accounting, financial, information technology and rates and revenues
- Professional Engineers – engineering, operations and water quality services.

It should be noted that the services provided by the Belleville lab are assumed to be transferable to professional engineers for purposes of this cost comparison. This was done for two reasons. First, there is no readily available survey of hourly billing rates for testing services such as those performed by Belleville. Second, Belleville personnel have similar educational backgrounds as Service Company engineering personnel. In fact, many Belleville employees have engineering degrees. Thus, it is valid to compare the hourly rates of Belleville services to those of outside engineering firms.

Service Company's hourly rate were calculated for each of the four outside service provider categories, based on the dollars and hours charged to TAWC during the 12-months ended June 30, 2006. 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 TAWC during the 12-months ended June 30, 2006, its hourly rates are actually overstated because Service Company personnel charge a maximum 8 per day even when they work more. Outside service providers generally bill for every hour worked. If the 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 market cost 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

Schedule 2 (pages 10-11) details the assignment of 2006 test period management and professional Service Company charges and hours to outsider provider categories.

Certain 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 2006 test period non-labor Service Company charges:

- Contract Services – 12-months ended June 30, 2006 Service Company charges to TAWC include over \$700,000 in charges associated with existing arrangements with

outside professional firms who perform certain corporate-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.

- **Travel Expenses** – In general, client-related travel expenses are not recovered by outside service providers through their hourly billing rate. 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.
- **Computer Hardware and Software Expenses** – Included in the 12-months ended June 30, 2006 Service Company charges to TAWC are charges for outside expenses related to leases and maintenance fees related to mainframe, server and network infrastructure, corporate business applications and the email system. An outside provider that would take over operation of a data center would recover these expenses over and above the labor necessary to operate the data center.
- **Severance Payments** – During the 12-months ended June 30, 2006, the Service Company instituted layoffs that resulted in severance payments to some departing employees. TAWC's portion of these payments are excluded from the hourly rate calculation because they are non-recurring items.

Schedule 3 (page 12) shows how contract services, travel expenses and computer hardware/software-related Service Company charges are assigned among the four outside provider categories.

Based on the assignment of expenses and hours shown in Schedules 3 and 4, the Service Company's equivalent costs per hour for the 12-months ended June 30, 2006 are calculated below.

	Attorney	Management Consultant	Certified Public Accountant	Professional Engineer	Total
Total management, professional & technical services charges	\$ 169,849	\$ 1,324,057	\$ 1,408,453	\$ 677,933	\$ 3,580,292
Less:					
Contract services	4,748	395,354	300,437	12,653	713,192
Travel expenses	8,977	60,781	34,559	40,128	144,445
Computer hardware/software	(1)	44,399	40,436	6,575	91,409
Severance expenses		28,534			28,534
Net Service Charges (A)	\$ 156,124	\$ 794,989	\$ 1,033,021	\$ 618,577	\$ 2,602,711
Total Hours (B)	1,396	5,167	16,097	9,335	31,995
Average Hourly Rate (A / B)	\$ 112	\$ 154	\$ 64	\$ 66	



**Tennessee American Water Company**  
**Analysis of 12-Months Ended June 30, 2006 Service Company Charges By Location And Function**

Location	Function	12-Months Ended June 30, 2006 Service Company Charges				
		Attorney	Management Consultant	Certified Public Accountant	Professional Engineer	Total
Belleville Lab	Water Quality				\$ 103,764	\$ 103,764
Call Center	Human Resources		\$ 21,925			\$ 21,925
Corporate	Accounting			\$ 74,831		\$ 74,831
	Administration	\$ 14,063	\$ 627,448	\$ 84,973	\$ 51,499	\$ 777,983
	Audit			\$ 34,763		\$ 34,763
	Communications		\$ 41,968			\$ 41,968
	Finance			\$ 111,853		\$ 111,853
	Human Resources		\$ 157,104			\$ 157,104
	Legal	\$ 44,579				\$ 44,579
	Operations				\$ 99,126	\$ 99,126
	Rates & Revenue			\$ 68,440		\$ 68,440
	Risk Management		\$ 25,496			\$ 25,496
	Water Quality				\$ 24,829	\$ 24,829
Central Region	Administration		\$ 2,463			\$ 2,463
	Communications		\$ 662			\$ 662
	Engineering				\$ 801	\$ 801
	Finance			\$ (109)		\$ (109)
	Human Resources		\$ 752			\$ 752
	Legal	\$ 347				\$ 347
	Operations				\$ 171	\$ 171
	Risk Management		\$ 375			\$ 375
	Water Quality				\$ 280	\$ 280
Northeast Region	Administration		\$ 2,523			\$ 2,523
	Communications		\$ 321			\$ 321
	Engineering				\$ 92	\$ 92
	Finance			\$ 1,079		\$ 1,079
	Human Resources		\$ 696			\$ 696
	Legal	\$ 794				\$ 794
	Operations				\$ 2,503	\$ 2,503
	Risk Management		\$ 254			\$ 254
Southeast Region	Administration		\$ 193,214			\$ 193,214
	Communications		\$ 39,609			\$ 39,609
	Engineering				\$ 82,049	\$ 82,049
	Finance			\$ 150,046		\$ 150,046
	Human Resources		\$ 85,563			\$ 85,563
	Legal	\$ 109,758				\$ 109,758
	Operations				\$ 247,745	\$ 247,745
	Risk Management		\$ 36,345			\$ 36,345
Western Region	Administration		\$ 294			\$ 294
	Communications		\$ (78)			\$ (78)
	Engineering				\$ 208	\$ 208
	Finance			\$ 1,160		\$ 1,160
	Human Resources		\$ (13)			\$ (13)
	Legal	\$ 307				\$ 307
	Operations				\$ (1,754)	\$ (1,754)
	Risk Management		\$ (12)			\$ (12)
IT	Information Systems			\$ 517,967		\$ 517,967
	Accounting			\$ 80,842		\$ 80,842
Shared Services	Accounting			\$ 232,176		\$ 232,176
	Administration		\$ 87,148			\$ 87,148
	Finance			\$ 32,458		\$ 32,458
	Rates & Revenue			\$ 17,973		\$ 17,973
<b>Total</b>		<b>\$ 169,849</b>	<b>\$ 1,324,057</b>	<b>\$ 1,408,453</b>	<b>\$ 677,933</b>	<b>\$ 3,580,292</b>

**Tennessee American Water Company**  
**Analysis of 12-Months Ended June 30, 2006 Service Company Hours By Location And Function**

Location	Function	12-Months Ended June 30, 2006 Service Company Hours			
		Attorney	Management Consultant	Certified Public Accountant	Professional Engineer
Belleville Lab	Water Quality				1,639
Call Center	Human Resources		228		
Corporate	Accounting			24	
	Administration		1,207		
	Audit			345	
	Communications		140		
	Finance			578	
	Human Resources		569		
	Legal	198			
	Operations				795
	Rates & Revenue			179	
	Risk Management		285		
	Water Quality				411
Central Region	Administration		-		
	Communications				
	Engineering				2
	Finance			6	
	Human Resources		26		
	Legal				
	Operations				
	Risk Management				
	Water Quality				
Northeast Region	Administration		2		
	Communications				
	Engineering				
	Finance			1	
	Human Resources		0		
	Legal	2			
	Operations				7
	Risk Management				
	Water Quality				
Southeast Region	Administration		621		
	Communications		414		
	Engineering				763
	Finance			2,692	
	Human Resources		912		
	Legal	1,195			
	Operations				4,355
	Risk Management		557		
	Water Quality				1,364
Western Region	Administration		-		
	Communications				
	Engineering				(1)
	Finance				
	Human Resources				
	Legal	1			
	Operations				
	Risk Management				
	Water Quality				
IT	Information Systems			4,583	
Supply Chain	Accounting			1,480	
Shared Services	Accounting			4,810	
	Administration		204		
	Finance			997	
	Rates & Revenue			402	
	<b>Total</b>	<b>1,396</b>	<b>5,167</b>	<b>16,097</b>	<b>9,335</b>
					<b>31,995</b>

**Tennessee American Water Company**  
**12-Months Ended June 30, 2006 Service Company Charges Excludable From The Hourly Rate Calculation --**  
**Contract Services, Travel Expenses and Computer Hardware/Software**

Charges By Function	Exclusions From Hourly Rate Calculation					Total	Outside Service Provider Category
	Contract Services	Travel Expenses	Computer HW/SW	Severance Payments			
Accounting	\$ 160,062	\$ 4,463	\$ 707		\$	\$ 165,232	Certified Public Accountant
Administration	\$ 326,061	\$ 39,485	\$ 42,017	\$ 28,347	\$	\$ 435,910	Management Consultant
Audit	\$ 8,568	\$ 3,262			\$	\$ 11,830	Certified Public Accountant
Communications	\$ 16,882	\$ 4,541	\$ 89		\$	\$ 21,512	Management Consultant
Engineering		\$ 3,275			\$	\$ 3,275	Professional Engineer
Finance	\$ 25,377	\$ 9,389	\$ 129		\$	\$ 34,895	Certified Public Accountant
Human Resources	\$ 50,262	\$ 9,712	\$ 56	\$ 187	\$	\$ 60,217	Management Consultant
Information Systems	\$ 89,740	\$ 12,226	\$ 39,600		\$	\$ 141,566	Certified Public Accountant
Legal	\$ 4,748	\$ 8,977	\$ (1)		\$	\$ 13,724	Attorney
Operations	\$ 10,275	\$ 31,039	\$ 1,130		\$	\$ 42,444	Professional Engineer
Rates & Revenue	\$ 16,690	\$ 5,219			\$	\$ 21,909	Certified Public Accountant
Risk Management	\$ 2,149	\$ 7,043	\$ 2,237		\$	\$ 11,429	Management Consultant
Water Quality	\$ 2,378	\$ 5,814	\$ 5,445		\$	\$ 13,637	Professional Engineer
<b>Total</b>	<b>\$ 713,192</b>	<b>\$ 144,445</b>	<b>\$ 91,409</b>	<b>\$ 28,534</b>	<b>\$</b>	<b>\$ 977,580</b>	

Recap By Outside Provider	Exclusions From Hourly Rate Calculation					Total
	Contract Services	Travel Expenses	Computer HW/SW	Severance Payments		
Attorney	\$ 4,748	\$ 8,977	\$ (1)	\$ -	\$	\$ 13,724
Management Consultant	\$ 395,354	\$ 60,781	\$ 44,399	\$ 28,534	\$	\$ 529,068
Certified Public Accountant	\$ 300,437	\$ 34,559	\$ 40,436	\$ -	\$	\$ 375,432
Professional Engineer	\$ 12,653	\$ 40,128	\$ 6,575	\$ -	\$	\$ 59,356
<b>Total</b>	<b>\$ 713,192</b>	<b>\$ 144,445</b>	<b>\$ 91,409</b>	<b>\$ 28,534</b>	<b>\$</b>	<b>\$ 977,580</b>

## **Outside Service Provider Hourly Rates**

The next step in the cost comparison was to obtain the average billing rates for each outside service provider. The source of this information and the determination of the average rates are described in the paragraphs that follow.

### **Attorneys**

The Tennessee Bar Association does not survey its members as to their hourly billing rates. In addition, publicly available billing rate information could not be found for Tennessee attorneys. Therefore, a Tennessee estimate was developed from a survey of Michigan lawyers conducted annually by the Michigan Lawyers Weekly. As presented in Schedule 4, the average rate for each Michigan firm respondent was adjusted for the cost of living differential between their location and Chattanooga, Tennessee. The survey includes rates that were in effect at December 31, 2005—the midpoint of the 12-months ended 2006.

### **Management Consultants**

The cost per hour for management consultants was developed from the 2005 annual survey performed by the Association of Management Consulting Firms—an industry trade organization. The first step in the calculation, presented in Schedule 5, was to determine an average rate by consultant position level. From these rates, a single weighted average hourly rate was calculated based upon the percent of time that is typically applied to a consulting assignment by each consultant position level. This survey includes rates that were in effect during 2004 for firms in 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 2004 average rate was escalated to December 31, 2005—the midpoint of 12-months ended June 30, 2006.

### **Certified Public Accountants**

The average hourly rate for Tennessee certified public accountants was developed from a 2004 survey conducted by the American Institute of Certified Public Accountants (AICPA) every two years. Hourly rates in the AICPA survey are the average of firms in Tennessee. The average hourly rate was calculated for a set of typical accountant positions, as shown in Schedule 6. 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 2003, thus they had to be escalated to December 31, 2005—the midpoint of 12-months ended June 30, 2006.

### **Professional Engineers**

The Service Company provided hourly rate information for three outside engineering firms that were used by TAWC in 2005 and 2006. As presented in Schedule 7, an average rate was developed for each engineering position level. Then, using a typical percentage mix of project time by engineering position, a weighted average cost per hour was calculated.

**Tennessee American Water Company**  
**Estimated Billing Rates Of Tennessee Attorneys**

Billing rates as of December 31, 2005 (Note A)							Cost of
Firm	Michigan Location	Number Of Michigan Lawyers	Billing Rate Range			Adjustment (C)	Adjusted Rate
			Low	High	Avg		
Dykema	Detroit	228	\$ 250	\$ 408	\$ 329	89.8%	\$ 295
Dickinson Wright	Detroit	218	\$ 208	\$ 385	\$ 296	89.8%	\$ 266
Butzel Long	Detroit	212	\$ 283	\$ 385	\$ 334	89.8%	\$ 300
Bodman	Detroit	130	\$ 168	\$ 323	\$ 245	89.8%	\$ 220
Jaffe Raitt Heuer & Weiss	Southfield	95	\$ 160	\$ 358	\$ 259	93.1%	\$ 241
Sommers Schwartz	Southfield	76	\$ 138	\$ 193	\$ 165	93.1%	\$ 154
Trott & Trott	Bingham Farms	57	\$ 188	\$ 250	\$ 219	79.4%	\$ 174
Brooks Kushman	Southfield	52	\$ 218	\$ 375	\$ 296	93.1%	\$ 276
Foley & Lardner	Detroit	42	\$ 298	\$ 453	\$ 375	89.8%	\$ 337
Kemp, Klein, Umphrey, Edelman & May	Troy	38	\$ 155	\$ 263	\$ 209	89.1%	\$ 186
Pepper Hamilton	Detroit	31	\$ 255	\$ 448	\$ 351	89.8%	\$ 315
Hertz, Schram & Saretsky	Bloomfield Hills	30	\$ 218	\$ 338	\$ 278	80.3%	\$ 223
O'Reilly Rancilio	Sterling Heights	27	\$ 180	\$ 238	\$ 209	91.6%	\$ 191
Thrun Law Firm	East Lansing	27	\$ 190	\$ 220	\$ 205	90.2%	\$ 185
Strobl & Sharp	Bloomfield Hills	26	\$ 145	\$ 275	\$ 210	80.3%	\$ 169
Kuperlian Ormond & Magy	Southfield	24	\$ 173	\$ 263	\$ 218	93.1%	\$ 203
Parmenter O'Toole	Muskegon	23	\$ 145	\$ 238	\$ 191	97.5%	\$ 187
Rader, Fishman & Grauer	Bloomfield Hills	23	\$ 208	\$ 373	\$ 290	80.3%	\$ 233
Tanoury, Corbet, Shaw, Nauts & Essad	Detroit	22	\$ 120	\$ 180	\$ 150	89.8%	\$ 135
Williams, Williams, Ratner & Plunkett	Birmingham	22	\$ 200	\$ 313	\$ 256	64.3%	\$ 165
Overall Average			\$ 195	\$ 314	\$ 254		\$ 223
Estimated Average Hourly Billing Rate For Tennessee Attorneys At December 31, 2005							\$ 223

Note A: Source is Michigan Lawyers Weekly, Michigan's Largest Law Firms (April 2006)

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

Note C: Represents Chattanooga's cost of living as a percent of the Michigan city in which the law firm is located.  
Source of this information is [www.homefair.com](http://www.homefair.com).

**Tennessee American Water Company**  
**Billing Rates of U.S. Management Consultants**

A. Calculation of Average Hourly Billing Rate by Consultant Position  
Survey billing rates were those in effect in 2004 (Note A)

Average Hourly Rates (Note A)				
Entry-Level Consultant	Associate Consultant	Senior Consultant	Junior Partner	Senior Partner
Average \$ 145	\$ 172	\$ 229	\$ 295	\$ 321

B. Calculation of Overall Average Hourly Billing Rate Based on a Typical Distribution of Time on an Engagement

	Entry-Level Consultant	Associate Consultant	Senior Consultant	Junior Partner	Senior Partner	
Average Hourly Billing Rate (from above)	\$ 145	\$172	\$229	\$295	\$321	
Typical Percent of Time Spent on a Consulting Project	30%	30%	20%	10%	10%	Weighted Average
	\$ 44	\$ 51	\$ 46	\$ 29	\$ 32	\$ 202

Escalation to Test Year Mid-Point December 31, 2005 (Note B)

CPI at December 31, 2004	190.3
CPI at December 31, 2005	196.8
Inflation/Escalation	6.5%
Estimated Average Hourly Billing Rate For Consultants At December 31, 2005	\$ 216

Note A: source: "Operating Ratios For Management Consulting Firms, 2005 Edition" Association of Management Consulting Firms

Note B: source is US Bureau of Labor Statistics (<ftp://ftp.bls.gov/pub/special.requests/cpi/cpiiai.txt>)

**Tennessee American Water Company**  
**Estimated Billing Rates Of Tennessee Certified Public Accountants**

A. Calculation of Average Hourly Billing Rate by Public Accounting Position Survey billing rates were those in effect in 2003 (Note A)					
Type of Firm	Average Hourly Billing Rate (Note A)				
	Staff Accountant	Senior Accountant	Manager	Partner	
Average Hourly Rate	\$ 72	\$ 77	\$ 120	\$ 160	
B. Calculation of Overall Average Accountant Billing Rate Based Upon Typical Distribution of Time on an Engagement					
Average Hourly Billing Rate (From Above)	Staff Accountant	Senior Accountant	Manager	Partner	
	\$ 72	\$ 77	\$ 120	\$ 160	
Typical Percent of Time Spent on an Accounting Assignment					Weighted Average
	30%	30%	20%	20%	
	\$ 22	\$ 23	\$ 24	\$ 32	\$ 101
Escalation to Test Year Mid-Point December 31, 2005 (Note B)					
CPI at December 31, 2003					184.3
CPI at December 31, 2005					196.8
Inflation/Escalation					12.5%
Estimated Average Hourly Billing Rate For Tennessee CPAs At Dec. 31, 2005					\$ 113

Note A: Source is AICPA's 2004 National PCPS/TSCPA Management of an Accounting Practice Survey

Note B: Source is US Bureau of Labor Statistics (<ftp://ftp.bls.gov/pub/special.requests/cpi/cpiat.txt>)

**Tennessee American Water Company**  
**Billing Rates Of Tennessee Engineers**

Note: Billing rates are the average for 2005 and 2006					
A. Calculation of Average Hourly Rate by Engineer Position					
Name of Firm	Average Hourly Billing Rates				
	CAD Drafter Engineer Tech	Engineer Design Engineer Project Engineer Elect Proj Engineer	Project Manager Project Associate Sr. Mgr. Engineer	Officer Principal Engineer	
Firm #1	\$59	\$99	\$122	\$133	
Firm #2	\$67	\$78	\$125	\$149	
B. Calculation of Overall Average Engineering Hourly Billing Rate					
Average Hourly Billing Rate (From Above)	CAD Drafter Engineer Tech	Engineer Design Engineer Project Engineer Elect Proj Engineer	Project Manager Project Associate Sr. Mgr. Engineer	Officer Principal Engineer	
	\$63	\$88	\$123	\$141	
Typical Percent of Time on an Engineering Assignment	30%	35%	25%	10%	Weighted Average
	\$19	\$31	\$31	\$14	\$95

Source: Information provided by American Water Works Service Company. Firm names have not been disclosed to preserve the confidentiality of their hourly rates.



### 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	12 Months Ended June 30, 2006		
	Service Company	Outside Provider	Difference-- Service Co. Greater(Less) Than Outside
Attorney	\$ 112	\$ 223	\$ (111)
Management Consultant	\$ 154	\$ 216	\$ (62)
Certified Public Accountant	\$ 64	\$ 113	\$ (49)
Professional Engineer	\$ 66	\$ 95	\$ (29)

Based on these cost per hour differentials and the number of managerial and professional services hours billed to TAWC during the 12-months ended June 30, 2006, outside service providers would have cost \$1,530,452 more than the Service Company (see table below). Thus, on average, outside provider's hourly rates are almost 34% higher than those of the Service Company (\$1,530,452 / \$4,536,342).

Service Provider	12 Months Ended June 30, 2006		
	Hourly Rate Difference-- Service Co. Greater(Less) Than Outside	Service Company Hours Charged	Dollar Difference
Attorney	\$ (111)	1,396	\$ (155,217)
Management Consultant	\$ (62)	5,167	\$ (321,083)
Certified Public Accountant	\$ (49)	16,097	\$ (785,939)
Professional Engineer	\$ (29)	9,335	\$ (268,213)
Net Service Co Less Than Outside Providers			\$ (1,530,452)

If TAWC were to use outside service providers rather than the Services Company for managerial and professional services, it would incur other additional expenses besides those associated with higher hourly rates. Managing outside firms who would perform 31,995 hours of work (around 21 full-time equivalents at 1,500 billable hours per FTE) would add a significant workload to the existing TAWC management team. Thus, it would be necessary for TAWC to add at least one position to supervise the outside firms and ensure they delivered quality and timely services. The individuals that would fill these positions would need a good understanding of each profession being managed. They must also have management experience and the authority necessary to give them credibility with the outside firms. As calculated in the table below, this position would add another \$121,400 per year to TAWC's personnel expenses.

#### Cost of Adding Administrative Positions To TAWC's Staff

	Total
New Positions' Salary	\$ 85,000
Benefits (at 52%)	\$ 36,400
Total Cost of the New Position	\$ 121,400

Thus, the total effect on the ratepayers of TAWC of contracting all services now provided by Service Company would be an increase in their costs of **\$1,651,852** (\$1,530,452 + \$121,400).

### Other Cost Comparisons

Every year, the Belleville Lab conducts a comparison of its cost for performing major tests to the cost of using outside testing laboratories. Over the past several years, these surveys have shown the following results been as follows:

Year	Number of Major Tests Surveyed	Percent Belleville Lower Than Outside Labs
2000	26	15%
2001	25	19%
2002	24	16%
2003	23	10%
2004	24	9%
2005	24	25%

These studies present further evidence that the Service Company arrangement is the lowest-cost alternative for TAWC.

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## V – Customer Account Services Cost Comparison

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### Background

It is difficult to compare the cost of American Water's National Call Centers with outside providers of the same call center-related services. Call center survey data is proprietary and expensive to obtain. For this reason, TAWC's National Call Center costs are compared to those of neighboring electric utilities because the data necessary to make this comparison is readily available to the public.

Electric utility cost information comes from their FERC Form 1. FERC's chart of accounts is defined in chapter 18, part 101 of Code of Federal Regulations. FERC accounts that contain call center-related expenses and are used in this study's comparison are:

- Account 903 Customer Accounts Expense – Records and Collection Expense
- Account 905 Customer Accounts Expense – Miscellaneous Customer Accounts Expense.

In addition, labor-related overheads charged to the following FERC accounts must be added to the labor components of Accounts 903 and 905.

- Account 926 Employee Pension and Benefits
- Account 408 Taxes Other Than Income (employer's portion of FICA).

Schedule 8 provides FERC's description of what should be charged to these accounts. In questioning the controller of a large Southeastern electric utility, it was determined that expenses of the activities described below are recorded in the designated FERC accounts.

#### **903 Records and Collection Expense**

- Customer Call Center – customer calls/contact, credit, order taking/disposition, bill collection efforts, outage calls
- Call Center IT – maintenance of phone banks, voice recognition units, call center software applications, telecommunications
- Customer billing – bill printing, stuffing and mailing
- Remittance processing – processing of customer payments received in the mail
- Bill payment centers – locations where customers can pay their bills in person

#### **905 Miscellaneous Customer Accounts Expense**

- Customer Information System IT – maintenance and support of the customer information system

This study assumes the FERC accounts for other electric and gas utilities contain expenses for the same activities.

**Tennessee American Water Company**  
**FERC Account Descriptions**

**903 – Customer Records and Collection 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.

Labor

1. Receiving, preparing, recording and handling routine orders for service, disconnections, transfers or meter tests initiated by the customer, excluding the cost of carrying out such orders, which is chargeable to the account appropriate for the work called for by such orders.
2. Investigations of customers' credit and keeping of records pertaining thereto, including records of uncollectible accounts written off.
3. Receiving, refunding or applying customer deposits and maintaining customer deposit, line extension, and other miscellaneous records.
4. Checking consumption shown by meter readers' reports where incidental to preparation of billing data.
5. Preparing address plates and addressing bills and delinquent notices.
6. Preparing billing data.
7. Operating billing and bookkeeping machines.
8. Verifying billing records with contracts or rate schedules.
9. Preparing bills for delivery, and mailing or delivering bills.
10. Collecting revenues, including collection from prepayment meters unless incidental to meter reading operations.
11. Balancing collections, preparing collections for deposit, and preparing cash reports.
12. Posting collections and other credits or charges to customer accounts and extending unpaid balances.
13. Balancing customer accounts and controls.
14. Preparing, mailing, or delivering delinquent notices and preparing reports of delinquent accounts.
15. Final meter reading of delinquent accounts when done by collectors incidental to regular activities.
16. Disconnecting and reconnecting services because of nonpayment of bills.
17. Receiving, recording, and handling of inquiries, complaints, and requests for investigations from customers, including preparation of necessary orders, but excluding the cost of carrying out such orders, which is chargeable to the account appropriate for the work called for by such orders.
18. Statistical and tabulating work on customer accounts and revenues, but not including special analyses for sales department, rate department, or other general purposes, unless incidental to regular customer accounting routines.
19. Preparing and periodically rewriting meter reading sheets.
20. Determining consumption and computing estimated or average consumption when performed by employees other than those engaged in reading meters.

Materials and expenses

21. Address plates and supplies.
22. Cash overages and shortages.
23. Commissions or fees to others for collecting.
24. Payments to credit organizations for investigations and reports.
25. Postage.
26. Transportation expenses, including transportation of customer bills and meter books under centralized billing procedure.
27. Transportation, meals, and incidental expenses.
28. Bank charges, exchange, and other fees for cashing and depositing customers' checks.
29. Forms for recording orders for services, removals, etc.
30. Rent of mechanical equipment.

**Tennessee American Water Company**  
**FERC Account Descriptions**

**905 – Miscellaneous Customer Accounts Expenses**

This account shall include the cost of labor, materials used and expenses incurred not provided for in other accounts.

Labor

1. General clerical and stenographic work.
2. Miscellaneous labor.

Materials and expenses

3. Communication service.
4. Miscellaneous office supplies and expenses and stationery and printing other than those specifically provided for in accounts 902 and 903.

### Comparison Group

Electric utilities included in the comparison group are shown in the table below. These are companies whose FERC Form 1 show amounts for accounts 903 and 905.

Tennessee	• Kingsport Power	
Kentucky	• Kentucky Power	• Louisville Gas & Electric
	• Kentucky Utilities	• Union Light, Heat & Power
Virginia	• Appalachian Power	• Virginia Electric Power
North Carolina	• Duke Power	• Progress Energy – Carolinas
Georgia	• Georgia Power	• Savannah Electric
Alabama	• Alabama Power	
Mississippi	• Entergy Mississippi	• Mississippi Power
Arkansas	• Entergy Arkansas	
Missouri	• Aquila	• Union Electric

Several neighboring electric utilities could not be included in the comparison group because they did not submit the necessary FERC Form 1 data.

### Comparison Approach

The basis for this comparison is customer account services expenses per customer. TAWC's cost pool was developed to include the same expenses included in electric utility's FERC accounts 903 and 905. As shown in the graphic below, TAWC's resultant cost pool contains the expenses of Service Company locations and certain operating company expenses.

American Water
<u>Service Company</u>
Pensacola & Alton Call Centers
a. Customer contact
b. Customer order processing
c. Billing information processing
d. Collections
e. Correspondence processing
<u>IT Service Centers</u>
a. Support expenses for the customer information system (ORCOM)
<u>New Jersey American</u>
a. Payment processing

Electric Utilities
FERC Acct 903 - Records and Collection Expense and FERC Acct 905 - Misc Customer Accounts Expense
a. Customer contact
b. Customer order processing
c. Bill preparation and mailing
d. Collections
e. Payment processing
f. Correspondence processing

### TAWC Cost Per Customer

In order to make a valid comparison to neighboring electric utilities, certain adjustments had to be made to the applicable Service Company charges to TAWC. It was necessary to adjust the National Call Center charges because electric utilities experience an average of 2.50 calls per customer compared to American Water's 1.32 calls per customer. Thus, National Call Center expenses had to be increased, for comparison purposes, to reflect its costs at a 2.50 calls per customer level. As shown below, TAWC's adjusted annual expense per customer is \$28.32—the number that can be compared to neighboring electric utilities' expenses.

Year Ended June 30, 2006 TAWC Cost Per Customer			Tennessee American	
Cost Component			Actual	Adjusted
Service Company				
Call Centers	Call processing, order processing, credit, bill collection	Note A	\$ 866,197	\$ 1,640,525
Regional Offices	Customer service support		\$ 89,853	\$ 89,853
IT Services	Customer info system support, bill printing			\$ 245,314
Operating Company	Customer payment processing	Note B		\$ 107,702
Cost Pool Total				\$ 2,083,394
Average Number of Customers				73,567
Year Ended June 30, 2006 Cost Per Customer				\$ 28.32

Note A: Adjustment for American Water's fewer calls per customer

Net Test Year Call Center Charges (above)

\$ 866,197

Electric Utility industry's avg calls/customer 2.50

American Water's avg calls/customer 1.32

Multiplier

1.89

Total estimated cost

\$ 1,640,525

Note B: Estimated customer customer payment processing expenses

Average number of customers

73,567

Average number of payments/customer/year

12

Total payments processed/year

882,804

Bank charge per item

\$ 0.1220

Total estimated annual expense

\$ 107,702



### Electric Utility Group Cost Per Customer

Schedule 9 shows the actual 2005 customer accounts expense per customer calculation for the electric utility comparison group. All of the underlying data was taken from the utilities' FERC Form 1.

### Summary Of Results

As shown in the table below, TAWC's cost per customer is below the average of the electric utility comparison group. It can therefore be concluded that the customer accounts-related expenses, including those of the Alton and Pensacola Call Centers, assigned by the Service Company to TAWC are reasonable.

<b>Customer Account Services Expenses Per Customer</b>	
Louisville Gas & Electric	\$ 12.61
Virginia Electric Power	\$ 15.77
Union Electric	\$ 22.38
Aquilla	\$ 22.84
Duke Power	\$ 24.35
Union Light, Heat & Power	\$ 25.75
Kentucky Utilities	\$ 25.78
Progress Energy - Carolinas	\$ 27.09
<b>Tennessee American Water</b>	<b>\$ 28.32</b>
<b>Comparison Group Average</b>	<b>\$ 31.73</b>
Kingsport Power	\$ 32.18
Appalachian Power	\$ 32.40
Kentucky Power	\$ 34.25
Georgia Power	\$ 43.44
Alabama Power	\$ 48.50
Savannah Electric	\$ 54.72
Mississippi Power	\$ 58.93
Entergy Arkansas	\$ 60.77
Entergy Mississippi	\$ 65.51



**Tennessee American Water Company**  
**Comparison Group 2005 Actual Customer Accounts Expense Per Customer**

**Customer Accounts Cost Pool**

**FERC Account Balances:**

Acct 903 - Customer Records & Collection (page 322, line 131)  
Acct 905 - Misc Customer Accounts (page 322, line 133)

**Subtotal**

Add: Employee Benefits & Employer FICA (not included in above amounts)

Account 926 - Employee Pension & Benefits

Account 408 - Taxes Other Than Income (Employer's Portion of FICA)

**Total Cost Pool**

Total Customers (page 304, line 43)

**Customer Accounts Expense per Customer**

**Note A: Calculation of Pension & Benefits Pertaining to Customer Acct Mgmt**

Account 926 - Employee Pension & Benefits (page 323, line 158)

Total Payroll (page 355, line 96)

Total Benefits as Percent of Payroll

Payroll Charged to Customer Accts Expenses (page 354, line 6)

Pension & Benefits Pertaining to Customer Accts Expenses

**Note B: Calculation of Employer's FICA Pertaining to Customer Acct Mgmt**

Payroll Charged to Customer Accts Expenses (page 354, line 6)

Employer's Portion of FICA

Estimated Employer's Portion of FICA

Virginia		Kentucky			
Appalachian Power	Virginia Electric Power	Kentucky Power	Kentucky Utilities	Louisville Gas & Electric	Union Light, Heat & Power
\$ 28,324,797	\$ 27,055,213	\$ 5,669,498	\$ 10,832,569	\$ 4,279,581	\$ 2,787,640
\$ 65,026	-	\$ 15,566	\$ 130,794	\$ 276,482	\$ 96,072
\$ 28,389,823	\$ 27,055,213	\$ 5,685,064	\$ 10,963,363	\$ 4,556,063	\$ 2,883,712
(A) \$ 1,155,330	\$ 6,548,241	\$ 180,973	\$ 2,120,162	\$ 337,225	\$ 294,880
(B) \$ 850,432	\$ 2,461,320	\$ 135,759	\$ 358,923	\$ 62,820	\$ 195,943
\$ 30,395,584	\$ 36,064,774	\$ 6,001,796	\$ 13,442,448	\$ 4,956,108	\$ 3,374,536
938,029	2,287,193	175,255	521,342	392,998	131,028
\$ 32,40	\$ 15,77	\$ 34,25	\$ 25,78	\$ 12,61	\$ 25,75
\$ 17,426,702	\$ 130,305,500	\$ 3,634,365	\$ 22,757,866	\$ 21,039,968	\$ 3,124,822
\$ 167,682,274	\$ 640,242,951	\$ 35,638,655	\$ 50,361,993	\$ 51,234,200	\$ 27,142,406
10.4%	20.4%	10.2%	45.2%	41.1%	11.5%
\$ 11,116,753	\$ 32,174,121	\$ 1,774,628	\$ 4,691,810	\$ 821,173	\$ 2,561,351
\$ 1,155,330	\$ 6,548,241	\$ 180,973	\$ 2,120,162	\$ 337,225	\$ 294,880
\$ 11,116,753	\$ 32,174,121	\$ 1,774,628	\$ 4,691,810	\$ 821,173	\$ 2,561,351
7.65%	7.65%	7.65%	7.65%	7.65%	7.65%
\$ 850,432	\$ 2,461,320	\$ 135,759	\$ 358,923	\$ 62,820	\$ 195,943

**Tennessee American Water Company**  
**Comparison Group 2005 Actual Customer Accounts Expense Per Customer**

**Customer Accounts Cost Pool**

**FERC Account Balances:**

Acct 903 - Customer Records & Collection (page 322, line 131)  
Acct 905 - Misc Customer Accounts (page 322, line 133)

**Subtotal**

Add: Employee Benefits & Employer FICA (not included in above amounts)

Account 926 - Employee Pension & Benefits

Account 408 - Taxes Other Than Income (Employer's Portion of FICA)

**Total Cost Pool**

Total Customers (page 304, line 43)

**Customer Accounts Expense per Customer**

**Note A: Calculation of Pension & Benefits Pertaining to Customer Acct Mgmt**

Account 926 - Employee Pension & Benefits (page 323, line 158)

Total Payroll (page 355, line 96)

Total Benefits as Percent of Payroll

Payroll Charged to Customer Accts Expenses (page 354, line 6)

Pension & Benefits Pertaining to Customer Accts Expenses

**Note B: Calculation of Employer's FICA Pertaining to Customer Acct Mgmt**

Payroll Charged to Customer Accts Expenses (page 354, line 6)

Employer's Portion of FICA

Estimated Employer's Portion of FICA

Georgia		Mississippi		North Carolina	
Georgia Power	Savannah Electric	Energy Mississippi	Mississippi Power	Carolina Power & Light	Duke Power
\$ 75,830,790	\$ 6,350,790	\$ 21,603,464	\$ 8,329,478	\$ 23,024,010	\$ 43,499,424
\$ 721,329	\$ 5,674	\$ 850	\$ 1,431,145	\$ 7,101,028	\$ 3,497,590
\$ 76,552,119	\$ 6,356,464	\$ 21,604,314	\$ 9,760,623	\$ 30,125,038	\$ 46,997,014
\$ 9,654,370	\$ 1,295,013	\$ 1,316,361	\$ 844,455	\$ 5,640,268	\$ 5,296,520
\$ 4,923,716	\$ 312,656	\$ 285,927	\$ 468,229	\$ 1,272,861	\$ 2,239,312
\$ 91,130,205	\$ 7,964,134	\$ 23,206,603	\$ 11,073,307	\$ 37,038,167	\$ 54,532,846
2,087,807	145,544	354,230	187,909	1,367,435	2,239,513
\$ 43.44	\$ 54.72	\$ 65.51	\$ 58.93	\$ 27.09	\$ 24.35
\$ 96,796,552	\$ 12,889,431	\$ 22,987,263	\$ 15,497,826	\$ 142,055,003	\$ 149,922,345
\$ 645,308,750	\$ 40,678,526	\$ 65,288,940	\$ 112,328,864	\$ 419,060,053	\$ 828,569,320
15.0%	31.7%	35.2%	13.8%	33.9%	18.1%
\$ 64,362,306	\$ 4,087,010	\$ 3,737,614	\$ 6,120,641	\$ 16,638,704	\$ 29,272,048
\$ 9,654,370	\$ 1,295,013	\$ 1,316,361	\$ 844,455	\$ 5,640,268	\$ 5,296,520
\$ 64,362,306	\$ 4,087,010	\$ 3,737,614	\$ 6,120,641	\$ 16,638,704	\$ 29,272,048
7.65%	7.65%	7.65%	7.65%	7.65%	7.65%
\$ 4,923,716	\$ 312,656	\$ 285,927	\$ 468,229	\$ 1,272,861	\$ 2,239,312

**Tennessee American Water Company**  
**Comparison Group 2005 Actual Customer Accounts Expense Per Customer**

**Customer Accounts Cost Pool**

FERC Account Balances:

Acct 903 - Customer Records & Collection (page 322, line 131)  
Acct 905 - Misc Customer Accounts (page 322, line 133)

Subtotal

Add: Employee Benefits & Employer FICA (not included in above amounts)

Account 926 - Employee Pension & Benefits

Account 408 - Taxes Other Than Income (Employer's Portion of FICA)

Total Cost Pool

Total Customers (page 304, line 43)

Customer Accounts Expense per Customer

**Note A: Calculation of Pension & Benefits Pertaining to Customer Acct Mgmt**

Account 926 - Employee Pension & Benefits (page 323, line 158)

Total Payroll (page 355, line 96)

Total Benefits as Percent of Payroll

Payroll Charged to Customer Accts Expenses (page 354, line 6)

Pension & Benefits Pertaining to Customer Accts Expenses

**Note B: Calculation of Employer's FICA Pertaining to Customer Acct Mgmt**

Payroll Charged to Customer Accts Expenses (page 354, line 6)

Employer's Portion of FICA

Estimated Employer's Portion of FICA

Tennessee	Missouri	Alabama	Arkansas	Group Average
Kingsport Power	Aquilla	Union Electric	Enlergy Arkansas	
\$ 1,433,975	\$ 8,536,953	\$ 21,732,269	\$ 27,300,865	\$ 374,801,981
\$ 2,709	\$ 182,261	\$ 467,706	\$ 303,672	\$ 14,297,904
\$ 1,436,684	\$ 8,719,214	\$ 22,199,975	\$ 27,604,537	\$ 389,099,885
\$ 19,249	\$ 1,241,896	\$ 3,189,312	\$ 6,224,256	\$ 51,207,068
\$ 22,989	\$ 483,132	\$ 1,012,104	\$ 611,803	\$ 19,165,626
\$ 1,478,923	\$ 10,444,242	\$ 26,401,390	\$ 34,440,596	\$ 459,472,579
45,960	457,368	1,179,621	586,699	14,480,283
\$ 32.18	\$ 22.84	\$ 22.38	\$ 60.77	\$ 31.73
\$ 260,234	\$ 27,719,175	\$ 92,704,386	\$ 69,049,690	\$ 876,438,393
\$ 4,062,743	\$ 140,961,291	\$ 384,562,394	\$ 88,720,642	\$ 4,075,920,696
6.4%	19.7%	24.1%	77.8%	21.5%
\$ 300,515	\$ 6,315,455	\$ 13,230,112	\$ 7,997,429	\$ 250,531,060
\$ 19,249	\$ 1,241,896	\$ 3,189,312	\$ 6,224,256	\$ 51,207,068
\$ 300,515	\$ 6,315,455	\$ 13,230,112	\$ 45,329,390	\$ 250,531,060
7.65%	7.65%	7.65%	7.65%	7.65%
\$ 22,989	\$ 483,132	\$ 1,012,104	\$ 611,803	\$ 19,165,626

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**VI - Need For Service Company Services**

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**Analysis Of Services**

The final aspect of this study was an assessment of whether the services that are provided to TAWC by the Service Company would be necessary if TAWC were a stand-alone water utility. 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 Schedule 10 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 was 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 stand-alone water utility.

Upon review of Schedule 10, the following conclusions can be drawn:

- The services that the Service Company provides are necessary and would be required even if TAWC were a stand-alone water utility.
- There is no redundancy or overlap in the services provided by the Service Company to TAWC. For all of the services listed in Schedule 10, there was only one entity that was primarily responsible for the service.

**Tennessee American Water Company  
Designation Of Responsibility For Water Utility Functions**

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

**Tennessee American Water Company**  
**Designation Of Responsibility For Water Utility Functions**

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

Note A: Financings and lines of credit are the responsibility of American Water Capital Corporation

**Tennessee American Water Company**  
**Designation Of Responsibility For Water Utility Functions**

Primarily Responsible P Provides Support S		Performed By: American Water Service Company						
Water Company Function		Tennessee American	Customer Call Centers	Regional Office	Shared Services	Corporate Office	IT Service Centers	Belleville Lab
<b>Rates</b>								
Rate Studies & Tariff Change Administration		S		P				
Rate Case Planning and Preparation		S		P				
Rate Case Administration		S		P				
Commission Inquiry Response		S		P				
<b>Legal</b>						S		
<b>Purchasing and Materials Management</b>								
Specification Development		S		S	S	P		
Bid Solicitation		S			P			
Contract Administration		S			P			
Ordering		P						
Inventory Management		P			S			
<b>Human Resources Management</b>								
Benefit Program Development						P		
Benefits Program Administration		P		S				
Management Compensation Administration						P		
Wage & Salary Program Design						P		
Wage & Salary Administration				S				
Labor Negotiations--Wages		P		S				
Labor Negotiations--Benefits		P						
Labor Negotiations--Work Rules		P		S		P		
Training Program Development		P						
Training--Course Delivery		S		S		P		
Affirmative Action/EEO--Plan Development		P						
Affirmative Action/EEO--Implementation		P						
<b>Information Systems Services</b>								
Service Company Data Centers								
System Operations & Maintenance							P	
Software Maintenance							P	
Network Administration				P			S	
PC Acquisition & Support				P			S	
Help Desk				S			P	

### Governance Practices Associated With Service Company Charges

There are several ways by which TAWC exercises control over Service Company services and charges. The most important of these are described below.

- **Regional President Oversight** – The Regional President of the Southeast Region is on the Executive Management Team (EMT) of American Water. The Regional President is responsible for the overall performance of each operating company in the region, including PAWC, VAWC, WVAWC, KAWC, TAWC, MAWC. As part of the EMT, each Regional President has equal say with other EMT members in major business decisions of American Water and has the ability to monitor Service Company performance quality and spending.
- **Regional Vice President & Treasurer** – The Regional Vice President and Treasurer of the Southeast Region is responsible for the financial reporting, performance and internal controls of each of the operating companies in the region. The Vice President and Treasurer monitor the performance and reporting from the Service Company to insure the timely and accurate support.
- **Operating Company Board Oversight** – TAWC board of directors includes members of American Water's EMT, members of the regional management team and business and community leaders from outside the Company. This helps ensure that Tennessee American's needs are a factor in the delivery of Service Company services.
- **Service Company Budget Review/Approval** – Every operating company president sits on the Service Company board and that board must formally approve the budget for Service Company charges for the next year. These budgeted charges are consolidated with the operating company's own spending into an overall budget which must be approved by the operating company's board of directors.
- **Major Project Review And Approval** – Major projects undertaken by the Service Company must first be reviewed by American Water's Executive Management Team, which includes the Regional President. The Regional President, with input from the regional management team has the ability to impact all new initiatives and projects before they are authorized.
- **Service Company Bill Scrutiny** – Regional office personnel review the monthly Service Company bill for accuracy and reasonableness on a monthly basis. Any mistakes or overcharges are credited on a subsequent billing.
- **Operating Company Budget Variance Reporting** – The "Budget/Plan Analysis," produced monthly by each operating company, has a line item for Management Fees (i.e., Service Company charges). In this way, Service Company budget versus actual charges can be monitored for the month and year-to-date.



- **Capital Investment Management (CIM)** – CIM is one of American Water's primary business planning processes. It covers capital and asset planning and is employed throughout American Water and Thames Water. The current CIM process and procedures were established in 2003 as part of an initiative to implement leading water industry practices. CIM 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. CIM ensures that:
  - Capital expenditure plans are aligned with the strategic intent of the business,
  - The impact of capital expenditure and income plans are fully reflected in operating expense plans,
  - The impacts of these plans are understood and affordable, and
  - Effective controls are in place over budgets (through business plans) and individual capital projects (through appropriate authorization thresholds, management and reporting processes).

The CIM process was designed to optimize the effectiveness of asset investment. The process is managed at three levels for all American Water companies, including all Tennessee American Operating Units.