PENNICHUCK®

STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

Docket No. DW 19-084

Pennichuck Water Works Inc.
Request for a Change in Rates

DIRECT TESTIMONY

OF

GREGG H. THERRIEN

June 27, 2019

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I. INTRODUCTION

Q. Please state your name, address, and position.

A. My name is Gregg H. Therrien. I am an Assistant Vice President with Concentric Energy Advisors, Inc. ("Concentric"), 293 Boston Post Road West, Suite 500, Marlborough, Massachusetts. My professional qualifications and experience are provided in Attachment GHT-1 to this testimony.

Q. Have you testified previously before the New Hampshire Public Utilities Commission ("NHPUC" or the "Commission")?

A. Yes, I have. I previously provided written and oral testimony in Docket No. DG 17-048, Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities' ("EnergyNorth") distribution service rate case. I have also filed direct testimony in Docket No. DE 19-064, Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities distribution service rate case.

Q. Have you previously provided consulting service and rate support for water utilities?

A. Yes. I have provided rate reviews, power purchasing strategies, and regulatory consulting services for the Connecticut Water Company. Additionally, our firm is

currently engaged with San Jose Water and the Connecticut Water Company, supporting their proposed merger in regulatory proceedings in Connecticut and Maine.

Q. What is your responsibility in this proceeding?

A. In this proceeding, I am responsible for conducting an Allocated Cost of Service Study ("ACOS") for Pennichuck Water Works, Inc. ("Pennichuck", "PWW" or "the Company").

Q. Please describe Concentric.

A. Concentric is an economic advisory and management consulting firm, headquartered in Marlborough, Massachusetts, which provides consulting services related to energy industry transactions, energy market analysis, litigation, and regulatory support. Our regulatory economic and market analysis services include utility ratemaking, including allocated and marginal cost of service studies, rate design, revenue requirements, and other services in support of general rate cases. Our regulatory services also include energy market assessments, market entry and exit analysis, corporate and business unit strategy development, demand forecasting, resource planning, and energy contract negotiations. Our financial advisory activities include both buy and sell side merger, acquisition and divestiture assignments, due diligence and valuation assignments, project and corporate finance services, and transaction support services. In addition, we provide litigation support services on a wide range of financial and economic issues on behalf of clients throughout North America.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to explain the ACOS study prepared on behalf of Pennichuck. ACOS studies perform an important task in establishing just and reasonable

rates. Allocating the Company's proposed revenue requirements (or cost of service) to the individual rate classes provides the Company with valuable cost-based insight to assist in establishing rates for each of these classes of customers. ACOSs are used by gas, electric, and water utility industries; the concepts used in ACOSs are common to all utility industries.

Q. Were Attachments ACOS-1 through ACOS-7 and Attachments ALLOC-1 through ALLOC-5 (collectively, the "ACOS Exhibits") prepared by you or under your direct supervision?

A. Yes.

II. ACOS PRINCIPLES FOR WATER UTILITIES

Q. Please describe the principle factors that govern water ACOS studies.

A. An ACOS is a critical tool used to establish just and reasonable rates, which collect the pro forma revenue requirements as submitted by Pennichuck. Proper cost allocation is based on system design and customer usage with the goal of representing the true cost to serve each individual class for the use of the water distribution system. The purpose of the ACOS is to allocate the overall revenue requirements to the rate classes. The ACOS does so in a manner that reflects the relative costs of providing service to each class and avoids unjust or undue discrimination between rate classes. This is accomplished through analyzing variable and fixed costs associated with service provided to each customer class and assigning each customer or rate class its proportionate share of the utility's total cost of service, i.e., the utility's total revenue requirement. The results of ACOS studies can be utilized to determine the relative cost of service for each customer class and to help determine the individual class revenue responsibility. Rate design is the

product of ACOS consultation, customer rate gradualism considerations, efficiency, simplicity, continuity of rates, fairness between rate classes and corporate earnings stability.[1] The Company's proposed rate design is described in detail in the pre-filed testimony of Mr. Donald Ware.

Q. Please provide an overview of the ACOS cost allocation methodology used in your study.

A. Consistent with Pennichuck's past cost of service studies, the base-extra capacity method was primarily used to allocate the various components of the revenue requirement in my study.[2] This methodology allocates the cost of providing water service to the rate classes based on each classes' use of the commodity (the actual water), various facilities (e.g., pumps, mains, etc.), and services (the physical service lines, meters and appurtenances). The American Water Works Association ("AWWA") recognizes the base-extra capacity method as a "fair and equitable" means of distributing the total revenue requirements in proportion to each class's contribution to the cost of the system.[3] The functionalization and class allocation methodologies used in this study are discussed in detail in Section III below.

[1] *Principles of Public Utility Rates*, Public Utility reports, Inc. by James C. Bonbright, Albert L. Danielsen and David R. Kamerschen. Second edition March 1988, pp. 383-384.
[2] See, Docket No. DW 10-091, *Pennichuck Water Works, Inc.*, Testimony of John R. Palko, April 2010. See also, Docket No. DW 17-071, Testimony of Donald L. Ware, Attachment DLW-1, *Cost of Service Study*, April 2017 by Raftelis Financial Consultants, Inc.
[3] AWWA Cost Manual, *Principles of Water Rates, Fees and Charges*, M1 Sixth Edition.

III. ACOS STUDY METHODOLOGY

A. Introduction

Q. Please describe the Company's pro forma revenue requirements.

A. PWW provided Concentric with several important documents. First, PWW provided us with their 2018 Annual Report filed with the Commission. This report served as a guide to the detailed accounts used to accumulate costs in the test year. Additionally, the Company's pro forma revenue requirements build off of these 2018 actual costs, adjusting for known and measurable changes. The ACOS relies on this pro forma revenue requirement, in its account-level detail, to allocate specific costs to the rate classes.

Q. What are the major components of the Company's revenue requirements?

A. Unlike most investor-owned utilities ("IOU's"), Pennichuck is wholly-owned by a single investor, the City of Nashua, NH (the "City"). The City owns the single share of the Company, under-pinned by the issuance of City bonds. Pennichuck' s revenue requirements are comprised of repayment of these City bonds (herein referred to as the "City Bond Fixed Revenue Requirement", or "CBFRR"), as well as more traditional costs such as Operations and Maintenance ("O&M") expenses, taxes, and interest. Lastly, Special Contract Revenues are treated as a deduction to revenue requirements for purposes of the ACOS.

Q. Does the Company have a rate base revenue requirement?

A. Yes, but it is not recovered through traditional revenue requirements as with traditional IOUs. Pennichuck' s rate base is supported by the combination of the City bond proceeds

and Company-issued debt. Rate base depreciation and return are not part of the revenue requirement *per se*; rather, revenue requirements related to net plant are based on recovery of the CBFRR and debt service. This is described in detail in Mr. Ware's testimony.

Q. Does the unique build-up of PWW's revenue requirement affect the ACOS methodology?

A. No, it doesn't. Concentric uses the Company's rate base accounts to derive cost allocation factors. The cost allocation factors are then applied to the CBFRR, the Debt Service Revenue Requirement ("DSRR 1.0"), and the 10% Debt Service Reserve Revenue Requirement ("0.1 DSRRR").

B. Special Contract Customers

Q. Please explain how special contract customers are treated in the ACOS and why these proceeds are treated as a deduction to the revenue requirement.

A. Special contracts, by their nature, are the result of arms-length negotiations. The purpose of a special contract is to provide service to a large facility or water system that is: 1) not willing to pay a standard General Metered rate given its ability to utilize alternative supply at a cheaper price; and 2) provides incremental revenues in excess of the marginal cost to serve that special contract customer. These incremental revenues provide a benefit to the General Metered customers through an offset to the revenue requirements necessary to operate, maintain, and invest in, the utility water system. Further, special contract customers' rates include a fixed fee component, which is based on the negotiated contract price and cannot be changed until contract expiration. Because of this unique arrangement, it is logical to exclude special contracts as a stand-alone class in the ACOS.

Furthermore, assignment of the full revenue requirements to the core customer groups – General Metered, Public and Private Fire – results in costs being allocated to the customers that cause those costs to be incurred in the first place. Low investment, marginal-cost priced special contract revenue is best applied as an offset to the General Metered class rates in recognition of that the General Metered class pays for the overall system deliverability. This approach addresses not being able to establish a separate class for special contract customers. A separate class for special contracts is moot because the special contracts have set, fixed prices for the remaining term of the contract, and as such, cannot be changed. Another distinguishing factor is that special contract customers have traditionally paid for these specific investments through a Contribution In Aid of Construction ("CIAC") whereas other customer classes have not. Such investments include dedicated pipes that do not rely on the existing core system for service. Certainly, special contract customers do receive the benefit of being a customer of the utility, whereby they receive metering information, billing information, maintenance on pipes and appurtenances and the like; however, the revenues charged to these customers more than offset these costs. Therefore, crediting this revenue back to the General Metered class is both efficient and accurate for purposes of the ACOS.

C. Cost Allocators

Q. Please summarize the major cost allocators deployed in the ACOS.

A. There are two types of cost allocators: functional allocators and class allocators. Functional allocators are used to assign various costs to specific functional categories and the class allocators are then utilized to allocate these functionalized costs to the three rate classes. Functional allocators allocate costs to the following cost functions:

1) Base;
2) Extra;
3) Customer; and
4) Fire.

Class allocators allocate costs to the rate classes:

1) General Metered;
2) Municipal Fire, and
3) Private Fire.

1. Functional Allocators

Q. How are costs allocated to the functions?

A. The Company accumulates costs according to the Uniform System of Accounts for Water Utilities.[4] Each of these individual accounts is assigned a functional allocator from the following list:

1) Base Cost;
2) Base / Excess Capacity Maximum Day;
3) Base / Excess Capacity Maximum Hour;
4) Customer Service and Billing;
5) Meters;
6) Services, and
7) Fire Hydrants.

Q. Please describe the methodology to calculate the Base and Extra Capacity Functional Allocators.

A. The Base and Extra Capacity allocators (including Extra Maximum Day and Extra Maximum Hour) are calculated using the Company's actual metered annual usage, converted to Millions of Gallons per Day ("MGD").[5] Maximum Daily usage was provided by the Company, which was derived from metered data for the General Metered customer class and was estimated for the remaining classes. Excess Maximum Day is

[4] Uniform System of Accounts for Water Utilities, Published by the N.H. Public Utilities Commission, June 2015.
[5] 1 CCF = 748 gallons.

equal to the Maximum Day less the Average Day. The split between Base and Maximum day Extra Capacity is calculated by comparing the ratio of average day usage to Maximum Daily usage and the ratio of Excess Maximum day to Maximum Daily usage. Excess Maximum Hour is similarly calculated, whereby the percentage of Maximum Day is established based on Company data for the General Metered class and estimated for the remaining water service customers. The split between Base and Maximum Hour Extra Capacity is calculated by comparing the ratio of average day usage to Maximum Hourly usage and the ratio of Excess Maximum Hour to Maximum Hourly usage. Fire service MGD, Maximum Day and Maximum Hour factors are based on factors provided by the Company. The result is a Base-Excess Max Day split of 47%/53%, and a Base-Excess Max Hour split of 23%/77%. For plant costs allocated using a combination of Base, Daily Excess Capacity, and Hourly Excess Capacity, a composite allocation of 23%/26%/51% is used. Support for these calculations are included in **Attachments ALLOC-1 and ALLOC-4**. ALLOC-1 provides details regarding the Base and Extra Capacity functional allocators while ALLOC-4 provides details regarding factors used to allocate cost functionalized to base, extra day, and extra hour to the rate classes.

Q. Please explain the Customer Service and Billing functional allocation factor.

A. This allocation factor is used to directly assign costs in certain accounts to the Customer Service and billing function. Examples include account no. 902 (Meter Reading Expense), account no. 903 (Customer Records and Collection Expense) and account no. 904 (Uncollectible Accounts Expense).

Q. How are the Meter and Services functional allocators calculated?

A. Similar to the Customer Service and Billing functional allocator, the Meters and Services functional allocators are used to directly assign costs in certain accounts to these functions. Examples of meter directly assigned costs include account no. 663 Meter Expenses and account no. 676, Maintenance of Meters. Service-related directly assigned costs include account no. 664, Customer Installations Expense and account no. 675, Maintenance of Services.

Q. How is the Fire Hydrants functional allocator derived?

A. The Fire Hydrants functional allocator is a binary allocator that directly assigns costs to the Fire Hydrant function, such as account no. 677 Maintenance of hydrants.

2. Customer Class Allocators

Q. How are costs allocated to the individual rate classes?

A. Class allocators allocate costs to the specific classes. The class allocators are:

1) Base Cost (MGD);
2) Extra Capacity – Maximum Day (MGD)
3) Extra Capacity – Maximum Hour (MGD)
4) Number of Customers;
5) Number of Bills;
6) Revenues;
7) Meters;
8) Weighted Cost of Services, and
9) Fire Hydrants.

Q. Please explain the Number of Customers, Number of Bills and Revenues class allocators.

These allocators are equal to the test year actual figures for these categories. Each of these class allocators will assign costs (maintained at the uniform system of accounts

level) to the individual rate classes. Examples include account no. 904, Uncollectible Accounts (allocated based on number of customers), account no. 903, Customer Records and Collection Expense (Number of bills), and account no. 461, Water Sales (Revenues). These test year figures are detailed in **Attachment ALLOC-2** (usage, customers and bills) and **Attachment ALLOC-5** (revenues).

Q. Please explain the Base Cost, Extra Capacity - Max Day, and Extra Capacity - Max Hour class allocators.

A. The Base Cost, Extra Capacity - Max Day, and Extra Capacity - Max Hour class allocators are used to allocate costs functionalized as Base Cost, Maximum Day Extra Capacity, and Maximum Hour Extra Capacity, respectively. The calculations detailing the development of these allocators are provided in **Attachment ALLOC-4**.

Q. How is the weighted cost of services Class allocator calculated?

A. The weighted cost of services allocator is used to allocate costs (including plant and O&M) functionalized as services to the rate classes. This allocator utilizes unit costs for each service size deployed by the Company. These unit costs are then divided by the unit cost for a ¾-inch service line to derive a cost weighting factor. The ¾-inch service is the most common and least expensive service and was the best choice to use as the base unit to factor against. Stated differently, the ¾-inch service lines have a weighting factor of 1.00 while other services have weighting factors that progressively increase from the 1-inch service line (1.02 weighting factor) up to the 16-inch service line (weighting factor of 4.57). These weighting factors are then multiplied times the number of services to create weighted service costs, which form the basis for the allocations to the rate classes. These calculations are detailed in **Attachment ALLOC-3.**

Q. How are meters assigned in the ACOS?

A. Meter costs are directly assigned to the General Metered class only, as the Municipal and Private fire classes are not metered.

Q. How does the ACOS utilize the fire hydrant Class allocator?

A. The fire hydrant allocator directly assigns all fire hydrant costs to the Municipal Fire rate class. All Private Fire customers own their own hydrants and are therefore excluded from this cost assignment.

3. Internal Allocators

Q. What is the purpose of internal allocators?

A. There are various indirect cost items related to overheads such as intangible plant and general plant, as well as administrative and general expenses that cannot be directly assigned to a particular function. These items were allocated to functions based on the relative amount of certain costs that have been directly-assigned to each function. The internally developed functional allocators ("internal allocators") used to assign overhead costs have been selected to reflect the type of direct costs that each overhead account generally supports. An example of such allocator is the "NET_PLANT" allocator, which is derived based on the sum of all of the individual allocations to each gross plant and depreciation reserve account number. This allocator is used to allocate the CBFRR, DSRR 1.0, 0.1 DSRRR, Amortization expense and income taxes.

D. Model Runs

Q. At a high level, how does the ACOS model work?

A. The ACOS is an iterative model that calculates both functional and class cost allocations simultaneously. This is an iterative process because internal allocators are a function of how line item costs are allocated using the external allocators. Each time a change is made to a dollar value, an external or internal allocator value, or a different functional or class allocator is used, the model must be "run". The Microsoft Excel © file utilizes a macro to effectuate the updates without creating a circular reference error. This logic enables the cost analyst to change cost allocators often, producing alternative scenarios to review for accuracy and reasonableness.

Q. What functional and class allocators were chosen for each cost element?

A. **Attachment ACOS-5** provides the allocators chosen for each element. The first allocation column represents the functional allocator, while the next eight columns show the class allocations by the functionalized category. This is another example of why the ACOS is designed as an iterative model.

IV. ACOS RESULTS

A. Summary Class Allocation Results

Q. What are the class allocated results for each rate class?

A. **Attachment ACOS-1** is the Class summary report from the ACOS. This report shows how rate base was allocated among the classes (lines 1-4); revenues at current rates (lines 5-10), and the proposed revenue requirement components (lines 11-21). The difference between the allocated revenue requirement and current rates results in a (deficiency) or

surplus for each customer class (line 22). This is an important calculation when considering changes to revenue allocation among the rate classes. Those with deficiencies above the system average may require a higher relative percentage increase than those classes with below average deficiency or a surplus. This is summarized as follows:

Table 1: Allocated Pro Forma Revenue Requirements

Rate Class	Revenues at Present Rates	Pro Forma Revenue Requirements	(Deficiency) / Surplus	(Deficiency) / Surplus %
Reference	*ACOS-1 Line 8*	*ACOS-1 Line 21*	*ACOS-1 Line 22*	
General Metered Service	$27,077,167	$29,175,439	($2,098,272)	-7.75%
Municipal Fire Protection	$3,444,078	$4,259,415	($815,337)	-23.67%
Private Fire Protection	$1,211,418	$2,075,949	($864,530)	-71.37%
System Total	**$31,732,664**	**$35,510,803**	**($3,778,139)**	**-11.91%**

Q. Please discuss these results.

Table 1 indicates an overall revenue increase of $3.8 million (11.91%) is required. Of that increase, the ACOS indicates that the majority of the dollars should be recovered from the General Metered class. Although the total dollars are the highest for this class, the class percentage increase is the lowest at 7.75%. The highest percentage increase, based on the ACOS results, should come from the Private Fire Protection customers at 71.37%. The Municipal Fire Protection class also shows an above-average revenue deficiency at 23.67%. These results are driven by the individual allocators chosen within the study based on cost-causation, discussed below.

Q. Did Concentric prepare a functional revenue requirement summary by rate class?

A. Yes, **Attachment ACOS-2** is a functional summary of the major components of the revenue requirement: CBFRR, O&M, Amortization, DSRR 1.0, 0.1 DSRRR and taxes (income and other). This functional cost exhibit displays each rate class' cost responsibility for base costs, extra capacity costs (by max day and max hour), customer service and billing, meters, service lines and fire hydrants.

Attachment ACOS-3 is a more detailed summary of the functional revenue requirement. The following table, based on information contained on lines 36 through 43 of Attachment ACOS-3, summarizes this information:

Table 2: Class Allocations

Allocator	System Total	General Metered Service	Municipal Fire Protection	Private Fire Protection
Base Cost	$ 12,742,484	$ 12,630,223	$ 82,719	$ 29,542
Extra Capacity - Max Day	$ 8,917,200	$ 7,024,060	$ 1,380,976	$ 512,164
Extra Capacity - Max Hour	$ 8,888,413	$ 5,431,541	$ 2,137,525	$ 1,319,348
Customer Service & Billing	$ 859,269	$ 838,630	$ 113	$ 20,527
Meters	$ 1,468,962	$ 1,468,962	$ -	$ -
Service Lines	$ 2,348,781	$ 2,137,417	$ -	$ 211,365
Fire Hydrants	$ 706,405	$ -	$ 706,405	$ -
Total Revenue Requirement	***$ 35,931,515***	***$ 29,530,832***	***$ 4,307,737***	***$ 2,092,946***
Base Cost	35%	43%	2%	1%
Extra Capacity - Max Day	25%	24%	32%	24%
Extra Capacity - Max Hour	25%	18%	50%	63%
Customer Service & Billing	2%	3%	0%	1%
Meters	4%	5%	0%	0%
Service Lines	7%	7%	0%	10%
Fire Hydrants	2%	0%	16%	0%
Total Revenue Requirement	***100%***	***100%***	***100%***	***100%***

Source: ACOS-3 Lines 5 - 12.

As Table 2 indicates, those classes with higher percentages of cost allocation to Extra Capacity incur the most costs. For example, the Company's Plant, Structures and Equipment accounts, the Water Treatment Plant accounts, and Transmission and Distribution Mains account are all allocated based on max day. The Pumping equipment accounts, Distribution Reservoir and Standpipes Account and the Transmission and Distribution Mains account all have substantial plant allocated based on max hour. It is logical that the Municipal and Private Fire Protection classes would incur a high percentage of these costs given the nature of the service that these classes provide. That

logic is illustrated by the fact that Municipal Fire Protection is allocated 50% and Private Fire Protection is allocated 63% of the Extra Capacity-Max Hour.

Q. How can this functional information be utilized in rate design?

These functions help determine *how* costs should be collected, either through the fixed or variable charge. Attachment ACOS-3 also includes a unit cost summary. Lines 46 through 51 show the functional costs on a unit basis. Base costs, which represent primarily the variable commodity cost of water service, is divided by annual CCF usage for each class to derive a volumetric unit cost. The remaining functionalized costs are divided by the number of annual bills for each class, deriving a monthly fixed unit cost. Lines 46 through 54 represent three different summations of these fixed costs for purposes of assisting in the fixed monthly charge rate design. These three summations are:

1) Direct Customer Costs – the sum of meters and service line unit costs;
2) Direct plus Customer Service and Billing – adds the results from summary 1) and customer service and billing costs, and
3) Total Customer and Extra Capacity Costs – Adds the extra capacity unit costs to summary 2) to derive total monthly customer-related fixed costs.

These unit costs are summarized as follows:

Table 3: Unit Costs

Ref.	Revenue Requirement	General Metered Service	Municipal Fire Protection	Private Fire Protection
	Base Cost ($ / CCF)	$2.87	$2.87	$2.87
	Extra Capacity Cost ($ / Bill)	$37.13	$58,641.69	$167.54
	Customer Service & Billing ($ / Bill)	$2.50	$1.88	$1.88
	Meters ($ / Bill)	$4.38	$0.00	$0.00
	Service Lines ($ / Bill)	$6.37	$0.00	$19.33
	Fire Hydrants ($ / Bill)	$0.00	$11,773.41	$0.00
1	Direct Customer Costs	$10.75	$0.00	$19.33
2	Direct plus Customer Service & Billing Customer Costs	$13.25	$1.88	$21.21
3	Total Customer Costs + Extra Capacity Costs	$50.38	$58,643.57	$188.75

B. Fixed Versus Variable Cost Summary

Q. Has an analysis of total system costs, split by fixed and variable costs, been performed?

A. Yes. Using the functionalized cost information from **Attachment ACOS-5** certain known variable costs were selected to derive the fixed/variable cost split:

Table 4: Fixed and Variable System Costs

	ACOS $	Percent	Source:
Total Revenue Requirement	**$35,931,515**		ACOS-1 Line 19
Variable Costs:			
Purchased water	$472,407		Account no. 602
Energy Portion of Fuel or Power Purchased for Pumping	$1,152,305		Account no. 623
Chemicals	$908,981		Account no. 641
Sludge Disposal	$378,140		Account no. 652
Total Variable Costs	**$2,911,833**	**8.1%**	
Total Fixed Costs		**91.9%**	

As Table 4 indicates, the vast majority (91.9%) of PWW's revenue requirement is fixed. An alternative calculation using the functionalized Base O&M expenses shown on Attachment ACOS-2 (line 6 column C) shows a variable cost of $6,320,669. Dividing this figure by the total system revenue requirement of $35,931,515 yields a variable

percentage of 17.6% and a fixed percentage of 82.4%. This relationship between fixed and variable costs is considered in the Company's rate design proposal, as discussed in Mr. Ware's testimony.

V. USE OF THE ACOS IN RATE DESIGN

Q. Have you prepared an exhibit to assist in the Company's proposed rate design?

A. Yes, I have. **Exhibit ACOS-7** calculates proposed volumetric revenues for all classes and special contract customers as well as General Meter class meter revenues (by meter size) by applying the system average increase of 7.8% to current rates. This exhibit forms the foundation for the Company's proposed rate design as detailed in Mr. Ware's testimony.

VI. CONCLUSION

Q. Please summarize your testimony.

A. Concentric has performed an ACOS study on behalf of Pennichuck that comports with industry standards, the AWWA guidance, and past cost of service studies filed with the Commission. The Company's pro forma revenue requirements were functionalized then allocated to the rate classes using the base-extra capacity methodology. The ACOS supports an above-average rate increase to the Municipal and Private Fire Protection classes based on their above-average allocation of Base-Excess costs. Additionally, the ACOS shows that the Company's fixed costs are between 82.4% to 91.9%, representing the vast majority of system costs.

Q. Does this complete your testimony?

A. Yes, it does.