EXHIBIT

OPC 6-NP

Exhibit No.:
Issue(s): MSD Rate/
Empire Special Contract/
District Specific or Consolidated Pricing
Witness/Type of Exhibit: Meisenheimer/Surrebuttal
Sponsoring Party: Public Counsel
Case No.: WR-2011-0337

SURREBUTTAL TESTIMONY

OF

BARBARA A. MEISENHEIMER

Submitted on Behalf of
the Office of the Public Counsel

MISSOURI AMERICAN WATER COMPANY

Case No. WR-2011-0337

OPC Exhibit No. 6-NP
Date 2-21-12 Reporter JC
File No. WR-2011-0337

February 2, 2012

NP

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water Company's Request for Authority to Implement a General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas.	)))))	Case No. WR-2011-0337

AFFIDAVIT OF BARBARA A. MEISENHEIMER

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Barbara A. Meisenheimer, of lawful age and being first duly sworn, deposes and states:

1. My name is Barbara A. Meisenheimer. I am a Chief Utility Economist for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony.

3. I hereby swear and affirm that my statements contained in the attached affidavit are true and correct to the best of my knowledge and belief.

Barbara A. Meisenheimer

Subscribed and sworn to me this 2nd day of February 2012.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

KENDELLE R. SEIDNER
My Commission Expires
February 4, 2015
Cole County
Commission #11004782

Kendelle R. Seidner
Notary Public

My commission expires February 4, 2015..

SURREBUTTAL TESTIMONY
OF
BARBARA A. MEISENHEIMER

MISSOURI AMERICAN WATER COMPANY
CASE NO. WR-2011-0337

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. Barbara Meisenheimer, Chief Economist, Office of the Public Counsel, P.O. Box 2230, Jefferson City, Missouri 65102.

Q. HAVE YOU TESTIFIED PREVIOUSLY IN THIS CASE?

A. Yes, I submitted direct testimony on the issues of district class cost of service and rate design for the Missouri American Water Company (MAWC or the Company) on December 12, 2011 and rebuttal testimony on January 19, 2012.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. The purpose of my surrebuttal testimony is to respond to the testimony of Janice M. Zimmerman and Keith D. Barber filed on behalf of Metropolitan St. Louis Sewer District (MSD), Blake A. Mertens on behalf of Empire District Electric and Karl A. McDermott and Paul R. Herbert on behalf of Missouri American Water Company (MAWC or Company).

Q. WHAT EXPERIENCE DO YOU HAVE RELATED TO DEVELOPING AND REVIEWING COST STUDIES?

A. Since 1996, I have regularly submitted testimony before the Missouri Public Service Commission on behalf of Public Counsel on issues related to costing and pricing of utility services. This experience includes work in the areas of telecommunications, natural gas,

electric and water services and reflects work with both fully distributed and incremental costing principles and cost studies for both regulated and unregulated services. At the Federal level, in the area of telecommunications, I served as one of the National Association of State Consumer Advocates (NASUCA) representatives on the Federal/State Universal Service Joint Board Staff. In this capacity, I reviewed costing and pricing principles, methods and models in assisting the Federal/State Joint Board in preparing recommendations for the FCC related to costing and pricing of telecommunications services.

II. MSD

Q. DOES PUBLIC COUNSEL SUPPORT METROPOLITAN ST. LOUIS SEWER DISTRICT'S (MSD) CURRENT RATE CHARGED BY THE COMPANY FOR PROVIDING CUSTOMER BILLING INFORMATION TO MSD OR MSD'S PROPOSED RATE?

A. No. As explained in the direct testimony of OPC witness Ted Robertson, MSD pays an unreasonably low rate of $350,000 for the service it receives. Using the results of MAWC most recent study, performed in 2007, Mr. Robertson testifies that the fully distributed expenses of gathering water usage data and making that data available to MSD are ** **. This cost represents MSD's fully distributed share of Meter Reading, IT Operations and Special Accounts expenses. Had MAWC also assigned MSD a share of

NP

the capital cost related to meter reading, MSD's fully distributed costs would have been greater. While arguably including some portion of the meter related capital cost would be reasonable, in this case, Public Counsel is satisfied to recover from MSD the more limited share of expense related costs that MAWC identified in this study.

MSD argues that it should pay only ** ** which is the amount that the 2007 MAWC study identifies as the incremental expenses incurred to provide the metered billing information to MSD. This amount understates the cost to serve MSD because it not only excludes any portion of capital costs of metering but also excludes any allocation of the cost associated with data jointly used by both MSD and MAWC including the gathering, processing and storing of data and any related labor and overhead costs.

Q. PLEASE COMMENT ON MSD WITNESS ZIMMERMAN'S STATEMENT THAT THE MSD/MAWC AGREEMENT HAS BEEN APPROVED IN THE LAST TWO RATE CASES.

A. In both WR-2008-0311 and WR-2010-0131, approval of the MSD rate was linked to Commission approval of rate design stipulations. The specific merits of MSD rate were not argued at hearing or addressed in the Commission orders approving the stipulations. In WR-2008-0311, Public Counsel withdrew its objection to the MSD/MAWC Contract the same day that MSD and Public Counsel, together with other parties, filed a Non-Unanimous Stipulation and Agreement resolving rate design. In WR-2010-0131, the

NP

MSD rate was approved as a specific element contained in the Non-Unanimous Stipulation and Agreement resolving rate design. The past three rate cases have resulted in rate increases for the majority of MAWC's customer classes. It is unreasonable that while other customer classes continue to have rate increases, MSD continues to pay a rate far below cost and makes no movement toward its cost of service.

Q. MSD ARGUES THAT ALTHOUGH ITS PROPOSED RATE IS BELOW FULLY DISTRIBUTED COSTS, IT SHOULD BE APPROVED BECAUSE THE RATE EXCEEDS THE INCREMENTAL COST. PLEASE DESCRIBE THE DEFINITIONS OF COSTS RELEVANT TO THIS ISSUE.

A. Incremental cost measures only the additional cost incurred to add a good or service to a firm's existing production. Incremental cost excludes any allocation of the joint or common costs associated with the shared facilities or expenses needed to provide the firm's other services. Pricing all service at incremental cost would charge each service only the cost of build-outs or enhancements required to provide the service. Under an incremental cost pricing structure, no customers would be responsible for facilities that are jointly or commonly used to provide multiple services. Pricing all services at incremental costs would result in the firm under-earning.

The "fully distributed" or "fully allocated" cost of a service includes the cost of facilities, equipment, labor and other expenses that can be directly assigned to the service

plus an allocated portion of the cost of facilities, equipment, labor and other expenses that are jointly or commonly used to produce multiple products. Although judgment is required to apportion the joint and common costs, in the regulatory environment analysts assign these costs based on allocation factors that reflect cost causation. Although not the only relevant factor, the fully distributed cost of service is a key consideration in determining rates that are just and reasonable. Other relevant factors include, but may not be limited to, rate affordability and equity.

Q. PLEASE DESCRIBE THE RELATIONSHIP BETWEEN INCREMENTAL COST AND PRICING FOR FIRMS OPERATING IN UNREGULATED MARKETS.

A. From the firm's perspective, producing an additional service that can be successfully priced above incremental costs is generally beneficial because it allows an additional opportunity to enhance profit without imposing any additional burden for cost recovery on the firm's existing services. Setting prices at incremental costs for some customers while recovering above fully allocated cost from other customers is a pricing strategy that can only be sustained if the firm has sufficient market power to impose a price above fully distributed costs on at least a portion of its customer base. In highly competitive and efficient markets a firm would be unable to sustain prices set above fully distributed costs.

Q. WHAT IS THE ECONOMIC BENEFIT OF LINKING RATES TO COST OF SERVICE?

A. The primary economic benefit of linking rates to cost is to maximize the efficient use of resources. The payments to the factors of production (land, labor, capital and entrepreneurship) are enough, but not more than necessary, to induce production at efficient levels and by efficient methods. Generally, the more competitive and efficient the market, the closer rates track the cost of production.

Q. HOW SHOULD THE PRICING OF SERVICES IN REGULATED UTILTY MARKETS RELATED TO THE OUTCOMES IN HIGHLY COMPETITIVE AND EFFICIENT MARKETS?

A. Pricing of regulated utility services should generally mimic the outcomes of highly competitive and efficient markets. In doing so, regulation can protect customers from the potential for abuse of monopoly power while also allowing all customers to share in the benefits produced by the economies of scale and scope inherent in the provision of utility service. Economies of scale refer to cost savings achieved when larger scale production results in declining average cost. Economies of scope refers to cost savings achieved by utilizing the same equipment, facilities and/or expertise to provide multiple products at lower cost than if the products were produced on a "standalone" basis.

According to economic theory, the price sustainable in a highly competitive and efficient market is a price that recovers the average cost to the firm including the cost of land, labor, capital and a level of return on investment normal for the industry. In this case, fully distributed cost represents the average cost.

Q. WOULD PRICING MSD'S SERVICE AT INCREMENTAL COST FAIRLY SHARE THE SAVINGS ASSOCIATED WITH ECONOMIES OF SCALE AND SCOPE AMONG ALL CUSTOMER CLASSES?

A. No. Pricing MSD's service at incremental cost while other classes pay rates that recover in excess of fully distributed costs disproportionately assigns cost savings to MSD at the expense of other customers. This allows MSD to benefit from scale and scope economies created by MAWC's provision of service to other classes while denying other classes any savings from MSD's use of joint and common facilities.

Q. WHY WOULD PRICING SERVICE TO MSD AT FULLY DISTRIBUTED COSTS BE EQUITABLE?

A. By sharing the system and pricing services to customer classes at fully distributed cost, MSD and MAWC's other customers pay rates that recover lower costs than would be recovered on a stand alone basis. The process of assigning costs to services on a cost causative basis ensures that any savings resulting from shared use of the system are shared between customers consistent with the cost causative manner in which the costs

were assigned. This results in an evenhanded approach to sharing the benefits between MAWC's customers.

Q. MSD WITNESS BARBER REFERENCES CHAPTER 32 OF THE AMERICAN WATER WORKS ASSOCIATION'S MANUAL OF WATER SUPPLY PRACTICES THE PRINCIPLES OF WATER RATES, FEES AND CHARGES (AWWA M1). ARE YOU FAMILIAR WITH THE AWWA M1?

A. Yes, I am. I have used the manual regularly in my duties with Public Counsel. Primarily, I refer to the manual when performing and evaluating cost of service and class cost of service studies for MAWC.

Q. PLEASE COMMENT ON YOUR UNDERSTANDING OF THE METHOD OF ESTABLISHING SPECIAL SERVICE CHARGES OUTLINED IN CHAPTER 32 OF THE M1 MANUAL.

A. I agree with the limited observation that appears on page 6 of Mr. Barber's rebuttal testimony regarding Chapter 32 when he states that "...Chapter 32 of the M1 manual discusses the steps required to determine the cost for a special service. The process generally involves a time and material study to identify the cost of the actual service provided to those benefiting from the service. Basically this procedure requires that the direct and indirect cost of a special service be paid by those that require the special service." What Mr. Barber does not acknowledge is that the direct and indirect cost

referenced in the excerpt he cites are actually referring to fully distributed measures of costs not simply incremental costs. Pages 250-254 of the AWWA M1 describe and outline a 5-step process for assigning direct and indirect costs to a special service. These costs may include capital costs, labor costs, other direct costs and indirect overhead costs. The description of Steps 2-5 provide examples of shared facilities, equipment, labor and central service support which should be allocated among the services using the facilities, equipment, labor and related overheads. Schedule BAM SUR-1 includes a copy of pages 250-254 of the AWWA M1.

Q. DO YOU BELIEVE THE AWWA M1 SETS OUT AN APPROPRIATE METHOD FOR DETERMINING MISCELLANEOUS AND SPECIAL CHARGES AND THAT THE METHOD IS CONSISTENT WITH THE RATE MR. ROBERTSON PROPOSES FOR THE INFORMATION SERVICE PROVIDED TO MSD?

A. Yes, I do.

Q. MR. BARBER COMMENTS THAT MR. ROBERTSON'S RECOMMENDATION WOULD DETRIMENTALLY IMPACT MSD. HOW WOULD THE INCREASE TO MSD IMPACT OTHERS CUSTOMERS?

A. Requiring MSD to pay a rate that fairly and reasonable reflects the fully allocated cost to serve MSD will work to reduce the impact on other customer classes.

III. EMPIRE

Q. EMPIRE DISTRICT ELECTRIC WITNESS MERTENS EXPLAINS THAT THE COMPANY'S PROPOSED RATE DESIGN WOULD ELIMINATE THE INTERRUPTIBLE TARIFF UNDER WHICH EMPIRE DISTRICT ELECTRIC CURRENTLY TAKES SERVICE IN THE JOPLIN DISTRICT. HE SUGGESTS THAT IT IS UNCLEAR WHETHER OTHER PARTIES ARE RECOMMENDING AN INTERRUPTIBLE TARIFF SINCE NO OTHER PARTY ADDRESSED THE INTERRUPTIBLE TARIFF IN DIRECT TESTIMONY. PLEASE COMMENT ON YOUR UNDERSTANDING OF THIS ISSUE.

A. The Company is the only party that proposed to eliminate the existing tariff. Since other parties did not propose to eliminate the tariff, Empire would be allowed to continue under the existing tariff if an alternative to the Company's proposal is approved by the Commission.

Q. WHAT ARE PUBLIC COUNSEL'S CONCERNS WITH THE PROPOSED AGREEMENT BETWEEN EMPIRE AND MAWC?

A. As outlined in Public Counsel's objection to the Nonunanimous Stipulation and Agreement (Agreement), Public Counsel is concerned that the Agreement between MAWC and Empire would prematurely predetermine the method of determining the rates that Empire will pay to MAWC for interruptible water service in a case in which the

Company has proposed significant and fundamental changes in district rate structures. The Agreement would establish the rate for Empire to include a Customer Charge and a Commodity Charge comprised of the lesser of MAWC's (a) fully loaded production costs covering the operating expenses, taxes and capital costs of producing water for the Joplin district, or (b) rate for manufactures, industrials and large quantity users of water, as approved by the Commission and applicable to the Joplin district. The Agreement also limits the conditions under which the Empire rate can be renegotiated.

In its direct filing, the Company proposed to consolidate rates for industrials across all districts. In rebuttal the Company appears to retain district specific pricing for industrial customers. The entire subject of the current MAWC rates and how they might change under the Company's various rate design proposals are key issues in this case. The Company has the burden of explaining how the Agreement results in just and reasonable rate. Based on the testimony filed to date, MAWC has not met that burden. For example, the term of the Agreement between MAWC and Empire is for an initial twenty-five (25) years from the effective date of the agreement with automatic renewals for one year renewal terms. The Agreement has no provisions for review to ensure that the agreement is or will continue to be in the public interest and contains only limited conditions for reopening the agreement. The Agreement and limited testimony

supporting it do not demonstrate that special treatment of Empire potentially at the expense of other customers in warranted or equitable.

Public Counsel recognizes that other customers have received special contract rates for 25 year terms under certain circumstances. However, the Agreement does not appear to meet the criteria for an Economic Development Rider or Alternative Incentive Provisions currently contained in the Company's tariff. Public Counsel believes Commission review of any special rate, especially one of such long duration, is necessary to determine whether the rate is and will continue to be in the best interest of all customers of MAWC.

IV. COST OF SERVICE AND CONSOLIDATION

Q. IN REBUTTAL TESTIMONY, COMPANY WITNESS DR. MCDERMOTT RESPONDS TO SOME OF THE EVIDENCE PROVIDED IN YOUR TESTIMONY BASED ON WHICH YOU CONCLUDED THAT THE DISTRICT COST OF SERVICE DOES NOT SUPPORT CONSOLIDATED PRICING. PLEASE COMMENT.

A. First, I would note that Dr. McDermott attempts to refute only the differences in costs between districts. My direct and rebuttal testimony schedules also used Company CCOS study results to demonstrate the substantial differences between similar customer classes

across districts. Those schedules demonstrate that consolidation of the residential class is unsupported on a cost basis just as full district consolidation is unsupported.

Second, Dr. McDermott notes that variation in per customer costs across such a wide service territory are not surprising. He dismisses differences between district by arguing that certain differences between districts many also be characteristic within districts. While I agree that cost characteristics within a district may not be entirely homogeneous some key similarities exist within districts that have historically established a cost basis for differentiated rates such as differing source of supply, treatment requirements and interconnectivity. While he criticizes my evidence of cost differences between districts he provides only anecdotal arguments that cost differences within districts diminish the importance of pricing services based on cost differences between districts. The Commission should also not be swayed by his attempts to shift the burden of proof to parties that seek to retain district specific rates based on cost of service or to dismiss simply for Company convenience the causative factors that lead to differences in district cost of service and class cost of service. Public Counsel has acknowledged its belief that the Commission has some discretion in setting rates and that other factors are relevant considerations in the process. However, the premise that the cost causer should pay is and should remain a key element in determining just and reasonable rates.

Q. DR. MCDERMOTT QUESTIONS YOUR METHOD OF CALCULATING EXPENSES AND DEMAND PER CUSTOMER AS THE APPROPRIATE MEASURE OF UNIT COSTS. PLEASE RESPOND.

A. As before, while criticizing my method, Dr. McDermott provides no meaningful alternative for comparison citing again to only an anecdotal example. While I acknowledge that the representation of classes within districts may vary as described in Dr. McDermott's Town A and Town B example, he fails to address the additional comparison by customer class that I provided in testimony. I included an analysis by customer class specifically to demonstrate that differences exist not just in total across districts, but also by class across districts. Based on the Company's own data, the costs for the residential class differ substantially across districts. Dr. McDermott's testimony does not qualify or support that the costs are similar enough to justify consolidation of residential rates across MAWC's service territory.

Q. DR. MCDERMOTT OBSERVES THAT MUCH OF THE DIFFERENCES IN EXPENSES PER CUSTOMER ARE CAUSED BY THE DIFFERENCE IN ALLOCATED OVERHEAD COSTS (I.E. ADMINISTRATIVE AND GENERAL OR A&G COSTS). PLEASE RESPOND.

A. I agree that MAWC's overhead costs are a substantial portion of expenses. However, Dr. McDermott does not acknowledge that only a portion of overhead expenses are allocated

on a customer basis, meaning that even within overhead related expense categories different districts may be allocated different costs. For example, while customer accounts are assigned on a customer basis, other costs are allocated on plant investment related factors that do vary by district. Additionally, Dr. McDermott's focus on A&G expenses does not give a complete picture of the costs allocated on the basis of district specific cost characteristics. The level and age of district specific investments gives rise to differences in total district revenue requirement necessary to provide an adequate "return on" and "return of" investment. Depreciation expense which Dr. McDermott explicitly excluded from his discussion reflects the "return of" investment. The net balance of plant (gross plant-accumulated depreciation) is the basis for determining the "return on" investment. Obviously, differing district specific investments give rise to differing costs per district. Many operations and maintenance expenses are also assigned to districts based on an expense follows plant allocation methodology. This principle of expense follows plant has been used by both the Staff and Company in this case and historically in assigning costs to district and to customer classes. To the extent that Dr. McDermott and the Company proposes to abandon or diminish the reasonableness of these allocation methods that have historically underpinned rate development, they should be required to provide a compelling reason to do so. For the reasons described above, Dr. McDermott's

criticism of my comparison based on his limited example of A&G allocations should be dismissed as incomplete.

Q. AT PAGE 6, LINE 133, DR. MCDERMOTT ATTEMPTS TO QUANTIFY DISTRICT A&G COSTS IN RELATION TO SYSTEM A&G COSTS. DO YOU AGREE WITH HIS OBSERVATION?

A. I can't really say. Dr. McDermott did not quantify the comparison in a schedule to his testimony or provide workpapers related to the calculation as was agreed to by the parties and approved by the Commission in the order establishing the procedural schedule in this case.

Q. DR. MCDERMOTT POSITS THAT YOUR USE OF COST PER CUSTOMER BY DISTRICT MAY NOT REFLECT THE MOST MEANINGFUL MEASURE IN DETERMINING WHETHER COSTS DIFFER BY DISTRICT. PLEASE COMMENT.

A. AG Processing witness Don Johnstone provides a comparison of cost per district measured in cost per gallon in his rebuttal testimony. Despite the difference in unit of measure, Mr. Johnstone also notes substantial differences in the cost per district. Dr. McDermott, on the other hand, provides no quantification of similarity of costs to support consolidated pricing.

Q. DO YOU AGREE WITH DR. MCDERMOTT'S OBSERVATION THAT INVESTMENT COSTS APPEAR TO BE LARGELY DRIVEN BY TRANSMISSION AND DISTRIBUTION (T&D) INVESTMENT COSTS AND NOT WATER TREATMENT AND SOURCE OF SUPPLY?

A. In some cases I do. However, rather than diminishing my conclusion that costs may differ significantly by district, the existence of substantial differences in transmission and distribution investments, like differences in source of supply contribute to dissimilar costs by district. Contrary to Dr. McDermott's broad brush assertion that consolidation pricing does nothing more than what regulators have been doing for 100 years, averaging the cost of transmission and distribution costs across districts is not similar to averaging those costs across MAWC's entire Missouri service area. Proximity to source of supply can have a significant impact on the cost of transmission. Differences in soil and other geological differences can also contribute to differences in district transmission and distribution costs.

Q. DR. MCDERMOTT RECKONS THAT THERE IS A PRACTICAL HURDLE IN APPLYING DISTRICT SPECIFIC PRICING THAT THE COMMISSION MUST DETERMINE WHAT MAKES A "SIGNIFICANT" ENOUGH DIFFERENCE TO WARRANT A SEPARATE DISTRICT. DO YOU AGREE?

A. No. I view the burden to be Dr. McDermott's and MAWC's to demonstrate that the district characteristics are similar enough to allow changing the status quo through consolidation.

Q. COMPANY WITNESS HERBERT SUGGESTS THAT YOUR CUSTOMER CHARGE CALCULATION IS INCONSISTENT WITH THE METHODS OUTLINED IN THE AWWA MANUAL. DO YOU AGREE?

A. No. I believe my method of developing a customer charge is consistent with the discussion at Page 114, of the AWWA M1. My class cost of service studies identify the investments and expenses directly related to the number of customers by class as including meters, services, operations and maintenance, and depreciation expenses related to meters and services, meter reading and arguably some portion of customer records expense. Consistent with the AWWA M1, I did not include an allocation of A&G expenses because those costs are not strictly related to the number of customers. The Company and Staff assign A&G costs in a manner related to operations and maintenance which in turn were allocated based on plant investments that are influenced by demand and commodity related factors. Based on my studies, the Company customer charge proposal far exceeds cost. In addition, the Company proposal for uniform customer charges is inconsistent with the variation in actual customer related costs by district. I encourage the Commission to reject the Company customer charge proposals.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

opportunities exist nearby; the pricing of miscellaneous services may serve to encourage or discourage the use of particular services. Though service charges usually are limited to the full cost of service provision, lower-than-cost prices are common in some situations. For example, the utility may wish to discourage return check charges by setting the charges at full cost. Many states, however, place limits on the amount that can be charged for returned checks.

Are there legislative, legal, or regulatory constraints under which the utility is required to operate? A utility considering implementing new service charges should evaluate any legal or regulatory constraints that may affect its decision. Laws vary from state to state, and investor-owned utilities are subject to the rules and procedures established by public utility commissions. Typically, state public utility commissions require that the schedule of service charges be approved before it is implemented.

Clearly, a system of charges for miscellaneous services can offer many advantages to utilities. This is evidenced by the large number of utilities currently using them as well as the growing number of types of fees in use.

COST BASIS AND RATIONALE FOR MISCELLANEOUS AND SPECIAL SERVICE CHARGES

Determining cost and estimating the demand for a service are key functions in the proper implementation of service charges. Cost and activity data are essential to

- measure the cost of service
- plan the expenditures associated with the service
- evaluate the cost/benefit ratio of the service charge
- project revenues from the service

It is impossible to accurately price the service if utility managers are unable to accurately measure the total cost of providing it. Without proper pricing, funding may be more or less than the amount necessary to provide the service. Furthermore, without adequate documentation of costs, service charges may be subject to challenge.

DETERMINING THE COST OF PROVIDING SERVICE

If a utility does not have the accounting capabilities necessary to develop cost data for each activity, a time-and-material study can be used to determine the average cost for various activities. These standard time-and-material studies can be the basis for developing fees. Where the cost differential between activities does not warrant a separate fee, groups of activities may be combined, and a standard rate can be charged. To the extent that the utility can simplify its system of charges within the possible constraint of cost-based charges, it can reduce the costs of administering its miscellaneous charge system.

The following steps can be used to determine the full cost of specific services. The specific analyses for a particular service may vary somewhat. This outline is offered as guidance only; additional judgment will be required on the part of the utility.

Step 1: Define the Service to Be Provided

The first step in determining the cost of a service is to clearly define the service being provided. This may seem obvious; however, a complete statement of the service facilitates the cost analysis and exposes possible capital, direct, and indirect costs. In defining the service, the utility should first describe the specific activities involved by identifying who the users of the service are, why the service is needed, how it is measured, and how it is controlled. In many situations, what initially appears to be a single service is actually various related services. For example, accepting an application for water service will entail different activities for a new subdivision requiring an extension of service than it will for service within an existing service area.

The next two steps are necessary to determine the cost of services that require the use of facilities and infrastructure. Examples of services that may require the use of facilities and infrastructure, and therefore appropriately include capital costs, include standby service arrangements and the conveyance of water not owned or controlled by the utility through the utilities' facilities. This later service is commonly referred to as *wheeling*.

Step 2: Identify Capital Investments Made in Order to Provide the Service

Once the specific service is clearly defined it should be apparent whether or not capital costs may be appropriately included in a special charge or miscellaneous fee. In general, a service that requires the use of facilities or operating equipment recorded in a utility's fixed asset or operating equipment accounts should be considered to include capital costs. Care should be taken to ensure those facilities and or equipment are clearly identified as being necessary to the provision of the service. A careful review of how the service interrelates with a utility's day-to-day operations will help identify the use of facilities and equipment that may not otherwise be readily apparent.

Determine an appropriate allocation of capital costs. To avoid adverse rate impacts to utility customers that have not requested a special service, an equitable allocation of capital costs to a party requesting a special service should first consider how capital costs are currently recovered from existing utility customers. For example, a special charge for capital intensive standby service provided to a particular customer will only be an equitable charge if the capital costs necessary to provide the standby service are included in the charge. Otherwise, the capital costs will be recovered from other revenue sources and therefore other customers who may not receive the benefit of the service. Appropriate capital cost recovery and allocation methods that apply to general rate setting principles can often be applied to special charges and are discussed in detail elsewhere in this manual.

Step 3: Estimate Direct Labor Costs

Employee wages and fringe benefits may represent a significant portion of the cost of providing services. It is the salary cost of those who directly supply the service that is used as a building block to allocate the indirect costs of supplying the service. Because of this, it is critical to accurately estimate the true and full cost of labor that goes into service delivery. At this point in the calculation, only the efforts of those who directly supply the service should be considered. Supervision, clerical support, and other similar positions are better classified as indirect costs.

Accounting records can be used as a checklist to ensure that all costs associated with a project are reflected in the cost analysis for a particular fee or charge. Historical costs must be adjusted to reflect any changes in labor rates or benefit costs; for example, such costs can give valuable information about normal labor usage levels. Historical costs also can indicate when costs for various activities differ significantly, so that separate fees may be designed.

Work activity can also be measured through interviews, detailed work logs or time sheets, or direct observation. The average amount of time required to perform a service should be determined by evaluating activity levels over a period of time. However, variations in overall work loads also should be taken into consideration. If the time required to perform a specific service varies greatly, it may be necessary to review how the service is defined and whether more than one service is being provided.

Labor costs should include full costs of salaries and fringe benefits. Total annual wages and benefits should be divided by the number of productive hours in a year, which have been adjusted for vacation, holidays, sick leave, training, meetings, breaks, and other downtime, to determine an hourly rate for labor. Typically, the work force for a particular classification has little turnover, then actual costs may average for a salary range applicable for each position can be used in the analyses. If the work force for a particular classification has little turnover, then actual costs may be closer to the top of the range. Wage increases that occur mid-year should also be factored into cost calculations.

Step 4: Determine Other Direct Costs

In addition to labor costs, many services result in either the consumption of materials or the use of equipment or vehicles. Again, accounting records may help to identify material unit costs and, possibly, usage levels for each service rendered. Often, when materials are directly used in the provision of a service, it is possible to measure the amounts used. Similar to labor costs, averaging techniques may be used to determine typical materials usage quantities.

Field services may require the use of vehicles and equipment. If the utility has internal service funds established for the use of vehicles and equipment, then standard charge rates should be available. Internal service funds are fiscal and accounting entities created to account for resources used in providing centralized service within an organization. A motor pool is a good example: the cost allocations and overhead assignments for each vehicle and piece of equipment are in the internal service fund. These allocations will result in standard internal charge rates for each item.

Other direct costs to be considered in developing service charges are external costs, which are those costs the utility incurs in providing a good or service. For example, a bank's charge for insufficient funds should be included in the determination of a return check charge.

Step 5: Determine Indirect (Overhead) Costs

Indirect costs related to specific goods or services are determined by considering the level of central service support that can be allocated to specific departments and functions. Indirect costs typically include a distribution of costs associated with items such as purchasing, building maintenance, electricity, telephone charges, supervision, and clerical support. Formulas can be established to quantify the relationship between indirect support services and the applicable service charge supported program.

The use of a cost allocation plan is one way to determine indirect costs. These plans are frequently prepared in compliance with federal standards (Office of Management and Budget [OMB] Circular A-87) or other requirements so that the

utility can qualify for maximum cost reimbursement in performing state or federal programs or grants and loans.

A number of approaches can be used to prepare a central service cost allocation plan that, under given circumstances, complies with the OMB A-87 and local government cost allocation needs. Some of the basic approaches follow:

Single tariff/consolidated rate method or multiple rate approach. These methodologies are regarded as acceptable cost allocation methodologies within OMB A-87. The essential problem with each (to a lesser extent the multiple rate approach) is that central service costs are accounted for in cost pools and distributed in a manner such that actual costs allocated may not reflect the services received. Also, direct billing systems are difficult to accommodate with these rate methodologies. Generally, rate methods are not acceptable in the context of more sophisticated accounting systems.

Single step-down approach. This approach is occasionally used in the preparation of some basic plans. In this methodology, a central service department allocates only to a central service department below it on a hierarchical list. The allocations, to some degree, can be controlled to selected departments, and so recoveries may be maximized. However, some distortions may exist between costs and services received. Many local governments appear to be equally interested in cost recovery and accounting information, so this method has not been widely used.

Cross allocation approach. Some state controllers have, over a period of years, suggested a cross allocation methodology for use by some jurisdictions. This methodology consists of two steps. In the first step, central service departments allocate to other central services and to the operating departments. In the second step, the residual in the central service departments is allocated to operation departments. The resulting allocations generally reflect the cost of services rendered. This methodology can be used to manually prepare a cost allocation plan, but the resulting plan can be extremely difficult to modify.

Step down-double allocation approach. In this methodology there are two steps. In the first step, the central service departments allocate to central service departments and to operating departments (as in the cross allocation approach). In the second step, the central service departments allocate to central service departments below them on a hierarchical list and to the operating departments. It can be argued that this methodology theoretically provides the most accurate allocations of any of the methods described. It is commonly used and accepted, cost-effective and flexible, and allows for convenient update.

In the absence of a complete cost allocation plan, utilities can develop indirect cost estimates using individually developed indirect cost rates. These estimates are developed by examining the level of overhead activities associated with each direct cost activity. For example, staff that perform a given service will be supervised by a manager; occupy office space; use phone, facsimile, and copy machines; and rely on other central services, such as accounting, purchasing, and the motor pool.

Determine indirect costs. To determine the cost of providing a good or service, all direct and indirect costs associated with the good or service are added together. A final unit cost is determined by dividing the total cost by the number of service units rendered. The procedures for calculating unit costs used as the basis for charging for a particular good or service vary with each utility and may depend on the particular good or service involved.

Annual review of miscellaneous charges and related costs. Charges for miscellaneous services should be considered within the annual budget process, with revenues balanced against costs and included in the complete revenue analysis. The annual review makes the legal review of service charges easier, because all existing

fees and charges can be acted on by the governing board or council in a single action. In addition, the annual review provides a regular mechanism to examine any cost changes or even the specific time and material requirements for performing services.

Fee policies can be considered in a broader context than a single fee program when all service charges and fees are reviewed at one time. In addition, utility attorneys will have little difficulty demonstrating the legitimacy of any fee or charge, and fee schedules are kept current with economic realities.

SAMPLE SERVICE CHARGE CALCULATION

The procedures for calculating unit costs used as the basis for charging for a particular activity will vary with each utility. One method is to make a time study of labor requirements, material needs, vehicle and other equipment uses, and other costs to determine the resource requirements for the average task using statistical procedures. As an alternative, when the utility's operating and accounting records permit, actual historical costs for the operations can be determined. These costs are adjusted for price changes or changes in operating requirements for labor, materials, or equipment used. Each method should include all appropriate overhead costs.

Under a time-study procedure, the utility (1) identifies those operations needed to complete the required service and those required to be done by the customer or applicant and (2) studies the time required to perform its tasks. Material and equipment requirements and the average time needed to travel to and from the job site are added to these requirements. These units of labor, materials, and equipment reflect the utility's current prices, including appropriate overheads. Normally, unit costs are rounded to provide a fixed-fee schedule for various service sizes. For job conditions that are not typical, an actual-cost price based on appropriate applicable labor rates and materials charges may be used when the resulting projected costs differ from the average by a substantial amount.

EXAMPLES

A variety of miscellaneous charges in the water utility industry include collection and delinquency charges, turn-off and turn-on charges, various application fees, tapping charges, and jobbing and merchandise sales. When special charges are used, the utility should coordinate these rates and charges with its customer-service section. Procedures must be developed to ensure that the customer has advance warning about requests for services that will trigger a charge. Billing procedures must be in place to properly account for special charges. Bill inserts and other forms of customer notification are effective tools for keeping customers informed. As with all utility operations, a well-developed employee-training program is a solid foundation on which good public relations can be built. Customer service personnel must have all necessary information available so they can explain the intent and circumstances to which each charge applies. Information preparedness will minimize the perception that these charges are punitive and will enhance the utility's effort to promote customer support.

A summary of several service charges follows. This list is intended to illustrate the broad range of potential fees, but it is not exhaustive. The specific application of service charges depends on the specific nature of a utility's operations. For example, some utilities have separate charges for turning off and turning on water service following a period of delinquent payments. Other utilities find it more convenient to charge once for both turning off the service and the subsequent expected service turn-on.