Exhibit No. ____ (TC - 2)

**BEFORE THE**

**VIRGIN ISLANDS PUBLIC SERVICES COMMISSION**

Docket No. 613

# PREPARED DIRECT TESTIMONY OF

# BRUCE R. OLIVER

**ON BEHALF OF**

**THE PUBLIC SERVICES COMMISSION'S**

**TECHNICAL CONSULTANTS**

July 3, 2013

## I. INTRODUCTION

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

A. My name is Bruce R. Oliver. My business address is 7103 Laketree Drive, Fairfax Station, Virginia, 22039.

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

A. I am employed by Revilo Hill Associates, Inc. I serve as President of the firm. I manage its operations and direct its preparation and presentation of consulting studies on energy, utility and regulatory policy matters for the firm's clients. For the purposes of this proceeding, I have been engaged as a subcontractor to the Georgetown Consulting Group (hereinafter "Georgetown" or "GCG") which for the purposes of this proceeding serves as Technical Consultants to the Virgin Islands Public Services Commission (hereinafter "PSC" or "the Commission").

Q. **ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

A. My testimony in this proceeding is presented on behalf of the Technical Consultants to the Public Services Commission (i.e., Georgetown).

Q. **WHAT IS THE PURPOSE OF YOUR PREPARED DIRECT TESTIMONY IN THIS PROCEEDING?**

A. This prepared direct testimony addresses rate structure issues relating to the Virgin Islands Water and Power Authority (hereinafter "WAPA" or "the Authority") requested water rate increase. My testimony responds primarily to portions of the pre-filed direct testimony of WAPA witness Henry L. Thomas. More specifically, my testimony addresses the Authority's test year revenue for Incentive Rate customers, the proposed rate reduction for Standpipe Service, WAPA's Large User Incentive Water Rates, the Authority's Miscellaneous Service charges, the development of proposed rates for FY 2014 service.

Q. **PLEASE SUMMARIZE YOUR EXPERIENCE AND QUALIFICATIONS.**

A. I am an economist specializing in the areas of utility rates, energy, and regulatory policy matters. I have over 40 years of experience in the analysis of energy and utility policy issues. That experience includes employment in management positions in the rate departments of two major utilities (the Pacific Gas and Electric Company and the Potomac Electric Power Company), as well as service in management and senior staff positions for three firms engaged in energy, utility and public policy consulting. Those firms include: Revilo Hill Associates, Inc., the Resource Dynamics Corporation, and ICF Incorporated.

As a consultant, I have served a diverse group of clients on issues encompassing a wide range of energy and utility related matters. My clients have included state regulatory commissions, utilities, state

Attorneys General, statefunded consumer advocacy groups, municipal governments, federal agencies, commercial and industrial energy users, hospitals and universities, suppliers of equipment and services to utility markets, residential consumer intervenors, the Electric Power Research Institute (EPRI), and the World Bank. Projects for those clients have included investigations of rate and regulatory policy matters relating to both publicly-owned and privately-owned utilities engaged in the provision of electric, natural gas, water, and wastewater utility services. I have also been engaged to address analyses and forecasts of supply, demand, and prices for utility and nonutility energy markets, as well as to assist commercial and industrial energy users in the negotiation of energy service contracts (including contracts for the procurement of competitive electricity and natural gas services).

To date, I have filed more than 400 separate pieces of testimony in over 250 proceedings before regulatory commissions in 24 jurisdictions. The regulatory jurisdictions in which I have testified include: the states of Pennsylvania, New York, New Jersey, Maryland, Delaware, Virginia, North Carolina, Rhode Island, Massachusetts, Vermont, Connecticut, Ohio, Illinois, Wisconsin, Arizona, New Mexico, South Dakota, and California, as well as the District of Columbia, Guam, the Virgin Islands, the City of Philadelphia, the Province of Alberta, Canada, and the U.S. Federal Energy Regulatory Commission (FERC). My testimonies in those jurisdictions have addressed such topics as industry restructuring, utility mergers and acquisitions, divestiture of generation assets, sighting of energy facilities, utility revenue requirements, revenue decoupling mechanisms, performance-based ratemaking, capacity planning, costs of capital, cost of service allocations, rate design, rate unbundling, Incentive Ratemaking, capacity expansion planning, demand-side management, energy conservation, economic development rates, lifeline rates, contracts for non-tariff service provided to large energy users, natural gas purchasing practices, gas transportation service, natural gas processing, competitive bidding, economic development rates, load research, load forecasting, weather normalization, metering, fuel procurement, fuel pricing, and asset management issues.

Q. **WERE THIS TESTIMONY AND THE ATTACHED EXHIBITS PREPARED BY YOU OR UNDER YOUR DIRECT SUPERVISION AND CONTROL?**

A. Yes, they were.

## II. SUMMARY

**Q. WHAT ARE THE KEY FINDINGS OF YOUR REVIEW OF RATE STRUCTURE ELEMENTS OF WAPA'S PRESENTATION IN THIS PROCEEDING?**

A. The findings of my review of WAPA's water rate proposals in this proceeding include:

- WAPA is fairly unique among water utilities in terms of the volumetric risk that it faces. Yet, its rate designs for the recovery of water service costs do not properly reflect those attributes of its customers' service requirements.

- Substantial portions of the costs of the Authority's water system are **fixed costs** that do not vary with water usage, and those costs are not properly recovered through volumetric charges for water use. Collection of substantial fixed costs through volumetric charges exposes the Authority to unnecessary losses of fixed cost recovery when water sales decline.

- The concept of "revenue decoupling" is as important for WAPA's water system as it is for WAPA's electric system.

- WAPA has not provided any cost of service study analysis in this proceeding upon which the Commission may rely for guidance in: (1) the determination of appropriate revenue requirements by class of service; (2) the design of charges by customer class; (3) assessing limits on the extent to which charges for specific services may be discounted.

- There appear to be errors in the Authority's application of charges to a certain Rate Schedule LUW customer that if continued may impact the revenue that WAPA derives from its Incentive Rate service for large water users.

- WAPA's Large User Incentive Water Rate (Rate Schedule LUW) was initially authorized as experimental rate that would be applicable for a five-year period. This case represents an appropriate time to address the appropriateness of continuing that rate beyond the period initially authorized.

- There are substantial reasons for the Commission to assess that WAPA's Standpipe Service has been priced well in excess of the costs of providing that service, and that approving WAPA's proposal to discount charges for Standpipe Service to meet competitive pressures is in the best interest of the Authority and its other water service customers.

- WAPA has not offered any adjustments to its Miscellaneous Service Charges despite the passage of more than two decades since those rate were last adjusted.

- WAPA has not properly computed FY 2014 revenue at existing (interim) rate levels for its Residential, Incentive Rate, and Standpipe services.

**Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS TO THE PSC REGARDING THE DESIGN OF RATES BY CUSTOMER CLASS?**

A. Key recommendations of this testimony regarding the design of rates for the Authority's electric service customers are as follows:

1. The Commission should find that the WAPA has not properly applied the tariff provisions of its Rate Schedule LUW to all customers served under that rate schedule, and as a result, WAPA's reported base rate revenue from Rate Schedule LUW customers for FY 2011 is **$58,978** less than the Authority was authorized to collect from those customers.

2. The Commission should find that WAPA's proposed Large User Incentive Water Rate Schedule has served its intended purpose and that removal of the "experimental" label on that

rate is reasonable and consistent with the Authority's plans to increase further the number of customers served under that rate in the coming years.

3. The Commission should find that the Authority's charges for Standpipe Service are presently priced in excess of the costs of providing that service, and WAPA's proposal to discount its charges for Standpipe Service represents a reasonable response to those competitive pressures that can be implemented with concern that the resulting revenue would be less than WAPA's actual costs of providing Standpipe Service.

4. The Commission should require periodic re-examination of the size of the rate discounts provided to Rate Schedule LUW customers to ensure that the discounts offered for that service remain appropriate in the context of changes in (1) WAPA's costs of water supply and (2) the costs of other water supply alternatives for large water users.

5. The Commission should find that, in the absence of any evidence regarding the reasonableness and appropriateness of the Authority's miscellaneous service charges, an effort to

reflect inflation-based increases in those charges is appropriate. As an initial step toward the greater reflection of inflation-based increases in the costs underlying WAPA's miscellaneous service charges, the Commission should direct WAPA to implement a **35% increase** in those charges.

6. The Commission should approve the proposed rates by charge and class of service that are computed herein which yield a 3.17% increase in charges for metered water service and accept WAPA's proposed reduction in Standpipe service charges.

## III. DISCUSSION OF ISSUES

Q. **HOW IS YOUR DISCUSSION ISSUES ORGANIZED?**

A. This discussion of issues in this testimony addresses four topics. Those topics include:

1. Concerns regarding the level of base rate revenue shown for Incentive Rate customers served under Rate Schedule LUW;

2. The continuing appropriateness of WAPA incentive rate for large water users, Rate Schedule LUW;

3. WAPA's proposed rate reduction for Standpipe Service;

4. The appropriateness of WAPA's miscellaneous services charges; and

5. The development of rates to recover the recommended increase in water service revenue requirement, including discussion of errors in WAPA calculation of revenues at interim rate levels and the potential use of revenue decoupling to improve the stability of the Authority's revenues.

***A. Concerns Regarding WAPA's Determination of Water Service Revenue***

**Q. HAS YOUR REVIEW OF WAPA'S FILING IN THIS PROCEEDING IDENTIFIED ANY CONCERNS REGARDING THE AUTHORITY'S DETERMINATION OF WATER SERVICE REVENUE?**

A. Yes. My review of the materials and information WAPA has provided finds that the Authority has misapplied its Rate Schedule LUW to a certain large Incentive Rate water service customer.

**Q. WHAT IS THE BASIS FOR YOUR FINDING RATE SCHEDULE LUW HAS BEEN MISAPPLIED FOR A CERTAIN LARGE CUSTOMER?**

A. Rate Schedule LUW requires establishment of a Contract Demand in terms of gallons per day (gpd) and the customer is billed the approved Demand Charge on that volume each month. For usage in excess of the Contract Demand in any month, Rate Schedule LUW provides that the customer will be billed an Excess Volume Charge which is defined as 90% of the applicable Demand Charge. In response to Commission Data Request 2-8, WAPA provides the contract demand for each Incentive Rate customer, as well as their monthly water consumption in gallons and the revenue. From this data, I was able to verify that the base rate charges for each of the three Incentive Rate customers located on St. Thomas were accurately computed. However, for the one large Incentive Rate customer on St. Croix, base rate charges were computed by multiplying actual water use for each month times the demand rate without consideration of the proper application of demand charges or the billing of excess volumes.

**Q. HOW DOES THE MISAPPLICATION OF THE PROVISIONS OF RATE SCHEDULE LUW IMPACT THE REVENUE THAT WAPA SHOWS FOR INCENTIVE RATE CUSTOMERS?**

A. **Exhibit BRO-W-1** provides the base revenue for the one St. Croix customer as presented by WAPA as well as revised calculations showing the amounts that should have been billed to the customer under the provisions of Rate Schedule LUW. As computed by WAPA the customer was billed $136,032. My assessment of the proper application of the provisions of Rate Schedule LUW indicates the customer should have been billed $194,830. Thus, it appears that WAPA has understated its appropriate base rate revenue for ratemaking purposes by **$58,798**. Regardless of whether WAPA actually billed this customer the correct amount during FY 2011, this data suggests that proper bill of the rate during the rate effective period should generate **$58,798** of greater revenue than WAPA has represented in this case even if no rate increase is approved. At the Authority's proposed rates for Rate Schedule LUW, the impact on the Authority's Incentive Rate revenue would be **$68,025**.

**Q. ARE YOU PROPOSING A REVENUE ADJUSTMENT TO REFLECT THE AUTHORITY'S MISAPPLICATION OF ITS LUW RATE?**

A. No. This is a problem in WAPA's reported revenue for FY 2011. Assuming the provisions of rate schedule LUW are properly applied going-forward, this problem should not impact the Authority's actual revenue for the 2013/2014 period. However, a comparison of reported Rate Schedule LUW revenue for FY 2011 with that projected for FY 2014 may reflect a greater dollar increase than might otherwise be anticipated.

***B. WAPA'S PROPOSED RATES FOR STANDPIPE SERVICE CUSTOMERS***

**Q. WHAT IS THE CURRENT BASIS FOR THE AUTHORITY'S CHARGES FOR USERS OF STANDPIPE SERVICE?**

A. Witness Thomas explains that WAPA presently charges the same rates to water haulers that purchase water at the standpipe the same rate that it charges commercial customers.[1] That rate is $0.02187 per gallon (i.e., $21.87 per thousand gallons) plus the WLEAC.

**Q. HOW DOES WAPA PROPOSE TO ADJUST ITS CHARGES FOR STANDPIPE CUSTOMERS?**

A. Despite seeking approval of an overall increase in its water service revenue requirement, the Authority, through the testimony of witness Thomas, proposes to **reduce** its charges for Standpipe customers by **18%**. However, the **base rate reduction** from the "Original" rate levels that WAPA proposes for Standpipe sales, as shown in Exhibit HLT-8, is only **8.25%.**[2]

**Q. WHAT SUPPORT DOES WAPA OFFER FOR THE PROPOSED REDUCTION IN ITS CHARGES FOR STANDPIPE SERVICE?**

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1 The Direct Testimony of WAPA witness Henry Thomas at page 11 of 17.

2 From Exhibit HLT-8, line 13, the base rate reduction is ($20.60 - $18.90) / $20.60 = 8.25%.

A. Witness Thomas represents that the proposed reduction in charges for Standpipe Service is based on competitive market factors. He notes that between FY 2011 and FY 2012 standpipe sales declined 80%, and he asserts that recovery of standpipe sales is "essential" to the Water System's financial viability. He also suggests that, although Standpipe Service is presently price the same as service to commercial customers, haulers who purchase water at the standpipe do not directly benefit from WAPA's water distribution system facilities.

**Q. HOW MUCH OF THE REDUCTION IN SALES AT THE STANDPIPE BETWEEN FY 2011 AND FY 2012 WAS DUE TO COMPETITIVE MARKET FACTORS?**

A. There appears to be substantial evidence that WAPA faces a measure of competition from alternative water suppliers. In response to discovery requests, WAPA has provided reasonable demonstration of the competition it faces from alternative sources of water supply. WAPA's response to Commission Data Request 2-2 identifies nine alternative sources of water supply (i.e., five on St. Thomas, three on St. Croix, and one on St. Johns. In addition, that response the information that WAPA has been able to gather regarding the prices that other water suppliers charge. However, the extent to which the observed losses of standpipe sales were the result of price-based competition is difficult to assess. WAPA explains that at least part of the loss of standpipe sales between FY

2011 and FY 2012 was the result of water quality problems at the standpipe, and those problems have been addressed and fully remedied. Thus, not all of the observed loss of standpipe sales was the product of price competition from other suppliers.

**Q. DO YOU AGREE THAT STANDPIPE SALES DO NOT BENEFIT DIRECTLY FROM WAPA'S WATER DISTRIBUTION SYSTEM?**

A. I do. WAPA's standpipe is adjacent to its water treatment facilities. As a result, water purchased at the standpipe does not use the water mains and service lines that comprise most of the Authority's water distribution system. Thus, there appears to be substantial cost basis for differentiating WAPA's charges for Standpipe sales from its charges it bills to commercial water users for whom WAPA delivers water directly to each customer's premises using the mains and service lines that comprise its water distribution system.

**Q. WITH IMPLEMENTATION OF THE AUTHORITY'S PROPOSED REDUCTION IN ITS CHARGES FOR STANDPIPE SALES WOULD THOSE CHARGES BE FULLY COST-BASED?**

A. No. Without the benefit of a water cost of service study, it is not possible to make determinations regarding the actual cost basis for any of WAPA's water services. However, given the fact that standpipe customers make little or no use of WAPA's distribution facilities, the Authority only needs to recover costs from those customers for:

(1) The supply of water to the standpipe;

(2) Billing and collection of charges for standpipe service; and

(3) An allocated share of non-distribution-related operation and maintenance and overhead expenses.

The available information in this proceeding, suggests that the Authority's proposed charges for Standpipe Service will more than satisfy that threshold requirement.

**Q. IS THE REDUCTION THAT WAPA PROPOSES FOR CUSTOMERS WHO PURCHASE WATER AT THE STANDPIPE REASONABLE?**

A. Yes, it is. Despite the fact that the portion of lost sales that is attributable to market competition cannot be easily determine, the Authority has presented substantial evidence regarding the competitive pressures it faces and the costs against which it expects to compete. In addition, the Commission should have reasonable confidence that the Authority's proposed charges for standpipe sales will more than recover a reasonable assessment of the costs the Authority would attribute to Standpipe sales in a reasonably constructed cost of service study. Moveover, even with WAPA's proposed reduction in its Standpipe Service charges, the Authority will most likely continue to derive substantial revenue margins from its sales of water at the standpipe. Thus, I find that WAPA's proposed reduction in its Standpipe Service charges is reasonable and should be approved.

**Q. DO YOU HAVE ANY FURTHER COMMENTS REGARDING WAPA'S PROPOSED REDUCTION IN CHARGES FOR STANDPIPE SERVICE?**

A. Yes, I do.

First, in the context of WAPA's proposal for a large reduction in its charges for Standpipe Service, the Commission should take note of the problems that can be encountered when rates are set without the support of a cost of service study which provides guidance regarding the manner in which the Authority's costs of providing reliable water service are incurred.

Second, due to the dynamic nature of market competition, the Commission must anticipate changes over time in the intensity of the competitive pressures that WAPA experiences. In this context, it may be appropriate for the Commission to provide WAPA a degree of flexibility in the prices that the Authority charges for Standpipe sales. For example, the Commission could allow WAPA the ability to further raise or lower its charges for Standpipe sales within an approved range (e.g., plus or minus 10% or 15%) without seeking further Commission approval. This would facilitate timely response to changes in market competition, thereby, further limiting potential sales losses.

Finally, if the Commission elects to provide WAPA the type of additional pricing flexibility suggested above, customers who receive the benefit of downwardly flexed pricing, should also be asked to make a reasonable level of on-going commitment to continued to use at least minimum water service volumes on an annual basis. Such minimum volume requirements (imposed either on a monthly of annual basis) would serve to limit further WAPA's exposure to sales losses. The Commission has approved similar minimum volume requirements for Incentive Water Rate customers (i.e., in the form of Contract Demand requirements) without complaints from the affected customers.

***C. Extension of Incentives for Large Water Users***

**Q. AS PART OF THE SETTLEMENT IN DOCKET NO. 575, THIS COMMISSION APPROVED THE IMPLEMENTATION OF AN "EXPERIMENTAL" INCENTIVE RATE FOR LARGE WATER USERS, RATE SCHEDULE LUW. HAVE YOU REVIEWED INFORMATION RELATING TO WAPA'S EXPERIENCE UNDER THAT "EXPERIMENTAL" RATE OFFERING?**

A. Yes, I have.

**Q. WHAT DO YOU CONCLUDE ON THE BASIS OF THAT REVIEW?**

A. The key conclusions from that review are summarized below:

First, it appears that Rate Schedule LUW has been reasonably successful in terms of aiding the Authority's efforts to retain service to customers who may have the ability to install Reverse Osmosis (RO) or other means of supplying their own water service requirements at a cost competitive with WAPA's services.

Second, the expansion of service to Incentive Rate customers appears to represent one of WAPA's most promising opportunities for expanding its annual water service volumes.

Third, as an experimental offering, Rate Schedule LUW was originally authorized by the Commission for a term of five years. Although the Commission allowed that "*the Customer and WAPA may mutually consent to renewal of a contract for a service period that extends beyond five (5) years subject to Commission review and approval*." The initial five-year term for Rate Schedule LUW is rapidly approaching its end. Yet, it is clear that WAPA plans to continue offering service under the terms of that Rate Schedule LUW beyond the initial authorize period for that rate schedule. Thus, I find **no reason** to continue to label that rate schedule as an "**experimental**" rate offering. Nor, do I find a continuing need for the Commission to require WAPA to make a special request of the Commission to offer service beyond the initial five-year authorization for Rate Schedule LUW. I do, however, believe that the length of contracts entered into by the Authority for Incentive Rate service should not be more than five years in duration.

Fourth, information WAPA has provided indicates that at least two of the current Rate Schedule LUW customers have been served under expired contracts since 2011. That is not a good practice. If a customer's contract for LUW service expires, the customer should be return to the Authority's standard (non-incentive) rates until a new contract is agreed upon and becomes effective. Allowing customers to continue to use Incentive Rate service after the expiration of its contract for that service undermines key elements of the commitment that the customer makes to obtain the rate discounts (i.e., incentives) provided to customers served under Rate Schedule LUW.

***D. Adjustment of WAPA's Miscellaneous Service Charges***

**Q. HAS WAPA PROPOSED ANY CHANGES IN ITS MISCELLANEOUS CHARGES FOR WATER SERVICE IN THIS PROCEEDING?**

A. No. It has not.

**Q. HAVE YOU PREVIOUSLY RAISED CONCERNS REGARDING THE LEVELS OF WAPA'S CURRENT MISCELLANEOUS WATER SERVICE CHARGES?**

A. Yes. My testimony in Docket No. 576 noted that the Authority's miscellaneous service charges had not been adjusted since 1991 at that at least an inflation-based adjustment to those charges was necessary to avoid other customers having to subsidize the activities for which miscellaneous charges are billed.

**Q. HAVE YOU PREVIOUSLY RAISED CONCERNS REGARDING THE LEVELS OF WAPA'S CURRENT MISCELLANEOUS WATER SERVICE CHARGES?**

A. Yes. My testimony in Docket No. 576 noted that the Authority's miscellaneous service charges had not been adjusted since 1991 at that at least an inflation-based adjustment to those charges was necessary to avoid other customers having to subsidize the activities for which miscellaneous charges are billed.

**Q. HAS WAPA PREVIOUSLY INDICATED THAT IT WOULD AMEND ITS PETITION FOR WATER BASE RATES TO ADJUST ITS CURRENT MISCELLANEOUS SERVICE CHARGES?**

A. Yes, it has. In its January 9, 2013 letter to the Commission regarding "Compliance with PSC Order 20/2011," the Authority indicated that it was in the process of performing a comparison of its miscellaneous service charges with those for other utilities and it "*will be amending its petition for water base rates to adjust these rates*."

**Q. TO DATE, HAS WAPA AMENDED ITS PETITION FOR WATER BASE RATES IN THIS PROCEEDING TO PROPOSE ADJUSTMENTS TO ITS**

**CURRENT APPLICABLE MISCELLANEOUS SERVICE CHARGES FOR WATER SERVICE?**

A. No, it has not.

**Q. HOW SHOULD THE COMMISSION ADDRESS THE EXTREMELY OUTDATED NATURE OF WAPA'S CURRENT MISCELLANEOUS SERVICE CHARGES FOR WATER SERVICE?**

A. In Docket No. 612 (i.e., the Authority's currently pending electric base rate proceeding), I have recommended that, in the absence of any effort on the part of the Authority to adjust its miscellaneous service charges, the Commission should take the initiative and direct WAPA to begin the process of updating its charges for miscellaneous water services. The first step of the process that I recommend in Docket No. 612 is designed to increase each of the Authority's miscellaneous service charges by **half** of the amount of general cost inflation as measured by the Consumer Price Index (CPI) since those charges were last adjusted. Application of that methodology in this proceeding would result in a **35%** increase (i.e., 50% of the identified 70% increase in the CPI since 1991) in each of WAPA's miscellaneous charges for water service. I encourage the Commission to make similar adjustments to WAPA's miscellaneous service charges in this proceeding.

**Q. WHAT IS THE REVENUE IMPACT OF THE ADJUSTMENT TO WAPA'S MISCELLANEOUS SERVICE CHARGES THAT YOU PROPOSE?**

A. Based on the level of Other Revenue that WAPA estimates for FY 2014 (which reflect no increase over the prior year), the proposed increase in Miscellaneous Service charges would generate approximately **$149,000** of addition revenue that WAPA would not need to recover through its base rates for water service.

***E. The Development of New Water Service Rates***

**Q. HOW ARE WAPA'S PRESENT RATES FOR WATER SERVICE STRUCTURED?**

A. WAPA's current rates for Residential, Commercial and Governmental customers, as well as an experimental rate schedule for the provision of incentive pricing to large water uses that may have more economic water supply alternatives. Those rates are designed to provide for the recovery all of the Authority's base rate revenue requirements through charges that are assessed on a cents per gallon (or dollars per 1,000 gallons) basis. With the exception of Rate Schedule LUW, no customer charges or demand charges are utilized. Blocking of usage charges is found only in WAPA's Residential Water Service Rate Schedule (RSW), and that rate includes just two usage blocks with slightly inverted charges (i.e., the charge for a Residential customer's initial 1,000 gallons of water use each month is presently about 11.82% below that for usage in excess of 1,000 gallons per month.

**Q. DO WAPA'S EXISTING RATES FOR WATER SERVICE REFLECT THE MANNER IN WHICH IT INCURS WATER SERVICE COSTS?**

A. No, they do not. In Docket No. 576, WAPA's water cost allocations for FY 2008 identified over $2.7 million of annual customer-related operating and maintenance costs. Those allocations also reflected over $20 million of annual fixed costs, a significant percentage of which are related to the ownership, operation and maintenance of distribution system facilities (which include costs for meters and service connections). In total, roughly two-thirds of WAPA's total annual costs for FY 2008 could be classified as customer-related costs. For a water system with concerns regarding the potential reductions in annual sales, the Authority's present rates which recover the majority of its base rate revenue through volumetric charges is inappropriate unless the recovery revenue through such charges is protected by a revenue decoupling mechanism.

**Q. HAS CONSIDERATION BEEN GIVEN TO THE ESTABLISHMENT OF CUSTOMER CHARGES FOR WATER SERVICE IN PAST WAPA WATER RATE PROCEEDINGS?**

A. Yes. Dating back at least as far as Docket No. 481 that was concluded in 1995, testimony was presented regarding the possible implementation of minimum monthly customer charges.[3] Similar considerations regarding the possible use of customer charges to achieve more cost-based rate structures were addressed in my testimony in Docket No. 575. In each case, concerns were raised regarding potential legal impediments to the implementation of such charges, and WAPA has made no effort to seek legislation to alleviate those impediments. Thus, the Commission should consider other alternatives for improving the stability of WAPA's water service revenue. For example, the Commission could consider:

1. Broader application of monthly demand charges;
2. The establishment of minimum usage levels that are ratcheted to water use in prior periods, and/or
3. Adoption of a revenue decoupling mechanism that allows the Authority to adjust its charges to compensate for usage levels that vary from those that were anticipated at the time rates were last set by the Commission.

Continued reliance on dollars per gallon usage charges in the face of growing use of WAPA service as simply a supplemental water supply may expose WAPA to unnecessary and inappropriate cost recovery risk.

3 See Order No. 25/1995, dated April 27, 1995, at pages 5-6.

**Q. WHAT IS THE AMOUNT OF THE REVENUE INCREASE THAT WAPA HAS REQUESTED IN THIS PROCEEDING?**

A. WAPA has requested an increase in Water System revenue of $2.3 million annually. That increase request comprises a $1.4 million permanent increase in Water System base rates over the level of revenue expected from the current interim rates, as well as the implementation of a $900,000 line loss reduction capital surcharge ("Line Loss Surcharge'). Combined with the interim increase the Authority's petition seeks a total of $3.7 million in additional test year revenue. Witness Thomas indicates that the proposed base rate increases represents a 15.5% increase over the level of the Authority's last approved Water System permanent base rates. He also testifies that the requested increase over WAPA's interim rate levels is 5.9% overall, including a 5.4% base rate increase and the Line Loss Surcharge of $0.71 per kgal.

**Q. HOW DOES WAPA PROPOSE TO ADJUST ITS BASE RATES TO REFLECT IT REQUESTED OVERALL REVENUE INCREASE?**

A. After allowing for the previously discussed reduction in base rate charges for Standpipe Service, Authority seeks a uniform increase of 5.4% over its interim rate levels for all classes of service except Standpipe service.

**Q. IS WAPA'S APPROACH TO THE ADJUSTMENT OF ITS BASE RATES FOR WATER SERVICE REASONABLE AND APPROPRIATE?**

A. WAPA's proposal for adjustment to its water service rates for all service other than Standpipe service is presented without any assessment of the manner in which the changes in its costs have affected its costs of providing service by rate class. Furthermore, despite the Authority's concerns regarding potential losses of sales, WAPA's proposals are offered without any attempt to assess means of protecting the Authority from losses of revenue between rate classes and improving the predictability of the revenue it recovers through rate. As a result, WAPA provides the Commission no basis for either assessing the reasonableness of the relationships between rates and WAPA's costs of providing service by customer class or evaluating the merits of alternative mechanisms for cost recovery. In this context, the Commission has little basis for applying anything other than a uniform percentage increase to all classes of service.

**Q. WHY SHOULD CHARGES FOR WATER SERVICE VARY BY CLASS OF SERVICE?**

A. There are numerous factors that can yield differences in WAPA's costs of providing service by rate class. Some examples include differences in the costs of meters, costs of service connections, costs of other required distribution facilities, costs of billing and collection, and the load factors for the service provided to different classifications of customers. To further illustrate such cost differences, I note that a typical residential customer tends to require a smaller and less expensive meter than an average Commercial or Governmental water service account. However, commercial and governmental service customers may have better load factors than residential customers and that suggests that residential customers should be allocated or assigned a greater proportion of other distribution and water supply and storage costs than commercial and governmental accounts. Assumptions that overall water service costs are essentially the same for all classes on a cost per gallon basis are generally not supported by detail assessments of water utilities' cost of service by customer class.

**Q. WHAT IS THE OVERALL INCREASE IN BASE REVENUE FOR WATER SERVICE THAT GEORGETOWN RECOMMENDS?**

A. As set forth in the testimony of witness Dirmeier, Georgetown's recommendation is a permanent increase in WAPA's water service base revenue of **$987,209**. I have adjusted that increase to reflect corrections to the dollar amounts shown in Exhibit HLT-3 for FY 2014 for Residential revenue, Large Water Customer revenue, and for Standpipe Service revenue. I have also adjusted that increase for metered water service to reflect the increase in revenue from miscellaneous service charges that I propose. After those corrections and adjustments, the net increase required for Metered Water Sales customers is **$703,037**.

**Q. WHAT IS THE BASIS FOR YOUR ADJUSTMENT TO THE RESIDENTIAL SALES REVENUE FOR FY 2014 SHOWN IN EXHIBIT HLT-3?**

A. For FY 2014, Witness Thomas' Exhibit HLT-3 reflects an average rate per kgal for Residential Service of $20.18. Based on the current rates for each of the rate blocks set forth in WAPA's tariff for Residential water service, that average rate implicitly assumes that **65%** of Residential Water use or 164,607 kgal of the forecasted 252,989 kgals for FY 2014 would have to be billed at the first block rate. **This is impossible!** Given the number of residential water customers that witness Thomas shows in his Exhibit HLT-2, the billing of 164,607 kgals in the first block would represent an average of **1,323 gallons** of water service in the first block. However, the first block only applies to the first 1,000 gallons of use per month. If we divided the 164,607 kgals of water use in the Residential rate block by the number of Residential bills for FY 2014 (as represented by the number of Residential customers time 12 months per year), we find that witness Thomas' assumed distribution of water use by rate block would require that on average **1,323 gallons** of water use would be billed in the first block for each Residential bill rendered. That assumed average is 323 gallons per customer per month (or 32.3%) greater than the **maximum usage** that can be billed at the first block rate under WAPA's currently effective tariff. Furthermore, by overstating the amount of usage that would be billed at the lower first block rate, WAPA understates the amount of revenue that it can expect to receive from Residential service during FY 2014.

If we compare WAPA's FY 2014 data and assumptions, discussed above, to the 2011 actual Residential data provided in Exhibit HLT-3 we find by comparison that only about **40%** of Residential water use (or **771** gallons per customer per month) was billed at the first block rate in FY 2011. Even if we assume that all of the reduction in water use between FY 2011 and FY 2014 comes out of the second block usage, we would still find only about **44%** of Residential usage billed in the initial rate block.

I have revised WAPA's calculations for the average rate per kgal for residential service and total Residential revenue at current rates for FY 2014 to reflect **44%** of Residential water use in the initial block.[4] With that change from 65% to 44% of total Residential usage billed at the first block rate, the "Average Price" for FY 2014 Residential service would rise to $20.73 per kgal and total Residential revenue FY 2014 at the current (interim) rates increases to **$5,244,340**. That is **$137,796** more revenue that Thomas computes in HLT-3 and that you have reflected in your revenue requirements determination.

[4] This may still overstate the amount of usage that will actually be billed at the first block rate since WAPA also shows a reduction in its number of customers between FY 2011 and FY 2014. With the forecasted decrease in the number of Residential customers, at least some of the overall reduction water use would almost necessarily be reflected as a reduction in first block usage.

**Q. HOW HAVE YOU CORRECTED WAPA'S ESTIMATED FY 2014 REVENUE FROM INCENTIVE RATE SERVICE?**

A. WAPA's calculation of Incentive Rate revenue for Large Water Customers is distorted by an in appropriate and inconsistent use of an average rate of unexplained derivation. In this instance, WAPA uses an average rate of $6.58 per kgal for existing Incentive Rate sales where the lowest applicable demand rate is $7.13 per kgal. Again that average rate cannot be reconciled with actual data. For an average rate of $6.58 to be achieved for existing Incentive Rate customers in FY 2014, all Incentive Rate service would have to be billed at the **Large** customer rate AND about 77% of the usage of existing customers would have to be billed as "excess volumes." Nothing in the historic usage and billing data for Incentive Rate customers that is provided in response to Commission Data Request 2-8 reflects anything approaching that level of excess usage. Further, WAPA's own presentation indicates that significant volumes for existing Incentive Rate customers are billed at the rates for **Medium** and **Medium Large** customers.

Similarly, WAPA has also used an average rate for Incremental Incentive Rate service volumes of $6.77 per kgal. Although all incremental Incentive Rate volumes appear to be associated with customers in the **Large** classification under Rate Schedule LUW, that $6.77 average rate cannot be justified based on the current (interim) demand charge for service to **Large** customers.

I have revised WAPA's FY 2014 Incentive Rate revenue calculations by identifying the volumes that are expected for each classification of Incentive Rate customer and multiplying the volumes for each rate classification by the existing (interim) demand rate for that service classification. Due to time restrictions, I have not been able to assess the influence of minimum demand requirements for incentive rate customers or the volumes that WAPA might expect to price during FY 2014 under the excess volume provisions of the LUW rate. However, I recommend that such assessment be made and presented as part of all future WAPA base rate filings. My revisions to WAPA Incentive rate revenue for FY 2014 at existing (interim) rate levels yield total Incentive Rate revenue of **$1,866,747**. This reflects an **increase** of **$191,239** over the $1,675,508 of total FY 2014 Incentive Rate revenue that shown in Exhibit HLT-3.

**Q. CAN YOU EXPLAIN THE ADJUSTMENTS YOU MADE TO WAPA'S PRESENTATION OF STANDPIPE REVENUE?**

A. Yes. Again, the calculation of Standpipe sales revenue shown in Exhibit HLT-3 is premised on an average rate which does not reconcile with either the original rate for that service, the existing (interim) rate, or the proposed rate for Standpipe service. Exhibit HLT-3, line 43, shows an average price for Standpipe sales of $17.83 per kgal. Again, the derivation of this rate is not adequately explained. However, we can observe from Exhibit HLT-8 that the original rate was $20.60 per kgal, the existing (interim) rate is $21.87 per kgal, and the proposed rate is $18.90. Thus, the average rate prior to any rate proposed rate change (i.e., a reduction for Standpipe service) that WAPA uses in Exhibit HLT-3 for Standpipe service is inexplicably **less than** both the existing rate and the proposed rate.

To correct for this problem, I have priced WAPA's projected FY 2014 Standpipe service volumes (i.e., 38,011 gallons) at the existing (interim) rate for FY 2014. That correction increases WAPA's FY 2014 Standpipe revenue at the Interim rates to **$831,301**. This revised revenue amount for FY 2014 at existing rates is **$149,765** above the **$681,536** of projected FY 2014 revenue for Standpipe service that Exhibit HLT-3 reflects.

**Q. WHAT BASE RATE CHARGES DO YOU PROPOSED TO RECOVER GCG'S RECOMMENDED WATER REVENUE REQUIREMENT ?**

A. GCG's recommend charges for metered water service are as follows:

**GCG Proposed Base Rate Charges by Rate Class**
*(Rates per 1,000 Gallons)*

| | | |
|---|---|---|
| • Residential | | |
| First 1,000 gallons per month | | $18.81 |
| Over 1,000 gallons per month | $21.34 | |
| • Commercial and VI Government | | $21.34 |
| • Standpipe Service | | $21.34 |
| • Large User Incentive Water Rate | | |
| Small | | 12.43 |
| Medium | | $9.32 |
| Medium Large | | $7.77 |

| | |
|---|---|
| Large | $6.73 |

**Q. HOW DID YOU DEVELOP THE PROPOSED BASE RATE CHARGES SHOWN ABOVE?**

A. As note previously, I have computed a revised net increase in base rate revenue for Metered Water Service of **$833,599** based on the GCG recommended revenue increase and the adjustments to FY 2014 revenue for Residential Service, Large Water Customer Service, and for Standpipe Service. The resulting increase equates to a 3.59% overall increase in WAPA's permanent charges for metered water service compared to the original (i.e., pre-interim rate increase) levels, and that 3.59% increase was applied uniformly to all charges for metered water service. Calculations supporting the development of the proposed rates for metered water service are provided in **Exhibit BRO-W-2**.

**Q. DO YOU HAVE ANY CONCLUDING COMMENTS?**

A. Yes. In the future the accuracy and credibility of WAPA's water rate filings could be greatly enhances if basic checks regarding the reasonableness of data and assumptions used in those filings are made prior to their submission to the Commission for review. In all cases, the rates used ot price service must be consistent with the approved by the Commission, and distributions of usage by charge must not exceed the maximum permissible quantities provided under the tariff.

In addition, the development of revenue estimates for Incentive Rate service should be premised on more detailed assessments of actual and projected usage by charge, rather than relying on average rate calculations. There are not a large number of customers served under Rate LUW, and therefore, greater analysis of historic and projected usage by charge for each Incentive Rate customer should not be an unduly burdensome task. Importantly, analyses of actual and forecasted revenue amounts should address the historic relationship between applicable Contract Demand levels and monthly usage levels. WAPA's development of its forecasted revenue for Incentive Rate customers ignores the demand provisions of the Rate Schedule LUW and prices service under that rate schedule by simply multiplying a purported average rate times projected volumes. This shortcut methodology is inappropriate for use in estimating Large Water Customer revenue and should be replaced by analyses that reflect explicit consideration of the actual provisions of Rate Schedule LUW, including recognition of demand ratchets and excess volume charges.

**Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

A. Yes, it does.