Public Advocate Statement No.1

BEFORE THE

PHILADELPHIA WATER, SEWER AND STORM WATER RATE BOARD

Philadelphia Water Department	**)))))**	**Fiscal Years 2022 - 2023 Rates**

DIRECT TESTIMONY

OF

LAFAYETTE K. MORGAN, JR.

ON BEHALF OF THE PUBLIC ADVOCATE

March 22, 2021

EXETER
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TABLE OF CONTENTS

Introduction

Q. WOULD YOU PLEASE STATE YOUR NAME AND BUSINESS ADDRESS?

A. My name is Lafayette K. Morgan, Jr. My business address is 10480 Little Patuxent Parkway, Suite 300, Columbia, Maryland, 21044. I am a Public Utilities Consultant working with Exeter Associates, Inc. (Exeter). Exeter is a firm of consulting economists specializing in issues pertaining to public utilities.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND QUALIFICATIONS.

A. I received a Master of Business Administration degree from The George Washington University. The major area of concentration for this degree was Finance. I received a Bachelor of Business Administration degree with concentration in Accounting from North Carolina Central University. I was previously a CPA licensed in the state of North Carolina, however, in 2009, I elected to place my license in an inactive status as I focused on start-up activities for other business interests.

Q. WOULD YOU PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE?

A. From May 1984 until June 1990, I was employed by the North Carolina Utilities Commission - Public Staff in Raleigh, North Carolina. I was responsible for analyzing testimony, exhibits, and other data presented by parties before the North Carolina Utilities Commission. I had the additional responsibility of performing the examination of books and records of utilities involved in rate proceedings and summarizing the results into testimony and exhibits for presentation before that Commission. I was also involved in numerous special projects, including participating in compliance and prudence audits of a major utility and conducting research on several issues affecting natural gas and electric utilities.

From June 1990 until July 1993, I was employed by Potomac Electric Power Company (Pepco) in Washington, D.C. At Pepco, I was involved in the preparation of the cost of service, rate base and ratemaking adjustments supporting the company's requests for revenue increases in the State of Maryland and the District of Columbia.

From July 1993 through 2010, I was employed by Exeter as a Senior Regulatory Analyst. During that period, I was involved in the analysis of the operations of public utilities, with emphasis on utility rate regulation. I reviewed and analyzed utility rate filings, focusing primarily on revenue requirements determination. This work involved natural gas, water, electric, and telephone companies.

In 2010, I left Exeter to focus on start-up activities for other ongoing business interests. In late 2014, I returned to Exeter continuing to work in a similar capacity as prior to my hiatus.

Q. HAVE YOU PREVIOUSLY TESTIFIED IN REGULATORY PROCEEDINGS ON UTILITY RATES?

A. Yes. I have previously presented testimony and affidavits on numerous occasions before the North Carolina Utilities Commission, the Pennsylvania Public Utility Commission, the Virginia Corporation Commission, the Louisiana Public Service Commission, the Georgia Public Service Commission, the Maine Public Utilities Commission, the Kentucky Public Service Commission, the Public Utilities Commission of Rhode Island, the Vermont Public Service Board, the Illinois Commerce Commission, the West Virginia Public Service Commission, the Maryland Public Service Commission, the Corporation Commission of Oklahoma, Kansas Corporation Commission, the Philadelphia Water, Sewer and Storm Water Rate Board, the Colorado Public Utilities Commission, the Public Service Commission of South Carolina, and the Federal Energy Regulatory Commission (FERC). I testified before the Philadelphia Water, Sewer and Storm Water Rate Board regarding the Water Department's proposed rate increases for FY 2017 - FY 2018 and for FY 2019-2021, and 2019 TAP Rider Reconciliation proceeding. My resumé is attached hereto as Appendix A.

Q. ON WHOSE BEHALF ARE YOU APPEARING?

A. I am presenting testimony on behalf of the Public Advocate.

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

A. Exeter Associates has been retained by the Public Advocate to assist in the evaluation of the Formal Notice of proposed increases in rates and charges submitted by Philadelphia Water Department ("Department"). In this testimony, I present my findings on behalf of the Public Advocate regarding the overall revenue increase the Department is requesting for its water and wastewater operations for its Rate Period (Fiscal Years 2022 and 2023). My colleague, Mr. Jerome D. Mierzwa, will present the Public Advocate's recommendations regarding rate design and class cost of service issues. Also, Mr. Roger D. Colton addresses issues related to customer assistance programs, and other issues on behalf of the Public Advocate.

Q. IN CONNECTION WITH THIS CASE, HAVE YOU PERFORMED AN EXAMINATION AND REVIEW OF THE COMPANY'S TESTIMONY AND EXHIBITS?

A. Yes. I have reviewed the Department's testimonies, exhibits and its rate filing, as well as its responses to data requests.

Q. HAVE YOU PREPARED SCHEDULES TO ACCOMPANY YOUR TESTIMONY?

A. Yes. I have prepared Schedules LKM-1 to LKM-6. Schedule LKM-1 presents the projected revenues and the revenue requirement, and the covenants metrics. Schedule LKM-1 is similar to the Department's Schedule BV-1, Table C-1. It presents the Department's revenue requirement and operating results after reflecting the various adjustments that I have recommended on behalf of the Public Advocate. Schedule LKM-2 presents a summary of the Department's various sales and revenue receipts after reflecting the adjustments I have proposed. Schedule LKM-3 presents a summary of the Department's operating expenses after reflecting the adjustments I have proposed. Schedule LKM-4 is broken down into four pages that summarizes the Department's capital expenditures, debt and debt service. Schedule LKM-5 provides a summary of the Rate Stabilization Fund balance and shows the Department's performance relative to the various covenants after reflecting the adjustments I have recommended. Last, Schedule LKM-6 presents the revenue requirement impact of each of the adjustments I have recommended.

Q. PLEASE EXPLAIN HOW YOUR TESTIMONY IS ORGANIZED.

A. First, I offer a summary of the rate relief the Department requests and a brief statement of my conclusions. I then summarize for the Board's consideration the likely receipt of federal stimulus funds the Department has not estimated in its cost of service study. I then provide an overview of the test year data considerations relative to the Department's proposed rate increase. I then briefly describe the Department's accounting practices, and how they impact upon its rate request. My testimony then describes how the Department's rate model has historically understated revenues and overstated expenses and I provide conclusions based on that review. Next, I undertake a more technical review of certain projections and assumptions included in the Department's filing, proposing specific changes where appropriate. Finally, I discuss the development of the revenue requirement, the basis upon which the revenue requirement is derived, and the adequacy of the reserves maintained by the Department.

Summary and Recommendations

Q. PLEASE SUMMARIZE THE RATE RELIEF REQUESTED BY THE DEPARTMENT IN ITS FILING.

A. In this proceeding, the Department is requesting increases in rates for Fiscal Years 2022 and 2023. As shown on Schedule BV-1, Table C-1, attached to the Testimony of Black & Veatch Corporation (Black & Veatch), Philadelphia Water Department Statement No. 7A, the Department is seeking a $48.864 million rate increase in FY 2022 and a $31.543 million increase in FY 2023. According to the Department, if its request is approved, in its entirety, the total monthly bill for a residential customer using 5 hundred cubic feet ("ccf") of water per month would increase by 11.6 percent on September 1, 2021 and an additional 5.3 percent on September 1, 2022. A small business customer with a 5/8-inch meter using 6 ccf of water per month and having a 5,500 square foot lot with 4,000 square feet of impervious area will see an increase of 7.2 percent on September 1, 2021 and an additional 5.7 percent on September 1, 2022.

Q. PLEASE SUMMARIZE YOUR FINDINGS AND RECOMMENDATIONS.

A. Because of the significant amount of stimulus funding the Department is likely to receive, I first recommend separate reporting and accounting for these funds, to reduce the rate impact on customers over the rate period and in future rate proceedings. I have reviewed the Department's rate increase filing, reviewed, and analyzed the responses to the data requests that were served on the Department, and examined the electronic spreadsheets supporting its claim for a rate increase. Based upon my review, I recommend that the Board not approve the increase in rates as filed by the Department. Instead, I am recommending adjustments to the cost of service, as presented by the Department, to reduce costs that appeared to be excessive and to reflect certain costs at a more reasonable level. As a result of these adjustments, my analyses show that the Department's request to increase rates is unnecessary and the Department can manage its coverage requirements by utilizing Rate Stabilization Fund transfers while maintaining adequate reserves.

<u>Stimulus Funding Considerations</u>

Q. PLEASE EXPLAIN THE SUBJECTS DISCUSSED IN THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony I explain the extensive amount of stimulus dollars that the Department is likely to receive, and which would result in a reduced need for additional service revenues from customers.

Q. HAS THE DEPARTMENT FORECAST RECEIPT OF VARIOUS FEDERAL STIMULUS FUNDS IN ITS COST OF SERVICE?

A. No. In response to discovery requests regarding funding from the Coronavirus Relief Fund (CARES Act of 2021) and the Consolidated Appropriations Act of 2021, the Department acknowledges that it has not included any estimate of the amounts it may receive in the cost of service study. See PA-X-2, PA-X-4.

Q. IS IT REASONABLE TO EXPECT THE DEPARTMENT WILL RECEIVE CARES ACT FUNDS?

A. Yes. According to the U.S. Treasury, Philadelphia received over $276 million in CARES Act funds.[1] Regarding these funds, the Department states that it has submitted eligible expenses to the City, but is not sure "when such reimbursements will be

[1] See https://home.treasury.gov/system/files/136/Payments-to-States-and-Units-of-Local-Government.pdf.

received." PA-X-2. Accordingly, the core issue concerning CARES Act funds is when, not if, such amounts will be received.

Q. IS IT REASONABLE TO EXPECT CUSTOMERS WILL ACCESS FUNDS FROM THE CONSOLIDATED APPROPRIATIONS ACT OF 2021 TO PAY WATER BILLS?

A. Yes. The Consolidated Appropriations Act of 2021 provided for emergency rental assistance that is eligible to be used for rent and utility bills. Philadelphia is currently in the process of implementing its program, but has determined that tenants will be eligible to receive up to $2,000 for water bills.[2] The total allocation of emergency rental assistance that is available to tenants in Philadelphia is just over $104 million, not accounting for administrative expenses.[3] In addition, the Consolidated Appropriations Act established the Low-Income Household Drinking Water and Wastewater Emergency Assistance Program and appropriated $638 million to such program.

Q. ARE THERE OTHER FEDERAL STIMULUS FUNDS THAT THE DEPARTMENT WILL LIKELY RECEIVE?

A. Yes, there are significant other funds that will likely be available, at least in part, to the Department. The American Rescue Plan Act included an additional $500 million for low-income water bill assistance. Accordingly, there is more than $1.1 billion in federal funds to help low-income customers with water bills. In addition, the American Rescue Plan Act established additional funds for rental and homeownership assistance, totaling approximately $30 billion. Utilities are specifically listed as qualified expenses for both rental and homeownership assistance. Finally, the American Rescue Plan Act dedicated almost $220 billion to state and local fiscal recovery. The Pennsylvania

[2] See https://phlrentassist.org/about-phase-4/.
[3] See https://www.houseappropriations.com/Topic/BudgetYears/592.

House Appropriations Committee estimates Pennsylvania will receive $6.149 billion from this source of funding, with Philadelphia receiving more than $1.4 billion.[4] These funds are eligible for a broad range of purposes, including "to make necessary investments in water [and] sewer…infrastructure."[5]

Q. IS IT REASONABLE TO APPROVE HIGHER RATES WITHOUT ACKNOWLEDGING THE ADDITIONAL REVENUES THE DEPARTMENT WILL RECEIVE FROM THE VARIOUS FEDERAL STIMULUS FUNDS?

A. No, it is not. As the Department acknowledges with respect to CARES Act funds, the question is not <u>if</u> the Department will receive additional funds. The question is <u>when</u> will the Department receive these funds.

Q. WHAT DO YOU RECOMMEND?

A. I believe that the availability of significant federal stimulus funds creates a significant likelihood that increased rates and charges from the Department's customers will prove to be unnecessary, in whole or in part. At a minimum, after taking into consideration the specific adjustments I discuss below, I believe the Board should require the Department to provide monthly reports regarding actual revenues received from the various stimulus funds (including any additional funds that may be authorized by subsequent legislation), and including a 12-month projection (updated monthly) of funds it expects to receive following each monthly report. Assuming the Board concludes that any additional service revenues from retail customers are warranted in FY 2023 on the basis of what is demonstrated on the record in this proceeding, it should approve such revenues only to the extent they exceed a reasonable estimate of the

[4] See https://www.houseappropriations.com/Topic/BudgetYears/596.
[5] See Section 9901 of the American Rescue Plan Act, available at: https://www.congress.gov/bill/117th-congress/house-bill/1319/text#H65C66E46488F4CB6ACD99E77DF090885

federal stimulus funds the Department will receive over the two-year rate period. This will require the Board to revisit the estimate of federal stimulus funds in the Spring of 2022, but would not require a full cost of service study for purposes of determining the future adjustment.

Q. IS YOUR RECOMMENDATION CONSISTENT WITH PRACTICES UTILIZED IN ANY OTHER RATE SETTING JURISDICTIONS?

A. Yes. In Rhode Island, municipal water utilities are allowed to file for multi-year rate increases based upon specific changes in their cost of service. In the years after the initial rate increase goes into effect, the utility makes a compliance filing reflecting the actual changes to the various cost components that were established during the rate case. The compliance filing does not require a new cost of service to be prepared. Instead, the cost of service from the most recent rate case used to establish current rates serves as the cost of service. Therefore, the compliance filing is the means of adjusting costs that were estimated during the rate case to actual costs.

Q. WHY ARE YOU RECOMMENDING A SIMILAR TREATMENT FOR THE STIMULUS FUNDS?

A. I am recommending this specific treatment because the availability of the stimulus funds is a known change that has occurred after the filing of this rate case, but before the Board's decision. More importantly, the stimulus funds may be significant enough to change the Department's cost of service in this proceeding, so it should not be ignored. The stimulus funds are also being made available because they are intended to assist the customers of the water utility that have been severely impacted by the COVID-19 pandemic in a negative way. If this measure is not taken, the benefits of the stimulus package may never reach those they are intended to help.

Development of Adjustments to Rate Increases

Q. HOW HAVE YOU DEVELOPED YOUR RECOMMENDATIONS FOR THE RATE INCREASE SOUGHT BY THE DEPARTMENT?

A. As indicated in the Department's filing, the testimony submitted by Black & Veatch provides the cost of service on which the proposed rates are based. The study period used in that cost of service study covers fiscal years ("FY") 2021 to 2026. While the study period covers a six-year period, the specific rate increases being sought by the Department are to become effective in FY 2022 and FY 2023. Therefore, the focus of my analyses was primarily to ensure that any rate increase granted during those fiscal years was justified. Consequently, I have not presented any of the years beyond FY 2023. However, to be clear, I have used the same projection period as the Department in determining the revenue requirements for each proposed rate increase.

In terms of the process of my calculation, I employed the use of two electronic spreadsheet models that were not developed by me. First, I used Black & Veatch's proprietary model. This model was used to assess the claims and the assumptions underlying the Department's requested rate increase to derive the adjusted cost of service. After obtaining the cost of service from the Black & Veatch model, I entered the data into the simplified cost of service model that was developed for the Board's use. The simplified model demonstrates the effect of my proposed adjustments on the Department's proposed rate increase. It is based upon the use of these two models that I have calculated the reduction in the Company's requested increase. Although I used these models to make my recommendations, I do not attest to the accuracy of the algorithms used therein.

Q. WHAT IS THE PURPOSE OF A TEST YEAR IN A RATEMAKING PROCEEDING?

A. A test year or test period consists of 12 or more consecutive months and is assumed to be representative of normal operations. Under standard ratemaking practice, the revenues and expenses that are projected to occur during that twelve-month period are used as the basis for determining whether there is a need for incremental revenues. Hence, test period revenues and costs must be adjusted to normalize non-recurring items, to annualize new costs and/or revenues, and to normalize costs or revenues that may occur infrequently (i.e., every 2 years, every 5 years, etc.).

It should be noted that the rates that are derived from the test year remain in effect, not just for the test year, but for all subsequent years until new rates from a future rate case become effective. This is an important distinction between ratemaking and budgeting. Since rates could be in effect for an indefinite period of time, it is extremely important that the test year financial data is representative of the utility's normal operating conditions. It is also important that both adjusted and unadjusted test year data meet the widely accepted regulatory principle of being "known and measurable". To be considered as "known and measurable", the probability of the revenue or cost and the amount of any change must be known with certainty.

Accounting Practices Overview

Q. PLEASE SUMMARIZE HOW THE DEPARTMENT'S ACCOUNTING BOOKS ARE MAINTAINED.

A. The Department keeps its books on what is termed a "legally enacted" or "modified accrual" basis. In general, a legally enacted basis is equivalent to a cash basis. Under this basis, revenues are recorded when they are received, rather than when the customer is billed, or service is rendered. Expenses are recorded on an encumbrance basis, which is similar to the accrual basis (i.e., recorded when the payment obligation is incurred).

Q. WHY IS THE DEPARTMENT'S BASIS OF ACCOUNTING SIGNIFICANT?

A. From a ratemaking perspective, there are two considerations that come to mind. First, since revenues are recorded when they are received, there is no provision on the Department's books for bad debts or uncollectible accounts from service revenues. Therefore, as I will discuss later in this testimony, in forecasting future revenues for ratemaking purposes for the Department, a major consideration is the portion of billed revenue that is expected to be collected based upon historical experience. Second, it is normal accepted ratemaking practice for utilities to normalize non-recurring or extraordinary expenditures both on their books and for ratemaking purposes. The rationale is to spread cost over the periods that benefit from the expenditure or to prevent over collection of costs. For example, the expenses incurred for presenting a rate case (legal, consultants, etc.) are usually normalized to reflect a reasonable filing period between rate cases.

Q. ARE THERE ANY GENERAL CONCERNS YOU HAVE REGARDING THE DATA ON WHICH THE REVENUE REQUIREMENT IS BASED?

A. Yes. Since the revenue requirement is based on fully forecasted test years, the budget provides certain data on which the cost of service is based. It is important to understand that there is a difference of perspective between ratemaking purposes and budget purposes, particularly for budgeting in governmental accounting. For governmental accounting, the budgets are recorded. In other words, a journal entry is made in the accounting books and records to adopt the annual budget at the beginning of the Fiscal Year. Hence, the recorded budget acts as a control on revenues and expenditures. As a result, in the governmental accounting setting, one would expect that budget projections are conservative. In other words, within a relevant range, conservative budgets are likely to project expenses that are on the high side and revenues on the low side. The effect of this budgeting methodology on ratemaking is two-fold.

First, there is a tendency for revenues to be understated and expenses overstated. The primary concern when adopting a budget in each year is to ensure that revenues are not under collected and expenditures do not exceed the level in the recorded budget. Therefore, the focus of budgeting techniques is to ensure the financial operating results for each specific fiscal year will meet a specific objective. In general, a primary financial objective for the Department is to meet debt service coverage ratios stated in bond indentures. As a result, a booked expense that would normally be amortized for ratemaking purposes is, therefore, overstated in the year that the expense is incurred. Since expenses are overstated, net income (revenues minus expenses) is understated and the income available to meet bond-related debt service coverage ratios is similarly understated. As stated above, this type of accounting has the effect of overstating the revenue requirement for the initial test year and beyond if such expenditures are not adjusted for ratemaking purposes. Second, because the focus of budgeting is one fiscal year at a time, there is no attempt to normalize one-time, non-recurring costs which are often included in the budget. As a result, expenses can be over-stated for ratemaking purposes. Normal ratemaking practice seeks to determine costs on a normal ongoing level, rather than to recover costs in one specific year. Since rates are not collected subject to refund, costs should be established at a level that is more representative of normal operations.

<u>Specific Adjustments Based on my Analyses</u>

Q. PLEASE EXPLAIN THE SUBJECTS DISCUSSED IN THIS SECTION OF YOUR TESTIMONY.

A. In order to explain the basis for specific adjustments to the Department's cost of service, it is important to understand the manner in which the Department projects its revenues and operating (O&M) expenses. In the sections that follow, I provide a brief explanation of the Department's development of projected revenues and O&M expenses. I then follow up on each of these explanations with my specific adjustments to both revenues and expenses.

Operating Revenues

Q. PLEASE EXPLAIN HOW THE DEPARTMENT DERIVED ITS OPERATING REVENUES FOR THE RATE YEARS.

The Department explains that to project water and sewer gross billings, for each fiscal year of the Study Period, it applied the FY 2021 schedules of water and sewer quantity and service charges to the projections of annual water sales and number of customer accounts, respectively. To project the fiscal year water sales and number of customer accounts, the Department used a 2-year average of the FY 2018 and FY 2019 sales volume per account and the FY 2020 number of accounts as the initial basis for the projection. To account for the impact of the COVID-19 Pandemic and the associated economic downturn, the Department adjusted the usage per account projections to reflect the pandemic demand patterns for various customer types. To do so, adjustments were made to the demand escalation factors applied to the various customer types. These demand escalation factors are derived by comparing the usage from July 2019 to February 2020 (before the pandemic) and April to October 2020. After FY 2021, consumption is assumed to remain at levels similar to those experienced during the pandemic, except for 5/8-inch meter residential service customers. For those customers only, the Department assumed the historical 2.0% annual decline in consumption will resume in FY 2023. For stormwater billings, for each fiscal year of the Study Period, the Department applied the FY 2021 GA and IA rates to the projected billable GA and IA respectively and applied the Billing & Collection charge to the projected number of billable accounts. Existing schedules of charges also include a charge for private fire protection connections to the Water System. The Water Department assesses an extra-strength surcharge to all retail customers that contribute high strength wastewater based upon their monitored strength.

The revenues from sales are also affected by the collection factors which are applied to the corresponding gross billings to determine the operating retail cash receipts. The historical collection factors are based on nine fiscal years (FY 2012 through FY 2020) of billing and associated collections. According to the Department, its recent experience suggests there will be reduced collections during the remainder of the economic downturn and the anticipated recovery. Therefore, the Department proposed adjustments to the collection factors. For FY 2021 Billing Year Collection Factors, the department reduced the collections factor by 8%; for FY 2022 Billing Year Collection Factors, the Department reduced the collection factor by 4%; and for FY 2023 Billing Year Collection Factor, the Department reduced the collection factor by 2%.

For its wholesale operating revenues, the Department kept the rates and billing determinants unchanged from FY 2020.

Q. WHAT ADJUSTMENTS HAVE YOU MADE TO THE DEPARTMENT'S OPERATING REVENUES?

A. I have made adjustments to several of the assumptions used by the Department in projecting its revenues.

First, I have adjusted the manner in which the department projected its operating revenues. As indicated earlier, the Department used the 2-year average from the period FY 2018 and FY 2019 to derive the sales volume per account. Instead, I have revised the calculation of the sales volume per account to reflect a three-year average covering FY 2018, 2019 and 2020. The use of a two-year average is too short a period to develop the normalized volume going forward through FY 2023. Additionally, the Department applied the volumes to the number of accounts for FY 2020. As a matter of consistency, to the extent that the number of accounts for FY 2020 were reasonable for use in developing the sales volume, the FY 2020 volumes should have been used in the development of the sales volume per account.

The second adjustment I made to the derivation of the revenues is to reflect a growth rate to the number of accounts. The Department's approach holds the FY 2020 number of accounts constant through FY 2023 in deriving the annual revenue. This assumption is unreasonable because it is highly unlikely that two years from now the number of accounts will be unchanged. Therefore, I have applied a 0.35 percent growth rate to the FY 2020 number of accounts to derive the number of accounts for each successive year to FY 2020. The 0.35 percent growth rate reflects the 3-year compound annual growth rate (CAGR) of the number of accounts based on the period FY 2018 to 2020.

The third adjustment I made is to remove the 2.0 percent decrease in the consumption for the 5/8-inch meter residential service customers in FY 2023. The Department's reason for reflecting this decrease is that prior to the pandemic, "the 5/8-inch meter General Service customers, including the Residential customer type, have historically exhibited a 2.0% annual decrease over time." However, it is also the case that other customer types have been exhibiting growth trends. The Department chose not to reflect the growth in the volumes for those other customers. The Department's approach of reflecting only the decrease associated with this group of customers is unreasonable because it ignores the growth history for other customer groups. This adjustment by the Department amounts to picking and choosing which sales attributes to reflect.

Fourth, for the water wholesale customer, Aqua PA, the Department estimates 65,000 Mcf for the usage in projecting the revenue. This 65,000 Mcf is less than the average usage for this customer and I have not seen any justification for the use of the lower level of usage. Therefore, I have adjusted the usage to reflect the FY 2020 usage of 67,537 Mcf for FY 2021 through FY 2023.

Finally, I have adjusted the demand escalators used by the Department in the derivation of the revenues. In the response to PA-ADV-4, the Department provided data that it indicated were used to derive its projected demand escalators. I attempted to re-calculate the Department's demand escalators from the data provided in the response to PA-ADV-4 but was unable. Given that I could not re-calculate the demand escalators used by the Department from the data provided, I could not conclude whether they were reasonable. Therefore, I have used the demand escalators that I calculated from the data presented in PA-ADV-4.

Collection Factors

Q. HOW DOES THE DEPARTMENT USE COLLECTION FACTORS?

A. The collection factors are calculated from the historical payment pattern for each billing year and are summarized in three payment intervals -- payments received within 12 months; payments within 13-24 months; and payments after 24 months. These collection factors are used to determine the percentage of revenue that is received during each fiscal year. According to the Department, based upon recent Water

Department experience, and to account for the reduced collections anticipated during the remainder of the economic downturn and the anticipated recovery, it made the following adjustments to the projected collection factors:

- FY 2021 Billing Year Collection Factors – Reduced by 8 percent.
- FY 2022 Billing Year Collection Factors – Reduced by 4 percent.
- FY 2023 Billing Year Collection Factors – Reduced by 2 percent.

The Department claims that it has been operating under a de facto moratorium since March 2020, so it has not disconnected customers for non-payment.

Q. WHAT ADJUSTMENT HAVE YOU PROPOSED TO THE COLLECTION FACTORS?

A. The Department was asked to provide data to support the percentages used to reduce the collection factors. The response stated:

> Please refer to the response attachment PA-ADV-7.xlsx. The reduction in Billing Year collection factors uses a comparison of monthly collections during the pandemic in FY 2020 (i.e. April through June) and the corresponding month's average during prior years (i.e., FY 2019 to FY 2012). Please refer to Section 1.3.2 on page 1-4 of Schedule BV-5 (as included in PWD Statement No. 7A –Direct Testimony of Black & Veatch) for additional discussion regarding the collection factor adjustments. The Cost of Service analysis assumes collections will partially recover in FY 2022 and FY 2023, returning to historical average levels by FY 2024.

Based on my review of the data provided in Attachment PA-ADV-7.xlsx, I was unable to conclude that the Department's claim was supported. On the one hand, the Department appears to reach its conclusions based on a very short period of time, April to June. In my opinion, this period of time is too short to reach any conclusion. Moreover, I was unable to verify any of the percentages (the 8%, 4% and 2%) used by the Department to reduce the collection factors. Therefore, I am recommending an adjustment to remove the percentages used by the Department to decrease the collection factors.

<u>O&M Expenses</u>

Q. PLEASE DESCRIBE HOW THE WATER DEPARTMENT'S EXPENSES ARE CATEGORIZED.

A. The Water Department's expenses are categorized into the following expense classes:

- <u>Class 100 - Personal Services.</u> This category includes employee compensation and related expenses. Included items are the cost of both regular and overtime salaries, compensation for holidays, vacation, jury duty, funeral leave, military time, the cost of employer paid fringe benefits such as health, welfare, and insurance, the cost of employer paid taxes such as Social Security, Medicare, and unemployment, and the cost of pension contributions made on behalf of past and present employees.
- <u>Class 200 - Purchase of Services.</u> This category includes the cost of outside services supplied on behalf of the Water Fund. It includes costs such as electricity, telephone, bio-solids transportation, professionals, rented space, and advertising.
- <u>Class 300 – Materials & Supplies.</u> This category includes the cost of chemicals, pump parts, supplies, fuel, vehicle parts and lubricants, and other related items.
- <u>Class 400 – Equipment.</u> This category includes the cost of heavy equipment, trucks, vehicles, boats, trailers, cranes, sewer cleaning machines, and other related items.
- <u>Class 500 – Contributions, Indemnities, Taxes and Awards.</u> This category includes payments made by the Law Department on behalf of the Department

for liabilities, claims and property damage, as well as certain taxes and employee awards.

- Class 700 – Sinking Fund. This includes the payment of principal and interest due on revenue bonds and other debt and related obligations of the Department. This also includes transfers from the debt service reserve account to refunding escrows.
- Class 800 – Interfunds. This category includes payments made to other City departments for services rendered to the Department. This class also is used to make transfers to the Residual Fund for further transfer to the capital account.

Q. PLEASE EXPLAIN HOW THE DEPARTMENT DETERMINED THE OPERATING EXPENSES USED IN THE COST OF SERVICE IN THIS PROCEEDING.

A. The Department used its operating budget for Fiscal Year 2021 as the base year for the development of the Operation and Maintenance (O&M) expense projections for the rate years FY 2022 and FY 2023. The calculation process involved applying the historical "actual-to-budget factors" or "spend factors" to derive the expected level of expenditures based on historical experience. According to the workpapers, the 2-year average actual-to-budget factors were used, with certain exceptions. The exceptions were:

- A 100 percent spend factor is applied to the FY 2021 budgets for Operations - Equipment, Planning & Environmental Services – Services, and Public Affairs – Services.
- A 100 percent spend factor is applied to the Planning & Environmental Services and Public Affairs Personnel Costs.

- A 100 percent spend factor is applied the Rate Board Personnel, Services Costs, and Materials and Supplies.
- A 77 percent spend factor is applied to Fleet Management Materials and Supplies costs.
- A 77.2 percent spend factor is applied to the Finance Department Transfers.
- A 100 percent spend factor is applied to Pension, Pension Obligations and Benefits.

After the Department determined what it deemed to be the expected level of expenditures, the various classes of costs (as described above) were escalated based upon growth factors that were either calculated based upon the Department's historical experience or taken from a cost index. These escalated costs are the basis of the FY 2022 and FY 2023 O&M expenses.

In addition to the projected expenses derived from the process described above, the Department proposed the following additional adjustments to reflect cost changes it claimed not to be reflected in the projected expenses.

- The Department included adjustments in FY 2022 and FY 2023 for additional Water Department staff costs related to the Consent Order & Agreement (also known as Green City, Clean Waters).
- The Department included $0.05 million annually in FY 2022 and FY 2023 for additional staff costs due to the Pennsylvania Department of Environmental Protection (PADEP) regulatory requirements for sample collection and field testing.
- The Department included adjustments in FY 2022 and FY 2023 for additional pension and benefits costs associated with additional staff noted above.

- The Department included $10.0 million annually in FY 2022 and FY 2023 for restoration of the SMIP/GARP prior budget levels.
- The Department included adjustments in FY 2022 and FY 2023 to reflect the transition of Planning & Environmental Services staff salaries from capital funded positions to O&M funded, and $1.0 million and $5.6 million in FY 2022 and FY 2023, respectively, to reflect the transition of Construction & Engineering staff salaries from capital funded positions to O&M funded.
- The Department decreased O&M expenses by $6.8 million and $7.0 million in FY 2022 and FY 2023, respectively, to reflect a reduction in maintenance.
- The Department included $1.6 million and $1.8 million in FY 2022 and FY 2023, respectively, to reflect the restoration of the budget for Water Department vehicles.

<u>Expense Escalations</u>

Q. HOW DID THE DEPARTMENT ESCALATE THE O&M EXPENSES IN THE COST OF SERVICE?

A. As I explained earlier, after the expected level of expenses were determined by applying the actual-to-budget factors to budgeted FY 2021 O&M expenses, those expenses were escalated based on the cost categories in which they fell to derive the projected expenses for FY 2022 and 2023. The following chart summarizes the various cost escalation factors that were used by the Department.

O&M Escalation Factors			
		2022	2023
Constant		0.00%	0.00%
Labor		2.00%	2.00%
Other Benefits		4.89%	4.05%
Pension		1.78%	3.28%
Pension Obligations		0.00%	0.00%
General		1.40%	1.40%
Property Leases		1.80%	1.80%
Other 200		0.00%	1.60%
Other 300		2.63%	2.63%
Other 400		2.80%	2.80%
Energy		0.00%	0.50%
Gas		5.50%	1.50%
Chemicals		2.50%	2.50%
Transfers		0.00%	0.00%

Q. ARE YOU RECOMMENDING ANY CHANGES TO THE DEPARTMENT'S ESCALATION FACTORS?

A. Yes, I am. I am recommending changes to the escalation factors applied to the categories of Other 200 (Services), Other 300 (Materials & Supplies), Other 400 (Equipment) and Gas.

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO THE ESCALATION FACTOR FOR OTHER 200 (SERVICES).

A. The Department indicated that the escalation factors of 1.60 percent for Services was derived from the use of the 2-year average Consumer Price Index (CPI) for the Philadelphia Area. The use of a 2-year average suggests that at least one year is in the past. In my opinion, past inflation is not a good predictor of future inflation. Hence, I disagree with this approach. Instead, I have used the most recent CPI data for the Philadelphia area (February 2021) of 1.0 percent. This approach is reasonable because it is the most recent known indicator of inflation moving forward.

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO THE ESCALATION FACTOR FOR OTHER 300 (MATERIALS & SUPPLIES) AND OTHER 400 (EQUIPMENT).

A. The Department indicated that the escalation factors for Other 300 (Materials & Supplies) and Other 400 (Equipment) were derived from the use of the average of the 2-year and 3-year average increase of the PPI for Construction Equipment and Machinery and the average of the 2-year and 3-year average increase of the PPI for Materials for Construction. As stated before, the use of a 2- and 3-year average suggests that past years have been used in the derivation of the escalation rate which is not reasonable because past inflation is not a good predictor of future inflation. Moreover, the approach taken by the Department for these escalation rates, the Other 300 (Materials & Supplies) and Other 400 (Equipment), shows that the Department's approach to the derivation of the escalation rate is not consistent, at least as it relates to the derivation of the escalation factor for the Other 200 (services). In one scenario a 2-year average is used, and in the other, an average of the 2-year and 3-year averages is used. Hence, I disagree with this approach. Instead, I have used the most recent PPI factors (February 2021) for the escalation rate. This approach is reasonable because it is the most recent known indicator of inflation moving forward.

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO THE ESCALATION FACTOR FOR GAS.

A. The Department supports its claim for the FY 2022 gas escalation factor of 5.50 percent by a letter provided by the City's Office of Sustainability[6]. While the letter provides some explanation on how the escalation rate was determined, the letter indicates that regular updates will be provided on the energy costs. Therefore, I have removed the 5.5

[6] Black & Veatch Schedule BV-6: WP-1, pages 34 and 35.

percent increase and request that the Department provide an update of the gas cost increase when it files its rebuttal testimony. Instead, for FY 2022, I have used the 1.5 percent escalation factor used for FY 2023.

<u>O&M Expenses Actual to Budget Factors</u>

Q. PLEASE EXPLAIN THE ADJUSTMENT YOU HAVE MADE TO THE USE OF THE ACTUAL TO BUDGET FACTORS.

A. As explained earlier, the Actual-to-Budget Factors are used to adjust the budgeted expenses to reflect the level of expenditures based upon historical experience. The Actual-to-Budget factors used by the Department in developing the cost of service reflect the two-year historical average of the actual-to-budget ratio from FY 2019 and FY 2020. I disagree with the use of the activity from a two-year period as the basis of determining what could be considered a normalized or average actual to budget ratios. A two-year period is too short a period to determine a normalized activity. If one of those years is abnormal, the resulting average is skewed in the direction of the abnormal year. It is acknowledged that calendar year 2020 was an extraordinary year. FY 2020 includes four months that were impacted by the COVID-19 pandemic, including the governor declaring a state of emergency. Therefore, I believe that the Department's use of the two-year period (for FY 2019 and 2020) for the actual to budget ratio is not reasonable.

In my calculation of the cost of service, I am recommending the use of the three-year period (FY 2018 to 2020) for the actual to budget factor. I believe this approach is more reasonable than the Department's approach.

Q. ARE YOU RECOMMENDING THE 3-YEAR AVERAGE BECAUSE OF THE IMPACT OF THE COVID-19 PANDEMIC?

A. No. I cited the COVID-19 pandemic because it is a good way to illustrate why the two-year approach is not reasonable. However, from the first time I testified before the Board, I have been consistent in recommending the use of the three-year average.

Q. HOW HAVE YOU TREATED THOSE COSTS TO WHICH THE DEPARTMENT DID NOT APPLY THE 2-YEAR AVERAGE IN DETERMINING THE ACTUAL TO BUDGET FACTOR?

A. I have applied the 3-year actual to budget factor to those costs that the Department did not use the two-year average to determine the actual to budget factor. The Department's reason for not applying the two-year average appears to be more subjective than data driven. In other words, no data was provided to justify the departure from the use of the two-year average. In fact, the Department has cited various reasons why it made an exception for certain expenses. However, the reason for using a multi-year average is so that any unusual or irregular circumstance can be recognized but not cause the cost to be skewed because of the effect of one unusual event in a year. The use of the multi-year average also avoids making a subjective determination of what the level of cost should be, as it appears to have been done by the Department. In other words, the three-year factor is used to smooth out fluctuations in expenditures that may occur from year to year.

SMIP/GARP

Q. PLEASE EXPLAIN WHAT THE DEPARTMENT IS REQUESTING FOR RECOVERY OF THE SMIP AND GARP PROGRAMS.

A. The Stormwater Management Incentives Program (SMIP) and the Greened Acre Retrofit Program (GARP) are two stormwater management programs offered by the Department to its customers. The SMIP provides grants to non-residential property owners to design and build stormwater retrofit projects resulting in greened acres that the Department can count toward compliance with the performance requirements in the Consent Order and Agreement with PaDEP. The GARP provides grant funding to companies or contractors to construct stormwater projects across multiple properties in the Department's service area.

According to the Department's filing, the amount spent on SMIP/GARP projects was $26.9 million in 2018 and $25 million annually for 2019 and 2020. The Department witness La Buda states that in response to the impact of the COVID-19 pandemic, at the request of the City, the Department cut its budget for SMIP/GARP projects by $10.0 million as part of an overall cost reduction of $25.0 million for FY 2021. In this proceeding, the Department is proposing to increase its SMIP/GARP budget by $10.0 million to take expenditures back to the previous budget of $25.0 million.

Q. SHOULD THE BOARD AUTHORIZE THE $10 MILLION INCREASE IN SMIP/GARP EXPENDITURES?

A. No. The SMIP/GARP expenditures were reduced by $10 million at the request of the City because of the impact of the COVID-19 pandemic. Presumably, the impact of the pandemic on the City created a need to preserve funds in order to meet its obligations. However, it should be noted that even though the Department cut its budget by $10 million, customers did not see a reduction in their rates. Nevertheless, the ability of the Department to reduce these expenses by 40 percent demonstrates the discretionary nature of these expenses. While it may be that the impact of the pandemic is over for the City, and the Department, to the point where it is ready to increase these expenditures by $10 million, the effect of the pandemic is not over for customers and the ordinary citizens of the City. The President recently signed into law a $1.9 trillion stimulus package partly intended to assist citizens and local governments (among others) impacted by the pandemic. This indicates that citizens of the country are still being negatively impacted by the pandemic economically.

Q. IF THE BOARD DOES NOT ACCEPT YOUR RECOMMENDATION, DO YOU HAVE AN ALTERNATIVE RECOMMENDATION?

A. Yes. While I believe now is not the appropriate time to include such a significant discretionary expense in rates, I recognize that the Board may view this issue differently. Therefore, if an increase is allowed for the SMIP/GARP programs, the Board should allow only one-half or $5.0 million to be recovered.

Rate Case Expenses

Q. WHAT CHANGES ARE YOU RECOMMENDING TO RATE CASE EXPENSE?

A. The Department has estimated the total cost of this proceeding to be $ 2,089,020 which is included in the FY 2021 budget. I am recommending that rate case expenses be normalized over 2 years. Rate case expenses are incurred as a result of the Department filing to increase rates and not a normal cost that is incurred annually. It is standard ratemaking procedure that since these costs are not incurred every year, they should be normalized over the benefit period to avoid an overcollection of the cost. Also, given that I am recommending a two-year rate increase, this approach is consistent with the period over which the rates from this proceeding will be in effect.

Q. DO YOU HAVE AN ADDITIONAL ADJUSTMENT TO RATE CASE EXPENSE?

A. Yes. I have reviewed the testimony of Roger D. Colton, submitted on behalf of the Public Advocate. Mr. Colton concludes that the testimony of H. Gil Peach, Mark Thompson, and Yvonne Whitelaw "makes no meaningful contribution to decision-making in the pending PWD rate proceeding." As a result, I do not believe PWD's expense associated with this testimony is reasonable or appropriate. I have included an adjustment to eliminate this expense prior to normalizing the remaining rate case expenses.

CIP Inflation Factor

Q. PLEASE EXPLAIN THE ADJUSTMENT YOU HAVE MADE TO THE CIP INFLATION FACTOR.

A. According to the Department, the CIP Budget is an appropriation-based budget. The FY 2021 CIP costs reflect the Water Department's adopted FY 2021 budget appropriation. The FY 2022 CIP costs reflect the Water Department's proposed FY 2022 budget appropriation. The budget for each respective fiscal year represents the total cost of the capital improvements the Water Department expects to contract in that fiscal year. According to the Black & Veatch testimony, the budgets submitted for the Department's capital program do not include any allowance for inflation. However, Black & Veatch indicated that it added annual inflation of 3.0 percent for FY 2023 to FY 2026.

I have removed the inclusion of the 3.0 percent inflation to the FY 2023 capital expenditures. I removed the inflation because the inflation amount is not part of the budgets the Water Department has projected for the future. The testimony clearly states the Department's CIP Budget is an appropriation-based budget and the Department will only contract fully funded CIP projects. The 3.0 percent inflation inclusion is an addition to the budget made by Black & Veatch and does not reflect the budget amount that PWD has projected in its budget. Therefore, it is inappropriate for inclusion in the cost of service.

Debt Interest Rate

Q. WHAT ADJUSTMENTS HAVE YOU MADE TO THE DEBT INTEREST RATES?

A. The Department has included projected debt issuances in the cost of service for FY 2022 and FY 2023. The interest rates that the Department used for these proposed new debt issuances are 5.0 percent for FY 2022 and 5.25 percent for FY 2023. In Ms. La Buda's testimony, she discusses the availability of more economical debt financing through Pennvest Loans. According to Ms. La Buda, the Department expects to finance its Capital Improvement Program during FY 2022 and FY 2023 partly with long term debt issuances totaling $740 million through Pennvest Loans. She states that, in January 2021, Pennvest was scheduled to act on two applications from the Department, a $100 million application regarding the Northeast Water Pollution Control Plant and a $5 million application regarding Lawncrest Stormwater. She also states that, in addition to these applications, the Department may submit other applications to Pennvest to obtain low-cost loans. Besides the Pennvest source of financing, Ms. La Buda explains that the Department is working on implementing a new commercial paper program, which was authorized by the City Council on November 19, 2020 and signed by the Mayor on December 1, 2020. Commercial paper is generally used as short-term financing and generally has lower interest rates than long-term debt.

The interest rates that the Department has used in the cost of service are excessive considering the current cost of long-term debt. From a review of the recent debt financing, the interest rates on virtually all of the recent loans have been significantly less than the 5 percent and 5.25 percent claimed by the Department. In particular, the Pennvest debt that are on the Department's books are at interest rates that are in the range of 1.35 percent. Other recent non-Pennvest debt are at interest rates that are in the 3.0 percent range. Given that the Department has indicated its intent to seek more Pennvest financing, the use of the 5.0 percent interest rates in the projection is unreasonable. Therefore, I have adjusted the interest rates on the proposed new debt financing from 5.0 percent and 5.25 percent to 3.00 percent to be aligned with recent interest rates on debt. I derived the 3.00 percent interest by averaging the interest rates on debt financing for 2019 and 2020. The average rate from that calculation was 2.86 percent. I rounded the 2.86 percent up to 3 percent as a reasonable approximation. The Department has claimed a 2.0 percent interest rate on commercial paper debt which I have accepted as a reasonable interest rate.

Q. WHY HAVE YOU REMOVED THE ISSUANCE COSTS FROM THE CALCULATION OF THE DEBT SERVICING EXPENSE?

A. In the response to PA-ADV-10, the Department stated: "[p]lease note that there are PennVest costs of issuance (paid from operating funds) which are not reflected in the attachment to this data response." In fact, Attachment PA-ADV-10 does not list any issuance cost. Therefore, I have removed the issuance cost from the debt service calculations because including those costs would be duplicative of costs that are included in O&M expenses.

<u>Development of Revenue Requirement</u>

Q. PLEASE PROVIDE YOUR UNDERSTANDING OF HOW THE DEPARTMENT'S PROPOSED REVENUE REQUIREMENT WAS DEVELOPED.

A. There are additional factors that must be considered when determining the Department's revenue requirement. First, the 1989 General Ordinance Requirement must be met. In addition to meeting the operation and maintenance expenses and annual capital costs, the 1989 General Ordinance stipulates that, during any given fiscal year, the Water Department's combined revenues for water and wastewater services must be sufficient to satisfy the following debt service coverage obligations:

1. The net revenues for any fiscal year shall be equal to at least 1.20[7] times the debt service requirements for such fiscal year (excluding the principal and interest payments in respect of Subordinated Bonds).
2. In each fiscal year, water and wastewater rents, rates, fees, and charges shall yield net revenues which shall be at least equal to 1.00 times the sum of the following:
    a. The debt service requirements for such fiscal year (including debt service requirements in respect of Subordinated Bonds);
    b. Amounts required to be deposited into the Debt Reserve Account during such fiscal year;
    c. The principal or redemption price of and interest on General Obligation Bonds payable during such fiscal year;
    d. Debt service requirements on interim debt payable during such fiscal year; and
    e. The Capital Account Deposit to the Construction Fund for such fiscal year (less any amounts transferred from the Residual Fund to the Capital Account during such fiscal year).

Second, the 1989 General Bond Ordinance (as amended) requires rates and charges for use by the Water and Wastewater systems to be sufficient to yield Net Revenues (excluding amounts transferred from the Rate Stabilization Fund into the Revenue Fund during, or as of the end of, such fiscal year) at least equal to 90 percent

[7] To clarify, throughout the discussion of the Debt Service Coverage, the coverage is expressed either as 1.xx times or 1xx percent (e.g., 1.20 or 120%). The arithmetic result is the same. Hence, these factors are used interchangeably.

of the Debt Service Requirements (excluding debt service due on any Subordinated Bonds) in such fiscal year.

Third, the Water Rate Board Ordinance Requirement: Section 13-101(4)(a) of the City Code sets the floor for the amounts that rates and charges must generate to support the System. The rates and charges must yield to the City at least an amount equal to the sum of:

1. Operating expenses of the City in respect of the water, sewer, storm water systems;[8]
2. Debt service on all obligations of the City in respect of the water, sewer, stormwater systems;
3. In respect of water, sewer and storm water revenue obligations of the City, such additional amounts as will be required to comply with any rate covenant and sinking fund reserve requirements approved by ordinance of Council in connection with the authorization or issuance of water, sewer and storm water revenue bonds; and
4. Proportionate charges for all services performed for the Water Department by all officers, departments, boards or commissions of the City.

In addition, Section 13-101(4)(b) of the City Code states that the rates and charges must not exceed the total appropriations from the Water Fund.

Q. HOW IS THE SENIOR DEBT COVERAGE DETERMINED?

A. As shown on Table C-1 of Black & Veatch's Exhibit BV-E1, Total Senior Debt Service Coverage (line 25) equals Net Revenues After Operations (line 19) divided by Total Senior Debt Service (line 24).

[8] I do not believe this language prohibits the normalization of nonrecurring costs.

Q. WHAT IS THE DEPARTMENT'S PROJECTION OF SENIOR DEBT SERVICE COVERAGE IN THIS PROCEEDING?

A. The Department proposes to meet the 1.20 times senior debt service coverage level mandated by the 1989 General Bond Ordinance.

Residual Fund

Q. WHAT BALANCE IS THE DEPARTMENT SEEKING FOR ITS RESIDUAL FUND BALANCE?

A. The Department is seeking a Residual Fund Balance of approximately $15 million. There has been an established goal of maintaining a minimum of $15 million in the Residual Fund.

Q. WHAT IS THE STATED PURPOSE OF THE RESIDUAL FUND?

A. According to Memorandum from Bond Counsel (provided as Schedule ML-3), "the Residual Fund is the last Fund into which Project Revenues are transferred from the Revenue Fund. Money in the Residual Fund may be used to pay Operating Expenses or debt service, or for almost any other purpose in support of the System…In addition, money in the Residual Fund may be used to fund a transfer to the City's General Fund limited to the 'Net Reserve Earnings' up to a maximum of $4,994,000. This annual transfer is often referred to as the 'scoop' by the City".

Q. WHAT BALANCE SHOULD BE USED FOR ESTABLISHING RATES IN THIS PROCEEDING?

A. In the last rate case $15 million was used by the Department for the target Residual Fund balance. The Public Advocate is not opposing the Department's projections of maintaining a target of $15 million. However, it should be noted that the $15 million is not a requirement of any bond covenant and the ability to maintain this amount is, like

Rate Stabilization Fund reserves, driven in part by operational choices made by the Department.

Rate Stabilization Fund

Q. WHAT IS THE STATED PURPOSE OF THE RATE STABILIZATION FUND (RSF)?

A. The Rate Stabilization Fund is intended to provide liquidity to the Department to comply with financial covenants and maintain cash flow stability and lessen the need for rate increases.

Q. FOR PURPOSES OF SATISFYING MINIMUM SENIOR DEBT SERVICE COVERAGE REQUIREMENTS, IS THERE A STATED REQUIREMENT REGARDING THE MAXIMUM AMOUNT THAT CAN BE WITHDRAWN FROM THE RATE STABILIZATION FUND IN ANY ONE YEAR?

A. Yes. The requirement states that there is a cap on the amount to be utilized for debt service coverage from the Rate Stabilization Fund based upon net revenues being 90% of debt service, that is, the maximum amount that can be withdrawn from the RSF to substitute for revenues in any one year is equal to the amount of senior debt service times 30%.

Q. FOR THE TEST YEARS, DID THE DEPARTMENT REFLECT ANY AMOUNTS TO BE WITHDRAWN (OR ADDED) TO THE RSF ON EXHIBIT BV-E1, TABLE C-1?

A. Yes. As shown on Line 18, the Department is projecting a withdrawal of $100,000 in FY 2022 and a deposit of $700,000 in FY 2023. As shown in LKM-5, after including the expense and revenue adjustments I have described above, I project the Department will be able to maintain adequate funds in the Rate Stabilization Fund over the rate period.

Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?

A. Yes, it does.

Public Advocate Statement No.1

BEFORE THE

PHILADELPHIA WATER, SEWER AND STORM WATER RATE BOARD

Philadelphia Water Department	**)))))**	**Fiscal Years 2022 - 2023 Rates**

SCHEDULES ACCOMPANYING THE DIRECT TESTIMONY

OF

LAFAYETTE K. MORGAN, JR.

ON BEHALF OF THE PUBLIC ADVOCATE

March 22, 2021

EXETER
ASSOCIATES, INC.
10480 Little Patuxent Parkway, Suite 300
Columbia, Maryland 21044

PHILADELPHIA WATER DEPARTMENT
Revenue Requirement and Operating Results
For the Rate Years Ending June 30, 2022 and 2023
($000s)

Line No.	Description				2021	2022	2023
	OPERATING REVENUE						
1a	Water Service - Existing Rates				$ 281,601	$ 283,150	$ 284,253
2a	Wastewater Service - Existing Rates				445,071	446,710	446,762
3a	Total Service Revenue - Existing Rates				$ 726,672	$ 729,860	$ 731,016
	Rate Increase /(Decrease)						
	Year	**Calc % Increase**	**Months Effective**				
4a	FY 2021	0.00%	9.81			$ -	$ -
5a	FY 2022	-1.64%	9.81	(a)		(9,796)	(12,001)
6a	FY 2023	2.08%	9.81	(a)		-	12,207
7a	FY 2024	18.64%	9.81	(a)		-	-
8a	FY 2025	5.18%	9.81	(a)		-	-
9a	FY2026	8.26%	9.81	(a)		-	-
10a	Total Additional Service Revenue Required					$ (9,796)	$ 206
11a	Total Water & Wastewater Service Revenue				726,672	720,064	731,222
11xa	Other Income (b)				-	-	-
12a	Other Operating Revenue				45,633	29,192	29,111
13a	Debt Reserve Fund Interest Income				-	-	-
14a	Operating Fund Interest Income				1,071	1,280	1,316
15a	Rate Stabilization Interest Income				1,298	1,089	1,092
16a	Total Revenues				$ 774,674	$ 751,625	$ 762,741
	OPERATING EXPENSES						
17a	Total Operating Expenses				$ (524,653)	$ (531,981)	$ (544,956)
	NET REVENUES						
18a	Transfer From/(To) Rate Stabilization Fund				$ (25,000)	$ -	$ 28,000
19a	NET REVENUES AFTER OPERATIONS				$ 225,021	$ 219,644	$ 245,785
	DEBT SERVICE						
20a	Outstanding Bonds				$ (175,726)	$ (163,516)	$ (164,558)
21a	Pennvest Parity Bonds				(10,651)	(10,885)	(11,067)
22a	Projected Future Bonds				-	(5,961)	(24,441)
23a	Commercial Paper				-	(2,000)	(4,000)
24a	Total Senior Debt Service				$ (186,377)	$ (182,362)	$ (204,066)
25a	TOTAL SENIOR DEBT SERVICE COVERAGE				1.21	1.20	1.20
26a	Subordinate Debt Service				-	-	-
27a	Transfer to Escrow				-	-	-
28a	Total Debt Service on Bonds				$ (186,377)	$ (182,362)	$ (204,066)
29a	CAPITAL ACCOUNT DEPOSIT				(27,833)	(29,447)	(29,308)
30a	TOTAL COVERAGE (L19a/(L24a+L26a+L29a))				1.05	1.04	1.05

PHILADELPHIA WATER DEPARTMENT

Revenue Requirement and Operating Results
For the Rate Years Ending June 30, 2022 and 2023
($000s)

Line No.	Description	2021	2022	2023
	RESIDUAL FUND			
31a	Beginning of Year Balance	$ 16,261	$ 15,064	$ 15,049
32a	Interest Income	156	150	150
32xa	Plus:			
33a	End of Year Revenue Fund Balance	9,448	7,835	12,410
34a	Deposit for Transfer to City General Fund (c)	1,855	1,847	2,076
34xa	Less:			
35a	Transfer to Construction Fund	(10,800)	(8,000)	(12,600)
36a	Transfer to City General Fund	(1,855)	(1,847)	(2,076)
37a	Transfer to Debt Service Reserve Fund	-	-	-
38a	End of Year Balance	$ 15,064	$ 15,049	$ 15,009
	RATE STABILIZATION FUND			
39a	Beginning of Year Balance (d)	$ 150,652	$ 175,652	$ 175,652
40a	Deposit From/(To) Revenue Fund	25,000	-	(28,000)
41a	End of Year Balance	$ 175,652	$ 175,652	$ 147,652

Calculation of Additional Service Revenue Required:

Description	2022	2023
Total Operating Expenses, 17a	$ 531,981	$ 544,956
Total Senior Debt Service, 24a	182,362	204,066
CAPITAL ACCOUNT DEPOSIT, 29a	29,447	29,308
Transfer to Construction Fund, 35a	8,000	12,600
Transfer to Escrow, 27a	-	-
Change in Residual Fund	(165)	(190)
Subtotal	$ 751,625	$ 790,741
Deposit From/(To) Revenue Fund, 40a	-	(28,000)
Other Op Revenue, DSRF + Operating + RSF I	(31,561)	(31,519)
Net Revenue Needs	$ 720,064	$ 731,222
Total Service Revenue - Existing Rates	729,860	731,016
Total Additional Service Revenue Required, 1	$ (9,796)	$ 206
Net Additional Service Revenue Required	$ (9,796)	$ 206

(a) The projected rate increases shown on lines 7a, 8a and 9a are the result of PWD assumptions and do not reflect any adjustments.

(b) Includes other operating and nonoperating income, including interest income on funds and accounts transferable to the Revenue Fund. Debt Service Reserve Fund Release in FY 2021 is included in Other Operating Revenue line item.

(c) Transfer of interest earnings from the Bond Reserve Account to the Residual Fund as shown in Line 34 to satisfy the requirements for the transfer to the City General Fund shown on Line 36.

(d) FY 2021 beginning balance is estimated based on preliminary FY 2020 results.

PHILADELPHIA WATER DEPARTMENT
Projected Revenue Receipts
For the Rate Years Ending June 30, 2022 and 2023
($000s)

Line No.	Description	2021	2022	2023
1a	Water Sales Receipts	$ 281,601	$ 283,150	$ 284,253
	Wastewater Sales Receipts			
2a	Sanitary Sewer	268,634	269,875	270,774
3a	Stormwater	176,436	176,835	175,989
4a	Subtotal Wastewater Service Receipts	445,071	446,710	446,762
5a	Total Water & Wastewater Receipts	726,672	729,860	731,016
5b	Net Change in Total Water & Wastewater Receipts	66,872	42,834	35,005
6a	Penalties	6,722	10,089	10,008
7a	Miscellaneous City Revenue	1,650	1,650	1,650
8a	Other	9,963	9,963	9,963
9a	State & Federal Grants	1,000	1,000	1,000
10a	Permits Issued by L&I	5,800	5,800	5,800
11a	Miscellaneous (Procurement)	390	390	390
12a	City & UESF Grants	300	300	300
13a	Affordability Program Discount Cost (a)	-	-	-
14a	Release from Debt Service Reserve (b)	19,808	-	-
15a	Other Operating Revenues	45,633	29,192	29,111
	Interest Income			
16a	Debt Service Reserve Fund (c)	-	-	-
17a	Operating Fund	1,071	1,280	1,316
18a	Rate Stabilization Fund	1,298	1,089	1,092
19a	Total Interest Income	2,369	2,369	2,408
20a	Total Receipts	$ 774,674	$ 761,421	$ 762,535

(a) Affordability Program Discounts represent anticipated lost revenue due to the Tiered Assistance Program (TAP). Beginning in FY 2019, TAP Revenue Loss are recovered via the TAP Rate Rider Surcharge.

(b) Projected Release from Debt Reserve Fund based on outstanding and proposed debt service payments.

(c) Excludes deposit into Residual Fund for Transfer to City General Fund.

PHILADELPHIA WATER DEPARTMENT

Operating Expenses

For the Rate Years Ending June 30, 2022 and 2023

($000s)

Line No.	Description	2021	2022	2023
	Water and Wastewater Operations			
1a	Personal Services	$ 156,615	$ 162,095	$ 167,368
2a	Pension and Benefits	148,940	153,915	159,305
3a	Subtotal	$ 305,555	$ 316,010	$ 326,673
	Purchase of Services			
4a	Power	$ 15,509	$ 15,509	$ 15,587
5a	Gas	4,363	4,428	4,494
6a	SMIP/GARP	15,000	15,000	15,000
7a	Other	152,313	145,445	146,935
8a	Subtotal	$ 187,185	$ 180,382	$ 182,016
	Materials and Supplies			
9a	Chemicals	$ 25,551	$ 26,190	$ 26,845
10a	Other	25,218	25,546	25,878
11a	Subtotal	$ 50,769	$ 51,736	$ 52,723
12a	Equipment	2,621	4,289	4,369
13a	Indemnities and Transfers	11,587	11,587	11,587
14a	Subtotal Expenses	$ 557,717	$ 564,003	$ 577,368
15a	Liquidated Encumbrances	(33,064)	(32,023)	(32,412)
16a	Total Expenses	$ 524,653	$ 531,981	$ 544,956

PHILADELPHIA WATER DEPARTMENT
Capital Improvement Program
For the Rate Years Ending June 30, 2022 and 2023
($000s)

Line No.	Description	2021	2022	2023
1	Engineering and Administration (a)	$ 14,000	$ 13,595	$ 11,871
2	Plant Improvements	328,000	250,550	309,300
3	Distribution System Rehabilitation	93,060	30,760	106,760
4	Large Meter Replacement	5,000	5,000	5,000
5	Storm Flood Relief	15,000	-	15,000
6	Reconstruction of Sewers	72,460	45,260	68,360
7	Green Infrastructure	72,000	20,000	72,000
8	Vehicles	12,000	12,000	12,000
9	Total Improvements	611,520	377,165	600,291
10	Inflation Adjustment (b)	-	-	18,009
11	Inflated Total	$ 611,520	$ 377,165	$ 618,300
12	Rollforward Adjustments	(344,975)	352,000	-
13	Total Inflated Adjusted CIP Budget	$ 266,545	$ 729,165	$ 618,300
14	Contingency Adjustment	(35,028)	(105,536)	(89,057)
15	Annual Encumbrances	231,517	623,630	529,243
16	Project Expenses (c)	324,964	345,303	426,730
16a	Adjustment to Project Expenses	-	-	(18,009)
16b	Adjusted Project Expenses	$ 324,964	$ 345,303	$ 408,721
17	Annual Net Encumbrances	$ (93,448)	$ 278,327	$ 102,513

(a) Reflects shift in capital related salary costs from capital to operating budget.

(b) Allowance for inflation of 3.0 percent per year after fiscal year 2022.

(c) Reflects annual drawdown of capital budget appropriations based on project durations and annual encumbrances.

PHILADELPHIA WATER DEPARTMENT

Flow of Funds - Construction Fund & Debt Reserve Account
For the Rate Years Ending June 30, 2022 and 2023
($000s)

Line No.	Description	2021	2022	2023
	Disposition of Bond Proceeds			
1a	Proceeds From Sale of Bonds	$ -	$ 238,440	$ 480,588
	Transfers:			
2a	Debt Reserve Fund (a)	-	16,184	25,644
3a	Cost of Bond Issuance (b)	-	-	-
4a	Refund Commercial Paper	-	-	200,000
5a	Construction Fund (c)	-	222,256	254,944
6a	Total Issue	$ -	$ 238,440	$ 480,588
	Disposition of Commercial Paper			
7a	Proceeds From Commercial Paper	$ -	$ 200,000	$ 200,000
	Transfers:			
8a	Debt Reserve Fund (a)	-	2,000	2,000
9a	Cost of Issuance (b)	-	250	-
10a	Construction Fund (c)	$ -	$ 197,750	$ 198,000
11a	Total Issue	$ -	$ 200,000	$ 200,000
	Construction Fund			
12a	Beginning Balance	$ 643,908	$ 377,543	$ 518,045
13a	Transfer From Bond Proceeds	-	222,256	254,944
14a	Transfer From Commercial Paper Proceeds	-	197,750	198,000
15a	Penn Vest Loan	14,884	23,897	10,391
16a	Capital Account Deposit	27,833	29,447	29,308
17a	Transfer from Residual Fund	10,800	8,000	12,600
18a	Interest Income on Construction Fund	5,082	4,456	5,663
19a	Total Available	$ 702,507	$ 863,348	$ 1,028,952
20a	Net Cash Financing Required	324,964	345,303	408,721
21a	Ending Balance	$ 377,543	$ 518,045	$ 620,231
	Capital Program Net Encumbrances			
22	Beginning Balance	$ 327,821	$ 234,373	$ 512,700
23	Annual Encumbrances	231,517	623,630	529,243
24	Project Expenses	(324,964)	(345,303)	(426,730)
25	Ending Balance	$ 234,373	$ 512,700	$ 615,213
26	Allowance Commitments Prior to Bond Issue	-	-	-
27	Target Balance	$ 234,373	$ 512,700	$ 615,213

	Debt Reserve Fund			
28a	Beginning Balance	$ 195,433	$ 175,625	$ 191,809
29a	Transfer From Bond Proceeds	-	16,184	25,644
30a	Debt Service Reserve Release	(19,808)	-	-
31a	Ending Balance	$ 175,625	$ 191,809	$ 217,453
32a	Interest Income on Debt Reserve Fund	$ 1,855	$ 1,847	$ 2,076

Capital Account Deposit Calculation - User

		2021	2022	2023
A	Net Cash Financing Required	$ 324,964	$ 345,303	$ 408,721
B	Cash Funded Capital Ratio	11.9%	10.8%	10.3%
C	Cash Funded Required	$ 38,633	$ 37,447	$ 41,908
D	Less: Residual Fund Deposits	(10,800)	(8,000)	(12,600)
E	Equals: Capital Account Deposits	$ 27,833	$ 29,447	$ 29,308

(a) Amount of Debt Reserve Fund estimated based on outstanding and proposed debt service payments.

(b) Cost of bonds issuance assumed at 0.65 percent of issue amount.

(c) Deposits equal proceeds from sale of bonds less transfers to Debt Reserve Fund and Costs of Issuance.

PHILADELPHIA WATER DEPARTMENT

Summary of Existing and Proposed Debt Service
For the Rate Years Ending June 30, 2022 and 2023
($000s)

Line No.	Description	Interest Rate	Bond Size	2021	2022	2023
	Revenue Bonds					
1a	Existing (a)			$ 175,726	$ 163,516	$ 164,558
	Proposed	Interest Rate	Bond Size			
	Fiscal Year 2021					
2a	Fiscal Year 2022 (b)	3.00%	$ 238,440		$ 5,961	$ 12,426
3a	Fiscal Year 2023 (c)	3.00%	$ 480,588		-	12,015
4a	Fiscal Year 2024 (c)	3.00%	$ 585,000		-	-
5a	Fiscal Year 2025 (c)	5.25%	$ 420,000		-	-
6a	Fiscal Year 2026 (c)	5.25%	$ 600,000		-	-
7a	Total Proposed			-	5,961	24,441
8a	Total Revenue Bonds			$ 175,726	$ 169,477	$ 188,999
	Pennvest Loans					
9a	Pennvest Loans - Parity Pennvest (d)			$ 10,651	$ 10,885	$ 11,067
	Commercial Paper					
10a	Commercial Paper			$ -	$ 2,000	$ 4,000
11a	Total Senior Debt Service			$ 186,377	$ 182,362	$ 204,066

(a) Projected debt service amounts include (i) debt service for the Series 2020A and 2020B Bonds which were issued in FY 2021; and (ii) debt service and savings from the Forward Refunding for the Series 2011A Bonds.

(b) Projected debt service amounts assume interest only payment for the first year of the bond authorization based on 5.00% interest rate; and assume issuance during the first quarter of the fiscal year.

(c) Projected debt service amounts assume interest only payment for the first year of the bond authorization based on 5.25% interest rate; and assume issuance during the first quarter of the fiscal year.

(d) Includes projected Pennvest Loan for the Torresdale Pump Station Rehabilitation.

PHILADELPHIA WATER DEPARTMENT

Projected Rate Stabilization Fund & Performance vs. Covenants
For the Rate Years Ending June 30, 2022 and 2023
($000s)

Line No.	Description	2021	2022	2023
	RATE STABILIZATION FUND			
1a	Beginning Balance: Rate Stabilization Fund (a)	$ 150,652	$ 175,652	$ 175,652
2a	Transfers From (To) Revenue Fund (b)	25,000	-	(28,000)
3a	Year-End Rate Stabilization Fund Balance (Line 1a + Line 2a)	$ 175,652	$ 175,652	$ 147,652
4a	End- of year Balance in the Residual Fund	15,064	15,049	15,009
5a	Combined End- of year Balance	$ 190,716	$ 190,701	$ 162,661
	Board Rate Stabilization Fund Target in the previous Rate Proceeding: 150,000 Combined			
	1989 General Bond Ordinance Covenants			
6a	Senior Debt Coverage (c)	1.21	1.20	1.20
6b	Line 6: General Ordinance Coverage of 1.20	YES	YES	YES
6c	Line 6: Rate Board Policy in Previous Proceeding: Coverage of 1.30	NO	NO	NO
7a	Total Debt Coverage (d)	1.05	1.04	1.05
7b	Line 7: General Ordinance Coverage of 1.00	YES	YES	YES
	Insurance Covenants			
8a	Senior Debt Coverage from Current Revenues (e)	1.21	1.20	1.07
8b	Line 8: Insurance Minimum of 0.90	YES	YES	YES
	O&M Actual to Budget Ratio			
9	Projected O&M Budget (f)	604,361	621,837	637,910
10	O&M Actual to Budget Ratio	87.0%	87.5%	87.5%
	Rate Ordinance Requirements			
11	Projected Total Revenues (g)	707,802	767,451	819,626
12	Projected Total Appropriations (g)	828,019	845,520	899,527
13	Line 12 > line 11: Rate Ordinance Requirement Compliance (h)	YES	YES	YES
	Cash Funding			
14a	Cash Funded Capital (i)	38,633	37,447	41,908
15a	Construction Fund	324,964	345,303	408,721
16a	Cash Funded Capital Ratio (j)	11.9%	10.8%	10.3%

See notes (a)-(j) on following page.

Line No.	Description	2021	2022	2023

Notes

(a) FY 2021 beginning balance is estimated based on FY 2020 preliminary financial results.

(b) See Line 18 in Table C-1A.

(c) Senior Debt Coverage = (Total Revenues - Operating Expenses + Transfer From (to) Rate Stabilization) divided by Total Senior Debt Service. The General Bond Ordinance requires the minimum Senior Debt Service Coverage of 1.20.

(d) Total Debt Coverage = (Total Revenues - Operating Expenses + Rate Stabilization Transfer) divided by (Senior Debt + Subordinate Debt + Capital Account Deposit). The General Bond Ordinance requires the minimum Total Debt Service Coverage of 1.00.

(e) Senior Debt Coverage from Current Revenues = (Total Revenues - Operating Expenses - Transfer to Rate Stabilization Fund) divided by Senior Debt. Transfers from Rate Stabilization are excluded from the Total Revenues. The General Bond Ordinance requires a minimum Senior Debt Service Coverage of 0.90 from Current Revenues.

(f) FY 2021 budget reflects the PWD adopted budget; FY 2022 through FY 2026 budget reflects annual cost escalation factors. Provided by PWD.

(g) Total Revenues includes service to the City as required by the 1989 General Ordinance rate covenants.

(g) Total Appropriation = Total O&M Budget + Senior Debt + Subordinate Debt + Transfer to Escrow + Capital Account Deposit + Transfer to Rate Stabilization Fund + Transfer to Residual Fund. Costs to service the City included as required by the General Bond Ordinance rate covenants. These figures are provided by PWD.

(h) Rate Ordinance requires that Total Revenues not exceed Total Appropriations.

(i) Cash Funded Capital = Capital Account Deposit + Residual Transfer to Construction Fund

(j) Cash Funded Capital Ratio = Cash Funded Capital divided by Capital Improvement Program annual expenses.

For (e) above, transfers from RSF are excluded, transfers to the RSF are deducted as calculated below:

	2021	2022	2023
RSF Withdrawal (+) or Addition (-)	$ 41,700	$ 100	$ (700)
Subtract only the additions	-	-	(700)
RSF Withdrawal (+) or Addition (-)	(25,000)	-	28,000
Subtract only the additions	(25,000)	-	-

PHILADELPHIA WATER DEPARTMENT
Revenue Requirement Effect of Adjustments
For the Rate Years Ending June 30, 2022 and 2023
($000s)

Line No.	Description	FY 2022	FY 2023
1	**Revenues**		
2	Reflect Growth Rate	$ 3,225	$ 4,956
3	Adjust Volume Escalators	5,593	9,448
4	Adjust Volume per Account	7,105	7,249
5	Adjust Collection Factors	26,903	13,344
6	Adjust Wholesale Customer Volume	8	8
7			
8	**Expenses**		
9	Adjust O&M Escalation Rate	$ (2,094)	$ (2,753)
10	Adjust Actual to Budget Factors	(612)	(676)
11	Adjust SMIP/GARP	(10,000)	(10,000)
12	Rate Case Adjustment	(1,033)	(1,047)
13	Adjust Interest Rates	-	(12,718)

BEFORE THE

PHILADELPHIA WATER, SEWER AND STORM WATER RATE BOARD

Philadelphia Water Department	)))))	**Fiscal Years 2022 - 2023 Rates**

APPENDIX A

RESUME OF

LAFAYETTE K. MORGAN, JR.

March 22, 2021

EXETER
ASSOCIATES, INC.
10480 Little Patuxent Parkway, Suite 300
Columbia, Maryland 21044

LAFAYETTE K. MORGAN, JR.

Mr. Morgan is an independent regulatory consultant focusing in the area of the analysis of the operations of public utilities with particular emphasis on rate regulation. He has reviewed and analyzed utility rate filings, focusing primarily on revenue requirements determination, accounting and regulatory policy and cost recovery mechanisms. This work has included natural gas, water, electric, and telephone utilities.

Education and Qualifications

B.B.A. (Accounting) – North Carolina Central University, 1983

M.B.A. (Finance) – The George Washington University, 1993

C.P.A. – Licensed in the State of North Carolina (Inactive status)

Previous Employment

1993-2010 Senior Regulatory Analyst
Exeter Associates, Inc.
Columbia, MD

1990-1993 Senior Financial Analyst
Potomac Electric Power Company
Washington, D.C.

1984-1990 Staff Accountant
North Carolina Utilities Commission – Public Staff
Raleigh, NC

Professional Experience

As a Staff Accountant with the North Carolina Utilities Commission – Public Staff, Mr. Morgan was responsible for analyzing testimony, exhibits, and other data presented by parties before the Commission. In addition, he performed examinations of the books and records of utilities involved in rate proceedings and summarized the results into testimony and exhibits for presentation before the Commission. Mr. Morgan also participated in several policy proceedings and audits involving regulated utilities.

As a Senior Financial Analyst with Potomac Electric Power Company, Mr. Morgan was a lead analyst and was involved in the preparation of the cost of service, rate base, and ratemaking adjustments supporting the Company's request for revenue increases in its retail jurisdictions.

As a Senior Regulatory Analyst with Exeter Associates, Inc., Mr. Morgan has been involved in the analysis of the operations of public utilities with particular emphasis on rate regulation. He has reviewed and analyzed utility rate filings, focusing primarily on revenue requirements determination, accounting and regulatory policy and cost recovery mechanisms. This work included natural gas, water, electric, and telephone utilities.

Expert Testimony

of Lafayette K. Morgan, Jr.

Kings Grant Water Company (North Carolina Utilities Commission, Docket No. W-250, Sub 5), 1984. Presented testimony on rate base, cost of service, and revenue and expense adjustments on behalf of the North Carolina Utilities Commission – Public Staff.

Northwood Water Company (North Carolina Utilities Commission, Docket No. W-690, Sub 1), 1985. Presented testimony on rate base, cost of service, and revenue and expense adjustments on behalf of the North Carolina Utilities Commission – Public Staff.

Emerald Village Water System (North Carolina Utilities Commission, Docket No. W-184, Sub 3), 1985. Presented testimony on rate base, cost of service, and revenue and expense adjustments on behalf of the North Carolina Utilities Commission – Public Staff.

General Telephone Company of the South (North Carolina Utilities Commission, Docket No. P-19, Sub 207), July 1986. Presented testimony on the level of cash working capital allowance on behalf of the North Carolina Utilities Commission – Public Staff.

Heins Telephone Company (North Carolina Utilities Commission, Docket No. P-26, Sub 93), November 1986. Presented testimony on rate base, cost of service, and revenue and expense adjustments on behalf of the North Carolina Utilities Commission – Public Staff.

Carolina Power and Light Company (North Carolina Utilities Commission, Docket No. E-2, Sub 537), March 1988. Presented testimony on rate base, cost of service, and revenue and expense adjustments on behalf of the North Carolina Utilities Commission – Public Staff.

Public Service Company of North Carolina, Inc. (North Carolina Utilities Commission, Docket No. G-5, Sub 246), August 1989. Presented testimony on rate base, cash working capital allowance, cost of service, and revenue and expense adjustments on behalf of the North Carolina Utilities Commission – Public Staff.

Conestoga Telephone and Telegraph Company (Pennsylvania Public Utility Commission, Docket No. I-00920015), September 1993. Presented testimony on cost of service on behalf of the Pennsylvania Office of Consumer Advocate.

Louisiana Power and Light Company (Louisiana Public Service Commission, Docket No. U-20925), February 1995. Presented testimony on rate base and working capital issues on behalf of the Louisiana Public Service Commission Staff.

South Central Bell Telephone Company – Louisiana (Louisiana Public Service Commission, Docket No. U-17949, Subdocket E), June 1995. Presented testimony on rate base and working capital issues on behalf of the Louisiana Public Service Commission Staff.

Expert Testimony

of Lafayette K. Morgan, Jr.

Apollo Gas Company (Pennsylvania Public Utility Commission, Docket No. R-00953378), August 1995. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Carnegie Natural Gas Company (Pennsylvania Public Utility Commission, Docket No. R-00953379), August 1995. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Tennessee Gas Pipeline Company (Federal Energy Regulatory Commission, Docket No. RP95-112), September 1995. Presented testimony rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Virginia-American Water Company (Virginia State Corporation Commission, Case No. PUE-950003), March 1996. Presented testimony on rate base and cost of service issues on behalf of the City of Alexandria.

GTE North, Inc. Interconnection Arbitration (Pennsylvania Public Utility Commission, Docket No. A-310125F0002), September 1996. Presented testimony on the determination of the appropriate resale discount on behalf of the Pennsylvania Office of Consumer Advocate.

United Cities Gas Company (Georgia Public Service Commission, Docket No. 6691-U), October 1996. Presented testimony on rate base and cost of service issues on behalf of the Office of Governor, Consumer Utility Counsel Division.

GTE North, Inc. (Pennsylvania Public Utility Commission, Docket Nos. R-00963666 and R-00963666C001), February 1997. Presented testimony on the determination of the appropriate resale discount on behalf of the Pennsylvania Office of Consumer Advocate.

Consumers Maine Water Company (Maine Public Utilities Commission, Docket No. 96-739), May 1997. Presented testimony on rate base, cost of service, and rate of return issues on behalf of the Maine Office of the Public Advocate.

Pennsylvania-American Water Company (Pennsylvania Public Utility Commission, Docket No. R-00973944), July 1997. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Pennsylvania-American Water Company – Wastewater Operations (Pennsylvania Public Utility Commission, Docket No. R-00973973), July 1997. Presented testimony on rate base, cost of service, depreciation, and rate design issues on behalf of the Pennsylvania Office of Consumer Advocate.

Expert Testimony

of Lafayette K. Morgan, Jr.

Jackson Purchase Electric Cooperative Corporation (Kentucky Public Service Commission, Case No. 97-224), December 1997. Presented testimony on rate base and cost of service issues on behalf of the Kentucky Office of the Attorney General.

Henderson Union Electric Cooperative Corporation (Kentucky Public Service Commission, Case No. 97-220), January 1998. Presented testimony on the return of patronage capital on behalf of the Kentucky Office of the Attorney General.

Green River Electric Corporation (Kentucky Public Service Commission, Case No. 97-219), January 1998. Presented testimony on the return of patronage capital on behalf of the Kentucky Office of the Attorney General.

Western Kentucky Gas Company (Kentucky Public Service Commission, Case No. 99-070), November 1999. Presented testimony on rate base and cost of service issues on behalf of the Kentucky Office of the Attorney General.

American Broadband, Inc. (Rhode Island Public Utilities Commission, Docket No. 2000-C-3), June 2000. Presented report and testimony on the Company's financing plan on behalf of the Rhode Island Division of Public Utilities and Carriers.

PPL Utilities (Pennsylvania Public Utility Commission, Docket No. R-00005277), October 2000. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

T.W. Phillips Oil and Gas Company (Pennsylvania Public Utility Commission, Docket No. R-00005459), October 2000. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Pike County Light & Power Company (Pennsylvania Public Utility Commission, Docket No. P-00011872), May 2001. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Vermont Gas Systems, Inc. (Vermont Public Service Board, Docket No. 6495), June 2001. Presented testimony on rate base and cost of service issues on behalf of the Vermont Public Service Department.

Community Service Telephone Company (Maine Public Utilities Commission, Docket No. 2001-249), July 2001. Presented joint testimony on rate base and cost of service issues on behalf of the Maine Office of the Public Advocate.

Expert Testimony

of Lafayette K. Morgan, Jr.

West Virginia-American Water Company (Public Service Commission of West Virginia, Docket No. 01-0326-W-42-T), August 2001. Presented testimony on rate base and cost of service issues on behalf of the Consumer Advocate Division.

Philadelphia Suburban Water Company (Pennsylvania Public Utility Commission, Docket No. R-00016750) February 2002. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Illinois-American Water Company (Illinois Commerce Commission, Docket No. 02-0690) January 2003. Presented testimony on cost of service issues on behalf of Citizens Utility Board.

Pennsylvania-American Water Company (Pennsylvania Public Utility Commission, Docket No. R-00027983), February 2003. Presented testimony addressing surcharge mechanism to recover security costs on behalf of the Pennsylvania Office of Consumer Advocate.

FairPoint New England Telephone Companies (Maine Public Utilities Commission, Docket Nos. 2002-747, 2003-34, 2003-35, 2003-36, and 2003-37), June 2003. Presented testimony on rate base and cost of service issues on behalf of the Maine Office of the Consumer Advocate.

Pennsylvania-American Water Company (Pennsylvania Public Utility Commission, Docket No. R-00038304), August 2003. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

PPL Electric Utilities Corporation (Pennsylvania Public Utility Commission, Docket No. R-00049255), June 2004. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Entergy Louisiana, Inc. (Louisiana Public Service Commission, Docket No. U-20925 RRF 2004), August 2004. Presented testimony on rate base and cost of service issues on behalf of the Louisiana Public Service Commission Staff.

Vectren Energy Delivery of Indiana (Indiana Utility Regulatory Commission, Cause No. 42598), September 2004. Presented testimony on O&M expense issues on behalf of the Indiana Office of Utility Consumer Counselor.

National Fuel Gas Distribution Corporation (Pennsylvania Public Utility Commission, Docket No. R-00049656), December 2004. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Expert Testimony

of Lafayette K. Morgan, Jr.

Block Island Power Company (Rhode Island Public Utilities Commission, Docket No. 3655), April 2005. Presented testimony on cash working capital on behalf of the Rhode Island Division of Public Utilities & Carriers.

Verizon New England, Inc. (Maine Public Utilities Commission, Docket No. 2005-155), September 2005. Presented joint testimony with Thomas S. Catlin on rate base and cost of service issues on behalf of the Maine Office of the Public Advocate.

T.W. Phillips Oil and Gas Company (Pennsylvania Public Utility Commission, Docket No. R-00051178), May 2006. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Duquesne Light Company (Pennsylvania Public Utility Commission, Docket No. R-00061346), July 2006. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

National Fuel Gas Distribution Company (Pennsylvania Public Utility Commission, Docket No. R-00061493), September 2006. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Southern Indiana Gas & Electric Co. (Indiana Utility Regulatory Commission, Cause No. 43112), January 2007. Presented testimony on rate base and cost of service issues on behalf of the Indiana Office of Utility Consumer Counsel.

PPL Electric Utilities (Pennsylvania Public Utility Commission, Docket No. R-00072155), July 2007. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Aqua Pennsylvania, Inc. (Pennsylvania Public Utility Commission, Docket No. R-00072711), February 2008. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Equitable Gas Company (Pennsylvania Public Utility Commission, Docket No. R-2008-2029325), October 2008. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

The Narragansett Bay Commission (Rhode Island Public Utilities Commission, Docket No. 4026), April 2009. Presented testimony on rate base and cost of service issues on behalf of the Rhode Island Division of Public Utilities and Carriers.

Expert Testimony

of Lafayette K. Morgan, Jr.

Maryland-American Water Company (Maryland Public Service Commission, Case No. 9187), July 2009. Presented testimony on rate base and cost of service issues on behalf of the Maryland Office of People's Counsel.

Monongahela Power Company & The Potomac Edison Company, both d/b/a Allegheny Power Company (West Virginia Public Service Commission, Case No. 09-1352-E-42T), February 2010. Presented testimony on rate base and cost of service issues on behalf of the West Virginia Consumer Advocate Division.

PPL Electric Utilities (Pennsylvania Public Utility Commission, Docket No. R-2010-2161694), June 2010. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Pawtucket Water Supply Board (Rhode Island Public Utilities Commission, Docket No. 4550), June 2015. Presented testimony on revenue requirements issues on behalf of the Rhode Island Division of Public Utilities and Carriers.

Columbia Gas of Pennsylvania (Pennsylvania Public Utility Commission, Docket No. R-2015-2468056), June 2015. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Indianapolis Power and Light Company (Indiana Utility Regulatory Commission, Cause No. 44576/44602), July 2015. Presented testimony on revenue requirements issues on behalf of the Indiana Office of Utility Consumer Counselor.

Public Service Company of Oklahoma (Corporation Commission of Oklahoma, Cause No. PUD 201500208), October 2015. Presented testimony on revenue requirements and environmental compliance rider issues on behalf of the United States Department of Defense and the Federal Executive Agencies.

Northern Indiana Public Service Company (Indiana Utility Regulatory Commission, Cause No. 44688), January 2016. Presented testimony on the company's electric division operating revenues, operating expenses and income taxes issues on behalf of the Indiana Office of Utility Consumer Counselor.

Philadelphia Water Department (Philadelphia Water, Sewer And Storm Water Rate Board, FY2017-2018 Rate Proceeding), March 2016. Presented testimony on revenue requirements issues on behalf of the Public Advocate.

Columbia Gas of Maryland (Public Service Commission of Maryland, Case No. 9417), June 2016. Presented testimony on rate base and cost of service issues on behalf of the Office of People's Counsel.

Expert Testimony

of Lafayette K. Morgan, Jr.

Chesapeake Utilities Corporation (Delaware Public Service Commission, PSC Docket No. 15-1734), August 2016. Presented testimony on rate base and cost of service issues on behalf of the Staff of the Delaware Public Service Commission.

Kent County Water Authority (Public Service Commission of Rhode Island, Docket No. 4611), September 2016. Presented testimony on rate base and cost of service issues on behalf of the Division of Public Utilities and Carriers.

Northern Utilities, Inc. (Maine Public Utilities Commission, Docket No. 2017-00065), August 2017. Assisted the Maine Office of Public Advocate (OPA) with Northern Utilities application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements, the utility's request to renew and modify its alternative rate plan, and its Targeted Infrastructure Replacement Adjustment.

Indiana Michigan Power Company (Indiana Utility Regulatory Commission, Cause No. 44967), November 2017. Presented testimony on rate base, operating revenues and operating expenses issues on behalf of the Indiana Office of Utility Consumer Counselor.

Emera Maine (Maine Public Utilities Commission, Docket No. 2017-00198), December 2017. Assisted the Maine Office of Public Advocate (OPA) with Emera Maine's application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements, the utility's request to reflect the changes brought about by the Tax Change and Jobs Act of 2017.

UGI-Electric (Pennsylvania Public Utility Commission, Docket No. R-2017-2640058), April 2018. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with UGI-Electric's application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OCA, on accounting issues including test year revenue requirements, the utility's request to reflect the changes brought about by the Tax Change and Jobs Act of 2017.

Philadelphia Water Department (Philadelphia Water, Sewer And Storm Water Rate Board, FY2019-2020 Rate Proceeding), April 2018. Presented testimony on revenue requirements and the Department's three-year rate plan issues on behalf of the Public Advocate.

Westar Energy, Inc. (Westar Energy) and Kansas Gas and Electric Company (KGE), (Kansas State Corporation Commission, Docket No. 18-WSEE-328-RTS), May 2018. Presented testimony on revenue requirements on behalf on behalf of the Federal Executive Agencies.

Expert Testimony

of Lafayette K. Morgan, Jr.

Duquesne Light Company (Pennsylvania Public Utility Commission, Docket No. R-2018-3000124), June 2018. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with UGI-Electric's application for an increase in rates. Presented testimony, on behalf of the OCA, on accounting issues including test year revenue requirements, the utility's request to reflect the changes brought about by the Tax Change and Jobs Act of 2017.

Bangor Natural Gas Company (Maine Public Utilities Commission, Docket No. 2018-00007), June 2018. Assisted the Maine Office of Public Advocate (OPA) Presented testimony, on behalf of the OPA, on the changes brought about by the Tax Change and Jobs Act of 2017.

SUEZ Water Pennsylvania, Inc. (Pennsylvania Public Utility Commission, R-2018-3000834), July 2018. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with SUEZ Water's application for an increase in rates. Presented testimony, on behalf of the OCA, on accounting issues including Rate Base, Operating Income, Inclusion of Costs Related to Expansion Territories and the utility's request to reflect the changes brought about by the Tax Change and Jobs Act of 2017.

Woonsocket Water Division (Public Service Commission of Rhode Island, Docket No. 4879), January 2019. Presented testimony on cost of service issues on behalf of the Division of Public Utilities and Carriers.

Central Maine Power Company (Maine Public Utilities Commission, Docket No. 2018-00194), January 2019. Assisted the Maine Office of Public Advocate (OPA) with Central Maine Power's application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements, the utility's request to reflect the changes brought about by the Tax Change and Jobs Act of 2017.

Newport Water Department (Public Service Commission of Rhode Island, Docket No. 4933), July 2019. Presented testimony on cost of service issues on behalf of the Division of Public Utilities and Carriers.

UGI-Gas (Pennsylvania Public Utility Commission, Docket No. R-2018-3006814), April 2019. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with UGI-Gas' application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OCA, on accounting issues including Rate Base and Net Operating Income.

Columbia Gas of Maryland (Public Service Commission of Maryland, Case No. 9609), August 2019. Presented testimony on rate base and cost of service issues on behalf of the Office of People's Counsel.

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Public Service Company of Colorado (Colorado Public Utility Commission, Proceeding No. 19AL-0268E), September 2019. Mr. Morgan provided testimony, on behalf of the Department of Energy and the Federal Executive Agencies, on accounting issues including test year revenue requirements, Rate Base and Net Operating Income.

Northern Utilities, Inc. (Maine Public Utilities Commission, Docket No. 2019-00092), September 2019. Assisted the Maine Office of Public Advocate (OPA) with Northern Utilities application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements and the utility's request to institute a Capital Investment Recovery Mechanism.

Citizens' Electric Company of Lewisburg (Pennsylvania Public Utility Commission, Docket No. R-2019-3008212), October 2019. Provided testimony on Plant in Service, Construction Work in Progress, Materials and Supplies, Customer Deposits, Depreciation Expense, Growth Factor, and The Tax Cuts and Jobs Act. Mr. Morgan provided testimony, on behalf of the Pennsylvania Office of Consumer Advocate (OCA).

Valley Energy, Inc. (Pennsylvania Public Utility Commission, Docket No. R-2019-3008209), October 2019. Provided testimony on Plant in Service, Construction Work in Progress, Materials and Supplies, Customer Deposits, Depreciation Expense, Growth Factor, and The Tax Cuts and Jobs Act. Mr. Morgan provided testimony, on behalf of the Pennsylvania Office of Consumer Advocate (OCA).

Wellsboro Electric Company (Pennsylvania Public Utility Commission, Docket No. R-2019-3008208), October 2019. Provided testimony on Plant in Service, Construction Work in Progress, Materials and Supplies, Customer Deposits, Depreciation Expense, Growth Factor, and The Tax Cuts and Jobs Act. Mr. Morgan provided testimony, on behalf of the Pennsylvania Office of Consumer Advocate (OCA).

Blue Granite Water Company (Public Service Commission of South Carolina, (Docket No. 2019-290-WS), January 2020. Assisted the South Carolina Department of Consumer Affairs. Presented testimony on accounting policy issues including test year revenue requirements.

UGI-Gas (Pennsylvania Public Utility Commission, Docket No. R-2019-3015162), May 2020. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with UGI-Gas' application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OCA, on accounting issues including Rate Base and Net Operating Income.

Columbia Gas of Maryland (Public Service Commission of Maryland, Case No. 9644), July 2020. Presented testimony on rate base and cost of service issues on behalf of the Office of People's Counsel.

Expert Testimony

of Lafayette K. Morgan, Jr.

Special Projects

Developed a Uniform System of Accounts and Financial Data Collection Template for five countries participating in the National Association of Regulatory Utility Commissioners (NARUC)/East Africa Regional Energy Regulatory Partnership. Also conducted training seminars and participated as a panel member addressing issues in the utility industry from the perspective of the regulator. This work was conducted by NARUC) and the United States Agency for International Development (USAID).

Other Projects

Texas Gas Transmission Corporation (Federal Energy Regulatory Commission, Docket No. RP93-106). Technical analysis and participation in settlement negotiations on cost of service, invested capital, and revenue deficiency on behalf of the Indiana Office of Utility Consumer Counselor.

Natural Gas Pipeline Company of America (Federal Energy Regulatory Commission, Docket No. RP93-36). Technical analysis and participation in settlement negotiations on cost of service, invested capital, and revenue deficiency on behalf of the Indiana Office of Utility Consumer Counselor.

Texas Gas Transmission Company (Federal Energy Regulatory Commission, Docket No. RP94-423). Technical analysis and participation in settlement negotiations on cost of service, invested capital, and revenue deficiency on behalf of the Indiana Office of Utility Consumer Counselor.

Lafourche Telephone Company (Louisiana Public Service Commission, Docket No. U-21181). Analysis and investigation of earnings and appropriate rate of return on behalf of the Louisiana Public Service Commission Staff.

Natural Gas Pipeline Company of America (Federal Energy Regulatory Commission, Docket No. RP95-326). Technical analysis and participation in settlement negotiations on cost of service, invested capital, and revenue deficiency on behalf of the Indiana Office of Utility Consumer Counselor.

Pymatuning Independent Telephone Company (Pennsylvania Public Utility Commission, Docket No. R-00953502). Technical analysis and development of settlement position in the Company's rate case on behalf of the Pennsylvania Office of Consumer Advocate.

Illinois Bell Telephone Company (Illinois Commerce Commission, Docket No. 96-0172). Technical analysis of the Company's annual rate filing pursuant to its Price Cap Plan on behalf of Citizens Utility Board.

Illinois Bell Telephone Company (Illinois Commerce Commission, Docket No. 97-0157). Technical analysis of the Company's annual rate filing pursuant to its Price Cap Plan on behalf of Citizens Utility Board.

TDS Telecom (Pennsylvania Public Utility Commission, Docket Nos. R-00973892 and R-00973893). Technical analysis regarding rate base, cost of service, rate design, and rate of return, and assistance in settlement negotiations in the Company's rate case and alternative regulatory filing on behalf of the Pennsylvania Office of Consumer Advocate.

Appalachian Power Company (Virginia State Corporation Commission, Case No. PUE 960301). Technical analysis regarding rate base and cost of service and assistance in settlement negotiations in the Company's rate case and alternative regulatory filing on behalf of the Virginia Office of the Attorney General.

Central Maine Power Company (Maine Public Utilities Commission, Docket No. 97-580). Technical analysis regarding attrition and accounting issues in the Company's Transmission and Distribution unbundling proceeding on behalf of the Maine Public Utilities Commission Staff.

Illinois Bell Telephone Company (Illinois Commerce Commission, Docket No. 98-0259). Technical Analysis of the Company's annual rate filing pursuant to its Price Cap Plan on behalf of Citizens Utility Board.

Maine Public Service Company (Maine Public Utilities Commission, Docket No. 98-577). Technical analysis regarding attrition and accounting issues in the Company's Transmission and Distribution unbundling proceeding on behalf of the Maine Public Utilities Commission Staff.

Bangor Hydro-Electric Company (Maine Public Utilities Commission, Docket No. 97-596). Technical analysis regarding attrition and accounting issues in the Company's Transmission and Distribution unbundling proceeding on behalf of the Maine Public Utilities Commission Staff.

TDS Telecom (Maine Public Utilities Commission, Docket Nos. 98-894, 98-895, 98-904, 98-906, 98-911, and 98-912). Technical analysis regarding accounting issues and access rate changes on behalf of the Maine Office of the Public Advocate.

Mid-Maine Telecom (Maine Public Utilities Commission, Docket No. 2000-810). Technical analysis regarding accounting issues and access rate changes on behalf of the Maine Office of the Public Advocate.

Unitel, Inc. (Maine Public Utilities Commission, Docket No. 2000-813). Technical analysis regarding accounting issues and access rate changes on behalf of the Maine Office of the Public Advocate.

Hydraulics International, Inc. (Armed Services Board of Contract Appeals, ASBCA No. 51285). Technical analysis and support relating to the Economic Adjustment Clause claim on behalf of the Air Force Materiel Command.

Tidewater Telecom and Lincolnville Telephone Company (Maine Public Utilities Commission, Docket Nos. 2002-100 and 2002-99). Technical analysis regarding accounting issues and access rate changes on behalf of the Maine Office of the Public Advocate.

TDS Telecom (Vermont Public Service Board, Docket No. 6576). Technical analysis regarding rate base, cost of service, and depreciation expense on behalf of the Vermont Department of Public Service.

CenterPoint Energy-Entex (Louisiana Public Service Commission, Docket No. U-26720, Subdocket A). Technical analysis regarding rate base and cost of service on behalf of the Louisiana Public Service Commission Staff.

CenterPoint Energy-Arkla (Louisiana Public Service Commission, Docket No. U-27676). Technical analysis regarding rate base and cost of service on behalf of the Louisiana Public Service Commission Staff.

Provided technical analysis and support on behalf of the Louisiana Public Service Commission Staff relating to CLECO Power LLC Rate Stabilization Plan.

Provided technical analysis and support on behalf of the Louisiana Public Service Commission Staff relating to CLECO Power LLC post-Katrina power purchases.

Provided technical analysis and support on behalf of the Louisiana Public Service Commission Staff relating to Entergy Louisiana LLC recovery of storm damage costs.

Westar Energy, Inc. (Westar Energy) and Kansas Gas and Electric Company (KGE), (Kansas State Corporation Commission, Docket No. 17-WSEE-147-RTS). Technical analysis regarding rate base and cost of service on behalf of the Federal Executive Agencies.

Westar Energy, Inc. (Westar Energy) and Kansas Gas and Electric Company (KGE), (Kansas State Corporation Commission, Docket No. 17-WSEE-147-RTS). Technical analysis regarding rate base and cost of service on behalf of the Federal Executive Agencies.