Warner J. Caines
General Manager

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December 19, 2008

Ms. Stephanie Stumbo
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
P.O. Box 615
Frankfort, KY 40602

Re: Case No. 2008-00250

Dear Ms. Stumbo:

Enclosed for filing is an original and six copies of Frankfort Plant Board's Response to the Commission's Order dated December 5, 2008 and North Shelby and U.S. 60 Water Districts' Data Request dated December 5, 2008.

I appreciate your assistance. If you have any questions, please contact me at (502) 352-4541 or hprice@fewpb.com.

Sincerely,

Hance Price

Hance Price
Staff Attorney

HP/mw
cc: John N. Hughes
Thomas Marshall
Donald Prather

VOLUME 1 OF 1
Response to PSC
Order of 12/5/08

Frankfort Plant Board

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE PROPOSED ADJUSTMENT OF THE WHOLESALE WATER SERVICE RATES OF THE FRANKFORT ELECTRIC AND WATER PLANT BOARD	))))	CASE NO. 2008-00250

COMMISSION STAFF'S SECOND DATA REQUEST TO FRANKFORT ELECTRIC AND WATER PLANT BOARD

1. Refer to the Plant Board's Response to the Elkhorn and Peaks Mill Water Districts' First Set of Interrogatories and Production of Documents, Item 11. The Plant Board stated that "[f]ire expenses are allocated to Public and Private Fire Rate Classes, not to wholesale customers." Clearly demonstrate that costs associated with private and public fire protection are not allocated to the wholesale customers.

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

2. At the informal conference held on August 21, 2008, representatives of the Plant Board stated that distribution mains under 10 inches were not allocated to the wholesale customers. However, in its response to the Elkhorn and Peaks Mill Water Districts' First Set of Interrogatories and Production of Documents, Item 12, the Plant Board states that "[d]istribution mains under 10-inch [sic] were allocated to wholesale customers because

distribution mains are required to provide service to the wholesale customers, many who are directly connected to mains less than 10-inches in diameter."

a. State whether or not lines smaller than 10 inches in diameter are included in the costs allocated to the wholesale customer.

b. If some or all of the cost of lines smaller than 10 inches in diameter are allocated to the wholesale customers, explain why costs associated with these smaller distribution lines that serve retail customers would be allocated to wholesale customers.

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

3. For each wholesale customer, provide a list of connections that identify the size of each line and meter.

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

4. Refer to Item 8 of the Plant Board's responses to the Commission Staff's Data Request of September 5, 2008. The Plant Board states that "[s]ince FEWPB does not track water distribution expenses by mains, meters and Services, expenses listed a, b, and c, were assigned to mains, meters, and services using one-third of the total water distribution expense for each category."

a. Provide an example of costs that make up each category.

b. Explain why these costs should be allocated to the wholesale customer despite being labeled as distribution expenses.

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

5. Refer to the Plant Board's responses to Commission Staff's Data Request of September 5, 2008, Item 8. The Plant Board maintains that because it does not track water distribution expenses by mains, meters, and services that it was reasonable to divide the cost of each equally by three based on the activities performed by personnel within that account. Provide a breakdown and description of the activities performed by the personnel that comprise the costs of these categories. Explain why the costs associated with each activity should be allocated to the wholesale customer.

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

CERTIFICATION

I, Hance Price, certify that I am the attorney supervising the preparation of these Responses on behalf of the Frankfort Electric and Water Plant Board and that the Responses and attachments thereto are true and accurate to the best of my knowledge, information and belief formed after reasonable inquiry.

Hance Price

Submitted By:

John N. Hughes by Hance Price
John N. Hughes
124 West Todd Street
Frankfort, Kentucky 40601

Hance Price
Hance Price
317 West Second Street
Frankfort, Kentucky 40601

Attorneys for Frankfort Electric and
Water Plant Board

This the 4th day of December, 2008.

CERTIFICATE OF SERVICE

I, Hance Price, certify that on the 19th day of December 2008 a copy of this Response to the Commission's Order of December 5, 2008 was served by mail to Honorable Thomas A. Marshall, Attorney at Law, 212 Washington Street, P.O. Box 223, Frankfort, KY 40602, and by mail to Honorable Donald T. Prather, Mathis, Riggs & Prather, P.S.C. Attorneys at Law, 500 Main Street, Suite 5, Shelbyville, KY 40065 and by hand delivery of an original and six copies to Stephanie Stumbo, Executive Director, Kentucky Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, KY 40602-0615.

Hance Price

RESPONSE TO PSC

PSC CASE NO. 2008-00250

ITEM 1

Frankfort Electric and Water Plant Board
Response to Commission Staff's Second Data Request Dated: 12-05-08
Case No. 2008-00250

ITEM 1: Refer to the Plant Board's Response to the Elkhorn and Peaks Mill Water Districts' First Set of Interrogatories and Production of Documents, Item 11. The Plant Board stated that "[f]ire expenses are allocated to Public and Private Fire Rate Classes, not to wholesale customers." Clearly demonstrate that costs associated with private and public fire protection are not allocated to the wholesale customers.

Response: Schedule B, page 1 of 4 of the Cost of Service Study shows that the costs associated with public and private fire are allocated to those customer classes, in columns 9 and 10. Accounts 677000 and 677100, for example, which are related to fire hydrants expense, are allocated all to Public Fire using Factor 7. Schedule A, page 6 of the Cost of Service Study, summarizes these costs by customer class. As demonstrated in Schedule A, comparing columns 2 and 6, the Sales for Resale Non Water Producing customers are paying their share of the cost of service, which excludes any costs associated with public and private fire protection.

RESPONSE TO PSC

PSC CASE NO. 2008-00250

ITEM 2

Frankfort Electric and Water Plant Board
Response to Commission Staff's Second Data Request Dated: 12-05-08
Case No. 2008-00250

ITEM 2: At the informal conference held on August 21, 2008, representatives of the Plant Board stated that distribution mains under 10 inches were not allocated to the wholesale customers. However, in its response to the Elkhorn and Peaks Mill Water Districts' First Set of Interrogatories and Production of Documents, Item 12, the Plant Board states that "[d]istribution mains under 10-inch [sic] were allocated to wholesale customers because distribution mains are required to provide service to the wholesale customers, many who are directly connected to *mains less than 10-inches in diameter.*"

a. State whether or not lines smaller than 10 inches in diameter are included in the costs allocated to the wholesale customer.

b. If some or all of the cost of lines smaller than 10 inches in diameter are allocated to the wholesale customers, explain why costs associated with these smaller distribution lines that serve retail customers would be allocated to wholesale customers.

Response: a) Yes. Mains smaller than 10 inches in diameter, commonly referred to as Distribution Mains, were allocated to wholesale customers. At the informal conference, plant board representatives indicated that mains less than 10-inch were not included in Transmission Mains.

b) Distribution Mains less than 10-inch are required to serve all classes of customers including both retail and wholesale customers. See response to Question No. 3. Therefore, it is appropriate and reasonable to allocate costs associated with Distribution Mains to both retail and wholesale customers.

RESPONSE TO PSC

PSC CASE NO. 2008-00250

ITEM 3

Frankfort Electric and Water Plant Board
Response to Commission Staff's Second Data Request Dated: 12-05-08
Case No. 2008-00250

ITEM 3. For each wholesale customer, provide a list of connections that identify the size of each line and meter.

Response: Please see Item 15, Exhibit 1 (system map) provided in FPB's Response to the PSC Order dated July 2, 2008 and Exhibit 1 attached hereto.

RESPONSE TO PSC

PSC CASE NO. 2008-00250

ITEM 4

Frankfort Electric and Water Plant Board
Response to Commission Staff's Second Data Request Dated: 12-05-08
Case No. 2008-00250

ITEM 4: Refer to Item 8 of the Plant Board's responses to the Commission Staff's Data Request of September 5, 2008. The Plant Board states that "[s]ince FEWPB does not track water distribution expenses by mains, meters and Services, expenses listed a, b, and c, were assigned to mains, meters, and services using one-third of the total water distribution expense for each category."

a. Provide an example of costs that make up each category.

b. Explain why these costs should be allocated to the wholesale customer despite being labeled as distribution expenses.

Response: (a) Examples for mains include lines required to feed the districts as well as gravel, concrete and asphalt used in the repair of mains. Meter costs include the cost of the meters, installation and testing. Finally, services include the cost of service lines.

(b) The account is simply titled "distribution expenses." FPB only maintains one account and the expenses are assigned to mains, meters or services. Whatever the title, these expenses are required to serve the wholesale customers

RESPONSE TO PSC

PSC CASE NO. 2008-00250

ITEM 5

Frankfort Electric and Water Plant Board
Response to Commission Staff's Second Data Request Dated: 12-05-08
Case No. 2008-00250

ITEM 5: Refer to the Plant Board's responses to Commission Staff's Data Request of September 5, 2008, Item 8. The Plant Board maintains that because it does not track water distribution expenses by mains, meters, and services that it was reasonable to divide the cost of each equally by three based on the activities performed by personnel within that account. Provide a breakdown and description of the activities performed by the personnel that comprise the costs of these categories. Explain why the costs associated with each activity should be allocated to the wholesale customer.

Response: A breakdown and description of activities performed by water department personnel are included in the job descriptions previously provided in Item 6, Exhibit 2 of FPB's Response dated July 2, 2008. These personnel maintain the system that serves the wholesale customers and as such it is proper to allocate costs to them.

VOLUME 1 OF 1
Response to North Shelby
And U.S. 60 Water Districts
Data Requested Date: 12/5/08

Frankfort Plant Board

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

PROPOSED ADJUSTMENT OF THE WHOLESALE	)	
WATER SERVICE RATES OF THE FRANKFORT	)	
ELECTRIC AND WATER PLANT BOARD	)	CASE NO. 2008-00250

INTERROGATORIES AND REQUESTS FOR PRODUCTION OF DOCUMENTS ON BEHALF OF NORTH SHELBY WATER COMPANY AND U.S. 60 WATER DISTRICT OF SHELBY AND FRANKLIN COUNTIES, KENTUCKY

Interrogatory No. 1:

(a) With respect to page 4 of the direct testimony of Paul Herbert, were the rates set out in the cost of service study prepared for Kentucky American Water Company in Case No. 2000-120 and 2007-00143 accepted and approved without modification by the Kentucky Public Service Commission ("PSC")?

(b) If the rates were altered by PSC, and the alteration was based upon PSC declining to accept any aspects of your cost of service study in each case, please explain how the PSC altered each aspect of your cost of service study in each case.

(c) Did you give testimony in these cases?

(d) If so, please produce a copy of your pre-filed testimony in each case and, if any other testimony given by you in those cases was transcribed, please produce a copy of that transcribed testimony.

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

Interrogatory No. 2:

(a) With respect to page 9 of the direct testimony of Paul Herbert, it was stated the

maximum hour ratio of 2.5 times the average hour was estimated based on the relationship of system maximum hour ratios compared to system maximum day ratios for other similar systems. Do the "similar systems" provide service to wholesale customers that provide their own overhead storage:

(b) Does the average hour ratio taken into consideration the fact the wholesale customers can fill their tanks at night or otherwise during off peak demand?

(c) If your answer to (a) above was no, please explain why.

(d) Please list Frankfort's wholesale customers who have overhead storage and Frankfort's wholesale customers who do not have overhead storage.

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

Interrogatory No. 3:

(a) With respect to page 11 of the direct testimony of Paul Herbert, it is stated the proposed rate design moves toward the cost of service, without creating radical changes in the rate structure.

(b) How does this statement relate to the wholesale customers?

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

Interrogatory No. 4:

(a) What is the purpose of each outstanding bond related to Frankfort's water division and how does the expense benefit the wholesale customers as opposed to all of Frankfort's customers?

(b) What percentage of the revenue bond anticipation note, Series 1996, dated December 19, 1996 financed the cost of the improvements and additions to the electric distribution system and what percentage financed improvements and additions to the water treatment plant?

(c) What percentage of the revenue bond anticipate note, Series 1997, dated December 19, 1997 financed the cost of the "line additions and improvements to the board's water system in east Frankfort," and please describe the lines (size and location) and the improvements which were constructed using this money.

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

Interrogatory No. 5:

(a) With respect to Volume 3 of 5 of Frankfort's Response to the PSC staff questions, Item 6 Exhibit 1, sheets 1 of 6 through 6 of 6, which list the employee number, please state how each employee's wage was allocated to the water division and in turn to the wholesale customers. For example, how was meter reading expense allocated to the water division and in turn to the wholesale customers?

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

Interrogatory No. 6:

(a) With respect to Volume 3 of 5, Item 6, Exhibit 3, what is the basis for the water allocation percentages? For instance, on sheet 4, accounts #40-902-000 and 100, the allocation percentage is 42.43%.

(b) Are all numbers allocated to water estimated or actual cost?

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

Interrogatory No. 7:

With respect to Schedule B, page 2 of 4 of the cost of service study, line item 920000, why is all of the rate case expense allocated to wholesale customers, since the cost of service study produces rates for both wholesale and retail customers?

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

Interrogatory No. 8:

With respect to Schedule C, page 5 of 20 of the cost of service study, how can the allocation factor for average hourly consumption for resale of .2971 be higher than the .2744 allocation factor for residential average hourly consumption?

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

Interrogatory No. 9:

(a) With respect to Schedule B, page 3 of 4 of the cost of service study, line item 932120, why are support services of $15,327.00 allocated to the wholesale customers?

(b) What are support services?

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

Interrogatory No. 10:

(a) With respect to page 4 of the cost of service study where in it is stated that the cost of service study was discussed with water board management, did management accept the rates presented in the study without revision?

(b) If not, explain all adjustments.

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

Interrogatory No. 11:

(a) Why was the existence of overhead storage facilities of the wholesale customers not considered in determining average hour consumption for wholesale customers?

(b) Would not the demand placed on Frankfort's system be lower than the average usage of 24.8 if wholesale customer overhead storage tanks were considered?

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

Interrogatory No. 12:

Is bad debt expense allocated in part to wholesale customers? If so, how and why?

Witness(es): Paul Herbert, Shannon Taylor, Herbbie Bannister

Response: Attached

CERTIFICATION

I, Hance Price, certify that I am the attorney supervising the preparation of these Responses on behalf of the Frankfort Electric and Water Plant Board and that the Responses and attachments thereto are true and accurate to the best of my knowledge, information and belief formed after reasonable inquiry.

Hance Price

Submitted By:

John N. Hughes
124 West Todd Street
Frankfort, Kentucky 40601

Hance Price
317 West Second Street
Frankfort, Kentucky 40601

Attorneys for Frankfort Electric and Water Plant Board

This the 19th day of December, 2008.

CERTIFICATE OF SERVICE

I, Hance Price, certify that on the 19th day of December 2008 a copy of this North Shelby and U.S. 60s' Data Request of December 5, 2008 was served by mail to Honorable Thomas A. Marshall, Attorney at Law, 212 Washington Street, P.O. Box 223, Frankfort, KY 40602, and by mail to Honorable Donald T. Prather, Mathis, Riggs & Prather, P.S.C. Attorneys at Law, 500 Main Street, Suite 5, Shelbyville, KY 40065 and by hand delivery of an original and six copies to Stephanie Stumbo, Executive Director, Kentucky Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, KY 40602-0615.

Hance Price

RESPONSE TO NORTH SHELBY AND U.S. 60 WATER DISTRICTS DATA REQUEST DATED: 12/5/08

PSC CASE NO. 2008-00250

ITEM 1

Frankfort Electric and Water Plant Board
Response to North Shelby and U.S. 60 Water Districts
Data Request Dated: 12/5/08
Case No. 2008-00250

ITEM 1: (a) With respect to page 4 of the direct testimony of Paul Herbert, were the rates set out in the cost of service study prepared for Kentucky American Water Company in Case No. 2000-120 and 2007-00143 accepted and approved without modification by the Kentucky Public Service Commission ("PSC")?

(b) If the rates were altered by PSC, and the alteration was based upon PSC declining to accept any aspects of your cost of service study in each case, please explain how the PSC altered each aspect of your cost of service study in each case.

(c) Did you give testimony in these cases?

(d) If so, please produce a copy of your pre-filed testimony in each case and, if any other testimony given by you in those cases was transcribed, please produce a copy of that transcribed testimony.

Response: a) Rates originally proposed in most rate cases are rarely approved without modification primarily due to reductions in claimed revenue requirements either from settlements or from litigation. The rates proposed in the cases listed were modified for revenue requirement changes, however no rate structure modifications were made.

b) The orders are available from the PSC.

c) Yes.

d) See attached Exhibits 1, 2 & 3. There was no transcribed testimony.

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2000-120

DIRECT TESTIMONY OF
PAUL R. HERBERT

CONCERNING
COST OF SERVICE ALLOCATION
AND
CUSTOMER RATE DESIGN

BEFORE THE

KENTUCKY PUBLIC SERVICE COMMISSION

April 28, 2000

BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION

RE: KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2000-120

DIRECT TESTIMONY OF PAUL R. HERBERT

Line No.

QUALIFICATIONS

1. Q. Please state your name and address.

A. My name is Paul R. Herbert. My business address is 207 Senate Avenue, Camp Hill, Pennsylvania.

2. Q. By whom are you employed?

A. I am employed by Gannett Fleming Valuation and Rate Consultants, Inc.

3. Q. What is your position with Gannett Fleming Valuation and Rate Consultants, Inc., and briefly state your general duties and responsibilities.

A. I am a Vice President. My duties and responsibilities include the preparation of accounting and financial data for revenue requirement and cash working capital claims, the allocation of cost of service to customer classifications, and the design of customer rates in support of public utility rate filings.

4. Q. Have you presented testimony in rate proceedings before a regulatory agency?

A. Yes. I have testified before the Pennsylvania Public Utility Commission, the New Jersey Board of Public Utilities, the Public Utilities Commission of Ohio and the Public Service Commission of West Virginia concerning revenue requirements, cost of service allocation and rate design and cash working capital claims. A list of the cases which I have testified is provided at the end of my direct testimony. (Attachment 1)

5. Q. What is your educational background?

A. I have a Bachelor of Science Degree in Finance from the Pennsylvania State University, University Park, Pennsylvania.

6. Q. Would you please describe your professional affiliations?

A. I am a member of the American Water Works Association and serve as a member of the Management Committee for the Pennsylvania Section. I am also a member of the Pennsylvania Municipal Authorities Association. In 1998, I became a member of the National Association of Water Companies as well as a member of its Rates and Revenue Committee.

7. Q. Briefly describe your work experience.

A. I joined the Valuation Division of Gannett Fleming Corddry and Carpenter, Inc., predecessor to Gannett Fleming Valuation and Rate Consultants, Inc., in September 1977, as a Junior Rate Analyst. Since then, I advanced through several positions and was assigned the position of Manager of Rate Studies on July 1, 1990. On June 1, 1994, I was promoted to my current position as Vice President.

While attending Penn State, I was employed during the summers of 1972, 1973 and 1974 by the United Telephone System - Eastern Group in its accounting department. Upon graduation from college in 1975, I was employed by Herbert Associates, Inc., Consulting Engineers (now Herbert Rowland and Grubic, Inc.), as a field office manager until September 1977.

COST OF SERVICE ALLOCATION

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

A. My testimony is in support of the cost of service allocation and rate design study conducted under my direction and supervision for the Kentucky-American Water Company, (the "Company").

9. Q. Have you prepared an exhibit presenting the results of your study?

A. Yes. Exhibit No. 36 presents the results of the allocation of the pro forma cost of service to the several customer classifications as of November 30, 2001, and the proposed rate design.

10. Q. Briefly describe the purpose of your cost allocation study.

A. The purpose of the study was to allocate the total cost of service, which is the total revenue requirement, to the several customer classifications. The cost of service includes operation and maintenance expenses, depreciation expense and amortizations, taxes other than income, income taxes and income available for return. In the study, the total costs were allocated to the residential, commercial, industrial, public authority, other water utilities, private fire protection and public fire protection classifications in accordance with generally-accepted principles and procedures. The cost of service allocation results in indications of the relative cost responsibilities of each class of customers. The allocated cost of service is one of several criteria appropriate for consideration in designing customer rates to produce the required revenues.

11. Q. Please describe the method of cost allocation that was used in your study.

A. The base-extra capacity method, as described in 1991 and prior Water Rates Manuals published by the American Water Works Association (AWWA), was used to allocate the pro forma costs. The method is a recognized method for allocating the cost of providing water service to customer classifications in proportion to the classifications' use of the commodity, facilities and services. It is generally accepted as a sound method for allocating the cost of water service and has been used by the Company in previous rate cases.

12. Q. Is the method described in Exhibit No. 36?

A. Yes. It is described on pages 3 and 4 of the exhibit.

13. Q. Please describe the procedure followed in the cost allocation study.

A. Each element of cost in the pro forma cost of service was allocated to cost functions through the use of appropriate allocation factors. This allocation is presented in Schedule D on pages 15 through 21 of Exhibit No. 36. The items of cost, which include operation and maintenance expenses, depreciation and amortization expenses, taxes and income available for return, are identified in column 1 of Schedule D. The cost of each item, shown in column 3, is allocated to the several cost functions based on allocation factors referenced in column 2. The development of the allocation factors is presented in Schedule E of the exhibit.

The four basic cost functions are base, extra capacity, customer and fire protection costs. Base Costs are costs that tend to vary with the quantity of water used, plus costs associated with supplying, treating, pumping and distributing water to customers under average load conditions, without the elements necessary to meet peak demands. Extra Capacity Costs are costs associated with meeting usage requirements in excess of average. They include the operating and capital costs for additional plant and system capacity beyond that required for average use. Extra capacity costs were subdivided into costs to meet maximum day extra capacity and maximum hour extra capacity requirements.

Customer Costs are costs associated with serving customers regardless of their usage or demand characteristics. Customer costs are subdivided into customer facilities costs, which include meters and services, and customer accounting costs, which include billing and meter reading functions. Fire Protection Costs are costs associated with providing the facilities to meet the potential peak demand of fire protection service as well as direct costs such as the cost for fire hydrants. The demand costs for fire protection are subdivided into costs for Private Fire Protection and Public Fire Protection on the basis of relative potential demands.

14. Q. Please provide examples of the cost allocation process.

A. I will use some of the larger cost items to illustrate the principles and considerations used in the cost allocation methodology. Water purchased for resale, purchased electric power, treatment chemicals and sludge handling costs are examples of costs that tend to vary with the amount of water consumed and are considered base costs. Thus, Factor 1 assigns these costs directly to the base cost function.

Other source of supply, pumping, purification and transmission costs are associated with meeting usage requirements in excess of the average, generally to meet maximum day requirements. Costs of this nature were allocated partially as base costs, proportional to average daily consumption, partially as maximum day extra capacity costs, in proportion to maximum day extra capacity, and, in the case of certain pumping stations and transmission mains, partially as fire protection costs, through the use of Factors 2 and 3. The development of the allocation factors, referenced as Factors 2 and 3 shown in Schedule E, pages 22 and 23, is based on the system peak day ratio and the potential demand of fire protection.

Costs associated with distribution mains and storage facilities were allocated partly on the basis of average consumption and partly on the basis of maximum hour extra demand, including the demand for fire protection service, because these facilities are designed to meet maximum hour and fire demand requirements. The development of the factors, referenced as Factors 4 and 5, used for these allocations is shown in Schedule E, on pages 23 through 25, of Exhibit No. 36. Fire demand costs were allocated to public and private fire protection service in proportion to the relative potential demands on the system by public fire hydrants as compared to the demands for private fire services and hydrants. The demand for private fire units were increased by a factor of 1.5 over the public fire units to recognize the greater flow rate required for a fire at a private service

than for a public hydrant. This adjustment was accepted by the Commission in the last case.

Costs associated with pumping facilities were allocated on a combined bases of maximum day, maximum day including fire and maximum hour extra capacity because pumping facilities serve these functions. The relative weightings of Factor 2 (maximum day), Factor 3 (maximum day with fire) and Factor 4 (maximum hour) for pumping facilities were based on the horsepower of the pumps serving these functions. The development of the pump horsepower serving each function was based on a review and classification of each pumping station in the system. The development of these weighted factors, referenced as Factor 6, is presented on page 26 of Exhibit No. 36.

Operation and maintenance costs for transmission and distribution mains were allocated on a combined bases of Factor 3 (maximum day with fire) for transmission mains and Factor 4 (maximum hour) for distribution mains. The weighting of the factors was based on the footage of mains and is referenced as Factor 7.

Costs associated with meters and services facilities were assigned directly to the meters and services cost functions using Factors 9 and 10. Billing and collecting costs and meter reading were assigned directly to the customer accounting cost functions using Factors 11 and 12. Operating and capital costs associated with public fire hydrants were assigned directly to the public fire protection function (Factor 13).

Administrative and general costs were allocated on the basis of allocated direct costs excluding those costs such as purchased water, power and chemicals, which require little administrative and general expense. The development of factors for this allocation, referenced as Factor 15, is presented on page 30 of Exhibit No. 36.

Annual depreciation accruals were allocated on the basis of the function of the facilities represented by the depreciation expense for each depreciable plant account.

The original cost less depreciation of utility plant in service was similarly allocated for the purpose of developing factors, referenced as Factor 18, for allocating items such as income taxes and return. The development of Factor 18 is presented on pages 33 through 35 of Exhibit No. 36.

Factor 18, as well as Factor 15 discussed earlier, are composite allocation factors. Composite factors are generated internally in the cost allocation program based on the results of allocating other costs. Factors 8, 14, 16, 17 and 19 also are composite factors. Refer to Schedule E of Exhibit No. 36 for a description of the basis of each composite factor.

15. Q. What was the source of the total cost of service data set forth in column 3 of Schedule D of Exhibit No. 36?

A. The pro forma costs of service were furnished by the Company, and are set forth in Company Schedules B, D and E.

16. Q. What is the next step in the cost allocation process?

A. The next step is to allocate the results of the functional allocation to the several customer classifications, namely residential, commercial, industrial, public authority, other water utilities and private and public fire protection. The total cost of service by function shown on the last line of Schedule D on page 21, is carried forward to column 3 of Schedule B on page 8 of the exhibit. The cost of service by function is allocated to the several customer classifications by applying the allocation factor referenced in column 2 to the cost of service in column 3. The allocation factors are set forth in Schedule C.

17. Q. Describe the allocation factors in Schedule C.

A. The allocation factors in Schedule C allocate the cost of service by function to the various classes of users based on considerations of quantity of water consumed, variability of rate of consumption, and costs associated with customer metering, billing

and accounting. Factor A allocates the base cost function to customer classifications on the basis of average daily usage. Factors B and C allocate the maximum day and hour extra capacity costs to classes on the bases of each classification's maximum day and hour usage in excess of the average usage.

Factors D and E allocate customer facilities costs to customer classes. Factor D is based on the number of 5/8-inch meter equivalents and Factor E is based on the number of 3/4-inch service equivalents for each classification. Factors F and G allocate customer accounting costs to customer classes based on the number of bills to allocate billing and collecting costs (Factor F) and the number of meter readings for allocating meter reading costs (Factor G). Factors H and I assign costs associated with private and public fire protection costs directly to the private and public fire protection classifications.

18. Q. Refer to Factors B and C and explain what factors were considered in estimating the maximum day extra capacity and maximum hour extra capacity demands used for the customer classifications.

A. The estimated demands were based on judgment which considered field studies of customer class demands conducted for the Company, field observations of the service areas of the Company, field studies of similar service areas in Pennsylvania conducted by my firm, the class factors used in the last cost of service study, and generally-accepted customer class maximum day and maximum hour demand ratios.

19. Q. Have you summarized the results of your cost allocation study?

A. Yes. The results are summarized in columns 1, 2 and 3 of Schedule A on page 6 of Exhibit No. 36. The total allocated pro forma cost of service as of November 30, 2001, for each customer classification identified in column 1 is brought forward from

Schedule B and shown in column 2. Column 3 presents each customer classification's cost responsibility as a percent of the total cost.

20. Q. Have you compared these cost responsibilities with the proportionate revenue under existing rates for each customer classification?

A. Yes. A comparison of the allocated cost responsibilities and the percentage of revenue under existing rates can be made by comparing columns 3 and 5 of Schedule A of Exhibit No. 36. A similar comparison of the percentage cost responsibilities (relative cost of service) and the percentage of pro forma revenues (relative revenues) under proposed rates can be made by comparing columns 3 and 7 of Schedule A of Exhibit No. 36. The proposed increase and the percent increase by class are shown in columns 8 and 9, respectfully.

21. Q. Have you submitted the cost of service allocation exhibit in spreadsheet format?

A. Yes, I have. The study was prepared using Microsoft Excel under the file name "Exhibit36.xls".

22. Q. Did you prepare a user manual to explain how to revise the results of the study?

A. Yes, instructions for the use of the spreadsheet are contained under the tab labeled "User Manual" in the file "Exhibit36.xls".

CUSTOMER RATE DESIGN

23. Q. Are you responsible for the design of the rate schedules proposed by the Company in this proceeding?

A. Yes, I am.

24. Q. Is the proposed rate structure presented in an exhibit?

A. Yes. A comparison of the present and proposed rate schedules is presented in Schedule G on pages 38 and 39 of Exhibit No. 36.

25. Q. What are the appropriate factors to be considered in the design of the rate structure?

A. In preparing a rate structure, one should consider the allocated costs of service, the impact of radical changes from the present rate structure, the understandability and ease of application of the rate structure, community and social influences, and the value of service. General guidelines should be developed with management to determine the extent to which each of these criteria is to be incorporated in the rate structure to be designed, inasmuch as the pricing of a commodity or service ultimately should be a function of management.

26. Q. Did you review your conclusions with management?

A. Yes, I did. Management accepted my conclusions of (1) maintaining the existing rate structure that includes a service charge by meter size applicable to all classes of customers and a separate one-block volumetric charge for each classification, (2) no increase to private and public fire service classes as indicated by the cost of service, and (3) adjusting revenues among the remaining classes in conformity with the indicated cost of service without excessive increases to any one class.

27. Q. Do the proposed rates comply with the guidelines enumerated in the answer to question 23?

A. Yes, they do.

28. Q. Please explain the development of the service charges.

A. The development of the service charges is set forth on Schedule H on page 40 of the Exhibit. Service charges should recover the cost of customer facilities such as meters and services and the cost of customer accounting including billing and collecting and meter reading costs. Also, the unrecovered cost of public fire service is included as a customer cost. These costs are incurred regardless of the amount of consumption and, therefore, are appropriate to include in the service charge.

The schedule shows the cost of service for these cost functions in column 2. These amounts were taken from the last line in Schedule D, columns 7, 8, 9 and 10. The costs associated with meters are divided by the total 5/8-inch meter equivalents and by 12 months to determine the monthly cost related to a 5/8-inch meter. The costs associated with services are divided by 3/4-inch service equivalents and by 12 months to determine the monthly cost related to a 3/4-inch service. Costs associated with billing and collecting, meter reading and unrecovered public fire service are divided by the number of customers and metered customers, respectively, and by 12 months to determine the monthly cost per customer for these functions. The sum of the monthly costs for a 5/8-inch meter is $7.50 which was used as the monthly 5/8-inch service charge. The rates for the larger-sized meters are determined by multiplying the meter capacity ratios times the $7.50 rate for the 5/8-inch meter, as shown at the bottom on the schedule. Meter capacity ratios also were used to determine the larger-sized service charges under the existing rate structure.

29. Q. How were the volumetric rates determined?

A. After the proposed service charges were applied to the bill analysis, the existing volumetric rates for each classification were increased so that revenues from each class moved toward the indicated cost of service and that total revenues equaled the proposed revenue requirement.

OTHER ISSUES

30. Q. Have you conducted an analysis of the production and transmission costs for the Kentucky-American system in response to determining the cost of service for the Boonesboro Water Association (BWA)?

A. Yes, I have. The analysis is attached to my direct testimony as Attachment No. 2.

31. Q. Please explain the attachment.

A. The schedule sets forth the cost of service related to source of supply, power and pumping, water treatment and transmission mains. These costs are commonly referred to as production and transmission costs and reflect the total cost to collect, treat and transmit water to the distribution system.

The production and transmission costs were selected from the operation and maintenance expenses, depreciation expense, and rate base accounts. Income available for return was calculated by applying the overall rate of return to the total rate base accounts. Income taxes were calculated based on the same income tax to return relationship as for the total case. The sum of these costs total $18,310,907.

32. Q. What is the average production and transmission cost per thousand gallons?

A. The total production and transmission costs of $18,310,907, divided by the total consumption of 13,422,510 thousand gallons results in an average cost of $1.36 per thousand gallons.

33. Q. Does that conclude your direct testimony?

A. Yes, it does.

LIST OF CASES IN WHICH PAUL R. HERBERT TESTIFIED

	Year	Jurisdiction	Docket No.	Client/Utility	Subject
1.	1983	Pa. PUC	R-832399	T. W. Phillips Gas and Oil Co.	Pro Forma Revenues
2.	1989	Pa. PUC	R-891208	Pennsylvania-American Water Company	Bill Analysis and Rate Application
3.	1991	PSC of W. Va.	91-106-W-MA	Clarksburg Water Board	Revenue Requirements (Rule 42)
4.	1992	Pa. PUC	R-922276	North Penn Gas Company	Cash Working Capital
5.	1992	NJ BPU	WR92050532J	The Atlantic City Sewerage Company	Cost Allocation and Rate Design
6.	1994	Pa. PUC	R-943053	The York Water Company	Cost Allocation and Rate Design
7.	1994	Pa. PUC	R-943124	City of Bethlehem	Revenue Requirements, Cost Allocation, Rate Design and Cash Working Capital
8.	1994	Pa. PUC	R-943177	Roaring Creek Water Company	Cash Working Capital
9.	1994	Pa. PUC	R-943245	North Penn Gas Company	Cash Working Capital
10.	1994	NJ BPU	WR94070325	The Atlantic City Sewerage Company	Cost Allocation and Rate Design
11.	1995	Pa. PUC	R-953300	Citizens Utilities Water Company of Pennsylvania	Cost Allocation and Rate Design
12.	1995	Pa. PUC	R-953378	Apollo Gas Company	Revenue Requirements and Rate Design
13.	1995	Pa. PUC	R-953379	Carnegie Natural Gas Company	Revenue Requirements and Rate Design
14.	1996	Pa. PUC	R-963619	The York Water Company	Cost Allocation and Rate Design
15.	1997	Pa. PUC	R-973972	Consumers Pennsylvania Water Company - Shenango Valley Division	Cash Working Capital
16.	1998	Ohio PUC	98-178-WS-AIR	Citizens Utilities Company of Ohio	Water and Wastewater Cost Allocation and Rate Design
17.	1998	Pa. PUC	R-984375	City of Bethlehem - Bureau of Water	Revenue Requirement, Cost Allocation and Rate Design
18.	1999	Pa. PUC	R-994605	The York Water Company	Cost Allocation and Rate Design
19.	1999	Pa. PUC	R-994868	Philadelphia Suburban Water Company	Cost Allocation and Rate Design
20.	1999	PSC of W.Va.	99-1570-W-MA	Clarksburg Water Board	Revenue Requirements (Rule 42), Cost Allocation and Rate Design

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2000-120

REBUTTAL TESTIMONY OF
PAUL R. HERBERT

CONCERNING
COST OF SERVICE ALLOCATION
AND
CUSTOMER RATE DESIGN

BEFORE THE

KENTUCKY PUBLIC SERVICE COMMISSION

September 1, 2000

BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION

RE: KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2000-120

REBUTTAL TESTIMONY OF PAUL R. HERBERT

Line
No.

1. Q. Please state your name and address.

A. My name is Paul R. Herbert. My business address is 207 Senate Avenue, Camp Hill, Pennsylvania.

2. Q. Did you submit direct testimony in this proceeding?

A. Yes. I submitted direct testimony and Exhibit No. 36 in support of the Company's cost of service allocation study and proposed rate design.

3. Q. What is the subject of your rebuttal testimony?

A. My rebuttal testimony addresses certain cost of service allocation revisions and rate design issues outlined in the direct testimony and exhibits of Attorney General's witness Scott J. Rubin.

4. Q. Please review the cost of service issues raised by Mr. Rubin in his direct testimony.

A. Mr. Rubin disagrees with my allocation of community education costs, the costs associated with providing wastewater service, my selection of class maximum day and hour extra capacity factors, my use of ¾-inch service line equivalent ratios, and my factor for allocating meter reading.

5. Q. Please explain Mr. Rubin's position on allocating community education expenses.

A. Mr. Rubin suggests that the portion of costs associated with educating the customers about the Bluegrass Water Pipeline Project (BWPP) should be allocated in the same

manner as other BWPP costs using Factor 2, base and maximum day extra capacity usage rather than Factor 11, number of customers.

6. Q. Do you agree with Mr. Rubin?

A. No, not at all. The community education costs were separately identified from other BWPP costs just as customer accounting, meter reading, and meters and service line costs are separately identified in the system of accounts. These items, collectively referred to as customer costs, are allocated based primarily on the number of customers and the relative size of their meters and service lines because these are the factors that affect how such costs are incurred. The same is true for the BWPP customer education costs. The magnitude of these costs was affected by the need for each customer to be educated, not by how much water they use. Therefore, it is entirely appropriate to allocate BWPP community education costs based on the number of customers rather than water usage.

7. Q. Please explain Mr. Rubin's position on the cost of wastewater service included in the cost of service.

A. Mr. Rubin proposes that the difference between the costs to provide wastewater service and the revenues received from wastewater service or $53,556, be eliminated from the cost of water service.

8. Q. Do you agree with eliminating wastewater costs from the cost of service?

A. Yes, I do. I was under the impression that by deducting the wastewater revenues of $28,376 from the cost of service, this would offset any wastewater costs included in the water cost of service. However, as Mr. Rubin correctly points out, the Company has identified wastewater costs of $81,933, which exceed the revenues by $53,556.

9. Q. How do you propose to correct this?

A. Instead of creating a separate cost function to allocate wastewater costs as Mr. Rubin suggests, I simply have removed the appropriate amounts from each expense account and also the associated revenues from the "other revenues" category. These revisions are reflected in the attached revised Exhibit No. 36-R, as well as other revisions that I will discuss later.

10. Q. Please describe Mr. Rubin's next revision to your cost allocation study.

A. Mr. Rubin selected different class maximum day and hour ratios than I used for the purposes of allocating maximum day and hour extra capacity costs to customer classifications.

11. Q. What source of data did Mr. Rubin use to estimate his ratios?

A. He based his ratios solely on the results of the 1999 demand study prepared by the Company's consultant.

12. Q. Has Mr. Rubin ever prepared a class demand study?

A. No. In response to a data request, Mr. Rubin stated he has never prepared such a study.

13. Q. Please describe some of the problems involved with conducting class demand studies.

A. Unlike load studies performed by power companies, the devices used to monitor water use run on batteries. These batteries can fail from time to time and data can be lost forever. The author of the Company's study indicated that the devices failed about ten percent of the time, which is similar to the failure rate in my experience conducting demand studies. Failure of the recording devices can cause incomplete and invalid results.

14. Q. What are some of the other problems obtaining valid data from demand studies?

A. The size and make-up of the sample of customers used for the study is also a concern. Each sample should be representative of the class so that study results can be applied to the total population. The Company's study makes no mention of how the sample sizes

were selected and if they are statistically valid. Also, demand studies should be conducted for more than one year so that changes in weather patterns can be incorporated and observed with the data. A one-year study has too small of a window and one cannot be sure if peak usage has been monitored.

15. Q. What do you conclude about using the Company's demand study as the sole source of information for estimating class peak ratios?

A. The study's author recommends that the study results "in conjunction with other factors" be used for the purposes of allocating costs associated with peak water usage. I would agree that the study should be only one factor to consider in estimating class peak demands.

16. Q. What are the other factors that should be considered?

A. As I stated in my direct testimony other factors would include ratios used in previous studies, results of demand studies for other water utilities and information found in publications.

17. Q. Mr. Rubin claims that demand studies of other water companies conducted by your firm are not valid sources of information because demographic and climatic data can be dramatically different. Do you agree?

A. No, not at all. First, let me explain that the studies my firm is conducting in Pennsylvania (for Pennsylvania-American Water Company "PAWC" and Philadelphia Suburban Water Company "PSWC") have been ongoing since the early 1990's, not one-year studies as Mr. Rubin suggests. Data is still being collected and will be used in subsequent cost allocation studies. As for the comparison of the Kentucky-American service area with service areas in Pennsylvania, there are many similarities with the Pennsylvania utilities especially the suburban Philadelphia area. In response to a data request, Mr. Rubin provided a comparison of demographic and climatic data for counties in the Pittsburgh

and Philadelphia areas and for Fayette County, Kentucky. Although Mr. Rubin highlights the differences in the table, there were as many similarities as differences. He pointed out that the KAWC service area has characteristics such as newer housing with more efficient water fixtures, lower average income, and more multi-unit housing. Such characteristics would attribute KAWC to having lower average residential water usage.

18. Q. What did Mr. Rubin's comparison of average residential consumption for KAWC, PSWC and PAWC show ?

A. He did not make such a comparison.

19. Q. Wouldn't that be the most important comparison to make?

A. Yes, it would.

20. Q. Have you compared the average monthly residential usage for these utilities?

A. Yes, I have. The comparison is as follows:

KAWC – 5,600 gal./month

PSWC – 5,700 gal./month

PAWC – 4,800 gal./month

21. Q. What do you conclude from this comparison?

A. That demographics and climate data may be an interesting study, however a much more meaningful test is to compare actual consumption of the customers. KAWC's average monthly residential usage is very similar to PSWC and about 17% more than PAWC's.

22. Q. What is the primary cause for higher average residential usage?

A. The primary cause would be higher discretionary usage such as outdoor lawn watering, car washing, swimming pool and other non-essential use.

23. Q. Does high discretionary use lead to peak residential demands?

A. Yes, it does. Peak residential use as well as system wide peaks occur during long periods of hot and dry conditions when outdoor use is prevalent.

24. Q. What are the results of the demand study for PSWC and how do they compare with KAWC?

A. For residential, based on demand data collected over several years, our estimate for max day is 2.10 and 4.50 for max hour. This compares to my estimates for KAWC of 2.0 for max day and 3.0 for max hour, which are very conservative considering the similarities in consumption.

25. Q. How do the estimates for the other classes compare?

A. Generally, my estimates for KAWC are lower than for PSWC especially the max hour ratios.

26. Q. Why are your estimates lower for KAWC?

A. As I stated previously, I considered not only the studies of other utilities, but also the estimates from the data in KAWC's demand study, the estimates used in the last study, and lastly, estimates used in the AWWA Manual M1. I mention the AWWA Manual last because it carried the least weight. I only considered that information as a validity test for my estimates. Mr. Rubin suggests that the ratios used in the manual's example are meaningless, but I disagree.

27. Q. Can you identify any authoritative passage that supports your opinion that the selection of class capacity factors should include other forms of information?

A. Yes, the AWWA Manual M1 states :

> "All pertinent sources of information need to be investigated and studied in estimating customer-class capacity factors. Such data should include daily and hourly pumpage records, recorded rates of flow in specific areas of the system, studies and interviews of large users regarding individual and group characteristics of use, special-demand metering programs, and experience in studies of other utilities exhibiting like characteristics."

28. Q. What are your conclusions regarding the customer class maximum day and hour ratios used in your study and Mr. Rubin's study?

A. Mr. Rubin based his estimates solely on a very limited, one-year study of class demands that, according to author of the study, should be used with other data to estimate class ratios. My estimates, which are conservative, are based not only on the data from KAWC's data, but also considered results of more comprehensive studies, conducted over several years, for water utilities having similar service characteristics as KAWC's. My estimates are fair and provide for a reasonable allocation of the extra capacity costs in this case.

29. Q. What is the next issue?

A. Mr. Rubin takes exception to my use of standard cost data for installing service lines as a basis to allocate service line costs. Instead he uses a combination of actual meter installation costs and service line costs over three years for ¾-inch, 1-inch and 2-inch connections and then estimates the costs for the larger sizes.

30. Q. What is wrong with Mr. Rubin's approach?

A. First, the actual cost data he used was from the calculation of tapping fees which also included meter installation costs in addition to service line costs. Only the costs to install service lines should be used as the basis to allocate service line costs (Account 345) because meter installations is in a separate account (Account 347). By including the meter installation costs in his cost basis, the resulting cost ratios are distorted. I have prepared Exhibit No. 36-R-1 which uses only the actual cost to install service lines by size and also have included actual costs for 4, 6, and 8-inch lines as well.

31. Q. Do you agree with using actual costs for the basis of allocation?

A. Yes, as long as the data does not produce illogical results.

32. Q. What problems can arise when using actual costs?

A. The data for ¾-inch, 1-inch, and 2-inch service lines provide for logical cost ratios, however, as you can see from Exhibit No. 36-R-1, the 4-inch average cost is substantially greater than the 6-inch cost and almost three times the 8-inch cost.

33. Q. How can this happen?

A. There are many factors that affect the cost of installing service lines. These factors include the size of the line, the length and depth of the line, excavation requirements, and restoration requirements. Sometimes the road restoration and paving costs can be the most costly item of installing a service line, however my view is that these additional items should not distort the cost of installing service lines for cost allocation purposes.

34. Q. How do you deal with this problem?

A. This is a common problem that I have encountered in many cost allocation studies. That is why I use standard cost per foot data for each service line size to establish the relative cost of service lines by size. This produces a natural progression of costs by size and results in a logical allocation of costs.

35. Q. What is your conclusion on this issue?

A. Mr. Rubin's revision to my allocation of service lines should be rejected because of his use of incorrect data.

36. Q. Please describe Mr. Rubin's remaining cost allocation revision.

A. Mr. Rubin used an analysis of man-days to read meters by classification, which I provided in response to a data request, as the basis to allocate meter reading costs.

37. Q. What did you use and do you agree with Mr. Rubin's revision?

A. I used the number of customers as the basis for allocating meter reading. Both methods are acceptable, however I will accept Mr. Rubin's analysis that reflects the fact that larger meters take longer to read and therefore, more cost. This revision is reflected in my revised Exhibit No. 36-R.

38. Q. Please summarize your Exhibit No. 36-R.

A. Exhibit No. 36-R excludes wastewater costs from the cost of service and revises the basis for allocating meter reading costs. The allocation of community education costs, the class maximum day and hour extra capacity factors and the basis for allocating service line costs are the same as my original Exhibit No. 36. The result of my revisions is an overall reduction to the cost of service of $53,556, with a reduction of $54,519 to the residential class. The changes to the results for the other classes are insignificant.

Exhibit No. 36-R reflects the appropriate allocation of the cost of service to customer classifications and should be the study that is used for the final rate design in this case.

39. Q. Please summarize the rate design issues raised by Mr. Rubin.

A. Mr. Rubin recommends (1) no increase to service charges, (2) limiting the increase so that no class receives more twice the average increase (3) no rate reductions to any class and (4) recovery of revenue deficiencies from classes that are below cost of service.

40. Q. Please explain Mr. Rubin's position on service charges (customer charges).

A. Mr. Rubin states that since my proposed service charges recover more than the customer costs identified in the cost of service, then there should be no increase to the service charges.

41. Q. Do you agree.

A. I agree that the proposed service charges as well as the present service charges recover revenues greater than the customer costs but I don't agree that all service charges should not be increased.

42. Q. Please explain.

A. The reason that my service charges recover more than the customer costs is because the rates for meter sizes larger than 5/8-inch were based on meter capacity ratios applied to

the 5/8-inch charge rather than an actual cost-based design. (See Schedule H of the original Exhibit 36). Using meter capacity ratios to determine the service charges for larger-sized meters is customary in the water industry and for KAWC. I simply continued this practice.

To show the difference in rates computed by meter capacity ratios and by a cost-based design, I have prepared a revised Schedule H, which is included in Exhibit No. 36-R. It shows the development of the cost-based rate for each meter size. The costs are based on the summation of each unit cost for each of the functional components – meters, services, billing and collecting, and meter reading. The total of these costs are shown under the column heading "Total Customer Costs". The amount for 5/8-inch of $7.49 is one penny less than my original Schedule H, which recognizes the revised allocation of meter reading costs as Mr. Rubin suggested. The total customer costs for the remaining sizes are all below the existing service charge rate.

43. Q. So what do you conclude from this analysis?

A. That the proposed rate for the 5/8-inch of $7.50 (or $7.49) is correct and is cost-based. Just because the rates for the larger-sized meters are higher than the cost does not mean that the 5/8-inch charge should be reduced.

44. Q. Should the existing service charges for ¾-inch and larger be reduced to equal the cost-based rate?

A. No, I agree with Mr. Rubin that no rate should be decreased. I would not oppose a proposal to maintain the existing service charges for ¾-inch and larger, however I would still recommend the service charges as originally filed because the proposed rates are not overly burdensome.

45. Q. What about Mr. Rubin's concern that the revenues from service charges are too high?

A. Excluding private and public fire service, my proposed rate design recovers approximately $10.8 million (26%) from service charges and about $30.5 million (74%) from consumption charges. Mr. Rubin's recommendation recovers $9.8 million (24%) from service charges and $31.5 (76%) from consumption charges. Considering the vast majority of costs in a water system are fixed, I do not believe that 26% from fixed (service) charges is unreasonable.

46. Q. If the Commission allows a rate increase in this proceeding less than the original request, how would you determine the final rate design.

A. I would continue to have no increase in Private and Public Fire rates maintaining the existing rates as proposed. For the other classes, I would scale-back all proposed service charges and consumption charges uniformly until the allowed level of revenue requirement is achieved. This would be a fair and equitable result for all classes of customers.

47. Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2007-00143

DIRECT TESTIMONY OF
PAUL R. HERBERT

CONCERNING
COST OF SERVICE ALLOCATION
AND
CUSTOMER RATE DESIGN

BEFORE THE

KENTUCKY PUBLIC SERVICE COMMISSION

April 26, 2007

BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION

RE: KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2007-120

DIRECT TESTIMONY OF PAUL R. HERBERT

Line No.

QUALIFICATIONS

1. Q. Please state your name and address.

A. My name is Paul R. Herbert. My business address is 207 Senate Avenue, Camp Hill, Pennsylvania.

2. Q. By whom are you employed?

A. I am employed by Gannett Fleming, Inc.

3. Q. What is your position with Gannett Fleming, Inc., and briefly state your general duties and responsibilities.

A. I am Senior Vice President of the Valuation and Rate Division. My duties and responsibilities include the preparation of accounting and financial data for revenue requirement and cash working capital claims, the allocation of cost of service to customer classifications, and the design of customer rates in support of public utility rate filings.

4. Q. Have you presented testimony in rate proceedings before a regulatory agency?

A. Yes. I have testified before the Pennsylvania Public Utility Commission, the New Jersey Board of Public Utilities, the Public Utilities Commission of Ohio, the Public Service Commission of West Virginia, the Kentucky Public Service Commission, the Iowa State Utilities Board, the Virginia State Corporation Commission, the Tennessee Regulatory Authority, The California Public Utilities Commission, New Mexico Public Regulation

Commission and the Missouri Public Service Commission concerning revenue requirements, cost of service allocation, rate design and cash working capital claims.

A list of the cases in which I have testified is provided at the end of my direct testimony.

5. Q. What is your educational background?

A. I have a Bachelor of Science Degree in Finance from the Pennsylvania State University, University Park, Pennsylvania.

6. Q. Would you please describe your professional affiliations?

A. I am a member of the American Water Works Association and serve as a member of the Management Committee for the Pennsylvania Section. I am also a member of the Pennsylvania Municipal Authorities Association. In 1998, I became a member of the National Association of Water Companies as well as a member of its Rates and Revenue Committee.

7. Q. Briefly describe your work experience.

A. I joined the Valuation Division of Gannett Fleming Corddry and Carpenter, Inc., predecessor to Gannett Fleming Valuation and Rate Consultants, Inc., in September 1977, as a Junior Rate Analyst. Since then, I advanced through several positions and was assigned the position of Manager of Rate Studies on July 1, 1990. On June 1, 1994, I was promoted to Vice President and on November 1, 2003, I was promoted to my current position as Senior Vice President.

While attending Penn State, I was employed during the summers of 1972, 1973 and 1974 by the United Telephone System - Eastern Group in its accounting department. Upon graduation from college in 1975, I was employed by Herbert Associates, Inc., Consulting Engineers (now Herbert Rowland and Grubic, Inc.), as a field office manager until September 1977.

COST OF SERVICE ALLOCATION

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

A. My testimony is in support of the cost of service allocation and rate design study conducted under my direction and supervision for the Kentucky-American Water Company, (the "Company").

9. Q. Have you prepared an exhibit presenting the results of your study?

A. Yes. Exhibit No. 36 presents the results of the allocation of the pro forma cost of service to the several customer classifications as of November 30, 2008, and the proposed rate design.

10. Q. Briefly describe the purpose of your cost allocation study.

A. The purpose of the study was to allocate the total cost of service, which is the total revenue requirement, to the several customer classifications. The cost of service includes operation and maintenance expenses, depreciation expense and amortizations, taxes other than income, income taxes and income available for return. In the study, the total costs were allocated to the residential, commercial, industrial, public authority, other water utilities, private fire protection and public fire protection classifications in accordance with generally-accepted principles and procedures. The cost of service allocation results in indications of the relative cost responsibilities of each class of customers. The allocated cost of service is one of several criteria appropriate for consideration in designing customer rates to produce the required revenues.

11. Q. Please describe the method of cost allocation that was used in your study.

A. The base-extra capacity method, as described in the 2000 and prior Water Rates Manuals (M1) published by the American Water Works Association (AWWA), was used to allocate the pro forma costs. The method is a recognized method for allocating the cost of providing water service to customer classifications in proportion to the

classifications' use of the commodity, facilities and services. It is generally accepted as a sound method for allocating the cost of water service and has been used by the Company in previous rate cases.

12. Q. Is the method described in Exhibit No. 36?

A. Yes. It is described on pages 3 and 4 of the exhibit.

13. Q. Please describe the procedure followed in the cost allocation study.

A. Each element of cost in the pro forma cost of service was allocated to cost functions through the use of appropriate allocation factors. This allocation is presented in Schedule D on pages 15 through 21 of Exhibit No. 36. The items of cost, which include operation and maintenance expenses, depreciation and amortization expenses, taxes and income available for return, are identified in column 1 of Schedule D. The cost of each item, shown in column 3, is allocated to the several cost functions based on allocation factors referenced in column 2. The development of the allocation factors is presented in Schedule E of the exhibit.

The four basic cost functions are base, extra capacity, customer and fire protection costs. Base Costs are costs that tend to vary with the quantity of water used, plus costs associated with supplying, treating, pumping and distributing water to customers under average load conditions, without the elements necessary to meet peak demands. Extra Capacity Costs are costs associated with meeting usage requirements in excess of average. They include the operating and capital costs for additional plant and system capacity beyond that required for average use. Extra capacity costs were subdivided into costs to meet maximum day extra capacity and maximum hour extra capacity requirements.

Customer Costs are costs associated with serving customers regardless of their usage or demand characteristics. Customer costs are subdivided into customer facilities

costs, which include meters and services, and customer accounting costs, which include billing and meter reading functions. Fire Protection Costs are costs associated with providing the facilities to meet the potential peak demand of fire protection service as well as direct costs such as the cost for fire hydrants. The demand costs for fire protection are subdivided into costs for Private Fire Protection and Public Fire Protection on the basis of relative potential demands.

14. Q. Please provide examples of the cost allocation process.

A. I will use some of the larger cost items to illustrate the principles and considerations used in the cost allocation methodology. Water purchased for resale, purchased electric power, treatment chemicals and sludge handling costs are examples of costs that tend to vary with the amount of water consumed and are considered base costs. Thus, Factor 1 assigns these costs directly to the base cost function.

Other source of supply, pumping, purification and transmission costs are associated with meeting usage requirements in excess of the average, generally to meet maximum day requirements. Costs of this nature were allocated partially as base costs, proportional to average daily consumption, partially as maximum day extra capacity costs, in proportion to maximum day extra capacity, and, in the case of certain pumping stations and transmission mains, partially as fire protection costs, through the use of Factors 2 and 3. The development of the allocation factors, referenced as Factors 2 and 3 shown in Schedule E, pages 22 and 23, is based on the system peak day ratio and the potential demand of fire protection.

Costs associated with distribution mains and storage facilities were allocated partly on the basis of average consumption and partly on the basis of maximum hour extra demand, including the demand for fire protection service, because these facilities are designed to meet maximum hour and fire demand requirements. The development of

the factors, referenced as Factors 4 and 5, used for these allocations is shown in Schedule E, on pages 23 through 25, of Exhibit No. 36. Fire demand costs were allocated to public and private fire protection service in proportion to the relative potential demands on the system by public fire hydrants as compared to the demands for private fire services and hydrants. The demand for private fire units were increased by a factor of 1.5 over the public fire units to recognize the greater flow rate required for a fire at a private service than for a public hydrant. This adjustment was accepted by the Commission in a previous case.

Costs associated with pumping facilities were allocated on a combined bases of maximum day, maximum day including fire and maximum hour extra capacity because pumping facilities serve these functions. The relative weightings of Factor 2 (maximum day), Factor 3 (maximum day with fire) and Factor 4 (maximum hour) for pumping facilities were based on the horsepower of the pumps serving these functions. The development of these weighted factors, referenced as Factor 6, is presented on page 26 of Exhibit No. 36.

Operation and maintenance costs for transmission and distribution mains were allocated on a combined bases of Factor 3 (maximum day with fire) for transmission mains and Factor 4 (maximum hour) for distribution mains. The weighting of the factors was based on the footage of mains and is referenced as Factor 7.

Costs associated with meters and services facilities were assigned directly to the meters and services cost functions using Factors 9 and 10. Billing and collecting costs and meter reading were assigned directly to the customer accounting cost functions using Factors 11 and 12. Operating and capital costs associated with public fire hydrants were assigned directly to the public fire protection function (Factor 13).

Administrative and general costs were allocated on the basis of allocated direct costs excluding those costs such as purchased water, power and chemicals, which require little administrative and general expense. The development of factors for this allocation, referenced as Factor 15, is presented on page 30 of Exhibit No. 36.

Annual depreciation accruals were allocated on the basis of the function of the facilities represented by the depreciation expense for each depreciable plant account. The original cost less depreciation of utility plant in service was similarly allocated for the purpose of developing factors, referenced as Factor 18, for allocating items such as income taxes and return. The development of Factor 18 is presented on pages 31 through 33 of Exhibit No. 36.

Factor 18, as well as Factor 15 discussed earlier, are composite allocation factors. Composite factors are generated internally in the cost allocation program based on the results of allocating other costs. Factors 8, 14, 16, 17 and 19 also are composite factors. Refer to Schedule E of Exhibit No. 36 for a description of the basis of each composite factor.

15. Q. What was the source of the total cost of service data set forth in column 3 of Schedule D of Exhibit No. 36?

A. The pro forma costs of service were furnished by the Company, and are set forth in Company Schedules B, D and E.

16. Q. What is the next step in the cost allocation process?

A. The next step is to allocate the results of the functional allocation to the several customer classifications, namely residential, commercial, industrial, public authority, other water utilities and private and public fire protection. The total cost of service by function shown on the last line of Schedule D on page 21, is carried forward to column 3 of Schedule B on page 8 of the exhibit. The cost of service by function is allocated to the

several customer classifications by applying the allocation factor referenced in column 2 to the cost of service in column 3. The allocation factors are set forth in Schedule C.

17. Q. Describe the allocation factors in Schedule C.

A. The allocation factors in Schedule C allocate the cost of service by function to the various classes of users based on considerations of quantity of water consumed, variability of rate of consumption, and costs associated with customer metering, billing and accounting. Factor A allocates the base cost function to customer classifications on the basis of average daily usage. Factors B and C allocate the maximum day and hour extra capacity costs to classes on the bases of each classification's maximum day and hour usage in excess of the average usage.

Factors D and E allocate customer facilities costs to customer classes. Factor D is based on the number of 5/8-inch meter equivalents and Factor E is based on the number of 3/4-inch service equivalents for each classification. Factors F and G allocate customer accounting costs to customer classes based on the number of bills to allocate billing and collecting costs (Factor F) and the number of meter readings for allocating meter reading costs (Factor G). Factors H and I assign costs associated with private and public fire protection costs directly to the private and public fire protection classifications.

18. Q. Refer to Factors B and C and explain what factors were considered in estimating the maximum day extra capacity and maximum hour extra capacity demands used for the customer classifications.

A. The estimated demands were based on judgment which considered field studies of customer class demands conducted for the Company, field observations of the service areas of the Company, the class factors used in the last cost of service study, and generally-accepted customer class maximum day and maximum hour demand ratios.

19. Q. Have you summarized the results of your cost allocation study?

A. Yes. The results are summarized in columns 1, 2 and 3 of Schedule A on page 6 of Exhibit No. 36. The total allocated pro forma cost of service as of November 30, 2008, for each customer classification identified in column 1 is brought forward from Schedule B and shown in column 2. Column 3 presents each customer classification's cost responsibility as a percent of the total cost.

20. Q. Have you compared these cost responsibilities with the proportionate revenue under existing rates for each customer classification?

A. Yes. A comparison of the allocated cost responsibilities and the percentage of revenue under existing rates can be made by comparing columns 3 and 5 of Schedule A of Exhibit No. 36. A similar comparison of the percentage cost responsibilities (relative cost of service) and the percentage of pro forma revenues (relative revenues) under proposed rates can be made by comparing columns 3 and 7 of Schedule A of Exhibit No. 36. The proposed increase and the percent increase by class are shown in columns 8 and 9, respectfully.

CUSTOMER RATE DESIGN

21. Q. Are you responsible for the design of the rate schedules proposed by the Company in this proceeding?

A. Yes, I am.

22. Q. Is the proposed rate structure presented in an exhibit?

A. Yes. A comparison of the present and proposed rate schedules is presented in Schedule G on pages 37 through 40 of Exhibit No. 36.

23. Q. What are the appropriate factors to be considered in the design of the rate structure?

A. In preparing a rate structure, one should consider the allocated costs of service, the impact of radical changes from the present rate structure, the understandability and ease

of application of the rate structure, community and social influences, and the value of service. General guidelines should be developed with management to determine the extent to which each of these criteria is to be incorporated in the rate structure to be designed, inasmuch as the pricing of a commodity or service ultimately should be a function of management.

24. Q. Did you discuss rate design guidelines with management?

A. Yes, I did. The guidelines established were: (1) maintain the existing rate structure that includes a service charge by meter size applicable to all classes of customers and a separate one-block volumetric charge for each classification, (2) Consolidate all rate divisions into the Central Division rate structure; (3) increase private and public fire service classes as indicated by the cost of service, and (4) adjust revenues among the remaining classes in conformity with the indicated cost of service without excessive increases to any one class.

25. Q. Do the proposed rates comply with the guidelines enumerated in the answer to question 26?

A. Yes, they do.

26. Q. Do you support the concept of single-tariff pricing and the consolidation of the rate divisions proposed in this case?

A. Yes, I do.

27. Q. Please explain the development of the service charges.

A. The development of the service charges is set forth on Schedule H on page 41 of the Exhibit. Service charges should recover the cost of customer facilities such as meters and services and the cost of customer accounting including billing and collecting and meter reading costs. Also, the unrecovered cost of public fire service is included as a

customer cost. These costs are incurred regardless of the amount of consumption and, therefore, are appropriate to include in the service charge.

The schedule shows the cost of service for these cost functions in column 2. These amounts were taken from the last line in Schedule D, columns 7, 8, 9 and 10. The costs associated with meters are divided by the total 5/8-inch meter equivalents and by 12 months to determine the monthly cost related to a 5/8-inch meter. The costs associated with services are divided by 3/4-inch service equivalents and by 12 months to determine the monthly cost related to a 3/4-inch service. Costs associated with billing and collecting, meter reading and unrecovered public fire service are divided by the number of customers and metered customers, respectively, and by 12 months to determine the monthly cost per customer for these functions. The sum of the monthly costs for a 5/8-inch meter is $8.34 which was used as the monthly 5/8-inch service charge. The rates for the larger-sized meters are determined by multiplying the meter capacity ratios times the $8.34 rate for the 5/8-inch meter, as shown at the bottom on the schedule. Meter capacity ratios also were used to determine the larger-sized service charges under the existing rate structure.

28. Q. How were the volumetric rates determined?

A. After the proposed service charges were applied to the bill analysis, the existing volumetric rates for each classification were increased so that revenues from each class moved toward the indicated cost of service and that total revenues equaled the proposed revenue requirement.

29. Q. Does that conclude your direct testimony?

A. Yes, it does.

LIST OF CASES IN WHICH PAUL R. HERBERT TESTIFIED

	Year	Jurisdiction	Docket No.	Client/Utility	Subject
1.	1983	Pa. PUC	R-832399	T. W. Phillips Gas and Oil Co.	Pro Forma Revenues
2.	1989	Pa. PUC	R-891208	Pennsylvania-American Water Company	Bill Analysis and Rate Application
3.	1991	PSC of W. Va.	91-106-W-MA	Clarksburg Water Board	Revenue Requirements (Rule 42)
4.	1992	Pa. PUC	R-922276	North Penn Gas Company	Cash Working Capital
5.	1992	NJ BPU	WR92050532J	The Atlantic City Sewerage Company	Cost Allocation and Rate Design
6.	1994	Pa. PUC	R-943053	The York Water Company	Cost Allocation and Rate Design
7.	1994	Pa. PUC	R-943124	City of Bethlehem	Revenue Requirements, Cost Allocation, Rate Design and Cash Working Capital
8.	1994	Pa. PUC	R-943177	Roaring Creek Water Company	Cash Working Capital
9.	1994	Pa. PUC	R-943245	North Penn Gas Company	Cash Working Capital
10.	1994	NJ BPU	WR94070325	The Atlantic City Sewerage Company	Cost Allocation and Rate Design
11.	1995	Pa. PUC	R-953300	Citizens Utilities Water Company of Pennsylvania	Cost Allocation and Rate Design
12.	1995	Pa. PUC	R-953378	Apollo Gas Company	Revenue Requirements and Rate Design
13.	1995	Pa. PUC	R-953379	Carnegie Natural Gas Company	Revenue Requirements and Rate Design
14.	1996	Pa. PUC	R-963619	The York Water Company	Cost Allocation and Rate Design
15.	1997	Pa. PUC	R-973972	Consumers Pennsylvania Water Company - Shenango Valley Division	Cash Working Capital
16.	1998	Ohio PUC	98-178-WS-AIR	Citizens Utilities Company of Ohio	Water and Wastewater Cost Allocation and Rate Design
17.	1998	Pa. PUC	R-984375	City of Bethlehem - Bureau of Water	Revenue Requirement, Cost Allocation and Rate Design
18.	1999	Pa. PUC	R-994605	The York Water Company	Cost Allocation and Rate Design
19.	1999	Pa. PUC	R-994868	Philadelphia Suburban Water Company	Cost Allocation and Rate Design
20.	1999	PSC of W.Va.	99-1570-W-MA	Clarksburg Water Board	Revenue Requirements (Rule 42), Cost Allocation and Rate Design
21.	2000	Ky. PSC	2000-120	Kentucky-American Water Company	Cost Allocation and Rate Design
22.	2000	Pa. PUC	R-00005277	PPL Gas Utilities	Cash Working Capital
23.	2000	NJ BPU	WR00080575	Atlantic City Sewerage Company	Cost Allocation and Rate Design

LIST OF CASES IN WHICH PAUL R. HERBERT TESTIFIED, cont.

24.	2001	Ia. St Util Bd	RPU-01-4	Iowa-American Water Company	Cost Allocation and Rate Design
25.	2001	Va. St. Corp Cm	PUE010312	Virginia-American Water Company	Cost Allocation and Rate Design
26.	2001	WV PSC	01-0326-W-42T	West-Virginia American Water Company	Cost Allocation and Rate Design
27.	2001	Pa. PUC	R-016114	City of Lancaster	Tapping Fee Study
28.	2001	Pa. PUC	R-016236	The York Water Company	Cost Allocation and Rate Design
29.	2001	Pa. PUC	R-016339	Pennsylvania-American Water Company	Cost Allocation and Rate Design
30.	2001	Pa. PUC	R-016750	Philadelphia Suburban Water Company	Cost Allocation and Rate Design
31.	2002	Va. St. Corp Cm	PUE-2002-0375	Virginia-American Water Company	Cost Allocation and Rate Design
32.	2003	Pa. PUC	R-027975	The York Water Company	Cost Allocation and Rate Design
33.	2003	Tenn Reg. Auth	03-	Tennessee-American Water Company	Cost Allocation and Rate Design
34.	2003	Pa. PUC	R-038304	Pennsylvania-American Water Company	Cost Allocation and Rate Design
35.	2003	NJ BPU	WR03070511	New Jersey-American Water Company	Cost Allocation and Rate Design
36.	2003	Mo. PSC	WR-2003-0500	Missouri-American Water Company	Cost Allocation and Rate Design
37.	2004	Va. St. Corp Cm	PUE-200 -	Virginia-American Water Company	Cost Allocation and Rate Design
38.	2004	Pa. PUC	R-038805	Pennsylvania Suburban Water Company	Cost Allocation and Rate Design
39.	2004	Pa. PUC	R-049165	The York Water Company	Cost Allocation and Rate Design
40.	2004	NJ BPU	WRO4091064	The Atlantic City Sewerage Company	Cost Allocation and Rate Design
41.	2005	WV PSC	04-1024-S-MA	Morgantown Utility Board	Cost Allocation and Rate Design
42.	2005	WV PSC	04-1025-W-MA	Morgantown Utility Board	Cost Allocation and Rate Design
43.	2005	Pa. PUC	R-051030	Aqua Pennsylvania, Inc.	Cost Allocation and Rate Design
44.	2006	Pa. PUC	R-051178	T. W. Phillips Gas and Oil Co.	Cost Allocation and Rate Design
45.	2006	Pa. PUC	R-061322	The York Water Company	Cost Allocation and Rate Design
46.	2006	NJ BPU	WR-06030257	New Jersey American Water Company	Cost Allocation and Rate Design
47.	2006	Pa. PUC	R-061398	PPL Gas Utilities, Inc.	Cost Allocation and Rate Design
48.	2006	NM PRC	06-00208-UT	New Mexico American Water Company	Cost Allocation and Rate Design
49.	2007	CA PUC	U-339-W	Suburban Water Systems	Water Conservation Rate Design
50.	2007	CA PUC	U-168-W	San Jose Water Company	Water Conservation Rate Design

RESPONSE TO NORTH SHELBY AND U.S. 60 WATER DISTRICTS DATA REQUEST DATED: 12/5/08

PSC CASE NO. 2008-00250

ITEM 2

Frankfort Electric and Water Plant Board
Response to North Shelby and U.S. 60 Water Districts
Data Request Dated: 12/5/08
Case No. 2008-00250

ITEM 2: (a) With respect to page 9 of the direct testimony of Paul Herbert, it was stated the maximum hour ratio of 2.5 times the average hour was estimated based on the relationship of system maximum hour ratios compared to system maximum day ratios for other similar systems. Do the "similar systems" provide service to wholesale customers that provide their own overhead storage?

(b) Does the average hour ratio taken into consideration the fact the wholesale customers can fill their tanks at night or otherwise during off peak demand?

(c) If your answer to (a) above was no, please explain why.

(d) Please list Frankfort's wholesale customers who have overhead storage and Frankfort's wholesale customers who do not have overhead storage.

Response: a) Yes, similar systems do supply service to wholesale customers with overhead storage. The maximum hour ratio was based on the maximum day ratio of 1.8 for the entire water system, including wholesale customers. Maximum hour ratios typically range from 1.3 to 1.5 times the maximum day ratio.

b) Yes, the average hour was based on total system demand, which takes into account wholesale demand.

c) N/A

d) All have overhead storage.

RESPONSE TO NORTH SHELBY AND U.S. 60 WATER DISTRICTS DATA REQUEST DATED: 12/5/08

PSC CASE NO. 2008-00250

ITEM 3

Frankfort Electric and Water Plant Board
Response to North Shelby and U.S. 60 Water Districts
Data Request Dated: 12/5/08
Case No. 2008-00250

ITEM 3: (a) With respect to page 11 of the direct testimony of Paul Herbert, it is stated the proposed rate design moves toward the cost of service, without creating radical changes in the rate structure.

(b) How does this statement relate to the wholesale customers?

Response: Rates were proposed for wholesale customers that recover the allocated cost of service (See Schedule A) resulting in an 18.4% increase, less than 6% compounded increase per year since the last rate increase in 2005. Therefore, there has not been a radical change in rate structure for the wholesale customers.

RESPONSE TO NORTH SHELBY AND U.S. 60 WATER DISTRICTS DATA REQUEST DATED: 12/5/08

PSC CASE NO. 2008-00250

ITEM 4

Frankfort Electric and Water Plant Board
Response to North Shelby and U.S. 60 Water Districts
Data Request Dated: 12/5/08
Case No. 2008-00250

ITEM 4: (a) What is the purpose of each outstanding bond related to Frankfort's water division and how does the expense benefit the wholesale customers as opposed to all of Frankfort's customers?

(b) What percentage of the revenue bond anticipation note, Series 1996, dated December 19, 1996 financed the cost of the improvements and additions to the electric distribution system and what percentage financed improvements and additions to the water treatment plant?

(c) What percentage of the revenue bond anticipate note, Series 1997, dated December 19, 1997 financed the cost of the "line additions and improvements to the board's water system in east Frankfort," and please describe the lines (size and location) and the improvements which were constructed using this money.

Response: (a) The purposes of the bonds are outlined in the Resolution(s) provided in Item 5 of FPB's Response dated July 2, 2008. The improvements benefit the wholesale customers because they enable Frankfort's system to provide service to them.

(b) Fifty percent financed electric improvements and fifty percent financed water improvements.

(c) One hundred percent of the bond anticipation note, Series 1997 financed the cost of East Frankfort's water system improvements. East Frankfort water system improvements Phase I, consisted of 33,400 feet of 24-inch diameter ductile iron pipe constructed from the Water Treatment Plant to the intersection of Hoover Boulevard and U.S. 60; a water booster pumping station located at the water plant; and a 2-million gallon elevated concrete water storage tank located behind the Greenheck Fan Company off of Hoover Boulevard.

RESPONSE TO NORTH SHELBY AND U.S. 60 WATER DISTRICTS DATA REQUEST DATED: 12/5/08

PSC CASE NO. 2008-00250

ITEM 5

Frankfort Electric and Water Plant Board
Response to North Shelby and U.S. 60 Water Districts
Data Request Dated: 12/5/08
Case No. 2008-00250

ITEM 5: (a) With respect to Volume 3 of 5 of Frankfort's Response to the PSC staff questions, Item 6 Exhibit 1, sheets 1 of 6 through 6 of 6, which list the employee number, please state how each employee's wage was allocated to the water division and in turn to the wholesale customers. For example, how was meter reading expense allocated to the water division and in turn to the wholesale customers?

Response: The allocation methods were provided in Item 6, Exhibit 3 of FPB's Response dated July 2, 2008.

RESPONSE TO NORTH SHELBY AND U.S. 60 WATER DISTRICTS DATA REQUEST DATED: 12/5/08

PSC CASE NO. 2008-00250

ITEM 6

Frankfort Electric and Water Plant Board
Response to North Shelby and U.S. 60 Water Districts
Data Request Dated: 12/5/08
Case No. 2008-00250

ITEM 6: (a) With respect to Volume 3 of 5, Item 6, Exhibit 3, what is the basis for the water allocation percentages? For instance, on sheet 4, accounts #40-902-000 and 100, the allocation percentage is 42.43%.

(b) Are all numbers allocated to water estimated or actual cost?

Response: The allocation methods have been previously provided and all numbers are based on actual cost. For the account referenced, $6.00 in meter reading expense was allocated to the wholesale customers.

RESPONSE TO NORTH SHELBY AND U.S. 60 WATER DISTRICTS DATA REQUEST DATED: 12/5/08

PSC CASE NO. 2008-00250

ITEM 7

Frankfort Electric and Water Plant Board
Response to North Shelby and U.S. 60 Water Districts
Data Request Dated: 12/5/08
Case No. 2008-00250

ITEM 7: With respect to Schedule B, page 2 of 4 of the cost of service study, line item 920000, why is all of the rate case expense allocated to wholesale customers, since the cost of service study produces rates for both wholesale and retail customers?

Response: The requirement for filing a rate case is due exclusively to serving wholesale customers. Therefore, it is appropriate to allocate the rate case expense entirely to the wholesale customers. Retail customers should not be required to subsidize costs that are required to be incurred only for wholesale customers.

In addition, the cost of service study requirement is related exclusively to PSC regulation of wholesale rates and Intervenor Water District's objection to rate adjustments. The cost of service is necessary only because of the Intervenors' opposition to the proposed rate adjustment.

RESPONSE TO NORTH SHELBY AND U.S. 60 WATER DISTRICTS DATA REQUEST DATED: 12/5/08

PSC CASE NO. 2008-00250

ITEM 8

Frankfort Electric and Water Plant Board
Response to North Shelby and U.S. 60 Water Districts
Data Request Dated: 12/5/08
Case No. 2008-00250

ITEM 8: With respect to Schedule C, page 5 of 20 of the cost of service study, how can the allocation factor for average hourly consumption for resale of .2971 be higher than the .2744 allocation factor for residential average hourly consumption?

Response: The Sales for Resale Non Water Producers have a larger average daily consumption, which is based on annual consumption, than the residential class. See Schedule C, page 1 of 20, Factor 1.

RESPONSE TO NORTH SHELBY AND U.S. 60 WATER DISTRICTS DATA REQUEST DATED: 12/5/08

PSC CASE NO. 2008-00250

ITEM 9

Frankfort Electric and Water Plant Board
Response to North Shelby and U.S. 60 Water Districts
Data Request Dated: 12/5/08
Case No. 2008-00250

ITEM 9: (a) With respect to Schedule B, page 3 of 4 of the cost of service study, line item 932120, why are support services of $15,327.00 allocated to the wholesale customers?

(b) What are support services?

Response: a) Line item 932120 is support services payroll. Support services payroll is required to provide administrative support for the water utility operations, and is appropriately allocated to the classifications. This item is allocated according to Factor 14, which is based on other operation and maintenance costs excluding purchased water, power, chemicals and waste disposal.

b) Support Services provide services including, but not limited to, maintenance, inventory management, procurement, dispatching, and grounds keeping.

RESPONSE TO NORTH SHELBY AND U.S. 60 WATER DISTRICTS DATA REQUEST DATED: 12/5/08

PSC CASE NO. 2008-00250

ITEM 10

Frankfort Electric and Water Plant Board
Response to North Shelby and U.S. 60 Water Districts
Data Request Dated: 12/5/08
Case No. 2008-00250

ITEM 10: (a) With respect to page 4 of the cost of service study where in it is stated that the cost of service study was discussed with water board management, did management accept the rates presented in the study without revision?

(b) If not, explain all adjustments.

Response: a) Yes, the board management accepted the rates presented *without revision*.

b) N/A

RESPONSE TO NORTH SHELBY AND U.S. 60 WATER DISTRICTS DATA REQUEST DATED: 12/5/08

PSC CASE NO. 2008-00250

ITEM 11

Frankfort Electric and Water Plant Board
Response to North Shelby and U.S. 60 Water Districts
Data Request Dated: 12/5/08
Case No. 2008-00250

ITEM 11: (a) Why was the existence of overhead storage facilities of the wholesale customers not considered in determining average hour consumption for wholesale customers?

(b) Would not the demand placed on Frankfort's system be lower than the average usage of 24.8 if wholesale customer overhead storage tanks were considered?

Response: a) The average hour consumption is the annual consumption divided by 365 days and 24 hours. It is not affected by overhead storage facilities.

b) No, the average hourly consumption does not change based on overhead storage.

RESPONSE TO NORTH SHELBY AND U.S. 60 WATER DISTRICTS DATA REQUEST DATED: 12/5/08

PSC CASE NO. 2008-00250

ITEM 12

Frankfort Electric and Water Plant Board
Response to North Shelby and U.S. 60 Water Districts
Data Request Dated: 12/5/08
Case No. 2008-00250

ITEM 12: Is bad debt expense allocated in part to wholesale customers? If so, how and why?

Response: Bad debt expense is allocated using Factor 12 which is based on the number of customers in a class. The wholesale customers are allocated $16 of bad debt expense out of a total of $22,424.