

ILLINOIS COMMERCE COMMISSION

DOCKET NO. 16-0093

IAWC EXHIBIT 11.00 (Rev.)

REVISED DIRECT TESTIMONY OF

PAUL R. HERBERT

ILLINOIS-AMERICAN WATER COMPANY

MARCH 7, 2016

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5 **ILLINOIS-AMERICAN WATER COMPANY**

6 **I. WITNESS QUALIFICATIONS AND EXPERIENCE**

7 **Q. Please state your name and address.**

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

10 **Q. By whom are you employed?**

11 **A. I am employed by Gannett Fleming Valuation and Rate Consultants, LLC.**

12 **Q. Please describe your position with Gannett Fleming Valuation and Rate**
13 **Consultants, LLC and briefly state your general duties and responsibilities.**

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

18 **Q. Have you presented testimony in rate proceedings before a regulatory**
19 **agency?**

20 **A. Yes. I have testified before the Pennsylvania Public Utility Commission, the New**
21 **Jersey Board of Public Utilities, the Public Utilities Commission of Ohio, the Public**

22 Service Commission of West Virginia, the Kentucky Public Service Commission, the
23 Iowa State Utilities Board, the Virginia State Corporation Commission, the New Mexico
24 Public Regulation Commission, the Public Utilities Commission of the State of
25 California, the Illinois Commerce Commission, the Delaware Public Service
26 Commission, the Arizona Corporation Commission, the Connecticut Department of
27 Public Utility Control, the Idaho Public Utilities Commission, the Tennessee Regulatory
28 Authority, the Hawaii Public Utilities Commission, and the Missouri Public Service
29 Commission concerning revenue requirements, cost of service allocation, rate design
30 and cash working capital claims. A list of cases in which I have testified is attached to
31 my testimony as Appendix A.

32 **Q. What is your educational background?**

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

35 **Q. Would you please describe your professional affiliations?**

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

41 **Q. Briefly describe your work experience.**

42 **A.** I joined the Valuation Division of Gannett Fleming Corddry and Carpenter, Inc.,
43 predecessor to Gannett Fleming, Inc., in September 1977, as a Junior Rate Analyst.
44 Since then, I advanced through several positions and was assigned the position of
45 Manager of Rate Studies on July 1, 1990. On June 1, 1994, I was promoted to Vice
46 President and to Senior Vice President in November 2003. On July 1, 2007, I was
47 promoted to my current position as President.

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

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

54 **A.** The purpose of my testimony in this case is to discuss the cost of service studies
55 (COSS) and proposals for rate design based on the results of the COSS. The COSS is
56 attached hereto as IAWC Exhibit 11.01, and includes Schedules A through F for each
57 rate area. The COSS was prepared using capacity factors developed in the direct
58 demand study prepared and presented in IAWC Exhibit 11.02. The Company's
59 proposed rate design is developed in Section III of my testimony, and production unit
60 costs used in establishing a non-production rate for Zone 1 Chicago Lake customers
61 are calculated in IAWC Exhibit 11.03.

62 **Q. Were IAWC Exhibits 11.01 11.02, and 11.03 prepared by you or under your**
63 **direction and supervision?**

64 **A.** Yes.

65 **II. COST OF SERVICE ALLOCATION**

66 **Q. Briefly describe the purpose of the COSS.**

67 **A.** The COSS allocates the rate area specific cost of service, which is the total
68 proposed revenue requirement for rate area water or sewer operations as determined
69 by the Company, to the customer classifications in each rate area. The rate areas for
70 which cost allocation studies were prepared include Zone 1, Lincoln, Pekin, and
71 Chicago Metro Sewer. Zone 1 includes all water rate areas except for Lincoln and
72 Pekin. An additional cost allocation study identified as Zone 1 - Alternate, which shows
73 Large Sale for Resale as a separate customer class, is provided in response to the
74 Commission's Order in Docket No. 11-0767.

75 In the water COSS, the rate area specific costs were allocated to the following
76 classifications, in accordance with generally accepted principles and procedures:
77 residential, commercial, large commercial, industrial, large industrial, competitive
78 industrial, other public authorities, large public authorities, sales for resale, private fire
79 protection and public fire protection. The water COSS results indicate the relative cost
80 responsibilities of each class of customers in each rate area.

81 The allocated cost of service is one of several criteria appropriate for
82 consideration in designing customer rates to produce the required revenues. The
83 studies present the results of the allocation of the rate area specific cost of service for

84 the test year ended September 30, 2017, and the customer rates which produce the
85 proposed revenue requirements.

86 **Q. Please describe the method of cost allocation that was used in the Water**
87 **COSS.**

88 **A.** The methodology is the same as that approved by the Commission in IAWC's
89 2008 rate investigation, Docket No. 08-0463, and, its most recent rate cases, Docket
90 Nos. 09-0319 and 11-0767. That method is the base-extra capacity method, as
91 described in Water Rates Manuals published by the American Water Works Association
92 (AWWA). Base-extra capacity is a recognized method for allocating the cost of
93 providing water service to customer classifications in proportion to the classifications'
94 use of the commodity, facilities, and services. It is generally accepted as a sound
95 method for allocating the cost of water service and was used by the Company in
96 previous cases.

97 **Q. Please describe the procedures followed in the Water COSS.**

98 **A.** Each identified classification of cost in the cost allocation study for a given rate
99 area was allocated to the customer classifications through the use of appropriate
100 factors. These allocations are presented in Schedule B of IAWC Exhibit 11.01 for each
101 cost allocation study. The items of cost, which include operation and maintenance
102 expenses, depreciation expense, taxes and income available for return, are identified in
103 column 1 of Schedule B. The cost of each item, shown in column 3, is allocated to the
104 several customer classifications based on allocation factors referenced in column 2.
105 The development of the allocation factors is presented in Schedule C of IAWC Exhibit

106 11.01. I will use some of the larger cost items to illustrate the principles and
107 considerations used in the cost allocation methodology.

108 Some costs are allocated directly, or allocated using factors developed
109 specifically for that type of cost. Other costs are allocated according to composite
110 allocation factors, which are based on the result of allocating other costs and are
111 computed internally in the cost allocation program. Factors 15, 15A and 18, as well as
112 Factors 11 and 21 in Zone 1, Factors 12, 16, 17 and 19, are composite allocation
113 factors. Refer to Schedule C for a description of the bases for each allocation factor.

114 Purchased water, purchased electric power, treatment chemicals, and sewer
115 disposal are examples of costs that tend to vary with the amount of water consumed
116 and are thus considered base costs. They are allocated to the several customer
117 classifications in direct proportion to the average daily consumption of those
118 classifications through the use of Factor 1.

119 Other sources of supply, water treatment, and transmission costs are associated
120 with meeting usage requirements in excess of the average, generally to meet maximum
121 day requirements. Costs of this nature were allocated to customer classifications
122 partially as base costs, proportional to average daily consumption, partially as maximum
123 day extra capacity costs, in proportion to maximum day extra capacity, and, in the case
124 of certain pumping stations and transmission mains, partially as fire protection costs,
125 through the use of Factors 2 and 3.

126 Costs associated with storage facilities and the capital costs of distribution mains
127 were allocated partly on the basis of average consumption and partly on the basis of
128 maximum hour extra demand, including the demand for fire protection service, because

129 these facilities are designed to meet maximum hour and fire demand requirements,
130 through the use of Factors 4 and 5.

131 Fire demand costs were allocated to public and private fire protection service in
132 proportion to the relative potential demands on the system by public fire hydrants and
133 private service lines as presented in Schedule D of IAWC Exhibit 11.01.

134 Costs associated with pumping facilities and the operation and maintenance of
135 mains were allocated on combined bases of maximum day and maximum hour extra
136 capacity because these facilities serve both functions. For pumping facilities, the
137 relative weightings of Factor 2 (maximum day), Factor 3 (maximum day and fire) and
138 Factor 4 (maximum hour) were based on the horsepower of pumps serving maximum
139 day, maximum day and fire, and maximum hour functions. This weighted factor is
140 referred to as Factor 6.

141 For operation and maintenance of mains, the relative weightings of Factor 3
142 (maximum day and fire) and Factor 4 (maximum hour) were based on the inch-feet of
143 transmission and distribution mains. Generally, for cost allocation purposes, mains
144 larger than 10 inches were classified as serving a transmission function and mains 10
145 inches and smaller were classified as serving a distribution function. This weighted
146 factor is referred to as Factor 7.

147 Costs associated with public fire hydrants were assigned directly to the public fire
148 protection class, and this direct assignment is referred to as Factor 8.

149 Costs associated with meters were allocated to customer classifications in
150 proportion to the meter equivalents of the sizes and quantities of meters serving each
151 classification. The factor for meters is referenced as Factor 9. Factor 10, Allocation of

152 Services, was developed in a manner similar to Factor 9, except that service
153 equivalents were used in order to weight the number of services by classification.

154 Costs for customer accounting, billing and collecting were allocated on the basis
155 of the number of customers or number of bills for Lincoln, Pekin, Zone 1, and Zone 1 -
156 Alternative for each classification, and costs for meter reading were allocated on the
157 basis of metered customers or metered bills. The development of these factors is
158 referenced as Factor 13 and Factor 14.

159 Administrative and general costs were allocated as direct costs, excluding costs
160 such as purchased water, power, chemicals and sewer disposal, which require little
161 administrative and general expense. These costs were allocated using Factor 15.
162 Cash working capital, an item of rate base, was also allocated as a direct cost, but the
163 allocation factor includes purchased water, power, chemicals and sewer disposal since
164 these items would affect the calculation of cash working capital. Cash working capital
165 was allocated using Factor 15A.

166 Annual depreciation accruals were allocated based on the function of the
167 facilities represented by the depreciation expense for each depreciable plant account.
168 The original cost less depreciation of utility plant in service was similarly allocated for
169 the purpose of developing factors, referenced as Factor 18, for allocating items such as
170 income taxes and return. The development of Factor 18 is presented on the last three
171 pages of Schedule C.

172 Uncollectible accounts are allocated based on Factor 20. The allocation factors
173 are based on the net write-offs by class by district.

174 **Q. What was the source of the total cost of service data set forth in column 3**
175 **of Schedule B of IAWC Exhibit 11.01?**

176 **A.** The cost of service data was furnished by the Company, and is based on the
177 proposed revenue requirement.

178 **Q. For Schedule C of IAWC Exhibit 11.01, explain the source of the system**
179 **maximum day and maximum hour ratios used in the development of Factors 2, 3**
180 **and 4.**

181 **A.** The demand ratios were obtained from Tables 1E through 1G of IAWC Exhibit
182 11.02, the Demand Study Report, which sets forth demand ratios (capacity factors).

183 **Q. How was the Demand Study Report developed?**

184 **A.** I conducted a direct measurement demand study to develop the Demand Study
185 Report.

186 **Q. What is a direct measurement demand study?**

187 **A.** A direct measurement demand study is performed by recording the peak day and
188 hourly demand of a sample of individual customers using metering equipment installed
189 at each customer location.

190 **Q. Is this the typical way demand factors are developed?**

191 **A.** No. Typically, demand factors are developed through analysis of aggregate
192 customer usage data. The AWWA provides guidance on acceptable means of
193 performing demand studies in AWWA M1 Manual, Appendix A. This method is the
194 more commonly-used method for determining demand factors. The direct

195 measurement method was used in this case per the Commission's directive in IAWC's
196 2009 rate case, Docket No. 09-0319, as further discussed by IAWC witness Jeff Kaiser.
197 (See IAWC Exhibit 3.00.) The demand study is discussed in more detail in the text of
198 the report.

199 **Q. Is the demand study complete in your opinion?**

200 **A.** Yes. The demand ratios are the result of four years of monitoring of many
201 different sites over the entire IAWC service area. In my estimation, this study is more
202 than sufficient for determining the demand ratios for this case and for cases in the
203 future. I recommend ending the monitoring due to the enormous amount of data
204 already collected and due to the large amount of Company resources required to
205 administer the study.

206 **Q. Please explain the allocation of small mains in certain rate areas.**

207 **A.** Factor 4, used to allocate distribution mains, was modified to exclude
208 consumption for customers on the large user tariffs and sales for resale customers in
209 the Zone 1 and Pekin tariff groups. This was done to recognize that certain large and
210 competitive industrial customers, large commercial, large other public authorities, and
211 sales for resale customers are connected directly to the transmission system and do not
212 benefit from the smaller distribution mains.

213 **Q. How was this adjustment accomplished?**

214 **A.** In Zone 1, all large industrial, competitive industrial, large other public authority,
215 sales for resale customers, and large sales for resale customers, are served from the

216 transmission system and, therefore, were excluded from Factor 4. For Pekin, the two
217 largest industrial customers as well as the sales for resale customers were excluded
218 from Factor 4.

219 **Q. Have you summarized the results of the COSS?**

220 **A.** Yes. The results are summarized in columns 1, 2 and 3 of Schedule A of IAWC
221 Exhibit 11.01 for each rate area. Column 2 sets forth the total allocated pro forma cost
222 of service as of September 30, 2017, for each customer classification identified in
223 Column 1. Column 3 presents each customer classification's cost responsibility as a
224 percent of the total cost.

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

227 **A.** Yes. A comparison of the allocated cost responsibilities and the percentage
228 revenue under existing rates for each tariff group can be made by comparing columns 3
229 and 5 of Schedule A of IAWC Exhibit 11.01.

230 **Q. Please describe the method of cost allocation that was used in the Sewer**
231 **COSS.**

232 **A.** The method of cost allocation used is described in my exhibit. The method used
233 for the allocation of Chicago Metro Sewer Operations cost of service incorporates the
234 functional cost allocation methodology described in the text "Financing and Charges for
235 Wastewater Systems", Manual of Practice No. 27, published by the Water Environment
236 Federation.

237 **III. CUSTOMER RATE DESIGN**

238 **Q. Please summarize the rate design considerations IADC has reviewed for**
239 **this proceeding.**

240 **A.** The rate design considerations included:

- 241 1. Align Non-residential rate blocks in Zone 1.
- 242 2. Increase customer charges to recover a greater portion of customer costs
243 for each rate area through the customer charge. Move toward a single
244 customer charge for all tariff groups.
- 245 3. Maintain separate rate structures for Pekin and Lincoln with the exception
246 of the customer charges in Pekin.
- 247 4. Establish the cost to provide public fire service for each municipality or fire
248 district based on the cost of service allocation studies within each rate
249 area and setting one rate per tariff group.
- 250 5. For the Chicago Metro Sewer District – determine the appropriate rates for
251 collection and treatment customers and collection-only customers using
252 the cost of service study as a guide and aligning the non-residential rates
253 with rates for the residential class.

254
255 **Q. What is the general basis for the Company’s proposed rate design?**

256 **A.** The Company’s proposed rate design continues the basic existing water rate
257 structure that includes a customer charge which varies by meter size and a single
258 consumption block for residential customers and multiple declining block rates for non-
259 residential customers. Generally, rates were designed to move revenues more in-line
260 with cost of service indicators without necessarily moving all the way to cost of service.
261 This was done primarily to avoid drastic shifts in revenues based on the results of the
262 direct demand study. Also, certain classes, primarily residential and commercial,
263 proposed revenue exceeds the cost of service level in order to make up for those

264 classes on contract or competitive rates that cannot be increased to recover their full
265 cost of service.

266 **Q. What are the primary elements of your proposed rate design?**

267 **A.** The primary elements of my rate design are proposed customer charges,
268 volumetric or consumption charges, and fire protection charges.

269 **Q. What is the purpose of the customer charges?**

270 **A.** Customer charges are designed to recover the fixed customer costs associated
271 with servicing customers without regard to the quantity of water used. Such costs
272 include operation and maintenance expenses related to meters and services,
273 depreciation expense, return and taxes on meters and services investment, expenses
274 related to meter reading, customer billing, and accounting and other customer service
275 related functions. An allocable portion of administrative and general expenses are also
276 included in customer costs.

277 **Q. What customer charges do you propose?**

278 **A.** Based on an analysis of customer costs shown on Schedule E of the COSS, I
279 recommend a \$20.00 per month customer charge for 5/8-inch meters for Zone 1 and
280 Pekin. This is a \$3.50, or 21.2%, increase over the existing \$16.50 5/8-inch charge for
281 Zone 1 and an increase of \$2.00 over the existing \$18.00 charge or 11.1% for Pekin.
282 All other customer charges for the larger meter sizes were increased 21.2% for these
283 two areas, since Pekin's larger customer charges are already equal to Zone 1.

284 Customer charges for 5/8-inch meters in Lincoln were increased from \$14.50 per
285 month to \$15.90, a 9.7% increase, and this 9.7% increase was applied to other meter
286 sizes in Lincoln. For South Beloit, the 5/8-inch customer charge was raised to \$19.12,
287 which is equal to the Zone 1 rate less the purchased water surcharge of \$0.88 for a 5/8-
288 inch meter. The other meter sizes in South Beloit were also increased to the level of
289 Zone 1, less the applicable purchased water surcharge.

290 **Q. What are consumption rates?**

291 **A.** Consumption or volumetric rates are rates that are applied to the amount of
292 water used.

293 **Q. Please describe the proposed consumption rates for South Beloit, Pekin,**
294 **and Lincoln.**

295 For South Beloit, the customer charges and consumption rates are linked to the
296 Zone 1 rates, less the cost of purchased water. The current rate for purchased water is
297 \$1.273 per 1000 gallons. This amount is subtracted from the Zone 1 consumption rates
298 so that the bill is equal to Zone 1 after the South Beloit purchased water is added. For
299 Pekin, the existing consumption rates were increased in order to move revenues as
300 close to the cost of service indicators as possible, considering potential bill impacts. For
301 Lincoln, the existing consumption rates remain the same since the increase to the
302 customer charges provided the total increase required.

303 **Q. Please explain how you developed the Zone 1 consumption rates.**

304 **A.** In Docket No. 11-0767, the Commission approved IAWC's proposal to
305 consolidate the non-production related (*i.e.*, transmission and distribution) costs of the
306 Chicago Metro and Zone 1 districts. In furtherance of that Order, the goal for Zone 1
307 rate design in this case was to develop the same rate for non-production costs for both
308 Zone 1 and Zone 1 Chicago Metro customers. That is, the costs to deliver water
309 (transmission and distribution) are to be the same for all Zone 1 and Chicago Metro
310 areas. Removing production costs to develop a common non-production cost
311 recognizes the operational differences between Chicago Metro customers within Zone 1
312 and other Zone 1 customers, in that Chicago Metro is supplied primarily by purchased
313 Lake Michigan water, while Zone 1's source of supply is surface and groundwater
314 produced by IAWC. The production costs are then added back for Zone 1 and non-
315 Chicago Metro Lake customers, only.

316 In order to determine the non-production unit costs, the unit costs associated with
317 the production of water (source of supply, treatment and high service pumping) were
318 determined for the Zone 1 service area, as presented in IAWC Exhibit Number 11.03.
319 The unit production costs were determined to be \$2.156 per 1000 gallons. This was
320 deducted from the proposed consumption rate for Zone 1 Chicago Lake customers,
321 resulting in the non-production (*i.e.*, transmission and distribution) rate.

322 **Q. What are the proposed rates for the Chicago Well area?**

323 **A.** Since the Chicago Well area produces its own supply, I set their rates equal to
324 Zone 1.

325 **Q. What do you recommend for Private Fire Protection rates?**

326 **A.** Generally, IAWC's private fire revenues do not sufficiently recover the cost of
327 providing private fire protection. Therefore, I recommend increasing private fire rates in
328 all districts to move revenue toward the cost of providing service.

329 **Q. Please explain the rates for Public Fire Protection.**

330 **A.** For each tariff group, public fire rates were developed based on the cost of
331 service in the tariff group. The cost of service was used to determine the total public fire
332 revenues required for the tariff group. The public fire revenue will be recovered from
333 each customer based on the number of customers by meter size for each tariff group.
334 However, in the districts where the municipality pays part of the public fire costs via a
335 hydrant charge, the public fire rates by meter size were reduced.

336 **Q. Please explain the rate design proposed for Chicago Metro Sewer.**

337 **A.** The rate design for Chicago Metro Sewer relied upon the results of the cost of
338 service allocation presented in IAWC Exhibit 11.01. The cost allocation shows the cost
339 of service attributable to Collection Only customers, Collection and Treatment
340 customers, and Treatment Only customers.

341 The proposed rate design continues to align the revenues with the cost of
342 service. For Collection Only and Collection and Treatment non-residential customers,
343 the proposed rates were aligned with the existing residential rate structure, resulting in a
344 more equitable rate structure between classes. All customer classes will now receive a
345 1,000 gallon allowance included in the minimum charge plus a uniform volumetric rate
346 for all water usage over 1,000 gallons per month. A flat rate charge was also

347 established based on an average 4,500 gallons per month for those customers without
348 metered water usage data.

349 For Treatment Only (wholesale) customers, the Tinley Park flat rate of \$59.33 per
350 user per month was based on the difference between an average collection and
351 treatment bill and an average collection only bill. The Tinley Park West monthly flat fee,
352 covering a multi-unit development, was set at one-half of the Tinley Park rate or \$29.27
353 per unit per month, in accordance with the agreement between IAWC and Tinley Park.

354 **Q. Does this complete your revised direct testimony at this time?**

355 **A.** Yes, it does.

PAUL R. HERBERT – LIST OF CASES TESTIFIED

<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client/Utility</u>	<u>Subject</u>	
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	WV PSC	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	Rev. Requirements and Rate Design
13.	1995	Pa. PUC	R-953379	Carnegie Natural Gas Company	Rev. 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	WV PSC	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
24.	2001	Ia. St Util Bd	RPU-01-4	Iowa-American Water Company	Cost Allocation and Rate Design
25.	2001	Va. St. CC	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.CC	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	Tn 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.CC	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

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<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client/Utility</u>	<u>Subject</u>	
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.	2006	Tn Reg Auth	06-00290	Tennessee American Water Company	Cost Allocation and Rate Design
50.	2007	Ca. PUC	U-339-W	Suburban Water Systems	Water Conservation Rate Design
51.	2007	Ca. PUC	U-168-W	San Jose Water Company	Water Conservation Rate Design
52.	2007	Pa. PUC	R-00072229	Pennsylvania American Water Company	Cost Allocation and Rate Design
53.	2007	Ky. PSC	2007-00143	Kentucky American Water Company	Cost Allocation and Rate Design
54.	2007	Mo. PSC	WR-2007-0216	Missouri American Water Company	Cost Allocation and Rate Design
55.	2007	Oh. PUC	07-1112-WS-IR	Ohio American Water Company	Cost Allocation and Rate Design
56.	2007	Il. CC	07-0507	Illinois American Water Company	Customer Class Demand Study
57.	2007	Pa. PUC	R-00072711	Aqua Pennsylvania, Inc.	Cost Allocation and Rate Design
58.	2007	NJ BPU	WR07110866	The Atlantic City Sewerage Company	Cost Allocation and Rate Design
59.	2007	Pa. PUC	R-00072492	City of Bethlehem – Bureau of Water	Revenue Reqmts, Cost Alloc.
60.	2007	WV PSC	07-0541-W-MA	Clarksburg Water Board	Cost Allocation and Rate Design
61.	2007	WV PSC	07-0998-W-42T	West Virginia American Water Company	Cost Allocation and Rate Design
62.	2008	NJ BPU	WR08010020	New Jersey American Water Company	Cost Allocation and Rate Design
63.	2008	Va St CC	PUE-2008-0009	Virginia American Water Company	Cost Allocation and Rate Design
64.	2008	Tn.Reg.Auth.	08-00039	Tennessee American Water Company	Cost Allocation and Rate Design
65.	2008	Mo PSC	WR-2008-0311	Missouri American Water Company	Cost Allocation and Rate Design
66.	2008	De PSC	08-96	Artesian Water Company, Inc.	Cost Allocation and Rate Design
67.	2008	Pa PUC	R-2008-2032689	Penna. American Water Co. – Coatesville Wastewater	Cost Allocation and Rate Design
68.	2008	AZ CC.	W-01303A-08-0227 SW-01303A-08-0227	Arizona American Water Co. - Water - Wastewater	Cost Allocation and Rate Design
69.	2008	Pa PUC	R-2008-2023067	The York Water Company	Cost Allocation and Rate Design
70.	2008	WV PSC	08-0900-W-42T	West Virginia American Water Company	Cost Allocation and Rate Design
71.	2008	Ky PSC	2008-00250	Frankfort Electric and Water Plant Board	Cost Allocation and Rate Design
72.	2008	Ky PSC	2008-00427	Kentucky American Water Company	Cost Allocation and Rate Design
73.	2009	Pa PUC	2008-2079660	UGI – Penn Natural Gas	Cost of Service Allocation
74.	2009	Pa PUC	2008-2079675	UGI – Central Penn Gas	Cost of Service Allocation
75.	2009	Pa PUC	2009-2097323	Pennsylvania American Water Co.	Cost Allocation and Rate Design
76.	2009	Ia St Util Bd	RPU-09-	Iowa-American Water Company	Cost Allocation and Rate Design
77.	2009	Il CC	09-0319	Illinois-American Water Company	Cost Allocation and Rate Design
78.	2009	Oh PUC	09-391-WS-AIR	Ohio-American Water Company	Cost Allocation and Rate Design
79.	2009	Pa PUC	R-2009-2132019	Aqua Pennsylvania, Inc.	Cost Allocation and Rate Design
80.	2009	Va St CC	PUE-2009-0059	Aqua Virginia, Inc.	Cost Allocation (only)
81.	2009	Mo PSC	WR-2010-0131	Missouri American Water Company	Cost Allocation and Rate Design
82.	2010	VaSt CorpCom	PUE-2010-00001	Virginia American Water Company	Cost Allocation and Rate Design
83.	2010	Ky PSC	2010-00036	Kentucky American Water Company	Cost Allocation and Rate Design
84.	2010	NJ BPU	WR10040260	New Jersey American Water Company	Cost Allocation and Rate Design
85.	2010	Pa PUC	2010-2167797	T.W. Phillips Gas and Oil Co.	Cost Allocation and Rate Design
86.	2010	Pa PUC	2010-2166212	Pennsylvania American Water Co. - Wastewater	Cost Allocation and Rate Design
87.	2010	Pa PUC	R-2010-2157140	The York Water Company	Cost Allocation and Rate Design
88.	2010	Ky PSC	2010-00094	Northern Kentucky Water District	Cost Allocation and Rate Design
89.	2010	WV PSC	10-0920-W-42T	West Virginia American Water Co.	Cost Allocation and Rate Design
90.	2010	Tn Reg Auth	10-00189	Tennessee American Water Company	Cost Allocation and Rate Design
91.	2010	Ct PU RgAth	10-09-08	United Water Connecticut	Cost Allocation and Rate Design
92.	2010	Pa PUC	R-2010-2179103	City of Lancaster-Bureau of Water	Rev Rqmts, Cst Alloc/Rate Design
93.	2011	Pa PUC	R-2010-2214415	UGI Central Penn Gas, Inc.	Cost Allocation
94.	2011	Pa PUC	R-2011-2232359	The Newtown Artesian Water Co.	Revenue Requirement
95.	2011	Pa PUC	R-2011-2232243	Pennsylvania-American Water Co.	Cost Allocation and Rate Design
96.	2011	Pa PUC	R-2011-2232985	United Water Pennsylvania Inc.	Demand Study, COS/Rate Design

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	<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client/Utility</u>	<u>Subject</u>
97.	2011	Pa PUC	R-2011-2244756	City of Bethlehem-Bureau of Water	Rev. Rqmts/COS/Rate Design
98.	2011	Mo PSC	WR-2011-0337-338	Missouri American Water Company	Cost Allocation and Rate Design
99.	2011	Oh PUC	11-4161-WS-AIR	Ohio American Water Company	Cost Allocation and Rate Design
100.	2011	NJ BPU	WR11070460	New Jersey American Water Company	Cost Allocation and Rate Design
101.	2011	Id PUC	UWI-W-11-02	United Water Idaho Inc.	Cost Allocation and Rate Design
102.	2011	Il CC	11-0767	Illinois-American Water Company	Cost Allocation and Rate Design
103.	2011	Pa PUC	R-2011-2267958	Aqua Pennsylvania, Inc.	Cost Allocation and Rate Design
104.	2011	VaStCom	2011-00099	Aqua Virginia, Inc.	Cost Allocation
105.	2011	VaStCom	2011-00127	Virginia American Water Company	Cost Allocation and Rate Design
106.	2012	TnRegAuth	12-00049	Tennessee American Water Company	Cost Allocation and Rate Design
107.	2012	Ky PSC	2012-00072	Northern Kentucky Water District	Cost Allocation and Rate Design
108.	2012	Pa PUC	R-2012-2310366	Lancaster, City of – Sewer Fund	Cost Allocation and Rate Design
109.	2012	Ky PSC	2012-00520	Kentucky American Water Co.	Cost Allocation and Rate Design
110.	2013	WV PSC	12-1649-W-42T	West Virginia American Water Co.	Cost Allocation and Rate Design
111.	2013	Ia St Util Bd	RPU-2013-000_	Iowa American Water Company	Cost Allocation and Rate Design
112.	2013	Pa PUC	R-2013-2355276	Pennsylvania American Water Co.	Cost Allocation and Rate Design
113.	2013	Pa PUC	R-2012-2336379	The York Water Company	Cost Allocation and Rate Design
114.	2013	Pa PUC	R-2013-2350509	City of DuBois – Bureau of Water	Cost Allocation and Rate Design
115.	2013	Pa PUC	R-2013-2390244	City of Bethlehem – Bureau of Water	Cost Allocation and Rate Design
116.	2014	Pa PUC	R-2014-2418872	City of Lancaster – Bureau of Water	Cost Allocation and Rate Design
117.	2014	Pa PUC	R-2014-2428304	Borough of Hanover	Cost Allocation and Rate Design
118.	2014	VASStCom	2014-00045	Aqua Virginia, Inc.	Cost Allocation
119.	2015	NJ BPU	WR15010035	New Jersey American Water Company	Cost Allocation and Rate Design
120.	2015	Pa PUC	R-2015-2462723	United Water PA	Cost Allocation and Rate Design
121.	2015	WV PSC		West Virginia American Water Company	Cost Allocation and Rate Design
122.	2015	Id PUC	UWI-W-15-01	United Water Idaho Inc.	Pro Forma Revenues