

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

**PETITION OF THE CITY OF COLUMBUS,
INDIANA, FOR (1) AUTHORITY TO ISSUE
BONDS, NOTES, OR OTHER OBLIGATIONS, (2)
AUTHORITY TO INCREASE ITS RATES AND
CHARGES FOR WATER SERVICE, (3)
APPROVAL OF NEW SCHEDULES OF WATER
RATES AND CHARGES, AND (4) AUTHORITY TO
ESTABLISH AND IMPLEMENT SYSTEM
DEVELOPMENT CHARGES.**

CAUSE NO. 45427

DIRECT TESTIMONY AND EXHIBITS

OF

CHRIS EKRUT

**ON BEHALF OF INTERVENOR
SOUTHWESTERN BARTHOLOMEW WATER COMPANY**

1. INTROUDUCTION

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

A. My name is Chris Ekrut, and my business address is 275 W Campbell Rd, Ste 440, Richardson, Texas 75080.

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

A. I am employed by NewGen Strategies and Solutions, LLC (NewGen) as the firm's Chief Financial Officer and a Director in the firm's Environmental Practice. My duties include managing and supervising our Richardson, Texas-based consultants and administrative staff; managing and performing client engagements; and assisting in the oversight and management of NewGen's financial and corporate operations.

3. Q. PLEASE SUMMARIZE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. In 2003, I graduated from West Texas A&M University with a Bachelor of Arts Degree in Public Administration. In 2005, I completed my Master of Public Administration at the University of North Texas. From 2005 through May 2008, I was employed by R.W. Beck, Inc. as a staff consultant assisting in performing cost of service and rate design studies primarily for water and wastewater utilities. I left R. W. Beck in May 2008 and became a founding member of J. Stowe & Co. In September 2012, J. Stowe & Co. added additional members and reformed into NewGen. I have been a member of NewGen since its founding in 2012. My entire career has focused primarily on providing consulting services to water and wastewater utilities around the nation. Such services include, but are not limited to:

- Cost of service and rate design studies
- Litigation support
- System valuations
- Operational and organization studies
- Socioeconomic impact analysis
- Business Plan development

- Program / Project Management

Attachment CDE-A contains my professional resume detailing my prior experience.

4. Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE INDIANA UTILITY REGULATORY COMMISSION (COMMISSION)?

A. Yes. I have testified before the Commission as well as in many utility regulatory proceedings before other state utility commissions. Attachment CDE-B contains my testifying resume demonstrating the proceedings in which I have filed testimony.

5. Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. I am testifying on behalf of Southwestern Bartholomew Water Corporation (SBWC), which is subject to the wholesale water rates requested by Columbus City Utilities (Columbus).

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

A. The purpose of my testimony is to provide my opinion of and suggested amendments to the Cost of Service Study (COSS) filed by Columbus. My testimony will primarily focus on issues with methodology and assumptions used in the COSS sponsored by Columbus witness Douglas Baldessari and the impact of these issues on the proposed wholesale rates specific to SBWC.

2. OVERVIEW

7. Q. WHAT HAVE YOU REVIEWED IN PREPARATION OF YOUR TESTIMONY?

A. I have reviewed the testimony of Mr. Baldessari and his accompanying workpapers. I have also reviewed testimony of other select witnesses and various responses to discovery, which are cited and referenced within my testimony.

1
2 **8. Q. PLEASE SUMMARIZE YOUR OPINION OF THE COST OF SERVICE**
3 **STUDY THAT HAS BEEN FILED IN THIS PROCEEDING.**

4 A. Based on my review and understanding of Mr. Baldessari's testimony and
5 workpapers, the COSS generally attempts to follow the methodology of calculating
6 cost of service under the Base-Extra Capacity method of customer class cost
7 allocation as outlined in the *American Water Works Association Manual of Water*
8 *Supply M1 – Principles of Water Rates, Fees, and Charges, 7th edition* (M-1
9 Manual, 7th Ed.). However, I believe some of the methodologies and assumptions
10 utilized in completing the COSS do not result in a reasonable allocation of costs to
11 SBWC, particularly in light of SBWC's unique service demands. Specifically, I
12 believe the COSS does not recognize the unique service demands of SBWC and
13 inappropriately allocates costs to the wholesale class that are not incurred in the
14 provision of service to these customers. There are also a number of errors that have
15 been made in the calculation of the COSS, which should be corrected.

16
17 **9. Q. PLEASE EXPLAIN WHAT YOU MEAN BY UNIQUE SERVICE**
18 **DEMANDS OF SBWC?**

19 A. SBWC is a wholesale customer who purchases water via contract from Columbus
20 and then resells that water to its retail customers utilizing their own internal
21 distribution network. Based on data provided in the Company's confidential
22 response to OUCC DR 02-8, Attachment 1, SBWC connects to the Columbus
23 system at two connection points that are 10-inches in size (Confidential Attachment
24 CDE-C). In addition, as noted in the contract between SBWC and Columbus, which
25 was contained in the workpapers to the filing (Attachment CDE-D), SBWC is
26 subject to additional service conditions, including, but not limited to, payment for
27 minimum quantities of water, maximum service quantity limitations, and
28 limitations on water pressure. Given the size of the connections and the service
29 requirements and limitations identified, the service provided to SBWC by

Columbus is unique and unlike the services provided to Columbus's other retail customers.

10. Q. IS IT IMPORTANT THAT THIS UNIQUE SERVICE LEVEL BE IDENTIFIED AND RECOGNIZED IN COMPLETING THE COST OF SERVICE STUDY?

A. Yes. As noted in the M-1 Manual:

[T]he purpose of the cost-of-service analysis is to equitably distribute the revenue requirements between the various customer classes of service served by the utility. The cost-of-service analysis determines what cost differences, if any, exist between serving the various customer classes

(M-1 Manual, 7th Ed., p. 5). The cost differences referred to in the M-1 manual are directly related to the service level unique to each customer class. If the service level is not properly identified, then the cost differences between classes will not be properly identified.

11. Q. DOES THE CONTRACT SIGNED BETWEEN SBWC AND COLUMBUS ADDRESS HOW THIS UNIQUE SERVICE LEVEL IS TO BE ADDRESSED WITHIN RATEMAKING?

A. Under the contract, the rate to be paid by SBWC "shall be determined by applying the then current schedule of rates and charges for the use and consumption of water by customers receiving water service within the corporate limits of the City of Columbus, Indiana as adopted by the Common Council of the City of Columbus and approved by the Indiana Utility Regulatory Commission . . ." (Attachment CDE-D, p. 3).

Given that the Commission is the regulatory body responsible for approving the rates in this proceeding, it is ultimately up to the Commission to properly recognize the cost differences that exist between the unique service levels for Columbus's wholesale and retail customer classes. Failure to do so may result in

1 rates that are not reflective of the actual cost to serve wholesale customers such as
2 SBWC.

3
4 **12. Q. PLEASE SUMMARIZE THE RECOMMENDATIONS WITHIN YOUR**
5 **TESTIMONY.**

6 A. My recommendations fall under the following broad categories.

7 First, I am recommending that changes be made to how costs are
8 functionalized within the COSS. These recommendations are detailed in Section 3
9 of my testimony.

10 Second, I am recommending changes regarding how costs are allocated
11 utilizing the base-extra capacity method within the COSS. This includes
12 amendments and corrections to the development of the factors used to properly
13 apply the base-extra capacity method. These recommendations are detailed in
14 Section 4 of my testimony.

15 In Section 5 of my testimony, I recommend amendments to how the cost of
16 service is distributed or allocated to the individual customer classes, including
17 changes to the service units and capacity factors of the individual customer classes.
18 Section 5 of my testimony presents the changes in the overall allocated cost of
19 service by customer class that result when all of my recommendations are applied.

20 Section 6 of my testimony discusses the overall rate impact to SBWC in this
21 case after recognizing the recommendations of SBWC Witness Ben Foley as these
22 recommendations flow-through my recommended cost of service analysis, along
23 with my overall concern regarding rate shock resulting from this proceeding, and
24 my recommendations for mitigating this effect.

25 Please note that the tables provided within my testimony and many of the
26 accompanying schedules are for illustrative purposes only and are specific to only
27 my recommended adjustments or the adjustments of other SBWC witnesses. These
28 tables and schedules do not indicate the final allocated cost of service I recommend
29 in this proceeding. Presumably, other witnesses will be presenting information on
30 adjustments that should be made to the Company's overall revenue requirement,

1 and these adjustments should be combined with my recommendations and should
2 flow through the amended cost of service methodology prior to producing the final
3 allocated cost of service in this proceeding.
4

5 **3. CHANGES TO COST OF SERVICE FUNCTIONALIZATION**

6
7 **13. Q. PLEASE DEFINE WHAT YOU MEAN BY COST**
8 **FUNCTIONALIZATION?**

9 A. Functionalization is the first step of the COSS process and involves assigning costs
10 “to the type of operational activity with which a particular cost is identified” (M-1
11 Manual, 7th Ed., p. 60). Common functionalization categories for water service
12 include, but are not limited to, source of supply, water treatment, transmission
13 service, distribution service, meters, customer service activities, and administrative
14 and general expense associated with overhead and management.
15

16 **14. Q. WHY IS IT IMPORTANT TO FUNCTIONALIZE COST?**

17 A. Functionalization is a critical first step in the COS process as some customers, such
18 as SBWC, do not utilize all of the utility's operational or functional areas. If costs
19 are not properly functionalized, then costs may be ultimately distributed to a
20 customer for which they receive no corresponding benefit.
21

22 **15. Q. DOES THE COSS PRESENTED BY COLUMBUS FUNCTIONALIZE**
23 **COSTS?**

24 A. While the COSS as filed attempts to recognize costs by function, all of the costs for
25 every functional area are ultimately allocated to all customers, and no attempt is
26 made to recognize how customers such as SBWC do not utilize certain system
27 components.

1 **16. Q. WHAT CHANGES HAVE YOU MADE TO THE COLUMBUS COS TO**
2 **PROPERLY FUNCTIONALIZE COSTS?**

3 A. To properly functionalize costs, I have taken the major components of the revenue
4 requirement, specifically operations and maintenance (O&M) expenses, debt
5 service, and depreciation, and functionalized each to specific functional service
6 areas that are identified by Columbus within their existing COSS. Additionally,
7 based on the functionalization I performed to debt service, there are flow-through
8 impacts necessary to functionalize the requested debt service reserve funding.
9 Finally, based on the functionalization of the above components, I also recognized
10 flow-through impacts to properly functionalize the requested additional utility
11 receipts tax.

12
13 **17. Q. HAVE YOU PREPARED A SUMMARY SCHEDULE DEMONSTRATING**
14 **THE RESULTS OF YOUR FUNCTIONALIZATION PROCESS?**

15 A. Yes. Please see Schedule CDE-1 for this summary presentation.
16

17 **18. Q. PLEASE DESCRIBE AND EXPLAIN HOW YOU FUNCTIONALIZED**
18 **O&M EXPENSES?**

19 A. As illustrated in Schedule CDE-2, I have functionalized the overall major
20 categories of O&M expenses as follows:

- 21 1. Treatment related expenses have been functionalized 100% to the
22 Supply/Treatment function.
- 23 2. Distribution related expenses have been functionalized to the transmission and
24 distribution functions based on the system inventory of pipe within the
25 Columbus system. Specifically, the assignment to transmission and
26 distribution is based on the diameter-weighted length of pipe used to serve
27 SBWC as identified in OUCC DR 2-16, Attachment 1 (Attachment CDE-E).
28 Specifically, all piping that is 10-inches or greater in size was assumed to
29 comprise the transmission system, while anything less than 10-inches is
30 assumed to represent the distribution system. This demarcation in pipe-size is

1 based on the take-points for SBWC as discussed previously in my testimony.
2 As shown in Schedule CDE-3, this allocates 48.89% of cost to Transmission,
3 and 51.11% to Distribution. The only exception to this is the allocation of
4 Distribution System Salaries and Wages, a portion of which Columbus
5 identified was related to Metering which has been assigned as a
6 Meter/Customer Service-related expense.

- 7 3. Engineering related expenses have been functionalized based on an associated
8 functionalized of plant assets as contained in Attachment DLB-1. As illustrated
9 on Schedule CDE-4, I have taken the plant values and applied them to service
10 functions. Based on the analysis in Schedule CDE-4, I developed a composite
11 allocation factor which I then applied to engineering related O&M.
- 12 4. For administrative and general related O&M expenses, I have functionalized
13 this expense using a composite factor developed from the previously
14 functionalized treatment, transmission, distribution, and engineering related
15 expenses. The only exception to this is the allocation of administrative and
16 general salaries and wages, a portion of which Columbus identified was related
17 to customer service and accounting which has been assigned as a
18 meter/customer service-related expense.
- 19 5. For off-setting non-rate revenues, I have functionalized penalties and
20 reconnect fees fully to the distribution function as SBWC does not generate
21 these revenues nor should it benefit from their offset to the overall revenue
22 requirement. For miscellaneous revenues, interest income, and rental income,
23 I have functionalized these off-setting revenues based on a composite factor of
24 the previously functionalized operating expenses.

25
26 **19. Q. PLEASE DESCRIBE AND EXPLAIN HOW YOU FUNCTIONALIZED**
27 **DEBT SERVICE EXPENSE?**

- 28 A. As illustrated in Schedule CDE-5, I have functionalized each line-item of project
29 expense associated with Columbus's proposed debt issue to the same four
30 functional cost areas I used for my analysis of O&M expenses. For any projects

1 associated with water main replacement, I utilized the detailed project information
2 contained in Confidential Attachment SD-5 (as confidentially filed in this Cause on
3 September 21, 2020) to the testimony of Columbus witness Scott Dompke, P.E. to
4 determine what portion of the project was associated with the transmission versus
5 distribution system. Where costs were common to all projects, such as the master
6 plan implementation, I used a composite of directly functionalized expenses to
7 develop an appropriate functionalization factor that spreads the common costs over
8 all functional areas. Where costs were common to a specific debt issuance, such as
9 the allowance for legal, bond counsel, financial advisory, or general project
10 contingencies, these costs were allocated based on a composite of the
11 functionalized expenses specific to the debt instrument.
12

13 **20. Q. YOU EARLIER TESTIFIED THAT THERE WERE FLOW-THROUGH**
14 **IMPACTS RELATED TO THE FUNCTIONALIZATION OF THE**
15 **REQUESTED DEBT SERVICE RESERVE TRANSFER. PLEASE**
16 **EXPLAIN AND DESCRIBE THESE IMPACTS.**

17 A. It is important that the functionalization of the requested debt service reserve
18 transfer match the functionalization of the related principal and interest associated
19 with the proposed debt issuance. To functionalize the debt service reserve transfer,
20 I took 1/5th of the debt service principal and interest specific to each functional
21 component. This is based on the five-year period for funding the reserve as testified
22 to by Mr. Baldessari (Baldessari, 19:1 – 19:2). The resulting functionalization of
23 the requested debt service reserve transfer is illustrated in the summary presented
24 on Schedule CDE-1.
25

26 **21. Q. PLEASE DESCRIBE AND EXPLAIN HOW YOU FUNCTIONALIZED**
27 **DEPRECIATION EXPENSE?**

28 A. My recommended functionalization of depreciation expense is illustrated in
29 Schedule CDE-7. For the new capital projects included in depreciation expense
30 funding, I utilized the same functionalization process as previously discussed

1 related to the functionalization of debt service as demonstrated in Schedule CDE-
2 5. For depreciation on all other capital assets, I utilized a composite of the
3 functionalized plant expense as contained in Schedule CDE-4.
4

5 **22. Q. PLEASE EXPOUND FURTHER ON YOUR TESTIMONY CONCERNING**
6 **THE FLOW-THROUGH IMPACTS ASSOCIATED WITH THE**
7 **FUNCTIONALIZATION OF THE REQUESTED ADDITIONAL UTILITY**
8 **RECEIPTS TAX?**

9 A. As testified by Mr. Baldessari, the generation of additional revenue to the utility
10 will result in increases to the amount of Indiana utility receipts tax that the utility
11 must pay (Baldessari, 18:12 – 18:14). To functionalize this expense, I calculated
12 the total increase in each component of the revenue requirements as filed, as
13 compared with the corresponding expense within Calendar Year 2019. I then
14 determined the percentage each component of the revenue requirement comprised
15 of the total requested increase, excluding the additional utility receipts tax, and
16 allocated the additional utility receipts tax to each revenue requirement component
17 based on the relationship of the increase in that component to the total overall
18 increase. After assigning the additional utility receipts tax to the revenue
19 requirement components, I then functionalized the utility receipt expense based on
20 a composite of the total result of each component's prior functionalization. The
21 results of my analysis are presented in Schedule CDE-8.
22

23 **23. Q. AFTER ARRIVING AT YOUR TOTAL FUNCTIONALIZED EXPENSE,**
24 **WHAT IS THE NEXT STEP IN THE COSS PROCESS?**

25 A. After determining the fully functionalized expense, it is necessary to identify what
26 functional areas are used by specific customers. For example, distribution related
27 expenses should not be allocated to Columbus's wholesale customers, SBWC, or
28 Eastern Bartholomew Water (EBW) as these wholesale customers take service at
29 the transmission, not distribution, system level. To recognize these service level
30 distinctions, I have identified the functional levels of service that are common to all

1 customers (Supply/Treatment, Transmission, and Metering/Customer) and totaled
2 those expenses as shown in Schedule CDE-1. Further, any expenses that are not
3 common to all customers (Distribution) are defined as "retail only," or only specific
4 to Columbus's retail customer classes.

5 After this distinction is made, only expenses which are considered
6 Common-to-all customers will be considered allocable to the wholesale customer
7 group. Through this process, the unique service differentials between Columbus's
8 wholesale customers and its retail customer group are appropriately reflected within
9 the fully allocated cost of service.

10
11 **4. CHANGES TO COST OF SERVICE ALLOCATION**

12
13 **24. Q. PLEASE DEFINE WHAT YOU MEAN BY THE BASE-EXTRA CAPACITY**
14 **METHOD OF COST ALLOCATION?**

15 A. Cost allocation is the second step in the COSS process. The base-extra capacity
16 method of cost allocation is one of the most common methods of cost allocation
17 utilized and has been employed by Mr. Baldessari in his COSS study for Columbus.
18 In the process of cost allocation, "costs are usually separated into four primary cost
19 components: base costs, extra capacity costs, customer costs, and direct fire
20 protection costs" (M-1 Manual, 7th Ed., p. 62).

21 Base costs are associated with expenses that are variable in nature, that is,
22 they vary based on the quantity of water used along with costs that are needed to
23 meet average day service demands. Extra-capacity costs are those costs which are
24 incurred in meeting demands above the average rate of use. Customer costs are
25 representative of metering and administrative costs associated with serving
26 customers. Finally, direct fire protection costs are associated with the provision of
27 the fire protection function by the utility.

1 **25. Q. DOES THE COSS PRESENTED BY COLUMBUS ALLOCATE COSTS?**

2 A. Yes. As I stated, Mr. Baldessari employs the base-extra capacity method of cost
3 allocation with this Columbus COSS.
4

5 **26. Q. DO YOU AGREE WITH THE RESULTS OF MR. BALDESSARI'S COST**
6 **ALLOCATION PROCESS?**

7 A. No. I do not.
8

9 **27. Q. PLEASE EXPLAIN WHY YOU DISAGREE WITH THE RESULTS**
10 **PRESENTED BY MR. BALDESSARI.**

11 A. In developing the allocation factors underlying the base-extra capacity method,
12 the M1 Manual notes:

13 [T]he appropriate allocation factors between base and extra capacity
14 vary among systems and should be determined on the basis of the
15 actual operating history or design criteria for each system.

16 (M-1 Manual, 7th Ed., p. 62). These factors are typically developed using system-
17 wide data and reflect the average day demand, max day demand, and max hour
18 demand occurring at the system level.

19 Instead of using system level data in his analysis, Mr. Baldessari used the
20 summation of customer class level data in developing his allocation factors. In other
21 words, he has used demand data that is reflective of the sum of non-coincidental
22 demands, as opposed to the coincidental demand reflective of overall performance
23 of the system. This is an incorrect measure for allocation factor development and
24 should be corrected.

25 Further, his methodology for arriving at the allocation factors using the
26 customer-level, non-coincidental data is also incorrect. For example, in developing
27 his allocation factor between base and max day extra capacity demands, Mr.
28 Baldessari has added together the average day and excess day demands, and then
29 calculated the percentage of each reflective of the total. The proper method for
30 determining the allocation factor is to take the average day demands at the system

level, divided by the peak day demands at the system level to determine the percentage of cost to be allocated to base or average day demands, with the remaining amount allocated to excess capacity demands on a peak day basis.

28. Q. HAVE YOU RECALCULATED ALLOCATION FACTORS WHICH YOU BELIEVE ARE MORE APPROPRIATE TO THE Columbus COSS?

A. Yes. Utilizing data provided in OUCC DR 2-19 (Attachment CDE-F), the system average day and peak day for the test year ended December 31, 2019 was provided. Utilizing this data, I recalculated the maximum day demand ratio as shown on Schedule CDE-9.

For the maximum hour demand ratio, Columbus reported in response to OUCC DR 2-19 (Attachment CDE-F) that it does not track hourly demand data. However, as shown in Workpaper DLB-1, Page 183, Mr. Baldessari estimated the system hourly demand by taking an estimation of system max day demand of 12.83 MGD multiplied by 24 hours, then multiplied by 60 minutes, then divided by 1,000 gallons, to arrive at an estimated system maximum hour demand of 18.4752 MGD. However, I do not agree with the logic of taking a daily number, then assuming that daily number occurs every minute of every day, to arrive at an estimated hourly demand figure.

As an alternative for estimating the system maximum hour, I recommend taking the relationship between the sum of the calculated class non-coincident peak hourly demand (19.28 MGD) over the sum of the calculated class non-coincident peak daily demand (13.97 MGD), and then applying this result ($1.38 = (19.28 / 13.97)$) to the system max day demand of 11.971 MGD as reported in OUCC DR 2-19 (Attachment CDE-F). This results in an estimated system peak hour demand of approximately 16.52 MGD ($1.38 * 11.971$ MGD). While I will discuss the development of these non-coincident factors later in my testimony, the results of these calculation are illustrated in Schedule CDE-9.

In summary, Table 1 below compares the factors I have developed with the same factors presented on Page 44 of Attachment DLB-1 (Attachment CDE-G).

Table 1
Comparison of Base-Extra Demand Ratio Factors

	Columbus	SBWC
Max Day Demand Ratio		
Average Day Demand	39.51%	67.42%
Maximum Day Demand	60.49%	32.58%
Maximum Hour Demand Ratio		
Average Day Demand	25.85%	48.86%
Maximum Day Demand	39.58%	23.61%
Maximum Hour Demand	34.57%	27.53%

29. Q. IN GENERAL, WHAT IS THE IMPACT OF THIS CHANGE TO SBWC?

A. As a customer with significant average day demands and less of a peaking impact on the Columbus system, this change shifts more cost to SBWC as opposed to less. The full impact of this change will be presented and discussed more fully later in my testimony. However, while this result could be considered adverse to SBWC, it represents the proper method for allocating costs and should be amended in the final COSS approved in this proceeding.

30. Q. AFTER DEVELOPING THE ALLOCATION RATIOS, WHAT IS THE NEXT STEP IN THE COST ALLOCATION PROCESS?

A. Once the appropriate allocation factors have been developed, they must be applied to the functionalized revenue requirements.

31. Q. DO YOU AGREE WITH MR. BALDESSARI'S APPLICATION OF THE ALLOCATION RATIOS TO REVENUE REQUIREMENTS?

A. Yes, and no. While I generally agree with how Mr. Baldessari has applied the ratios, amendments are needed to recognize the more extensive functionalization of costs that I have performed. Additionally, I believe a more detailed analysis is warranted specific to the allocation of debt service costs and the debt service reserve transfer within the revenue requirement.

1 **32. Q. HAVE YOU PREPARED A SUMMARY OF YOUR RECOMMENDED**
2 **ALLOCATION OF EXPENSES?**

3 A. Yes. Schedule CDE-10 presents a summary of the revenue requirement allocated
4 under the base-extra capacity method using my recommended allocation factors.
5 Please note that to properly recognize only those expenses which serve SBWC, I
6 have presented the analysis between the discrete cost components which are
7 common to all customers versus those that only apply to Columbus's retail
8 customers.

9
10 **33. Q. PLEASE EXPLAIN YOUR ALLOCATION PROCESS SPECIFIC TO O&M**
11 **EXPENSES THAT ARE COMMON TO ALL CUSTOMERS?**

12 A. As illustrated in Schedule CDE-11, I have allocated the overall major categories of
13 O&M expenses as follows:

- 14 1. Treatment-related expenses have been allocated between base and max day
15 components based on my recommend max day demand factor. The exception
16 to this is that the variable expense categories of utilities and chemicals have
17 been assigned 100% to base costs. This is generally consistent with Mr.
18 Baldessari's methods, with the exception of utilities.
- 19 2. Transmission related expenses have been allocated between base and max day
20 components based on my recommend max day demand factor. This is
21 consistent with the recommendations of the M1 manual wherein it states,
22 "treated water transmission mains . . . are primarily designed to meet base and
23 maximum-day loads" (M-1 Manual, 7th Ed., p. 63). The only exception to this
24 is the allocation of Transmission System Salaries and Wages, a portion of
25 which Columbus identified was related to Metering and has been assigned as
26 a Metering expense.
- 27 3. Engineering related expenses have been allocated based on a composite factor
28 reflecting the allocation of treatment and transmission related expenses,
29 excluding the component of costs allocated to metering.

- 1 4. Specific to administrative and general related O&M expenses, I have allocated
2 this expense using a composite factor developed from the previously allocated
3 expenses. The only exception to this is the allocation of administrative and
4 general salaries and wages, a portion of which Columbus identified was related
5 to customer service and accounting and has been assigned as a billing and
6 collection related expense.
7 5. For off-setting non-rate revenues, I have allocated all of these revenues using
8 the same composite factor as I utilized for the administrative and general
9 related O&M expenses.
10

11 **34. Q. PLEASE EXPLAIN YOUR ALLOCATION PROCESS SPECIFIC TO O&M**
12 **EXPENSES THAT ARE UNIQUE TO RETAIL CUSTOMERS?**

13 A. As illustrated in Schedule CDE-12, given that the only expense unique to retail
14 customers is related to the distribution system, I have applied the maximum hour
15 demand ratio to all of these expenses. This is consistent with the M1 manual, which
16 states, "treated water distribution mains . . . provide both maximum-day and
17 maximum-hour service" (M-1 Manual, 7th Ed., p. 63). The only exception to this
18 application is a small amount which I have allocated to direct fire protection. The
19 amount of repairs and maintenance expense applied to direct fire protection is based
20 on Page 93 of Workpaper DLB-1 (Attachment CDE-H) and is an average of the
21 four years of hydrant maintenance and testing as shown in the professional fee
22 schedule. This does impact the composite factor I utilize for further allocation of
23 administrative and general expense as well as offsetting non-rate revenues.
24

25 **35. Q. PLEASE DESCRIBE AND EXPLAIN HOW YOU ALLOCATED DEBT**
26 **SERVICE EXPENSE THAT WAS COMMON TO ALL CUSTOMERS?**

27 A. As illustrated in Schedule CDE-13, for project elements related to water supply, I
28 have assigned them 100% to base. This is consistent with the M1 manual wherein
29 it states that such facilities "are often sized principally to meet annual supply
30 requirements in total, whether or not daily needs vary" (M-1 Manual, 7th Ed., p.

63). For water treatment and transmission related project elements, I have assigned them to the base and extra capacity components using the maximum day demand ratio. Where costs were common to all projects, such as the master plan implementation, I used a composite of directly allocated expenses to develop an appropriate allocation factor, which spreads the common costs over all categories. Where costs were common to a specific debt issuance, such as the allowance for legal, bond counsel, financial advisory, or general project contingencies, these costs were allocated based on a composite of the allocated expenses specific to the debt instrument.

36. Q. PLEASE DESCRIBE AND EXPLAIN HOW YOU ALLOCATED DEBT SERVICE EXPENSE THAT WAS UNIQUE TO ONLY RETAIL CUSTOMERS?

A. Given that the only debt service expense unique to retail customers is related to the distribution system, I have applied the maximum hour allocation ratio to all of these expenses. Please see Schedule CDE-14 for these calculations.

37. Q. WHAT METHOD DID YOU EMPLOY IN THE ALLOCATION OF THE REQUESTED DEBT SERVICE RESERVE TRANSFER?

A. The allocation of the requested debt service reserve mirrors the allocation of the debt service expense, such that 1/5th of the allocated debt service amount in each allocation category results provides the appropriate allocated amount for the debt service reserve. Please see Schedule CDE-10 relative to these calculations.

38. Q. PLEASE DESCRIBE AND EXPLAIN HOW YOU ALLOCATED DEPRECIATION EXPENSE THAT IS COMMON TO ALL CUSTOMERS?

A. As illustrated in Schedule CDE-15, for the new capital projects included in depreciation expense funding, I utilized the same allocation process as previously discussed related to the allocation of debt service as further demonstrated in Schedule CDE-13. For depreciation on all other capital assets, I relied on the

functionalization of the plant assets illustrated in CDE-7 and applied factors to each functional area consistent with my prior analysis. Specifically, treatment and transmission related assets are assigned based on the max day demand ratio. Metering / customer expense is assigned to the meters / services allocation category.

39. Q. PLEASE DESCRIBE AND EXPLAIN HOW YOU ALLOCATED DEPRECIATION EXPENSE THAT IS UNIQUE TO ONLY RETAIL CUSTOMERS?

A. Given that the only depreciation expense unique to retail customers is related to the distribution system, I have applied the maximum hour allocation ratio to all of these expenses. Please see schedule CDE-16 for these calculations.

40. Q. PLEASE EXPLAIN THE FLOW-THROUGH IMPACT OF ALL OF YOUR ALLOCATIONS TO THE APPROPRIATE ALLOCATION OF THE UTILITY RECEIPTS TAX?

A. As illustrated in Schedule CDE-17, I have allocated each component of the utility receipts tax based on a composite allocation factor reflecting the allocation of the expense which is giving rise to the additional tax. For example, the utility receipts tax associated with operating expenses that are common to all customers was allocated based on a composite factor reflecting the allocation of this revenue requirement component as demonstrated on Schedule CDE-11. My goal in this was to match the allocation of the utility receipts tax with the allocation of the expense, which results in the additional utility receipts tax.

**5. CHANGES TO COST OF SERVICE
DISTRIBUTION TO CUSTOMER CLASSES**

41. Q. FOLLOWING ALLOCATION OF COSTS, WHAT IS THE NEXT STEP IN THE COSS PROCESS?

A. After expenses are functionalized and classified, they must be distributed to customer classes reflective of each customer classes' overall use of the system. This

requires an estimation of each classes' use of the system on an average day, peak day basis, and peak hour use so that costs can be appropriately distributed reflective of system use.

42. Q. DO YOU AGREE WITH THE METHODS EMPLOYED BY COLUMBUS TO DETERMINE CUSTOMER CLASS DEMANDS FOR DISTRIBUTION PURPOSES?

A. No.

43. Q. PLEASE EXPLAIN.

A. In developing its estimation of system use by customer class, Columbus has not taken into account the distinctions in service level between wholesale and retail customers. Specifically, water delivered to Columbus wholesale customers is delivered at the transmission level of service. This means that customers such as SBWC do not utilize the smaller distribution service lines on the Columbus system; however, these smaller distribution lines are where a greater amount of water loss occurs within a water system.

44. Q. ON WHAT DO YOU BASE YOUR STATEMENT THAT A GREATER AMOUNT OF WATER LOSS OCCURS WITHIN A UTILITY'S DISTRIBUTION SYSTEM?

A. My statement is based on my professional experience and knowledge along with common sense. As illustrated in Schedule CDE-3, which is based on data provided in OUCC DR 2-16, Attachment 1 (Attachment CDE-E), the Columbus distribution system (i.e., lines less than 10-inches in size) comprises over 1.86 million linear feet of pipe, while the transmission system (lines 10-inches in size and greater) comprises just under 500,000 linear feet. In other words, approximately 79% of all of the water mains within the Columbus system are distribution related. Given the sheer size of the distribution system, and the number of valves and connections

1 within this system, the changes of line breaks, water leaks, and unauthorized usage
2 are much more substantial at this service level.
3

4 **45. Q. PLEASE EXPLAIN HOW, IN YOUR OPINION, COLUMBUS HAS**
5 **FAILED TO TAKE THIS CIRCUMSTANCE INTO ACCOUNT WITHIN**
6 **THE DISTRIBUTION OF COSTS TO CUSTOMERS?**

7 A. In its development of customer class data, Columbus is utilizing metering data at
8 the customer's point of delivery, which differs between transmission level delivery
9 for wholesale customers and distribution level delivery for retail customers. By not
10 adjusting the distribution level metering data for water loss, Columbus is blending
11 metering data from differing service levels in the allocation of costs. In laymen's
12 terms, Columbus is mixing apples and oranges.
13

14 **46. Q. HOW SHOULD THE METERING DATA BE CORRECTED TO**
15 **PROPERLY DISTRIBUTION COSTS TO CUSTOMERS?**

16 A. The distribution level customer data must be adjusted back to the transmission level
17 of service. In other words, all non-wholesale customer metering data must be
18 adjusted, or grossed up, by water loss specific to the distribution system. This aligns
19 all water usage at the transmission level and results in an equitable basis on which
20 to distribute costs reflective of service level differentials.
21

22 **47. Q. CAN YOU PLEASE PROVIDE AN EXAMPLE TO CLARIFY THIS ISSUE**
23 **FOR THE COMMISSION?**

24 A. Certainly. As evidenced in the following Table 2, assume two customer classes with
25 Class A taking service at a 10-inch connection and Class B taking service at a 2-
26 inch connection. Also, assume that the percent of water loss difference between the
27 10-inch level of service and the 2-inch level of service is 10%. When the unadjusted
28 meter data is utilized, Class A receives 33% of the allocated cost. But when the
29 Class B metered usage is grossed up to reflect the water loss that occurs between
30 the 10-inch and 2-inch level of service, Class A's allocated cost drops to 31%.

While this is a small change, this adjustment flows through the entire cost of service and can result in significant changes within the final level of distributed cost.

Table 2
Example Impact of Distribution Loss Adjustment

	Unadjusted for Loss		Adjusted for Loss	
	000's	%	000's	%
Class A Average Day	5,000	33%	5,000	31%
Class B Average Day	10,000	67%	11,111 <i>(10,000/(1-10%))</i>	69%
Subtotal	15,000		16,111	

48. Q. WHAT LEVEL OF LOSS ARE YOU RECOMMENDING BE RECOGNIZED FOR THE DISTRIBUTION LEVEL CUSTOMERS?

A. Based on the data provided by Columbus in OUCC DR 2-1 (Attachment CDE-I), the utility indicated water loss in the test year of approximately 514 million gallons. This is compared with water supplied of 2,764 million gallons. Taking the 514 MG over the 2,764 MG results in an estimated water loss percentage of approximately 17%. However, this overall level of loss is reflective of all losses on the system. To attempt to identify just the level of loss associated with the distribution system, I have applied the functionalization factor between the transmission and distribution developed on Schedule CDE-3 and applied the distribution percentage (51.11%) to the level of water loss (17%) to arrive at an estimated distribution level water loss percentage of approximately 9%. I recommend that this loss percentage be applied via a gross-up calculation to determine the average day demand factors to be employed within the COSS specific to the retail customers. Please see Schedule CDE-18 for calculations illustrating this gross-up process and the resulting average day demand factors.

1 **49. Q. PLEASE SUMMARIZE THE AVERAGE DAY DEMAND FACTORS YOU**
2 **ARE RECOMMENDING FOR USE IN THE CUSTOMER CLASS**
3 **DISTRIBUTION PROCESS.**

4 A. The average day demand factors I am recommending for distribution of common-
5 to-all costs are illustrated in Schedule CDE-21. The average day demand factors I
6 am recommending for distribution of retail only related costs are illustrated in
7 Schedule CDE-24.

8
9 **50. Q. DOES YOUR CHANGE IN THE AVERAGE DAY DEMAND FACTORS BY**
10 **CUSTOMER CLASS IMPACT OTHER FACTORS USED IN THE**
11 **CUSTOMER CLASS COST DISTRIBUTION PROCESS?**

12 A. While it does not impact the calculation of the maximum day or maximum hour
13 capacity factors, it does impact the excess capacity on a max day basis specific to
14 distributing costs to the customer classes.

15
16 **51. Q. ARE YOU PROPOSING CHANGES TO THE MAXIMUM DAY OR**
17 **MAXIMUM HOUR CAPACITY FACTOR CALCULATIONS PROPOSED**
18 **BY COLUMBUS?**

19 A. Yes. While I generally follow the same methodology as Mr. Baldessari, the system-
20 level data I utilized in my calculations is different from that utilized in Columbus's
21 calculations. This changes the system max day factor which is a component of the
22 max day capacity factor calculation. My recommended max day capacity factors
23 are illustrated in Schedule CDE-19.

24 Specific to the max hour capacity factors, given that my max day capacity
25 factors changed, there are flow-through impacts to the calculated max hour capacity
26 factors. My recommended max hour capacity factors are illustrated in Schedule
27 CDE-20.

1 **52. Q. WHAT REASONABLENESS TESTING HAVE YOU PERFORMED TO**
2 **DETERMINE THE ADEQUACY OF YOUR CALCULATED CAPACITY**
3 **FACTORS?**

4 A. As noted in the AWWA M1 manual:

5 [T]o test the reasonableness of the maximum-day peaking factors,
6 the noncoincident demands resulting from the application of . . .
7 peaking factors to the annual average-day demands of each class
8 should be summed and compared against the actual coincident
9 system demands. This relationship of the noncoincident to
10 coincident demands is referred to as the measure of the system
11 diversity of demand. The system diversity ratio is often in the range
12 of 1.1 to 1.4.

13 (M-1 Manual, 7th Ed., p. 377).

14 Schedule CDE-19 illustrates my calculations of the system max day
15 diversity ratio for the peak day demands, the result of which is 1.17 and falls
16 within the typical range noted within the M1 Manual.

17 Specific to the max hour capacity factors, I have calculated the
18 system max hour diversity ratio for the peak hour demands on Schedule
19 CDE-20. The result of this calculation is 1.17 and falls within the typical
20 range noted within the M1 Manual. In both factors, the test for
21 reasonableness is met.

22
23 **53. Q. AFTER DEVELOPING AND TESTING YOUR AMENDED CAPACITY**
24 **FACTORS, PLEASE EXPLAIN HOW YOU HAVE INCORPORATED**
25 **THEM INTO THE AMENDED COSS?**

26 A. Specific to the distribution of expenses that are common to both retail and
27 wholesale customers, I prepared a complete summary of the service units, by class,
28 to be used in customer class distribution process. These are illustrated in Schedule
29 CDE-21. Please note that I have grossed-up the retail sales for distribution level

1 losses and applied my recommended max day and max hour capacity factors to
2 arrive at the figures shown in Schedule CDE-21.

3 Further, as shown on Schedule CDE-22, I then developed the per unit cost
4 of service which was common to all customers by dividing the common to all cost
5 of service, as summarized on Schedule CDE-10, by the service units from Schedule
6 CDE-21 to determine my per unit cost of service by cost allocation category.

7 Finally, the unit cost of service by category is applied to the service units
8 by customer class to determine the complete distribution of the common to all
9 revenue requirements to each customer classes. Please see Schedule CDE-23 for
10 this distribution of costs.

11
12 **54. Q. HAVE YOU PERFORMED A SIMILAR PROCESS WITH COSTS THAT**
13 **ARE SPECIFIC TO THE RETAIL CLASS OF CUSTOMERS?**

14 A. Yes. As shown on Schedule CDE-24, I have summarized the service units to be
15 utilized in cost distribution for retail level costs. As shown, this schedule excludes
16 the wholesale customers as they should not share in costs that are distribution
17 related and solely attributable to only retail customer classes.

18 As shown on Schedule CDE-25, I then developed the unit cost of service
19 specific to retail only costs by dividing the retail only cost of service, as summarized
20 on Schedule CDE-10, by the service units from Schedule CDE-24 to determine my
21 per unit cost of service by cost allocation category.

22 Finally, the unit cost of service by category is applied to the service units
23 by customer class to determine the complete distribution of the retail only revenue
24 requirements to customer classes. Please see Schedule CDE-26 for this distribution
25 of costs.

1 **55. Q. HAVE YOU PREPARED A SUMMARY OF THE TOTAL COST OF**
2 **SERVICE REFLECTING YOUR TESTIMONY AND RECOMMENDED**
3 **CHANGES?**

4 A. Yes. As shown on Schedule CDE-27, I have summarized the fully distributed cost
5 of service by customer class.

7 **56. Q. HOW DOES YOUR AMENDED COST OF SERVICE REFLECT THE**
8 **ORIGINAL COSS AS FILED IN THIS PROCEEDING?**

9 A. A comparison of my recalculated cost of service and the cost of service filed in this
10 proceeding is illustrated in Schedule CDE-28. As shown, before any adjustments
11 are made to overall revenue requirements, the cost of service to SBWC should be
12 \$432,218 as opposed to the originally filed amount of \$397,856. This is a \$34,362,
13 or approximately 8.6%, increase in the cost of service allocable to SBWC.

15 **6. RECOMMENDATIONS REGARDING**
16 **OVERALL RATE DESIGN**

18 **57. Q. BASED ON YOUR AMENDED RESULTS, AND ASSUMING NO OTHER**
19 **REDUCTIONS IN REVENUE REQUIREMENTS, WHAT IS THE**
20 **ANTICIPATED IMPACT TO SBWC FROM THE PROPOSED RATE**
21 **INCREASE?**

22 A. According to Columbus, SBWC currently generates approximately \$176,037 in
23 annual revenue. My amended COS value of \$432,218 represents an approximate
24 146% increase in annual revenue that is needed from SBWC. While Columbus has
25 proposed a three-step phase-in this proceeding, this is still a substantial increase
26 that will be borne by SBWC customers.

1 **58. Q. IN LIGHT OF THIS SUBSTANTIAL INCREASE TO SBWC, DO YOU**
2 **HAVE ADDITIONAL RECOMMENDATIONS FOR CONSIDERATION**
3 **BY THE COMMISSION?**

4 A. Yes. As further discussed in the testimony of Mr. Foley, I concur with his opinion
5 that implementation of the full COSS should be done more gradually over time,
6 and the full impact of the COSS change should not be absorbed in the instant case.
7 Allowing for more time to adjust to the amended COSS will help to mitigate rate
8 shock to SBWC's customers.

10 **59. Q. IN YOUR OPINION, WHAT METHODS SHOULD THE COMMISSION**
11 **EMPLOY TO MORE GRADUALLY IMPLEMENT THE COSS RESULTS?**

12 A. To begin with, I'd recommend that the rates for Fire Protection be held at current
13 levels and no decrease be permitted for this customer class. Second, I recommend
14 that no customer class be permitted an increase of more than 100%. Based on these
15 two recommendations, there is an additional \$440,362 which would need to be
16 spread between the remaining customer classes which are not receiving the
17 maximum increase, Residential and Eastern Bartholomew. I recommend that this
18 subsidy amount be spread between the Residential Class and Eastern Bartholomew
19 based on their percentage of the total COS of the two classes. In other words, 98.6%
20 of the subsidy amount (\$434,200) should be added to the Residential Class'
21 increase while 1.4% (\$6,162) should be added to the Eastern Bartholomew
22 increase. This result would ensure that no class receives more than a 100% increase
23 and begins movement towards better aligning actual revenues with the results of
24 the COSS. In subsequent cases, the Commission can take additional steps to better
25 align approved rates with the then applicable COSS results. Please see Schedule
26 CDE-29 for an illustration of the above discussed method.

1
2
3 **7. CONCLUSION**

4 **60. Q. MR. EKRUT, TO THE EXTENT YOU HAVE NOT ADDRESSED THE**
5 **COMPANY'S POSITION ON A PARTICULAR ISSUE WITHIN YOUR**
6 **TESTIMONY, DOES THAT INDICATE THAT YOU AGREE WITH THE**
7 **COMPANY'S POSITION?**

8 A. No. My silence on a particular issue does not necessarily indicate my agreement
9 with the Company's position. The scope of my testimony is limited by available
10 timing and resources and my failure to address a particular topic should not be
11 construed as my tacit agreement with the Company's stated position.

12 **61. Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

13 A. Yes, it does. However, I reserve the right to add to or amend my testimony as
14 additional facts may become known to me during the course of this proceeding.

VERIFICATION

I affirm under the penalties of perjury that the foregoing testimony is true to the best of my knowledge, information, and belief as of the date here filed.

A handwritten signature in blue ink, appearing to read 'Ch Ekrut', is written above a horizontal line.

Chris Ekrut

CERTIFICATE OF SERVICE

I certify that on December 11, 2020, this document was electronically filed with the Indiana Utility Regulatory Commission and was served electronically on the parties below:

Columbus Municipal Water Utility

Nicholas K. Kile

Lauren M. Box

Barnes & Thornburg, LLP

Nicholas.kile@btlaw.com

Lbox@btlaw.com

Indiana Office of Utility Consumer Counselor

Dan LeVay

Scott Franson

dlevay@oucc.in.gov

sfranson@oucc.in.gov

infomgt@oucc.in.gov



Jeffery A. Earl