

**STATE OF INDIANA**

**INDIANA UTILITY REGULATORY COMMISSION**

**IN THE MATTER OF THE PETITION OF )  
THE TOWN OF CHANDLER, INDIANA, )  
FOR APPROVAL OF A NEW SCHEDULE )  
OF RATES AND CHARGES FOR WATER )  
UTILITY SERVICE AND FOR AUTHORITY TO )  
ISSUE REVENUE BONDS TO PROVIDE FUNDS FOR )  
THE COSTS OF THE ACQUISITION AND )  
INSTALLATION OF IMPROVEMENTS )  
AND EXTENSIONS TO THE WATERWORKS OF )  
THE TOWN )**

**CAUSE NO. 45062**

**TESTIMONY**

**OF**

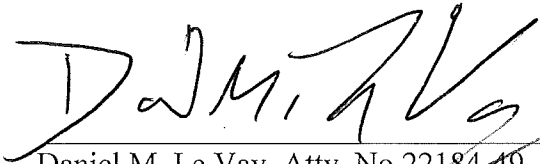
**JEROME D. MIERZWA - PUBLIC'S EXHIBIT NO. 4**

**ON BEHALF OF THE**

**INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR**

**August 10, 2018**

Respectfully Submitted,

  
\_\_\_\_\_  
Daniel M. Le Vay, Atty. No. 22184-49  
Deputy Consumer Counselor

**CERTIFICATE OF SERVICE**

This is to certify that a copy of the foregoing *Office of Utility Consumer Counselor Testimony of Jerome D. Mierzwa* has been served upon the following counsel of record in the captioned proceeding by electronic service on August 10, 2018.

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**TESTIMONY OF JEROME D. MIERZWA  
CAUSE NO. 45062  
TOWN OF CHANDLER**

**I. INTRODUCTION**

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

2 A. My name is Jerome D. Mierzwa. I am a Principal and a Vice President of Exeter  
3 Associates, Inc. ("Exeter"). My business address is 10480 Little Patuxent Parkway,  
4 Suite 300, Columbia, Maryland 21044. Exeter specializes in providing public utility-  
5 related consulting services.

6 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**  
7 **EXPERIENCE.**

8 A. I graduated from Canisius College in Buffalo, New York, in 1981 with a Bachelor of  
9 Science Degree in Marketing. In 1985, I received a Master's Degree in Business  
10 Administration with a concentration in finance, also from Canisius College. In July  
11 1986, I joined National Fuel Gas Distribution Corporation ("NFG Distribution") as a  
12 Management Trainee in the Research and Statistical Services Department ("RSS").  
13 I was promoted to Supervisor RSS in January 1987. While employed with NFG  
14 Distribution, I conducted various financial and statistical analyses related to the  
15 company's market research activity and state regulatory affairs. In April 1987, as part  
16 of a corporate reorganization, I was transferred to National Fuel Gas Supply  
17 Corporation's ("NFG Supply") rate department where my responsibilities included  
18 utility cost of service and rate design analysis, expense and revenue requirement  
19 forecasting and activities related to federal regulation. I was also responsible for

1 preparing NFG Supply's Federal Energy Regulatory Commission ("FERC") Purchase  
2 Gas Adjustment ("PGA") filings and developing interstate pipeline and spot market  
3 supply gas price projections. These forecasts were utilized for internal planning  
4 purposes as well as in NFG Distribution's purchased gas cost review proceedings.

5 In April 1990, I accepted a position as a Utility Analyst with Exeter. In  
6 December 1992, I was promoted to Senior Regulatory Analyst. Effective April 1, 1996,  
7 I became a principal of Exeter. Since joining Exeter, my assignments have included  
8 water and wastewater utility class cost of service and rate design analysis, evaluating  
9 the gas purchasing practices and policies of natural gas utilities, sales and rate  
10 forecasting, performance-based incentive regulation, revenue requirement analysis, the  
11 unbundling of utility services and the evaluation of customer choice natural gas  
12 transportation programs.

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

15 A. Yes. I have provided testimony on more than 300 occasions in proceedings before the  
16 FERC, utility regulatory commissions in Arkansas, Delaware, Georgia, Illinois,  
17 Louisiana, Maine, Maryland, Massachusetts, Montana, Nevada, New Jersey, Ohio,  
18 Pennsylvania, Rhode Island, Texas, Utah, and Virginia, as well as before the Indiana  
19 Utility Regulatory Commission ("Commission").

20 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

21 On March 13, 2018, the Town of Chandler ("Petitioner") filed for approval to  
22 increase its rates and charges for water service by \$1.48 million, or 50 percent. Exeter  
23 has been retained by the Indiana Office of Utility Consumer Counselor ("OUCC") to  
24 assist in the evaluation of Petitioner's class cost of service study ("CCOSS") and rate

1 design proposals. My testimony addresses Petitioner's CCOSS and rate design  
2 proposals.

3 **Q. PLEASE SUMMARIZE YOUR FINDINGS AND RECOMMENDATIONS.**

- 4 • The maximum day and maximum hour extra capacity factors reflected  
5 in Petitioner's CCOSS utilized to allocate the cost of providing service  
6 to each customer class were not properly determined and should be  
7 modified; and
- 8 • Petitioner's proposed distribution of the revenue increase authorized by  
9 the Commission in this proceeding should be revised to reflect the  
10 modified customer class extra capacity factors as discussed in my  
11 testimony.

12 **Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?**

13 A. The remainder of my testimony is divided into two additional sections. The first  
14 additional section addresses Petitioner's CCOSS. The second section presents my  
15 recommended distribution of the revenue increase authorized by the Commission in  
16 this proceeding.

## **II. CLASS COST OF SERVICE STUDY**

17 **Q. WHAT IS THE OBJECTIVE OF A COST OF SERVICE STUDY?**

18 A. A cost of service study is conducted to assist a utility and regulators in determining the  
19 level of costs properly recoverable from each of the various classes of customers to  
20 which the utility provides service. Allocation of recoverable costs to each class of  
21 service is generally based on cost causation principles.

1 Q. WHAT ARE THE PRIMARY COST OF SERVICE STUDY  
2 METHODOLOGIES UTILIZED FOR WATER UTILITIES?

3 A. The two most commonly used and widely recognized methods of allocating costs to  
4 customer classes for water utilities are the base-extra capacity method and the  
5 commodity-demand method. Both of these methods are set forth in the American  
6 Water Works Association's ("AWWA") Manual, M1, *Principles of Water Rates, Fees,*  
7 *and Charges* ("AWWA Manual").

8 Q. WHAT METHODOLOGY HAS PETITIONER UTILIZED TO PREPARE ITS  
9 CCROSS?

10 A. Petitioner has utilized the base-extra capacity method in preparing its class cost of  
11 service study. Under the base-extra capacity method, investment and costs are first  
12 classified into four primary functional cost categories: base or average capacity, extra  
13 capacity, customer and fire protection. Once investment and costs are classified to  
14 these functional categories, they are allocated to the various customer classes.

15 Q. PLEASE DESCRIBE IN GREATER DETAIL THE FOUR PRIMARY  
16 FUNCTIONAL COST CATEGORIES AND HOW THEY ARE ALLOCATED  
17 TO THE VARIOUS CUSTOMER CLASSES UNDER THE BASE-EXTRA  
18 CAPACITY METHOD.

19 A. **Base Costs** are costs that tend to vary with the quantity of water used, plus costs  
20 associated with supplying, treating, pumping, and distribution water to customers under  
21 average load conditions. Base costs were allocated to customer class on the basis of  
22 average daily usage in Petitioner's study.

23 **Extra Capacity Costs** are costs associated with meeting usage requirements in  
24 excess of average usage. This includes operating and capacity costs for additional plant  
25 and system capacity beyond that required for average usage. Extra capacity costs in  
26 Petitioner's study have been subdivided into costs necessary to meet maximum day

1 extra demand and maximum hour extra demand. These extra capacity costs were  
2 allocated to customer classes on the basis of each class' maximum day and maximum  
3 hour usage in excess of average usage.

4 **Customer Costs** are costs associated with serving customers regardless of their  
5 usage or demand characteristics. Customer costs include the operating costs related to  
6 meters and services, meter reading costs, and billing and collection costs. Customer  
7 costs were allocated on the basis of capital cost of meters and services and the number  
8 of customer bills.

9 **Fire Protection Costs** are costs associated with providing the facilities to meet  
10 the potential peak demand of fire protection service. In Petitioner's study, fire  
11 protection costs have been subdivided into the costs associated with meeting Public  
12 Fire Protection and Private Fire Protection demands. The extra capacity costs assigned  
13 to fire protection were allocated to Public and Private Fire Protection on the basis of  
14 the total relative demands of hydrants and fire service lines.

15 **Q. WHAT CUSTOMER CLASSES HAS PETITIONER IDENTIFIED IN ITS**  
16 **CCOSS?**

17 A. Petitioner has separately identified the cost of serving five customer classes in its  
18 CCOSS: Residential; Small Commercial; Large Commercial; Private Fire Protection;  
19 and Public Fire Protection.

20 **Q. DO YOU AGREE WITH THE FUNCTIONALIZATION AND ALLOCATION**  
21 **OF COSTS IN PETITIONER'S CCOSS?**

22 A. I generally agree with Petitioner's use of the base-extra capacity methodology.  
23 However, I believe that modifications to the maximum day and maximum hour extra  
24 capacity factors utilized to allocate functionalized costs to the various customer

1 classifications are necessary. In addition, Petitioner's functionalization of water  
2 treatment purchased power costs should be revised.

3 **Q. PLEASE DESCRIBE IN GREATER DETAIL THE ALLOCATION OF**  
4 **MAXIMUM DAY AND MAXIMUM HOUR EXTRA CAPACITY COSTS**  
5 **UNDER THE BASE-EXTRA CAPACITY METHOD AS SET FORTH IN THE**  
6 **AWWA MANUAL.**

7 A. Under the base-extra capacity method, maximum day and maximum hour extra  
8 capacity costs are allocated to customer class based on the excess of each class' non-  
9 coincident maximum day and maximum hour demands over average day and average  
10 hour demands, respectively. For example, in Petitioner's study, the average daily  
11 demand of Residential customers is 952,700 gallons, and the non-coincident maximum  
12 day demand of Residential customers is estimated to be 3,048,600 gallons (Attachment  
13 No. SAM-1 to Petitioner's Exhibit No. 3, page 22). Thus the maximum day extra  
14 capacity demand of Residential customers is estimated to be 2,095,900 gallons  
15 (3,048,600 minus 952,700), and this serves as the basis to allocate maximum day extra  
16 capacity costs to Residential customers. The maximum day extra capacity factor is the  
17 ratio obtained by dividing maximum day extra capacity demands by average daily  
18 demands. In this instance, the maximum day extra capacity factor for Residential  
19 customers is 320 percent. (3,048,600/952,700).

20 In Petitioner's study, the average day demand of Residential customers is  
21 952,700 gallons, the average hourly demand of Residential customers on the maximum  
22 day is projected to be 3,048,600 gallons, and the non-coincident maximum hour  
23 demand of Residential customers is estimated to be 5,049,300 gallons. Thus, the  
24 maximum hour extra capacity demand of Residential customers is estimated to be  
25 2,000,700 gallons (5,049,300 minus 3,048,600), and this serves as the basis for



1 allocating maximum hour extra capacity costs to Residential customers in Petitioner's  
2 CCOSS. In this instance, the maximum hour capacity factor for Residential customers  
3 over average day demands is 530 percent (5,049,300/952,700).

4 **Q. THE BASE-EXTRA CAPACITY UTILIZES *NON-COINCIDENT* PEAK TO**  
5 **ALLOCATE EXTRA CAPACITY COSTS TO THE VARIOUS CUSTOMER**  
6 **CLASS. IS THIS SIMPLY THE DEMANDS OF EACH CUSTOMER**  
7 **CLASSIFICATION AT THE TIME OF SYSTEM PEAK DAY AND PEAK**  
8 **HOURLY DEMANDS?**

9 A. No. Non-coincident peak demands represent the maximum demands of the individual  
10 customer classifications regardless of when those demands occur. Thus, the sum of  
11 each customer class' non-coincident demands will exceed the system coincident peak  
12 demand. The ratio obtained by dividing non-coincident demands by coincident  
13 demands is referred to as the system diversity ratio in the AWWA Manual.

14 **Q. WHY ARE NON-COINCIDENT DEMANDS UTILIZED UNDER THE BASE-**  
15 **EXTRA CAPACITY METHOD?**

16 A. The basis for using non-coincident maximum day and minimum hour demands is set  
17 forth in the AWWA Manual:

18 It is important that the reader understand the rationale of using  
19 the non-coincident demands in distributing the functionally  
20 allocated costs to each class. The rationale for supporting  
21 the use of non-coincident peaking factors is that the benefits  
22 of diversity in customer class consumption patterns should  
23 accrue to all classes in proportion to their use of the system,  
24 and not be allocated primarily to a particular class that  
25 happens to peak at a time different from other users of the  
26 system. The concept is illustrated through the following  
27 example: Assume that a utility was going to build a *separate*  
28 *system* (source of supply, treatment, pumping, transmission  
29 and distribution, etc.) *for each of the customer classes* served  
30 by the utility. These separate water systems would need to  
31 be sized to meet the base, maximum-day extra capacity, and

1 maximum-hour extra capacity demands related to each class.  
2 The sum of those systems would compose the overall water  
3 system, and the costs associated with each of the individual  
4 systems would be allocable to each class (based on their  
5 respective non-coincidental demands that were the basis for  
6 sizing the individual components of the system).

7 Assume that a concept is developed that efficiencies,  
8 economies of scale, and reduction in the overall size of the  
9 "system" could be achieved if the system is an integrated  
10 diversified system. With this concept in mind, recognizing  
11 the diversities of demands of the various classes and using  
12 the coincidental demands of all classes to size the plant, a  
13 smaller system could be built. Total fixed capacity costs and  
14 most operation and maintenance expenses, except perhaps  
15 for power and chemical costs, would be reduced in sizing the  
16 overall system facilities on the basis of the coincidental  
17 demands of all the classes of customers.

18 The question at hand is, considering that there is a smaller,  
19 more efficient, and less costly system, how should the cost  
20 savings of that system be allocated among the individual  
21 customer classes? One appropriate manner to allocate these  
22 costs, and have each customer class share equitably in the  
23 overall cost savings, is to allocate the total new, smaller  
24 system costs on the basis of the non-coincident demands of  
25 each customer class. In this manner, all classes share  
26 proportionately in the economies of scale and cost savings  
27 of this smaller, integrated, and diverse system.

28 AWWA Manual, Appendix A, pages 374-375, 7<sup>th</sup> Edition  
29 (2017).

30 **Q. HOW DID PETITIONER DEVELOP THE MAXIMUM DAY AND MAXIMUM**  
31 **HOUR DEMANDS OF THE VARIOUS CUSTOMER CLASS REFLECTED IN**  
32 **ITS CCOSS**

33 A. Petitioner claims to have used the estimating procedures presented in Appendix A of  
34 the AWWA Manual: *Development of Peaking Factors by Customer Class*. These  
35 procedures are commonly used by water utilities in lieu of conducting a formal  
36 customer demand study, which can be costly and time consuming.

1 **Q. PLEASE DESCRIBE THE METHOD DESCRIBED IN APPENDIX A TO**  
2 **DETERMINE MAXIMUM DAY EXTRA CAPACITY FACTORS FOR EACH**  
3 **CUSTOMER CLASSES SERVED BY A WATER UTILITY.**

4 A. Appendix A of the AWWA M1 Manual indicates that the first step in determining the  
5 maximum day extra-capacity factor for a customer class is to calculate the ratio of the  
6 average-day consumption for the maximum month to the annual average day  
7 consumption for each class (MM/AD Factor). Next, the ratio of the overall system  
8 coincident maximum day demand to the average day demand for the system maximum  
9 month is determined (System MD/MM Ratio). To calculate the maximum day factor  
10 for each customer class, the MM/AD Factor and system MD/MM Ratio are multiplied,  
11 and a weekly adjustment factor is applied. The weekly adjustment factor reflected in  
12 Appendix A for Residential customers is 1.35, and the weekly adjustment factor for  
13 Commercial and Industrial customers is 1.17.

14 **Q. HOW IS THE MAXIMUM HOUR EXTRA CAPACITY FACTOR**  
15 **DETERMINED FOR EACH CUSTOMER CLASS IN APPENDIX A?**

16 A. The maximum hour extra capacity factor is determined by multiplying the maximum  
17 day extra capacity factor by an estimated maximum hour to maximum day ratio for  
18 each class (Estimated MH/MD Ratio). The Estimated MH/MD Ratio identified in  
19 Appendix A for the Residential and Commercial customer classes is 1.66, and 1.33 for  
20 the Industrial class.

21 **Q. DID PETITIONER FOLLOW THE PROCEDURES DESCRIBED IN**  
22 **APPENDIX A OF THE AWWA MANUAL TO DETERMINE THE MAXIMUM**  
23 **DAY AND MAXIMUM HOUR CAPACITY FACTORS USED IN ITS CCSS?**

24 A. Petitioner followed the procedures described in Appendix A with one exception.  
25 Rather than utilizing *actual* maximum system demands to calculate the system  
26 MD/MM daily Ratio, Petitioner used a theoretical maximum system design demand.

1 That is, Petitioner used the theoretical maximum day capability of its system.  
2 Appendix A specifies the use of actual and not theoretical maximum day demands to  
3 calculate maximum day extra capacity factors.

4 **Q. HAVE YOU REVISED PETITIONER'S MAXIMUM DAY AND MAXIMUM**  
5 **HOUR EXTRA CAPACITY FACTORS TO REFLECT THE USE OF ACTUAL**  
6 **DATA?**

7 A. Yes. Schedule JDM-1 calculates maximum day and maximum hour extra capacity  
8 factors utilizing actual data. A comparison of Petitioner's extra capacity factors and  
9 my revised factors is presented in Table 1.

<b>Class</b>	<b>Maximum Day</b>		<b>Maximum Hour</b>	
	<b>OUCC</b>	<b>Petitioner</b>	<b>OUCC</b>	<b>Petitioner</b>
Residential	265	320	440	530
Small Commercial	200	310	330	520
Large Commercial	220	340	365	450

10 **Q. DOES APPENDIX A IDENTIFY A PROCEDURE TO TEST THE**  
11 **REASONABLENESS OF EXTRA CAPACITY FACTORS?**

12 A. Yes. Appendix A sets forth a procedure to test the reasonableness of both maximum  
13 day and hour peaking factors. For maximum day factors, the non-coincident demands  
14 resulting from the application of maximum day peaking factors to the average daily  
15 demands of each class are summed and compared against actual coincident system  
16 maximum day demands. This relationship of the non-coincident to coincident demands  
17 is referred to as the measure of system diversity. The maximum day system diversity  
18 ratio should generally be in the range of 1.1 to 1.4. If the system diversity ratio falls  
19 within this range, the maximum day factors are likely to be reasonable.

1           A similar procedure is followed to test the reasonableness of maximum hour  
2 demands. That is, the non-coincident demands resulting from the application of  
3 maximum hour peaking factors to average hourly demands of each class are summed  
4 and compared against actual coincident system maximum hour demands to determine  
5 a maximum hour system diversity ratio. The same 1.1 to 1.4 zone of reasonableness  
6 also applies to the maximum hour system diversity ratio.

7 **Q.   WHAT ARE THE SYSTEM DIVERSITY RATIOS INDICATED BY YOUR**  
8 **REVISED EXTRA CAPACITY FACTORS?**

9 A.   As shown on Schedule JDM-1, my revised maximum day extra capacity factors result  
10 in a system diversity ratio of 1.33 which is within the 1.1 to 1.4 zone of reasonableness.  
11 Petitioner does not track and record actual maximum hourly demands and, therefore, a  
12 maximum hour extra capacity system diversity ratio cannot be calculated using the  
13 procedures set forth in Appendix A.

14 **Q.   PLEASE DESCRIBE YOUR PROPOSED REVISION TO PETITIONER'S**  
15 **FUNCTIONALIZATION OF WATER TREATMENT PURCHASED POWER**  
16 **COSTS.**

17 A.   Petitioner has functionalized water treatment purchased power costs as partially base  
18 costs and partially as maximum day extra capacity costs. This is unreasonable.  
19 Purchased power costs vary primarily with the quantity of water treated and, therefore,  
20 should be functionalized entirely as base costs.

21 **Q.   HAVE YOUR REVISED PETITIONER'S CCROSS TO REFLECT YOUR**  
22 **RECOMMENDED EXTRA CAPACITY FACTORS AND THE**  
23 **FUNCTIONALIZATION OF WATER TREATMENT PURCHASED POWER**  
24 **COSTS?**

25 A.   Yes. Schedule JDM-2 provides a summary of the OUCC's revised CCROSS.

**III. REVENUE DISTRIBUTION**

1 **Q. PLEASE SUMMARIZE PETITIONER'S PROPOSED DISTRIBUTION OF**  
2 **THE RATE INCREASE IT IS REQUESTING IN THIS PROCEEDING.**

3 A. Petitioner's proposed distribution of the revenue increase is summarized in Schedule  
4 JDM-3.

5 **Q. WHAT IS YOUR PROPOSAL WITH RESPECT TO THE DISTRIBUTION OF**  
6 **THE REVENUE INCREASE AWARDED IN THIS PROCEEDING?**

7 A. My revised CCOSS indicates a lower cost of service than Petitioner's CCOSS for the  
8 Small Commercial class, and a higher cost of service for Fire Protection. Therefore, I  
9 recommend that Fire Protection proposed rates be increased to the cost of service  
10 indicated by the revised CCOSS, and the proposed rates for the Small Commercial class  
11 be reduced by a similar amount. My proposed distribution is presented in Schedule  
12 JDM-4. To the extent the Commission awards Petitioner less than the amount of the  
13 requested increase, rates for classes should be scaled back proportionately.

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

15 A. Yes, it does.

**SCHEDULES ACCOMPANYING THE  
PREPARED TESTIMONY OF JEROME D. MIERZWA  
CAUSE NO. 45062**





## CHANDLER (INDIANA) MUNICIPAL WATER UTILITY

**OUCC COST OF SERVICE ALLOCATED TO CUSTOMER CLASS**  
**(12 months ended 8/31/2017)**

Total Costs of Service	Allocable To All Customers					Direct Fire Protection Service
	Base	Extra Capacity		Customer Costs		
		Maximum Day (-----1,000's of Gallons-----)	Maximum Hour	Meters and Services Equiv. Meters	Billing and Collecting Bills	
Unit Costs of Service (1)	\$2.3261	\$602.5858	\$274.6849	\$56.0876	\$1.8200	\$61.1068
<b><u>Allocated Costs of Service:</u></b>						
Residential:						
Units of service	347,751.5	1,572.0	1,667.2	7,008.0	77,563.0	
Cost	\$2,748,353	\$808,905	\$947,265	\$393,062	\$141,166	
Small Commercial:						
Units of service	72,847.2	199.6	259.5	951.0	4,045.0	
Cost	421,709	\$169,450	\$120,276	\$53,339	\$7,363	
Large Commercial:						
Units of service	133,172.1	437.9	529.1	455.0	234.0	
Cost	744,943	\$309,787	\$263,872	\$25,520	\$427	
Fire Protection:						
Units of service		240.0	1,200.0			768
Cost	521,174	\$144,622	\$329,622			\$46,930
Total allocated cost of service	\$4,436,179	\$1,288,142	\$1,476,035	\$1,004,195	\$471,921	\$148,956
						\$46,930

**CHANDLER (INDIANA) MUNICIPAL WATER UTILITY**  
 Petitioner Proposed Distribution of Revenue Increase

Class	Cost of Service	Present Rates	Indicated CCOSS Increase		Proposed Rates	Proposed Increase		CCOSS Variance	
			Amount	Percent		Amount	Percent	Amount	Percent
Residential	\$ 2,683,202	\$ 2,048,415	\$ 634,787	30.99%	\$ 2,778,122	\$ 729,707	35.62%	\$ 94,920	3.54%
Small Commercial	501,000	280,757	220,243	78.45%	512,909	232,152	82.69%	11,909	2.38%
Large Commercial	797,733	340,631	457,102	134.19%	691,619	350,988	103.04%	(106,114)	-13.30%
Fire Protection	454,295	289,256	165,039	57.06%	454,628	165,372	57.17%	333	0.07%
<b>TOTAL</b>	<b>\$ 4,436,230</b>	<b>\$ 2,959,059</b>	<b>\$ 1,477,171</b>	<b>49.92%</b>	<b>\$ 4,437,278</b>	<b>\$ 1,478,219</b>	<b>49.96%</b>	<b>\$ 1,048</b>	<b>0.02%</b>

**CHANDLER (INDIANA) MUNICIPAL WATER UTILITY**  
**OUCC Proposed Distribution of Revenue Increase**

Class	Cost of Service	Present Rates	Indicated CCOSS Increase		Proposed Rates	Proposed Increase		CCOSS Variance	
			Amount	Percent		Amount	Percent	Amount	Percent
Residential	\$ 2,748,353	\$ 2,048,415	\$ 699,938	34.17%	\$ 2,778,122	\$ 729,707	35.62%	\$ 29,769	1.08%
Small Commercial	421,709	280,757	140,952	50.20%	446,363	165,606	58.99%	24,654	5.85%
Large Commercial	744,943	340,631	404,312	118.70%	691,619	350,988	103.04%	(53,324)	-7.16%
Fire Protection	521,174	289,256	231,918	80.18%	521,174	231,918	80.18%	-	0.00%
<b>TOTAL</b>	<b>\$ 4,436,179</b>	<b>\$ 2,959,059</b>	<b>\$ 1,477,120</b>	<b>49.92%</b>	<b>\$ 4,437,278</b>	<b>\$ 1,478,219</b>	<b>49.96%</b>	<b>\$ 1,099</b>	<b>0.02%</b>

**VERIFICATION**

STATE OF INDIANA            )  
  )  
  )  
COUNTY OF MARION        )

  ss:

The undersigned, Jerome D. Mierzwa, under penalties of perjury and being first duly sworn on his oath, says that he is a Consultant for the Indiana Office of Utility Consumer Counselor; that he caused to be prepared and read the foregoing; that the representations set forth therein are true and correct to the best of his knowledge, information and belief.

  
By: Jerome D. Mierzwa  
Indiana Office of  
Utility Consumer Counselor

Subscribed and sworn to before me, a Notary Public, this 8 day of Aug 2018.

  
Signature

Deborah M Adams  
Printed Name

My Commission Expires: 2/2019

My County of Residence: Howard

DEBORAH M ADAMS  
Notary Public  
State of Maryland  
Howard County