

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of the Application of Rate Increase)
For Indian Hills Utility Operating Company, Inc.) **Case No. WR-2017-0259**

STAFF’S RATE DESIGN SCENARIOS

COMES NOW, the Staff of the Missouri Public Service Commission (Staff), by and through counsel, files the attached document to comply with the Commission’s January 10, 2018 *Order Directing Filing of Rate Design Scenarios* (Order).

Staff has prepared rates that comply with the *Order*, as shown below:

<u>Type of Charge</u>	<u>Current Rates</u>	<u>Proposed Rates Per Order</u>	<u>Proposed Amount of Rate Change</u>	<u>Staff’s Proposal at Hearing</u>	<u>OPC’s Proposal at Hearing</u>
Summer Customer Charge	\$10.81	\$50.59	\$39.78	\$59.02	\$43.03
Summer Commodity Charge	\$1.89	\$14.05	\$12.16	\$9.37	\$6.06
Winter Customer Charge	\$10.81	\$50.59	\$39.78	\$59.02	\$13.03
Winter Commodity Charge	\$1.89	\$9.37	\$7.48	\$7.67	\$16.11

Staff’s recommendation in response to the *Order* can be found in the third column above, titled “Proposed Rates Per Order.” The analysis for that proposal can be found on the attached documents. Staff has also included two other alternative rate designs for comparison purposes.

WHEREFORE, Staff respectfully submits *Staff’s Rate Design Scenarios* and the attached designs to comply with the aforementioned order.

Respectfully submitted,

/s/ Jacob T. Westen

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CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing have been mailed, hand-delivered, transmitted by facsimile, or electronically mailed to all parties and or counsel of record on this 16th day of January, 2018.

/s/ Jacob T. Westen

Indian Hills Utility Operating Company, Inc.

Rate Making Income Statement

Summer Seasonal Rates

Operating Revenues at Current Rates

1	Tariffed Rate Revenues *	\$	92,555
2	Other Operating Revenues *	\$	4,736
3	Total Operating Revenues	\$	97,291
4	* See "Revenues - Current Rates" for Details.		

Cost of Service

Item	Amount					
5	Misc Source of Supply Expense	\$	200	0.00	\$	200
6	Pumping	\$	13,681	0.00	\$	13,681
7	Chemicals	\$	5,381	0.00	\$	5,381
8	Operation Labor & Expense	\$	71,104	0.30	\$	21,331
9	Operation Supervision & Engineering	\$	800	0.50	\$	400
10	Contract Water Testing	\$	630	0.80	\$	504
11	Maintenance of Structure and Improvements	\$	26,532	0.50	\$	13,266
12	Maintenance Pumping	\$	5,071	0.00	\$	-
13	Maintenance Supervision and Engineering	\$	495	0.50	\$	248
14	Maintenance of Transmission & Distribution	\$	127	0.50	\$	64
15	Billing & Collections	\$	17,961	0.80	\$	14,369
16	Bank Fees	\$	4,932	0.00	\$	-
17	Administrative & General Expenses	\$	124,314	1.00	\$	124,314
18	PSC	\$	1,025	1.00	\$	1,025
19	Business License	\$	74	1.00	\$	74
20	Sub-Total Operating Expenses	\$	272,327		\$	175,594
21	SS & Medicare	\$	4,396	0.80	\$	3,517
22	Unemployment	\$	1,373	0.80	\$	1,098
23	Property Taxes	\$	4,956	0.80	\$	3,965
24	Income Taxes	\$	18,418	0.80	\$	14,734
25	Sub-Total Taxes	\$	29,143		\$	23,314
26	Depreciation	\$	98,735	0.80	\$	78,988
27	Amoritzation	\$	21,011	0.80	\$	16,809
28	Interest	\$	171,090	0.60	\$	102,654
29	Sub-Total Depreciation/Interest/Amortization	\$	290,836		\$	198,451
30	Return on Equity	\$	61,461	0.80	\$	49,169
31	Total Cost of Service	\$	653,767		\$	446,528
32	Cost to recover in rates	\$	649,031		\$	446,528
33	Overall Revenue Increase Needed	\$	556,476		\$	353,973

	offer	ratio		
	\$630,911		60.00%	40.00%
	\$92,555			
	\$723,466		\$434,080	\$289,386

Indian Hills Utility Operating Company, Inc.

Residential Customer Bill Comparison-Water

Summer

Rates for 5/8" Meter

Customer	Current Base Customer Charge	Proposed Base Customer Charge	Current Usage Rate	Proposed Usage Rate
5/8" Meter	\$ 10.81	\$ 50.59	\$ 1.89	\$ 14.05

current service charge is monthly charge

usage rate is per 1,000 gallons used

MONTHLY BILL COMPARISON

Full Time average 3,000 gallons/month usage.

Monthly Billing

Current Rates

Customer Charge	\$ 10.81	
Usage Charge	\$ -	Current customer charge includes 4,000 gallons of water per month, company reported no sales above this amount
Total Bill	\$ 10.81	

Proposed Rates

Customer Charge	\$ 50.59
Usage Charge	\$ 42.16
Total Bill	\$ 92.75

INCREASES

Customer Charge

\$ Increase	\$39.78
% Increase	368.01%

Usage Charge

\$ Increase	\$42.16
% Increase	N.A.

Total Bill

\$ Increase	\$81.94
% Increase	758.02%

Indian Hills Utility Operating Company, Inc.

Rate Making Income Statement

Winter Seasonal Rates

Operating Revenues at Current Rates

1	Tariffed Rate Revenues *	\$	92,555	
2	Other Operating Revenues *	\$	4,736	
3	Total Operating Revenues	\$	97,291	
4	* See "Revenues - Current Rates" for Details.			

Cost of Service

	Item		Amount	
5	Misc Source of Supply Expense	\$	200	0.00 \$ - \$ 200
6	Pumping	\$	13,681	0.00 \$ - \$ 13,681
7	Chemicals	\$	5,381	0.00 \$ - \$ 5,381
8	Operation Labor & Expense	\$	71,104	0.30 \$ 21,331 \$ 49,773
9	Operation Supervision & Engineering	\$	800	0.50 \$ 400 \$ 400
10	Contract Water Testing	\$	630	0.80 \$ 504 \$ 126
11	Maintenance of Structure and Improvements	\$	26,532	0.50 \$ 13,266 \$ 13,266
12	Maintenance Pumping	\$	5,071	0.00 \$ - \$ 5,071
13	Maintenance Supervision and Engineering	\$	495	0.50 \$ 248 \$ 248
14	Maintenance of Transmission & Distribution	\$	127	0.50 \$ 64 \$ 64
15	Billing & Collections	\$	17,961	0.80 \$ 14,369 \$ 3,592
16	Bank Fees	\$	4,932	0.00 \$ - \$ 4,932
17	Administrative & General Expenses	\$	124,314	1.00 \$ 124,314 \$ -
18	PSC	\$	1,025	1.00 \$ 1,025 \$ -
19	Business License	\$	74	1.00 \$ 74 \$ -
20	Sub-Total Operating Expenses	\$	272,327	\$ 175,594 \$ 96,733
21	SS & Medicare	\$	4,396	0.80 \$ 3,517 \$ 879
22	Unemployment	\$	1,373	0.80 \$ 1,098 \$ 275
23	Property Taxes	\$	4,956	0.80 \$ 3,965 \$ 991
24	Income Taxes	\$	18,418	0.80 \$ 14,734 \$ 3,684
25	Sub-Total Taxes	\$	29,143	\$ 23,314 \$ 5,829
26	Depreciation	\$	98,735	0.50 \$ 49,368 \$ 49,368
27	Amoritzation	\$	21,011	0.50 \$ 10,506 \$ 10,506
28	Interest	\$	171,090	0.50 \$ 85,545 \$ 85,545
29	Sub-Total Depreciation/Interest/Amortization	\$	290,836	\$ 145,418 \$ 145,418
30	Return on Equity	\$	61,461	0.80 \$ 49,169 \$ 12,292
31	Total Cost of Service	\$	653,767	\$ 393,495 \$ 260,272
32	Cost to recover in rates	\$	649,031	\$ 393,495 \$ 255,536
33	Overall Revenue Increase Needed	\$	556,476	\$ 300,940 \$ 255,536

	ratio			
offer		60.00%	40.00%	
\$630,911				
\$92,555				
\$723,466		\$434,080	\$289,386	

Indian Hills Utility Operating Company, Inc.

Residential Customer Bill Comparison-Water

Winter

Rates for 5/8" Meter

Customer	Current Base Customer Charge	Proposed Base Customer Charge	Current Usage Rate	Proposed Usage Rate
5/8" Meter	\$ 10.81	\$ 50.59	\$ 1.89	\$ 9.37

current service charge is monthly charge
usage rate is per 1,000 gallons used

MONTHLY BILL COMPARISON

Full Time average 3,000 gallons/month usage.

Monthly Billing

Current Rates

Customer Charge	\$ 10.81	
Usage Charge	\$ -	Current customer charge includes 4,000 gallons of water per month, company reported no sales above this amount
Total Bill	\$ 10.81	

Proposed Rates

Customer Charge	\$ 50.59
Usage Charge	\$ 28.11
Total Bill	\$ 78.70

INCREASES

Customer Charge

\$ Increase	\$39.78
% Increase	368.01%

Usage Charge

\$ Increase	\$28.11
% Increase	N.A.

Total Bill

\$ Increase	\$67.89
% Increase	628.02%

Staff's Proposal From the Hearing

According to the Commission's Order dated January 10, 2018, here are the parameters:

Revenue Requirement in Staff's Brief: \$ 723,466

Customer Charge shall be lower than: \$ 59.02

Commodity Charge in Summer higher than Winter, but differential greater than Staff's proposed rate.

In the non-unanimous Stipulation and Agreement between Staff and Company,

The Revenue Requirement was: \$ **723,466**

Customer Charge was: \$ 59.02

Summer rate (April 1 - September 30): \$ 9.37

Winter rate (October 1 - March 31): \$ 7.67

To arrive at Staff's proposal, the following calculations were made:

Staff used a 70/30 split of revenue requirement for customer charge/commodity charge

Customer Charge RR: \$ 506,426

Commodity Charge RR: \$ 217,040

Number of customers: **715**

To determine customer charge divide Customer Charge RR by number of customers by 12 months:

\$	59.02
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Annual amount of 1,000 gallons sold was estimated as: **25,740**

Based on 3,000 gallons used per customer each month

To determine summer/winter rate, Staff first divided 1,000 gallons sold by a 55/45 ratio:

To calculate winter rate use 55: 14,157

To calculate summer rate use 45: 11,583

Then, Staff divided the commodity Charge RR by two to collect the amount in each season:

1/2 Commodity Charge RR: \$ 108,519.90

Then, Staff divided the seasonal commodity charge RR by each usage ratio:

Winter Commodity Rate:	\$	7.67
Summer Commodity Rate:	\$	9.37

Impact on a customer using 3,000 gallons:

Customer Charge: \$ 59.02

Winter Commodity Charge: \$ 23.00

Summer Commodity Charge: \$ 28.11

Winter Monthly Bill:	\$	82.02
Summer Monthly Bill:	\$	87.13

Staff's Recommended Scenario

According to the Commission's Order dated January 10, 2018, here are the parameters:

Revenue Requirement in Staff's Brief:	\$	723,466
Customer Charge shall be lower than:	\$	59.02

Commodity Charge in Summer higher than Winter, but differential greater than Staff's proposed rate.

In the non-unanimous Stipulation and Agreement between Staff and Company, The Revenue Requirement was:	\$	723,466
Customer Charge was:	\$	59.02
Summer rate (April 1 - September 30):	\$	9.37
Winter rate (October 1 - March 31):	\$	7.67

To arrive at Staff's proposal, the following calculations were made:

Staff used a 60/40 split of revenue requirement for customer charge/commodity charge

Customer Charge RR:	\$	434,080
Commodity Charge RR:	\$	289,386
Number of customers:		715

To determine customer charge divide Customer Charge RR by number of customers by 12 months:

\$	50.59
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Annual amount of 1,000 gallons sold was estimated as: **25,740**

Based on 3,000 gallons used per customer each month

To determine summer/winter rate, Staff first divided 1,000 gallons sold by a 60/40 ratio:

To calculate winter rate use 60:	15,444
To calculate summer rate use 40:	10,296

Then, Staff divided the commodity Charge RR by two to collect the amount in each season:

1/2 Commodity Charge RR:	\$	144,693.20
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Then, Staff divided the seasonal commodity charge RR by each usage ratio:

Winter Commodity Rate:	\$	9.37
Summer Commodity Rate:	\$	14.05

Impact on a customer using 3,000 gallons:

Customer Charge:	\$	50.59
Winter Commodity Charge:	\$	28.11
Summer Commodity Charge:	\$	42.16

Winter Monthly Bill:	\$	78.70
Summer Monthly Bill:	\$	92.75

Scenario Two - Lower Customer Charge

According to the Commission's Order dated January 10, 2018, here are the parameters:

Revenue Requirement in Staff's Brief: \$ 723,466

Customer Charge shall be lower than: \$ 59.02

Commodity Charge in Summer higher than Winter, but differential greater than Staff's proposed rate.

In the non-unanimous Stipulation and Agreement between Staff and Company,

The Revenue Requirement was: \$ 723,466

Customer Charge was: \$ 59.02

Summer rate (April 1 - September 30): \$ 9.37

Winter rate (October 1 - March 31): \$ 7.67

To arrive at Staff's proposal, the following calculations were made:

Staff used a 55/45 split of revenue requirement for customer charge/commodity charge

Customer Charge RR: \$ 397,906

Commodity Charge RR: \$ 325,560

Number of customers: 715

To determine customer charge divide Customer Charge RR by number of customers by 12 months:

\$ 46.38

Annual amount of 1,000 gallons sold was estimated as: 25,740

Based on 3,000 gallons used per customer each month

To determine summer/winter rate, Staff first divided 1,000 gallons sold by a 60/40 ratio:

To calculate winter rate use 60: 15,444

To calculate summer rate use 40: 10,296

Then, Staff divided the commodity Charge RR by two to collect the amount in each season:

1/2 Commodity Charge RR: \$ 162,779.85

Then, Staff divided the seasonal commodity charge RR by each usage ratio:

Winter Commodity Rate:	\$ 10.54
Summer Commodity Rate:	\$ 15.81

Impact on a customer using 3,000 gallons:

Customer Charge: \$ 46.38

Winter Commodity Charge: \$ 31.62

Summer Commodity Charge: \$ 47.43

Winter Monthly Bill:	\$ 78.00
Summer Monthly Bill:	\$ 93.81

Scenario Three - 15% Seasonal Shifts

According to the Commission's Order dated January 10, 2018, here are the parameters:

Revenue Requirement in Staff's Brief:	\$ 723,466
Customer Charge shall be lower than:	\$ 59.02

Commodity Charge in Summer higher than Winter, but differential greater than Staff's proposed rate.

In the non-unanimous Stipulation and Agreement between Staff and Company,

The Revenue Requirement was:	\$ 723,466
Customer Charge was:	\$ 59.02
Summer rate (April 1 - September 30):	\$ 9.37
Winter rate (October 1 - March 31):	\$ 7.67

To arrive at Staff's proposal, the following calculations were made:

Staff used a 60/40 split of revenue requirement for customer charge/commodity charge

Customer Charge RR:	\$ 434,080
Commodity Charge RR:	\$ 289,386

Number of customers: **715**

To determine customer charge divide Customer Charge RR by number of customers by 12 months:

\$	50.59
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Annual amount of 1,000 gallons sold was estimated as: **25,740**

Based on 3,000 gallons used per customer each month

To determine summer/winter rate, Staff first divided 1,000 gallons sold by a 65/35 ratio:

To calculate winter rate use 65:	16,731
To calculate summer rate use 35:	9,009

Then, Staff divided the commodity Charge RR by two to collect the amount in each season:

1/2 Commodity Charge RR:	\$ 144,693.20
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Then, Staff divided the seasonal commodity charge RR by each usage ratio:

Winter Commodity Rate:	\$ 8.65
Summer Commodity Rate:	\$ 16.06

Impact on a customer using 3,000 gallons:

Customer Charge:	\$ 50.59
Winter Commodity Charge:	\$ 25.94
Summer Commodity Charge:	\$ 48.18

Winter Monthly Bill:	\$ 76.54
Summer Monthly Bill:	\$ 98.77