

Proposed Changes At A Glance

1. Establish 2017 Power Supply Cost Recovery Factor (PSCR)
2. Approve revised Outdoor Lighting Tariffs

1. Establish the 2017 Power Supply Cost Recovery Factor (PSCR)

Existing Situation

- o Power supply costs from Wolverine Power Cooperative (WPC) are passed on at cost to members of PIE&G through the PSCR mechanism.
- o PIE&G, working with WPC, establishes a factor to collect or refund power supply costs that are above or below the base energy rates based upon cost and sales forecasts.
- o The collection of funds through the PSCR Factor is reconciled annually with the actual energy costs billed to PIE&G by WPC and the difference is either refunded or charged to the membership.
- o The 2016 PSCR Factor was established at -1.31 mills/kWh or -\$0.00131/kWh.
- o The overall estimated energy rate billed to the members of PIE&G is the sum of the PSCR Basing Point and the current year's PSCR Factor. That rate for 2016 was \$0.08872/kWh or 88.72 mills/kWh.
- o Prior action of the Board has set the PSCR Basing Point to 87.85 mills/kWh.

Proposed Change

- o This approval will establish the maximum PSCR Factor for 2017.
- o Should actual power supply costs be lower than forecasted, then the cooperative may apply a lesser PSCR Factor. Should actual power supply costs be higher than forecasted, the excess will be collected through the next year's PSCR Factor.
- o The established maximum PSCR Factor shall be **0.87** mills/kWh or **\$0.00087**/kWh. This represents an increase of \$1.44 per month or 1.44% for the average residential monthly account.

	Basing Point	PSCR Factor	Total Energy Rate
2016	\$ 0.08785	\$ (0.00131)	\$ 0.08654
2017	\$ 0.08785	\$ 0.00087	\$ 0.08872
	Difference		\$ 0.00218

- o The proposed change includes an estimated under-collection of 2016 power supply costs of \$180,000. Should actual under-collections for 2016 be lower than forecasted, the established rate.

Management Recommends

- o Establish the 2017 PSCR Factor of **\$0.00087** per kWh effective with bills rendered on or after February 1, 2017.
- o Management will bring forward the 2016 over/under collection at the first Special Member Regulation Board Meeting of 2017.

2. Approve Revisions to the Outdoor Lighting Tariff

Existing Situation

- o The current Outdoor Lighting tariffs (Sheet 15.00 - 15.02) were established on March 26, 2013. A cost of service study was conducted based upon a 2015 test year. That study provided the basis for revisions to the tariff.
- o Staff also recommends revisions to it's outdoor lighting program to acknowledge the increased efficiency of the LED technology and discontinue the installation of Mercury Vapor (MV) and High Pressure Sodium (HPS) lighting fixtures.

Proposed Change

- o The proposed changes are presented in the table below.

Type of Device	Current Monthly Rate	Proposed Monthly Rate	Difference
175W MV	\$ 12.00	\$ 11.40	\$ (0.60)
400W MV	\$ 21.74	\$ 19.70	\$ (2.04)
100W HPS	\$ 8.55	\$ 9.00	\$ 0.45
250W HPS	\$ 14.68	\$ 14.80	\$ 0.12
LED 40W	\$ 7.30	\$ 6.80	\$ (0.50)
LED 70W	\$ 7.30	\$ 7.70	\$ 0.40

Management Recommends

- o Approval of the recommended revisions and authority to implement effective for bills rendered on or after February 1, 2017.

**PRESQUE ISLE ELECTRIC & GAS CO-OP
SPECIAL BOARD MEETING
9AM SEPTEMBER 27, 2016**

AGENDA

- | | |
|---|----------------|
| Call to Order | Chairman Brown |
| Roll Call | |
| PA 167 of 2008 | CEO Burns |
| Introduction of Guests | |
| Member Comment | |
| Action Items | CFO Sobeck |
| 1. Establish the 2017 Power Supply Cost Recovery Factor | |
| 2. Revise Outdoor Lighting Tariffs | |
| Adjournment | |

**PRESQUE ISLE ELECTRIC & GAS CO-OP
BOARD RESOLUTION
SEPTEMBER 27, 2016**

**RESOLUTION 2016-MR-03
2017 PSCR FACTOR**

WHEREAS, PIE&G transitioned to member regulation with an effective date of September 23, 2012 thus providing that certain of its rates are no longer regulated by the MPSC; and

WHEREAS, PIE&G in conjunction with Wolverine Power Supply Cooperative (WPSC), it's wholesale electric energy supplier, has conducted an analysis of projected energy costs and sales volumes; and

WHEREAS, PIE&G's staff has reviewed the analysis with the Board of Directors; and

WHEREAS, results of that analysis indicate and overall energy cost of 88.72 mills/kWh or \$0.08872/kWh which, when combined with PIE&G's current PSCR basing point of 87.85 mills/kWh provides for a 2017 PSCR Factor of 0.87 mills/kWh.

NOW BE IT HEREBY RESOLVED that the PIE&G Board of Directors accepts the analysis as provided by the cooperative staff as a reasonable basis for establishing the maximum 2017 PSCR Factor of 0.87 mills/kWh or \$0.00087/kWh effective with all bills rendered on or after February 1, 2017 and directs staff to amend the appropriate tariffs in its Electric Rate Book.

BE IT FURTHER RESOLVED that the cooperative staff may apply a lesser PSCR Factor than approved in this resolution because of an over-collection of power supply costs from the membership, in which case they shall notify the Board of Directors of their intent to do so.

CERTIFICATION

I, David Smith, Secretary of the Board of Directors of Presque Isle Electric & Gas Co-op, do hereby certify that the above is a true and correct copy of a resolution adopted at a special meeting of the Board of Directors of Presque Isle Electric & Gas Co-op held on September 27, 2016.

By: _____
David Smith, Secretary

Dated: _____

Presque Isle Electric & Gas Co-op

2017 PSCR Plan Overview

Line No.

1	Projected Energy Purchases (kWh)		259,282,813
2	Less: Line Losses (7.73%)		20,742,625
3	Projected Energy Sales (kWh)		238,540,188
4	Projected Energy Costs		21,164,408
5	PSCR Rate - \$/kWh (Line 4/Line 3)	\$	0.08872
6	PSCR Base - \$/kWh		<u>0.08785</u>
7	PSCR Factor - \$/kWh (Line 5 - Line 6)	\$	0.00087
8	PSCR Rate - mills/kWh (Line 4/Line 3)		88.72
9	PSCR Base - mills/kWh		<u>87.85</u>
10	PSCR Factor - mills/kWh (Line 8 - Line 9)		0.87

Presque Isle Electric & Gas Co-op

2017 PSCR Plan

Summary

<u>Description</u>	<u>2017 Rates</u>	<u>Units</u>	<u>Annual Totals</u>
Energy (previous Dec. total)			
Forecast Energy Charge - General	\$ 0.055162	kWh	240,639,214
Forecast Energy Charge - C&I	\$ 0.055162	kWh	18,643,599
True-up Energy Charge - General		kWh	239,477,100
True-up Energy Charge - C&I		kWh	18,974,700
Forecasted Base Demand (Wolv 12CP) General - 2017	\$ 5.9414	kW/mo.	446,562
Forecasted Base Demand (Wolv 12CP) C&I - 2017	\$ 5.9414	kW/mo.	32,394
True-Up Base Demand (Wolv 12CP) General - 2015		kW/mo.	434,923
True-Up Base Demand (Wolv 12CP) C&I - 2015		kW/mo.	30,313
Forecasted MISO-Coincident Demand (1CP) General - 2015	\$ 5.3601	kW/mo.	541,122
Forecasted MISO-Coincident Demand (1CP) C&I - 2015	\$ 5.3601	kW/mo.	0
True-Up MISO-Coincident Demand (1CP) General - 2013		kW/mo.	473,556
True-Up MISO-Coincident Demand (1CP) C&I - 2013		kW/mo.	43,428
Member's Base Demand Units Total (12 CP) - Current year	NA	kW/mo.	478,956
Total Dist. Members Coincident Peak (Wolv 12CP) - Current year	NA	kW	5,818,523
Energy (Total) - Current year	NA	kWh	259,282,813
General Energy, % Total Energy	NA	% and pts.	92.8%
General Demand, % Total Demand	NA	%	50.7%
Member's Share of Coin. Peak - Current Year Actual	NA	% and pts.	8.23%
Member's Share of Coin. Peak - Used for Billing	NA	% and pts.	8.23%
Fuel Clause Adjustment, True Up	NA	\$/kWh	0.00000
C&I Credits (Tier A); i.e., average demand > 2,000 kW	\$ 0.009000	kWh	0
C&I Credits (Tier B); i.e., average demand > 500 kW	\$ 0.005000	kWh	18,643,599
Efficient Electric Heat Credit	\$ 0.030000	kWh	2,909,278
Electric Water Heater Credits	\$ 4.50	no.	1,291
Backup Generation	\$ 2.50	kW-mo.	0
Dedicated Excluded Facilities Charge	16.98%	Invest. \$	0
Shared Excluded Facilities Charge	16.98%	Invest. \$	667,589
Substation Maintenance Charge (% charge)	10.34%	Invest. \$	7,965,236
Substation Investment Charge (\$/sub)	\$ 2,253.00	# subs	18
Substation Investment Charge (\$/sub); shared subs	varies	\$	0
Prepaid Substation Credit	NA	\$	0
Prepaid Excluded Facilities Credit	NA	\$	0
Excess Revenue	NA	\$	0
Other Charges/(Credits)	NA	\$	0
<u>Dollar Amounts</u>			
Forecast Energy Charge - General	\$	\$	13,661,329
Forecast Energy Charge - C&I	\$		1,058,416
True-up Energy Charge - General	\$		0
True-up Energy Charge - C&I	\$		0
Forecasted Base Demand (Wolv 12CP) General - 2017	\$		2,483,867
Forecasted Base Demand (Wolv 12CP) C&I - 2017	\$		180,182
True-Up Base Demand (Wolv 12CP) General - 2015	\$		0
True-Up Base Demand (Wolv 12CP) C&I - 2015	\$		0
Forecasted MISO-Coincident Demand (1CP) General - 2015	\$		2,531,260
Forecasted MISO-Coincident Demand (1CP) C&I - 2015	\$		0
True-Up MISO-Coincident Demand (1CP) General - 2013	\$		0
True-Up MISO-Coincident Demand (1CP) C&I - 2013	\$		0

Fuel Clause Adjustment, True Up	\$		0
C&I Credits (Tier A); i.e., average demand > 2,000 kW	\$		0
C&I Credits (Tier B); i.e., average demand > 500 kW	\$		(93,218)
Efficient Electric Heat Credit	\$		(87,278)
Electric Water Heater Credits	\$		(69,732)
Backup Generation	\$		0
Dedicated Excluded Facilities Charge	\$		0
Shared Excluded Facilities Charge	\$		9,329
Substation Maintenance Charge (% charge)	\$		823,605
Substation Investment Charge (\$/sub)	\$		486,648
Prepaid Substation Credit	\$		0
Prepaid Excluded Facilities Credit	\$		0
Excess Revenue	\$		0
Other Charges/(Credits)	\$		0
Total	\$	\$	20,984,408

Non-Energy Components	\$	\$	6,264,664
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Contribution to Bundled Rate

Forecast Energy Charge - General	\$/MWh	\$	52.69
Forecast Energy Charge - C&I	\$/MWh		4.08
True-up Energy Charge - General	\$/MWh		
True-up Energy Charge - C&I	\$/MWh		
Forecasted Base Demand (Wolv 12CP) General - 2017	\$/MWh		9.58
Forecasted Base Demand (Wolv 12CP) C&I - 2017	\$/MWh		0.69
True-Up Base Demand (Wolv 12CP) General - 2015	\$/MWh		
True-Up Base Demand (Wolv 12CP) C&I - 2015	\$/MWh		
Forecasted MISO-Coincident Demand (1CP) General - 2015	\$/MWh		9.76
Forecasted MISO-Coincident Demand (1CP) C&I - 2015	\$/MWh		
True-Up MISO-Coincident Demand (1CP) General - 2013	\$/MWh		
True-Up MISO-Coincident Demand (1CP) C&I - 2013	\$/MWh		
Fuel Clause Adjustment, True Up	\$/MWh		
C&I Credits (Tier A); i.e., average demand > 2,000 kW	\$/MWh		
C&I Credits (Tier B); i.e., average demand > 500 kW	\$/MWh		(0.36)
Efficient Electric Heat Credit	\$/MWh		(0.34)
Electric Water Heater Credits	\$/MWh		(0.27)
Backup Generation	\$/MWh		
Dedicated Excluded Facilities Charge	\$/MWh		
Shared Excluded Facilities Charge	\$/MWh		0.04
Substation Maintenance Charge (% charge)	\$/MWh		3.18
Substation Investment Charge (\$/sub)	\$/MWh		1.88
Prepaid Substation Credit	\$/MWh		
Prepaid Excluded Facilities Credit	\$/MWh		
Excess Revenue	\$/MWh		
Other Charges/(Credits)	\$/MWh		
Total	\$/MWh	\$	80.93

Inputs for Member's PSCR Factor

Member's Line Losses	%		8.00000%
Member's Line Losses	kWh		20,742,625
Wholesale Purchases - Member's Losses	kWh		238,540,188
Member's HQ Energy Use	kWh		0
Member's Sales to its Members	kWh		238,540,188
Non-PSCR Sales	kWh		0
PSCR Sales	kWh		238,540,188
Member's HQ Energy Use	\$		0
Prior Year (Over)/Under Collection	\$		180,000
PSCR Cost	\$		21,164,408

Power Supply Rate Before HQ Use and (O)/U Coll.	\$/MWh	\$	87.97
PSCR Rate	\$/MWh	\$	88.72
PSCR Base	\$/MWh	\$	87.85
PSCR Factor	\$/MWh	\$	0.87
Member's PSCR Revenue	\$	\$	21,163,285
Member's PSCR Cost	\$	\$	21,164,408
Member's Over/(Under) Collection	\$	\$	(1,123)

Presque Isle Electric & Gas
2017 PSCR Plan

2017 Rates		2017 PSCR Plan												
Input by Wolverine		January	February	March	April	May	June	July	August	September	October	November	December	YTD
Input by Member														
Not Included in Budget														
Units														
Energy (previous Dec. total)														
Forecast Energy Charge - General	\$ 0.056771	22,507,658	20,761,015	19,581,233	18,440,693	18,283,886	18,535,277	22,768,204	20,114,465	18,259,936	18,929,859	20,365,743	22,091,245	240,639,214 total
Forecast Energy Charge - C&I	\$ 0.056771	1,478,660	1,457,118	1,582,023	1,496,145	1,547,146	1,644,419	1,777,226	1,755,235	1,570,266	1,571,571	1,384,147	1,379,643	18,643,599 total
True-up Energy Charge - General		23,804,400	22,795,200	21,125,700	17,839,400	17,712,000	17,464,500	21,452,700	20,211,300	18,537,000	18,840,900	19,356,900	20,336,700	239,477,100 total
True-up Energy Charge - C&I		1,476,000	1,445,400	1,558,500	1,536,600	1,587,600	1,655,700	1,907,100	1,804,500	1,662,600	1,554,300	1,365,300	1,421,100	18,974,700 total
Forecasted Base Demand (Wolv 12CP) General - 2017	\$ 5.5622	38,408	38,156	35,508	31,948	34,701	36,278	39,049	43,170	36,269	33,406	38,853	40,816	446,562 total
Forecasted Base Demand (Wolv 12CP) C&I - 2017	\$ 5.5622	2,544	2,768	2,832	2,608	2,653	2,927	3,259	2,645	2,851	2,603	2,300	2,404	32,394 total
True-Up Base Demand (Wolv 12CP) General - 2015		39,974	43,129	37,973	30,630	27,675	29,433	42,749	39,438	36,453	31,733	35,638	40,098	434,923 total
True-Up Base Demand (Wolv 12CP) C&I - 2015		2,410	2,579	2,426	2,677	2,483	2,602	3,299	2,888	3,325	2,377	1,295	1,952	30,313 total
Forecasted MISO-Coincident Demand (1CP) General - 2015	\$ 4.6778	45,094	45,094	45,094	45,094	45,094	45,094	45,094	45,094	45,094	45,094	45,094	45,094	541,122 total
Forecasted MISO-Coincident Demand (1CP) C&I - 2015	\$ 4.6778													0 total
True-Up MISO-Coincident Demand (1CP) General - 2013		39,463	39,463	39,463	39,463	39,463	39,463	39,463	39,463	39,463	39,463	39,463	39,463	473,556 total
True-Up MISO-Coincident Demand (1CP) C&I - 2013		3,619	3,619	3,619	3,619	3,619	3,619	3,619	3,619	3,619	3,619	3,619	3,619	43,428 total
Member's Base Demand Units Total (12 CP) - Current year	NA	40,952	40,924	38,340	34,556	37,354	39,205	42,308	45,815	39,120	36,009	41,153	43,220	478,956 total
Total Dist. Members Coincident Peak (Wolv 12CP) - Current year	NA	521,188	488,527	458,370	389,627	409,287	490,876	589,861	553,277	524,538	415,495	474,682	502,797	5,818,523 total
Energy (Total) - Current year	NA	23,986,318	22,218,133	21,163,256	19,936,838	19,831,032	20,179,696	24,545,430	21,869,700	19,830,202	20,501,430	21,749,890	23,470,888	259,282,813 total
General Energy, % Total Energy	NA	93.8%	93.4%	92.5%	92.5%	92.2%	91.9%	92.8%	92.0%	92.1%	92.3%	93.6%	94.1%	92.8% avg
General Demand, % Total Demand	NA	49.0%	46.9%	48.3%	51.1%	55.6%	55.2%	47.7%	52.3%	49.9%	51.3%	52.2%	50.4%	50.7% avg
Member's Share of Coin. Peak - Current Year Actual	NA	7.86%	8.38%	8.36%	8.87%	9.13%	7.99%	7.17%	8.28%	7.46%	8.67%	8.67%	8.60%	8.23% avg
Member's Share of Coin. Peak - Used for Billing	NA	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23% avg
Fuel Clause Adjustment, True Up	NA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000 avg
C&I Credits (Tier A); i.e., average demand > 2,000 kW	\$ 0.009000	0	0	0	0	0	0	0	0	0	0	0	0	0 total
C&I Credits (Tier B); i.e., average demand > 500 kW	\$ 0.005000	1,478,660	1,457,118	1,582,023	1,496,145	1,547,146	1,644,419	1,777,226	1,755,235	1,570,266	1,571,571	1,384,147	1,379,643	18,643,599 total
Efficient Electric Heat Credit	\$ 0.030000	308,383	496,524	497,511	432,873	374,088	258,879	106,978	42,898	54,361	58,961	94,671	183,151	2,909,278 total
Electric Water Heater Credits	\$ 4.50	1,316	1,327	1,310	1,297	1,296	1,259	1,261	1,284	1,301	1,291	1,272	1,282	1,291 avg
Backup Generation	\$ 2.50													0 total
Dedicated Excluded Facilities Charge	16.98%	0	0	0	0	0	0	0	0	0	0	0	0	0 avg
Shared Excluded Facilities Charge	16.98%	667,589	667,589	667,589	667,589	667,589	667,589	667,589	667,589	667,589	667,589	667,589	667,589	667,589 avg
Substation Maintenance Charge (% charge)	10.34%	7,830,486	7,830,486	7,830,486	7,830,486	7,830,486	7,830,486	7,830,486	7,830,486	7,830,486	8,369,486	8,369,486	8,369,486	7,965,236 avg
Substation Investment Charge (\$/sub)	\$ 2,253.00	18	18	18	18	18	18	18	18	18	18	18	18	18 avg
Substation Investment Charge (\$/sub); shared subs	varies	0	0	0	0	0	0	0	0	0	0	0	0	0 avg
Prepaid Substation Credit	NA	0	0	0	0	0	0	0	0	0	0	0	0	0 total
Prepaid Excluded Facilities Credit	NA	0	0	0	0	0	0	0	0	0	0	0	0	0 total
Excess Revenue	NA	0	0	0	0	0	0	0	0	0	0	0	0	0 total
Other Charges/(Credits)	NA	0	0	0	0	0	0	0	0	0	0	0	0	0 total
Dollar Amounts														
Forecast Energy Charge - General	\$	1,277,782	\$ 1,178,624	\$ 1,111,646	\$ 1,046,897	\$ 1,037,994	\$ 1,052,266	\$ 1,292,574	\$ 1,141,918	\$ 1,036,635	\$ 1,074,667	\$ 1,156,184	\$ 1,254,142	\$ 13,661,329
Forecast Energy Charge - C&I		83,945	82,722	89,813	84,938	87,833	93,355	100,895	99,646	89,146	89,220	78,579	78,324	1,058,416
True-up Energy Charge - General		0	0	0	0	0	0	0	0	0	0	0	0	0
True-up Energy Charge - C&I		0	0	0	0	0	0	0	0	0	0	0	0	0
Forecasted Base Demand (Wolv 12CP) General - 2017		213,633	212,231	197,503	177,701	193,014	201,785	217,198	240,120	201,735	185,811	216,108	227,027	2,483,867
Forecasted Base Demand (Wolv 12CP) C&I - 2017		14,150	15,396	15,752	14,506	14,757	16,281	18,127	14,712	15,858	14,478	12,793	13,372	180,182
True-Up Base Demand (Wolv 12CP) General - 2015		0	0	0	0	0	0	0	0	0	0	0	0	0
True-Up Base Demand (Wolv 12CP) C&I - 2015		0	0	0	0	0	0	0	0	0	0	0	0	0
Forecasted MISO-Coincident Demand (1CP) General - 2015		210,938	210,938	210,938	210,938	210,938	210,938	210,938	210,938	210,938	210,938	210,938	210,938	2,531,260
Forecasted MISO-Coincident Demand (1CP) C&I - 2015		0	0	0	0	0	0	0	0	0	0	0	0	0
True-Up MISO-Coincident Demand (1CP) General - 2013		0	0	0	0	0	0	0	0	0	0	0	0	0
True-Up MISO-Coincident Demand (1CP) C&I - 2013		0	0	0	0	0	0	0	0	0	0	0	0	0
Fuel Clause Adjustment, True Up		0	0	0	0	0	0	0	0	0	0	0	0	0
C&I Credits (Tier A); i.e., average demand > 2,000 kW		0	0	0	0	0	0	0	0	0	0	0	0	0
C&I Credits (Tier B); i.e., average demand > 500 kW		(7,393)	(7,286)	(7,910)	(7,481)	(7,736)	(8,222)	(8,886)	(8,776)	(7,851)	(7,858)	(6,921)	(6,898)	(93,218)
Efficient Electric Heat Credit		(9,251)	(14,896)	(14,925)	(12,986)	(11,223)	(7,766)	(3,209)	(1,287)	(1,631)	(1,769)	(2,840)	(5,495)	(87,278)
Electric Water Heater Credits		(5,922)	(5,972)	(5,895)	(5,837)	(5,832)	(5,666)	(5,675)	(5,778)	(5,855)	(5,810)	(5,724)	(5,769)	(69,732)
Backup Generation		0	0	0	0	0	0	0	0	0	0	0	0	0
Dedicated Excluded Facilities Charge		0	0	0	0	0	0	0	0	0	0	0	0	0
Shared Excluded Facilities Charge		777	777	777	777	777	777	777	777	777	777	777	777	9,329
Substation Maintenance Charge (% charge)		67,473	67,473	67,473	67,473	67,473	67,473	67,473	67,473	67,473	72,117	72,117	72,117	823,605
Substation Investment Charge (\$/sub)		40,554	40,554	40,554	40,554	40,554	40,554	40,554	40,554	40,554	40,554	40,554	40,554	486,648
Prepaid Substation Credit		0	0	0	0	0	0	0	0	0	0	0	0	0
Prepaid Excluded Facilities Credit		0	0	0	0	0	0	0	0	0	0	0	0	0
Excess Revenue		0	0	0	0	0	0	0	0	0	0	0	0	0
Other Charges/(Credits)		0	0	0	0	0	0	0	0	0	0	0	0	0
Total		\$ 1,886,686	\$ 1,780,563	\$ 1,705,726	\$ 1,617,481	\$ 1,628,550	\$ 1,661,776	\$ 1,930,767	\$ 1,800,298	\$ 1,647,780	\$ 1,673,127	\$ 1,772,566	\$ 1,879,089	\$ 20,984,408
Non-Energy Components		\$ 524,959	\$ 519,217	\$ 504,267	\$ 485,646	\$ 502,723	\$ 516,155	\$ 537,298	\$ 558,734	\$ 521,999	\$ 509,240	\$ 537,803	\$ 546,623	\$ 6,264,664

Presque Isle Electric & Gas
2017 PSCR Plan

Input by Wolverine
Input by Member
Not Included in Budget

2017
Rates

	2017 PSCR Plan												YTD
	January	February	March	April	May	June	July	August	September	October	November	December	YTD
Contribution to Bundled Rate													
Forecast Energy Charge - General	\$ 53.27	\$ 53.05	\$ 52.53	\$ 52.51	\$ 52.34	\$ 52.14	\$ 52.66	\$ 52.21	\$ 52.28	\$ 52.42	\$ 53.16	\$ 53.43	\$ 52.69
Forecast Energy Charge - C&I	3.50	3.72	4.24	4.26	4.43	4.63	4.11	4.56	4.50	4.35	3.61	3.34	4.08
True-up Energy Charge - General													
True-up Energy Charge - C&I													
Forecasted Base Demand (Wolv 12CP) General - 2017	8.91	9.55	9.33	8.91	9.73	10.00	8.85	10.98	10.17	9.06	9.94	9.67	9.58
Forecasted Base Demand (Wolv 12CP) C&I - 2017	0.59	0.69	0.74	0.73	0.74	0.81	0.74	0.67	0.80	0.71	0.59	0.57	0.69
True-Up Base Demand (Wolv 12CP) General - 2015													
True-Up Base Demand (Wolv 12CP) C&I - 2015													
Forecasted MISO-Coincident Demand (1CP) General - 2015	8.79	9.49	9.97	10.58	10.64	10.45	8.59	9.65	10.64	10.29	9.70	8.99	9.76
Forecasted MISO-Coincident Demand (1CP) C&I - 2015													
True-Up MISO-Coincident Demand (1CP) General - 2013													
True-Up MISO-Coincident Demand (1CP) C&I - 2013													
Fuel Clause Adjustment, True Up													
C&I Credits (Tier A); i.e., average demand > 2,000 kW													
C&I Credits (Tier B); i.e., average demand > 500 kW	(0.31)	(0.33)	(0.37)	(0.38)	(0.39)	(0.41)	(0.36)	(0.40)	(0.40)	(0.38)	(0.32)	(0.29)	(0.36)
Efficient Electric Heat Credit	(0.39)	(0.67)	(0.71)	(0.65)	(0.57)	(0.38)	(0.13)	(0.06)	(0.08)	(0.09)	(0.13)	(0.23)	(0.34)
Electric Water Heater Credits	(0.25)	(0.27)	(0.28)	(0.29)	(0.29)	(0.28)	(0.23)	(0.26)	(0.30)	(0.28)	(0.26)	(0.25)	(0.27)
Backup Generation													
Dedicated Excluded Facilities Charge													
Shared Excluded Facilities Charge	0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.04	0.04	0.04	0.04	0.03	0.04
Substation Maintenance Charge (% charge)	2.81	3.04	3.19	3.38	3.40	3.34	2.75	3.09	3.40	3.52	3.32	3.07	3.18
Substation Investment Charge (\$/sub)	1.69	1.83	1.92	2.03	2.04	2.01	1.65	1.85	2.05	1.98	1.86	1.73	1.88
Prepaid Substation Credit													
Prepaid Excluded Facilities Credit													
Excess Revenue													
Other Charges/(Credits)													
Total	\$ 78.66	\$ 80.14	\$ 80.60	\$ 81.13	\$ 82.12	\$ 82.35	\$ 78.66	\$ 82.32	\$ 83.09	\$ 81.61	\$ 81.50	\$ 80.06	\$ 80.93
Inputs for Member's PSCR Factor													
Member's Line Losses	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00000%
Member's Line Losses	1,918,905	1,777,451	1,693,060	1,594,947	1,586,483	1,614,376	1,963,634	1,749,576	1,586,416	1,640,114	1,739,991	1,877,671	20,742,625
Wholesale Purchases - Member's Losses	22,067,413	20,440,682	19,470,196	18,341,891	18,244,549	18,565,320	22,581,796	20,120,124	18,243,786	18,861,316	20,009,899	21,593,217	238,540,188
Member's HQ Energy Use	0	0	0	0	0	0	0	0	0	0	0	0	0
Member's Sales to its Members	22,067,413	20,440,682	19,470,196	18,341,891	18,244,549	18,565,320	22,581,796	20,120,124	18,243,786	18,861,316	20,009,899	21,593,217	238,540,188
Non-PSCR Sales	0	0	0	0	0	0	0	0	0	0	0	0	0
PSCR Sales	22,067,413	20,440,682	19,470,196	18,341,891	18,244,549	18,565,320	22,581,796	20,120,124	18,243,786	18,861,316	20,009,899	21,593,217	238,540,188
Member's HQ Energy Use	0	0	0	0	0	0	0	0	0	0	0	0	0
Prior Year (Over)/Under Collection	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	180,000
PSCR Cost	1,901,686	1,795,563	1,720,726	1,632,481	1,643,550	1,676,776	1,945,767	1,815,298	1,662,780	1,688,127	1,787,566	1,894,089	21,164,408
Power Supply Rate Before HQ Use and (O)/U Coll.	\$ 85.50	\$ 87.11	\$ 87.61	\$ 88.19	\$ 89.26	\$ 89.51	\$ 85.50	\$ 89.48	\$ 90.32	\$ 88.71	\$ 88.58	\$ 87.02	\$ 87.97
PSCR Rate	\$ 88.72	\$ 88.72	\$ 88.72	\$ 88.72	\$ 88.72	\$ 88.72	\$ 88.72	\$ 88.72	\$ 88.72	\$ 88.72	\$ 88.72	\$ 88.72	\$ 88.72
PSCR Base	\$ 87.85	\$ 87.85	\$ 87.85	\$ 87.85	\$ 87.85	\$ 87.85	\$ 87.85	\$ 87.85	\$ 87.85	\$ 87.85	\$ 87.85	\$ 87.85	\$ 87.85
PSCR Factor	\$ 0.87	\$ 0.87	\$ 0.87	\$ 0.87	\$ 0.87	\$ 0.87	\$ 0.87	\$ 0.87	\$ 0.87	\$ 0.87	\$ 0.87	\$ 0.87	\$ 0.87
Member's PSCR Revenue	\$ 1,957,821	\$ 1,813,497	\$ 1,727,396	\$ 1,627,293	\$ 1,618,656	\$ 1,647,115	\$ 2,003,457	\$ 1,785,057	\$ 1,618,589	\$ 1,673,376	\$ 1,775,278	\$ 1,915,750	\$ 21,163,285
Member's PSCR Cost	1,901,686	1,795,563	1,720,726	1,632,481	1,643,550	1,676,776	1,945,767	1,815,298	1,662,780	1,688,127	1,787,566	1,894,089	21,164,408
Member's Over/(Under) Collection	\$ 56,135	\$ 17,935	\$ 6,670	\$ (5,188)	\$ (24,894)	\$ (29,661)	\$ 57,690	\$ (30,241)	\$ (44,191)	\$ (14,751)	\$ (12,288)	\$ 21,661	\$ (1,123)

**PRESQUE ISLE ELECTRIC & GAS CO-OP
BOARD RESOLUTION
SEPTEMBER 27, 2016**

**RESOLUTION 2016-MR-04
OUTDOOR LIGHTING PROGRAM REVISIONS**

WHEREAS, PIE&G transitioned to member regulation with an effective date of September 23, 2012 thus providing that certain of its rates are no longer regulated by the MPSC; and

WHEREAS, PIE&G has conducted a cost of service study analysis of current and prospective Outdoor Lighting (OD) rates; and

WHEREAS, PIE&G's staff has reviewed the analysis with the Board of Directors; and

WHEREAS, the Cooperative wishes to implement changes to its Outdoor Lighting program to take advantage of Light Emitting Diode technology to reduce the costs to both the Cooperative and it's individual members:

WHEREAS, results of that analysis indicate the need to revise OD lighting rates as indicated in the table below; and

<u>Nominal Rating</u>	<u>Monthly</u>	<u>Annual</u>
40W LED (alternative to 175W MV; 100 W HPS)	\$ 6.80	\$ 81.60
70W LED (alternative to 400W MV; 250W HPS)	\$ 7.70	\$ 92.40
<u>No Longer Available for New Installations</u>		
175 Watts MV	\$11.40	\$136.80
400 Watts MV	\$19.70	\$236.40
100 Watts HPS	\$ 9.00	\$108.00
250 Watts HPS	\$14.80	\$177.60

NOW BE IT HEREBY RESOLVED that the PIE&G Board of Directors accepts the analysis as provided by the cooperative staff as a reasonable basis for establishing the new Outdoor Lighting rates for all bills rendered on or after February 1, 2017 and directs staff to amend the appropriate tariffs in its Electric Rate Book.

CERTIFICATION

I, David Smith, Secretary of the Board of Directors of Presque Isle Electric & Gas Co-op, do hereby certify that the above is a true and correct copy of a resolution adopted at a special meeting of the Board of Directors of Presque Isle Electric & Gas Co-op held on September 27, 2016.

By: _____
David Smith, Secretary

Dated: _____

Presque Isle Electric & Gas
Calculation of Realigned Security Light Rates
Replacement Cost Data for Existing Lights

Line	Description	Ref.	175 MV	400 MV	100 HPS	250 HPS	40 LED	70 LED	Notes	
Investment Cost										
1	Fixture	Input	\$ 40.15	\$ 112.16	\$ 40.15	\$ 112.16	\$ 183.00	\$ 183.00	Per PIE&G fixture cost data. MV cost based on HPS	
2	Installation	P2, L16	210.35	210.35	210.35	210.35	210.35	210.35	Estimated	
3	Total Replacement Cost per Fixture		<u>\$ 250.50</u>	<u>\$ 322.51</u>	<u>\$ 250.50</u>	<u>\$ 322.51</u>	<u>\$ 393.35</u>	<u>\$ 393.35</u>	Per PIE&G fixture cost data..	
4	Useful Life	Input	15	15	15	15	15	15	Per PIE&G fixture cost data..	
5	Annual Depreciation Expense	L3/L4	\$ 16.70	\$ 21.50	\$ 16.70	\$ 21.50	\$ 26.22	\$ 26.22		
6	Capital Costs (Interest and Margin)	L3*P2,L4	15.72	20.24	15.72	20.24	24.69	24.69	Cost of new debt per rate study plus margin at 2 TIER	
7	Property Taxes	L3*P2,L6	2.51	3.23	2.51	3.23	3.93	3.93	Estimated tax rate.	
8	Annual Investment Cost		<u>\$ 34.93</u>	<u>\$ 44.97</u>	<u>\$ 34.93</u>	<u>\$ 44.97</u>	<u>\$ 54.84</u>	<u>\$ 54.84</u>		
9										
10	Annual Power Cost									
11	Lamp kW	Watts/1000	0.175	0.400	0.100	0.250	0.040	0.070		
12	Ballast kW	Input	0.030	0.054	0.026	0.045	-	-	Estimated	
13	Total kW of each Fixture	L11+L12	0.205	0.454	0.126	0.295	0.040	0.070		
14	Annual Hours of Operation	P2,L8	4,300	4,300	4,300	4,300	4,300	4,300	Estimated annual operating hours.	
15	Annual kWh	L13*L14	882	1,952	542	1,269	172	301		
16	Wholesale Energy Cost	P2, L23	\$ 0.0621	\$ 0.0621	\$ 0.0621	\$ 0.0621	\$ 0.0621	\$ 0.0621	Average cost of power for lighting classes per COSS plus Current April 2016 PCA	
17	Total Annual Power Cost to Serve Light	L12*L13	<u>\$ 54.73</u>	<u>\$ 121.21</u>	<u>\$ 33.64</u>	<u>\$ 78.76</u>	<u>\$ 10.68</u>	<u>\$ 18.69</u>		
18										
19	Replacement Lamp Costs									
20	Total Cost of a Lamp (Photocell for LED)	Input	\$ 6.53	\$ 9.30	\$ 9.29	\$ 8.27	\$ -	\$ -		
21	Travel and Labor	P2,L14	210.35	210.35	210.35	210.35	210.35	210.35	Estimated	
22	Total Replacement Lamp Cost		<u>\$ 216.88</u>	<u>\$ 219.65</u>	<u>\$ 219.64</u>	<u>\$ 218.62</u>	<u>\$ 210.35</u>	<u>\$ 210.35</u>		
23	Total Life in Years	Input	8.3	8.3	8.3	8.3	15.0	15.0	Estimated years between Maintenance trips	
24	Total Annual Cost		<u>\$ 26.13</u>	<u>\$ 26.46</u>	<u>\$ 26.46</u>	<u>\$ 26.34</u>	<u>\$ 14.02</u>	<u>\$ 14.02</u>		
25										
26	Other Operating Expenses									
27	Estimated Annual Customer Related Costs	P2, L11	\$ 14.64	\$ 14.64	\$ 14.64	\$ 14.64	\$ 14.64	\$ 14.64	Annual Customer Related Costs per lamp per last COSS.	
28	Estimated Annual Distribution Capacity Costs	P2, L12 * L15	26.36	58.37	16.20	37.93	5.14	9.00	Annual Distribution Capacity Related Costs per lamp per last COSS.	
29	Total Other Operating Costs		<u>\$ 41.00</u>	<u>\$ 73.01</u>	<u>\$ 30.84</u>	<u>\$ 52.57</u>	<u>\$ 19.78</u>	<u>\$ 23.64</u>		
30										
31	Total Annual Cost per Fixture	L8+L17+L24+L29	<u>\$ 156.79</u>	<u>\$ 265.65</u>	<u>\$ 125.87</u>	<u>\$ 202.64</u>	<u>\$ 99.33</u>	<u>\$ 111.20</u>		
32										
33	Total Monthly Cost per Fixture	L31/12	\$ 13.07	\$ 22.14	\$ 10.49	\$ 16.89	\$ 8.28	\$ 9.27		
34	Revenue True Up	-19.9%	(1.69)	(2.40)	(1.53)	(2.05)	(1.47)	(1.53)	Adjustment to match present revenue levels.	
35	Target Monthly Rate	L33+L34	<u>\$ 11.37</u>	<u>\$ 19.74</u>	<u>\$ 8.96</u>	<u>\$ 14.83</u>	<u>\$ 6.81</u>	<u>\$ 7.73</u>		
36										
37	One Minus GRT Rate	1-P2,L18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		
38	Total Monthly Rate (Rounded)	L33/L35	<u>\$ 11.40</u>	<u>\$ 19.70</u>	<u>\$ 9.00</u>	<u>\$ 14.80</u>	<u>\$ 6.80</u>	<u>\$ 7.70</u>		
39										
40	Current Rate	Input	\$ 12.00	\$ 21.74	\$ 8.55	\$ 14.68	\$ 7.30	\$ 7.30		
41	Increase/(Decrease)	L38-L40	<u>\$ (0.60)</u>	<u>\$ (2.04)</u>	<u>\$ 0.45</u>	<u>\$ 0.12</u>	<u>\$ (0.50)</u>	<u>\$ 0.40</u>		
42	Increase/(Decrease) Percentage	L41/L40	<u>-5.0%</u>	<u>-9.4%</u>	<u>5.3%</u>	<u>0.8%</u>	<u>-6.8%</u>	<u>5.5%</u>		
43										

Presque Isle Electric & Gas

Calculation of Realigned Security Light Rates Supplemental Data

Line No.	Description				Amount
1	<u>Cost of Capital</u>	Cost	Capital Structure	Weighted Cost	
2	Cost of New Debt	5.3%	55%		2.92%
3	Margin	7.5%	45%		3.36%
4	Weighted Cost				<u>6.28%</u>
5					
6	<u>Property Tax Rate</u>				<u>1.00%</u>
7					
8	<u>Annual Hours of Light Operation</u>				<u>4,300</u>
9					
10	<u>Data from Cost of Service Study</u>				
11	Customer Related Costs per Year				\$14.64
12	Distribution Related Costs per kWh				\$0.02990
13					
14	<u>Maintenance Trip Cost</u>				<u>\$210.35</u>
15					
16	<u>Installation Cost</u>				<u>\$210.35</u>
17					
18	<u>Utility Receipts Tax</u>				<u>0.0%</u>
19					
20	<u>Average Power Cost</u>				
21	Power Cost per Last Cost of Service Study				\$0.0634
22	Current 2016 Power Cost Adjustment				-\$0.0013
23	Total Power Cost				<u>\$0.0621</u>

**OUTDOOR/SECURITY/STREET LIGHTING SERVICE
SCHEDULE OL**

Availability

Available to existing members of the Cooperative for continuous, year-round service in all territory served by the Cooperative where 120 volt service exists and in accordance with the Cooperative's Rules and Regulations. Where 120 volt service does not exist, additional fees will apply.

As of October 2016, only LED (light emitting diode) lighting technology options will be available for new installations; existing installations of non-LED technologies (mercury vapor, high pressure sodium, etc.) will be replaced with equivalent LED lighting technology at the discretion of the Co-operative at no charge to the Member and at the appropriate tariffed rate.

Nature of Service

Dusk to dawn service controlled by photo-sensitive devices which provide service every night and all night.

(Continued on Sheet No. D-15.01)

Issued September 26, 2016
By: Brian Burns
President and CEO
Onaway, Michigan

Effective for bills rendered on and
after February 1, 2017

Issued under authority of the Board of
Directors dated September 27, 2016

OUTDOOR LIGHTING SERVICE
SCHEDULE OL (Contd)
(Continued from Sheet No. D-15.00)

Rates

<u>Nominal Rating</u>	<u>Monthly</u>	<u>Annual</u>
40W LED (alternative to 175W MV; 100 W HPS)	\$ 6.80	\$ 81.60
70W LED (alternative to 400W MV; 250W HPS)	\$ 7.70	\$ 92.40
<u>No Longer Available for New Installations</u>		
175 Watts MV	\$11.40	\$136.80
400 Watts MV	\$19.70	\$236.40
100 Watts HPS	\$ 9.00	\$108.00
250 Watts HPS	\$14.80	\$177.60

Tax Adjustments

- A. Bills shall be increased within the limits of political subdivisions which levy special taxes, license fees or rentals against the Cooperative's property, or its operations, or the production and/or sale of electric energy, to offset such special charges and thereby prevent other Member-Consumers from being compelled to share such local increases.
- B. Bills shall be increased to offset any new or increased specific tax or excise imposed by any governmental authority which increases the Cooperative's cost of providing electric service.

Type of Service

The Cooperative will supply the energy and will own, operate and maintain the lighting fixtures. Burned out lamps must be reported by the Member-Consumer, and the Cooperative will undertake to replace the lamps as soon as practical during regular working hours. Broken lamps or damage to fixtures by accident or vandalism will be repaired at the Member-Consumer's expense. The Cooperative shall replace or repair, at its cost, streetlight equipment that is out of service with the exception of those caused by accidents or vandalism.

The Cooperative reserves the right to make special contractual arrangements as to term or duration of contract, termination charges or annual charges, or other special consideration when the Member-Consumer requests service, equipment or facilities not normally provided for under this rate.

(Continued on Sheet No. D-15.02)

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President and CEO
Onaway, Michigan

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OUTDOOR LIGHTING SERVICE
SCHEDULE OL (Contd)
(Continued from Sheet No. D-15.01)

Member-Consumers requesting underground service facilities for security or street lights that are not to be installed on an existing pole or from an existing underground service will be charged a contribution in aid of construction based on the rules and regulations governing service laterals as set forth on Sheet No. C-25.00.

Member-Consumers requesting overhead service facilities for security or street lights shall be charged the cost of labor, overhead and materials for additional poles and service facilities necessary.

All accounts will be billed on a monthly basis except billings of security lights for seasonal accounts which shall coincide with the billing of the seasonal account.

Power Supply Cost Recovery Clause and Factor

This rate schedule is subject to the Cooperative's Power Supply Cost Recovery Clause as set forth on Sheet Nos. D-1.00 and D-1.01. For purposes of this adjustment, the following monthly energy usage is assumed:

	<u>kWh</u>
40W LED (alternative to 175W MV; 100 W HPS)	14
70W LED (alternative to 400W MV; 250W HPS)	25
175 Watts Mercury Vapor	74
400 Watts Mercury Vapor	163
100 Watts High Pressure Sodium	45
250 Watts High Pressure Sodium	106

Terms of Payment

A one-time late payment charge of 5% of the unpaid balance, excluding sales tax, will be assessed on any bill not paid by the due date.

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