Power System Engineering, Inc.

City of Escanaba

Cost of Service and Electric Rate Study

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About PSE

Power System Engineering, Inc. (PSE) has been dedicated to helping utilities succeed since 1974. We have worked with more than 200 utilities throughout the nation to help them improve efficiency, cut costs and provide a higher level of service to their customers.

- Engineering (system planning & design)
- Communications (SCADA, AMI/AMR)
- Economics (Load forecasting, resource plans)
- Finance (Rate & COS, Forecasting, Mergers & Acquisitions)

Agenda

- Explain study process and assumptions.
- Summarize study results.
- Rate design recommendations.

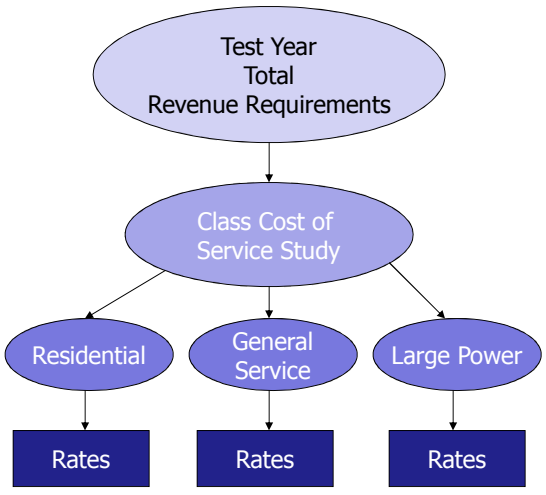
Study Purpose

- Determine how individual rates are tracking with cost of service.
  1. Power Supply
  2. Transmission
  3. Distribution
- Design, evaluate, and recommend rate design, guided by generally-accepted rate making principles.

Rate Recommendation Summary

- Implementing a rate decrease of $1,831,000 or 12.3%.
  - This figure assumes the power plant has been sold or MISO and the City negotiated a Y-1 agreement. Either of these scenarios results in a $0 cost to the City related to plant operations.
- Opportunity to re-align rate levels and rate structures with COS as a guide and with an eye towards the future.
- The COS shows that not all rates are due the same decrease.
- Range of decreases from 6.4% to 17.3%.
- Rate Structure Changes
  - Customer Charge
  - Remove declining block Energy Charges
  - Remove Load Factor Adjustment for Large Power demand billing
  - Consider power plant recovery rider to recoup power plant maintenance costs at the determination of the Council at some point in the future

Study Process



Task 1: Revenue Requirement
- Identify total cost of service for the City.

Task 2: Cost of Service
- Identify class responsibility for revenue requirement.
- Provide unit cost info for use in rate design.

Task 3: Rate Design
- Recover adequate revenue
- Balance other ratemaking objectives

Revenue Requirements

- The total revenue required to operate the Electric Utility, i.e. cost of providing service:

Operating Expenses

+ Other Cash Needs

= Revenue Requirements

Revenue Requirements Summary Cash Flow Basis

Revenue Requirements Summary
Cash Flow Method

		($)
1.	Operating Expenses	13,137,234
2.	Cash Margin Requirements	
	a. Capital Outlay	400,000
	b. Payment to the General Fund	463,624
	c. Total Cash Needs	863,624
	d. Less: Non-Operating Income - Interest	225,000
	e. Less: Depreciation	300,000
	f. Net Cash Margins Required	338,624
3.	Total Revenue Requirements	13,475,858
4.	Revenue From Present Rates	
	a. Tariff Revenue	14,900,900
	b. Other Operating Revenue	406,200
	c. Total Revenue	15,307,100
5.	Required Increase (Decrease) [1]	(1,831,242)
	or	-12.3%

[1] Percent decrease is calculated based on the percent of Tariff Revenue.

Power Costs

- Current contract through NextEra
  - Contracted at $0.05710/kWh purchased
  - Low kW charge, calculated at $0.23/kW purchased
- Alternative potential future power cost scenario, based on a formula based power supply
  - Lower kWh charge, $0.03188/kWh purchased
  - Higher demand charge of $16.06/kW purchased
  - Assumed no change in MISO monthly billings or transmission costs
  - Alternative purchased power scenario would result in added costs of $896,000 per year

Comparison of Power Costs

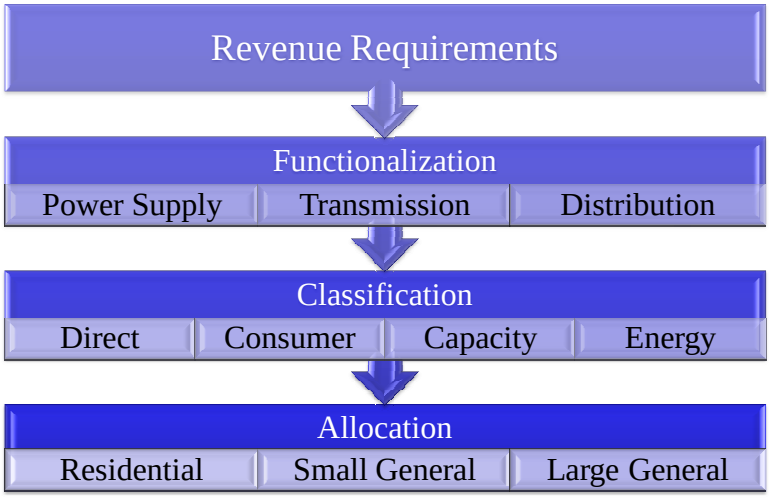
Comparison of
Purchased Power Expense

Line No.	Description	Units		NextEra Rates	Alternative Rates		NextEra Cost	Alternative Cost	Power Cost Change
1							($)	($)	($)
2	**MISO Monthly Billings**						180,000	180,000	-
3									
4	**Demand Charge**								
5	Demand	301,100	kW	$0.23	$16.06	/kW	68,600	4,835,666	4,767,066
6									
7	**Energy Charge**								
8	Energy	153,500,000	kWh	$0.05710	$0.03188	/kWh	8,764,850	4,893,580	(3,871,270)
9									
10	**Transmission**								
11	ATC Transmission Charge	301,100	kW	$4.04	$4.04	/kW	1,216,170	1,216,170	-
12									
13									
14	**Total Test Year**	153,500,000	kWh	$0.06664	$0.07248	/kWh	10,229,620	11,125,416	895,796

Cost of Service Study Purpose

- To identify the cost of providing service as a function of:
  - Service provided.
  - Load characteristics.
- Guide for distributing or allocating revenue requirements;
  - Goal: equity between rate classes.
- Guide for designing individual rate schedules (e.g., service charge, energy charge, demand charge);
  - Goal: equity within each rate class.

Class Cost of Service Flow



- Cost causers should be cost payers.
- Cost users should be cost payers.

Functionalization

- Costs are arranged into basic service functions of:
  - Power Supply or Generation
  - Transmission
  - Distribution

Classification

- Costs are classified into categories that reflect how they are incurred and to facilitate allocation.

Power Supply	Transmission	Distribution
Direct		Direct
		Consumer
Capacity	Capacity	Capacity
Energy		

Allocation

- Only a few costs are directly related to a specific class (e.g. security lights). These costs can be directly assigned to a specific class
- Most costs are "common" since they are related to providing service to all consumers
  - These costs must be allocated

Allocation Factors

- Allocation factors spread costs to classes based on a relationship to system use

Direct	Consumer	Capacity	Energy
■ Class specific	■ weighted # of consumers	■ Non-Coinc. Demand kW ■ Coinc. Demand kW	■ metered energy sales (kWh)

Allocation Example

- Wholesale purchased energy costs are allocated on the basis of energy sales to each rate class.
- Meters are allocated on a per customer basis.

Class COS Summary

Class Cost of Service
Summary -- Present Rates

Rate Class	Present Rate Revenue [1]	Revenue Requirements	Increase/(Decrease)	
			Amount	Percent
	($)	($)	($)	
Residential	4,197,281	3,992,692	(204,589)	(5.0%)
Commercial	3,915,208	3,254,906	(660,302)	(17.3%)
Large Power	6,339,923	5,406,021	(933,902)	(15.1%)
Water Heating	34,644	33,430	(1,214)	(3.6%)
Electric Heating	32,768	30,313	(2,455)	(7.7%)
Municipal	596,593	501,010	(95,583)	(16.5%)
Street Lighting	131,900	207,419	75,519	58.8%
Dusk to Dawn Lighting	58,783	50,068	(8,715)	(15.2%)
Total	15,307,100	13,475,858	(1,831,242)	

[1] Includes an allocated share of Other Operating Revenue.

Base Case Class Allocation Summary

Class Cost of Service
Class Allocation Summary

Rate Class	Power Supply		Transmission	Distribution		Total COS
	Capacity	Energy		Consumer	Capacity	
	($)	($)	($)	($)	($)	($)
Residential	20,956	2,187,863	390,466	874,036	519,370	3,992,692
Commercial	17,220	2,185,643	320,857	286,950	444,235	3,254,906
Large Power	28,658	4,076,790	533,960	29,688	736,926	5,406,021
Water Heating	218	19,145	4,063	4,792	5,211	33,430
Electric Heating	224	19,621	4,183	781	5,504	30,313
Municipal	2,802	352,705	52,204	14,447	78,853	501,010
Street Lighting	-	86,539	-	100,279	20,600	207,419
Dusk to Dawn Lighting	-	25,475	-	18,828	5,765	50,068
Total	70,079	8,953,782	1,305,732	1,329,800	1,816,465	13,475,858

Rate Design Factors

Class Cost of Service
Rate Design Factors

Rate Class	Power Supply		Transmission	Distribution		Total Cost
	Capacity	Energy [1]		Consumer	Capacity	
	(¢/kWh)	(¢/kWh)	(¢/kWh)	($/mo.)	(¢/kWh)	(¢/kWh)
Residential	0.06	6.17	1.10	$ 11.91	1.46	11.26
Commercial	0.05	6.17	0.91	$ 22.58	1.25	9.19
Large Power	0.04	6.05	0.79	$ 60.10	1.09	8.03
Water Heating	0.07	6.17	1.31	$ 2.50	1.68	10.78
Electric Heating	0.07	6.17	1.32	$ 2.50	1.73	9.53
Municipal	0.05	6.17	0.91	$ 11.91	1.38	8.77
Street Lighting	-	6.17	-	$ 0.60	1.47	14.79
Dusk to Dawn Lighting	-	6.17	-	$ 5.37	1.40	12.13
Total - Average	0.05	6.12	0.89	$ 10.92	1.24	9.21

[1] Cost per kWh figures includes system average line losses.

Customer Related Cost
Residential

Line No.	Description	Consumer Related Cost
1	Primary Line	($/cons./mo.)
2	Depreciation	
3	Interest	
4	O&M	
5	A&G	
6	Subtotal	$ -
7		
8	Transformer	
9	Depreciation	
10	Interest	
10	O&M	
11	A&G	
11	Subtotal	$ 0.75
12	Meter & Service	
13		
14	Depreciation	
14	Interest	
15	O&M	
15	A&G	
16	Subtotal	$ 4.31
16		
20	Customer Accounting Expense	$ 5.88
21	Taxes & Miscellaneous	$ -
22	Margins	$ 0.96
23	Subtotal	
24	**Total**	$ 11.91

Cost Study Uses and Limitations

- Provides a reasonable guide for identifying average cost responsibility of customers within a class.
- Results cannot be used to identify the specific cost of providing service to an individual customer.
- Allocating costs is subject to numerous assumptions, philosophy, and methodologies.

Typical Rate Design Objectives

Rate Design Caveat

- Not all rate design objectives can be simultaneously achieved to their fullest extent.
- Must be balanced based on the philosophy and judgment of the City.

24

Rate Design Process

Step 1: Determine rate class decreases

- Allocation of increase/(decrease) between rate classes
- Cost of service vs. other objectives

	Range of % Decrease
Average =	12.3%
Minimum =	6.15% (1/2 of Average)
Maximum =	18.45% (1 ½ times Average)

Step 2: Design rates to distribute the determined decrease by class

- Focus on equity or recovery within the rate classes
- Customer Charge, Demand Charge, Energy Charges

25

Facility Charge Considerations

	High	Low
Cost Causation	X	X
Revenue Stability (weather)	X	
Historical Practice		X
Neighboring Utilities	X	X
Customer Acceptance	X	X
Environmental/Conservation		X

Comparison of Revenue

Comparison of Revenue
Present and Proposed Rates

(a) Line No.	(b) Rate Class	(c) Revenue Present Rates	(d) Revenue Proposed Rates	(e) Increase/(Decrease) Amount	(f) Increase/(Decrease) Percent
		($)	($)	($)	(%)
1	Residential	4,085,899	3,822,805	(263,094)	-6.4%
2	Commercial	3,811,311	3,151,259	(660,052)	-17.3%
3	Large Power	6,171,682	5,325,790	(845,892)	-13.7%
4	Water Heating	33,725	31,521	(2,204)	-6.5%
5	Electric Heating	31,899	28,450	(3,449)	-10.8%
6	Municipal	580,762	506,395	(74,366)	-12.8%
7	Street Lighting	128,400	152,997	24,597	19.2%
8	Dusk to Dawn Lighting	57,223	49,904	(7,319)	-12.8%
9	**Total**	14,900,900	13,069,122	(1,831,779)	-12.3%

COS Summary Under Proposed Rates

Class Cost of Service
Summary -- Proposed Rates

Rate Class	Proposed Rate Revenue [1]	Revenue Requirements	Increase/(Decrease) Amount	Increase/(Decrease) Percent
	($)	($)	($)	
Residential	3,934,187	3,992,692	58,504	1.5%
Commercial	3,255,156	3,254,906	(250)	(0.0%)
Large Power	5,494,031	5,406,021	(88,010)	(1.6%)
Water Heating	32,440	33,430	989	3.1%
Electric Heating	29,319	30,313	994	3.4%
Municipal	522,227	501,010	(21,217)	(4.1%)
Street Lighting	156,497	207,419	50,921	32.5%
Dusk to Dawn Lighting	51,464	50,068	(1,396)	(2.7%)
Total	13,475,322	13,475,858	536	

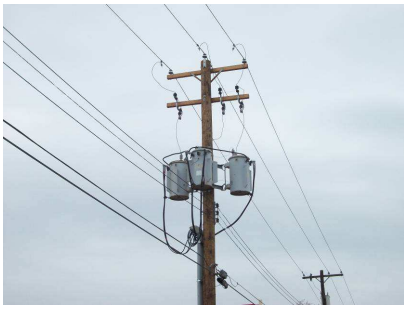
[1] Includes an allocated share of Other Operating Revenue.

Rate Design Summary

- Increase customer charge and move towards the COS results and to recover more of the fixed costs to provide service
- Collapse energy blocks and have a flat kWh charge
- Split out Commercial customer charge between Single Phase and Three Phase customers due to increased costs to the City to serve the Three Phase customers

Commercial Class - Single Phase and Three Phase Equipment

Single Phase



Three Phase

Comparison of Present and Proposed Rates

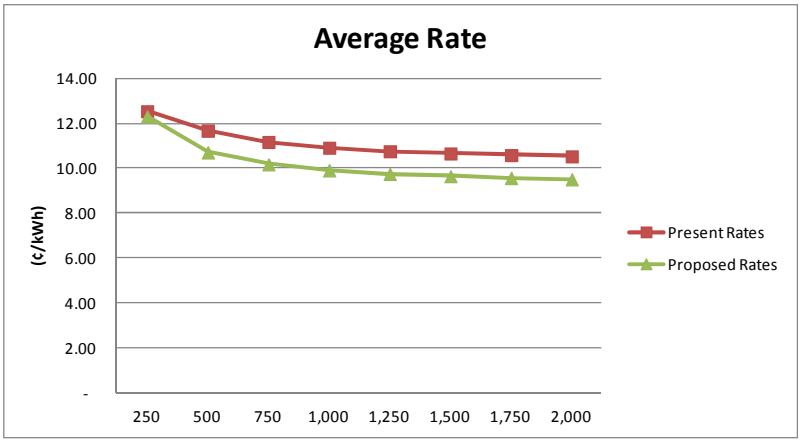
		Present Rates	Proposed Rates	COS	Potential Future Power Cost COS	
Residential						
Customer Charge						
In City	@	$3.19	$7.98	$11.91	$11.91	/month
Out of City	@	$4.01	$10.03	$11.91	$11.91	/month
Energy Charge						
First 400 kWh	@	$0.11264	$0.09114	$0.08800	$0.10160	/kWh
Over 400 kWh	@	$0.10151	$0.09114	$0.08800	$0.10160	/kWh
Power Plant Cost Adjustment	@	$0.00000	$0.00000	$0.00000	$0.00000	/kWh
Commercial						
Customer Charge - Single Phase						
In City	@	$3.19	$7.98	$22.58	$22.58	/month
Out of City	@	$4.01	$10.03	$22.58	$22.58	/month
Customer Charge - Three Phase						
In City	@	$3.19	$15.95	$22.58	$22.58	/month
Out of City	@	$4.01	$20.05	$22.58	$22.58	/month
Energy Charge						
First 500 kWh	@	$0.13629	$0.08500	$0.08380	$0.09020	/kWh
Next 1,500 kWh	@	$0.10707	$0.08500	$0.08380	$0.09020	/kWh
Over 2,000 kWh	@	$0.10151	$0.08500	$0.08380	$0.09020	/kWh
Power Plant Cost Adjustment	@	$0.00000	$0.00000	$0.00000	$0.00000	/kWh

Bill Comparison - Residential

Present			Proposed		
Customer Charge			Customer Charge		
In City	$3.19	/month	In City	$7.98	/month
Out of City	$4.01	/month	Out of City	$10.03	/month
Energy Charge			Energy Charge		
First 400 kWh	$0.11264	/kWh	First 400 kWh	$0.09114	/kWh
Over 400 kWh	$0.10151	/kWh	Over 400 kWh	$0.09114	/kWh
Power Cost Adjustment	$0.00000	/kWh	Power Cost Adjustment	$0.00000	/kWh

kWh/ Mo.	Estimated Bill		Difference		Average Rate	
	Present	Proposed	Amount	Percent	Present	Proposed
(kWh/mo)	($)	($)	($)	(%)	(¢/kWh)	(¢/kWh)
-	3.19	7.98	4.79	150.00	N.A.	N.A.
250	31.35	30.76	(0.59)	(1.88)	12.54	12.30
500	58.40	53.55	(4.85)	(8.31)	11.68	10.71
750	83.77	76.33	(7.44)	(8.89)	11.17	10.18
1,000	109.15	99.12	(10.04)	(9.20)	10.92	9.91
1,250	134.53	121.90	(12.63)	(9.39)	10.76	9.75
1,500	159.91	144.69	(15.22)	(9.52)	10.66	9.65
1,750	185.28	167.47	(17.81)	(9.61)	10.59	9.57
2,000	210.66	190.26	(20.41)	(9.69)	10.53	9.51

Bill Comparison - Residential



Unbundled Rate Example - Residential

Rate Class	Billing Determinants	Units	Rate	Revenue
Residential				($)
Power Supply Charges				
Energy Charge	35,453,930	kWh	$0.06230	2,208,780
Delivery Charges				
Customer Charge				
In City	5,861	cons.	$7.98	560,898
Out of City	255	cons.	$10.03	30,636
Delivery Energy Charge	35,453,930	kWh	$0.02884	1,022,491
			Total	3,822,805
			Per Exhibit 6	3,822,805

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Bill Comparison - Commercial

Present			Proposed		
Customer Charge			Customer Charge - Single Phase		
In City	$3.19	/month	In City	$7.98	/month
Out of City	$4.01	/month	Out of City	$10.03	/month
Energy Charge			Energy Charge		
First 500 kWh	$0.13629	/kWh	First 500 kWh	$0.08500	/kWh
Next 1,500 kWh	$0.10707	/kWh	Next 1,500 kWh	$0.08500	/kWh
Over 2,000 kWh	$0.10151	/kWh	Over 2,000 kWh	$0.08500	/kWh
Power Cost Adjustment	$0.00000	/kWh	Power Cost Adjustment	$0.00000	/kWh

kWh/ Mo.	Estimated Bill		Difference		Average Rate	
	Present	Proposed	Amount	Percent	Present	Proposed
(kWh/mo)	($)	($)	($)	(%)	(¢/kWh)	(¢/kWh)
-	3.19	7.98	4.79	150.00	N.A.	N.A.
500	71.34	50.48	(20.86)	(29.24)	14.27	10.10
1,000	124.87	92.98	(31.90)	(25.54)	12.49	9.30
1,500	178.41	135.48	(42.93)	(24.06)	11.89	9.03
2,000	231.94	177.98	(53.97)	(23.27)	11.60	8.90
3,000	333.45	262.98	(70.48)	(21.14)	11.12	8.77
4,000	434.96	347.98	(86.99)	(20.00)	10.87	8.70
5,000	536.47	432.98	(103.50)	(19.29)	10.73	8.66
7,500	790.25	645.48	(144.77)	(18.32)	10.54	8.61

35

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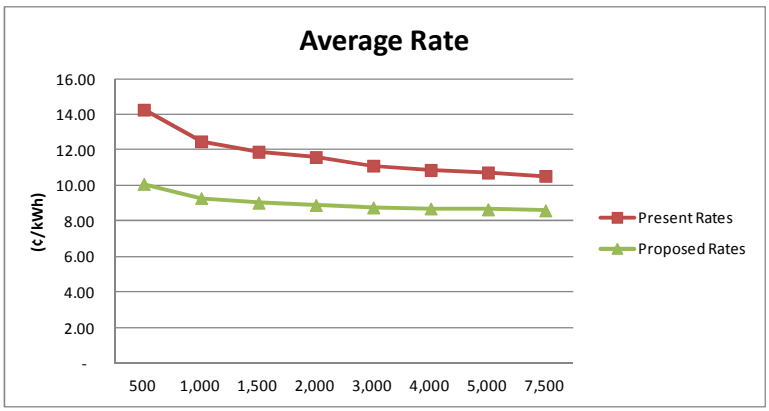
Bill Comparison - Commercial



36

Large Power Rate Changes

- Implement a customer charge, currently there is no customer charge for the LP rate.
- Removal of the Load Factor Adjustment, change to a flat demand charge for kW.
  - The current Load Factor Adjustment has an effective demand charge of $3.96/kW versus stated $10.71/kW.
  - Under the Cost of Service analysis, demand cost is $7.65/kW while under the alternative potential future power supply scenario, the demand costs would be $19.34/kW.
  - Recommend starting a transition towards a higher demand charge
- Collapse energy blocks to a flat energy charge versus declining block.

Comparison of Present and Proposed Rates

		Present Rates	Proposed Rates	COS	Potential Future Power Cost COS	
Large Power						
Customer Charge						
In City	@	N/A	$60.10	$60.10	$60.10	/month
Out of City	@	N/A	$60.10	$60.10	$60.10	/month
Demand Charge	@	$10.71	$8.54	$7.65	$19.34	/kW
Energy Charge						
First 50,000 kWh	@	$0.08621	$0.05710	$0.06050	$0.03370	/kWh
Next 150,000 kWh	@	$0.08219	$0.05710	$0.06050	$0.03370	/kWh
Over 200,000 kWh	@	$0.07817	$0.05710	$0.06050	$0.03370	/kWh
Power Plant Cost Adjustment	@	$0.00000	$0.00000	$0.00000	$0.00000	/kWh
Water Heating						
Customer Charge						
In City	@	$1.63	$2.00	$2.50	$2.50	/month
Out of City	@	$2.41	$2.96	$2.50	$2.50	/month
Energy Charge	@	$0.09824	$0.08876	$0.09230	$0.11370	/kWh
Power Plant Cost Adjustment	@	$0.00000	$0.00000	$0.00000	$0.00000	/kWh
Electric Heating						
Customer Charge						
In City	@	$1.63	$2.00	$2.50	$2.50	/month
Out of City	@	$2.41	$2.96	$2.50	$2.50	/month
Energy Charge	@	$0.09824	$0.08876	$0.09290	$0.11450	/kWh
Power Plant Cost Adjustment	@	$0.00000	$0.00000	$0.00000	$0.00000	/kWh

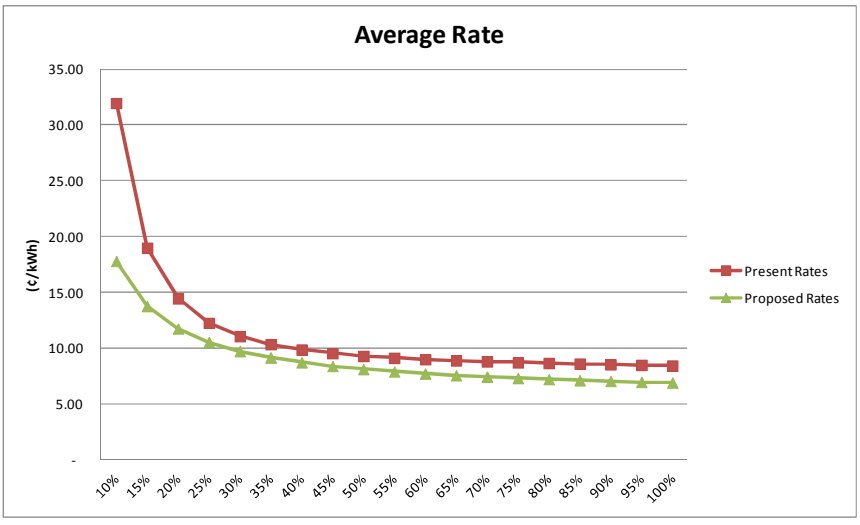
Bill Comparison – Large Power (350kW)

Present			Proposed		
Customer Charge			Customer Charge		
In City	$0.00	/month	In City	$60.10	/month
Out of City	$0.00	/month	Out of City	$60.10	/month
Demand Charge	$10.71	/kW	Demand Charge	$8.54	/kW
Energy Charge			Energy Charge		
First 50,000 kWh	$0.08621	/kWh	First 50,000 kWh	$0.05710	/kWh
Next 150,000 kWh	$0.08219	/kWh	Next 150,000 kWh	$0.05710	/kWh
Over 200,000 kWh	$0.07817	/kWh	Over 200,000 kWh	$0.05710	/kWh
Power Plant Cost Adjustı	$0.00000	/kWh	Power Plant Cost Adjustm	$0.00000	/kWh

	kWh/	Estimated Bill		Difference		Average Rate	
LF	Mo.	Present	Proposed	Amount	Percent	Present	Proposed
	(kWh/mo)	($)	($)	($)	(%)	(¢/kWh)	(¢/kWh)
10%	25,200	8,057.64	4,488.02	(3,569.62)	(44.30)	31.97	17.81
15%	37,800	7,182.17	5,207.48	(1,974.69)	(27.49)	19.00	13.78
20%	50,400	7,285.95	5,926.94	(1,359.01)	(18.65)	14.46	11.76
25%	63,000	7,733.03	6,646.40	(1,086.63)	(14.05)	12.27	10.55
30%	75,600	8,376.28	7,365.86	(1,010.42)	(12.06)	11.08	9.74
35%	88,200	9,131.63	8,085.32	(1,046.31)	(11.46)	10.35	9.17
40%	100,800	9,957.04	8,804.78	(1,152.26)	(11.57)	9.88	8.73
45%	113,400	10,829.16	9,524.24	(1,304.92)	(12.05)	9.55	8.40
50%	126,000	11,733.97	10,243.70	(1,490.27)	(12.70)	9.31	8.13
55%	138,600	12,662.56	10,963.16	(1,699.40)	(13.42)	9.14	7.91
60%	151,200	13,608.99	11,682.62	(1,926.37)	(14.16)	9.00	7.73
65%	163,800	14,569.13	12,402.08	(2,167.05)	(14.87)	8.89	7.57
70%	176,400	15,540.05	13,121.54	(2,418.51)	(15.56)	8.81	7.44
75%	189,000	16,519.60	13,841.00	(2,678.60)	(16.21)	8.74	7.32
80%	201,600	17,499.72	14,560.46	(2,939.26)	(16.80)	8.68	7.22
85%	214,200	18,441.38	15,279.92	(3,161.46)	(17.14)	8.61	7.13
90%	226,800	19,387.86	15,999.38	(3,388.48)	(17.48)	8.55	7.05
95%	239,400	20,338.39	16,718.84	(3,619.55)	(17.80)	8.50	6.98
100%	252,000	21,292.35	17,438.30	(3,854.05)	(18.10)	8.45	6.92

39

Bill Comparison – Large Power



40

Comparison of Present and Proposed Rates

		Present Rates	Proposed Rates	COS	Potential Future Power Cost COS	
Municipal						
Customer Charge	@	$3.21	$7.98	$11.91	$11.91	/month
Energy Charge	@	$0.10093	$0.08860	$0.08510	$0.09180	/kWh
Power Plant Cost Adjustment	@	$0.00000	$0.00000	$0.00000	$0.00000	/kWh
Street Lighting						
Energy Charge	@	$0.09156	$0.10910	$0.14790	$0.12060	/kWh
Power Plant Cost Adjustment	@	$0.00000	$0.00000	$0.00000	$0.00000	/kWh
Dusk to Dawn Lighting						
Small	@	$12.89	$11.24	$11.04	$8.99	/month
Large	@	$19.32	$16.85	$18.46	$13.73	/month

Rate Recommendation Summary

- Implementing a rate decrease of $1,831,000 or 12.3%.
  - This figure assumes the power plant has been sold or MISO and the City negotiated a Y-1 agreement. Either of these scenarios results in a $0 cost to the City related to plant operations.
- Opportunity to re-align rate levels and rate structures with COS as a guide and with an eye towards the future.
- The COS shows that not all rates are due the same decrease.
- Range of decreases from 6.4% to 17.3%.
- Rate Structure Changes
  - Customer Charge
  - Remove declining block Energy Charges
  - Remove Load Factor Adjustment for Large Power demand billing
  - Consider power plant recovery rider to recoup power plant maintenance costs at the determination of the Council at some point in the future

Community Comparisons - Residential

City/Utility	Residential Rate			Residential Bill	
	Meter Charge	Energy Charge		300 kWh/mo	800 kWh/mo
Marquette Marquette BLP	$5.50	First 1,000 kWh Over 1,000 kWh	$0.07440 $0.07000	$31.72	$75.41
Manistique Cloverland REA	$3.40	All kWh	$0.09311	$31.98	$79.62
Menominee WPS	$9.00	All kWh	$0.08487	$34.46	$76.90
Escanaba Proposed Rates	$7.98	All kWh	$0.09110	$35.32	$80.89
Escanaba City of Escanaba	$3.19	First 400 kWh Over 400 kWh	$0.11264 $0.10151	$36.98	$88.85
Sturgeon Bay WPPI	$7.00	All kWh	$0.10600	$38.80	$91.80
Gladstone WPPI	$8.00	All kWh	$0.12010	$44.03	$104.08
Iron Mountain WE Energies	$9.47	All kWh	$0.13145	$48.91	$114.63
Ishpeming UPPCO	$11.00	All kWh	$0.18350	$66.05	$157.80

43

Community Comparisons - Commercial

City/Utility	Commercial Rate			Commercial Bill	
	Meter Charge	Energy Charge		4,000 kWh/mo	40,000 kWh/mo 85 kW
Marquette Marquette BLP	$13.80	First 3,500 kWh Over 3,500 kWh	$0.08800 $0.06000	$403.76	$3,445.85
Manistique Cloverland REA	$7.40	All kWh	$0.10611	$440.48	$4,338.20
Menominee WPS	$22.00	All kWh	$0.08925	$379.00	$3,603.80
Escanaba Proposed Rates	1 PH - $7.98 3 PH - $15.95	All kWh	$0.08500	$347.98	$3,415.95
Escanaba City of Escanaba	$3.19	First 500 kWh Next 1,500 kWh Over 2,000 kWh	$0.13629 $0.10707 $0.10151	$434.96	$4,089.32
Sturgeon Bay WPPI	$8.00	All kWh	$0.10600	$432.00	$4,248.00
Gladstone WPPI	$8.00	All kWh	$0.12170	$494.80	$4,013.00
Iron Mountain WE Energies	$14.79	All kWh	$0.13659	$561.15	$4,131.243 - $4,417.842
Ishpeming UPPCO	$15.00	All kWh	$0.18505	$755.20	$5,625.40

44

Community Comparisons – Large Power

City/Utility	Large Power Rate				Large Power Bill	
	Meter Charge	Demand Charge	Energy Charge		60,000 kWh/mo 112 kW	200,000 kWh/mo 463 kW
Marquette Marquette BLP	$0.00	$7.80	All kWh	$0.06499	$5,025.40	$16,609.40
Manistique Cloverland REA	$600.00	$4.90	First 300kwh/kw Next 200kwh/kw Over 500kwh/kw	$0.08511 $0.08111 $0.07911	$6,385.00	$20,078.30
Menominee WPS	$115.00	$8.72	On-Peak (16hrs) Off-Peak (8hrs)	$0.06197 $0.03350	$4240.441 - $4809.842	$14,648.361 - $16,546.362
Escanaba Proposed Rates	$60.10	$8.54	All kWh	$0.05710	$4,442.58	$15,434.12
Escanaba City of Escanaba	$0.00	$10.71	First 50,000 kwh Next 150,000 kwh Over 200,000	$0.08621 $0.08219 $0.07817	$5,385.51	$17,936.64
Sturgeon Bay WPPI	$100.00	$9.00	On-Peak (12hrs) Off-Peak (12hrs)	$0.08600 $0.04300	$4,832.00	$17,167.003 - $21,467.002
Gladstone WPPI	$75.50	$8.50	All kWh	$0.07590	$5,581.50	$19,191.00
Iron Mountain WE Energies	$83.84	$18.53	On-Peak (12hrs) Off-Peak (12hrs)	$0.06898 $0.05465	$5,867.763 - $6,297.662	$21,024.843 - $22,457.842
Ishpeming UPPCO	$250.00	$15.50	On-Peak (16hrs) Off-Peak (8hrs)	$0.09630 $0.06261	$8,222.60	$24,440.501 - $26,686.502

45

Questions?

46

Thank You!

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