

A REGULAR MEETING

Of The

TRAVERSE CITY LIGHT AND POWER BOARD

Will Be Held On

Tuesday, September 25, 2018

At

5:15 p.m.

In The

COMMISSION CHAMBERS
(2nd floor, Governmental Center)
400 Boardman Avenue

Traverse City Light and Power will provide necessary reasonable auxiliary aids and services, such as signers for the hearing impaired and audio tapes of printed materials being considered at the meeting, to individuals with disabilities at the meeting/hearing upon notice to Traverse City Light and Power. Individuals with disabilities requiring auxiliary aids or services should contact the Light and Power Department by writing or calling the following.

Jennifer St. Amour
Administrative Assistant
1131 Hastings Street
Traverse City, MI 49686
(231) 932-4543

Traverse City Light and Power
1131 Hastings Street
Traverse City, MI 49686
(231) 922-4940

Posting Date: 9-21-18
3:00 p.m.

AGENDA

Pledge of Allegiance

1. Roll Call

2. Disclosure of Recusal

3. Consent Calendar

The purpose of the consent calendar is to expedite business by grouping non-controversial items together to be dealt with by one Board motion without discussion. Any member of the Board, staff or the public may ask that any item on the consent calendar be removed therefrom and placed elsewhere on the agenda for full discussion. Such requests will be automatically respected. If an item is not removed from the consent calendar, the action noted in parentheses on the agenda is approved by a single Board action adopting the consent calendar.

- a. Approval of Agenda.
- b. Consideration of approving minutes of the Regular Meeting of August 14, 2018. (Approval Recommended (p.4))
- c. Consideration of approving a Confirming Contract with Cintas Corporation. (Approval Recommended) (Arends) (p.8)
- d. Consideration of approving a purchase order for relay control panels for the Parsons Switching Station Project. (Approval Recommended) (Dixon) (p.9)

4. Unfinished Business

- a. Consideration of scheduling a Public Hearing October 9, 2018 regarding rate adjustments to be effective November 1, 2018. (Myers-Beman) (p.12)

5. New Business

- a. Consideration of authorizing the Executive Director to execute a Letter of Authorization with MPPA for renewable energy. (Arends) (p.36)
- b. Consideration of a request from the City of Traverse City regarding the lighting component of the Hickory Hills Recreational Area Improvement Project. (Colburn) (p.45)
- c. Consideration of approving a Construction Contract for the Parsons Switching Station Project. (Chartrand) (p.49)

6. Reports and Communications

- a. From Legal Counsel.

a. From Staff.

1. Discussion of On-Bill Financing. (Hardy) (p.52)
2. Electronic Board packets presentation. (St. Amour/Menhart) (video)

b. From Board.

7. Public Comment

a. General.

/js

**TRAVERSE CITY
LIGHT AND POWER BOARD**

Minutes of Regular Meeting
Held at 5:15 p.m., Commission Chambers, Governmental Center
Tuesday, August 14, 2018

Board Members -

Present: Pat McGuire, Elysha Davila, Ross Hammersley, Amy Shamroe, Tim Werner, John Taylor

Absent: Paul Heiberger

Ex Officio Member -

Present: Marty Colburn, City Manager

Others: Tim Arends, Daren Dixon, Scott Menhart, Karla Myers-Beman, Kelli Schroeder, Tony Chartrand, Jacob Hardy, Mark Watson, Jennifer J. St. Amour

The meeting was called to order at 5:15 p.m. by Chairman McGuire.

Item 2 on the Agenda being Disclosure of Recusal – None

Chairman McGuire made a motion to add item f. to the Consent Calendar, approving a purchase order for transformers from ABB. Seconded by Hammersley.

CARRIED unanimously.

Item 3 on the Agenda being Consent Calendar

Moved by Shamroe, seconded by Hammersley, that the following actions, as recommended on the Consent Calendar portion of the Agenda, be approved:

- a. Approval of Agenda
- b. Minutes of the Regular Meeting of July 10, 2018.
- c. Approving the corrective action plan submission regarding Traverse City Light & Power's pension system to the State of Michigan Department of Treasury.
- d. Authorizing a Letter of Agreement with the Utility Workers Union of America, AFL-CIO Local No. 295.
- e. Approving a partial material purchase for the Parsons Switching Station project.
- f. Consideration of approving a purchase order for eight potential transformers to be used for the Parsons Switching Project.

CARRIED unanimously.

Items Removed from the Consent Calendar

None.

Item 4 on the Agenda being Unfinished Business

- a. Consideration of approving the 2018 Strategic Plan.

The following individuals addressed the Board:

Tim Arends, Executive Director
Karla Myers-Beman, Controller
Daren Dixon, Operations Manager
Scott Menhart, Mgr. of Telecom & Technology
Kelli Schroeder, Mgr. of Human Resources & Communications
Jacob Hardy, Key Accounts/Energy Technician

The following individuals from the Public addressed the Board:

Elizabeth Dell, 117 E. 10th St., ratepayer
Kate Madigan, 400 Boughey St., ratepayer
Mayor James Carruthers, 218 W. Eleventh St., ratepayer
Woody Smith, 502 Fifth St., ratepayer
Ann Rogers, 1236 Peninsula Dr., ratepayer
Greg Reisig, NMEAC, non-ratepayer
Dave Petrov, 9988 Riley Rd., non-ratepayer
Dr. Lisa Del Buono, 1800 Nelson Rd., non-ratepayer
Suzannah Tobin, 502 Fifth St., ratepayer
Maureen Voss, 727 Washington St., ratepayer
Jeff Gibbs, Benzie County, non-ratepayer
Russell Schindler, 1123 Front St., ratepayer
Bob Eichenlaub, 531 Randolph St., ratepayer
Ric Evans, Groundwork Center for Resilient Communities

Moved by Shamroe, seconded by Hammersley, that the Board adopt the Traverse City Light & Power Strategic Plan – 2018 as amended.

YES – Taylor, Davila, Hammersley, Werner, Shamroe
NO – McGuire

CARRIED.

Item 5 on the Agenda being New Business

- g. Consumers Energy 46kV Rebuild.

The following individuals addressed the Board:

Daren Dixon, Operations Manager
Tim Arends, Executive Director

Moved by Shamroe, seconded by Werner, that the Board authorizes the Chairman and Secretary to enter into an hourly Construction Agreement with CC Power, LLC in an

amount \$83,700, more or less, to rebuild & relocate overhead lines in the right-of-way east of Peninsula Dr. between Eastern Ave. and North Orchard Dr. subject to approval as to substance by the Executive Director and as to form by General Counsel.

The following individuals addressed the Board:

Tom Lemay, 711 Calvin Dr., ratepayer

CARRIED unanimously.

Item 6 on the Agenda being Reports and Communications

a. From Legal Counsel.

b. From Staff.

1. MPPA Update.

The following individuals addressed the Board:

Tim Arends, Executive Director

2. Discussion of potential renewable energy project on TCL&P owned property on Cedar Run Rd.

The following individuals addressed the Board:

Tim Arends, Executive Director
Mark Watson, Field Engineer

3. Capital Plan Update.

The following individuals addressed the Board:

Tim Arends, Executive Director
Karla Myers-Beman, Controller

c. From Board

Item 7 on the Agenda being Public Comment

a. General

The following individuals from the Public addressed the Board:

Ann Rogers, 1236 Peninsula Dr., ratepayer
Dave Petrov, 9988 Riley Rd., non-ratepayer

There being no objection, Chairman McGuire declared the meeting adjourned at 6:46 p.m.

Tim Arends, Secretary
LIGHT AND POWER BOARD

DRAFT



**TRAVERSE CITY
LIGHT & POWER**

To: Light & Power Board
From: Tim Arends, Executive Director
Date: September 3, 2018
Subject: Confirming Cintas Contract

A standard rental service contract was recently renewed with Cintas Corporation for weekly rental and cleaning of rugs placed throughout the buildings at the Hastings Service Center at an approximate cost of \$109.63 per week for a sixty-month term. Based on the utility's purchasing policy any contract exceeding one year requires board approval. It is staff's request that the Board approve this confirming contract.

This item is on the Consent Calendar as it is deemed non-controversial. Approval of this item on the Consent Calendar means you agree with staff's recommendation.

If any member of the Board or the public wishes to discuss this matter, other than clarifying questions, it should be placed on the "Items Removed from the Consent Calendar" portion of the agenda for full discussion. If after Board discussion you agree with staff's recommendation the following motion would be appropriate:

MOVED BY _____, SECONDED BY _____,

**THAT THE BOARD APPROVES THE STANDARD RENTAL SERVICE CONTRACT
WITH CINTAS CORPORATION FOR A TERM OF SIXTY MONTHS.**



**TRAVERSE CITY
LIGHT & POWER**

To: Light & Power Board
From: Tony Chartrand, System Engineer
Date: September 11, 2018
Subject: Parsons Switching Station Project – Relay Panel Purchase Authorization Request

GRP Engineering solicited bids for the purchase of Relay Panels for the Parsons Switching Station project. Two (2) bids were requested and two (2) were received:

<u>Vendor</u>	<u>Price</u>
EP2	\$111,684.00
Keystone	\$104,637.02

After review by staff, it is recommended TCL&P issue a purchase order to Keystone in the amount of \$104,637.02 for the Relay Panels, following the attached recommendation from GRP. These costs are in line with the anticipated material costs for this project.

This item is on the Consent Calendar as it is deemed non-controversial. Approval of this item on the Consent Calendar means you agree with staff's recommendation.

If any member of the Board or the public wishes to discuss this matter other than clarifying questions, it should be placed on the "Items Removed from the Consent Calendar" portion of the agenda for full discussion. If after Board discussion you agree with staff's recommendation, the following motion is recommended:

MOVED BY _____, SECONDED BY _____,

THAT THE BOARD AUTHORIZES THE EXECUTIVE DIRECTOR TO ISSUE A PURCHASE ORDER TO KEYSTONE IN THE AMOUNT OF \$104,637.02 FOR RELAY PANELS TO BE USED FOR THE PARSONS SWITCHING STATION PROJECT.

September 7, 2018
18-0929.01

Mr. Daren Dixon
Operations Manager
Traverse City Light & Power
1131 Hastings Street
Traverse City, MI 49686

**RE: Parsons Switch Station
Relay Control Panels Bid Evaluation & Recommendation**

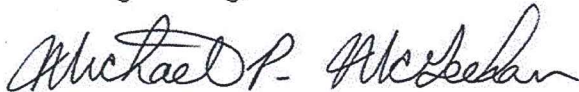
Dear Daren:

GRP Engineering, Inc. has completed our evaluation of the 69kV Relay Control Panels bids received for the Parsons Switch Station project. Of the three (3) vendors invited to submit bids, two (2) bids were received. Keystone submitted the low bid in the amount of \$104,637.02. A complete bid tabulation is attached to this letter. Keystone quoted a delivery time of 12 – 14 weeks which meets the current project schedule.

<u>Vendor</u>	<u>Total</u>	
EP2	\$111,684.00	
Keystone	\$104,637.02	(Low Bid)

Keystone's quoted price is below the \$125,000 estimated for these panels. GRP Engineering, Inc. sees no reason not to accept Keystone's bid. Please contact me should you have any questions regarding this evaluation.

Sincerely,
GRP Engineering, Inc.



Michael McGeehan
Project Engineer

Enclosures

cc: Traverse City Light & Power
Mr. Tony Chartrand

BID TABULATION

OWNER:
 TRAVERSE CITY LIGHT & POWER
 1131 HASTINGS STREET
 TRAVERSE CITY, MI 49686

PARSONS SWITCH STATION
 69KV YARD - RELAY CONTROL PANELS

ENGINEER:
 GRP ENGINEERING, INC.
 459 BAY STREET
 PETOSKEY, MI 49770

BIDDERS	TOTAL VENDOR BASE BID PRICE	ADDENDUM #1	REMARKS
ENERGIS			No Bid
EP2	\$111,684.00	Yes	
KEYSTONE	\$104,637.02	Yes	Low Bid

This is to certify that at 11:00a.m., local time on Wednesday September 5, 2018, the bids tabulated herein were publicly opened and read.

GRP Engineering, Inc.

Michael P. McGeehan

By:

Michael P. McGeehan, P.E.



**TRAVERSE CITY
LIGHT & POWER**

To: Light & Power Board
From: Karla Myers-Beman, Controller
Date: August 27, 2018
Subject: Public hearing for the proposed November 1, 2018 rate increase

At the April 10, 2018 board meeting staff along with Utility Financial Solutions presented the results of the cost of service study performed for the purpose to ensure the following:

1. There is sufficient revenue to provide capital to maintain a reliable system.
2. Simplify the rate structure for ease of billing.
3. To create a five-year rate schedule to correct subsidies between rate classes.
3. Modify the rates within each tariff to reflect the cost of service.

Sufficient Revenue

The cost of service study recommends a revenue neutral rate increases and decreases for differing classes this year with no overall rate increase until the fiscal year 2020-21. Staff will evaluate every year at budget time to determine if any modifications are necessary to the five-year rate plan.

The revenue neutral rate increase means overall the utility will not see an increase in utility revenues, however, different rate classes will see varying levels of an increase/decrease to their bill based on their energy consumption. These are presented on the individual rates sheets included in the board packet.

Simplify the rate structure

Staff plans on simplifying the rate structure over the next several years. Some rates will take longer to transition to prevent significant increases or “rate shock” to customers. These rates tend to have minimal number of customers within the rate class and/or encourage energy consumption and reflect the times of when they were created. These rates include the Water and Space Heating, Commercial Electric Air Conditioning, Commercial Water Heater, Primary Interruptible, and Municipal Pumping 103%. When these rates will be transitioned are noted on the summary page of the tariff rates.

In addition, the tariffs will no longer have winter/summer rates or often referred to as seasonal rates, as our rates do not fluctuate significantly during the year based on the utility’s current purchased power contracts.

FOR THE LIGHT & POWER BOARD MEETING OF SEPTEMBER 25, 2018

Correct subsidies and modify the rates

Staff is proposing to correct the subsidizations between rate classes as shown in the Table of Cost of Service Summary Results included within the board packet. This table shows the Commercial/General Tariff Rate is subsidizing at various levels other tariff rates.

Cost of Service Structure

Additionally, within this revenue neutral rate increase is to make gradual increases/decreases in the rates within each tariff to reflect the cost of service. Mostly migrating the fixed distribution charges from the variable consumption components (billing based on per kWh sold) of the rates to the fixed customer charges.

Each tariff rate shows an increase in the customer service charge varying from \$1.50 for the residential tariff to \$50 for the industrial tariff rate. Once again, the movements towards cost of service will be gradual as we want to provide an acceptable level of increases to the customers over the next several years.

Other information

Staff is proposing also modifying language within the residential tariff rates to clarify when customers are in a work/live dwelling of whether they should be charged a residential or commercial tariff rate. The modified language added to the residential tariff rates is as follows:

“Service under this rate is not available when a portion of the dwelling or an appurtenant building is used for commercial, industrial, or resale purposes unless the wiring is so arranged that service for residential and non-residential purposes are metered separately at separate service locations.”

Staff will also be working on over the next several months a “Rules and Regulation for Electric Service”, which will encompass all policies, tariffs and rates charged for providing electric service. Staff believes this will be a great resource tool for both customers and staff.

Conclusion

It is staff's recommendation that the Board sets a public hearing for the proposed rate increases/decreases at its September 25, 2018 meeting. If after Board discussion you agree with staff's recommendation the following motion would be appropriate.

MOVED BY _____, SECONDED BY _____,

THAT THE BOARD AUTHORIZES THE SECRETARY TO SET A PUBLIC HEARING FOR THE PROPOSED NOVEMBER 1ST RATE INCREASES/DECREASES TO BE HELD AT THE OCTOBER 9, 2018 REGULAR MEETING; AND FURTHER THAT A NOTICE OF THE PUBLIC HEARING BE POSTED ON THE UTILITY'S WEBSITE AND PLACED IN THE TRAVERSE CITY RECORD EAGLE.

Traverse City Light and Power Rate Design 2018		Overran					Current kWh	Proposed kWh	Difference	Current kW	Proposed kW	Difference	Notes
Customer Class	Rate Class Increase or Decrease	Current Monthly Rate	Proposed Monthly Rate	Difference	Current kWh	Proposed kWh	Difference	Current kW	Proposed kW	Difference	Notes		
Residential													
Residential	1.50%	6.00	7.50	1.50	0.0940	0.0921	(0.0019)						
First Tier - 16 kWh per day					0.1055	0.1055	-						
Second Tier - all over 16kWh per day													
Residential Water Heating	2.50%	6.00	7.50	1.50	0.0940	0.0942	0.0002					Rate will be closed into the residential tariff rate effective fiscal year 2019-20. Approximately 350 customers will be transitioned.	
First Tier - 29 kWh per day					0.1055	0.1055	-						
Second Tier - all over 29 kWh per day													
Residential Space Heating	1.00%	6.00	7.50	1.50	0.0920	0.0901	(0.0019)						
Winter Rate					0.1055	0.1055	-						
First Tier - 16 kWh per day													
Second Tier - all over 16kWh per day													
Summer Rate					0.0940	0.0901	(0.0039)						
First Tier - 16 kWh per day					0.1055	0.1055	-						
Second Tier - all over 16kWh per day													
Senior Residential	1.00%	5.00	4.50	(0.50)	0.0770	0.0820	0.0050						
First Tier - 16 kWh per day					0.1229	0.1100	(0.0129)						
Second Tier - next 17.3kWh per day					0.1055	0.1100	0.0045						
Third Tier - all over													
Senior Water Heating	2.00%	5.00	4.50	(0.50)	0.0807	0.0836	0.0029						
First Tier - 29 kWh per day					0.1055	0.1055	-						
Second Tier - all over 29 kWh per day													
Senior Space Heating	0.00%	5.00	4.50	(0.50)									
Winter Rate													
First Tier - 16 kWh per day					0.0920	0.0899	(0.0021)						
Second Tier - all over 16kWh per day					0.0920	0.1000	0.0080						
Summer Rate													
First Tier - 16 kWh per day					0.0940	0.0899	(0.0041)						
Second Tier - all over 16kWh per day					0.1055	0.1000	(0.0055)						
Public Authority													
Public Authority MP2	3.50%	22.00	32.00	10.00	0.0920	0.0950	0.0030						
Public Authority MP1	0.00%	19.00	22.00	3.00	0.0990	0.0983	(0.0007)						
MP1 at 103%	-6.70%	19.00	32.00	13.00	0.1020	0.0950	(0.0070)					Rates will be closed to the MP-2 Rate. 1 customer will be transitioned.	

Traverse City Light and Power Rate Design 2018											
Customer Class	Overall Rate Class	Current Monthly Rate	Proposed Monthly Rate	Difference	Current kWh	Proposed kWh	Difference	Current kW	Proposed kW	Difference	Notes
Commercial											
Commercial/General Secondary Service	-1.50%	13.00	15.00	2.00	0.1211	0.1175	(0.0036)				
Commercial Demand/ General Secondary Service	0.00%	15.00	20.00	5.00	0.0590	0.0571	(0.0019)	12.95	13.45	0.50	
Commercial Demand Primary Metered	0.00%	16.00	20.00	4.00	0.0581	0.0562	(0.0019)	12.57	13.25	0.68	
Commercial Industrial Water Heating Service	6.60%	11.75	15.00	3.25	0.0970	0.0990	0.0020				Rate will be closed to Commercial tariff rate in fiscal year 2022-23. Approximately 2 customers will be transitioned.
Commercial Electric Heat and Air Conditioning	2.50%	13.00	15.00	2.00	0.1060	0.1082	0.0022				Rate will be closed to Commercial tariff rate in fiscal year 2022-23. Approximately 33 customers will be transitioned.
Industrial											
Primary Service High Load Factor Rates (Industrial)	0.00%	50.00	100.00	50.00				11.00	12.25	1.25	
Winter Rate											
On-Peak					0.0660	0.0640	(0.0020)				
Intermediate					0.0550	0.0520	(0.0030)				
Summer Rate											
On-Peak					0.0680	0.0640	(0.0040)				
Intermediate					0.0550	0.0520	(0.0030)				
Primary Interruptible	1.70%	50.00	100.00	50.00				11.00	12.25	1.25	Rate will be closed to the Industrial Rate this fiscal year.
Winter Rate											
On-Peak					0.0660	0.0660	-				
Intermediate					0.0600	0.0600	-				
Summer Rate											
On-Peak					0.0680	0.0680	-				
Intermediate					0.0600	0.0600	-				
Metal Melting	0.50%	40.00	55.00	15.00				8.48	10.00	1.52	
Winter Rate											
On-Peak					0.0640	0.0636	(0.0004)				
Intermediate					0.0500	0.0476	(0.0024)				
Summer Rate											
On-Peak					0.0670	0.0636	(0.0034)				
Intermediate					0.0500	0.0476	(0.0024)				

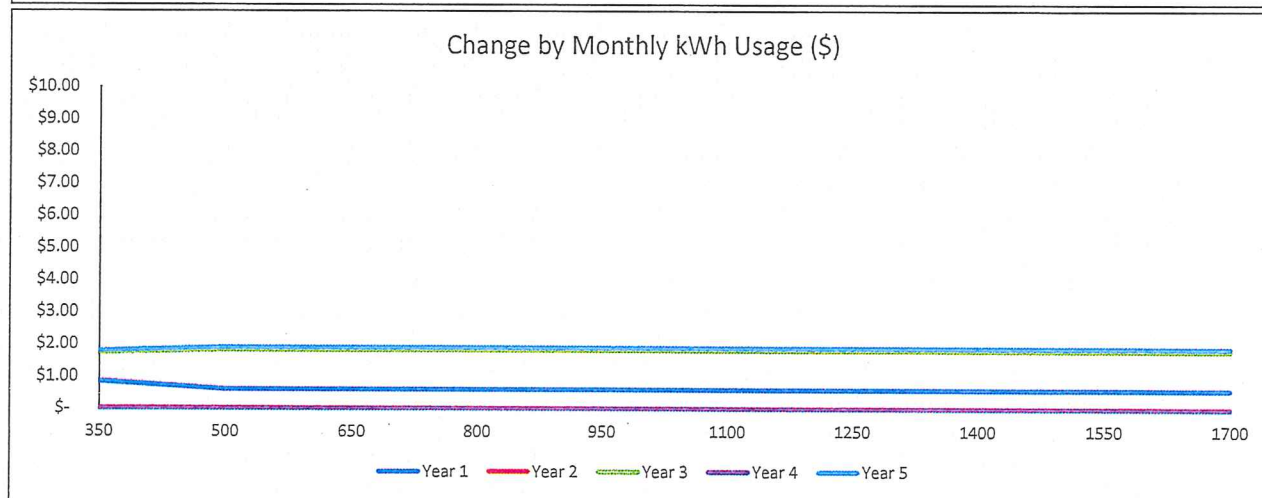
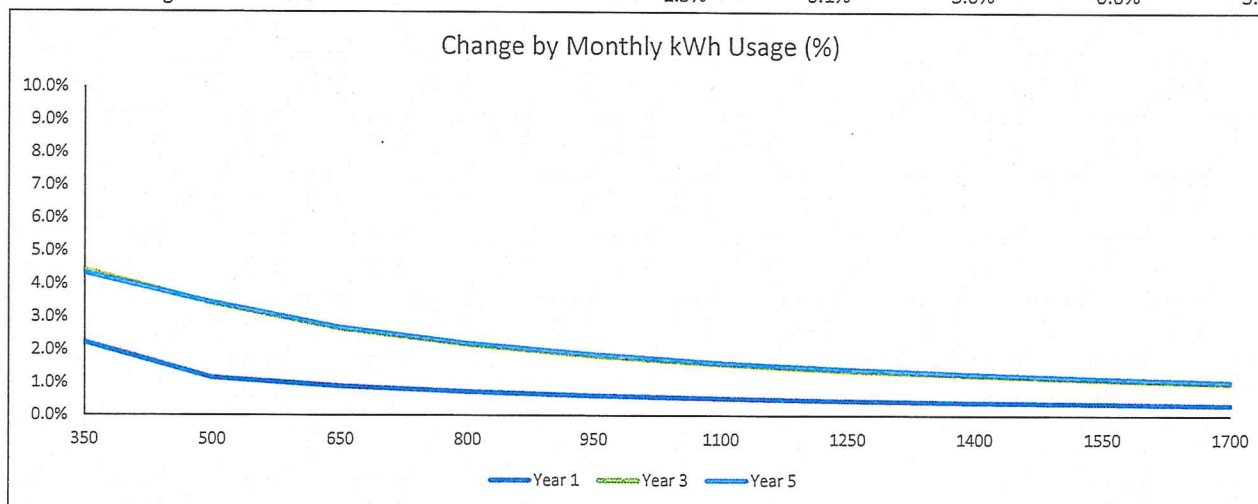
Note: TCL&P provides life support rates at a 20% discount.

Traverse City Light and Power
 Cost of Service Summary
 September 2018

Customer Class	Cost of Service \$	Current Projected Revenues	% Difference	Proposed Revenues	% Change
Residential	5,401,462	4,893,847	10.37%	4,966,001	1.47%
Residential Water Heater	297,836	273,591	8.86%	280,431	2.50%
Residential Space Heat	113,806	105,810	7.56%	106,868	1.00%
Senior Water Heater	65,656	49,385	32.95%	50,356	1.97%
Senior Citizen	814,125	625,173	30.22%	631,425	1.00%
Senior Space Heat	19,007	17,257	10.14%	17,257	0.00%
Residential Life Support	22,573	17,831	26.59%	17,990	0.89%
Residential Senior Life Support	12,817	7,980	60.61%	8,210	2.88%
Commercial/General	3,605,601	4,038,103	-10.71%	3,977,647	-1.50%
Commercial Electric Heat and Air Conditioning	164,347	162,049	1.42%	166,100	2.50%
Commercial and Industrial Water Heating Service	1,896	1,602	18.35%	1,708	6.62%
Municipal Pumping Service (MP-1)	60,613	59,148	2.48%	59,135	-0.02%
Municipal Pumping Service (MP-2)	243,611	174,293	39.77%	180,366	3.48%
Municipal Pumping Service at 103%	65,193	55,707	17.03%	51,938	-6.77%
Commercial Demand/General Secondary	10,857,881	10,197,762	6.47%	10,197,762	0.00%
Commercial Demand Primary Metered	176,298	178,810	-1.40%	178,732	-0.04%
Primary Service High Load Factor	7,721,241	7,521,378	2.66%	7,521,378	0.00%
Primary Interruptible	489,623	429,635	13.96%	436,745	1.65%
Metal Melting	1,899,299	1,762,762	7.75%	1,771,503	0.50%
Total	32,032,885	30,572,123	4.78%	30,621,552	

TCL&P
Electric Rate Design
Projected Residential Rates

Rates	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 6.00	\$ 7.50	\$ 7.50	\$ 9.00	\$ 9.00	\$ 10.50
Energy Charge:						
Block 1 (0 - 16 kWh per day)	\$ 0.0940	\$ 0.0921	\$ 0.0921	\$ 0.0928	\$ 0.0928	\$ 0.0935
Block 2 (Excess)	\$ 0.1055	\$ 0.1055	\$ 0.1055	\$ 0.1055	\$ 0.1055	\$ 0.1055
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 4,893,847	\$ 4,966,001	\$ 5,249,946	\$ 5,406,286	\$ 5,406,286	\$ 5,680,741
Change from Previous		1.5%	0.1%	3.0%	0.0%	3.0%



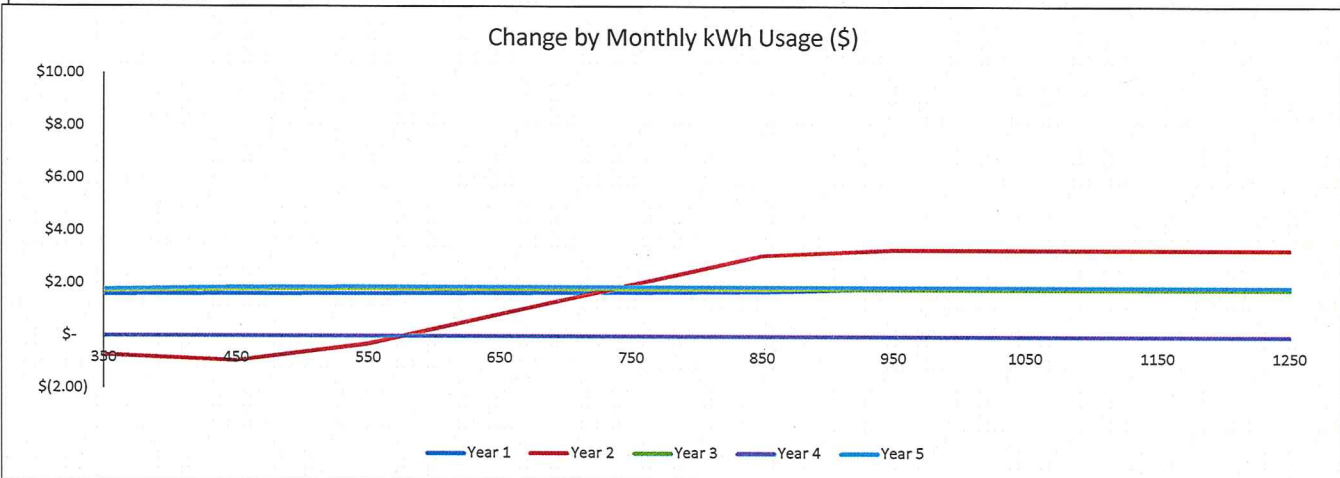
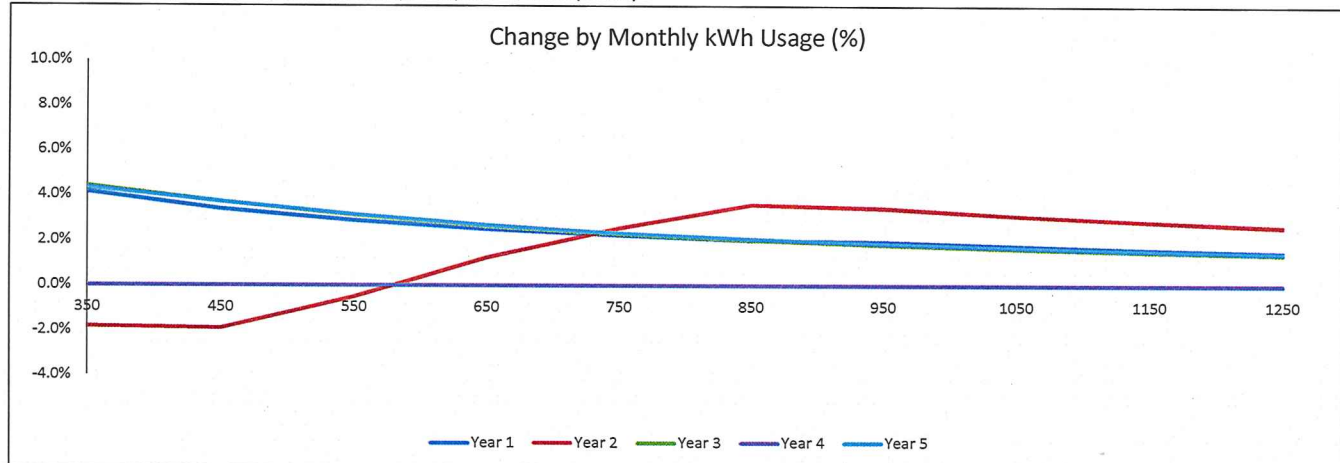
TCL&P

Electric Rate Design

Consolidated Residential Water Heater Rates

Rates	Current	Year 1	Residential Rate			
			Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 6.00	\$ 7.50	\$ 7.50	\$ 9.00	\$ 9.00	\$ 10.50
Energy Charge:						
Block 1 (0 - 29 kWh per day)	\$ 0.0940	\$ 0.0942	\$ 0.0921	\$ 0.0928	\$ 0.0928	\$ 0.0935
Block 2 (Excess)	\$ 0.1055	\$ 0.1055	\$ 0.1055	\$ 0.1055	\$ 0.1055	\$ 0.1055
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 273,591	\$ 280,431	\$ 283,946	\$ 291,295	\$ 294,451	\$ 302,565
Change from Previous		2.5%	1.3%	2.6%	1.1%	2.8%

Note: Blocks change in Year 2 from 0-29 kWh per day to 0-16 kWh per day

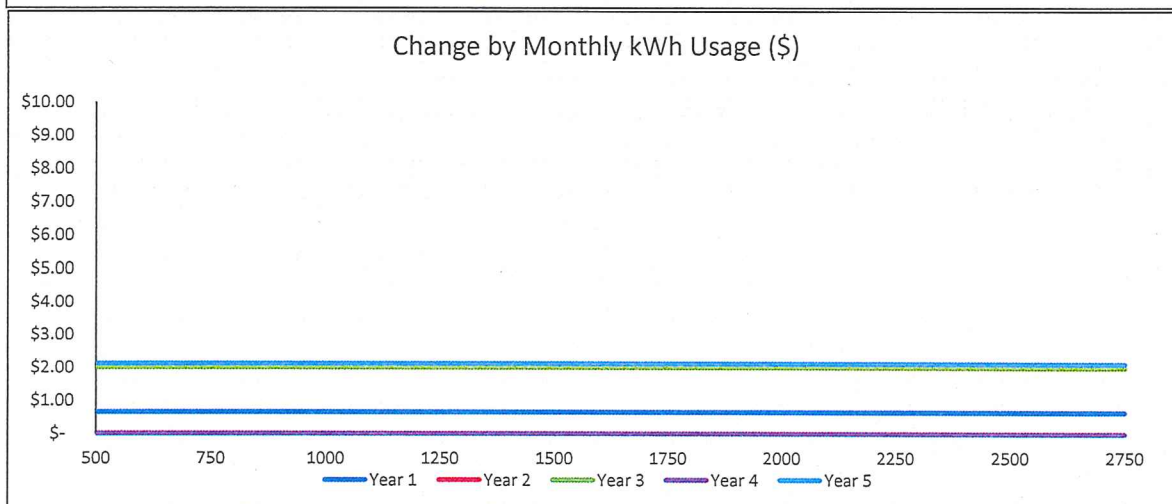
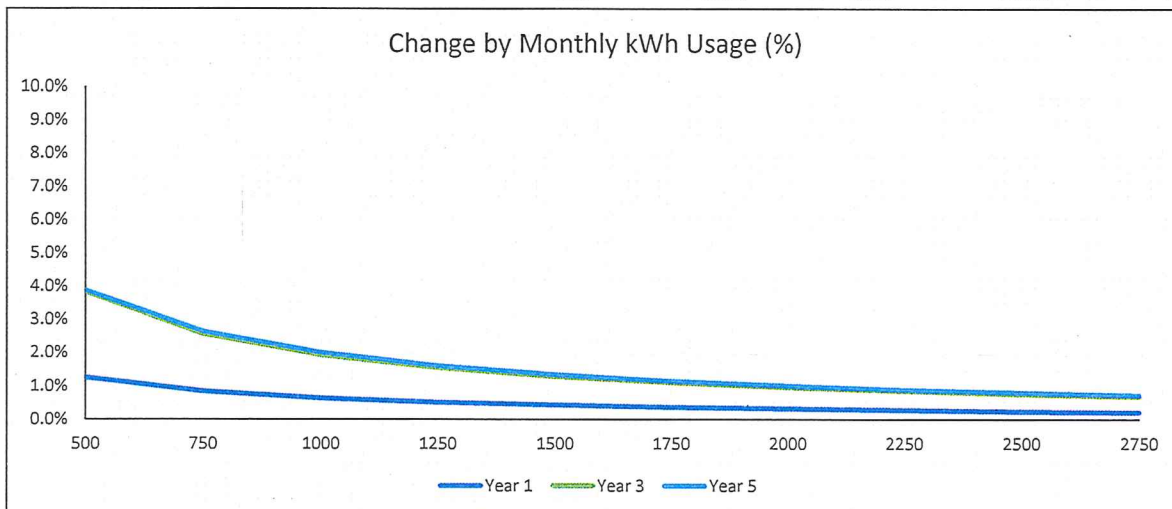


TCL&P

Electric Rate Design

Consolidated Residential Space Heat Rates

Rates	Residential Rate					
	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 6.00	\$ 7.50	\$ 7.50	\$ 9.00	\$ 9.00	\$ 10.50
Energy Charge:						
Winter Block 1 (0 - 480 kWh)	\$ 0.0920	\$ 0.0913	\$ 0.0913	\$ 0.0923	\$ 0.0923	\$ 0.0935
Winter Block 2 (Excess)	\$ 0.1055	\$ 0.1055	\$ 0.1055	\$ 0.1055	\$ 0.1055	\$ 0.1055
Summer Block 1 (0 - 480 kWh)	\$ 0.0940	\$ 0.0913	\$ 0.0913	\$ 0.0923	\$ 0.0923	\$ 0.0935
Summer Block 2 (Excess)	\$ 0.1055	\$ 0.1055	\$ 0.1055	\$ 0.1055	\$ 0.1055	\$ 0.1055
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 105,810	\$ 106,868	\$ 106,868	\$ 110,074	\$ 110,074	\$ 113,472
Change from Previous		1.0%	0.0%	3.0%	0.0%	3.1%

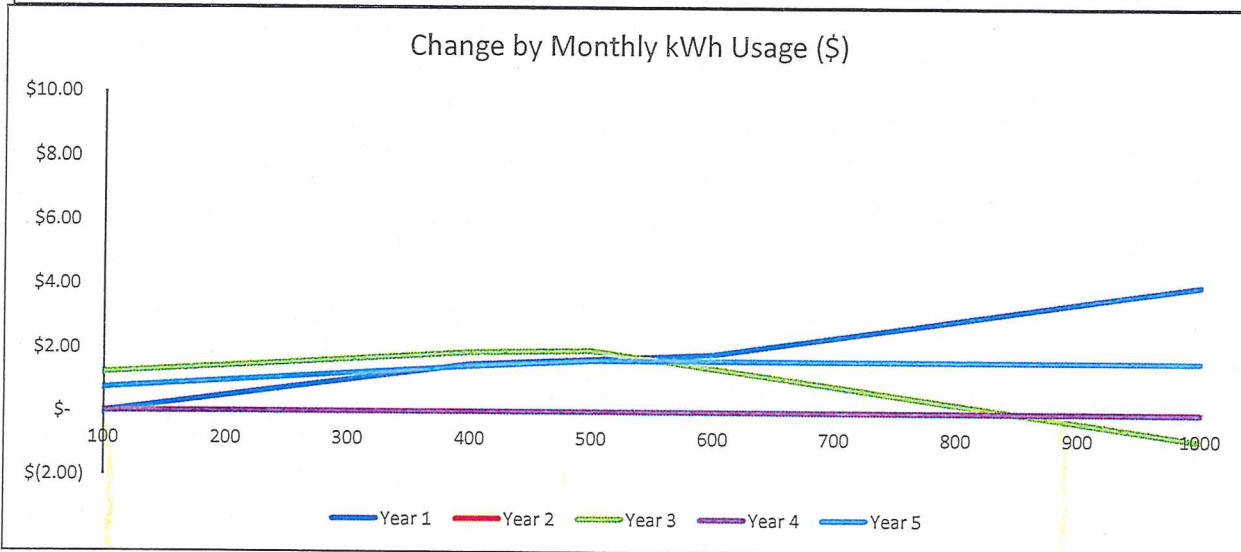
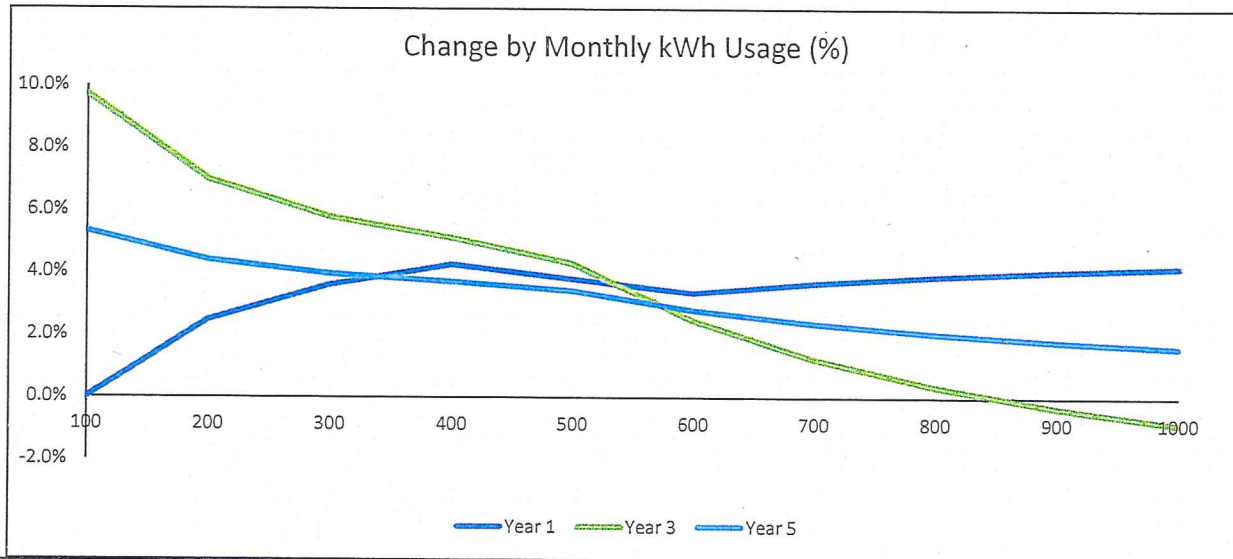


TCL&P

Electric Rate Design

Projected Senior Citizen Rates

Rates	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 5.00	\$ 7.50	\$ 7.50	\$ 8.50	\$ 8.50	\$ 9.00
Senior Discount		\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00
Energy Charge:						
Block 1 (0 - 480 kWh)	\$ 0.07700	\$ 0.0820	\$ 0.0820	\$ 0.0841	\$ 0.0841	\$ 0.0864
Block 2 (481 - 522 kWh)	\$ 0.12290	\$ 0.1110	\$ 0.1110	\$ 0.1055	\$ 0.1055	\$ 0.1055
Block 3 (Excess)	\$ 0.10550	\$ 0.1110	\$ 0.1110	\$ 0.1055	\$ 0.1055	\$ 0.1055
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 625,173	\$ 631,425	\$ 631,425	\$ 650,368	\$ 650,368	\$ 669,879
Change from Previous		1.0%	0.0%	3.0%	0.0%	3.0%

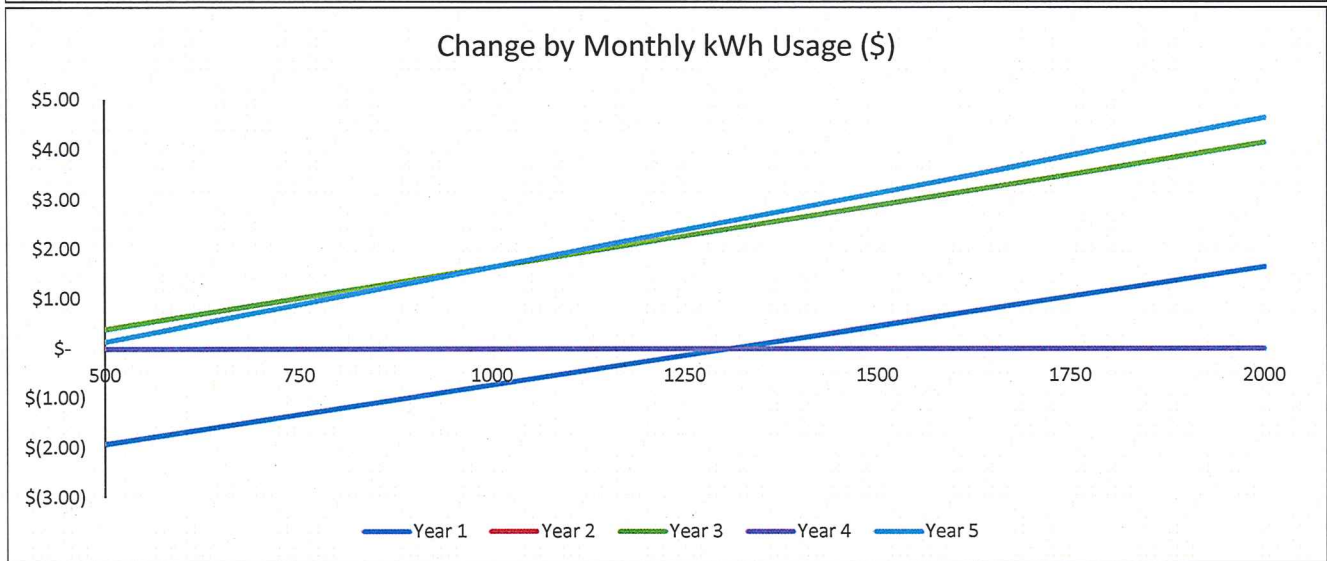
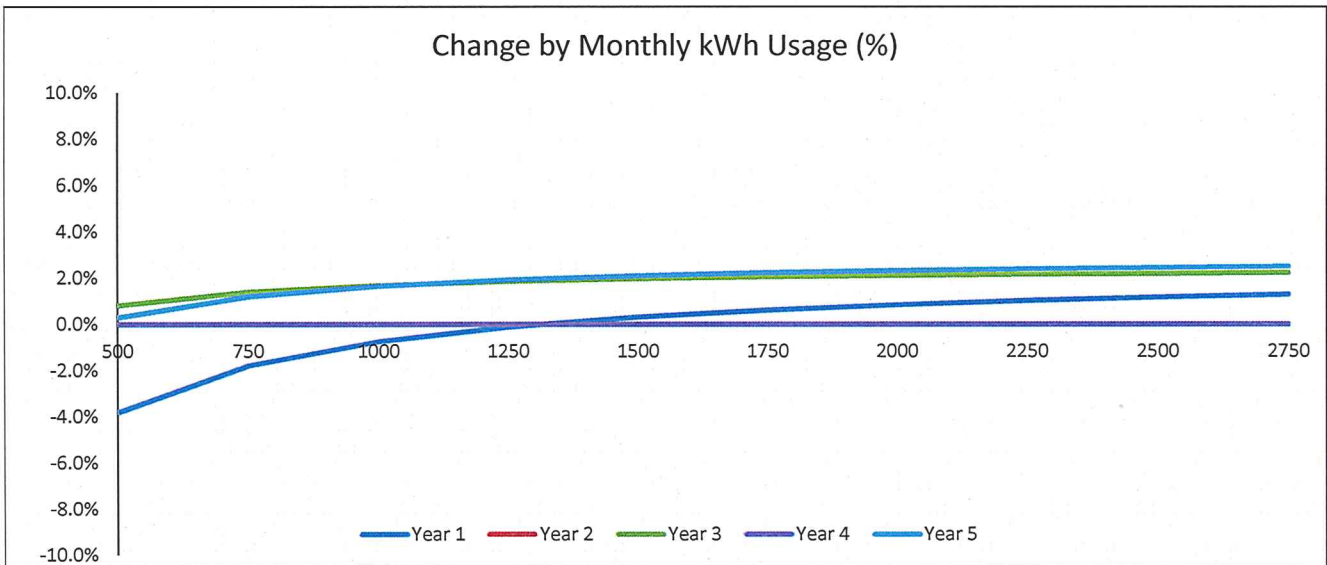


TCL&P

Electric Rate Design

Consolidated Senior Space Heat Rates

Rates	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 5.00	\$ 7.50	\$ 7.50	\$ 8.50	\$ 8.50	\$ 9.00
Senior Discount		\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00
Energy Charge:						
Winter Block 1 (0 - 488 kWh)	\$ 0.09200	\$ 0.0899	\$ 0.0899	\$ 0.0886	\$ 0.0886	\$ 0.0878
Winter Block 2 (Excess)	\$ 0.09200	\$ 0.1000	\$ 0.1000	\$ 0.1025	\$ 0.1025	\$ 0.1055
Summer Block 1 (0 - 488 kWh)	\$ 0.09400	\$ 0.0899	\$ 0.0899	\$ 0.0886	\$ 0.0886	\$ 0.0878
Summer Block 2 (Excess)	\$ 0.10550	\$ 0.1000	\$ 0.1000	\$ 0.1025	\$ 0.1025	\$ 0.1055
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 17,257	\$ 17,257	\$ 17,257	\$ 17,257	\$ 17,257	\$ 17,257
Change from Previous		0.0%	0.0%	0.0%	0.0%	0.0%

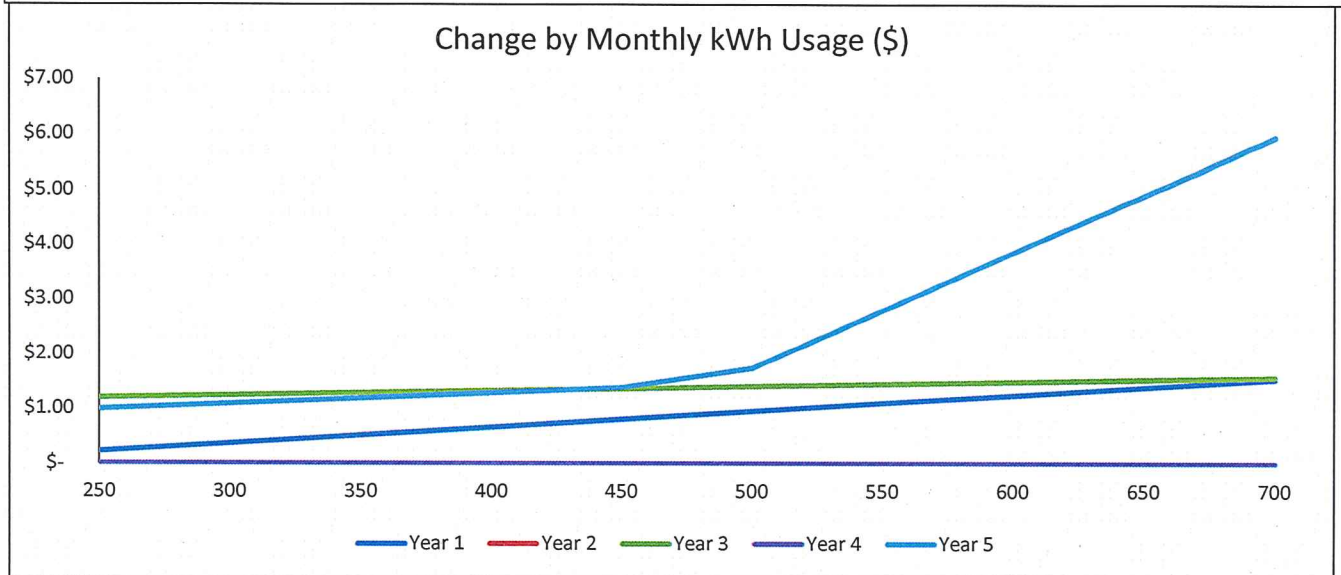
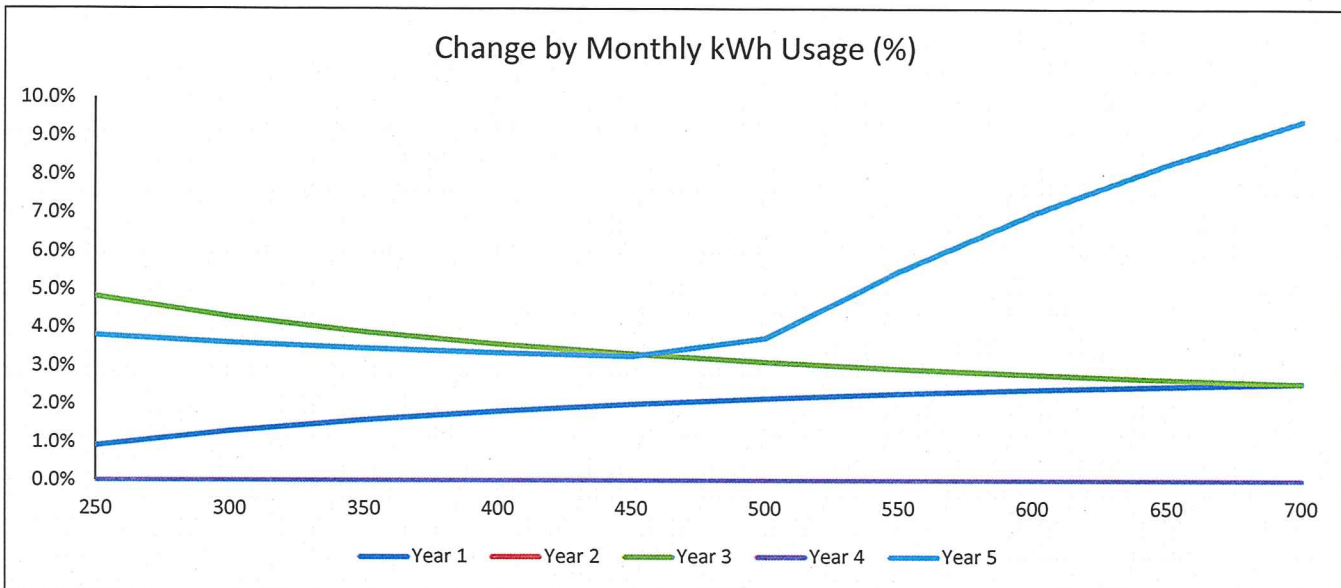


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Electric Rate Design

Consolidated Senior Water Heater Rates

Rates	Current	Year 1	Year 2	Year 3	Year 4	Senior Rate	
						Year 5	Year 5
Monthly Facilities Charge:							
All Customers	\$ 5.00	\$ 7.50	\$ 7.50	\$ 8.50	\$ 8.50	\$ 9.00	\$ 9.00
Senior Discount		\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00
Energy Charge:							
Block 1 (0 - 29 kWh per da	\$ 0.08070	\$ 0.08361	\$ 0.0836	\$ 0.0844	\$ 0.0844	\$ 0.0864	\$ 0.0864
Block 2 (Excess)	\$ 0.10550	\$ 0.1055	\$ 0.1055	\$ 0.1055	\$ 0.1055	\$ 0.1055	\$ 0.1055
Power Cost Adjustment	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 49,385	\$ 50,356	\$ 50,356	\$ 51,901	\$ 51,901	\$ 53,941	\$ 53,941
Change from Previous		2.0%	0.0%	3.1%	0.0%	3.9%	3.9%

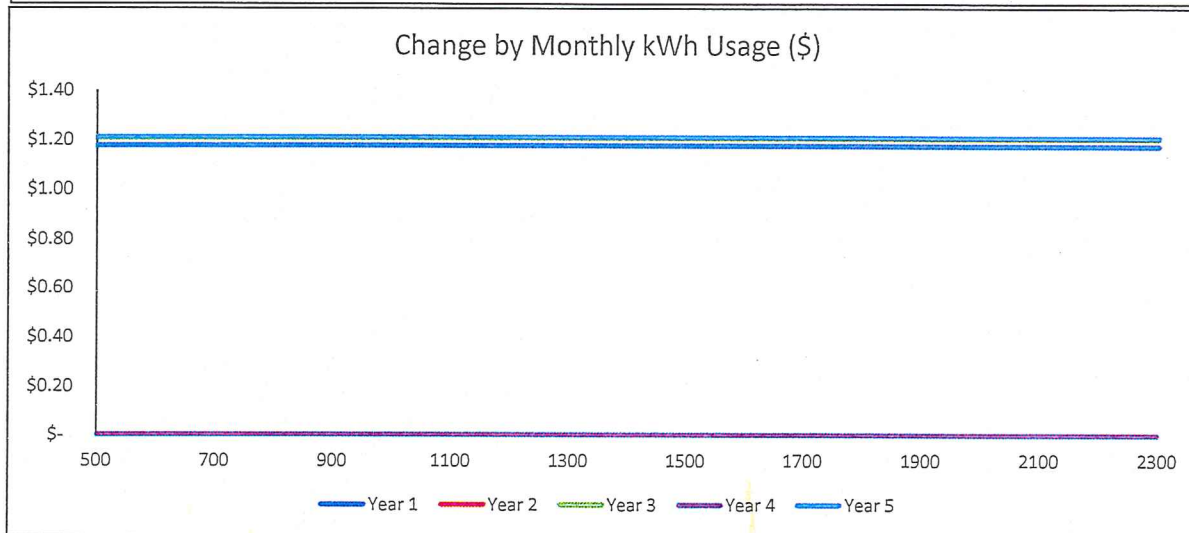
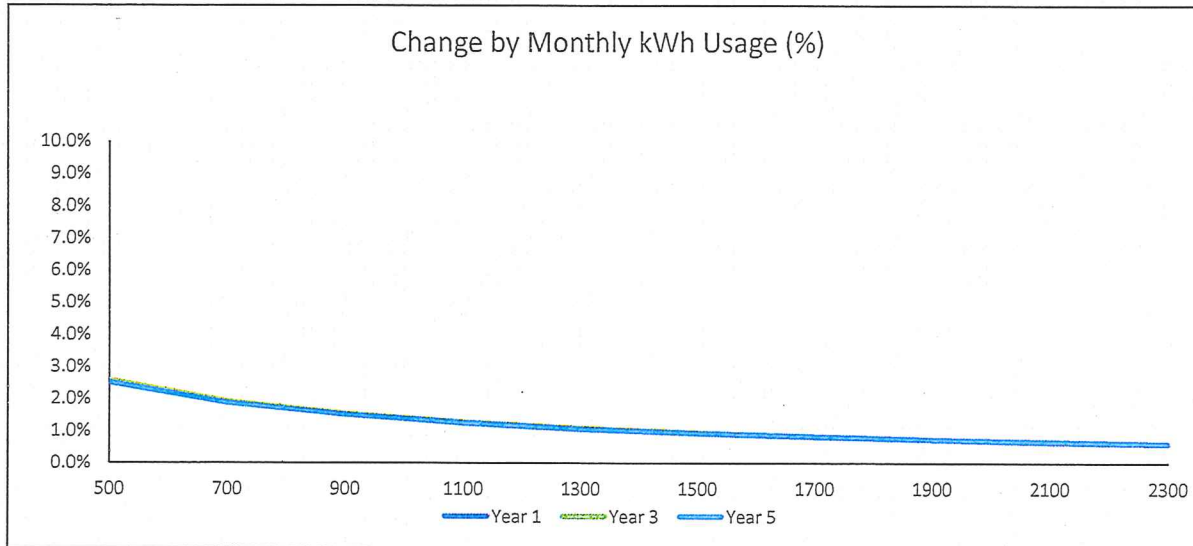


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Electric Rate Design

Projected Residential Life Support Rates

Reduction Factor	0.8	0.8	0.8	0.8	0.8	0.8
Rates	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 4.80	\$ 6.00	\$ 6.00	\$ 7.20	\$ 7.20	\$ 8.40
Energy Charge:						
Block 1 (0 - 16 kWh per da	\$ 0.07520	\$ 0.0737	\$ 0.0737	\$ 0.0742	\$ 0.0742	\$ 0.0748
Block 2 (Excess)	\$ 0.08440	\$ 0.0844	\$ 0.0844	\$ 0.0844	\$ 0.0844	\$ 0.0844
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 17,831	\$ 17,990	\$ 17,990	\$ 18,379	\$ 18,379	\$ 18,778
Change from Previous		0.9%	0.0%	2.2%	0.0%	2.2%

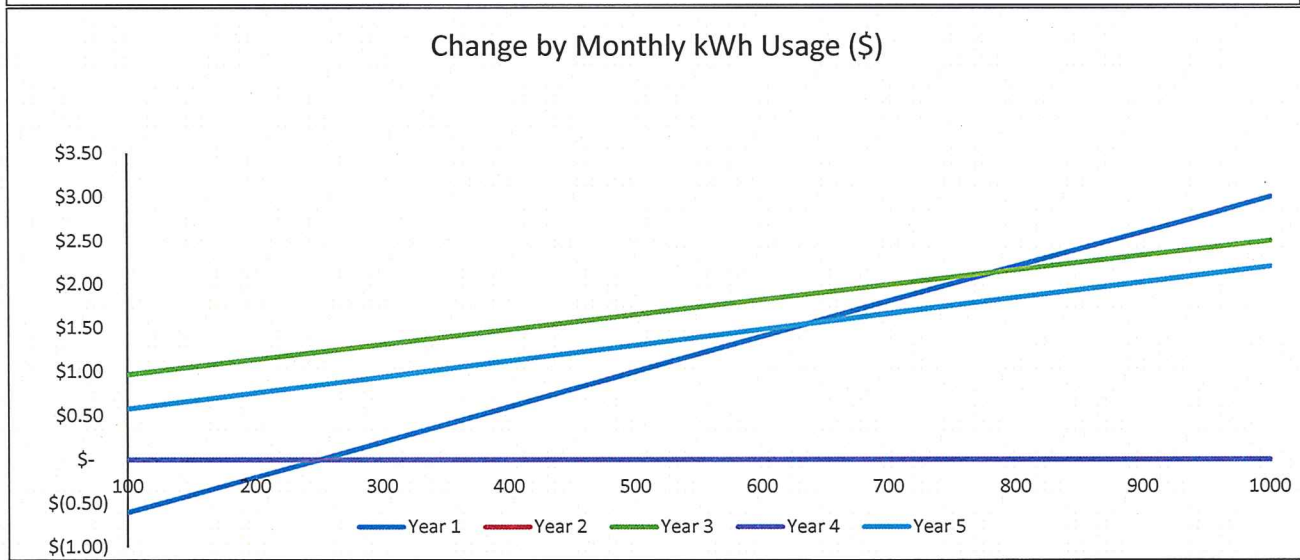
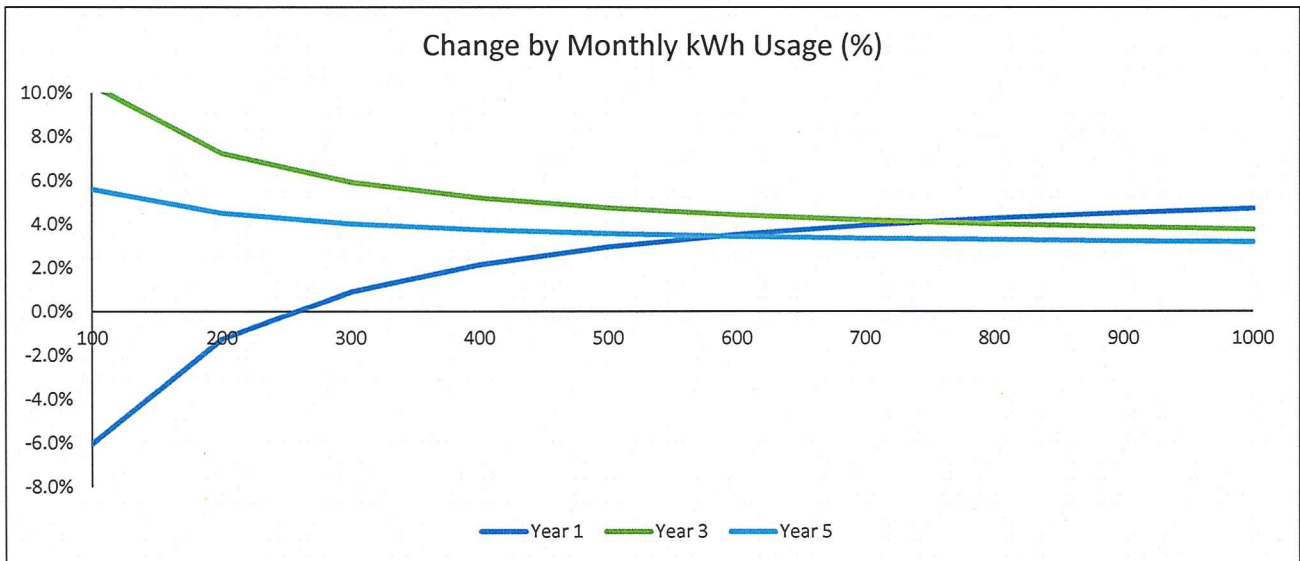


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Electric Rate Design

Projected Residential Senior Life Support Rates

Rates	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 4.00	\$ 6.00	\$ 6.00	\$ 6.80	\$ 6.80	\$ 7.20
Senior Discount		\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00
Energy Charge:						
Block 1 (0 - 480 kWh per day)	\$ 0.06160	\$ 0.0656	\$ 0.0656	\$ 0.0673	\$ 0.0673	\$ 0.0691
Block 2 (16 - 33kWh per day)	\$ 0.09832	\$ 0.0888	\$ 0.0888	\$ 0.0844	\$ 0.0844	\$ 0.0844
Block 3 (Excess)	\$ 0.08440	\$ 0.0888	\$ 0.0888	\$ 0.0844	\$ 0.0844	\$ 0.0844
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 7,980	\$ 8,210	\$ 8,210	\$ 8,379	\$ 8,379	\$ 8,600
Change from Previous		2.9%	0.0%	2.1%	0.0%	2.6%

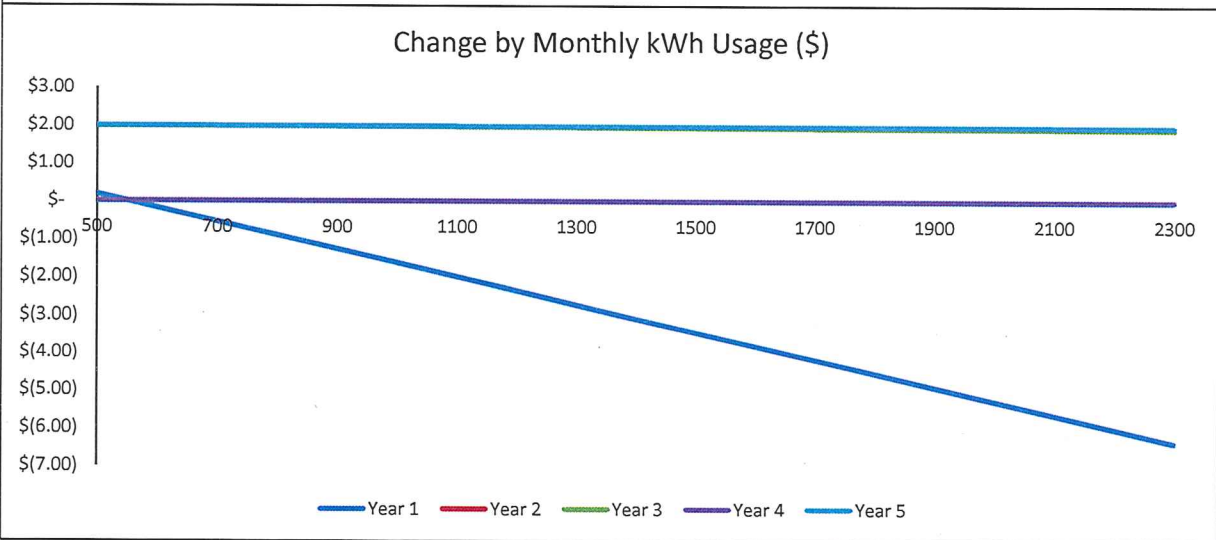
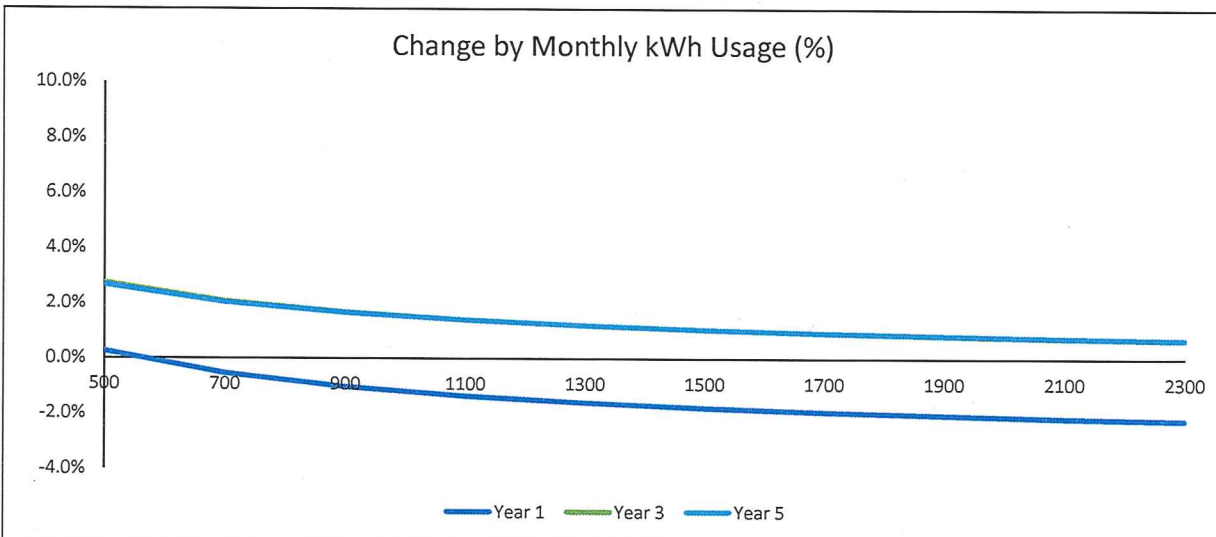


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Electric Rate Design

Projected Commercial/General Rates

Rates	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 13.00	\$ 15.00	\$ 15.00	\$ 17.00	\$ 17.00	\$ 19.00
Energy Charge:						
All Energy	\$ 0.1211	\$ 0.1175	\$ 0.1175	\$ 0.1174	\$ 0.1174	\$ 0.1174
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 4,038,103	\$ 3,977,647	\$ 3,977,647	\$ 4,028,859	\$ 4,028,859	\$ 4,264,380
Change from Previous		-1.5%	0.0%	1.3%	0.0%	1.3%

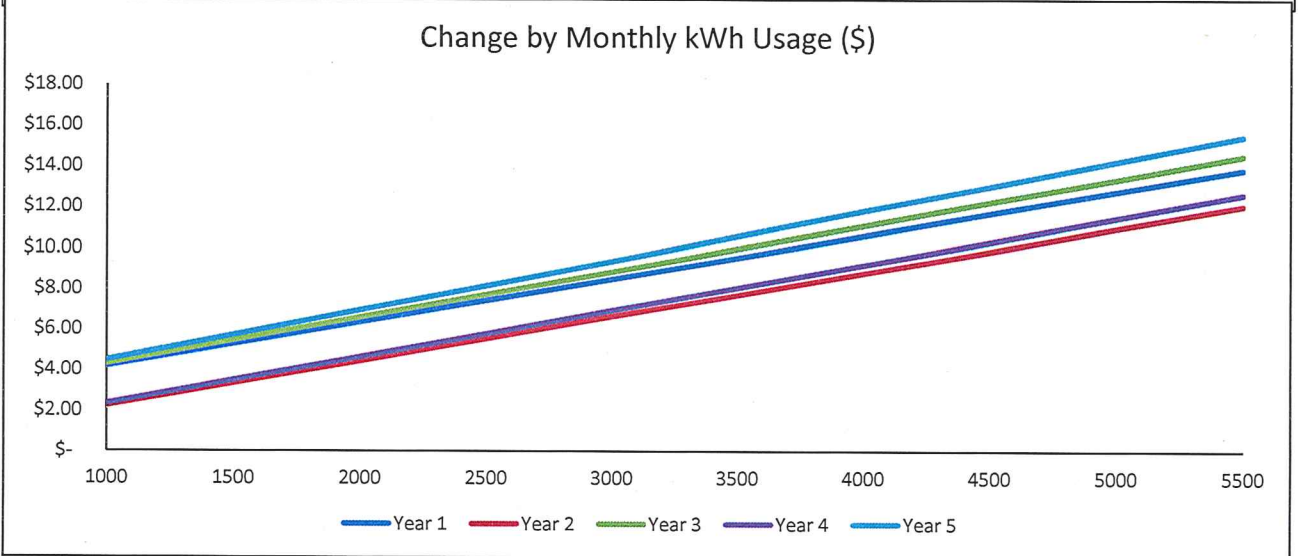
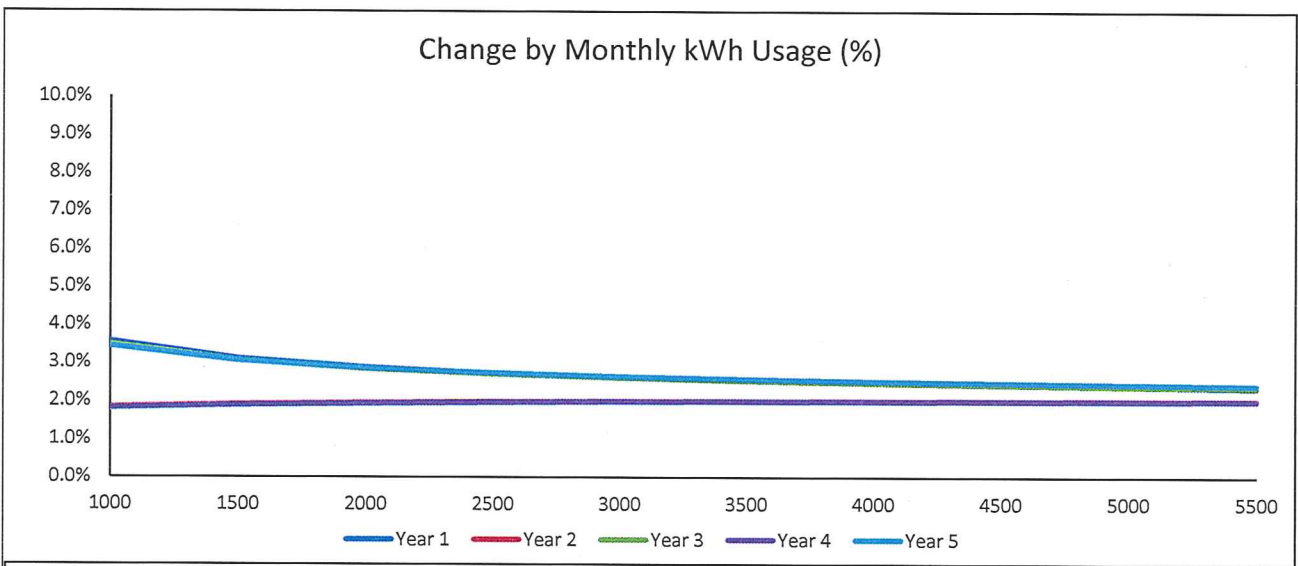


TCL&P

Electric Rate Design

Consolidated Commercial Electric Heat and Air Conditioning Rates

Rates	Commercial Rate					
	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 13.00	\$ 15.00	\$ 15.00	\$ 17.00	\$ 17.00	\$ 19.00
Energy Charge:						
All Energy	\$ 0.1060	\$ 0.1082	\$ 0.1104	\$ 0.1126	\$ 0.1150	\$ 0.1174
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 162,049	\$ 166,100	\$ 169,422	\$ 173,658	\$ 177,131	\$ 181,630
Change from Previous		2.5%	2.0%	2.5%	2.0%	2.5%

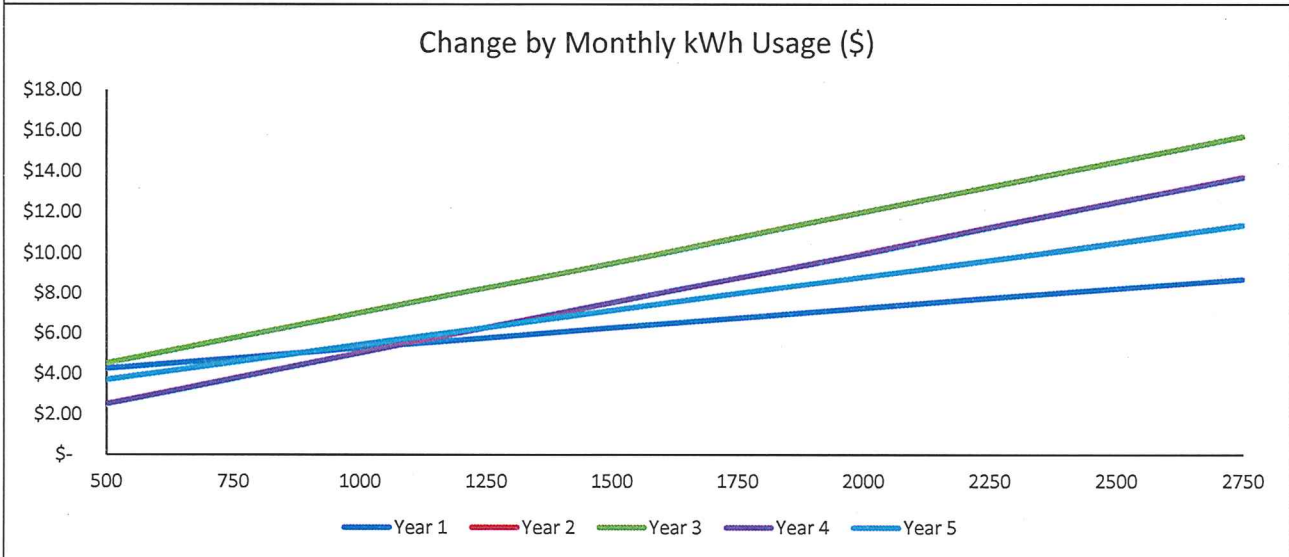
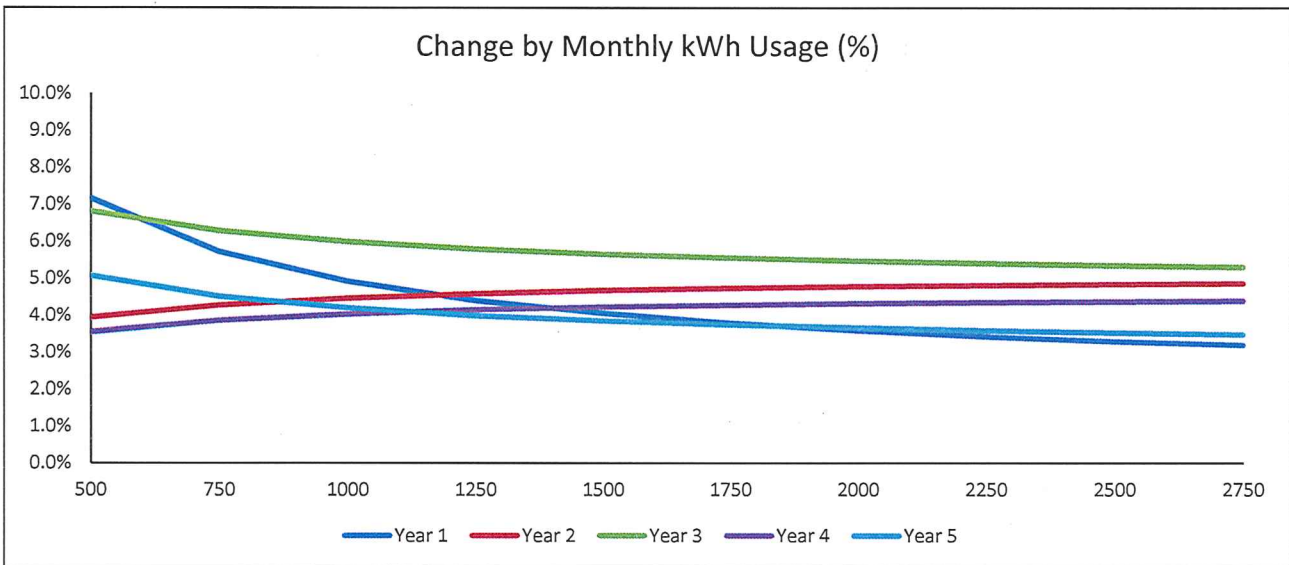


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Electric Rate Design

Consolidated Commercial and Industrial Water Heating Service Rates

Rates	Current	Year 1	Year 2	Year 3	Year 4	Commercial Rate		
						Year 5		
Monthly Facilities Charge:								
All Customers	\$ 11.75	\$ 15.00	\$ 15.00	\$ 17.00	\$ 17.00		\$ 19.00	
Energy Charge:								
All Energy	\$ 0.0970	\$ 0.0990	\$ 0.1040	\$ 0.1090	\$ 0.1140		\$ 0.1174	
Power Cost Adjustment:								
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)		\$ (0.0019)	
Revenue from Rate	\$ 1,602	\$ 1,708	\$ 1,777	\$ 1,894	\$ 1,964		\$ 2,059	
Change from Previous		6.6%	4.1%	6.6%	3.7%		4.9%	

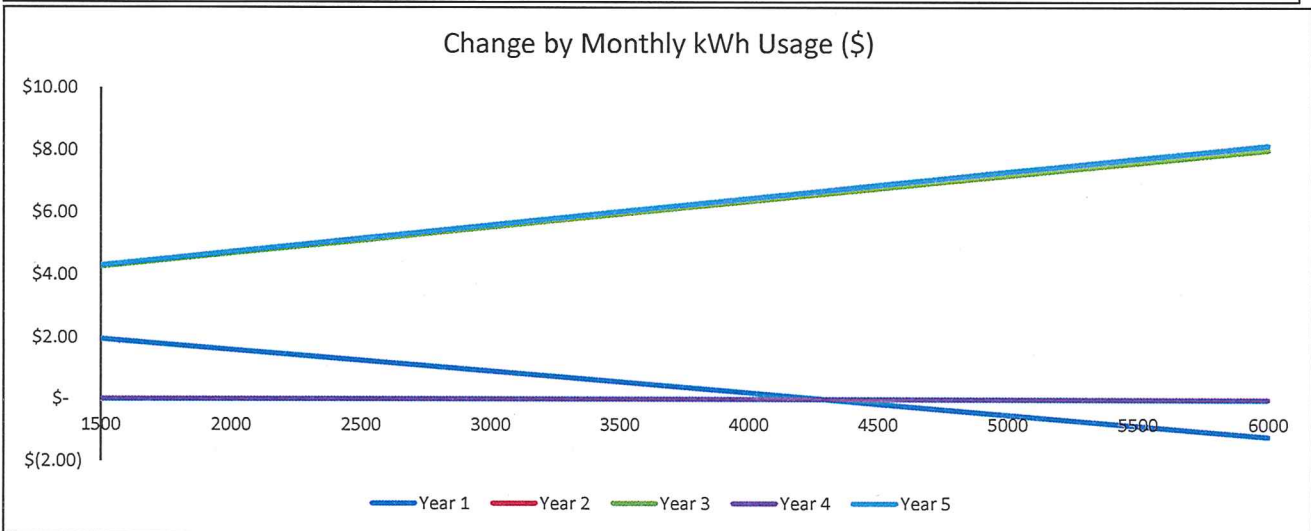
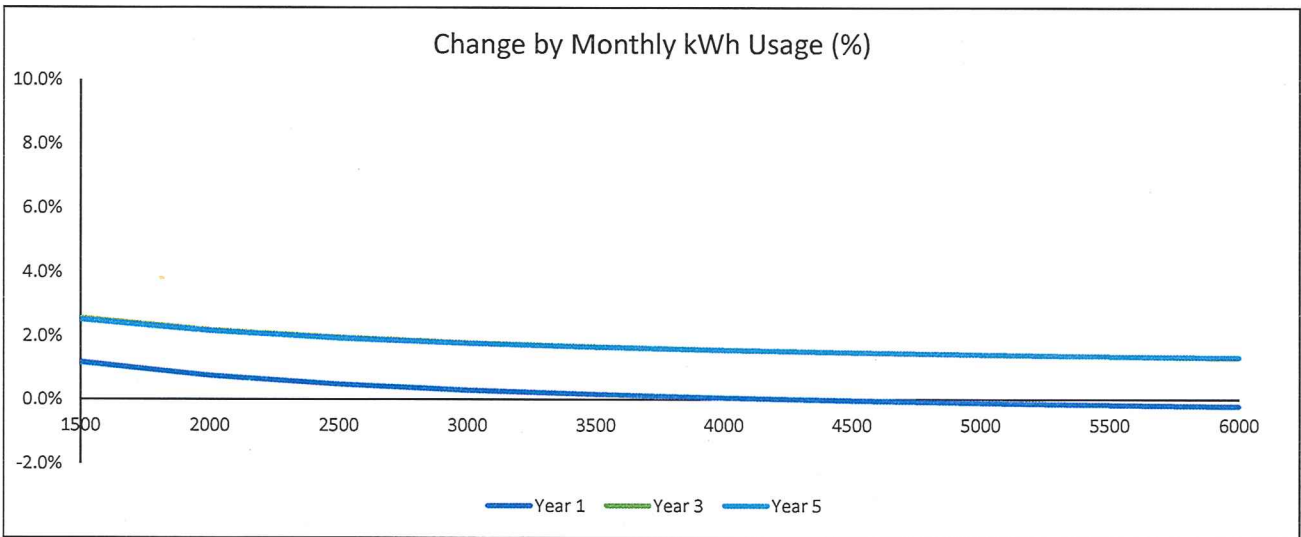


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Electric Rate Design

Projected Municipal Pumping Service (MP-1) Rates

Rates	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 19.00	\$ 22.00	\$ 22.00	\$ 25.00	\$ 25.00	\$ 28.00
Energy Charge:						
All Energy	\$ 0.0990	\$ 0.0983	\$ 0.0983	\$ 0.0991	\$ 0.0991	\$ 0.1000
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 59,148	\$ 59,135	\$ 59,135	\$ 60,023	\$ 60,023	\$ 60,923
Change from Previous		0.0%	0.0%	1.5%	0.0%	1.5%

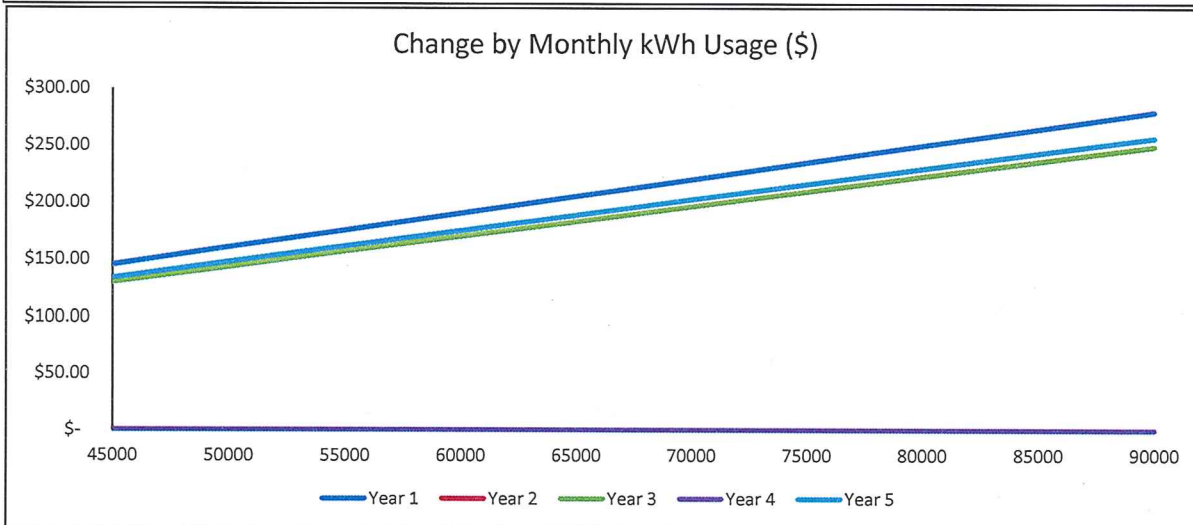
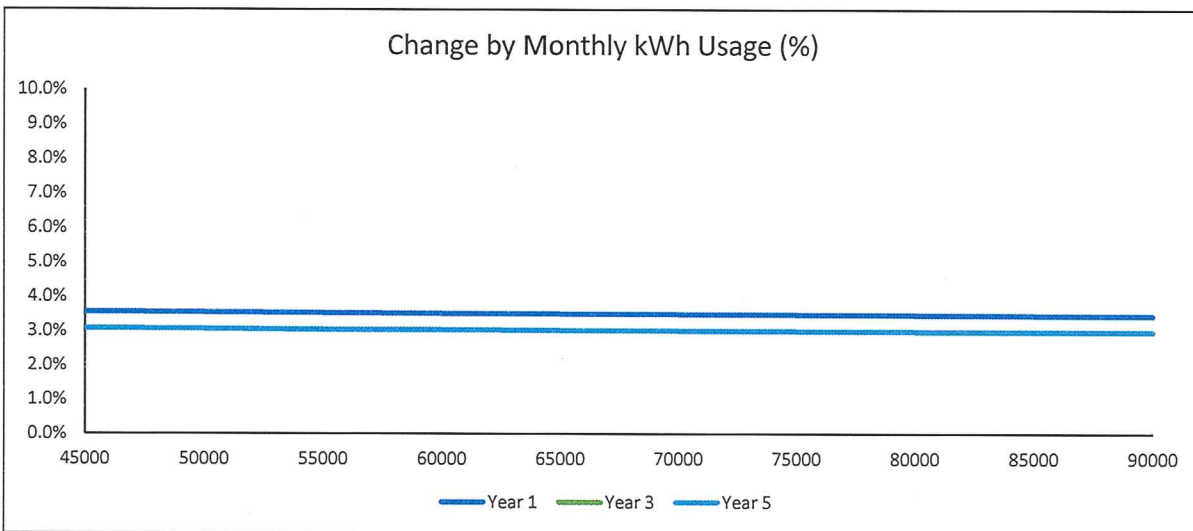


TCL&P

Electric Rate Design

Projected Municipal Pumping Service (MP-2) Rates

Rates	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 22.00	\$ 32.00	\$ 32.00	\$ 42.00	\$ 42.00	\$ 52.00
Energy Charge:						
All Energy	\$ 0.0920	\$ 0.0950	\$ 0.0950	\$ 0.0977	\$ 0.0977	\$ 0.1004
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 174,293	\$ 232,304	\$ 232,304	\$ 239,273	\$ 239,273	\$ 246,451
Change from Previous		1.0%	0.0%	3.0%	0.0%	3.0%

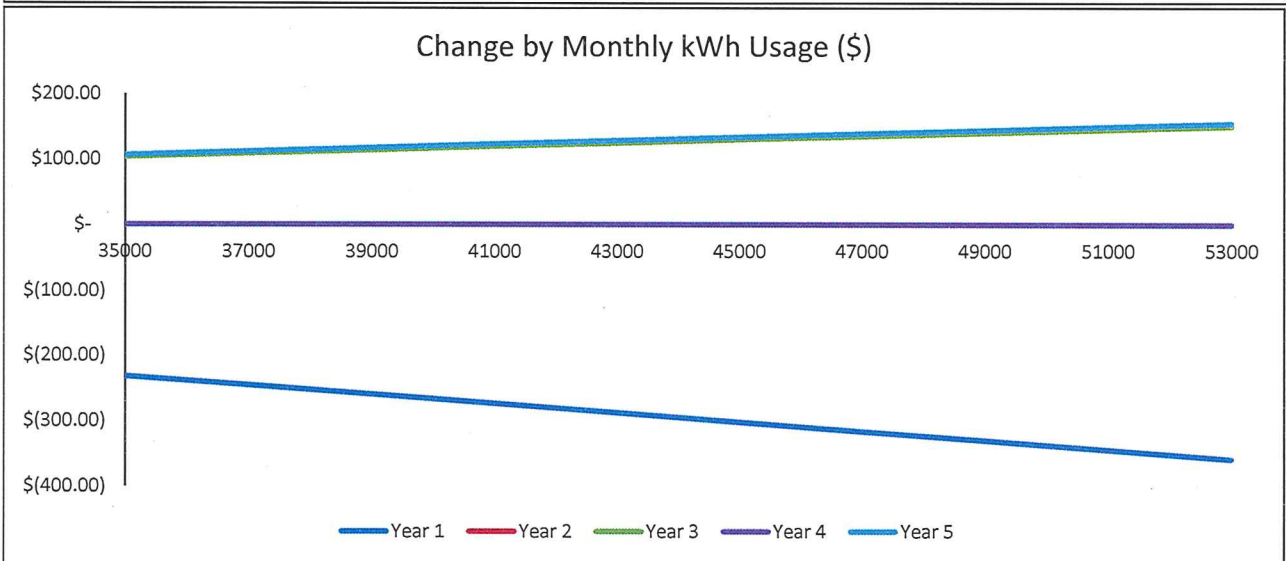
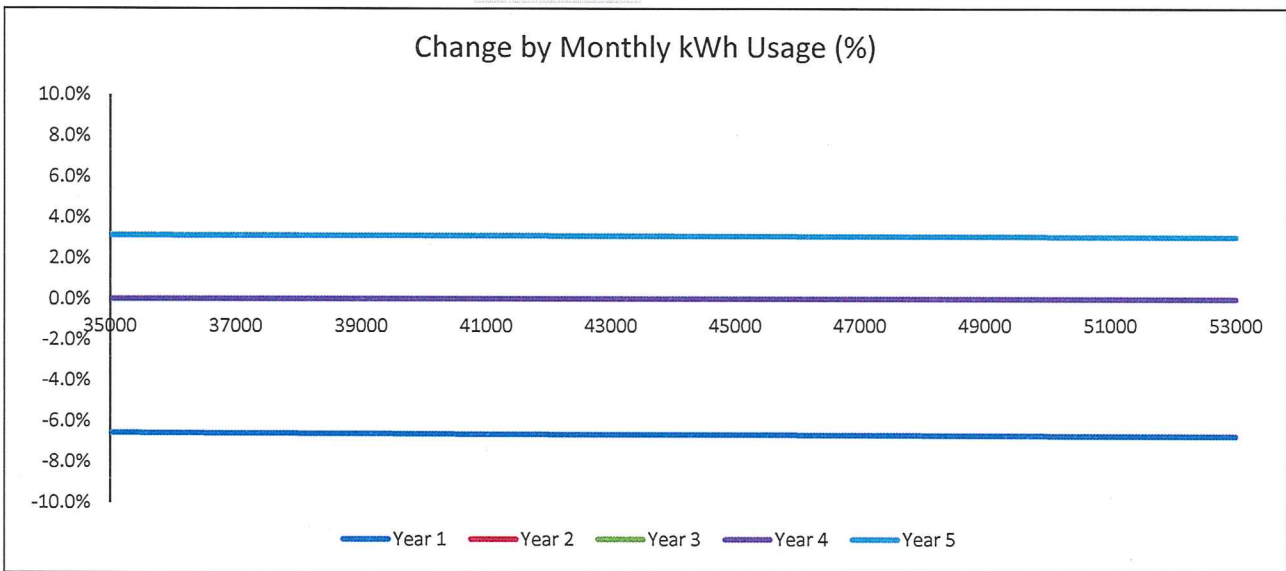


TCL&P

Electric Rate Design

Consolidated Municipal Pumping Service at 103% Rates

Rates	Current	MP-2 Rate				
		Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 19.00	\$ 32.00	\$ 32.00	\$ 42.00	\$ 42.00	\$ 52.00
Energy Charge:						
All Energy	\$ 0.10200	\$ 0.0950	\$ 0.0950	\$ 0.0977	\$ 0.0977	\$ 0.1004
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue for Graph	\$ 55,707	\$ 51,983	\$ 51,983	\$ 53,578	\$ 53,578	\$ 55,220
Change from Previous		-6.7%	0.0%	3.1%	0.0%	3.1%

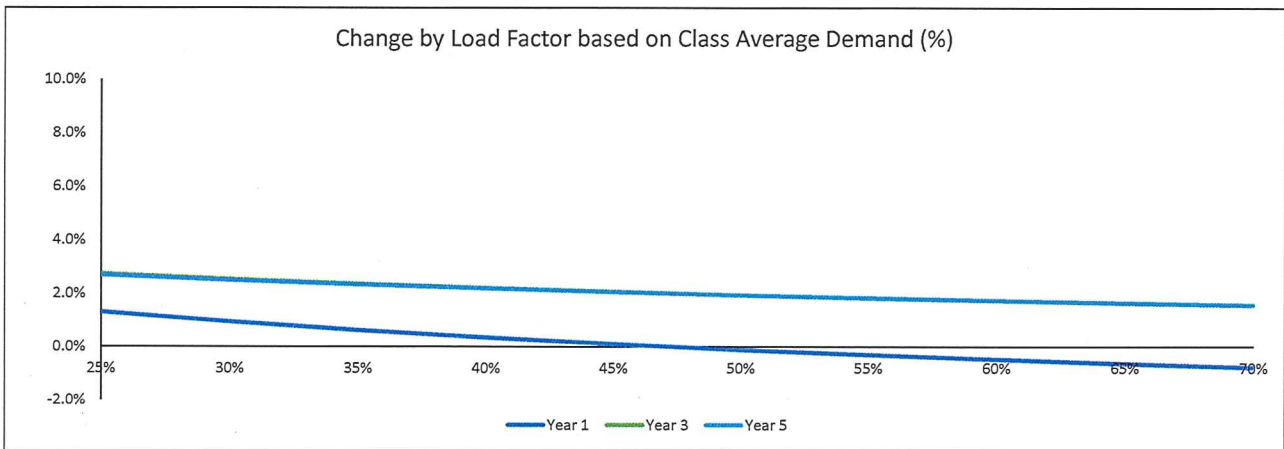


TCL&P

Electric Rate Design

Projected Commercial Demand/General Secondary Rates

Rates	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
Monthly Charge	\$ 15.00	\$ 20.00	\$ 20.00	\$ 25.00	\$ 25.00	\$ 30.00
Energy Charge:						
All Energy	\$ 0.0590	\$ 0.0571	\$ 0.0571	\$ 0.0571	\$ 0.0571	\$ 0.0571
Demand Charge						
All Demand	\$ 12.95	\$ 13.45	\$ 13.45	\$ 13.95	\$ 13.95	\$ 14.45
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 10,197,762	\$ 10,197,762	\$ 10,197,762	\$ 10,401,717	\$ 10,401,717	\$ 10,609,751
Change from Previous		0.0%	0.0%	2.0%	0.0%	2.0%

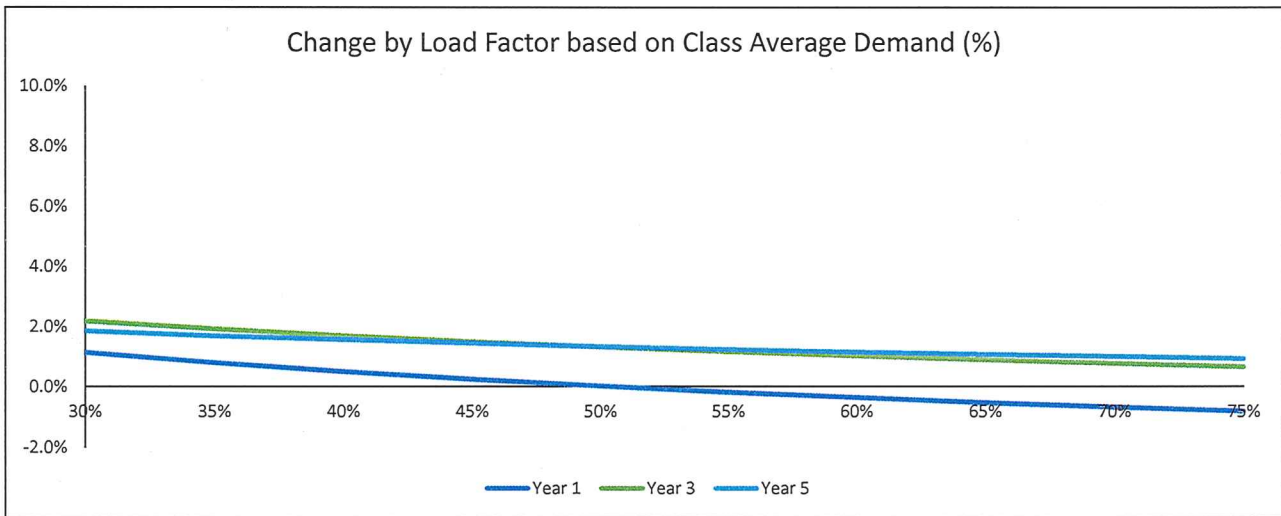


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Electric Rate Design

Projected Commercial Demand Primary Metered Rates

Rates	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
Monthly Charge	\$ 16.00	\$ 20.00	\$ 20.00	\$ 25.00	\$ 25.00	\$ 30.00
Energy Charge:						
All Energy	\$ 0.0581	\$ 0.0562	\$ 0.0562	\$ 0.0554	\$ 0.0554	\$ 0.0552
Demand Charge						
All Demand	\$ 12.57	\$ 13.25	\$ 13.25	\$ 13.95	\$ 13.95	\$ 14.45
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 178,810	\$ 178,732	\$ 178,732	\$ 180,992	\$ 180,992	\$ 183,346
Change from Previous		0.0%	0.0%	1.3%	0.0%	1.3%

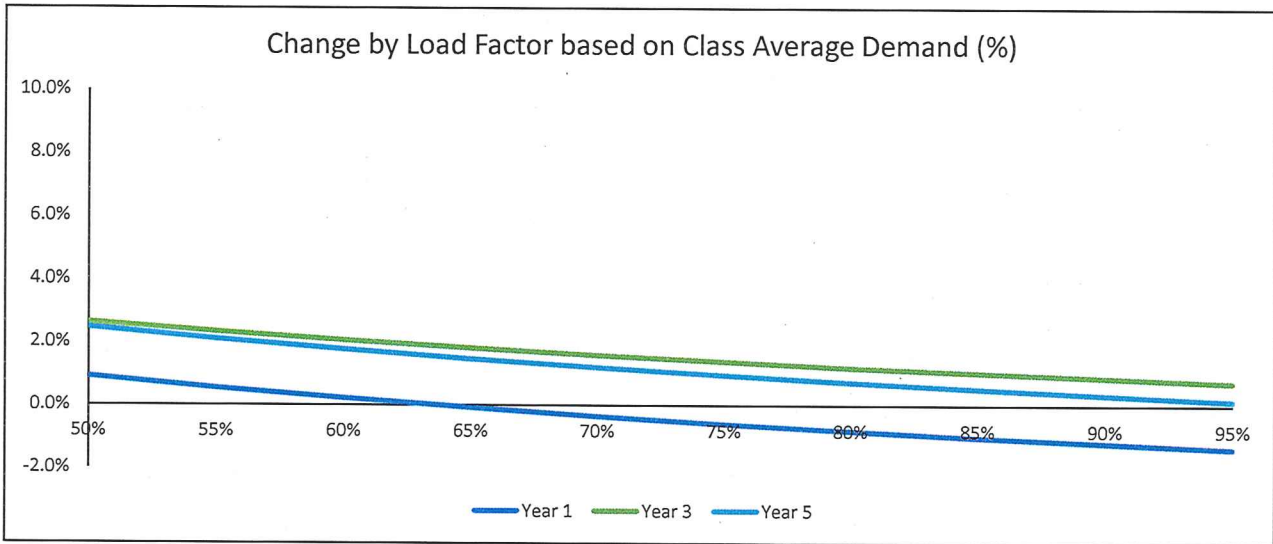


TCL&P

Electric Rate Design

Projected Primary Service High Load Factor Rates

Rates	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 50.00	\$ 100.00	\$ 100.00	\$ 150.00	\$ 150.00	\$ 200.00
Energy Charge:						
Winter On Peak	\$ 0.0660	\$ 0.0640	\$ 0.0640	\$ 0.0626	\$ 0.0626	\$ 0.0604
Winter Off Peak	\$ 0.0550	\$ 0.0520	\$ 0.0520	\$ 0.0506	\$ 0.0506	\$ 0.0484
Summer On Peak	\$ 0.0680	\$ 0.0640	\$ 0.0640	\$ 0.0626	\$ 0.0626	\$ 0.0604
Summer Off Peak	\$ 0.0550	\$ 0.0520	\$ 0.0520	\$ 0.0506	\$ 0.0506	\$ 0.0484
Demand Charge:						
All Demand	\$ 11.00	\$ 12.25	\$ 12.25	\$ 13.50	\$ 13.50	\$ 15.00
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 7,521,378	\$ 7,521,378	\$ 7,993,130	\$ 8,142,734	\$ 8,142,734	\$ 8,268,622
Change from Previous		0.0%	0.4%	1.9%	0.0%	1.5%



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Electric Rate Design

Consolidated Primary Interruptible Rates

Rates	Current	PHLF Rate				
		Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 50.00	\$ 100.00	\$ 100.00	\$ 150.00	\$ 150.00	\$ 200.00
Energy Charge:						
Winter On Peak	\$ 0.0660	\$ 0.0660	\$ 0.0640	\$ 0.0626	\$ 0.0626	\$ 0.0604
Winter Off Peak	\$ 0.0600	\$ 0.0600	\$ 0.0520	\$ 0.0506	\$ 0.0506	\$ 0.0484
Summer On Peak	\$ 0.0680	\$ 0.0680	\$ 0.0640	\$ 0.0626	\$ 0.0626	\$ 0.0604
Summer Off Peak	\$ 0.0600	\$ 0.0600	\$ 0.0520	\$ 0.0506	\$ 0.0506	\$ 0.0484
Demand Charge:						
All Demand	\$ 11.00	\$ 12.25	\$ 12.25	\$ 13.50	\$ 13.50	\$ 15.00
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 429,635	\$ 436,745	\$ 483,791	\$ 489,926	\$ 489,926	\$ 494,113
Change from Previous		1.7%	10.8%	1.3%	0.0%	0.9%

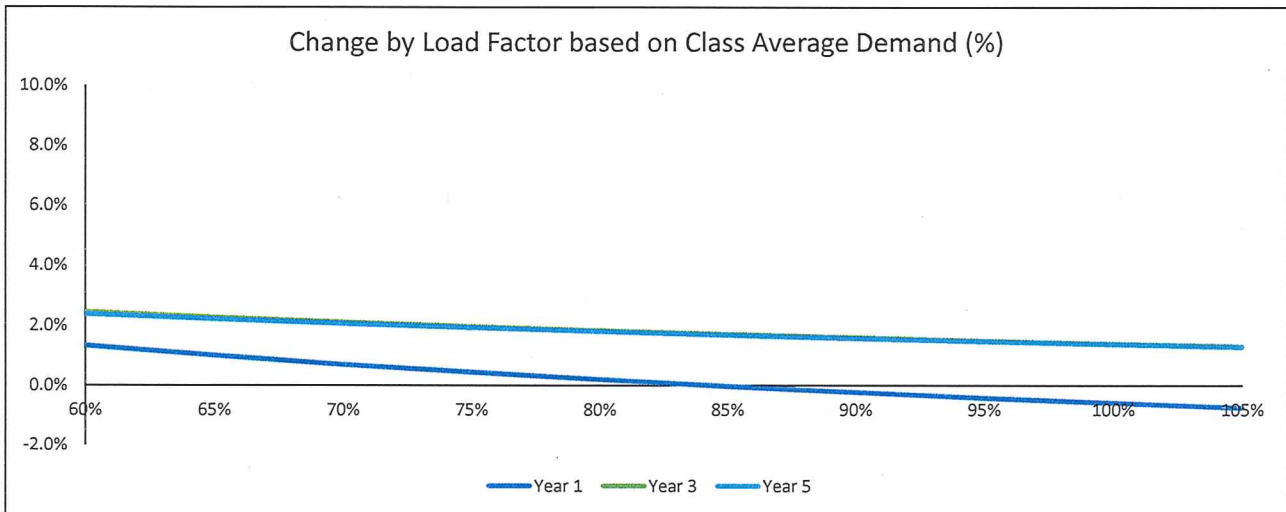
Note: Year 2 increase is caused from measuring demand at actual rather than demand measurement per tariff rate. Otherwise it would be rate decrease when consolidating to primary high load factor tariff rate.

TCL&P

Electric Rate Design

Metal Melting

Rates	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 40.00	\$ 55.00	\$ 55.00	\$ 70.00	\$ 70.00	\$ 85.00
Energy Charge:						
Winter On Peak	\$ 0.06400	\$ 0.06360	\$ 0.06360	\$ 0.06320	\$ 0.06320	\$ 0.06280
Winter Off Peak	\$ 0.05000	\$ 0.04760	\$ 0.04760	\$ 0.04720	\$ 0.04720	\$ 0.04680
Summer On Peak	\$ 0.06700	\$ 0.06360	\$ 0.06360	\$ 0.06320	\$ 0.06320	\$ 0.06280
Summer Off Peak	\$ 0.05000	\$ 0.04760	\$ 0.04760	\$ 0.04720	\$ 0.04720	\$ 0.04680
Demand Charge:						
All Demand	\$ 8.48	\$ 10.00	\$ 10.00	\$ 11.00	\$ 11.00	\$ 12.00
Power Cost Adjustment:						
All Energy	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)	\$ (0.0019)
Revenue from Rate	\$ 1,762,762	\$ 1,771,503	\$ 1,771,503	\$ 1,806,813	\$ 1,806,813	\$ 1,842,123
Change from Previous		0.5%	0.0%	2.0%	0.0%	2.0%





TRAVERSE CITY
LIGHT & POWER

To: Light & Power Board
From: Tim Arends, Executive Director
Date: September 10, 2018
Subject: MPPA Purchase Power Commitment - Solar

Michigan Public Power Agency (“MPPA”) has received authorization from its Board to execute two purchase power agreements with developers; both are contingent on receiving authorization letters from members to purchase the power from MPPA. One of the purchase power agreements (“PPA”) has been executed and the other has a couple loose ends to work out before signature. To support the PPA’s MPPA will be counting on Traverse City Light & Power to commit to purchasing 22 MW’s of installed capacity that we expect to amount to about 38,544 MWh’s annually. The rate charged to each member participating will be a weighted average of the two MPPA purchase power agreements based on actual generation from the two facilities and will be about \$41.60 per MWh, but can range plus or minus about \$2 per MWh depending on which facility is operating at any given time. This rate will increase 2% per year throughout the term of the 25-year agreement. Your commitment to MPPA will be treated as a Purchase Power Commitment (PPC) under the existing Energy Services Agreement that TCL&P has already agreed to.

The reasons that MPPA highly recommends participation in the PPC are as follows:

1. Pricing for the PPA include:

* Super-peak energy – Energy will be delivered when generated that correspond greatly to the periods of the day when electric demand is the greatest, and therefore, when the value of energy is the greatest.

* Capacity – As coal plants in the State are retired, there is a general expectation in the marketplace that capacity will increase in value because the coal plants will not be completely replaced with new sources of generation.

* Renewable Energy Credits –All MPPA members are required to meet the State of Michigan Renewable Portfolio Standard and this solar supply will be one of the sources that will provide the credits necessary to be submitted to the State. Current law requires that renewable energy credits be submitted to the State that are equivalent to 15% of energy supplied.

2. MPPA has analyzed the economics of the three products purchased above against future forecasts of power costs and believe that the solar facilities will bring a positive financial value well into the future. This is a testament to the municipal joint action agency model and the ability to aggregate the needs of multiple municipal members to bring the economics of power supply projects to the cost levels typically experienced by the largest utilities.

FOR THE LIGHT & POWER BOARD MEETING OF SEPTEMBER 25, 2018

3. The electric industry is largely migrating its future energy supply to sources fueled by natural gas. MPPA believes strongly that renewable energy provides a natural hedge against the future costs of natural gas. Regardless of what happens to future costs of natural gas, this solar pricing is fixed. MPPA also believes in diversity of supply and expects to enter into additional agreements for more renewable energy in the near future.

4. This purchase power agreement goes towards achieving the Board's renewable energy goal of 40% of its energy portfolio requirements from clean and renewable energy by 2025. With this agreement the utility's portfolio will be at an estimated 24% of its energy coming from clean and renewable energy.

Staff has included an analysis within the board packet showing the most recent calculated avoided cost of solar, costs of the purchase power commitment versus market, and the impact on average residential, commercial, commercial demand and industrial rates. Additionally, the Energy Services Project Transaction Authorization is included for your review.

If the Board agrees with moving forward with the Energy Services Project Transaction Authorization the following motion would be appropriate:

MOVED BY _____, SECONDED BY _____,

THE BOARD AUTHORIZES THE DESIGNATED MEMBER REPRESENTATIVE OF THE MPPA & TCL&P ENERGY SERVICES AGREEMENT, THE EXECUTIVE DIRECTOR, TO SIGN MPPA'S ENERGY SERVICES PROJECT TRANSACTION AUTHORIZATION FOR THE SOLAR ENERGY PURCHASE POWER COMMITMENT ONCE TERMS ARE FINALIZED AND WITHIN THE DISCLOSED TERMS PRESENTED TO THE BOARD.

Traverse City Light and Power
 Avoided Cost/Purchase Power Price - Solar for MPPA Purchase Commitment
 September 2018

	1	2	3	4	5	6	7
	2021	2022	2023	2024	2025	2026	2027
AVOIDED COST OF SOLAR							
Contract Year		2022	2023	2024	2025	2026	2027
Energy Cost	\$ 0.0327	\$ 0.0334	\$ 0.0340	\$ 0.0347	\$ 0.0357	\$ 0.0366	\$ 0.0373
Capacity Cost	\$ 0.0137	\$ 0.0138	\$ 0.0138	\$ 0.0139	\$ 0.0140	\$ 0.0140	\$ 0.0141
Renewable Energy Credit	\$ 0.0009	\$ 0.0009	\$ 0.0009	\$ 0.0009	\$ 0.0009	\$ 0.0009	\$ 0.0009
Total (Cost per kWh)	\$ 0.0473	\$ 0.0480	\$ 0.0488	\$ 0.0495	\$ 0.0506	\$ 0.0515	\$ 0.0523

ANNUAL IMPACT ON PURCHASE POWER COSTS							
Expected Generation (MWh)	38,544	38,351	38,160	37,969	37,779	37,590	37,402
Market Cost	1,821,621.22	1,841,986.78	1,860,737.70	1,880,217.66	1,911,668.43	1,935,752.33	1,957,799.95
Purchase Power Contract	1,603,430.40	1,627,321.51	1,651,568.60	1,676,176.98	1,701,152.01	1,726,499.18	1,752,224.02
Difference	218,190.82	214,665.26	209,169.10	204,040.69	210,516.42	209,253.16	205,575.94
Impact on Power Service Cost Recovery Rate	\$ (0.0006324)	\$ (0.0006191)	\$ (0.0006003)	\$ (0.0005826)	\$ (0.0005981)	\$ (0.0005916)	\$ (0.0005783)

ANNUAL IMPACT ON CUSTOMER BILLS							
Average Residential Customer	\$ (4.03)	\$ (3.96)	\$ (3.86)	\$ (3.77)	\$ (3.89)	\$ (3.86)	\$ (3.80)
Average Commercial Customer	\$ (9.81)	\$ (9.65)	\$ (9.41)	\$ (9.18)	\$ (9.47)	\$ (9.41)	\$ (9.25)
Average Commercial Demand Customer	\$ (82.94)	\$ (81.60)	\$ (79.51)	\$ (77.56)	\$ (80.02)	\$ (79.54)	\$ (78.14)
Average Industrial Customer	\$ (1,503.86)	\$ (1,479.56)	\$ (1,441.68)	\$ (1,406.33)	\$ (1,450.97)	\$ (1,442.26)	\$ (1,416.92)

Traverse City Light and Power
 Avoided Cost/Purchase Power Price - Solar for MPP
 September 2018

AVOIDED COST OF SOLAR	8	9	10	11	12	13	14
	2028	2029	2030	2031	2032	2033	2034
Contract Year							
Energy Cost	\$ 0.0382	\$ 0.0393	\$ 0.0393	\$ 0.0395	\$ 0.0395	\$ 0.0412	\$ 0.0419
Capacity Cost	\$ 0.0142	\$ 0.0143	\$ 0.0143	\$ 0.0144	\$ 0.0145	\$ 0.0145	\$ 0.0146
Renewable Energy Credit	\$ 0.0009	\$ 0.0009	\$ 0.0009	\$ 0.0009	\$ 0.0009	\$ 0.0009	\$ 0.0009
Total (Cost per kWh)	\$ 0.0533	\$ 0.0544	\$ 0.0545	\$ 0.0548	\$ 0.0549	\$ 0.0566	\$ 0.0574

ANNUAL IMPACT ON PURCHASE POWER COSTS							
Expected Generation (MWh)	37,215	37,029	36,844	36,660	36,476	36,294	36,112
Market Cost	1,983,295.40	2,014,962.82	2,008,220.47	2,010,593.07	2,003,186.89	2,055,720.30	2,073,506.61
Purchase Power Contract	1,778,332.15	1,804,829.30	1,831,721.26	1,859,013.91	1,886,713.21	1,914,825.24	1,943,356.14
Difference	204,963.25	210,133.52	176,499.22	151,579.16	116,473.67	140,895.06	130,150.47
Impact on Power Service Cost Recovery Rate	\$ (0.0005737)	\$ (0.0005853)	\$ (0.0004891)	\$ (0.0004180)	\$ (0.0003196)	\$ (0.0003847)	\$ (0.0003536)

ANNUAL IMPACT ON CUSTOMER BILLS							
Average Residential Customer	\$ (3.79)	\$ (3.88)	\$ (3.26)	\$ (2.80)	\$ (2.15)	\$ (2.60)	\$ (2.40)
Average Commercial Customer	\$ (9.22)	\$ (9.45)	\$ (7.94)	\$ (6.82)	\$ (5.24)	\$ (6.34)	\$ (5.85)
Average Commercial Demand Customer	\$ (77.91)	\$ (79.87)	\$ (67.09)	\$ (57.62)	\$ (44.27)	\$ (53.55)	\$ (49.47)
Average Industrial Customer	\$ (1,412.69)	\$ (1,448.33)	\$ (1,216.51)	\$ (1,044.75)	\$ (802.79)	\$ (971.11)	\$ (897.05)

Traverse City Light and Power
 Avoided Cost/Purchase Power Price - Solar for MPP
 September 2018

AVOIDED COST OF SOLAR	15	16	17	18	19	20	21
	2035	2036	2037	2038	2039	2040	2041
Contract Year							
Energy Cost	\$ 0.0427	\$ 0.0430	\$ 0.0438	\$ 0.0451	\$ 0.0473	\$ 0.0483	\$ 0.0513
Capacity Cost	\$ 0.0151	\$ 0.0151	\$ 0.0152	\$ 0.0153	\$ 0.0154	\$ 0.0154	\$ 0.0151
Renewable Energy Credit	\$ 0.0009	\$ 0.0009	\$ 0.0009	\$ 0.0009	\$ 0.0009	\$ 0.0009	\$ 0.0009
Total (Cost per kWh)	\$ 0.0587	\$ 0.0590	\$ 0.0599	\$ 0.0613	\$ 0.0635	\$ 0.0646	\$ 0.0674

ANNUAL IMPACT ON PURCHASE POWER COSTS							
Expected Generation (MWh)	35,932	35,752	35,573	35,396	35,219	35,043	34,867
Market Cost	2,107,701.65	2,110,721.71	2,132,158.84	2,170,620.50	2,238,127.81	2,264,302.43	2,349,368.55
Purchase Power Contract	1,972,312.14	2,001,699.59	2,031,524.92	2,061,794.64	2,092,515.38	2,123,693.86	2,155,336.90
Difference	135,389.51	109,022.12	100,633.92	108,825.87	145,612.43	140,608.57	194,031.66
Impact on Power Service Cost Recovery Rate	\$ (0.0003660)	\$ (0.0002932)	\$ (0.0002693)	\$ (0.0002898)	\$ (0.0003858)	\$ (0.0003707)	\$ (0.0005090)

ANNUAL IMPACT ON CUSTOMER BILLS							
Average Residential Customer	\$ (2.50)	\$ (2.01)	\$ (1.86)	\$ (2.01)	\$ (2.69)	\$ (2.60)	\$ (3.58)
Average Commercial Customer	\$ (6.09)	\$ (4.90)	\$ (4.53)	\$ (4.89)	\$ (6.55)	\$ (6.32)	\$ (8.73)
Average Commercial Demand Customer	\$ (51.46)	\$ (41.44)	\$ (38.25)	\$ (41.37)	\$ (55.35)	\$ (53.45)	\$ (73.75)
Average Industrial Customer	\$ (933.16)	\$ (751.43)	\$ (693.61)	\$ (750.07)	\$ (1,003.62)	\$ (969.13)	\$ (1,337.35)

Traverse City Light and Power
 Avoided Cost/Purchase Power Price - Solar for MPP
 September 2018

AVOIDED COST OF SOLAR	22		23		24		25	
	2042		2043		2044		2045	
Contract Year								
Energy Cost	\$ 0.0529	\$	0.0541	\$	0.0554	\$	0.0567	
Capacity Cost	\$ 0.0152	\$	0.0153	\$	0.0154	\$	0.0154	
Renewable Energy Credit	\$ 0.0009	\$	0.0009	\$	0.0009	\$	0.0009	
Total (Cost per kWh)	\$ 0.0690	\$	0.0703	\$	0.0717	\$	0.0731	

ANNUAL IMPACT ON PURCHASE POWER COSTS	22		23		24		25		Total
Expected Generation (MWh)	34,693		34,520		34,347		34,175		907,941
Market Cost	2,394,993.36		2,428,218.31		2,462,051.03		2,496,502.54		52,514,036.38
Purchase Power Contract	2,187,451.42		2,220,044.44		2,253,123.10		2,286,694.64		48,143,354.93
Difference	207,541.94		208,173.87		208,927.92		209,807.90		4,370,681.45
Impact on Power Service Cost Recovery Rate	\$ (0.0005418)	\$	(0.0005407)	\$	(0.0005400)	\$	(0.0005395)		

ANNUAL IMPACT ON CUSTOMER BILLS	22	23	24	25	Total
Average Residential Customer	\$ (3.83)	\$ (3.84)	\$ (3.86)	\$ (3.88)	\$ (80.72)
Average Commercial Customer	\$ (9.33)	\$ (9.36)	\$ (9.40)	\$ (9.44)	\$ (196.57)
Average Commercial Demand Customer	\$ (78.89)	\$ (79.13)	\$ (79.41)	\$ (79.75)	\$ (1,661.32)
Average Industrial Customer	\$ (1,430.47)	\$ (1,434.82)	\$ (1,440.02)	\$ (1,446.08)	\$ (30,124.56)



ENERGY SERVICES PROJECT TRANSACTION AUTHORIZATION

This Transaction Authorization ("Authorization") is made and entered into as of _____, 2018, by and between MICHIGAN PUBLIC POWER AGENCY ("MPPA"), a body corporate and politic of the State of Michigan, created pursuant to 1976 PA 448 and _____ (the "Participant").

WHEREAS, MPPA was organized under Act 448 to provide a means for those Michigan municipalities which are members of MPPA to secure electric power and energy for their present and future needs; and

WHEREAS, on March 11, 2009, the MPPA Board of Commissioners by action in open meeting created the Energy Services Project; and

WHEREAS, one of the services allowed under the Energy Services Project is that a Participant may agree to have MPPA enter into Power Purchase Commitments to meet a portion of the Participant's load requirements; and

WHEREAS, the service covered by this Authorization is a Power Purchase Commitment under the Energy Services Agreement between the Participant and MPPA ("Energy Services Agreement"):

NOW, THEREFORE, for and in consideration of the mutual covenants and agreements herein contained, it is agreed by and between the parties hereto as follows:

Section 1. Solar Power Supply Agreements

MPPA's Solar Power Supply Agreement for the Solar facility located in Shiawassee County, Michigan is with Assembly Solar, LLC. The Solar Power Supply Agreement for the Solar facility located in either Lenawee County or Calhoun County, Michigan is with Invenergy Solar Development North America, LLC. For the terms of each respective Agreement, MPPA will allocate a pro rata portion of MPPA's rights and obligations contained in each Agreement to the Participant as provided in this Transaction Authorization.

Section 2. Delivery Point

The delivery point for the solar power will be located at each of the solar facility's interconnection points with the regional transmission organization.

Section 3. Term

The term of the Power Purchase Commitment will begin upon the declared commercial operation date of each facility, currently estimated to begin January 1, 2021 and continue for 25 years thereafter.

Section 4. Amount

The Participant is allocated a percentage of output from each of the facilities as shown below.

Approximate Installed Capacity	Allocation Percentage
22.0 MW	24.4%

Section 5. Product

Upon commercial operation of each respective solar facility, MPPA will transfer to each Participant the Participant's allocated pro rata share of the output of the solar facilities, as described below.

Section 6. Price

Participants will pay to MPPA a maximum rate of \$43.75 per MWh delivered in year 1 depending on actual generation from each facility. This maximum rate will escalate by 2% each year thereafter.

Section 7. Energy Services Agreement

This Authorization for the purchase power commitments is subject to the terms and provisions of the Energy Services Agreement, including the MPPA Energy Risk Management Policy contained in Exhibit 2 thereto. In the event the terms of this Authorization conflict with the Energy Services Agreement, the provisions of the Energy Services Agreement shall control.

Section 8. Evidence

Authority of the Participant's Authorized Representative to execute this Authorization is evidenced through the Participant resolution passed appropriately by the Participant's governing body or through the meeting minutes of the Participant's governing body where approval was granted to the Authorized Representative to execute this Authorization.

Section 9. Effectiveness

This Transaction Authorization and the associated Purchase Power Commitment is not effective until MPPA has received sufficient MPPA member participation to enable the solar facilities in Section 1 to proceed.

Authorized Representative

By _____

Its _____



**TRAVERSE CITY
LIGHT & POWER**

To: Light & Power Board
From: Tim Arends, Executive Director
Date: September 18, 2018
Subject: Hickory Hills Recreational Area Improvement Project

Enclosed is a request from Mary Colburn, City Manager, for financial participation from TCL&P in the lighting component of the Hickory Hills Recreational Area Improvement Project in the amount of \$154,000. This consists of \$130,000 for ski slope lighting and \$24,000 for parking lot lighting.

Marty Colburn will be in attendance at the meeting to present this request and to answer any questions from the Board.

If the Board would like to approve to financially participate in the Hickory Hills Recreational Area Improvement Project, the following motion would be appropriate:

MOVED BY _____, SECONDED BY _____,

THAT THE BOARD APPROVES FUNDING THE LIGHTING COMPONENT OF THE CITY OF TRAVERSE CITY'S HICKORY HILLS RECREATIONAL AREA IMPROVEMENT PROJECT IN THE NOT TO EXCEED AMOUNT OF \$154,000.



September 18, 2018

Traverse City Light & Power Board of Directors
c/o Mr. Tim Arends, TCLP Director
1131 Hastings St.
Traverse City, MI 49686

Re: Request for Participation in Hickory Hills Electrical Site Work

The City of Traverse City is working on improvements to the city-owned Hickory Hills Recreation Area. This ski area is dedicated to teaching youth how to ski, as well as enjoy and experience other winter activities. Providing healthy outdoor activities is an important element of the City's commitment to the well-being of our citizens.

The City is seeking collaboration with area resources, including Traverse City Light and Power, for the lighting component of the Hickory Hills Recreational Area improvement project. The City Engineer's office has provided an itemized project materials listing (attached). The estimates for the ski slope lighting are approximately \$130,000.00, and parking lot lighting is approximately \$24,000.00, for a total of \$154,000.00.

As you are probably aware, this project has elicited the collaboration of numerous partners, and has generated well over \$2 million "in kind" and financial contributions, as well as City participation with an estimated \$2.0 million. Some of these partners are:

1. TCLP
2. Cherryland Electric
3. Consumers Energy
4. Low Bid Contractor
5. Electrical Contractor In-Kind
6. City Staff
7. Electrical Supply Companies (All-Phase, Schneider, Kendall, Standard, etc.)
8. Electrical Workers Union

The City respectfully requests that Traverse City Light & Power, as a City Department, continue that partnership with collaboration on these electrical projects within the scope of the project.

Traverse City Light & Power Board of Directors
c/o Mr. Tim Arends, TCLP Director
Page Two

Hickory Hills historically was one of the first electrically lit ski slopes in the Nation, providing a new opportunity for night time skiing. It has served generations of Traverse City residents well. It is important that that this opportunity for healthy outdoor activity continues. At this time, I'm respectfully requesting that this item be forwarded and placed on the agenda for the Tuesday, September 25, 2018, meeting of the Board of Directors for Traverse City Light & Power. I will be in attendance at that meeting to answer any questions the Board may have regarding the project.

Your consideration and support regarding this request is greatly appreciated.

Sincerely,



Martin A. Colburn
City Manager

MAC/kas

pc: Mr. Tim Lodge, City Engineer
Mr. Bill Twietmeyer, Treasurer

Att.

Hickory Hills Recreation Area
Grant Funded and Related Electrical Site Work

RP17-0041				CC POWER		45th PROPERTY & POWER		MATERIALS		
Item No.	Est. Qty	Unit	Description of Items	Unit Price	Total Price	Sub-Total	Unit Price	Total Price	Unit Price	Total Price
400	1EA		ELECTRICAL PANEL FOR VALLEY SLOPE SNOW MAKING	\$ 2,500.00	\$ 2,500.00				\$ 4,770.00	\$ 4,770.00
401	1EA		ELECTRICAL PANEL FOR VALLEY SLOPE LIFTS	\$ 2,500.00	\$ 2,500.00				\$ 2,351.00	\$ 2,351.00
402	1EA		ELECTRICAL PANEL FOR JACKS TRAIL SNOW MAKING	\$ 2,500.00	\$ 2,500.00				\$ 6,828.00	\$ 6,828.00
403	1EA		RELOCATE LIGHT POLE AND REDIRECT FIXTURES	\$ 1,000.00	\$ 1,000.00					
404	1EA		REDIRECT FIXTURES ON EXISTING POLE	\$ 500.00	\$ 500.00					
405	7EA		INSTALL NEW POLE WITH EXISTING FIXTURE (TRUCK)	\$ 1,000.00	\$ 7,000.00					
406	3EA		INSTALL NEW WOOD POLE (TRUCK)	\$ 750.00	\$ 2,250.00					
407	12EA		INSTALL NEW WOOD POLE (ALL TERRAIN RG)	\$ 1,500.00	\$ 18,000.00					
408	4EA		FURNISH SINGLE FIXTURE TYPE A OR B	\$ 700.00	\$ 2,800.00					
409	4EA		INSTALL SINGLE FIXTURE TYPE A OR B	\$ 300.00	\$ 1,200.00					
410	5EA		FURNISH SINGLE FIXTURE TYPE C	\$ 1,100.00	\$ 5,500.00					
411	5EA		INSTALL SINGLE FIXTURE TYPE C	\$ 200.00	\$ 1,000.00					
412	10EA		FURNISH DOUBLE FIXTURE TYPE C	\$ 2,200.00	\$ 22,000.00					
413	10EA		INSTALL DOUBLE FIXTURE TYPE C	\$ 400.00	\$ 4,000.00					
414	1EA		FURNISH TRIPLE FIXTURE TYPE C	\$ 3,300.00	\$ 3,300.00					
415	1EA		INSTALL TRIPLE FIXTURE TYPE C	\$ 600.00	\$ 600.00					
416	3830 FT		FURNISH DIRECT BURY UG WIRE FOR LIGHTING	\$ 0.80	\$ 3,064.00					
417	3830 FT		INSTALL DIRECT BURY UG WIRE FOR LIGHTING	\$ 3.90	\$ 14,997.00					
418	1EA		ELECTRICAL PANEL FOR LIGHTING FOR VALLEY SLOPE	\$ 4,000.00	\$ 4,000.00					
419	5EA		INSTALL LIGHT(S) ON SKI LIFT TOWER	\$ 250.00	\$ 1,250.00					
420	1LSUM		CONNECT LIGHTING CIRCUITS TO MAINTENANCE BUILDING	\$ 3,200.00	\$ 3,200.00					
421	1EA		CONSTRUCT AND REMOVE TEMPORARY BENCH IN SLOPE	\$ 3,200.00	\$ 3,200.00					
422	24 SFT		12" EQUIPMENT PAD	\$ 30.00	\$ 720.00					
423	7022 EA		TRENCH OR PLOW DIRECT BURY WIRE FOR SNOW MAKING AND LIFTS	\$ 2.00	\$ 14,044.00					
424	22 FT		CONNECT ELECTRICAL PEDESTAL FOR SNOW MAKER	\$ 200.00	\$ 4,400.00					
425	28 EA		FURNISH AND INSTALL JUNCTION BOX(S), CONDUIT, DISCONNECT SWITCH FOR WOOD POLES	\$ 600.00	\$ 16,800.00					
426	28 EA		FURNISH WOOD POLE TCP	\$ 285.00	\$ 7,980.00					
427	1EA		ELECTRICAL DISTRIBUTION PANEL AT VALLEY SLOPE	\$ 2,500.00	\$ 2,500.00					
TOTAL					\$ 150,716.00	\$ 27,250.00		\$ 32,700.00		\$ 68,433.94

LW17-0018/26-01785				BONDS AND INSURANCE	
Item No.	Est. Qty	Unit	Description of Items	Unit Price	Total Price
500	6EA		INSTALL NEW WOOD POLE (TRUCK)	\$ 750.00	\$ 4,500.00
501	6EA		FURNISH SINGLE FIXTURE TYPE A OR B	\$ 700.00	\$ 4,200.00
502	6EA		INSTALL SINGLE FIXTURE TYPE A OR B	\$ 300.00	\$ 1,800.00
503	1EA		CONNECT EXISTING LIGHT POLE AT ENTRANCE	\$ 250.00	\$ 250.00
504	1000 FT		2" CONDUIT WITH CONDUCTOR	\$ 6.50	\$ 6,500.00
505	1000 FT		2" CONDUIT SPARE	\$ 3.50	\$ 3,500.00
506	7EA		HANDHOLE	\$ 600.00	\$ 4,200.00
TOTAL					\$ 24,950.00

BONDS AND INSURANCE				CC POWER		45th PROPERTY & POWER		MATERIALS		
Item No.	Est. Qty	Unit	Description of Items	Unit Price	Total Price	Sub-Total	Unit Price	Total Price	Unit Price	Total Price
600	1LSUM		BONDS	\$ 6,000.00	\$ 6,000.00					
601	1LSUM		INSURANCE	\$ 2,500.00	\$ 2,500.00					
602	1LSUM		OWNERS PROTECTIVE POLICY	\$ 3,200.00	\$ 3,200.00					
TOTAL					\$ 11,700.00					

Subtotal Lighting Slopes Only				Subtotal Lighting Parking Lot Only		Subtotal Snow Lifts		Subtotal Snow Making		Subtotal Lighting Check		City Install Wire		
Item No.	Est. Qty	Unit	Description of Items	Unit Price	Total Price	Sub-Total	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
TOTAL					\$ 187,366.00									
					\$ (24,182.68)									
					\$ (108,748.68)									
					\$ 135,222.00									
					\$ 24,950.00									
					\$ 2,500.00									
					\$ 24,654.00									
					\$ 160,172.00									
					\$ 45,183.74									
					\$ 11,560.00									
					\$ 3,951.00									
					\$ 37,688.50									
					\$ 56,753.74									
					\$ (23,804.00)									
					\$ 51,475.44									
					\$ 129,569.18									
					\$ 23,531.50									
					\$ 6,302.00									
					\$ 14,657.50									
					\$ 52,246.00									
					\$ 58,046.94									
					\$ 152,900.68									



**TRAVERSE CITY
LIGHT & POWER**

To: Light & Power Board
From: Tony Chartrand, Systems Engineer
Date: September 19, 2018
Subject: Parsons Switching Station Project – Construction Contract Award

Four bidders attended the prebid meeting and thus were eligible to bid on this project. On September 19th, 2018, three bids for the Parsons Switching Station Project were received and opened. The following are the results:

<u>Contractor</u>	<u>Amount</u>
Kent Power	\$1,273,704.00
Hydaker-Wheatlake	\$1,403,974.00
Newkirk	\$1,180,684.00
Rahorn	No Bid

These costs are approximately 20% above GRP's estimate. After reviewing the estimate and comparing it to the received unit list included in the bid it was evident much of the 69kV work was not included in the original estimate. Staff will be reviewing and updating the Barlow Switch Station estimate to ensure nothing has been missed in that estimate.

After review by staff and GRP Engineering it is recommended the contract be awarded to the low bidder Newkirk Electric, Inc. in the amount of \$1,180,684.00. GRP Engineering's letter of recommendation is attached for your review.

MOVED BY _____, SECONDED BY _____,

THAT THE BOARD AUTHORIZES THE CHAIRMAN AND SECRETARY TO EXECUTE A CONSTRUCTION AGREEMENT IN THE AMOUNT OF \$1,180,684.00 WITH NEWKIRK ELECTRIC, INC. FOR THE PARSONS SWITCHING STATION PROJECT; SUBJECT TO APPROVAL AS TO SUBSTANCE BY THE EXECUTIVE DIRECTOR AND TO FORM BY GENERAL COUNSEL; AND FURTHER AUTHORIZES THE EXECUTIVE DIRECTOR TO APPROVE CHANGE ORDERS IN THE BEST INTEREST OF THE UTILITY.

September 19, 2018
18-0929.01

Mr. Daren Dixon
Operations Manager
Traverse City Light & Power
1131 Hastings Street
Traverse City, MI 49686

**RE: Parsons Switch Station
Construction Bid Evaluation & Recommendation**

Dear Daren:

GRP Engineering, Inc. has completed our evaluation of the Construction bids received for the Parsons Switch Station project. Of the four (4) vendors invited to submit bids, three (3) bids were received. Newkirk Electric submitted the low bid in the amount of \$1,180,684.00. A complete bid tabulation is attached to this letter.

<u>Vendor</u>	<u>Total</u>	
Kent Power	\$1,273,704.00	
Newkirk Electric	\$1,180,684.00	<i>(Low Bid)</i>
Hydaker Wheatlake	\$1,403,974.00	
Rauhorn Electric	NO BID	

Newkirk Electric submitted a complete and conforming bid. GRP Engineering, Inc. sees no reason not to accept Newkirk's bid. Please contact me should you have any questions regarding this evaluation.

Sincerely,
GRP Engineering, Inc.



Nicholas A. Winsemius
Project Engineer

Enclosures

cc: Traverse City Light & Power
Mr. Tony Chartrand

BID TABULATION

OWNER:
 TRAVERSE CITY LIGHT & POWER
 1131 HASTINGS STREET
 TRAVERSE CITY, MI 49686

**PARSONS SWITCH STATION
 69KV YARD - CONSTRUCTION**

ENGINEER:
 GRP ENGINEERING, INC.
 459 BAY STREET
 PETOSKEY, MI 49770

BIDDERS	BID BOND	TOTAL VENDOR BASE BID PRICE	ADDENDUM #1	REMARKS
KENT POWER	10%	\$1,273,704.00	YES	
NEWKIRK ELECTRIC	10%	\$1,180,684.00	YES	
HYDAKER WHEATLAKE	10%	\$1,403,974.00	YES	
RAUHORN ELECTRIC		NO BID		

This is to certify that at 11:00a.m., local time on Wednesday September 19, 2018, the bids tabulated herein were publicly opened and read.

GRP Engineering, Inc.

By: 

Nicholas A. Winsemius



**TRAVERSE CITY
LIGHT & POWER**

To: Light & Power Board
From: Tim Arends, Executive Director
Date: September 3, 2018
Subject: On Bill Financing

Staff recently had a conference call with Mary Templeton, Executive Director of Michigan Saves to discuss an opportunity with the United States Department of Agriculture (USDA). (Michigan Saves is a non-profit created for the primary purpose to stimulate and support investment in energy efficiency and renewable energy systems and measures in Michigan homes, businesses, and public buildings.) The USDA is currently offering a 0-3% loan program for utilities to drawdown on for the purpose to administer an on-bill financing program.

The first step in moving forward with the program is to submit a letter of intent to the USDA. A draft of the letter of intent is included within the board packet. If the letter of intent is approved the utility would move forward to the application process. While the utility is going through this process, staff is concurrently working on other items such as if the utility billing system can handle billing loan payments and talking with City of Holland and Mary Templeton more on specifics of how City of Holland's program was set up and operates. A high-level summary of City of Holland's program is included within the board packet for your review.

Additionally, staff will be attending a meeting for the Northwest Michigan area at Cherryland Electric to discuss current program developments by the Michigan Public Service Commission on the on-bill financing program.

Staff is seeking feedback on whether the Board believes this is a program staff should dedicate time in moving forward and implementing. As this program would help achieve the utility's strategic plan goal of "Implement additional tools that are in the best interest of the utility to achieve energy savings that manage load growth and are aimed at reducing on-peak demand."

September 19, 2018

Mr. Christopher A. McLean
Assistant Administrator, Electric Program Rural Utilities Service
1400 Independence Avenue, SW Stop 1560
Washington, DC 20250-1560

RE: Intent to Apply for a Rural Energy Savings Program Loan

This letter confirms that Traverse City Light and Power, a municipal utility, (“TCL&P”) intends to seek a Rural Energy Savings Program loan from the Rural Utilities Service pursuant to the Notice Funding Availability (NOFA) for Fiscal Year 2018 (FY2018) published in the Federal Register **83 FR 38273** on August 6, 2018. TCL&P hereby represents that it meets all the requirements as specified in the NOFA and herewith submits the mandatory information required to comply with the first step of the loan application process.

TCL&P intends to submit a complete application on or before the due date specified in the NOFA for step-2 of the process and commits to diligently collaborate with the RUS General Field Representative to complete the application in a timely manner. **TCL&P** acknowledges that RUS may not consider our loan application complete (Step-2) if we fail to provide the information requested by RUS in its screening process (Step-1).

Applicant’s Profile and Point of Contact

TCL&P is a municipal utility organized under the laws of State of Michigan, on **September 30, 1912** with its principal place of business located in 1131 Hastings Street, Traverse City, Michigan 49686. The DUN and Bradstreet (D&B) DUNS number for TCL&P is **556788958** and our tax identification number is 38-6004740. **TCL&P will be a new RUS borrower.**

TCL&P serves City of Traverse City and part of four surrounding townships, Garfield, Elmwood, Peninsula and East Bay Townships. Population and meters served are below.

Entity	Population	Meters Served
City of Traverse City	15,326	9,395
Garfield Township	17,436	1,788
East Bay Township	11,472	470
Peninsula Township	5,773	232
Elmwood Township	4,501	56

TCL&P has net assets in the amount of **\$73,797,420** It is hereby affirmed that TCL&P has not been in **receivership or bankruptcy or under a workout agreement over the last 10 years.** **TCL&P** holds operating reserves in the amount of \$9,500,000. A copy of TCL&P balance sheet for the last 3 years is submitted with this

letter of intent. TCL&P intends to be the legal borrower.

The point of contact during the application process will be Karla Myers-Beman, Controller, who has been duly authorized to carry out the necessary actions to complete the RESP loan application. Karla can be contacted at 1131 Hastings Street, Traverse City, Michigan 49686, 231-932-4560, kmyersbe@tclp.org. Additional information about **TCL&P** is available at www.tclp.org.

Project Description

An on-bill loan program is a financial collection mechanism where financing for clean energy improvements is repaid by the utility customer, such as a homeowner or commercial building owner, on their monthly utility bill. On-bill programs can:

1. Expand access to customers with tarnished credit or low- to moderate- and fixed-income individuals who need low, fixed monthly payments
2. Provide greater affordability through longer loan terms than traditional loan programs, which make comprehensive energy efficiency, water efficiency, and renewable energy improvements more affordable for homeowners
3. Increase customer ease by integrating the energy improvement and payment process into customers' existing billing

As of 2017, 32 states have legislation related to on-bill loan programs or utilities that have implemented (or are currently developing) on-bill programs. Michigan passed legislation that enables municipal utilities (Public Act 408 of 2014) and investor-owned utilities (Public Act 341 and Public Act 342 of 2016) to develop residential on-bill programs.

Details about the TCLP On-bill Loan Program are provided in Table 1.

Table 1. Loan Product Details

Program Element	Definition
Eligible properties	Single-family (one- to four-unit) homes within the utility service territory.
Loan type	Unsecured loan. Notice of the loan is recorded with the register of deeds for the county in which the property is located, allowing the loan obligation to stay with the property and become binding for future customers contracting electric service to the property.
Repayment mechanism	Customers will pay back the loan through a per-meter charge on their monthly utility bill. The payment is considered part of the charges for electric or gas services to the property. The utility has the authority to disconnect the customer's utility service for nonpayment of the loan.
Loan amounts	\$2,000–\$30,000
Loan term	Ten years or useful life of the improvement, whichever is less.
Loan rates	Not to exceed 3% APR. Fixed rate with no prepayment penalty.

Key underwriting criteria	Must have 12 consecutive months of utility bill payments without any late charges.
	No delinquent taxes, bankruptcies, foreclosures, or repossessions greater than \$1,000 within the last 12 months (from discharge) and no unsatisfied money judgments.
Loan agreement	Loans are made directly by utility, through program administrator and fiduciary Michigan Saves, using funds provided by the U.S. Department of Agriculture (USDA) through the Rural Energy Savings Program.

Staff and Contractor Credentials

TCLP is a community-owned not for profit public power utility that serves more than 12,500 homes and businesses in Traverse City and part of the outlying areas in Blair, East Bay, Elmwood, Garfield, Paradise and Peninsula Townships.

Michigan Saves is a nonprofit dedicated to making energy improvements easier for all Michigan energy consumers. To accomplish this, Michigan Saves operates as a green bank, making affordable financing and incentives available through grants and partnerships with private-sector lenders and energy providers. Michigan Saves' financing portfolio includes programs for residential, commercial, and municipal customers, and supports energy-efficiency, geothermal, and solar photovoltaic (PV) projects. Michigan Saves assists the City of Holland and the Holland Board of Public Works with management of the Holland On-bill Loan Program, which launched in 2016. Michigan Saves also authorizes and monitors a network of contractors, recognizing those with advanced training, and provides technical assistance for customers and contractors.

Michigan Saves is governed by an 18-member board of directors and a special policy advisor appointed by the Michigan Public Service Commission. Since its inception, Michigan Saves has financed more than \$145 million in residential and commercial loans through our network of authorized lenders.

The utility will contract with Michigan Saves to serve as the fiduciary and program administrator. Michigan Saves will perform the following tasks:

- Manage and oversee provider contracts (loan originator and servicer)
- Create program implementation guidelines and processes
- Provide a credit enhancement, known as a loan loss reserve (if required)
- Recruit, train, and manage installation contractors and energy auditors to provide services under the program
- Develop and implement an outreach plan and a branding/marketing strategy
- Hold the loan agreement for the utility
- Conduct customer satisfaction surveys and quality assurance inspections
- Collect metrics and evaluate program effectiveness

All energy-saving or renewable energy improvements that qualify for financing must be installed by an authorized contractor. Michigan Saves authorizes and manages the network of contractors, who must meet certain minimum requirements, including appropriate insurance, licensure, and program training.

On-bill Loan Program Implementation Plan Marketing Strategy

We expect that many homeowners will learn about the On-bill Loan Program from authorized contractors and the outreach efforts of the utility. In some cases, customers will seek authorized contractors via Michigan

Saves' online searchable database. In other cases, authorized contractors will promote their affiliation with the program through marketing materials. Regardless of the flow of contact between a customer and an authorized contractor, the enrollment process remains the same.

Michigan Saves will provide authorized contractors with a marketing toolkit that stipulates marketing guidelines and resources to help contractors promote the on-bill loan program to customers. The toolkit includes information, such as permitted and required uses of logos and other branding requirements, contractor identification cards, and sample copies of marketing materials. Contractors can also follow the branding guidelines to develop their own customized marketing materials with the program logo.

Relending Process

The On-bill Loan Program has a straightforward process for loaning funds to qualified consumers.

Step one: The customer identifies an authorized contractor at www.MichiganSaves.org.

Step two: The authorized contractor performs an energy assessment and identifies the qualifying energy improvements. As part of the energy assessment, the contractor should perform test-in diagnostics, unless asbestos or other hazardous materials are present in the home.

Step three: The customer completes the loan application online or sends a paper copy by mail and receives a decision. The customer will be notified, in writing, if their loan application is approved, conditionally approved, or denied. If approved, the customer will sign the loan documents and schedule the project.

Step four: The contractor installs the equipment, according to the workplan, and the contract with the customer. A test-out procedure, such as a blower door test, may also be conducted to ensure improvements were installed properly.

Step five: The contractor obtains the customer's signature on a certificate of completion (COC) and sends the COC to the loan originator. This triggers payment to the contractor. Payment is made directly to the contractor, minus an administrative fee, and normally arrives within seven to ten days.

Step six: The contractor logs into their account with Michigan Saves and creates a new specification sheet (spec sheet). The contractor attaches the signed COC to this spec sheet and submits to Michigan Saves.

Step seven: The customer repays the loan via direct billing on their monthly utility bill from the participating rural electric service provider.

Step eight: The retail electric service provider returns loan principal to USDA.

The entire relending process can be broadly summarized in Figure 1 below.

Figure 1. Relending Process

Below is a sample fund schedule for the On-bill Loan Program.

This fund schedule assumes the following:

- All of the loans go to term (ten years)
- There are no defaults
- The utility pays for all setup and annual administrative costs with internal funds and/or the interest earned on the loans
 - The annual administrative costs include an annual loan origination management fee, an annual fee for the program administrator, and a per-loan fee to record and discharge the loans at the county register of deeds
- The monthly loan servicing is done by the utility
- The customer pays the loan documentation fee that is assessed by the loan originator
- All cost estimates within the fund schedule are speculative and could change based on loan volume and value, and the number of tasks that the utility brings in-house (or contracts out)

Table 2. Sample Fund Schedule

	Year One	Year Two	Year Three	Year Four	Year Five	Year Six	Year Seven	Year Eight	Year Nine	Year Ten	Total
Number of Loans	20	30	40	50	50	50	50	50	50	50	
Average Loan Value	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	
Setup Costs	\$ 50,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,000
Annual Administrative Costs	\$ 46,400.00	\$ 46,600.00	\$ 46,800.00	\$ 47,000.00	\$ 47,000.00	\$ 47,000.00	\$ 47,000.00	\$ 47,000.00	\$ 47,000.00	\$ 47,000.00	\$ 468,800
Total Annual Costs	\$ 96,400.00	\$ 46,600.00	\$ 46,800.00	\$ 47,000.00	\$ 47,000.00	\$ 47,000.00	\$ 47,000.00	\$ 47,000.00	\$ 47,000.00	\$ 47,000.00	\$ 518,800
Monthly Loan Payment (principal + interest) at 3%	\$ 72.42	\$ 72.42	\$ 72.42	\$ 72.42	\$ 72.42	\$ 72.42	\$ 72.42	\$ 72.42	\$ 72.42	\$ 72.42	
USDA Funds Loaned to Customers through On-bill Loan Program (annual)	\$ 150,000.00	\$ 225,000.00	\$ 300,000.00	\$ 375,000.00	\$ 375,000.00	\$ 375,000.00	\$ 375,000.00	\$ 375,000.00	\$ 375,000.00	\$ 375,000.00	\$ 3,300,000
Annual Principal Returned to USDA	\$ 13,059.53	\$ 33,046.05	\$ 60,170.24	\$ 94,649.20	\$ 130,176.87	\$ 166,785.15	\$ 204,506.91	\$ 243,376.01	\$ 283,427.36	\$ 324,696.90	\$ 1,553,894
Annual Interest Earned by On-bill Loan Program	\$ 4,321.40	\$ 10,406.29	\$ 18,043.97	\$ 27,017.34	\$ 34,942.00	\$ 41,786.05	\$ 47,516.63	\$ 52,099.86	\$ 55,500.86	\$ 57,683.65	\$ 349,318
Total Principal + Interest	\$ 17,380.93	\$ 43,452.34	\$ 78,214.20	\$ 121,666.54	\$ 165,118.87	\$ 208,571.21	\$ 252,023.54	\$ 295,475.88	\$ 338,928.21	\$ 382,380.55	\$ 1,903,212

	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Total
Number of Loans	-	-	-	-	-	-	-	-	-	-	
Average Loan Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Setup Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual Administrative Costs	\$ 600.00	\$ 800.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 8,400
Total Annual Costs	\$ 600.00	\$ 800.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 8,400
Monthly Loan Payment (principal + interest) at 3%	\$ 72.42	\$ 72.42	\$ 72.42	\$ 72.42	\$ 72.42	\$ 72.42	\$ 72.42	\$ 72.42	\$ 72.42	\$ 72.42	
USDA Funds Loaned to Customers through On-bill Loan Program (annual)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual Principal Returned to USDA	\$ 316,950.94	\$ 300,158.42	\$ 274,044.18	\$ 238,324.68	\$ 201,518.74	\$ 163,593.31	\$ 124,514.35	\$ 84,246.76	\$ 42,754.40	\$ -	\$ 1,746,105
Annual Interest Earned by On-bill Loan Program	\$ 48,048.67	\$ 38,769.79	\$ 30,122.17	\$ 22,389.33	\$ 15,742.93	\$ 10,216.03	\$ 5,842.65	\$ 2,657.91	\$ 697.94	\$ -	\$ 174,487
Total Principal + Interest	\$ 364,999.61	\$ 338,928.21	\$ 304,166.35	\$ 260,714.01	\$ 217,261.68	\$ 173,809.34	\$ 130,357.01	\$ 86,904.67	\$ 43,452.34	\$ -	\$ 1,920,593

Evaluation, Measurement, and Verification of Energy and Utility Bill Savings

Michigan Saves will monitor the effectiveness and impact of the on-bill loan program. Key metrics include:

- Number of loans
- Loan value (average and total)
- Energy savings (average and total)

When the contractor enters the energy improvements on the spec sheet, the annual and lifetime energy savings are automatically calculated using the energy savings values in the Michigan Energy Measures Database (MEMD). These are the same values used by regulated utilities to claim energy savings for regulatory goals. As program administrator, Michigan Saves will report key metrics monthly to the utility.

Eligible Energy-efficiency Improvements

Under the On-bill Loan Program, owners of residential buildings (four units or fewer), within the utility's service territory can finance any eligible energy-efficiency or renewable energy improvement. Eligible improvements include any measure or piece of equipment with an ENERGY STAR® label (unless otherwise noted) that has energy savings documented in the MEMD.

Homeowners may also finance the remediation of pre-existing environmental hazards or the repair of physical and structural defects that create health and safety issues, so long as the remediation or repairs necessary to allow for an appropriate efficiency measure and the cause(s) of the environmental hazard or physical defect are addressed.

Table 3. Eligible Energy Improvements

Group	Measures	Minimum Efficiency Rating
Appliances	Clothes washer, dishwasher, freezer, refrigerator	ENERGY STAR®
Building shell	Air sealing and insulation (attic, crawlspace, floor, joist, wall)	
	Doors (exterior), skylights, and windows	ENERGY STAR®
	Insulated mobile home skirting	
	Roofing (asphalt, metal, or membrane)	ENERGY STAR® or comparable
Health and safety	Asbestos abatement, electrical service upgrades, lead abatement, mold removal, oil tank removal, and radon abatement	
HVAC	Air-source heat pump, including mini-split (ductless) heat pump	ENERGY STAR®
	Boiler (space heating, hot water, steam, wood gasification)	Annual Fuel Utilization Efficiency (AFUE) ≥ 85%; 82%; 75%
	Central air conditioning (split system or package system)	ENERGY STAR®
	Furnace (any fuel)	ENERGY STAR®
	Thermostat (programmable or Wi-Fi enabled)	

Lighting	LED lights	
	Electric vehicle charging station	Level Two
Renewable energy	Geothermal system	Energy Efficiency Ratio \geq 16.1
	Solar PV	
	Water heater (solar thermal)	Solar Factor \geq .50
	Whole-home battery storage	
	Wind turbine	
Water heating	Water heater (any fuel)	ENERGY STAR®

Lastly, TCL&P commits to immediately notify RUS in writing should we decide to withdraw from consideration for the RESP loan before submitting the complete application.

Sincerely,

Tim Arends
Executive Director

Enclosures

¹ The applicant will need to identify its service area by its service area map and identify whether it serves customers in all or part of the population within the town or city and/or county boundaries. Information needs to be provided as to the extent it serves all or part of the population within the town or city and/or county boundaries. The applicant will need to identify/state/list how many meters it serves its customers with, within its service area. If the service area of proposed borrower extends beyond the town or city and/or county boundary, the number of meters within each of the service boundaries needs to be stated/listed.

² Project descriptions must not exceed 5 pages. Refer to the NOFA for details.

Purpose

High up-front costs can be a significant challenge to investing in home energy improvements. A program that provides affordable loans, which a customer can repay on their monthly utility bill, is one way to overcome this cost barrier. Holland Energy Fund (HEF), a nonprofit corporation facilitating and financing the Holland Community Energy Plan, created the On-Bill Loan Program to help homeowners implement energy-efficiency and renewable energy improvements. For more information, see www.hollandenergyfund.com

Loan Product Details

Structure/Minimum Standards

Eligible Properties	Single-family (one to four unit) homes. Rental/income properties are eligible provided the landlord meets program requirements.
Location	Homes must be within the city limits of the City of Holland. Homes within Holland Charter Township and the rest of the Holland Board of Public Works (HBPW) service area are not eligible.
Loan Type	Unsecured consumer loan. Notice of the loan is recorded with the county register of deeds. Any unpaid amount can be added to property tax bill and enforced through a tax lien foreclosure process.
Transferable	Yes, if property is sold, the loan can stay with the property if agreed upon by buyer.
Eligible Improvements	Qualifying energy-saving home improvements, installed by an authorized contractor. A whole-home energy assessment with diagnostic testing is required for each financed project. Renewable energy measures are permitted if the home has a Home Energy Score greater than eight (on a ten-point scale).
Loan Amounts	\$5,000–\$30,000. Multiple loans per customer are allowed if the total amount financed does not exceed the maximum allowable loan amount. Multiple loans are consolidated into one loan at the current interest rate.
Loan Term	Up to 15 years or life of the measure, whichever is less.
Loan Rates	4.99% interest rate for loan terms up to 120 months 5.99% interest rate for loan terms greater than 120 months
Repayment Mechanism	Customers repay the loan through a per-meter charge on the monthly HBPW bill for electric services. The payment is considered part of the charges for electric services to the property. There is no penalty for early repayment.
Key Underwriting Criteria	Twelve consecutive months with no late payments on electric utility bill payment history; no delinquent taxes; no bankruptcies within three years (from discharge), foreclosures, or repossessions greater than \$1,000; no unsatisfied money judgements.
Loan Agreement	The loan agreement is between Holland Energy Fund and the customer. Upon completion of the energy efficiency improvements, HEF pays the contractor directly and the loan payments begin.

Loan Application Process

- 1 The customer connects with a Michigan Saves authorized contractor working in the Holland On-Bill Loan Program. See hollandenergyfund.com/on-bill-loan-program
- 2 The contractor completes an energy assessment, performs diagnostic testing, and prepares a report
 - a. Existing whole-home assessments can be used if done within the last 12 months
 - b. No test-in necessary if asbestos-containing material is found
 - c. If customer is seeking the 10 percent rebate from the Home Energy Retrofit program, the assessment must be approved by the Holland residential energy advisor
- 3 The customer and contractor agree on work scope and the contractor explains the Holland On-Bill Loan Program
 - a. If seeking the 10 percent rebate from the Home Energy Retrofit program, the residential energy advisor must participate in the development of the work scope
- 4 The customer initiates the loan application process
 - a. Online application is preferred; paper application is also available
 - b. energyfinancesolutions.com/sites/energyfinancesolutions.com/files/pdfs/holland-energy-fund-credit-app-fillable.pdf
- 5 The loan originator, Energy Finance Solutions (EFS), provides a loan decision
 - a. If pre-approved, EFS issues a conditional pre-approval letter to the customer
 - i. Conditional pre-approval letter indicates which documents must be provided to EFS to receive the approval
 - ii. Conditional pre-approval also subject to review of tax and utility repayment history and conformance with program requirements
 - b. Once documentation is provided by the customer, and the customer qualifies for the loan, EFS issues an approval letter
 - c. If the customer is denied, EFS sends a denial letter stating the reason for denial and notifies the contractor
- 6 Upon approval, EFS sends the loan documents to the customer for signature
 - a. The customer takes the loan documents to the HEF office at Holland City Hall for signatures and notarization
 - b. The customer has three days to cancel the loan by submitting a rescission notice to HEF. If the loan is not cancelled, EFS notifies contractor that the work can proceed
- 7 The contractor completes work
 - a. If there is a change in the work scope, the customer or contractor must submit a change order to EFS
 - i. EFS will resend the loan documents to the customer for a signature
- 8 The customer signs a Michigan Saves Certificate of Completion and submits it to EFS
 - a. The contractor must provide the test-out documentation, when applicable
- 9 The loan is closed
- 10 HEF pays the contractor and records the loan with the county register of deeds
- 11 The customer repays the loan via monthly charge on the electric utility bill
 - a. Due date for entire utility bill, including loan payment, will be the 22nd of the month

Program Contacts



Anne Saliers
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asaliers@hollandbpw.com



Peter Boogaart
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(616) 355-1364
p.boogaart@cityofholland.com



Todd Parker
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(517) 484-6474
tparker@michigansaves.org