

**A REGULAR MEETING**

Of The

**TRAVERSE CITY LIGHT AND POWER BOARD**

Will Be Held On

**TUESDAY, November 8, 2016**

At

**5:15 p.m.**

In The

**COMMISSION CHAMBERS**  
(2<sup>nd</sup> 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 J. St. Amour  
Administrative Assistant  
1131 Hastings Street  
Traverse City, MI 49686  
(231) 922-4940 ext. 201

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

Posting Date: 11-4-16  
3:00 p.m.

## AGENDA

### Pledge of Allegiance

#### 1. Roll Call

#### 2. 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.*

#### 3. Unfinished Business

None.

#### 4. New Business

- a. Consideration of approving minutes of the Regular Meeting of October 25, 2016. (Approval recommended) (p.3)

#### 5. Appointments

None.

#### 6. Reports and Communications

- a. From Legal Counsel.
- b. From Staff.
  1. June 30, 2016 Financial Statements. (Myers-Beman) (p.5)
  2. Franklin Energy Presentation regarding TCL&P's Energy Efficiency Program. (Arends/Franklin) (p.13)
  3. Presentation by SEEDS (Salzman) (p.26)
  4. Overview of TCL&P information technology issues (Menhart) (p.37)
  5. Fiber to the Premise (Menhart) (p.40)
- c. From Board.

#### 7. Public Comment

/js

**TRAVERSE CITY  
LIGHT AND POWER BOARD**

Minutes of Regular Meeting  
Held at 5:15 p.m., Commission Chambers, Governmental Center  
Tuesday, October 25, 2016

**Board Members -**

Present: Pat McGuire, Jeff Palisin, Amy Shamroe, John Taylor, Tim Werner, Jan Geht

Absent: Bob Spence

**Ex Officio Member -**

Present: Marty Colburn, City Manager

**Others:** Tim Arends, Karla Myers-Beman, Kelli Schroeder, Scott Menhart, Mark Watson, Blake Wilson, Tony Chartrand, Jennifer St. Amour

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

Tim Arends introduced TCL&P's new System Engineer/Key Accounts employee, Tony Chartrand.

Tim Arends made the announcement that Blake Wilson, TCL&P's Senior Field Technician was leaving the utility after 8 years of service.

**Item 2 on the Agenda being Consent Calendar**

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

- a. Minutes of the Regular Meeting of September 27, 2016.
- b. Authorizing a purchase order to Power Line Supply in the amount of \$39,815.70 for the Orchard Heights Overhead-to-Underground Phase 1 Materials Project.
- c. Declaring trailer surplus.

CARRIED unanimously.

**Item 3 on the Agenda being Unfinished Business**

None.

**Item 4 on the Agenda being New Business**

None.

**Item 5 on the Agenda being Appointments**

None.

**Item 6 on the Agenda being Reports and Communications**

- a. From Legal Counsel.
- b. From Staff.
  1. 2016 Customer Survey results.

The following individuals addressed the Board:

Cathlyn Sommerfield, Ph.D., CS Research & Consulting, LLC  
Kelli Schroeder, Manager of HR & Communications  
Tim Arends, Executive Director

2. Tim Arends introduced the Capital Plan Update.
  - 2a. June 30, 2016 Summary. (No formal presentation given.)
  - 2b. Karla Myers-Beman provided a recap of the Spruce Street Project.
  - 2c. Blake Wilson and Karla Myers-Beman provided an update on the Pole Replacements Project.
  - 2d. Blake Wilson and Karla Myers-Beman provided an update on the LaFranier Transmission Line Project.
- c. From Board.
  1. Marty Colburn presented the 2016 Road Millage Ballot Proposal.
  2. Tim Arends spoke on the Franklin EO presentation coming up at the 11/8/16 Regular Board Meeting.

None.

**Item 7 on the Agenda being Public Comment**

There being no objection, Chairman Geht declared the meeting adjourned at 6:10 p.m.

/js

---

Tim Arends, Secretary  
LIGHT AND POWER BOARD



**TRAVERSE CITY  
LIGHT & POWER**

---

**To:** Light and Power Board  
**From:** Karla Myers-Beman, Controller  
**Date:** November 2, 2016  
**Subject:** Year End Financial Report

---

Enclosed in your packet are the unaudited year-end financial statements for the Electric and Fiber Funds.

**Electric Utility Fund**

As of June 30, 2016 operating revenues are 96.82% of budget. Operating revenues did not meet budget expectations because of the overall PCR Rate coming in lower than what was budgeted along with a slight decrease in kWh's sold compared to budget.

Total operating expenses are at 97.22% of budget year-to-date, with purchase power costs at 92.62% caused by the cost per kWh coming in lower than budgeted. Distribution is at 110.52% compared to budget. This is related to pension expense coming in higher than expected primarily due to the amortization of the negative investment income earned for the calendar year 2015, amortization of assumption changes and the expenses relating to the August 2015 storm. Transmission is at 125.73% higher than expected due to Attachment O salary/wage allocations, which is based on the value of transmission assets compared to the utility's total assets (used for MISO reimbursement calculations), which are higher than what was used in the budget along with maintenance expense per contract incurred relating to the East Hammond Transmission Line. Customer Accounting is at 110.69% and General Administration expense at 109.34% relating again to the higher pension expense.

Net income for the year is \$1,834,745, which is approximately a \$2,636,000 decrease over the prior year.

Cash flows shows approximately \$8.3 million expended in capital assets, primarily for the West Side Transmission Line project, LaFranier Transmission Line, West Front Street Lighting, Pine and State Street Underground project, South Substation replacement transformers, and the Covered Storage Building project.

**Fiber Fund**

Revenues in the Fiber Fund are 96.64% of budgeted operating revenues while expenses are 108.72% of budget year-to-date. Salaries and related fringe benefits are at 143.87% and 167.05% of budget, because more time was allocated to fiber maintenance during the fiscal year than expected and relating to the higher pension expense previously described. The transfer out to the Electric Fund was made causing an overall net position of \$(134,094).

**Other**

Auditors will be onsite next week with anticipation of the final report being issued in December.

# TRAVERSE CITY LIGHT AND POWER

(A Component Unit of the City of Traverse City, Michigan)

## ELECTRIC FUND STATEMENT OF NET POSITION JUNE 30, 2016

ASSETS	LIABILITIES AND NET POSITION		
<b>Current assets</b>		<b>Current liabilities</b>	
Cash and cash equivalents	\$ 8,521,499	Accounts payable	1,724,298
Investments	10,849,656	Accrued expenses and other liabilities	508,435
Receivables		Customer deposits	107,932
Customer, less allowances of \$279,103 for uncollectible accounts (Light and Power Fund)	3,162,393	Unearned revenue	-
Accrued interest	34,124	Compensated absences	-
Taxes	14,272	Due to primary government	284,900
Other	2,210,586		
Inventories	1,576,660	<b>Total current liabilities</b>	<b>2,625,565</b>
Prepaid expenses	14,456		
<b>Total current assets</b>	<b>26,383,646</b>	<b>Long-term liabilities</b>	
<b>Non-current assets</b>		Compensated absences	199,160
Other postemployment benefit asset	1,382,770	Net pension liability	14,076,448
Long-term advances - due from primary government	689	<b>Total long term liabilities</b>	<b>14,275,608</b>
Asset held for sale	-	<b>Total liabilities</b>	<b>16,901,173</b>
Land and land improvements	1,079,419		
Construction in progress	1,384,254	<b>Net position</b>	
Capital assets being depreciated, net	53,690,526	Invested in capital assets	56,154,199
<b>Total non-current assets</b>	<b>57,537,658</b>	Unrestricted	14,056,896
<b>Total assets</b>	<b>83,921,304</b>	<b>Total net position</b>	<b>\$ 70,211,095</b>
Deferred outflow	3,190,964		
<b>Total cash and investments</b>	<b>\$ 19,371,155</b>		

**TRAVERSE CITY LIGHT AND POWER**

(A Component Unit of the City of Traverse City, Michigan)

**ELECTRIC FUND**

**SCHEDULE OF REVENUES AND EXPENSES - BUDGET AND ACTUAL (UNAUDITED)  
FOR THE PERIOD ENDED JUNE 30, 2016**

	Year to Year Comparison			Budget to Year to date Comparison					
	Year to date	Year to date	Year to date	Amended Budget	Year to date	Favorable			
	Actual	Prior Year	Difference		Actual	(Unfavorable)			
<b>Operating revenues - sales</b>									
Residential	\$ 6,090,231	\$ 6,612,011	\$ (521,780)	\$ 6,338,000	\$ 6,090,231	\$ (247,769)		96.09%	
Commercial	15,348,675	16,392,293	(1,043,618)	15,766,500	15,348,675	(417,825)		97.35%	
Industrial	9,615,567	10,788,926	(1,173,359)	10,040,000	9,615,567	(424,433)		95.77%	
Public authority	309,162	317,521	(8,359)	286,000	309,162	23,162		108.10%	
Street lighting	203,949	199,517	4,432	195,000	203,949	8,949		104.59%	
Yard lights	98,529	86,531	11,998	82,000	98,529	16,529		120.16%	
<b>Total operating revenues - sales</b>	<b>31,666,113</b>	<b>34,396,799</b>	<b>(2,730,686)</b>	<b>32,707,500</b>	<b>31,666,113</b>	<b>(1,041,387)</b>		<b>96.82%</b>	
<b>Other operating revenues</b>									
Forfeited discounts	60,777	73,522	(12,745)	60,000	60,777	777		101.30%	
Merchandise and jobbing	231,826	115,918	115,908	187,000	231,826	44,826		123.97%	
Sale of scrap	41,792	30,804	10,988	35,000	41,792	6,792		119.41%	
Recovery of bad debts	26	30	(4)	200	26	(174)		13.00%	
MISO income	3,483,052	2,481,500	1,001,552	2,900,000	3,483,052	583,052		120.11%	
Miscellaneous	46,458	45,016	1,442	39,000	46,458	7,458		119.12%	
<b>Total other operating revenues</b>	<b>3,863,931</b>	<b>2,746,790</b>	<b>1,117,141</b>	<b>3,221,200</b>	<b>3,863,931</b>	<b>642,731</b>		<b>119.95%</b>	
<b>Nonoperating revenues</b>									
Rental income	44,387	49,046	(4,659)	44,350	44,387	37		100.08%	
Pole rental income	48,860	42,180	6,680	34,600	48,860	14,260		141.21%	
Reimbursements	296,244	143,048	153,196	102,800	296,244	193,444		288.18%	
Interest income	348,193	310,269	37,924	250,000	348,193	98,193		139.28%	
Gain/loss on sale of assets	(355,965)	(428,620)	72,655	25,000	(355,965)	(380,965)		-1423.86%	
<b>Total nonoperating revenues</b>	<b>381,719</b>	<b>115,923</b>	<b>265,796</b>	<b>456,750</b>	<b>381,719</b>	<b>(75,031)</b>		<b>83.57%</b>	
<b>Total revenues</b>	<b>35,911,763</b>	<b>37,259,512</b>	<b>(1,347,749)</b>	<b>36,385,450</b>	<b>35,911,763</b>	<b>(473,687)</b>		<b>98.70%</b>	
<b>Generation expense</b>									
Non purchase power expenses	414,424	345,503	68,921	317,100	414,424	(97,324)		130.69%	
Capacity costs	465,422	12,000	453,422	672,000	465,422	206,578		69.26%	
MISO	3,101,041	(358,421)	3,459,462	257,800	3,101,041	(2,843,241)		1202.89%	
Lansing Bridge	2,898,085	5,675,258	(2,777,173)	3,091,000	2,898,085	192,915		93.76%	
Stoney Corners	2,940,041	2,819,687	120,354	3,257,000	2,940,041	316,959		90.27%	
M-72 Wind Turbine	35,056	8,890	26,166	42,000	35,056	6,944		83.47%	
Combustion Turbine	3,338,292	3,364,832	(26,540)	4,714,000	3,338,292	1,375,708		70.82%	
Campbell Coal Plant	4,153,349	4,850,934	(697,585)	4,580,000	4,153,349	426,651		90.68%	

**TRAVERSE CITY LIGHT AND POWER**

(A Component Unit of the City of Traverse City, Michigan)

**ELECTRIC FUND**

**SCHEDULE OF REVENUES AND EXPENSES - BUDGET AND ACTUAL (UNAUDITED)  
FOR THE PERIOD ENDED JUNE 30, 2016**

	Year to Year Comparison			Budget to Year to date Comparison			
	Year to date	Year to date	Year to date	Amended	Year to date	Favorable	
	Actual	Prior Year	Difference	Budget	Actual	(Unfavorable)	
Belle River Coal Plant	4,055,595	5,349,402	(1,293,807)	4,364,000	4,055,595	308,405	92.93%
Landfill Gas	567,834	494,766	73,068	1,127,000	567,834	559,166	50.38%
Bilateral contracts	1,100,866	292,322	808,544	2,357,000	1,100,866	1,256,134	46.71%
Purchase power expenses	22,655,581	22,509,670	145,911	24,461,800	22,655,581	1,806,219	92.62%
<b>Total generation expenses</b>	<b>23,070,005</b>	<b>22,855,173</b>	<b>214,832</b>	<b>24,778,900</b>	<b>23,070,005</b>	<b>1,708,895</b>	<b>93.10%</b>
<b>Distribution</b>	<b>\$ 4,394,347</b>	<b>\$ 3,530,929</b>	<b>\$ 863,418</b>	<b>\$ 3,976,150</b>	<b>\$ 4,394,347</b>	<b>\$ (418,197)</b>	<b>110.52%</b>
Transmission	451,739	406,584	45,155	359,300	451,739	(92,439)	125.73%
Customer accounting	577,256	568,692	8,564	521,500	577,256	(55,756)	110.69%
Public service	671,545	513,302	158,243	679,400	671,545	7,855	98.84%
General administration expense	986,037	834,938	151,099	901,800	986,037	(84,237)	109.34%
Other expenses							
Insurance	62,001	57,875	4,126	63,000	62,001	999	98.41%
City fee	1,784,900	1,863,259	(78,359)	1,801,000	1,784,900	16,100	99.11%
Depreciation	2,254,188	2,157,940	96,248	2,150,000	2,254,188	(104,188)	104.85%
<b>Total expenses</b>	<b>34,252,018</b>	<b>32,788,692</b>	<b>1,463,326</b>	<b>35,231,050</b>	<b>34,252,018</b>	<b>979,032</b>	<b>97.22%</b>
<b>Income before transfers</b>	<b>1,659,745</b>	<b>4,470,820</b>	<b>(2,811,075)</b>	<b>1,154,400</b>	<b>1,659,745</b>	<b>505,345</b>	
Transfers in	175,000	-	175,000	-	175,000	(175,000)	#DIV/0!
<b>Change in net position</b>	<b>\$ 1,834,745</b>	<b>\$ 4,470,820</b>	<b>\$ (2,636,075)</b>	<b>\$ 1,154,400</b>	<b>\$ 1,834,745</b>	<b>\$ 330,345</b>	<b>#DIV/0!</b>



# TRAVERSE CITY LIGHT AND POWER

(A Component Unit of the City of Traverse City, Michigan)

## ELECTRIC FUND STATEMENT OF CASH FLOWS FOR THE PERIOD ENDED JUNE 30, 2016

<b>Cash flows from operating activities</b>	
Cash received from customers	\$ 34,462,306
Cash payments to employees	(3,714,321)
Cash payments to suppliers for goods and services	(25,401,484)
Cash payments of City fee	(1,863,259)
	<hr/>
<b>Net cash provided by operating activities</b>	<b>3,483,242</b>
	<hr/>
<b>Cash flows from noncapital financing activities</b>	
Cash payments from primary government	2,311
Cash payments to/from other funds	194,441
Customer deposits paid	9,546
Rental income received	93,247
Reimbursements received	296,244
	<hr/>
<b>Net cash provided by noncapital financing activities</b>	<b>595,789</b>
	<hr/>
<b>Cash flows from capital and related financing activities</b>	
Proceeds from sale of capital assets	908
Proceeds from sale of assets held for sale	980,900
Purchase of capital assets	(8,372,839)
	<hr/>
<b>Net cash (used in) capital and related financing activities</b>	<b>(7,391,031)</b>
	<hr/>
<b>Cash flows from investing activities</b>	
Sale of investments	2,370,746
Interest and dividends	364,750
	<hr/>
<b>Net cash provided by investing activities</b>	<b>2,735,496</b>
	<hr/>
Net (decrease) in cash and cash equivalents	(576,504)
	<hr/>
Cash and cash equivalents, beginning of year	9,098,003
	<hr/>
<b>Cash and cash equivalents, end of year</b>	<b>\$ 8,521,499</b>

**TRAVERSE CITY LIGHT AND POWER**  
(A Component Unit of the City of Traverse City, Michigan)

**ELECTRIC FUND**  
**SUPPLEMENTARY INFORMATION**  
**FOR THE PERIOD ENDED JUNE 30, 2016**

SALES	KWH month	KWH year to date	Monthly revenue	Year to date revenue	Current month	Prior year month	Revenue/Sales monthly variance	Year to date	Prior year to date	Revenue/Sales year to date variance
Residential Sales	5,135,740	56,152,371	\$ 540,948	\$ 6,125,202	\$ 0.1049	\$ 0.1135	\$(0.0086)	\$ 0.1091	\$ 0.1183	\$(0.0092)
Commercial Sales	14,845,827	145,202,503	1,576,480	15,632,301	0.1062	0.1132	(0.0070)	0.1077	0.1178	(0.0101)
Industrial Sales	10,332,980	121,967,650	772,177	9,694,405	0.0747	0.0818	(0.0071)	0.0795	0.0922	(0.0127)
Yard and Street Lights	214,696	1,510,103	42,790	298,591	0.1993	0.1983	0.0010	0.1977	0.1913	0.0064
<b>Total Sales</b>	<b>30,549,243</b>	<b>324,832,627</b>	<b>\$ 2,932,395</b>	<b>\$ 31,750,499</b>						

Note: Revenues do not agree to income statement because of monthly accruals.

PURCHASED POWER	KWH month	KWH year to date	Monthly cost	Year to date cost	Cost per kWh for the month	Cost per kWh for the year to date
Lansing Bridge	-	58,944,000	\$ -	\$ 2,898,084.57	#DIV/0!	\$ 0.049
MISO Account	-	(3,416,700)	-	114,072.70	#DIV/0!	(0.033)
MISO - BWL	-	25,820,618	744,256.20	3,904,297.40	0.104	0.151
MISO - MPPA	7,139,862	not applicable	1,606.46	21,237.87	not applicable	not applicable
Wolverine	not applicable	not applicable	(8,145.21)	(273,240.71)	not applicable	not applicable
Transmission	not applicable	not applicable	737,717.45	3,766,367.26	0.103	0.168
Subtotal	7,139,862	22,403,918	737,717.45	3,766,367.26	0.103	0.168
Bilateral Contract	10,016,000	75,824,000	108,768.01	1,100,865.61	0.011	0.015
Campbell #3	-	62,180,995	168,700.10	3,793,716.74	#DIV/0!	0.061
Belle River	2,220,545	55,434,899	176,305.14	3,749,901.69	0.079	0.068
Combustion Turbine	3,989,324	39,059,882	296,163.39	3,338,292.20	0.074	0.085
Landfill Gas	724,819	9,036,580	49,621.93	567,834.35	0.068	0.063
Stoney Corners	1,689,303	25,629,988	195,824.00	2,940,041.19	0.116	0.115
M-72 Wind Turbine	29,125	500,803	2,038.75	35,056.21	0.070	0.070
MPPA Capacity Costs (market)	not applicable	not applicable	57,648.20	465,421.41	not applicable	not applicable
<b>Total</b>	<b>25,808,978</b>	<b>349,015,065</b>	<b>\$ 1,792,786.97</b>	<b>\$ 22,655,581.23</b>	<b>\$ 0.069</b>	<b>\$ 0.065</b>

# TRAVERSE CITY LIGHT AND POWER

(A Component Unit of the City of Traverse City, Michigan)

## FIBER FUND

### STATEMENT OF NET POSITION JUNE 30, 2016

ASSETS	LIABILITIES AND NET POSITION	
<b>Current assets</b>		
Cash and cash equivalents	\$ 209,098	\$ 3,614
Accounts receivable	12,340	1,096
Inventory	5,956	14,270
Prepaid expenses	-	13,932
<b>Total current assets</b>	<u>227,394</u>	<u>32,912</u>
<b>Non-current assets</b>		
Construction in progress	-	2,598
Capital assets being depreciated, net	1,566,248	38,427
<b>Total non-current assets</b>	<u>1,566,248</u>	<u>73,937</u>
<b>Total assets</b>	<u>1,793,642</u>	<u>1,566,248</u>
Deferred outflow	9,965	163,422
		<u>\$ 1,729,670</u>

TRAVERSE CITY LIGHT AND POWER

(A Component Unit of the City of Traverse City, Michigan)

FIBER FUND  
STATEMENT OF REVENUES, EXPENSES AND  
CHANGES IN NET POSITION  
FOR THE PERIOD ENDED JUNE 30, 2016

	Amended Budget	Year to date Actual	Favorable (Unfavorable)	Percentage of Budget
<b>Operating revenues</b>				
Charges for services	\$ 288,200	\$ 278,376	\$ (9,824)	96.59%
Merchandising and jobbing	-	129	129	#DIV/0!
<b>Total operating revenues</b>	<b>288,200</b>	<b>278,505</b>	<b>(9,695)</b>	<b>96.64%</b>
<b>Operating expenses</b>				
Salaries and wages	31,000	44,601	(13,601)	143.87%
Fringe benefits	21,000	35,081	(14,081)	167.05%
Supplies	12,000	1,829	10,171	15.24%
WiFi Operations and maintenance	37,400	28,678	8,722	76.68%
Professional and contractual	6,400	4,202	2,198	65.66%
Professional development	2,100	-	2,100	0.00%
Insurance	1,200	-	1,200	0.00%
Repairs and maintenance	-	11,171	(11,171)	
Vehicle Rental	4,500	8,974	(4,474)	199.42%
City fee	14,435	13,932	503	96.52%
Depreciation	138,400	143,383	(4,983)	103.60%
<b>Total operating expenses</b>	<b>268,435</b>	<b>291,851</b>	<b>(23,416)</b>	<b>108.72%</b>
<b>Operating income (loss)</b>	<b>19,765</b>	<b>(13,346)</b>	<b>(33,240)</b>	
<b>Nonoperating revenues</b>				
Reimbursements	30,400	54,127	23,727	178.05%
Interest income	500	125	(375)	25.00%
<b>Total nonoperating revenues</b>	<b>30,900</b>	<b>54,252</b>	<b>23,352</b>	<b>175.57%</b>
<b>Income before transfers</b>	<b>50,665</b>	<b>40,906</b>	<b>(9,888)</b>	
<b>Transfers out</b>	<b>-</b>	<b>(175,000)</b>	<b>(175,000)</b>	<b>#DIV/0!</b>
Change in net position	50,665	(134,094)	(184,888)	
Net position, beginning of year	1,863,764	1,863,764	-	
<b>Net position, end of year</b>	<b>\$ 1,914,429</b>	<b>\$ 1,729,670</b>	<b>\$ (184,888)</b>	



**TRAVERSE CITY  
LIGHT & POWER**

---

**To:** Light & Power Board  
**From:** Tim Arends, Executive Director  
**Date:** October 31, 2016  
**Subject:** Energy Efficiency Funds

---

As mentioned at the end of the last Board meeting, staff was going to bring before you how to proceed with the successful energy optimization program from fiscal year 2015-16 continuing into 2016-17. Franklin Energy will be in attendance at the Board meeting to provide a presentation (included in the packet) on historical and current information along with options on how to move forward on the Energy Optimization Program.

The Energy Optimization (“EO”) Program for the 2016 calendar year, and similar to previous years, has surpassed the kWh’s savings goals mandated by the State (one percent of kWh sales). This mandate is proposed to change with upcoming legislation and move towards a combined renewable/energy efficiency percentage achievement goal of kWh sales that may cause an increase of the one percent.

Unlike in past years the actual expenditures came in slightly above budget for the June 30, 2016 fiscal year end and could exceed budget in the upcoming fiscal year. One attributing factor for the excess expenses in the upcoming fiscal year is the utility did not budget for an energy efficiency contractor in the second half of the fiscal year as this program was going to be brought in house. However, based on the ability and timing of filling positions and with the recent vacancy of the Senior Lead Technician position, this transition will most likely occur in moderation. First, this will again involve bringing the residential program in house while continuing to contract out the commercial aspect of the program. Even not taking into consideration the contractual aspect of the budget, based on current forecasts the utility has received applications that will exceed the planned kWh achievement goal and the monetary budget for rebates attributed to the utility’s goal.

Staff feels there are multiple benefits of the EO Program and that are as follows:

1. Provides a way for the utility to avoid the cost of purchasing or producing energy such as building new power plants.
2. Reduces the overall demand on the utility by lowering the need for capital infrastructure improvements and expensive power.
3. Job creation in the community.

However, staff recognizes that customers may also feel the only ratepayers that benefit from the program are ones who utilize it with it being subsidized by all ratepayers of the utility.

Staff feels the benefits from the customer perspective are:

1. Tends to improve the asset value of their building or equipment.
2. Lowers overall operating cost.
3. Limits greenhouse gas emissions.
4. Asset or building will tend to work more reliably and efficient.
5. Tends to strengthen the business’s overall community image.

Financial information on the EO Program for the fiscal year 2015-16 and the current fiscal year along with the calendar reporting year 2016 are enclosed for your review. Overall the utility has reduced the kWh cost this fiscal year to a little under \$.10 per kWh while in past years this has ranged from \$.12 to \$.14 per kWh.

FOR THE LIGHT & POWER BOARD MEETING OF NOVEMBER 8, 2016

Staff is looking for feedback from the Board as to the direction or guidelines they would like to see for the EO Program, specifically to keep within the mandated goals of the State or to exceed those levels by setting guidelines at the local level that exceeds the State mandate.

Traverse City Light & Power  
 Energy Optimization Reconciliation  
 Through October 26, 2016

Fiscal Year 2015-16

Row Labels	Sum of kWh Saved	Sum of Balance
Administration		\$ 33,638.16
C&I Custom	236,179.80	\$ 18,894.40
Dehumidifier/Room AC Recycle	2,294.00	\$ 270.00
EEO Information Flyers	-	\$ 3,264.00
EO Loan Program		\$ 95.50
Freezer recycle	8,387.00	\$ 450.00
Not categorized		\$ 10,423.14
Refrigerator pickup	1,261.00	\$ 3,375.00
Refrigerator recycle	71,753.00	\$ 3,330.00
Residential Efficient Lighting	227,093.60	\$ 13,922.50
Residential HVAC/Lighting/New Appliances	119,516.57	\$ 16,535.55
Franklin Energy		\$ 177,628.42
C & I Prescriptive	4,653,817.57	\$ 228,804.93
<b>Grand Total</b>	<b>5,320,302.54</b>	<b>\$ 510,631.60</b>

Cost per kWh \$ 0.0959779

Fiscal Year 2016-17

Row Labels	Sum of kWh Saved	Sum of Balance
EO Mailing		\$ 849.94
Freezer recycle	3,776.00	\$ 200.00
Not categorized		\$ 30.06
Refrigerator pickup		\$ 270.00
Refrigerator recycle	21,565.00	\$ 950.00
Residential HVAC/Lighting/New Appliances	45,767.30	\$ 5,003.44
Sponsorship		\$ 2,500.00
Franklin Energy		\$ 65,389.98
C & I Prescriptive	711,508.30	\$ 37,034.59
<b>Grand Total</b>	<b>782,616.60</b>	<b>\$ 112,228.01</b>

Cost per kWh \$ 0.1434010

EO Reporting Year 2015

Row Labels	Sum of kWh Saved	Sum of Balance
Dehumidifier/Room AC Recycle	1,260.00	\$ 150.00
EEO Information Flyers	-	\$ 3,264.00
Freezer recycle	5,555.00	\$ 300.00
Not categorized		\$ 10,398.14
Refrigerator pickup	-	\$ 1,935.00
Refrigerator recycle	50,188.00	\$ 2,380.00
Residential Efficient Lighting	124,554.40	\$ 9,628.00
Residential HVAC/Lighting/New Appliances	48,260.59	\$ 7,521.30
Franklin Energy	-	\$ 127,364.40
C & I Prescriptive	1,356,586.39	\$ 61,230.78
<b>Grand Total</b>	<b>1,586,404.38</b>	<b>\$ 224,171.62</b>

Cost per kWh \$ 0.1413080

Note: 2015 numbers only reflect what is in the 2015-16 fiscal year. Accumulation of information in this form began as of July 1, 2015.

EO Reporting Year 2016

Row Labels	Sum of kWh Saved	Sum of Balance
Administration		\$ 33,638.16
C&I Custom	236,179.80	\$ 18,894.40
Dehumidifier/Room AC Recycle	1,034.00	\$ 120.00
EO Loan Program		\$ 95.50
EO Mailing		\$ 849.94
Freezer recycle	6,608.00	\$ 350.00
Not categorized		\$ 55.06
Refrigerator pickup	1,261.00	\$ 1,710.00
Refrigerator recycle	43,130.00	\$ 1,900.00
Residential Efficient Lighting	102,539.20	\$ 4,294.50
Residential HVAC/Lighting/New Appliances	117,023.28	\$ 14,017.69
Sponsorship		\$ 2,500.00
Franklin Energy	-	\$ 115,654.00
C & I Prescriptive	4,008,739.48	\$ 204,608.74
<b>Grand Total</b>	<b>4,516,514.76</b>	<b>\$ 398,687.99</b>

Cost per kWh \$ 0.0882734

JULY THROUGH DECEMBER 2016	
Half Year Budget	\$ 190,250.00
Less Actual	\$ 112,228.01
Balance	\$ 78,021.99

**Forecasted expenditures through December 2016**

Franklin Energy Administration (Monthly amount * 2)	\$ (32,161.14)
EO Loan Program Subsidization (Estimate)	(250.00)
Commercial Incentives (from 10/3/2016 Franklin report - less actual payments)	(1,423.35)
Incentive Authorized	(791.10)
Work Complete	(22,771.61)
Work in Progress	(6,032.55)
Application Submitted	(21,768.62)
Application Received	(25,000.00)
Residential Incentives (Estimate)	(2,000.00)
Chamber Booth Expenses	(25,000.00)
TCLP Administration (Estimate)	(59,176.38)
<b>Balance</b>	<b>\$ (59,176.38)</b>

**JANUARY THROUGH JUNE 2017**

Half Year Budget	\$ 190,250.00
<b>Forecasted expenditures through January through June 2017</b>	
Franklin Energy Administration (Monthly amount * 6)	\$ (96,483.42)
EO Loan Program Subsidization (Estimate)	(250.00)
Commercial Incentives (Annual budget tends to be \$200,000)	(100,000.00)
Residential Incentives (Estimate)	(25,000.00)
TCLP Administration (Estimate)	(25,000.00)
<b>Balance</b>	<b>\$ (56,483.42)</b>

**OVERALL BUDGET**

<b>Total amount over budget</b>	<b>\$ (115,659.80)</b>
Reasoning:	
Franklin not budgeted for second half of fiscal year.	\$ 96,483.42
Residential over by \$15,000 compared to prior year	\$ 15,000.00
<b>Difference</b>	<b>\$ (4,176.38)</b>



Franklin Energy

WHEN *Experience* MATTERS

## Franklin Energy Staff for TCL&P

**Kevin Salatruk**

Program Manager

**Jennifer Alvarado**

Outreach Lead

**Zack Heidemann**

Energy Engineer

**Jacob Hardy**

Energy Advisor

**Dawn Berry**

Project Coordinator

**2016**

*Experience. Delivery. Results.*

 **Franklin**Energy

- Franklin Energy corporate HQ is located in Port Washington, WI**
- **Founded in 1994 as an Engineering Firm.**
  - **Started implementing Energy Optimization in 2009 in Michigan**
  - **Traverse City was one of the first contracts in Michigan**
  - **State HQ is in East Lansing, MI**

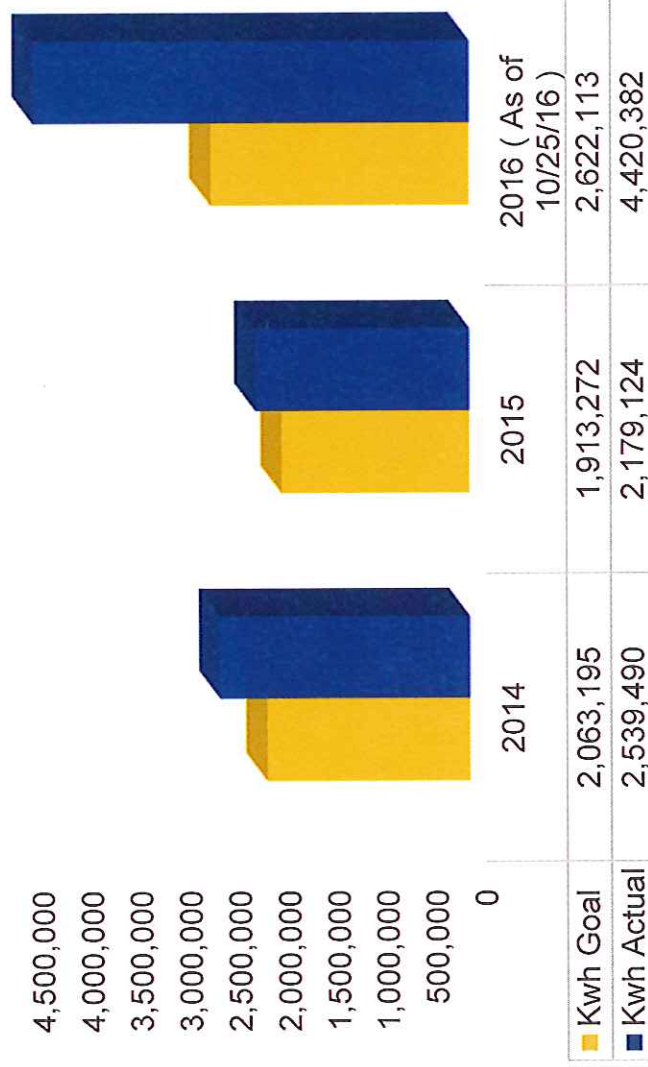
**2016**

*Experience. Delivery. Results.*

**Franklin**Energy

# TCLP Historic Performance

Commercial & Industrial



# 2016

*Experience. Delivery. Results.*

## Annual Budget Breakdowns

	2014	2015	2016
Budget	\$191,889.42	\$248,970.00	\$268,639.00*
Paid	\$130,376.36	\$113,564.86	\$228,605.00*
Unspent to date	\$ 61,513.06	\$135,405.14	\$40,034.00

# 2016

*Experience. Delivery. Results.*

 Franklin Energy

## 2016 Project Stage Breakdown

As Of 10/25/16

Application Stage	# of Projects	Rebate Total	Budget
Applied, not reserved	9	\$37,408	
Work in Progress	15	\$34,445	
Completed (Paid or To Be Paid)	49	\$228,605	
Total	73	\$300,458	\$268,639

Due to the increase in rebate applications for 2016, there will be \$31,819 in additional rebate money needed. This is also dependent upon no further projects being submitted and completed this year.

# 2016

*Experience. Delivery. Results.*



Franklin Energy

## 2016 Exceptional Year

- Increased Number of Applications
- Contractors Are Educated
- Built Strong Relationships with Larger Customers
- Receiving Applications for Measures Other than Lighting
- Starting to Manage Projects

# 2016

*Experience. Delivery. Results.*

 Franklin Energy

## Program Options For Remainder of Year

- **Increase Budget for Remainder of 2016 Year**
  - Manage Projects that we can pay in calendar year 2017
  - Continue to take in applications and pay on projects for 2016
    - Estimated additional Incentives to pay out \$31,819
- **Waitlist until January**
  - Only pay on projects that have received reservation letters
  - Can cause customers and contractors to not apply again
  - Slows down upward progress trends
  - Some programs have taken a long time to recover

# 2016

*Experience. Delivery. Results.*

 Franklin Energy



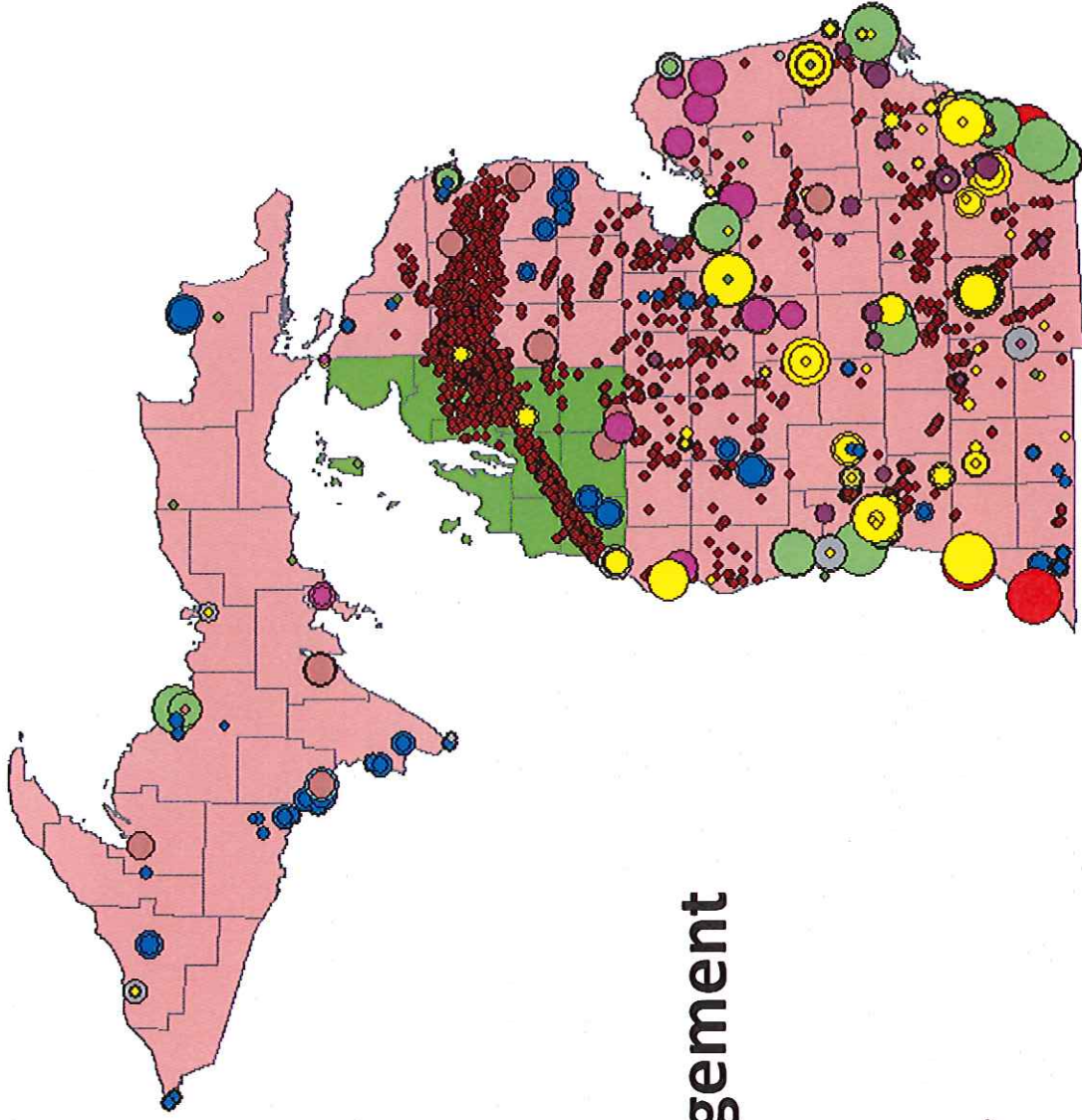


# Questions??

2016

*Experience. Delivery. Results.*





## Community Energy Management

November 8, 2016

Sarna Salzman, Executive Director

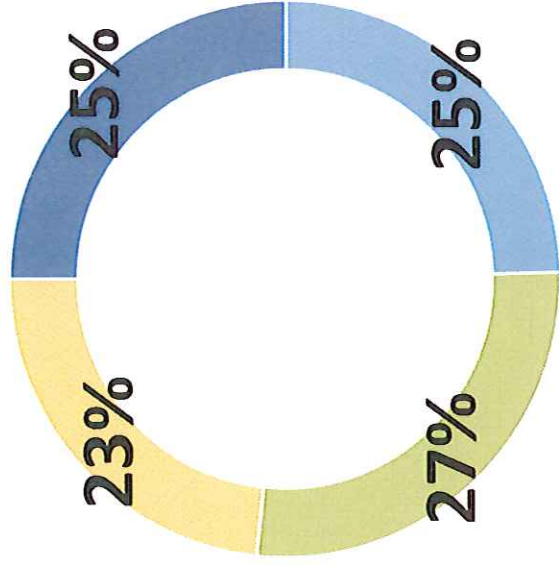


Since 1999, SEEDS has been implementing local solutions to global issues.

We believe the best solutions are found at the intersection of Ecology, Education & Design

# Energy & Environmental Analysis

## 10-County Energy Consumption



- Residential
- Commercial
- Industrial
- Transportation

**101 Trillion Btu's used**

**\$1.5 Trillion spent**

**12.5 Million MTCO<sub>2</sub>e emitted**

# Energy Technical Assistance & Partnership

In 2009, with NWMCOG, captured ARRA funds allowing us to invest in technical assistance for 20 units of government *plus* \$40,000 for each of nine retrofitting projects.

**Results: GTC is spending \$23K LESS on utility bills than it was in 2009 even though they built the Hall of Justice in the interim.**



In 2011, with MLUI, captured ARRA funds to launch TC Saves & served 600 TC homes.



**For every \$1 invested, homeowners immediately matched \$0.87**



In 2012 hired by TCL&P to provide additional technical assistance to 10 biggest C&I customers.

**Led to Britten Banner becoming first Venture North borrower.**

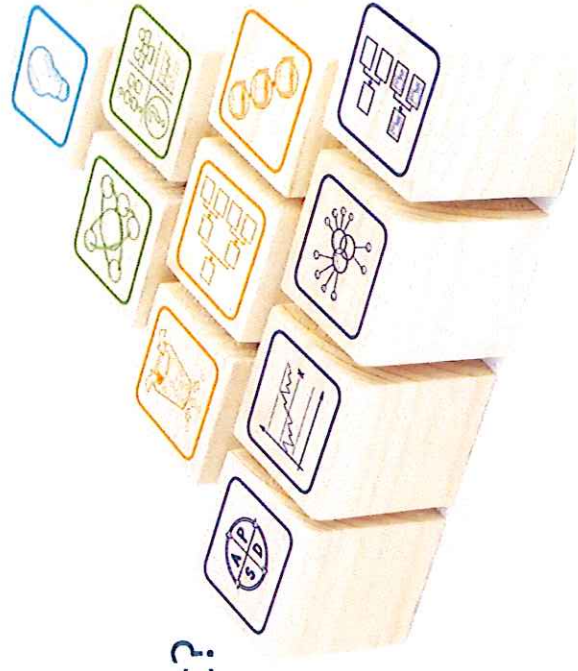
A History of Collaboration and Partnership  
**R.E.A.L. Framework for Energy Excellence**

Reliability – does it turn on when I want it?

Ecology – does it harm other species?

Affordability – can I reasonably pay for it?

Local economy – who gets my dollars?



## **Opportunities Today Government Segment of C&I**

1. Save tax-payer dollars on utility bills
2. Better for general operating fund balances
3. Efficiency measures reduce need for generation capacity

**There are ~ 3.5 million Sf of public buildings in GT County**

**In 2011, GT County public buildings used**

**> 37 million kWh of electricity**

# Top Strategic Activities for C&I

1. Energy Benchmarking & Public Data Disclosure  
~6.6 Year Simple Payback
2. Retro-Commissioning (Rcx): tuning-up existing equipment  
**Cost ~\$9,000 per 50,000 Sf & 1 year simple payback**
3. Retrofitting: retro-commissioning + strategic investments  
**Cost ~\$2.50/Sf and typically results in 23% energy reduction**



# Sample Projection: Retrocommissioning (Rcx) the Governmental Center

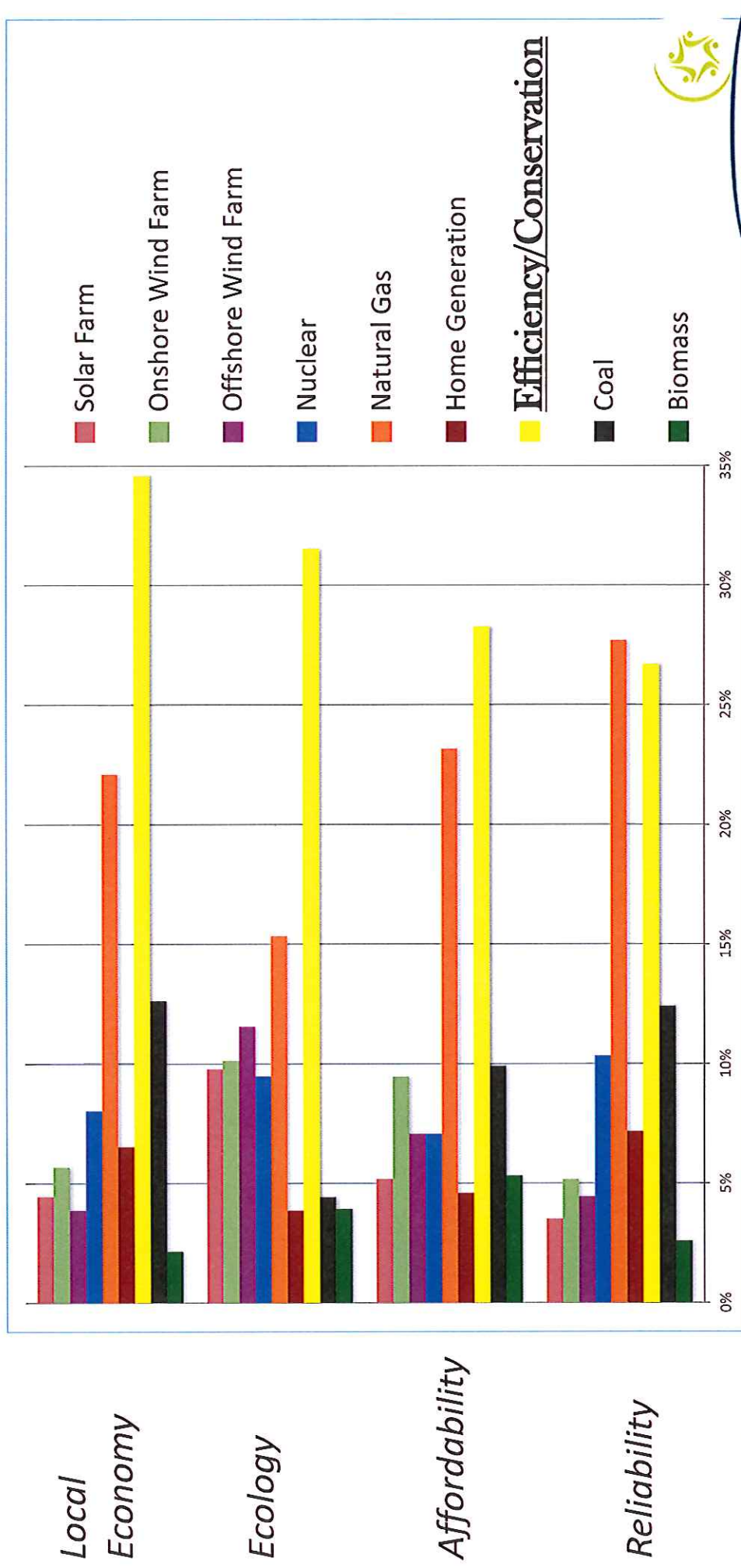
Projections by Year	Utility Cost Savings	Elec Savings (kWh)	Gas Savings (therms)
1	\$12,469	674,347	3,992
2	\$11,409	617,028	3,652
3	\$9,470	512,133	3,031
4	\$7,055	381,539	2,258
5	\$4,656	251,816	1,491
<b>Cumulative Savings</b>	\$45,059	2,436,863	14,425
<b>Annualized Average</b>	\$9,012	487,373	2,885

# Sample Projection: Retro-commissioning (Rcx) the Governmental Center

Cost Scenario	Cost / Sf	Total Cost	Payback (years)	Annualized ROI
Min	\$0.15	\$8,153	0.7	91%
Avg	\$0.30	\$16,850	1.4	33%
Max	\$0.45	\$24,460	2.0	17%

**5-Yr Cumulative Savings ~ \$45K and 2400 mWh**

# Community Opinion about Electricity Priorities



**It is much less expensive to save energy than to  
produce it.**



# IT Service Plan

**Critical City/L&P IT Applications IBM  
iSeries Proposal**

Traverse City Light and Power is proposing the purchase of an IBMi system for the City of Traverse City and Traverse City Light and Power. The system would allow both entities to operate their own system for Utility Billing, Payroll, and Finance without utilizing County hardware.

The purchase of the IBMi is recommended for the following reasons:

- Grand Traverse County has stated their intention of moving off of the IBMi system. If the City and TCL&P purchases their own system, then the choice of staying on the system or moving off will be defined by your schedule, not the County's. This will result in a proactive approach to migrating services, rather than a re-active approach if the County decides to decommission the system sooner than later.
- The only remaining County IT employee with the expertise to support the iSeries is planning to retire from the County at the end of 2016. Once this happens, the County will not have any staff left with the ability to program the system or that has in depth knowledge of the system. Note: It was stated by DMC, the current hardware support for the AS/400, does not know the applications running to be able to support them. They also mentioned that they do not operate by an emergency/helpdesk role. They are project based and will get back with calls when they can.
- The County has agreed to allow Don Sheehan and Mike Reed access to the County system for the time being. There is concern that once a new IT Director is hired that access may be revoked which will remove the ability for the City/TCL&P to support their own applications.

TCL&P would like to procure and host an IBMi system to host the City's and TCL&P's critical applications and retain the ability to maintain them. There are also two virtual Windows servers that the County currently hosts that TCL&P would like to move into their virtual server environment, which the City and TCL&P fully own already.

- Naviline/DMS server. Naviline provides the graphical interface to the IBMi Utility Billing system and the DMS server provides Document Management Services for sending out electronic notices.
- Click-to-Gov server. The Click-to-Gov server provides a web interface for Utility Billing customers to access their accounts over the Internet.

In order to accomplish the above there are several assumptions that are being made.

- The County will provide a complete backup tape of the current IBMi system that TCL&P can use to restore the City applications, user profiles, and authorities onto the new TCL&P IBMi system. A complete backup tape is generated on the County IBMi system every night as part of the system backups. If this accommodation cannot be met because of County data sharing, then a request would be made to create a backup tape of just City and TCL&P Data specifically.
- The County will provide or give access to the server images for the Naviline/DMS and Click-to-Gov servers, which all software and licenses are solely owned by the City and TCL&P.

The estimated cost for TCL&P to purchase and setup the system is listed below.

- IBMi system costs:
  - \$31,580 - Hardware/Software.
    - Reductions in hardware/software costs may be possible if the web query software is not purchased.
  - \$3,500 – 3 Year Hardware/Software 24x7 Maintenance.
- Consulting services estimate.
  - \$14,400 (320 hours at \$45 per hour) – Installation, configuration, migration of data from the current County system.



**TRAVERSE CITY  
LIGHT & POWER**

---

**To:** Light and Power Board  
**From:** Scott Menhart, Manager of Telecom & Technology  
**Date:** November 8, 2016  
**Subject:** Fiber to the Premise (FTTP) Staff Update

---

Staff wanted to give the Board an update of the steps taken regarding TCL&P's Fiber to the Premise (FTTP) project. Therefore, the items listed below are the steps Staff has taken or is still working on in an effort to bringing the Board more information.

**Cool & Connected Federal Grant:** This grant was specifically designed to help small communities with business plans for fiber to the premise projects. TCL&P applied for this grant but unfortunately did not receive it.

**TC New Tech Group:** This is a special interest group that conceptually supports the fiber to the premise initiative. They have been a resource that has been getting the community involved along with getting many letters of support from various organizations throughout the region. These letters and resolutions will be in the final packet given to the Board.

**Cherryland Electric:** Staff has had several discussions and meetings with Tony Anderson on their independent investigation and research into fiber to the premise. Wolverine Power is bringing fiber to the majority of the Cherryland substations, which will bring fiber to Cherryland's territory. Both utilities will look for and investigate any potential benefits of a partnership should both utilities get involved in FTTP.

**21<sup>st</sup> Century Infrastructure Commission:** A commission that is analyzing infrastructure recommendations to Governor Synder. Staff met with the majority of this infrastructure group to inform them of TCL&P's interest and investigation into the project. Staff plans to submit a packet of information to this Commission in the next few weeks to have in consideration for any possible funding opportunities. The committee is expected to make recommendations over the next several months.

**State of Michigan IT Team:** Staff met with the State of Michigan's IT Executive Team to discuss FTTP and gather information and insight into the project at the State level. Staff is continually working with this team to help seek an approval from the 21<sup>st</sup> Century Infrastructure Commission mentioned above.

**Conexon:** Staff hired Conexon to perform the business plan and feasibility study for the project. After a recent conversation, they are attempting to put a high level draft together for the end of November that Staff can include in a packet it is making for the 21<sup>st</sup> Century Infrastructure



## FOR THE LIGHT & POWER BOARD MEETING OF NOVEMBER 8, 2016

Commission. The full report is expected to be completed in December with a full presentation to the Board to take place in January. Conexon was chosen for economies of scale as they are also the company that is performing Cherryland Electric's FTTP study.

**Chattanooga EPB:** This municipal electric utility deployed a large scale successful FTTP network to its service territory. Therefore, they have already gone through much of what is ahead for TCL&P in regards to the project. As a result, Staff has entered into a consulting agreement with them to assist along the way and to help avoid any pitfalls they may have encountered during their process.

**Letters of Resolution:** Working with Jean Derenzy, she has successfully acquired unanimous support for the resolutions she brought to the County Commission, City Commission, DDA Board, and TCL&P Board. These letters will also be utilized in the packet for the 21<sup>st</sup> Century Infrastructure Commission and given to the TCL&P Board.

**CTC Technology & Energy:** Given the magnitude and potential cost of this project, Staff wanted to investigate the possibilities of obtaining a second full business plan that can coincide with the Conexon business plan. CTC was the organization used to put Holland BPW's business plan together. Therefore, given their Michigan municipal experience, CTC is being pursued for this second business plan for TCL&P. Discussions are still being held with another meeting scheduled for next week.

From the work that has been completed, depending on a few pending agreements, three items will potentially be produced that will be given to and/or presented to the Board:

- Late November or Early December 2016: Packet containing current FTTP steps taken, draft Conexon business plan, and letters of resolution and support
- January 2017: Full Conexon Business Plan
- To Be Determined 2017: Potential CTC Business Plan