

A REGULAR MEETING

Of The

TRAVERSE CITY LIGHT AND POWER BOARD

Will Be Held On

TUESDAY, February 14, 2017

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 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: February 10, 2017
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.

- a. Consideration of approving the minutes of the Regular Meeting of January 24, 2017. (Approval recommended) (p.4)
- b. Consideration of approving Board Policies:
 1. Equal Employment Opportunity Policy. (Approval recommended) (Schroeder) (p.7)
 2. Social Security Number Privacy Policy. (Approval recommended) (Schroeder) (p.10)

Items Removed From Consent Calendar

a.

3. Unfinished Business

None.

4. New Business

- a. Discussion of Confidential Attorney Client Privileged Communications (Possible closed session-2/3rd's board vote required) (Doren) (p.12)

5. Appointments

None.

6. Reports and Communications

- a. From Legal Counsel.
- b. From Staff.
 1. Presentation on Energy Efficiency Revolving Loan Fund Annual Report by Venture North. (Arends/Galbraith) (p.13)
 2. Presentation on the Fiber to the Premise Feasibility Report. (Arends/Menhart) (p.15)
 3. Presentation of the 2017-18 Fiber Fund Budget. (Myers-Beman/Menhart) (p.39)
 4. Presentation of the Utility Rate Analysis Report. (Myers-Beman) (p.42)

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, January 24, 2017

Board Members -

Present: Jan Geht, Pat McGuire, Amy Shamroe, Bob Spence

Absent: Jeff Palisin, John Taylor, Tim Werner

Ex Officio Member -

Present: Marty Colburn, City Manager

Others: Tim Arends, Karla Myers-Beman, Jeff Jocks, Kelli Schroeder, Pete Schimpke, Scott Menhart, Tony Chartrand, Jennifer St. Amour

The meeting was called to order at 5:17 p.m. by Chairman Geht.

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 January 10, 2017.
- b. Authorizing a Letter of Agreement with the Utility Workers Union of America, AFL-CIO Local No. 295.
- c. Approval of a contract amendment with Great Lakes Energy for Afterhours Customer Support and Outage Dispatch Services.

CARRIED unanimously. (Palisin, Taylor, Werner absent)

Items Removed from the Consent Calendar

None.

Item 3 on the Agenda being Unfinished Business

None.

Item 4 on the Agenda being New Business

- a. Public Hearing regarding:
 - LED and HPS tariff rates.

Chairman Geht opened the Public Hearing.

No Public comment made.

Chairman Geht closed the Public Hearing.

Moved by McGuire, seconded by Shamroe, that the Board authorizes the amended street lighting and private area lighting tariff rates as presented effective February 1, 2017.

CARRIED unanimously. (Palisin, Taylor, Werner absent)

- b. Consideration of a territory exchange with Cherryland Electric Cooperative.

The following individuals addressed the Board:

Tim Arends, Executive Director

Moved by Spence, seconded by McGuire, that the Board authorize the Chairman and Secretary to enter into an agreement with the Cherryland Electric Cooperative for the transfer and exchange of electric distribution facilities and accounts, subject to approval as to substance by the Executive Director and as to form by General Counsel and approval by the Michigan Public Service Commission.

CARRIED unanimously. (Palisin, Taylor, Werner absent)

- c. Approval of the 2017 Strategic Plan.

The following individuals addressed the Board:

Tim Arends, Executive Director

Moved by McGuire, seconded by Shamroe, that the Board adopts the Traverse City Light & Power Strategic Plan – 2017 as presented.

CARRIED unanimously. (Palisin, Taylor, Werner absent.)

Item 5 on the Agenda being Appointments

None.

Item 6 on the Agenda being Reports and Communications

- a. From Legal Counsel.

1. Jeff Jocks, representing General Counsel, reported that Cohl, Stoker, & Toskey, P.C. had been hired as special legal counsel to negotiate labor matters.

- b. From Staff.

1. Karla Myers-Beman presented the 2015-16 Annual Report.

- c. From Board.

Item 7 on the Agenda being Public Comment

There being no objection, Chairman Geht declared the meeting adjourned at 5:46 p.m.

/js

Tim Arends, Secretary
LIGHT AND POWER BOARD

DRAFT



**TRAVERSE CITY
LIGHT & POWER**

To: Light & Power Board
CC: Timothy Arends, Executive Director
From: Kelli Schroeder, Manager of HR & Communications
Date: February 8, 2017
Subject: Equal Employment Opportunity Policy
Social Security Number Privacy Policy

Staff continues to amend and add new policies as necessary. Included in your packet for review are two new policies in which no formalized guidelines have been implemented or approved by the TCL&P Board.

The first is an Equal Employment Opportunity Policy that has never been officially adopted by the Board, but rather, the utility has been adhering to the City of Traverse City EEO Policy adopted by the Commission on June 17, 1996 and subsequently amended in November 2010 and April 2011. Like other policies, staff recommends the TCL&P Board adopt this policy specific to the utility.

The second is a Social Security Number Privacy Policy that outlines the acceptable use and disclosure of employee and applicant social security numbers.

Staff recommends that the Board approve the proposed policies. These items are appearing on the Consent Calendar as they are deemed by staff to be non-controversial items. Approval of the items on the Consent Calendar means you agree with staff's recommendation.

If any member of the Board or the public wishes to discuss these matters, other than clarifying questions, the items, individually, 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 motions would be appropriate:

(RECOMMENDED MOTIONS ON NEXT PAGE)

FOR THE LIGHT & POWER BOARD MEETING OF FEBRUARY 14, 2017

1. EQUAL EMPLOYMENT OPPORTUNITY POLICY:

MOVED BY _____, SECONDED BY _____,

THAT THE BOARD ADOPTS THE EQUAL EMPLOYMENT OPPORTUNITY POLICY
AS PRESENTED WITH AN IMMEDIATE EFFECTIVE DATE.

2. SOCIAL SECURITY NUMBER PRIVACY POLICY:

MOVED BY _____, SECONDED BY _____,

THAT THE BOARD ADOPTS THE SOCIAL SECURITY NUMBER PRIVACY POLICY
AS PRESENTED WITH AN IMMEDIATE EFFECTIVE DATE.

EQUAL EMPLOYMENT OPPORTUNITY

PURPOSE

Traverse City Light & Power (TCL&P) provides equal employment opportunities (EEO) to all employees and applicants for employment without regard to race, color, religion, sexual orientation, gender identity or expression, national origin, age, genetic information, disability, sex, height, weight, arrest record, marital status or veteran status. TCL&P complies with applicable federal, state and local laws governing nondiscrimination in employment. This policy applies to all terms and conditions of employment, including recruiting, hiring, placement, promotion, termination, layoff, recall, transfer, leaves of absence, compensation and training.

POLICY

TCL&P expressly prohibits any form of workplace harassment based on race, color, religion, sexual orientation, gender identity or expression, national origin, age, genetic information, disability, sex, height, weight, arrest record, marital status or veteran status. Improper interference with the ability of TCL&P's employees to perform their job duties may result in discipline up to and including discharge.

Complaints of unlawful employment discrimination or harassment should be reported immediately to a supervisor or the TCL&P Human Resource Department. In cases where investigation confirms the allegations, appropriate corrective action will be taken, regardless of whether the inappropriate conduct rises to the level of any violation of law.

Retaliation

TCL&P prohibits retaliation, including but not limited to making any threatening communication by verbal, written and/or electronic means, against any individual who reports and/or provides any information concerning unacceptable behavior, unlawful discrimination, harassment and/or other violations of TCL&P policies, rules and procedures. Any employee found engaging in retaliation will be subject to disciplinary action up to and including termination.

Timothy J. Arends
Executive Director and Secretary
Traverse City Light and Power Board

SOCIAL SECURITY NUMBER PRIVACY POLICY

PURPOSE

Pursuant to Michigan state law, it is the policy of Traverse City Light & Power (TCL&P) to protect the confidentiality of its employees' and applicants' Social Security numbers (SSNs) obtained and used in the course of business. No person shall knowingly acquire, disclose, transfer, or unlawfully use the social security number of any employee or individual unless in accordance with applicable state and federal law and the procedures and rules established by this policy. A violation of this policy constitutes grounds for discipline up to and including termination of employment.

POLICY

Collection of SSNs

SSNs will be collected from applicants and employees as required to meet federal or state reporting requirements. These purposes include:

- To conduct pre-employment background checks.
- To verify eligibility for employment.
- To withhold federal and state taxes.
- To comply with state new-hire reporting.
- To facilitate enrollment and/or updates in company benefits plans.

SSNs may also be collected from creditors, suppliers or independent contractors where no tax identification or employer identification number is accessible. SSNs so obtained will be subject to the same provisions of the privacy policy as those for applicants and employees.

Use of SSNs

Except for verification and reporting uses for the above-referenced reasons, no SSN, or portion thereof greater than four (4) sequential numbers, will be permitted to be used for identification badges, permits, timecards, employee rosters, licenses, agreements, contracts, or any other materials or documents that are publicly displayed.

Mail or Transmitted Documents

Documents containing social security numbers shall only be mailed or transmitted in the following circumstances:

- State or federal law, rule, regulation, or court order or rule authorizes, permits, or requires that a social security number appear in the document.
- The document is sent as part of an application or enrollment process initiated by the individual whose social security number is contained in the document.
- The document is sent to establish, confirm the status of, service, amend, or terminate an account, contract, policy, or employee or health insurance benefit or to confirm the accuracy of a social security number of an individual who has an account, contract, policy, or employee or health insurance benefit.
- The document or information is mailed by or at the request of an individual whose social security number appears in the document or information.

Documents containing social security numbers that are mailed or otherwise sent to an individual shall not reveal the number through the envelope window, nor shall the number be otherwise visible from outside the envelope or package.

No SSN, or portion thereof greater than four (4) sequential numbers, will be used in open computer transmissions or company distributions or through the company intranet except where such transmission of information is by secure connection or is encrypted.

Storage of SSNs

All documents containing SSNs shall be stored in locked, secured areas. All computer applications containing SSNs shall be maintained on secured, authorized-access computer stations only.

Access to SSNs

Only persons who have a legitimate business reason will have access to SSNs. Such access will be authorized by the Executive Director. Department heads, supervisors and employees granted such access must take all necessary precautions to ensure the integrity of records that include such numbers when in use and not in use.

Destruction of SSNs

Records that include SSNs will be maintained in accordance with federal and state law. When such documents are released for destruction, the records will be destroyed by shredding.

Timothy J. Arends
Executive Director and Secretary
Traverse City Light and Power Board

FOR THE LIGHT & POWER BOARD MEETING OF FEBRUARY 14, 2017



TRAVERSE CITY
LIGHT & POWER

To: Light & Power Board
From: Tim Arends, Executive Director
Date: February 6, 2017
Subject: Confidential attorney-client communications – closed session

Enclosed in your binder for your review are confidential attorney-client communications.

The Chairman has requested the board go into closed session to discuss these communications with general counsel. Closed sessions regarding attorney-client privileged communications is allowable under the Open Meetings Act.

If the Board agrees to go into closed session, the following motion is appropriate to do so and five (5) affirmative votes are required:

MOVED BY _____, SECONDED BY _____,

**THAT THE TCL&P BOARD ENTER INTO CLOSED SESSION IMMEDIATE FOLLOWING
THE PUBLIC COMMENT PORTION OF THE AGENDA TO DISCUSS AN ATTORNEY-
CLIENT PRIVILEGED COMMUNICATION.**



VENTURE NORTH

MEMORANDUM

TO: Traverse City Light & Power Board of Directors

FROM: Laura Galbraith, Executive Director

DATE: 2/3/2017

SUBJECT: TCLP Energy Efficiency Revolving Loan Fund

Loans Issued

Name	Interest Rate, Term	Original Loan Amount	Balance
Bill Marsh	3%, 3 Years	\$50,000.00	\$15,650.15
Radio Centre I	0%, 3 Years	\$36,300.00	PAID
The Beverage Co	0%, 3 Years	\$31,430.00	\$20,080.22
Radio Centre I #2	0%, 3 Years	\$36,000.00	\$26,000.00
Budget Luxury Inn	0%, 3 Years	\$50,000.00	\$38,888.88
Total		\$203,730.00	\$100,619.25

- All loans are current and there have been no delinquencies
- The Current Fund Balance \$103,785.98

Cinnaire Loan Loss Reserve

Venture North entered into an Agreement with Cinnaire Lending to participate in a 25% Loan Loss Reserve for the TCL&P Energy Efficiency Loan Program. Please see one page attachment for more information.

GREEN Loan Guarantee Program

Sponsored by:

Cinnaire Lending

Cinnaire Lending (formerly Great Lakes Capital Fund) provides a 25% guarantee for loans tied to Green retrofit (**no new construction**) improvements on existing buildings (i.e. multi-family apartments, commercial, industrial, or municipal buildings). The financed improvements should generally reduce energy costs by 20% and can include the purchase and installation of items such as:

- insulation
- weatherstripping
- HVAC systems
- hot water heaters
- water saving toilets and **low flow** shower heads
- LED lighting
- Energy Star™ appliances
- replacement windows and doors
- solar systems
- geothermal heating/cooling systems

The energy cost savings should enable the development to repay the GREEN loan over a 2 – 10 year period. An energy audit is not required; but it can help prioritize which improvements offer the best cost/benefit. Low-cost audits are available and could be wrapped into the financing.

Cinnaire provides the lender with a 25% guarantee of payment for loan losses associated with the financed Green improvements. Process: the lender identifies a target amount of Green loans it intends to close prior to December 31, 2017. Cinnaire provides a Loan Loss Guarantee Agreement that will cover losses incurred by the lender up to 25% of the total amount of loans outstanding. The Guarantee will remain in place for up to 10 years.

Example: Lender obtains a Guarantee for \$100,000 to backstop \$400,000 worth of loans. The lender closes 4 Green loans (approximately \$100,000 each) over a 12-month period. If the lender files a foreclosure on one of the loans, the lender can receive up to \$100,000 from the Guarantee against the anticipated loss. If some of Guarantee remains available, it will continue to backstop the remaining 3 loans.

For more information, please contact: Tom Edmiston – Sr. VP, Cinnaire
517.364.8907
tEdmiston@cinnaire.com

Greg Nicholas
517.896.1100
gnicholas@globalinnovationllc.com



Traverse City Light and Power

Fiber to the home Initial staff review



Business models

TCLP as the provider

- All within light and power
- Possible partnerships with nearby cooperatives or other providers
- Similar to Chattanooga EPB model

Separate operator

- TCLP owns fiber
- Cost recovered through payment of a lease or access fee
- Similar to Huntsville/Google model
- We recommend exclusive (not open access)



Common infrastructure assumptions

- 24 month project duration
- 2 phases of construction
- Distributed split or tap architecture
- All passive network from substation to premise
- No calculated financial benefits to TCLP from smart grid or economic development
- 20 year bond, 2.75% interest
- 58% aerial, 42% underground



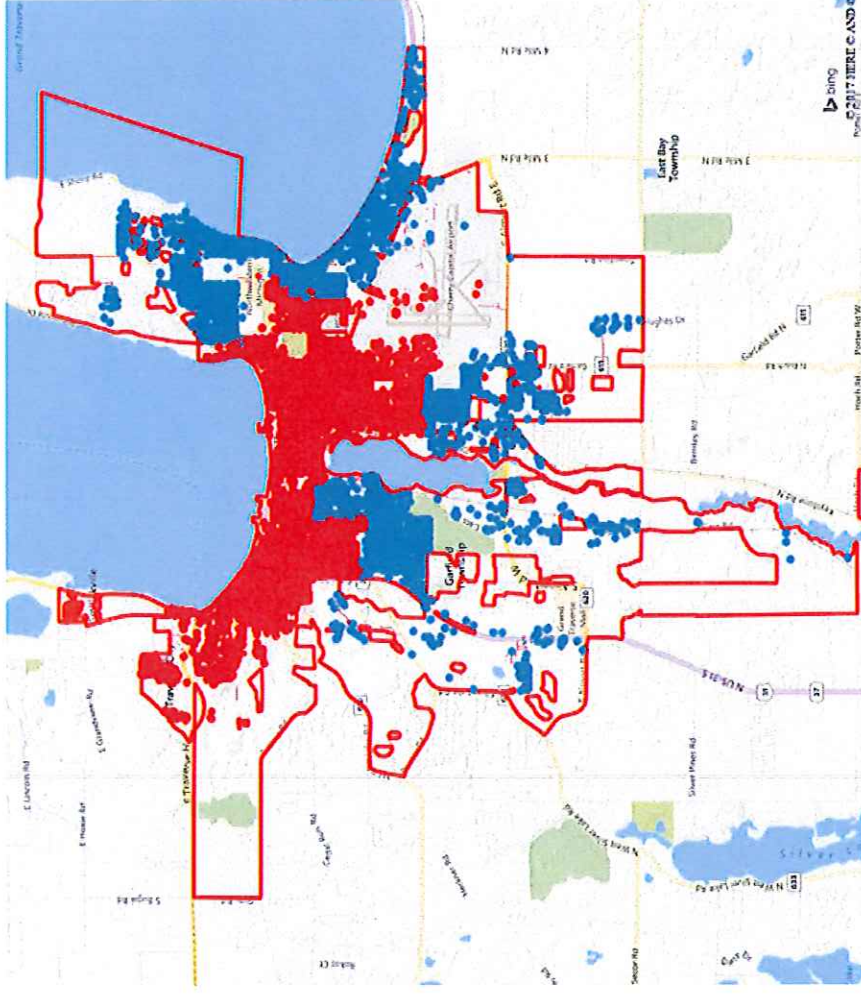
Proposed phases

Phase	Services passed	Aerial miles	UG miles	Total miles	Density	Capital investment
1	6,121	47	26	73	83.7	\$8,263,762
2	4,675	59	52	111	42.3	\$7,948,533
	10,796	106	78	184	58.8	\$16,212,295



Proposed phases

- Phase 1 [6166]
- Phase 2 [4675]



Competitive summary

Competitor	Technology	Speed	Internet Price	Intro Pricing	TV
AT&T	DSL	1.5mbps	\$30.00	Y	Y
		3.0mbps	\$30.00		
Charter	Cable	60mbps	Intro \$44.99	Y	Y
			\$59.99		



Competitive comparison

- ⦿ Tennessee Municipal Utility
 - Approaching 50% take rate
 - Competitors: Comcast and AT&T
 - Source – published annual report
- ⦿ Electric Cooperative data
 - Over 45% of meters
 - 40% against Charter
 - 25% launch take rate against two major competitors with over 100mbps
 - Source – clients



Assumptions – Operating entity

- 2 year project schedule
- GPON fiber to the home architecture
- Full triple play model
- VoIP phone service provided by Third Party voice provider
- Percent taking service within 24 months of each phase start: 25%
- Penetration growth rate of 3% annually capping at 50%
- Declining phone take rate beginning at 25% of connects
- Declining TV take rate beginning at 60% of connects
- Gradually increasing highest internet tier take rate
- \$50 marketing cost per new passing
- No installation charge during launch
- Residential unlimited local and long distance phone \$24.95
- 100mbps for \$49.95, gigabit for \$79.95 all symmetrical



Financial projections – TCLP as operator



Financial projection summary

Description	Value
Subscribers end of construction period	2,870
Total capital investment for fiber	\$16,212,295
Net income breakeven	Year 6
Overall net income breakeven (accumulated losses recovered)	Year 11
Number of employees end of construction in operating entity	11



Traverse City Fiber Model: Preliminary Summary

	Year:									
	1	2	3	4	5	6	7	8	9	10
Miles constructed end of year	69	175	176	178	180	182	183	185	187	189
Premises Passed	6,121	10,796	10,904	11,013	11,123	11,234	11,347	11,460	11,575	11,691
Subscribers	808	2,870	3,252	3,641	4,038	4,442	4,854	5,273	5,701	6,136
Revenue	\$571,686	\$2,660,106	\$4,510,797	\$5,159,967	\$5,838,441	\$6,547,343	\$7,287,813	\$8,061,001	\$8,868,059	\$9,710,143
Revenue growth	0.0%	365.3%	69.6%	14.4%	13.1%	12.1%	11.3%	10.6%	10.0%	9.5%
Employees	9	11	11	11	11	11	11	13	13	13
EBITDA	-\$1,015,072	-\$228,086	\$932,935	\$1,258,584	\$1,614,313	\$1,985,445	\$2,372,693	\$2,690,676	\$3,030,736	\$3,466,643
EBITDA growth	-177.6%	77.5%	509.0%	34.9%	28.3%	23.0%	19.5%	13.4%	12.6%	14.4%
EBITDA margin		-8.6%	20.7%	24.4%	27.6%	30.3%	32.6%	33.4%	34.2%	35.7%
Capex	\$8,263,762	\$7,948,533	\$711,108	\$686,287	\$706,271	\$745,354	\$997,291	\$828,336	\$789,745	\$811,523
Cumulative Capex	\$8,263,762	\$16,212,295	\$16,923,404	\$17,609,690	\$18,315,962	\$19,061,316	\$20,058,606	\$20,886,942	\$21,676,687	\$22,488,210
Debt balance	\$9,964,089	\$18,251,353	\$18,525,518	\$18,515,321	\$18,167,971	\$17,477,447	\$16,637,011	\$15,625,820	\$14,586,820	\$13,519,248

Traverse City Fiber Model: Projected Income Statement

	1	2	3	4	5	6	7	8	9	10
Revenue										
Internet revenue	258,585	1,174,079	1,955,055	2,204,292	2,459,593	2,721,067	2,988,825	3,262,980	3,543,646	3,830,939
Video revenue	231,559	1,086,514	1,870,297	2,170,275	2,491,561	2,835,144	3,202,022	3,593,202	4,009,696	4,452,510
Voice revenue	40,295	182,437	302,934	340,591	378,970	418,084	457,941	498,554	539,934	582,091
Large commercial revenue	64,200	321,000	555,073	638,823	724,193	811,206	899,887	990,261	1,082,352	1,176,186
Bundle discounts	(22,954)	(103,924)	(172,563)	(194,014)	(215,877)	(238,157)	(260,862)	(283,997)	(307,568)	(331,583)
Total Revenue	571,686	2,660,106	4,510,797	5,159,967	5,838,441	6,547,343	7,287,813	8,061,001	8,868,059	9,710,143
Bandwidth costs	192,000	192,000	193,412	204,636	216,030	227,601	239,353	251,290	263,419	275,745
Video programming costs	170,702	793,336	1,352,622	1,554,621	1,767,769	1,992,384	2,228,775	2,477,237	2,738,050	3,011,473
Telephone costs	11,180	50,616	84,047	94,495	105,143	115,995	127,054	138,321	149,802	161,498
Total Cost of Sales	373,882	1,035,952	1,630,082	1,853,752	2,088,943	2,335,980	2,595,181	2,866,849	3,151,272	3,448,716
Gross Margins	197,804	1,624,154	2,880,715	3,306,215	3,749,498	4,211,363	4,692,632	5,194,151	5,716,787	6,261,426
Operating Expenses										
Corporate overhead labor and expense	554,063	800,578	735,528	776,219	802,330	829,256	857,024	885,660	915,189	945,638
Direct Labor and Benefits	130,500	267,525	274,243	281,068	288,095	295,298	302,680	387,809	477,005	488,930
Technical support costs	7,271	33,103	55,099	62,037	69,108	76,314	83,658	91,141	98,765	106,532
Marketing expenses	306,050	306,050	306,050	306,050	306,050	306,050	306,050	306,050	306,050	306,050
Maintenance	5,212	18,302	26,312	26,575	26,841	27,109	27,380	27,654	27,931	28,210
City gross revenue fees	28,584	133,005	225,540	257,998	291,922	327,367	364,391	403,050	443,403	485,507
General Operating Expenses	181,196	293,677	325,037	337,683	350,839	364,524	378,756	402,112	417,710	433,917
Total Operating Expenses	1,212,876	1,852,240	1,947,779	2,047,631	2,135,185	2,225,918	2,319,939	2,503,476	2,686,051	2,794,784
EBITDA	(1,015,072)	(228,086)	932,935	1,258,584	1,614,313	1,985,445	2,372,693	2,690,676	3,030,736	3,466,643
Interest income	0	0	0	0	0	0	0	0	0	0
Interest expense	137,006	398,207	516,809	521,232	516,976	503,208	482,606	457,518	429,710	401,138
Depreciation	164,900	903,138	1,191,757	1,261,826	1,331,728	1,403,804	1,459,623	1,400,197	1,343,065	1,393,694
Net Income before taxes	(1,316,979)	(1,529,431)	(775,630)	(524,474)	(234,391)	78,433	430,464	852,961	1,257,960	1,671,811
Income taxes	0	0	0	0	0	0	0	0	0	0
Net Income (loss)	(1,316,979)	(1,529,431)	(775,630)	(524,474)	(234,391)	78,433	430,464	852,961	1,257,960	1,671,811
Cumulative Net Income (loss)	(1,316,979)	(2,846,410)	(3,622,040)	(4,146,514)	(4,380,905)	(4,302,471)	(3,872,007)	(3,039,046)	(1,781,085)	(109,274)

Traverse City Fiber Model: Projected Balance Sheet

	1	2	3	4	5	6	7	8	9	10
Assets										
Cash	601,074	190,606	21,694	16,206	10,090	4,334	2,214	346,083	1,065,689	2,190,339
Receivables	47,640	221,676	375,900	429,997	486,537	545,612	607,318	671,750	739,005	809,179
Deferred Income Tax	-	-	-	-	-	-	-	-	-	-
Total current assets	648,715	412,281	397,593	446,203	496,627	549,946	609,531	1,017,833	1,804,694	2,999,517
Long term property	3,876,432	10,145,948	10,484,480	10,811,691	11,147,901	11,493,272	11,847,973	12,212,172	12,586,043	12,969,761
Mid term property	3,785,979	4,572,566	4,740,012	4,900,791	5,065,599	5,234,502	5,407,564	5,584,853	5,766,434	5,952,377
Short term property	601,351	1,493,782	1,698,912	1,897,208	2,102,462	2,333,542	2,803,070	3,089,917	3,324,209	3,566,072
Long term accumulated depreciation	(77,529)	(357,976)	(770,585)	(1,196,508)	(1,635,700)	(2,088,523)	(2,555,348)	(3,036,551)	(3,532,516)	(4,043,632)
Mid term accumulated depreciation	(75,720)	(493,647)	(959,276)	(1,441,316)	(1,939,635)	(2,454,640)	(2,986,744)	(3,536,365)	(4,103,929)	(4,689,869)
Short term accumulated depreciation	(11,652)	(216,415)	(529,935)	(883,797)	(1,278,014)	(1,713,989)	(2,174,684)	(2,544,057)	(2,823,594)	(3,120,231)
Total assets	8,747,577	15,556,538	15,061,202	14,534,273	13,959,239	13,354,109	12,951,361	12,787,802	13,021,342	13,633,995
Liabilities and Equity										
Payables and deferred revenue	100,467	151,595	157,723	165,466	172,173	179,134	186,357	201,028	215,607	224,021
Bank debt	9,964,089	18,251,353	18,525,518	18,515,321	18,167,971	17,477,447	16,637,011	15,625,820	14,586,820	13,519,248
Total liabilities	10,064,556	18,402,948	18,683,242	18,680,787	18,340,144	17,656,580	16,823,368	15,826,848	14,802,427	13,743,269
Accumulated income/loss	(1,316,979)	(2,846,410)	(3,622,040)	(4,146,514)	(4,380,905)	(4,302,471)	(3,872,007)	(3,039,046)	(1,781,085)	(109,274)
Contributed equity	-	-	-	-	-	-	-	-	-	-
Total Equity	(1,316,979)	(2,846,410)	(3,622,040)	(4,146,514)	(4,380,905)	(4,302,471)	(3,872,007)	(3,039,046)	(1,781,085)	(109,274)
Total Liabilities and Equity	8,747,577	15,556,538	15,061,202	14,534,273	13,959,239	13,354,109	12,951,361	12,787,802	13,021,342	13,633,995

Traverse City Fiber Model: Projected Cash Flow Summary

	1	2	3	4	5	6	7	8	9	10
Cash Flow Statement										
Cash flow from operations	(1,099,252)	(749,200)	268,031	690,997	1,047,505	1,430,122	1,835,605	2,183,397	2,548,350	3,003,745
Debt service	-	(745,067)	(809,217)	(866,947)	(914,937)	(951,507)	(984,128)	(1,011,192)	(1,039,000)	(1,067,572)
Capital Expenditures										
Capex - Fiber plant	(3,458,150)	(5,275,715)	(87,339)	(88,212)	(89,094)	(89,985)	(90,885)	(91,794)	(92,712)	(93,639)
Capex - New drops	(318,283)	(824,418)	(200,463)	(186,577)	(193,057)	(199,647)	(206,349)	(213,166)	(220,098)	(227,148)
Capex - Maintenance	-	(19,382)	(50,730)	(52,422)	(54,058)	(55,740)	(57,466)	(59,240)	(61,061)	(62,930)
Capex - Network	(3,928,580)	(1,669,018)	(372,576)	(359,075)	(370,062)	(381,233)	(392,590)	(404,136)	(415,874)	(427,806)
Capex - Startup and operations	(558,750)	(150,000)	-	-	-	-	(240,000)	(60,000)	-	-
Proceeds from debt financing	9,964,089	9,032,332	1,083,382	856,749	567,587	260,983	143,693	-	-	-
Equity contributions	-	-	-	-	-	-	-	-	-	-
Equity distributions	-	-	-	-	-	-	-	-	-	-
Total sources and uses	601,074	(400,469)	(168,912)	(5,488)	(6,116)	12,994	7,879	343,869	719,606	1,124,650
Cash balance	601,074	200,606	31,694	26,206	20,090	33,084	40,964	384,833	1,104,439	2,229,089
Debt balance	9,964,089	18,251,353	18,525,518	18,515,321	18,167,971	17,477,447	16,637,011	15,625,820	14,586,820	13,519,248

Financial projections - Independent operator



Financial projection summary

Description	Value
Subscribers end of construction period	2,870
Total capital investment for fiber	\$10,095,448
Net income	Year 2
Overall net income breakeven	Year 2



Traverse City Fiber Model - Independent Operator: Preliminary Summary

	Year:									
	1	2	3	4	5	6	7	8	9	10
Miles constructed end of year	69	175	176	178	180	182	183	185	187	189
Homes Passed	6,121	10,796	10,904	11,013	11,123	11,234	11,347	11,460	11,575	11,691
Revenue	\$295,177	\$1,054,069	\$1,539,284	\$1,574,042	\$1,610,232	\$1,647,921	\$1,687,179	\$1,728,079	\$1,770,698	\$1,815,114
Revenue growth	0.0%	257.1%	46.0%	2.3%	2.3%	2.3%	2.4%	2.4%	2.5%	2.5%
EBITDA	\$84,817	\$780,399	\$1,223,688	\$1,305,826	\$1,335,899	\$1,367,287	\$1,400,053	\$1,434,262	\$1,469,985	\$1,507,293
EBITDA growth	28.7%	820.1%	56.8%	6.7%	2.3%	2.3%	2.4%	2.4%	2.5%	2.5%
EBITDA margin		74.0%	79.5%	83.0%	83.0%	83.0%	83.0%	83.0%	83.0%	83.0%
EBITDA - Capex	-\$3,891,615	-\$5,338,617	\$886,409	\$979,873	\$1,000,955	\$1,023,187	\$1,046,630	\$1,071,346	\$1,097,404	\$1,124,872
Capex	\$3,976,432	\$6,119,015	\$337,279	\$325,953	\$334,944	\$344,100	\$353,423	\$362,916	\$372,581	\$382,420
Cumulative Capex	\$3,976,432	\$10,095,448	\$10,432,727	\$10,758,680	\$11,093,624	\$11,437,724	\$11,791,147	\$12,154,063	\$12,526,643	\$12,909,063
Debt balance	\$4,210,578	\$9,779,784	\$9,411,708	\$9,028,908	\$8,630,796	\$8,216,760	\$7,786,163	\$7,338,341	\$6,872,607	\$6,388,243

Traverse City Fiber Model - Independent Operator: Projected Income Statement

	1	2	3	4	5	6	7	8	9	10
Revenue										
Fiber lease revenue	295,177	1,054,069	1,539,284	1,574,042	1,610,232	1,647,921	1,687,179	1,728,079	1,770,698	1,815,114
Management and admin	-	-	-	-	-	-	-	-	-	-
Total Revenue	<u>295,177</u>	<u>1,054,069</u>	<u>1,539,284</u>	<u>1,574,042</u>	<u>1,610,232</u>	<u>1,647,921</u>	<u>1,687,179</u>	<u>1,728,079</u>	<u>1,770,698</u>	<u>1,815,114</u>
Gross Margins	<u>295,177</u>	<u>1,054,069</u>	<u>1,539,284</u>	<u>1,574,042</u>	<u>1,610,232</u>	<u>1,647,921</u>	<u>1,687,179</u>	<u>1,728,079</u>	<u>1,770,698</u>	<u>1,815,114</u>
Operating Expenses										
Utility management labor	121,438	124,473	127,585	76,123	78,026	79,976	81,976	84,025	86,126	88,279
Maintenance	5,212	18,302	26,312	26,575	26,841	27,109	27,380	27,654	27,931	28,210
City gross revenue fees	14,759	52,703	76,964	78,702	80,512	82,396	84,359	86,404	88,535	90,756
General Operating Expenses	68,952	78,191	84,734	86,815	88,954	91,152	93,412	95,734	98,122	100,576
Total Operating Expenses	<u>210,360</u>	<u>273,670</u>	<u>315,596</u>	<u>268,215</u>	<u>274,332</u>	<u>280,634</u>	<u>287,127</u>	<u>293,817</u>	<u>300,713</u>	<u>307,821</u>
EBITDA	<u>84,817</u>	<u>780,399</u>	<u>1,223,688</u>	<u>1,305,826</u>	<u>1,335,899</u>	<u>1,367,287</u>	<u>1,400,053</u>	<u>1,434,262</u>	<u>1,469,985</u>	<u>1,507,293</u>
Interest income	0	0	0	0	0	0	0	0	0	0
Interest expense	84,212	286,886	391,191	376,468	361,156	345,232	328,670	311,447	293,534	274,904
Depreciation	79,529	293,438	422,563	435,828	449,046	462,627	476,577	490,904	505,614	520,714
Net income before taxes	<u>(78,923)</u>	<u>200,076</u>	<u>409,933</u>	<u>493,530</u>	<u>525,697</u>	<u>559,428</u>	<u>594,805</u>	<u>631,911</u>	<u>670,837</u>	<u>711,674</u>
Income taxes	0	0	0	0	0	0	0	0	0	0
Net Income (loss)	<u>(78,923)</u>	<u>200,076</u>	<u>409,933</u>	<u>493,530</u>	<u>525,697</u>	<u>559,428</u>	<u>594,805</u>	<u>631,911</u>	<u>670,837</u>	<u>711,674</u>
Cumulative Net Income (loss)	<u>(78,923)</u>	<u>121,153</u>	<u>531,086</u>	<u>1,024,616</u>	<u>1,550,313</u>	<u>2,109,741</u>	<u>2,704,546</u>	<u>3,336,457</u>	<u>4,007,294</u>	<u>4,718,969</u>

Traverse City Fiber Model - Independent Operator: Projected Balance Sheet

	1	2	3	4	5	6	7	8	9	10
Assets										
Cash	227,683	113,422	203,623	417,383	656,564	917,868	1,202,499	1,511,727	1,846,886	2,209,381
Receivables	24,598	87,839	128,274	131,170	134,186	137,327	140,598	144,007	147,558	151,259
Loans to subsidiary	-	-	-	-	-	-	-	-	-	-
Deferred Income Tax	-	-	-	-	-	-	-	-	-	-
Total current assets	252,281	201,261	331,896	548,553	790,750	1,055,195	1,343,097	1,655,733	1,994,444	2,360,641
Long term property	3,776,432	9,895,448	10,232,727	10,558,680	10,893,624	11,237,724	11,591,147	11,954,063	12,326,643	12,709,063
Mid term property	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Short term property	-	-	-	-	-	-	-	-	-	-
Long term accumulated depreciation	(75,529)	(348,966)	(751,530)	(1,167,358)	(1,596,404)	(2,039,031)	(2,495,608)	(2,966,513)	(3,452,127)	(3,952,841)
Mid term accumulated depreciation	(4,000)	(24,000)	(44,000)	(64,000)	(84,000)	(104,000)	(124,000)	(144,000)	(164,000)	(184,000)
Short term accumulated depreciation	-	-	-	-	-	-	-	-	-	-
Total Assets	4,149,185	9,923,743	9,969,093	10,075,875	10,203,971	10,349,888	10,514,636	10,699,283	10,904,960	11,132,863
Liabilities and Equity										
Payables and deferred revenue	17,530	22,806	26,300	22,351	22,861	23,386	23,927	24,485	25,059	25,652
Bank debt	4,210,578	9,779,784	9,411,708	9,028,908	8,630,796	8,216,760	7,786,163	7,338,341	6,872,607	6,388,243
Total liabilities	4,228,108	9,802,590	9,438,007	9,051,259	8,653,657	8,240,146	7,810,090	7,362,826	6,897,666	6,413,895
Accumulated income/loss	(78,923)	121,153	531,086	1,024,616	1,550,313	2,109,741	2,704,546	3,336,457	4,007,294	4,718,969
Contributed equity	-	-	-	-	-	-	-	-	-	-
Total Equity	(78,923)	121,153	531,086	1,024,616	1,550,313	2,109,741	2,704,546	3,336,457	4,007,294	4,718,969
Total Liabilities and Equity	4,149,185	9,923,743	9,969,093	10,075,875	10,203,971	10,349,888	10,514,636	10,699,283	10,904,960	11,132,863

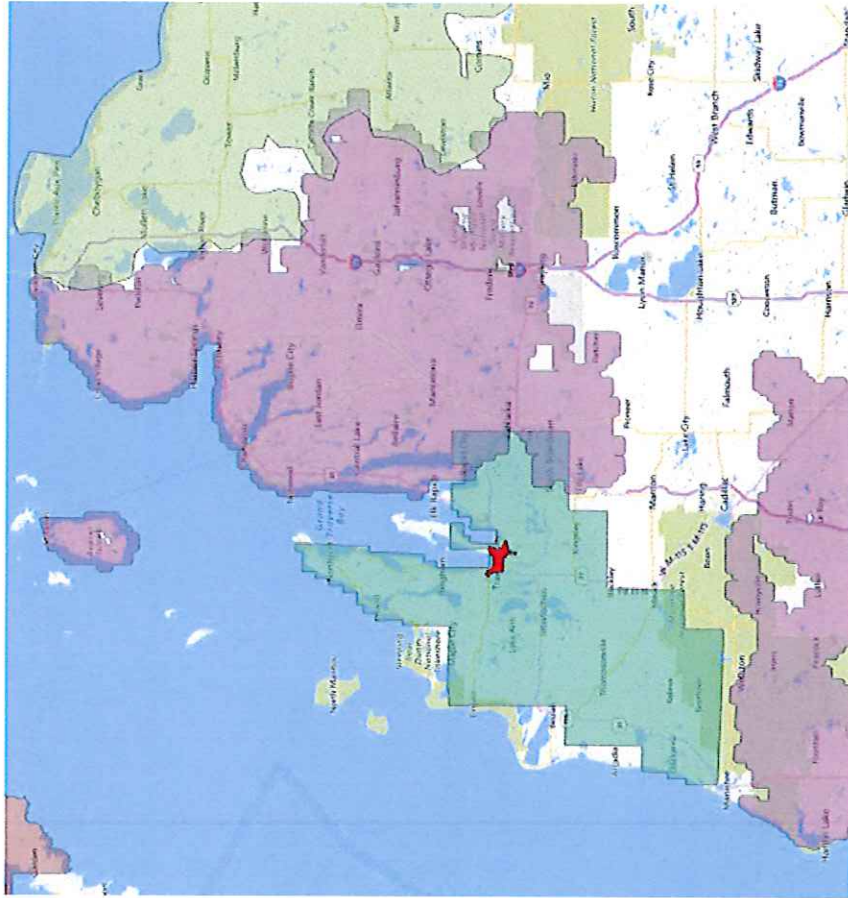
Traverse City Fiber Model - Independent Operator: Projected Cash Flow Summary

	1	2	3	4	5	6	7	8	9	10
Cash Flow Statement										
Cash flow from operations	(6,462)	435,548	795,556	922,513	972,237	1,019,440	1,068,652	1,119,965	1,173,474	1,229,279
Debt service	-	(353,920)	(368,077)	(382,800)	(398,112)	(414,036)	(430,598)	(447,821)	(465,734)	(484,364)
Capital Expenditures										
Capex - Fiber plant	(3,458,150)	(5,275,715)	(87,339)	(88,212)	(89,094)	(89,985)	(90,885)	(91,794)	(92,712)	(93,639)
Capex - New drops	(318,283)	(824,418)	(200,463)	(186,577)	(193,057)	(199,647)	(206,349)	(213,166)	(220,098)	(227,148)
Capex - Maintenance	-	(18,882)	(49,477)	(51,164)	(52,793)	(54,468)	(56,189)	(57,956)	(59,770)	(61,633)
Capex - Network	-	-	-	-	-	-	-	-	-	-
Capex - Startup and operations	(200,000)	-	-	-	-	-	-	-	-	-
Proceeds from debt financing	4,210,578	5,923,126	-	-	-	-	-	-	-	-
Loan disbursements to subsidiary	-	-	-	-	-	-	-	-	-	-
Loan payments from subsidiary	-	-	-	-	-	-	-	-	-	-
Equity contributions	-	-	-	-	-	-	-	-	-	-
Equity distributions	-	-	-	-	-	-	-	-	-	-
Contributions in associated org	-	-	-	-	-	-	-	-	-	-
Total sources and uses	227,683	(114,261)	90,200	213,761	239,181	261,304	284,631	309,228	335,159	362,495
Cash balance	227,683	113,422	203,623	417,383	656,564	917,868	1,202,499	1,511,727	1,846,886	2,209,381
Debt balance	4,210,578	9,779,784	9,411,708	9,028,908	8,630,796	8,216,760	7,786,163	7,338,341	6,872,607	6,388,243

Summary



Neighboring cooperatives



Recommendations

- Take advantage of low interest/bond rates
- Demand on contractor work force and materials is increasing
- First to market with FTTH is important
- Be competitive
- Defend valuable market areas
- Possible partnerships with Michigan cooperatives



Conexon services

- GIS fiber design and construction project management
- Assist with obtaining financing
- Research additional funding opportunities
- Construction and materials relationships
- General assistance and advice
- Regulatory assistance





**TRAVERSE CITY
LIGHT & POWER**

To: Light & Power Board
From: Tim Arends, Executive Director
Date: February 3, 2017
Subject: Presentation of the Fiber Fund 2017-18 Budget

Enclosed is the Fiber Fund and related cash flow for the fiscal year end June 30, 2018.

BUDGET

This year the budget is relatively status quo to the last year's presented budget with a few exceptions noted below.

Professional services decreased relating to the Fiber to the Premise Feasibility Study being completed in the current fiscal year.

Repairs and Maintenance and Reimbursements accounts increased relating to a fiber relocation costs being incurred and reimbursed by the property owner.

This budget does not reflect any activity relating to the Fiber to the Premise Project. If the Board decides to move forward after the presentation of the feasibility study and further board discussion, all of the activity would be reflected in the balance sheet primarily through bonds payable, cash and fixed assets.

CASH FLOW

The projected six year cash flow represents inflationary increases in fiber revenue and related expenses, except for one time expenses such as the professional services related to the fiber business plan and one time fiber relocations costs and corresponding reimbursement. Additionally, staff has included planned repayments to the Electric Fund for the initial investments into the Fiber Fund.

**Traverse City Light & Power
Fiber Optics Fund
2017-18 Budgeted Revenues and Expenses**

	FY 14/15 Actual	FY 15/16 Actual	FY 16/17 Budgeted	FY 16/17 Projected	FY 17/18 Recommended
<u>Operating revenues:</u>					
Charges for services	\$ 255,752	\$ 278,376	\$ 326,316	\$ 279,000	\$ 319,000
Other	-	129	-	-	-
Total Operating Revenues	255,752	278,505	326,316	279,000	319,000
<u>Operating expenses:</u>					
Salaries and wages	49,165	44,601	72,072	72,100	75,700
Fringe benefits	35,167	35,081	57,632	57,600	62,000
Office & operation supplies	331	1,829	1,000	1,500	1,000
WIFI operations and maintenance	23,225	28,678	32,000	32,000	29,800
Hardware and software	-	-	4,000	5,400	5,400
Professional services	-	1,727	54,200	24,500	-
Legal services	-	2,475	2,700	2,000	1,500
City fee	12,788	13,932	16,400	13,975	15,975
Professional development	-	-	2,500	-	2,500
Insurance	1,161	-	1,400	1,000	1,000
Repair and maintenance	-	11,171	5,000	9,000	20,000
Vehicle rental	12,461	8,974	13,000	13,000	13,000
Miscellaneous	-	-	-	-	-
Depreciation expense	116,606	143,383	145,000	145,000	145,000
Total operating expenses	250,904	291,851	406,904	377,075	372,875
Operating income (loss)	4,848	(13,346)	(80,588)	(98,075)	(53,875)
<u>Non-operating revenues:</u>					
Reimbursements	296,122	54,127	38,400	42,400	53,400
Interest revenue	4	125	500	500	500
Total non operating revenues	296,126	54,252	38,900	42,900	53,900
<u>Other financing transfers:</u>					
Transfer out	-	(175,000)	(175,000)	(175,000)	(175,000)
Change in net position	\$ 300,974	\$ (134,094)	\$ (216,688)	\$ (230,175)	\$ (174,975)

Traverse City Light & Power - Fiber Fund

	Fiscal Year:	Actual 2015/16	Estimate 2016/17	Estimate 2017/18	Estimate 2018/19	Estimate 2019/20	Estimate 2020/21	Estimate 2020/22
Receipts								
Charges for services - Fiber	\$	281,076	\$ 279,000	\$ 319,000	\$ 325,380	\$ 331,888	\$ 338,525	\$ 345,296
Non Operating Revenues - Reimbursements		54,127	42,400	53,400	38,400	39,168	39,951	40,750
Non Operating Revenues - Other		500	500	500	500	500	500	500
Timing of receivables (DDA WIFI Project)		275,000	-	-	-	-	-	-
Interfund cash deficit loan		(19,441)	-	-	-	-	-	-
Total Receipts		591,262	321,900	372,900	364,280	371,556	378,977	386,546
Payments								
Fiber Expense		145,578	200,075	198,075	186,737	190,471	194,281	198,166
WIFI Expense		33,500	32,000	29,800	30,396	31,004	31,624	32,256
Capital Investments		28,086	-	-	-	-	-	-
Transfer to Electric Fund		175,000	175,000	175,000	150,000	150,000	150,000	150,000
Total Payments		382,164	407,075	402,875	367,133	371,475	375,905	380,423
Cashflow Surplus/Deficit (-)		209,098	(85,175)	(29,975)	(2,853)	80	3,072	6,124
Opening Cash & Investments Balance	\$	-	\$ 209,098	\$ 123,923	\$ 93,948	\$ 91,096	\$ 91,176	\$ 94,248
Closing Cash & Investments Balance	\$	209,098	123,923	93,948	91,096	91,176	94,248	100,372



TRAVERSE CITY
LIGHT & POWER

To: Light & Power Board
From: Karla Myers-Beman, Controller
Date: February 3, 2017
Subject: Rate Comparison

Attached you will find the rate comparison of Residential Rate with consumption levels at 500 kWh and 1000 kWh, Small Commercial Rate with consumption level at 1,200 kWh and Large Commercial Rate with demand level at 30 kW and consumption level 11,000 kWh. The consumption amounts for the Small and Large Commercial Rates were obtained by averaging TCL&P's actual billing data from the past fiscal year.

The data for this rate comparison was obtained from utility websites, telephone calls/emails to respective entities and is for the time period for rates effective as of December 2016.

Compared to the last rate comparison study completed in December 2014 residential is ranked 4th up from 7th and 11th, respectively, for the 500 kWh and 1000 kWh consumption level. Small commercial is at the top of the mid-range with being ranked at 13th up from 23rd, less expensive than Consumers Energy, but more expensive than Cherryland Electric Cooperative. Large commercial is better than small commercial ranked at 3rd up from 11th, less expensive than both Consumers Energy and Cherryland Electric Cooperative.

The movement upward in each rate comparison is primarily caused from the change in the utility's power service cost recovery rate. In December 2014 this rate was \$.00860 and it has decreased to \$(.00144) in the current rate comparison.

FOR THE LIGHT & POWER BOARD MEETING OF FEBRUARY 14, 2017



TRAVERSE CITY
LIGHT & POWER

To: Light & Power Board
From: Karla Myers-Beman, Controller
Date: February 14, 2017
Subject: Rate Comparison

Included with this memo is a revised rate comparison. After publication of the board packet the City of Marshall notified staff they provided us the incorrect power service cost recovery rate, which modified TCL&P small commercial ranking to move from 13th to 14th. All other rankings for the other rate classifications and consumption levels remained the same.

