

A REGULAR MEETING
Of The
TRAVERSE CITY LIGHT AND POWER BOARD

Will Be Held On
TUESDAY, November 22, 2016

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
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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: 11-18-16
4:00 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 minutes of the Regular Meeting of November 8, 2016. (Approval recommended) (p.3)
- b. Consideration of authorizing ESRI renewal. (Approval recommended) (Menhart) (p.6)

3. Unfinished Business

None.

4. New Business

- a. Consideration of LED Light Rate Tariff. (Myers-Beman) (p.7)
- b. Consideration of continuing the Energy Optimization Program based on pro forma budget. (Arends) (p.13)

5. Appointments

None.

6. Reports and Communications

- a. From Legal Counsel.
- b. From Staff.
 - 1. Presentation of 2017 Six-Year Capital Plan. (Arends) (p.15)
 - 2. 2017-2018 Budget Schedule. (Myers-Beman) (p.24)
- 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, November 8, 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, Scott Menhart, Pete Schimpke, Tony Chartrand, Jennifer St. Amour

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

Chairman Geht amended the Agenda to add item 4b under New Business; Consideration of Consent of Assignment for Everstream, LLC to accept Great Lakes Comnet, Inc.'s agreements held with TCL&P.

Item 2 on the Agenda being Consent Calendar

None.

Item 3 on the Agenda being Unfinished Business

None.

Item 4 on the Agenda being New Business

- a. Consideration of approving the minutes of the Regular Meeting of October 25, 2016.

Moved by McGuire, seconded by Shamroe, that the Board approves the minutes of the Regular Meeting of October 25, 2016.

CARRIED unanimously.

- b. Consideration of Consent of Assignment for Everstream, LLC to accept Great Lakes Comnet Inc.'s agreements held with TCL&P.

The following individuals addressed the Board:

Karla Myers-Beman, Controller

Moved by McGuire, seconded by Taylor, that the Light & Power Board approves the Consent to Assignment of Great Lakes Comnet, Inc. pole attachment agreement and Letter of Understanding for Use of Fiber Conduit.

CARRIED unanimously.

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. Karla Myers-Beman presented the June 30, 2016 Financial Statements.
2. Franklin Energy Presentation regarding TCL&P's Energy Efficiency Program.

The following individuals addressed the Board:

Jennifer Alvarado, Outreach Lead, Franklin Energy
Jacob Hardy, Energy Advisor, Franklin Energy
Tim Arends, Executive Director
Karla Myers-Beman, Controller

3. Presentation by SEEDS.

The following individuals addressed the Board:

Tim Arends, Executive Director
Sarna Salzman, SEEDS Executive Director

4. Scott Menhart presented an overview of TCL&P information technology issues.

The following individuals addressed the Board:

Marty Colburn, City Manager
Tim Arends, Executive Director

5. Scott Menhart reported on Fiber to the Premise.

The following individuals addressed the Board:

Tim Arends, Executive Director

c. From Board.

1. Marty Colburn reported the City Commission approved the special land use permit from Munson Medical Center and the related request to vacate a portion of Sixth Street.
2. Marty Colburn reported that the City Commission approved a policy regarding payment-in-lieu-of-taxes PILOT program.
3. Marty Colburn reported himself, the City Engineer, and the City Planner went to Windsor, Canada to work with individuals in the field of biology, academia, engineering, etc. regarding the possible construction of a new fish passage along the Boardman River.
4. Tim Arends pointed out two pamphlets included in the Board binder. The first being the annual Energy Optimization and Renewable Energy report that was included in the August/September newsletter and the other being a welcome pamphlet for city utility customers. The pamphlets were produced internally by Kelli Schroeder.

Item 7 on the Agenda being Public Comment

There being no objection, Chairman Geht declared the meeting adjourned at 7:15 p.m.

/js

Tim Arends, Secretary
LIGHT AND POWER BOARD



**TRAVERSE CITY
LIGHT & POWER**

To: Light and Power Board
From: Scott Menhart, Manager of Telecom & Technology
Date: November 22, 2016
Subject: Geographic Information Systems (GIS) Software

TCL&P and the City of Traverse City utilize ESRI software for all Geographic Information Systems (GIS) management, map production, work order tracking, and is also the substructure to TCL&P's Outage Management System. The GIS databases contain asset inventories for the electric transmission system, electric distribution system, and fiber optic network. The software license is set to expire in January of 2017 and is renewed every three years.

The cost for ESRI Small Municipal and County ELA is \$25,000 per year. The City's current annual cost share is \$7,000. This lower rate was originally designed for the City to just use desktop licensing for users, not server licensing. It was intended that TCL&P would do all of the Server hosting for the City, and thus pay more for licensing. However, the City decided to lease server space on the County's servers and stand up their own servers to host their own GIS environment, which utilizes ESRI server licensing. As a result, the City's ESRI licensing usage is the same to what TCL&P is utilizing. Therefore, the annual cost share for the City will increase from \$7,000 to \$12,500 to reflect this increased usage.

Staff recommends the Board approve the renewal of the Software Agreement. This item is appearing on the Consent Calendar as it is deemed a non-controversial item by staff. 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 the Board discussion you agree with staff's recommendation the following motion would be appropriate:

MOVED BY _____, SECONDED BY _____,

**THAT THE BOARD AUTHORIZES THE CHAIRMAN AND SECRETARY TO EXECUTE
A THREE YEAR AGREEMENT WITH ESRI IN THE AMOUNT OF \$75,000 FOR AN
ENTERPRISE LICENSE, SUBJECT TO APPROVAL AS TO SUBSTANCE BY THE
EXECUTIVE DIRECTOR, AND APPROVAL AS TO FORM BY GENERAL COUNSEL.**



**TRAVERSE CITY
LIGHT & POWER**

To: Light & Power Board
From: Karla Myers-Beman, Controller
Date: November 10, 2016
Subject: LED Light Rate Study

In conjunction with Utility Financial Solutions, LLC (the "consultant") staff completed the LED light rate study ("study") for street lights and private area lighting to reflect the actual consumption/cost of the lights installed in the distribution system. Even though the primary purpose of the utility moving forward in transitioning to LED lights was more of an energy saving than a financial measure.

Following the memo is a summary of the last page of the study providing the proposed rates for the new LED lights installed since 2010. As you can see overall there are not significant fluctuations between the HPS and LED lights. The higher cost and the kWh savings seem to equal each other when compared to the current implemented rates and not provide a significant savings or cost when solely looking at the lighting component. However, there are significant costs when the utility provides the cash outlay for the poles that need to be recovered while taking into consideration future inflationary costs and adding this to the lighting component. For example, Silver Drive without the pole is \$12.76, with the addition of the pole recovery costs the rate becomes \$21.29.

The monthly street lights invoice will increase annually by approximately \$11,000 if the new LED rates are implemented. Currently, this annual increase will have no impact to the financial statements of the utility as it is both an expense and revenue on the income statement.

It is staff's recommendation that the Board sets a public hearing for the proposed rate increases at its December 13, 2016 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 JANUARY 1ST INCREASE TO BE HELD AT THE DECEMBER 13, 2016
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.**

City of Traverse City
LED Street Lighting COS Study

Total Monthly Cost per Lamp Summary							
Lamp Type	Monthly Power Supply		Monthly O&M, Depreciation & ROR		Monthly Customer Service		Current Light Rate per Comparable Lamp Wattage
	Cost/Light		Cost/Light		Cost/Light		
SL 157 Watt LED (250W HPS) (HL)	\$ 2.26	\$	6.21	\$	2.82	\$	12.56 \$ 10.87
SL 130 Watt LED (250W HPS) (HL)	\$ 1.87	\$	5.37	\$	2.82	\$	11.11 \$ 10.87
SL 112 Watt LED (250W HPS) (HL)	\$ 1.61	\$	4.53	\$	2.82	\$	9.87 \$ 10.87
SL 54 Watt LED (100W HPS) (HL)	\$ 0.78	\$	4.15	\$	2.82	\$	8.19 \$ 7.97
SL 45 Watt LED (100W HPS) (HL)	\$ 0.65	\$	3.60	\$	2.82	\$	7.43 \$ 7.97
SL 50 Watt LED (LL)	\$ 0.72	\$	3.39	\$	2.82	\$	7.33 \$ 12.09
SL 86 Watt LED (LL) Silver Drive	\$ 1.24	\$	8.00	\$	2.82	\$	12.76 \$ 12.09
SL 75 Watt LED (LL) Garland Street	\$ 1.08	\$	-	\$	2.82	\$	4.50 \$ -
TART Trail 54 Watt (100W HPS)	\$ 0.78	\$	4.15	\$	2.82	\$	8.19 \$ 12.09
Auto Parking LED 50 Watt (100W HPS) (LL)	\$ 0.72	\$	4.15	\$	2.82	\$	8.10 \$ 12.09
EASC 62 Watt LED	\$ 0.89	\$	5.56	\$	2.82	\$	9.78 \$ -
EASC 119 Watt LED	\$ 1.72	\$	6.08	\$	2.82	\$	11.57 \$ -
EASC 137 Watt LED	\$ 1.98	\$	6.23	\$	2.82	\$	12.12 \$ -
EASC 283 Watt LED	\$ 4.08	\$	8.13	\$	2.82	\$	17.31 \$ -
Wood Pole	\$ -	\$	3.56	\$	-	\$	3.56 \$ 1.63
Silver Drive Pole	\$ -	\$	8.53	\$	-	\$	8.53 \$ -
West Front Pole (includes lighting component)	\$ -	\$	19.64	\$	-	\$	19.64 \$ -

City of Traverse City
Light and Power Department
Effective: July 1, 2014
Amended:

PRIVATE AREA LIGHTING SERVICE

(Rate "PAL")

Availability:

Open to any customer desiring photoelectric-controlled, un-metered Private Area Lighting (also referred to as "Security Lighting" or "Dusk-to-Dawn" lighting).

Nature of Service:

The Department will install, own and maintain un-metered, photoelectric-controlled luminaries in mutually-agreeable locations as required by the customer. Standard overhead equipment includes wood poles and non-decorative fixtures. Any lighting system other than this will be charged based on expected life and a 5% carrying cost of capital. The Light and Power Board retains the right to self-fund special lighting projects that it determines are in the best interest of the City.

Monthly Rate:

One existing pole:

High Pressure Sodium

100 Watt HPS 8,500 Lumens	\$ 6.52 per month
250 Watt HPS 24,000 Lumens	\$ 9.73 per month
35 Watt Low Level Pedestrian Light	\$11.39 per month
For each alternate cut-off, decorative fixture:	\$ 1.51 per month

LED

54 Watt LED	\$ 8.19 per month
62 Watt LED	\$ 9.78 per month
112 Watt LED	\$ 9.87 per month
119 Watt LED	\$11.57 per month
137 Watt LED	\$12.12 per month
283 Watt LED	\$17.31 per month

For each additional pole required:	\$ 3.56 per month
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Terms and Conditions:

Initial minimum term is one (1) year for each installation.

City of Traverse City
Light and Power Department
Effective:

Private Area Lighting Service (Rate "PAL"), cont.

Special Conditions:

Where the customer desires other than standard wood poles or desires underground wiring or special equipment not covered herein, the Department, at its option, will provide such facilities by special agreement. In addition, the customer agrees to furnish the Department with a trenchable route across their property, if needed, and agrees to restore any damage due to trenching at their cost.

Due Date:

The due date of the customer's bill will be shown on the bill and will be at least twenty-one (21) days after mailing. Payments received after the due date are considered late, and a penalty charge of 2% shall be imposed as a one-time charge.

Michigan Sales Tax:

This tax shall be added to all bills, including minimum, where applicable.

Termination of Service:

If a customer cancels service prior to three (3) years from installation date, customer must pay the cost of installation as follows:

1. Without a pole: \$220.00
2. With a pole: \$300.00

City of Traverse City
Light and Power Department
Effective: July 1, 2014
Amended:

STREET LIGHTING SERVICE

(Rate "GV")

Availability:

Open to the State of Michigan or any political subdivision or agency thereof having jurisdiction over public streets or roadways for street lighting service for any system consisting of one or more luminaires where the Department has an existing distribution system with secondary voltage available.

Nature of Service:

The Department will furnish, install, and own all equipment comprising the street lighting system. The Department will supply the energy and maintain the entire equipment with the replacement of the asset subject to the utility's Decorative Lighting Policy and Street Lighting Operations and Maintenance Policy. In areas where the Department has installed a residential underground electric distribution system, the street lighting system will be served from said underground electric distribution system. In all other areas, the street lighting system will normally be served from either overhead lines or from underground cables as available. Standard overhead equipment includes wood poles and non-decorative fixtures. Any lighting system other than this will be charged based on expected life and an 5% carrying cost of capital. The Light and Power Board retains the right to self-fund special lighting projects that it determines are in the best interest of the City.

Monthly Rate:

The charge per luminaire (per month) shall be:

<u>Type of Luminaire</u>	<u>Nominal Rating of Lamps (One Lamp Per Luminaire)</u>		<u>Rate Per Luminaire (per month)</u>
	<u>Watts</u>	<u>Lumens</u>	
High Pressure Sodium	100	8,500	\$ 7.97
High Pressure Sodium	250	24,000	\$ 10.87
Low Level Pedestrian Light	35	3,600	\$ 11.39
Low Level Pedestrian Light	50		\$ 11.39
Low Level Pedestrian Light	100		\$ 12.09
Designated Areas (LL)	50		\$ 2.64
Designated Areas (LL)	35		\$ 2.02
City of TC 8 th Flasher			\$ 13.20
Cut-off Without Pole (LL)	100		\$ 9.50
Cut-off (LL)	100		\$ 12.09

<u>Type of Luminaire</u>	<u>Nominal Rating of Lamps (One Lamp Per Luminaire)</u>		<u>Rate Per Luminaire (per month)</u>
	<u>Watts</u>	<u>Lumens</u>	
100 Watt with Deco Arm	100		\$ 9.50
Barlow 100 Watt	100		\$ 6.52
For alternate cut-off, decorative fixture: \$1.51 per month.			
LED	157		\$ 12.56
LED	130		\$ 11.11
LED	112		\$ 9.87
LED	54		\$ 8.19
LED	45		\$ 7.43
LED	50		\$ 7.33
LED – Autoparking	50		\$ 8.10
LED – Silver Drive	86		\$ 12.76
LED – Garland Street	75		\$ 4.50

The charge per pole (per month) shall be:

<u>Pole Type</u>	<u>Rate Per Pole (per month)</u>
West Front Street (includes lighting component)	\$ 19.64
Silver Drive	\$ 8.53

Near intersections, the Department, at its option and expense, may install a 50 watt lamp in lieu of a 35 watt lamp.

Due Date:

The due date of the customer's bill will be shown on the bill and will be at least twenty-one (21) days. Payments received after the due date are considered late, and a penalty charge of 2% shall be imposed as a one-time charge.



**TRAVERSE CITY
LIGHT & POWER**

To: Light & Power Board
From: Tim Arends, Executive Director and Karla Myers-Beman, Controller
Date: November 14, 2016
Subject: Energy Optimization Program

Staff hopes to address the three overarching themes from the discussion on the Energy Optimization ("EO") Program at the last board meeting. They are as follows:

1. Exceeding budgeted appropriations
2. Cost of per kWh's energy cost of the EO Program
3. Providing a long term strategy for the EO Program

Exceeding budgeted appropriations

Even though it was the intention of the utility to move forward bringing this program in-house, current staffing levels prohibited this transition. Staff plans on continuing to contract with Franklin Energy through the Michigan Public Power Agency Energy Efficiency Group for the 2017 calendar year.

Based on continuing with Franklin Energy, January through June 2017 will cause the budget to exceed the approved budget appropriation by approximately \$100,000. Taking this allotment into consideration, a pro forma budget will increase the current budget of \$380,500 to \$480,500 with staff managing the program to ensure the total program budget stays within this allocation. The program will continue even if the State mandate for energy savings is met providing that the EO Program will save on future cash flow because of the ability for the kWh's that exceed the goal to be carried over in future years until the mandate is no longer required by legislation.

Currently it is estimated the 2017 carryover will be 1,798,269 kWh's as of Franklin Energy's October 25, 2016 report, reducing next year's mandate from 3,148,744 kWh's (based on 2015 sales) to 1,350,475 kWh's for calendar year 2018.

Cost of per kWh's energy cost of the EO Program

Staff calculated out the cost of per kWh for the EO Program by projecting out the kWh's saved over the useful life of the asset installed and evenly split out the incentive costs and program management costs. (General assumptions were made on the weighted life of the asset utilizing the 2017 MEMD database.) However, the contractor installation cost of the actual cost of the customer is not included, causing the cost per kWh to be significantly lower than other utility's reported cost.

FOR THE LIGHT & POWER BOARD MEETING OF NOVEMBER 22, 2016

The average cost for the utility's EO Program is estimated at \$.01204 per kWh whereas the ACEEE, American Council for an Energy Efficient Economy, provided through their Energy Efficiency report the cost was \$.028 based on reports reviewed from 20 states. Additionally, the average LMP for the period 2011 through 2025 is \$.035 per kWh, therefore in theory, the utility is avoiding \$.02296 per kWh on the short run, which allows for full recovery of the utility's investment into the program. Since 2011, the utility has saved an estimated 196,000,270 kWh's. Additionally, for the 2015 year program with spreading out the cost and kWh's savings achieved among the estimated life of the assets the avoided cost to the utility was approximately \$800,000.

Staff will be revisiting the Navigant study to review those programs that are the most beneficial to the utility while working closely with Franklin Energy on implementation and consideration of their independent recommendations.

Providing a long term strategy

Staff recognizes that a long term strategy needs to be developed on how to evolve this program going forward in the future possibly to a non-incentivize program and have these requirements embedded through the community by modifying the construction code requirements. Staff recommends that this becomes a goal of the upcoming year strategic plan based on the time and effort required to develop this strategy.

Staff is recommending continuing the EO Program within the proposed pro forma budget thresholds while recognizing a strategy has to be developed to evolve the EO Program. If the Board concurs moving forward the following motion would be appropriate:

MOVED BY, _____, SECONDED BY, _____,

THAT THE BOARD RECOMMENDS STAFF TO CONTINUE THE ENERGY

OPTIMIZATION PROGRAM BASED ON THE PROPOSED PRO FORMA BUDGET

AND INCLUDE THE DEVELOPMENT OF A STRATEGY TO EVOLVE THE ENERGY

OPTIMIZATION PROGRAM AS PART OF THE STRATEGIC PLAN.



**TRAVERSE CITY
LIGHT & POWER**

To: Light & Power Board
From: Tim Arends, Executive Director
Date: November 14, 2016
Subject: Six Year Capital Improvements Plan - 2017

Included in your packet is a first draft of the Six Year Capital Improvements Plan – 2017 (Plan) that will be discussed at your meeting on Tuesday. Staff, with assistance from GRP Engineering, City Engineering and City Manager Departments has put together what it believes are the priorities of the utility in the coming years based on the previously approved Plan and projects that have surfaced over this past year.

Included with this Plan is a preliminary cash flow analysis that will be updated as staff progresses through the budget process. However, staff knows the importance of this document to be used as a tool for the Board to make decisions on approving the Plan. Even though this document is preliminary, staff feels it provides enough evidence to the Board there will be sufficient funds to cover the proposed Electric Utility capital projects.

Staff will plan to incorporate all ideas and suggestions (supported by the majority) into the Plan by the following board meeting for a final Plan to the Board for its consideration of approval. This will allow TCL&P's capital projects to be incorporated into the City's overall capital plan for Planning and City Commission review and approval. Additionally, it will allow for a more focused review of the proposed budget by separating the review of these two vital guiding documents.



SIX YEAR CAPITAL IMPROVEMENTS PLAN – 2017

ELECTRIC FUND

TRANSMISSION:

Transmission Line Reconstruction

Location: Existing transmission corridor from Barlow Street Substation to Parsons Road Substation, Hall Street Substation to Cass Road Substation, and Cass Road Substation to Barlow Junction.

Character: Overhead transmission facilities to include new poles and wire.

Extent: Reconductor/rebuilding of existing 69kV transmission lines with new lines and higher poles to bring circuits to current day standards.

Fiscal Year(s): 2019-20 through 2022-23

SUBSTATION:

Substation Transformer Upgrades

Location: Barlow and Cass Road Substation

Character: Installation of higher rated transformers as recommended by Engineers.

Extent: Upgrade existing substation transformers for system reliability due to load growth and age of transformers.

Fiscal Year(s): 2017-18 through 2018-19

Substation Switching Stations

Location: Parsons and Barlow Substation

Character: Addition of switching equipment to allow for switching load on the looped transmission system for increased reliability.

Extent: Installation of substation infrastructure and equipment.

Fiscal Year(s): 2019-20 through 2020-21

Substation Circuit Exits (NEW)

Location: Parsons, Barlow, and Cass Road Substation

Character: New undergrounding from the substation to the circuits.

Extent: Installation of new wire and conduit.

Fiscal Year(s): 2017-18 through 2018-19



SIX YEAR CAPITAL IMPROVEMENTS PLAN – 2017

DISTRIBUTION

Distribution Circuit Rebuild

Location: Throughout the entire service area. In 2016-17, BW-31 circuit, which includes the commercial corridor North of Eighth Street between Barlow Street and Garfield Avenue ending at Peninsula/Center Road will be completed. Future projects have been evaluated and currently the planned replacement schedule for future years are Grandview Parkway, PC-32, BW-30, HL-33, SS-32, CD-21, CD-31, HL-22, PC-22, and PC-23.

Character: Replace deteriorated overhead/underground facilities with new wire, conduit, poles, etc. to include conversion of overhead facilities to underground as appropriate.

Extent: New circuits and upgrade of existing circuits to improve reliability and serve anticipated growth to include undergrounding facilities as appropriate.

Fiscal Year(s): 2017-18 through 2022-23 (Annual Program)

Overhead to Underground Conversion Projects

Location: Throughout the entire service area

Character: Conversion of overhead distribution facilities to underground.

Extent: Annual Program for approved projects except for 2017-18 was removed based on project load for that fiscal year.

Fiscal Year(s): 2018-19 through 2022-23 (Annual Program)

Line Improvements, Extensions, and New Services

Location: Throughout the entire service area

Character: Construction/replacement of overhead and underground distribution facilities involving the use of wire, poles, meters, cabinets, and transformers.

Extent: This is an annual project in which wages, benefits, and equipment charges are capitalized for upgrades to existing services or new customer services.

Fiscal Year(s): 2017-18 through 2022-23 (Annual Program)

Critical and Large Customers (NEW)

Location: Throughout the entire service area

Character: Construction/replacement of overhead and underground distribution facilities involving the use of wire, poles, meters, cabinets, and transformers.

Extent: They are one-time projects in which wages, benefits, materials and equipment charges are capitalized for upgrades to existing services for improvements needed for our top ten and most critical customers.

Fiscal Year(s): 2017-18 through 2020-21



SIX YEAR CAPITAL IMPROVEMENTS PLAN – 2017

DISTRIBUTION (continued)

Hartman Road Overhead Tie (NEW)

Location: Throughout the entire service area

Character: Overhead construction, poles, wires and related materials.

Extent: Allow a second feed into the circuit to enhance reliability.

Fiscal Year(s): 2018-19

FACILITIES AND OTHER:

Hastings Service Center Facility Improvements (NEW)

Location: 1131 Hastings Street

Character: Site and data infrastructure improvements to existing facility

Extent: Needed upgrades to the datacenter infrastructure for reliability purposes, which will allow for the current datacenter equipment to be used at an offsite recovery center.

Additionally included are parking lot improvements at the service center.

Fiscal Year(s): 2017-18 through 2018-19

JOINT TCL&P, CITY OF TRAVERSE CITY, and DDA PROJECTS:

Automated Metering Infrastructure (AMI)

Location: Entire service area

Character: Electric meters and software to accommodate advanced metering capabilities.

Extent: A program to provide for the migration to electronic advanced meters that will assist utility customers on energy use, reliability and provide reads to utility billing. Will also drive future system engineering planning as well as provide metrics on completed items to show project results.

Fiscal Year(s): 2017-18

Upgraded Front Street Lighting Circuits and Receptacles

Location: Downtown north and south along Front Street

Character: Upgrade circuit to accommodate increased load

Extent: New conduit, wire, and addition of event outlets

Fiscal Year(s): 2021-22



SIX YEAR CAPITAL IMPROVEMENTS PLAN – 2017

JOINT TCL&P, CITY OF TRAVERSE CITY, and DDA PROJECTS (continued):

Financial Software (NEW)

Location: Hastings Street Service Center and Governmental Center

Character: Upgrade the current accounting financial software package

Extent: New software programs for utility billing, cash receipts, general ledger, purchase orders, miscellaneous receivables, payroll, accounts payable, fixed assets, and human resources.

Fiscal Year(s): 2017-18 through 2018-19

Park Street Streetscapes Lighting

Location: From State Street to Grandview Parkway

Character: New street lighting installation and underground existing overhead services.

Extent: Removal of existing fixtures/poles/wires in coordination with DDA project.

Fiscal Year(s): 2017-18

Eighth Street Streetscapes Lighting (NEW)

Location: Boardman Avenue to Woodmere Avenue

Character: New street lighting installations in conjunction with planned corridor improvements.

Extent: To be determined in coordination with the City.

Fiscal Year(s): 2018-19

Division Street Streetscapes Lighting (NEW)

Location: Fourteenth Street to Grandview Parkway

Character: New street lighting installations in conjunction with planned streetscape.

Extent: To be determined in coordination with MDOT.

Fiscal Year(s): 2022-23

Cass & Lake Street Streetscapes Lighting

Location: Cass Street from Eighth Street to Cass Street bridge and along Lake Street from Cass Street to Eighth Street.

Character: New street lighting installations in conjunction with planned streetscape.

Extent: To be determined in coordination with DDA.

Fiscal Year(s): 2017-18



SIX YEAR CAPITAL IMPROVEMENTS PLAN – 2017

JOINT TCL&P, CITY OF TRAVERSE CITY, and DDA PROJECTS (continued):

West Front Streetscapes Lighting

Location: Division Street to Elmwood Avenue

Character: New street lighting installations in conjunction with planned streetscape.

Extent: To be determined in coordination with the City.

Fiscal Year(s): 2017-18

FIBER FUND

Fiber to the Premises (NEW)

Location: Entire service area

Character: Telecommunications services to the Traverse City area

Extent: A network that is built off of TCL&P's existing fiber network to run fiber to the premise. This network would be capable of pushing high speed internet services, television, and other telecommunication service offerings to customers.

Fiscal Year(s): 2017-18 through 2020-21

TRAVERSE CITY LIGHT & POWER
CAPITAL IMPROVEMENTS PLAN 2017

ELECTRIC FUND			FISCAL YEARS				
Sum of Amount	Column Labels						
Row Labels	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Grand Total
Transmission			\$ 475,000.00	\$ 475,000.00	\$ 430,000.00	\$ 615,000.00	\$ 1,995,000.00
Transmission Line Reconstruction			475,000.00	475,000.00	430,000.00	615,000.00	1,995,000.00
Cass Road Substation to Barlow Junction						615,000.00	615,000.00
1.3 Miles rebuild						615,000.00	615,000.00
Barlow Substation to Parsons Substation			475,000.00	475,000.00			950,000.00
2.7 Miles rebuild			475,000.00	475,000.00			950,000.00
Hall Street Substation to Cass Road Substation					430,000.00		430,000.00
2.8 Miles rebuild					430,000.00		430,000.00
Substation	1,165,000.00	1,645,000.00	1,560,000.00	1,610,000.00			5,980,000.00
Substation Transformer Upgrades	750,000.00	1,500,000.00					2,250,000.00
Barlow #1 Transformer		750,000.00					750,000.00
Cass Road #1 Transformer	750,000.00						750,000.00
Barlow #2 Transformer		750,000.00					750,000.00
Substation Switching Stations			1,560,000.00	1,610,000.00			3,170,000.00
Parsons Substation			1,560,000.00				1,560,000.00
Barlow Substation				1,610,000.00			1,610,000.00
Substation Circuit Exits (New)	415,000.00	145,000.00					560,000.00
Parsons Substation		145,000.00					145,000.00
Barlow Substation	200,000.00						200,000.00
Cass Road Substation	215,000.00						215,000.00
Distribution	1,620,000.00	3,474,000.00	3,400,000.00	3,805,000.00	3,092,000.00	3,865,000.00	19,256,000.00
Distribution Circuit Rebuild	350,000.00	839,000.00	650,000.00	980,000.00	1,117,000.00	1,815,000.00	5,751,000.00
Grandview Parkway		650,000.00	650,000.00				1,300,000.00
Install new 750 MCM CU URG & Padmount Equipment along Grandview Pkwy & Behind Bldgs North of Front St - 2.0 Miles		650,000.00	650,000.00				1,300,000.00
PC-32 Circuit	350,000.00					400,000.00	750,000.00
OH 8th St/Hastings St Area East to Munson Avenue						400,000.00	400,000.00
OH East Bay Blvd & East Ave	350,000.00						350,000.00
BW-30 & PC-32 Circuits		189,000.00					189,000.00
OH Parsons St & Airport Access to Munson Avenue - 1.72 Miles		189,000.00					189,000.00
HL-33 Circuit				400,000.00	725,000.00	725,000.00	1,850,000.00
69 KV Underbuild along Wadsworth St from 5th to 13th St - .78 Miles				400,000.00	725,000.00	725,000.00	1,850,000.00
SS-32 Circuit				200,000.00			200,000.00
LaFranier Rd from South Sub to Hammond Road - .82 Miles				200,000.00			200,000.00
BW-30 Circuit				285,000.00			285,000.00
OH Hastings St & Carver St from Parsons St to Woodmere Avenue - 1.09 Miles				285,000.00			285,000.00
CD-21 Circuit				95,000.00			95,000.00
OH Cass St & 8th to 14th Street - .49 Miles				95,000.00			95,000.00
CD-31 Circuit					125,000.00		125,000.00
Replace Poles & Install Additional Poles on CD31 along US31 from 14th St South and on Franke Rd from Silver Lake Rd South to US 31 to improve clearance					125,000.00		125,000.00
HL-22 Circuit					185,000.00		185,000.00
OH alley north of 8th St from Lake Ave East to Railroad Ave - .45 Miles					185,000.00		185,000.00
PC-22 Circuit					82,000.00	370,000.00	452,000.00
OH in back lot area from Parsons Rd to Munson Ave - .48 Miles					82,000.00		82,000.00
OH Munson Avenue from Davis Street to 3 Mile Road - 1.43 Mile						370,000.00	370,000.00

TRAVERSE CITY LIGHT & POWER
CAPITAL IMPROVEMENTS PLAN 2017

ELECTRIC FUND							
FISCAL YEARS							
Sum of Amount	Column Labels						
Row Labels	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Grand Total
PC-23 Circuit						320,000.00	320,000.00
OH Along Munson Avenue from Davis Street to Three Mile Road - 1.19 Miles						320,000.00	320,000.00
Overhead to Underground Conversion Projects		700,000.00	725,000.00	750,000.00	775,000.00	800,000.00	3,750,000.00
Line Improvements, Extensions and New Services	1,000,000.00	1,050,000.00	1,100,000.00	1,150,000.00	1,200,000.00	1,250,000.00	6,750,000.00
Critical and Large Customers (New)	270,000.00	410,000.00	925,000.00	925,000.00			2,530,000.00
Hartman Road Overhead Tie (New)		475,000.00					475,000.00
Facilities and Other	150,000.00	100,000.00					250,000.00
Hastings Service Center Facility Improvements (New)	150,000.00	100,000.00					250,000.00
Parking Lot		100,000.00					100,000.00
Datacenter Upgrades	150,000.00						150,000.00
Joint TCL&P, City of Traverse City and DDA Projects	2,375,000.00	75,000.00			1,340,000.00	-	3,790,000.00
Automated Metering Infrastructure (AMI)	1,900,000.00						1,900,000.00
Upgrade Front Street Lighting Circuits and Receptacles					1,340,000.00		1,340,000.00
Financial Software (New)	25,000.00	75,000.00					100,000.00
Park Street Streetscapes Lighting	100,000.00						100,000.00
Eighth Street Streetscapes Lighting (New)		-					-
Division Street Streetscapes Lighting (New)						-	-
Cass & Lake Street Streetscapes Lighting	350,000.00						350,000.00
West Front Streetscapes Lighting (New)	-						-
Grand Total	\$ 5,310,000.00	\$ 5,294,000.00	\$ 5,435,000.00	\$ 5,890,000.00	\$ 4,862,000.00	\$ 4,480,000.00	\$ 31,271,000.00
FIBER FUND							
Sum of Amount	Column Labels						
Row Labels	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Grand Total
Fiber to the Premise (NEW)	\$ 5,000,000.00	\$ 5,000,000.00	\$ 5,000,000.00	\$ 5,000,000.00	\$ -	\$ -	\$ 20,000,000.00
Grand Total	\$ 5,000,000.00	\$ 5,000,000.00	\$ 5,000,000.00	\$ 5,000,000.00	\$ -	\$ -	\$ 20,000,000.00
NOTES:							
1)THIS WORKSHEET IS FOR ILLUSTRATION PURPOSES ONLY AND IS SUPPLEMENTAL TO THE PLAN.							
2)ACTUAL FISCAL YEAR THAT A PROJECT MAY BE UNDERTAKEN MAY DIFFER FROM THE FISCAL YEAR DEPICTED IN THIS SPREADSHEET. DOLLAR AMOUNTS ARE ESTIMATES FOR INFORMATION ONLY AND ARE NOT A PART OF THE OFFICIAL PLAN.							
3)STREET LIGHTING PROJECTS ARE SUBJECT TO FUNDING REQUIREMENTS PER THE DECORATIVE LIGHTING POLICY AND STREET LIGHTING OPERATIONS AND MAINTENANCE POLICY.							

Traverse City Light & Power - Electric Fund

Cash Flow Forecast - Market Value of Assets - 10 year amortization MERS and 2% rate increase in 2019/20

Fiscal Year:	Actual 2015/16	Estimate 2016/17	Estimate 2017/18	Estimate 2018/19	Estimate 2019/20	Estimate 2020/21	Estimate 2021/22	Estimate 2022/23
Receipts								
Charges for Services	31,666,113	33,887,000	34,564,740	35,256,035	36,666,276	37,399,602	38,147,594	38,910,546
Other Operating Revenues	3,863,931	3,204,900	3,268,998	3,334,378	3,401,066	3,469,087	3,538,469	3,609,238
Non Operating Revenues	630,842	369,200	376,584	384,116	391,798	399,634	407,627	415,779
Transfers in	175,000	175,000	175,000	150,000	150,000	150,000	150,000	150,000
Total Receipts	36,335,886	37,636,100	38,385,322	39,124,528	40,609,140	41,418,322	42,243,689	43,085,563
Payments								
Generation Expense	23,069,158	24,077,650	24,559,203	25,050,387	25,551,395	26,062,423	26,583,671	27,115,345
Distribution Expense	4,387,363	3,886,250	3,963,975	4,043,255	4,124,120	4,206,602	4,290,734	4,376,549
Transmission Expense	451,739	437,000	445,740	454,655	463,748	473,023	482,483	492,133
Metering & Customer Accounting	560,770	559,350	570,537	481,948	491,587	501,418	511,447	521,676
Conservation & Public Service	671,545	486,000	495,720	505,634	515,747	526,062	536,583	547,315
Administrative & General	985,174	1,187,800	1,211,556	1,235,787	1,260,503	1,285,713	1,311,427	1,337,656
Insurance	62,001	65,500	66,810	68,146	69,509	70,899	72,317	73,764
City Fee	1,784,900	1,870,000	1,907,400	1,945,548	1,984,459	2,024,148	2,064,631	2,105,924
GASB 68 Adjustment	(1,096,888)	775,330	790,837	806,654	822,787	839,242	856,027	873,148
Capital Investments	8,388,478	7,746,500	5,310,000	5,294,000	5,435,000	5,890,000	4,862,000	4,480,000
Additional Street Lighting Projects	-	169,000	-	-	-	-	-	-
Total Payments	39,264,240	41,260,380	39,321,778	39,886,013	40,718,854	41,879,531	41,571,321	41,923,508
Cashflow Surplus/Deficit (-)	(2,928,354)	(3,624,280)	(936,456)	(761,485)	(109,714)	(461,208)	672,368	1,162,055
Opening Cash & Investments Balance	22,318,405	19,390,051	15,765,770	14,829,315	14,067,830	13,958,115	13,496,907	14,169,275
Closing Cash & Investments Balance	19,390,051	15,765,770	14,829,315	14,067,830	13,958,115	13,496,907	14,169,275	15,331,329
Reserved Cash & Investment Balance	9,350,000	9,525,000	9,700,000	9,800,000	9,900,000	10,000,000	10,400,000	10,550,000
Unreserved & Undesignated Cash & Investment	10,040,051	6,240,770	5,129,315	4,267,830	4,058,115	3,496,907	3,769,275	4,781,329



To: Light & Power Board
From: Karla Myers-Beman, Controller
Date: November 10, 2016
Subject: Proposed 2017-18 Budget Schedule

In preparing the 2017-18 Six Year Capital Improvements Plan and Operating Budgets, staff plans to present a budget and capital plan incorporating the goals set forth in the Strategic Plan to the Board before submission to the City Commission.

Six Year Capital Plan & Budget Review:

Charter Section 179 (o) requires: "The Board shall submit to the City Commission annually with its budget a capital improvements plan for the next six (6) years."

Charter Section 179 (i) requires: "The Board shall submit to the City Commission on or before the last regular meeting of the City Commission in the month of April (17th in 2017) of each year an itemized budget conforming to the system of accounts required by the State of Michigan."

Below is the schedule:

Tuesday, November 22, 2016:	Regular Meeting – initial presentation and discussion of the capital plan.
Tuesday, January 10, 2017:	Regular Meeting – consideration of approval of the capital plan.
Tuesday, February 14, 2017:	Regular Meeting – initial presentation and discussion of the Fiber Fund budget.
Tuesday, February 28, 2017:	Regular Meeting – initial presentation and discussion of the Electric Utility Fund budget.
Tuesday, March 14, 2017:	Regular Meeting – approval of the Electric Utility and Fiber Fund budgets.

If further discussion is needed, the March 28, 2017 meeting can be utilized and the consideration of approval to submit the recommended budget and capital plan to the City can be moved to April 11, 2017.