



**TRAVERSE CITY
LIGHT & POWER**

Investing Our Energy In You

Traverse City Light & Power Strategic Plan 2017



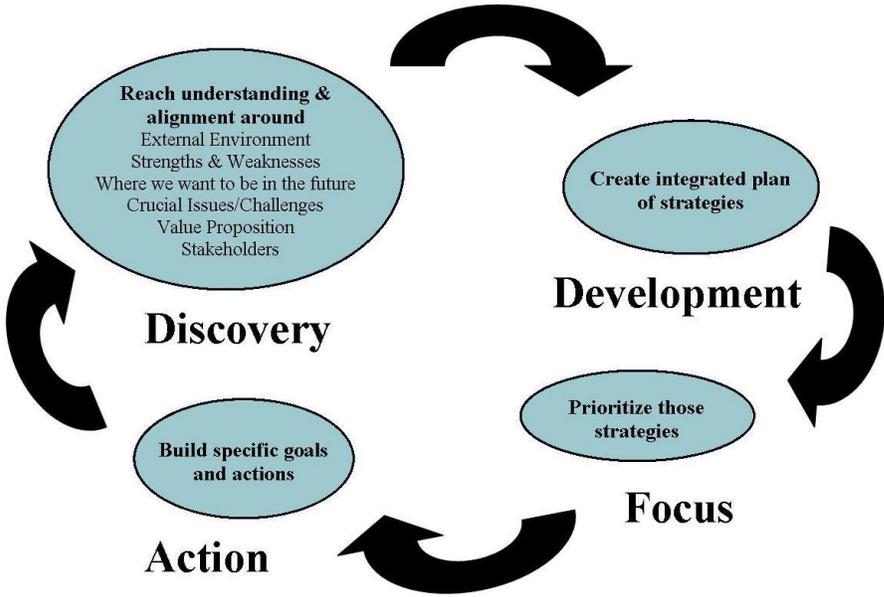
Introduction from the Executive Director

After successfully serving the City and surrounding areas for 103 years, the Board of Traverse City Light & Power (“TCL&P”) embarked on developing a new Strategic Plan (“Plan”) that could challenge the public power utility to exceed customer expectations while meeting the ever changing challenges of the electric utility industry. Safety, high reliability, low rates, transparency, exceptional customer service and communications are among the core values of the utility. This Plan was created with these basic core values always in mind.

The purpose of the Plan is to serve as a guiding document of the Board and utility staff and to support the vision and mission of the utility by achieving goals and objectives that enhance the value of the utility to its owners and the community it serves.

This Plan is the result of a very intense six month planning process facilitated by professional industry experts and the dedicated efforts of the Board, staff, and employees. The strategic plan process outlined in the diagram below also included obtaining invaluable information from the utility’s key account customers. The feedback gathered from these meetings allowed staff to better define the strategic direction of the Plan.

Going forward, the Plan provides a blueprint for strategic planning and goal setting into the future. Quarterly, the utility staff will report to the Board on its progress toward specific goals identified in the Plan. On an annual basis, staff and the Board will update the Plan to meet changes in the industry, economy, and to meet changes in customer needs and expectations. This annual review, as is required in the Strategic Plan Board policy, will enable the Plan to remain a relevant guiding document for TCL&P in this ever-changing utility industry.



Timothy J. Arends
Executive Director

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1. Who We Are

TCL&P prides itself on being a responsive and community-friendly electric utility. The core purpose of the utility is electric service, but has grown to provide traffic signals operation and maintenance, a complimentary downtown WiFi network, a dark fiber system and street lighting, all of which enhance the quality of life and make Traverse City a better place to live, work and play as exemplified in the utility's vision and mission statements:

- **Vision Statement**

“To build the long-term value of Traverse City Light & Power for the benefit of the City and its residents and all Traverse City Light & Power customers.”

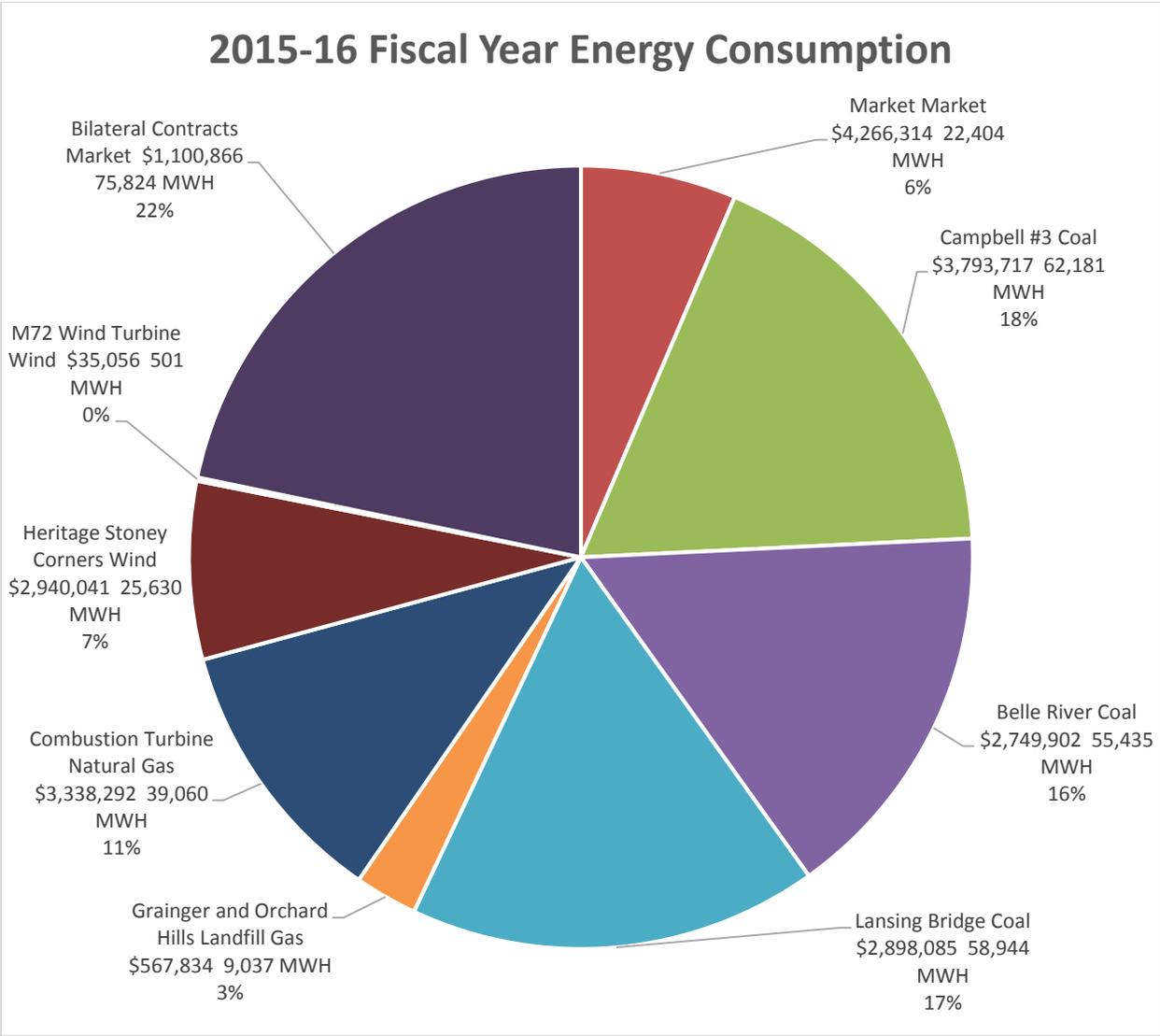
- **Mission Statement**

“The Mission of Traverse City Light & Power is to provide the Public Power benefits of safety, lower rates, high reliability, local control and exceptional customer service to the City and its residents and all Traverse City Light & Power customers.”

TCL&P provides electric services to Traverse City and part of the outlying areas in Blair, East Bay, Elmwood, Garfield, Paradise and Peninsula Townships. The utility distributes electricity to these areas through an electrical infrastructure system consisting of three transmission substations, approximately thirty-five miles of transmission lines, five distribution substations, two hundred miles of overhead distribution lines, one hundred and fifty miles of underground distribution lines, seven thousand poles and two thousand transformers. Recent capital projects, such as construction of new transmission and distribution substations and upgrade of two key transmission lines have been completed as the utility transitions to a looped system. The result of which is increased reliability for all customers.

Currently, TCL&P is a \$36 million operation with net assets of \$70 million. The largest portion of net assets is TCL&P's investment in capital assets that are used to provide service to customers. The utility currently has no outstanding debt issuances and remains financially strong. Operations are maintained with forty full-time equivalent employees.

TCL&P, along with other Michigan municipal utilities, is a member of Michigan Public Power Agency (“MPPA”). The Agency was formed to acquire interest in certain electric generating plants and related transmission lines to service its members. TCL&P is able to provide reliable electric service through a diversification in purchase power contracts and ownership in various sources, a majority of which are with MPPA, as shown in the graph below.



As of fiscal year-end, June 30, 2016 the utility served an average of 12,782 customers and sold 324,833 mega-watt hours (“MWH”) of electricity. 75% of the utility’s customers are residential that provide 20% of the utility’s revenues; conversely, 25% are commercial customers that provide 80% of the utility’s revenues. An average residential customer uses 521 kWh per month, which equates to a monthly bill of \$57.90. In 2015, TCL&P surveyed the rates of forty-one utilities in Michigan, and ranked seventh lowest for residential, twenty-third lowest for small commercial, and eleventh lowest for large commercial.

Our residential, commercial and industrial customers enjoy reliable power at low rates because we are a community-owned not for profit public power utility. Public power is a collection of more than 2,000 community-owned electric utilities that serve over forty million people or about 15% of the nation's electricity consumers. Public power utilities are operated by local governments to provide communities with reliable, responsive, not-for-profit electric service. Public power utilities are directly accountable to the people they serve through local elected or appointed officials.



TCL&P is governed by a Board of Directors which was created in 1979 as a discrete component unit of the City of Traverse City and is referred to in the City Charter as a Department. A separate board was created to manage all aspects of the utility, with the City Commission approving its budget.

The TCL&P Board is a seven member board appointed by the City Commission, plus one non-voting ex-officio member, the City Manager. At least five of the seven members are non-commissioner members with five year alternating terms. One of the five may be a non-city resident, but must be a TCL&P customer. As part of the seven member Board, at least one member, but no more than two, must be a City Commissioner that serves a two year term.

In addition to the utility's budget the City Commission approves the six-year capital improvements plan, authorizes bond issues, ordinance change requests, agreements that directly impact the City, and provides for the utility's vehicle fleet needs through the Garage Internal Service Fund.

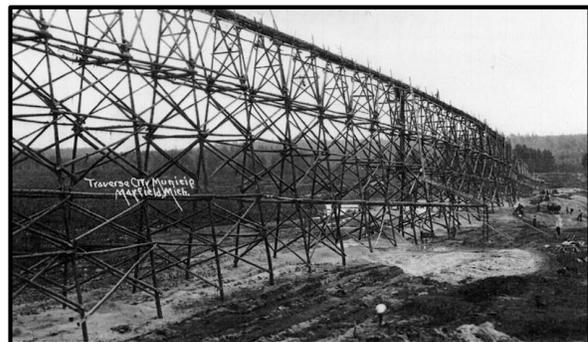
Local control, low rates and reliable service are the key pillars to providing the benefits of public power to the utility's customers and TCL&P looks forward to serving its customers with these principles for many years to come.

2. History

In the early 1900's, as demand for electric power grew in Traverse City, competition to meet this demand grew as well. The Queen City Light & Power Company was in operation only a few short years as a direct competitor to Boardman River Electric Light and Power Company. In September 1912, the City of Traverse City purchased Queen City Light & Power for \$150,000. The purchase included sixty acres at Keystone and the property and flowage rights seven miles upstream including the Brown Bridge Dam area and pond. The new power company was known as the Traverse City Municipal Light and Power Department, known today as Traverse City Light & Power Department.

In the early days of TCL&P working conditions were challenging. Linemen camped in tents and worked with teams of horses to haul poles into place. Holes were dug by hand using picks and shovels. Linemen had to manually combat the elements, especially in winter.

Attracting new commerce to the Grand Traverse area required reliable and plentiful electric power. In 1920, the Traverse City Chamber of Commerce had to pause its efforts in pursuing new businesses because of the lack of such power. Fortunately, in 1921, the construction of Brown Bridge Dam began. Once completed in 1922, the dam produced reliable energy for TCL&P for the next eighty years.



In 1928, the first steam turbine was added to the Traverse City Waterworks building, which became the site of TCL&P's coal-fired Bayside Power Plant.

In 1937, TCL&P celebrated twenty-five years of supplying electricity to Traverse City. During this time, growth had continued to drive electric demand. A second steam turbine was installed in the Bayside Power Plant with an additional capacity of 1,000 kilowatts; the largest at that time and necessary to keep Traverse City growing and thriving.

In 1948, an \$850,000, five-year expansion program for the Bayside Power Plant was approved. This new capital would allow TCL&P to purchase new equipment to increase generation capacity. Throughout the late 40's and 50's, TCL&P added new and more powerful generators, opening the way for more growth and prosperity for the Traverse City area.

Other milestones and events occurred that would further impact the delivery of electricity to Traverse City residents and businesses. In 1950, Consumers Power Company purchased all assets of the Michigan Public Service Company. In 1961, the Keystone Dam washed out due to heavy rains and extensive flooding of the Boardman River. That dam was never rebuilt.



In 1964, the city explored the possibility of expanding the Bayside Power Plant at a cost of \$3.5 million. In 1965, voters approved the expansion by an over 2-to-1 margin and construction began. In 1967, the Bayside Power Plant expansion was completed. The peak of the new addition was almost ninety-nine feet; roughly the height of the top of the historic Park Place Hotel. The height was necessary to house the overhead coal conveyor and handling system.

During the blizzard of 1977, work crews had to brave snow depths of eighteen inches and more to restore power. Fortunately, because TCL&P had locally generated power, TCL&P customers had plenty of power for their consumption needs during that tough winter, while other major Midwest utilities had to ask customers to cut down on their consumption. The utility hit a lifetime peak production of 22,200 kilowatts on January 19, 1977.

In 1976, as the electric utility industry and how it operated had become more complex, the City Commission established an ad hoc committee to study the advisability of establishing a separate TCL&P Board. In January 1977 the ad hoc committee submitted its recommendation to create a two-year TCL&P Advisory Board which was approved by the voters in April 1977. In 1979 the TCL&P Advisory Board submitted a draft charter amendment to the City Commission, a public hearing was held, and the City Commission approved putting the draft charter amendment on the next ballot. After much analysis and public input, the voters approved the creation of the TCL&P Board on April 2, 1979.

In 1981, the Department of Natural Resources ("DNR") and TCL&P began discussing the development of a Fish Management Plan for the migratory fish, primarily salmon, that ran up the Boardman River each fall. After numerous meetings and approvals of the City Commission, the Michigan DNR, the Natural

Resources Committee and the TCL&P Board, the Boardman River Trap and Transfer Harvest Facility was approved. The facility, located east of Hall Street, was completed in 1987.

In 1988, TCL&P held its first annual tree seedling giveaway at the Bayside Power Plant in celebration of Earth Day. Seedlings were given away to customers and local community groups.

1996 was a major milestone year for TCL&P. The utility, long committed to exploring renewable energy sources, pioneered the first utility grade wind turbine in Michigan. The turbine was installed on M-72 and was, at the time of installation, the largest utility grade wind turbine in the United States.

Prior to the installation of the M-72 wind turbine, TCL&P developed the Green Rate. This rate allowed customers to voluntarily pay more on their monthly utility bill. The money collected went towards paying for the wind turbine, thereby supporting renewable energy. The Green Rate was the first of its kind in the country and is now used as a model nationwide.

As the new millennium approached, TCL&P was on the cusp of significant changes and innovations. In 2002, TCL&P, along with four other municipal electric utilities, participated in the Michigan Public Power Agency's natural gas-fired combustion turbine project in Kalkaska, MI. The project continues to provide reliable energy to the electric grid during peak demand times in the summer and winter months.

In 2005, the Bayside Power Plant (located in Traverse City's "Open Space" on West Grand Traverse Bay), which had been relegated to a lesser role of peak power support, was removed. Parts of the plant were sold to a Honduran company that planned to reassemble the power-generating portion of the plant in Guatemala.



In the fall of 2006, the license to generate electricity at the Boardman, Sabin and Brown Bridge dams was surrendered to FERC. The Brown Bridge Dam was removed in 2013 with plans to also remove Sabin and Boardman dams in the near future.

In response to Michigan Public Act 295 legislation, in 2009 TCL&P contracted to purchase all generation output from five, two-megawatt wind turbines located in McBain, MI. In the fall of 2010, when all five turbines were operational, TCL&P had the highest percentage of renewable generation to total generation of any utility in Michigan.

Also in 2010, stemming from TCL&P's announcement to construct a biomass generation facility, a ballot proposal was approved by voters to amend the City Charter to provide that any decision to build or acquire a power generation facility shall be subject to a referendum of city resident voters.



In 2012, TCL&P celebrated its 100th Anniversary. TCL&P's focus remains much the same as it has over its many years of service, providing customers with safe, reliable and affordable electricity.

In March of 2012, TCL&P experienced one of the worst winter storms in the utility's history. At the peak of the storm, approximately 8,000 of TCL&P's 11,500 customers experienced outages. Due to the extent of the storm, TCL&P enacted a mutual aid agreement to request assistance from other electric utilities to help in the restoration effort. This was the first time in utility history that TCL&P requested mutual aid. Crews from Lansing Board of Water & Light, Grand Haven Board of Light & Power, Zeeland Board of Public Works, Lowell Light & Power, Trees Inc. and NG Gilbert responded and provided assistance. All TCL&P customers were restored within three days of the initial storm while some customers in the surrounding areas experienced outages for more than one week.

In the spring of 2013, TCL&P partnered with Cherryland Electric Cooperative to offer the first Community Solar Project in Michigan. The project allowed TCL&P customers to purchase a SUN Share (one solar panel) in the project and receive a monthly bill credit equal to the amount of energy produced by their share. In addition to the project being the first in the State of Michigan, it was also the first such partnership in the United States between a municipal and cooperative utility.

Also in 2013, after 18 years in operation, the TCL&P Board approved the decommissioning of the TCL&P wind turbine located on M-72 after a series of mechanical failures and unsuccessful attempts to repair the unit.

In December of 2014, TCL&P signed over ownership of the M-72 wind turbine to Heritage Sustainable Energy, LLC, owners of Stoney Corners Wind Farm in McBain, MI and entered into a Power Purchase Agreement to buy the output of the turbine.

In April 2014, TCL&P collaborated with the Downtown Development Authority ("DDA") to provide a complimentary WiFi internet service to the public within the DDA's jurisdiction. The DDA desired to have this secure municipal network to provide electronic parking services. TCL&P is responsible for installing and maintaining the WiFi system with the DDA reimbursing TCL&P for the costs. TCL&P will be fully reimbursed in 2025.

In February 2015, TCL&P received the prestigious RP3 platinum designation by the American Public Power Association ("APPA"). RP3 is APPA's program to encourage public power systems to demonstrate basic proficiency in four important disciplines: reliability, safety, workforce development and system improvement. TCL&P had previously been awarded the gold designation in 2013.

On Sunday, August 2, 2015, a severe storm caused widespread outages to approximately 5,000 TCL&P customers. Due to the extent of the damage done to TCL&P's electrical system, and the number of customers without power, TCL&P immediately called for mutual aid assistance from partnering utilities. Lowell Light & Power, Marquette Board of Light & Power, Lansing Board of Water & Light, Grand Haven Board of Light & Power, Zeeland Board of Public Works and Penn Line Service responded to the mutual aid request and assisted TCL&P for several days. A majority of TCL&P's customers had power restored by August 7, with the remaining handful needing the assistance of an electrician to complete power restoration. During the restoration process, TCL&P, and the multiple mutual aid crews, did not experience any safety incidents.

As of June 2015, TCL&P placed in service the East Hammond Substation to increase reliability of the transmission system and meet FERC reliability standards. The overall project cost was approximately \$7.3 million when encompassing the related joint transmission line construction projects with Consumers Energy.



As of January 2016, TCL&P placed in service the South Substation to increase reliability of the distribution system in order to handle the load growth from 1987 when the last substation was constructed. Overall the project cost was approximately \$5 million.

3. Understanding the Current Utility Environment

The energy landscape and traditional utility service delivery model is changing as a result of the emergence of new products, services, technologies, evolving workforce and increasing regulation.

Today's customers covet instant and constant communication. These communications cover real time information regarding outages, consumption patterns and billings. Customers look to the utility to provide this information through a wide variety of channels such as social media, phone apps, e-newsletters and text messaging. It is the expectation of the customer that these value added benefits will be provided at no cost.

Offering these new technological communication avenues does come at an additional cost to the utility due to software, staffing and subscription fees. TCL&P's current customer base is comprised of a large generational spread which requires the utility to maintain the traditional customer service model while also meeting the demands of new customer preferences.

Not only are customers seeking information regarding their electrical use, they are also wanting to take charge of their usage. For TCL&P today, it is becoming more common that the utility receives requests from customers to install and generate their own power at a financial benefit to them. With the installation of a customer owned system, the traditional service the electric utility provided, which served as the primary feed, is now becoming the customer's secondary source for electric power.

TCL&P's distribution system was not designed to accommodate multiple distributed generation sites. These sites will impact the reliability of the system in having generation feed into the grid at multiple points. This creates the need for TCL&P to invest time and money in additional capital system upgrades to ensure the same level of reliability for all customers. Regardless of these distributed generation sites,

TCL&P still has to maintain the system's infrastructure assets (substations, poles, transmission and distribution lines, etc.) for those customers when called upon as the secondary source. The cost of maintaining that infrastructure needs to be passed onto the customer irrelevant of their use. While the utility has to address the current customer desire for distributed generation, TCL&P must also plan for the next era. Energy storage is on the horizon and the utility expects it will have similar system and financial impacts that TCL&P is experiencing today with distributed generation.

Just as customers are evolving, so is the utility's workforce. TCL&P faces significant changes as 24% of the experienced workforce are eligible to retire in the next five years. Emerging technologies will also change the nature of utility operations, requiring new investments and training requirements. As a result of these trends, public power utilities will need to attract the next generation of workers with new skills, and must be able to offer career opportunities for current and incoming workers interested in technology, innovation, and customer service.



TCL&P will be required to develop resources to address workforce challenges, attracting and retaining new people to the industry, succession planning including knowledge transfer from departing employees and training for new employees in relevant areas, including new technologies and services.

Advancements in technology are driving change within the electric utility industry, specifically the amount of data technology is able to provide to the utility. The volume of data created by technology offers tremendous opportunities to mine both customer and operational related information.

Effective mining of this data can enhance preventative maintenance and storm response capabilities. However, it requires significant storage abilities and data analytics tools in order to use this information for proper decision making.

Technology also brings the need for defense against cyber security threats. The threat landscape continues to evolve and become ever more challenging, requiring constant attention and appropriate adjustments to the utility's defense strategy. In addition, there are many legislative and political challenges that require the attention and engagement of the utility.

In addition to the political challenges technology creates, there is also uncertainty among utilities regarding the federal and state legislative direction including many issues such as EPA's clean power plan, tax exempt financing, renewable energy, energy optimization, net metering, right to serve and customer choice.

The utility has already been impacted by past legislative actions including Public Act 295 which was signed into law on October 6, 2008. The Act, known as the Clean, Renewable and Efficient Energy Act, established a Renewable Energy Standard for all utilities in the State of Michigan. This Renewable Energy Standard requires Michigan electric providers to achieve a retail supply portfolio that includes at least 10% renewable energy by 2015.

The governor signed into law new energy legislation in December 2016 to ensure Michigan has sufficient generation capacity, as several coal-fired plants are planned to close in the next several years. The legislation also modifies requirements of Public ACT 295, specifically, the amount of energy Michigan would need to generate from renewable sources from 10 to 15 percent by 2022, and energy efficiency is now referred to as energy waste reduction. The 1 percent cap was removed and increased to 1.5 percent or higher.

Another large impact to the utility caused by federal regulations is the decommissioning of various coal-fired plants within the state of Michigan. The utility has already made steps forward and continues to be proactive in planning for potential generation replacement. As it has in the past, meeting future mandates could financially impact the utility. But with proper planning and involvement with the legislative process, TCL&P hopes to mitigate the financial risks.

4. Strategic Issues

At the beginning of the strategic planning process, the Board and staff participated in focused planning sessions to identify the top priorities of the utility now and into the future. Below is a summary of the six Strategic Issues that were identified through this process. In the following pages, each will be discussed further to show how the Strategic Issues impact the utility.

- Financial Stability
- Power Supply Strategy
- System Reliability & Power Quality
- Technology
- High Quality Workforce
- Customer Satisfaction

4.1 Financial Stability

Financial stability is an important strategic issue because it is the function that allows the possibility for the goals to be achieved in every other strategic issue. It is not the sole function, but one that is necessary. Additionally, with management being financially responsible and transparent of its operations, it ensures the public's trust to continue with the strategic plan goals set forth by management and approved by the Board. The areas focused on for this strategic issue include:

- Provide transparent communications on the financial health of the organization.
- Maintain the public's trust by being accountable at all levels of management.

The Operating Strategy for Financial Stability is to:

“Maintain positive operating cash flows and adequate capital reserves to sustain the financial health of the utility.”

Three main Business Goals were identified to sustain and improve TCL&P's Financial Stability:

- 1. Review current workplace flows for efficiency enhancement through new developed process and procedures that will provide a proper planning environment and execution process for utility projects. (ON-GOING)**

Workplace flows at times may become complacent and it is beneficial for staff to hold brainstorming sessions to develop new processes and procedures that will lead to efficiencies within the organization. Included within the brainstorming sessions, staff will develop and implement a plan to incorporate the newly developed processes and procedures and continually monitor on an annual basis for improvement.

- 2. Develop and implement rate structures to promote financial stability while keeping in mind the impacts of environmental regulations, increased energy efficiency and distributed generation (ON-GOING)**

The electric utility industry is in a new era of EPA regulations that may affect all types of generation including causing aged coal plants to be decommissioned, utilization of energy efficiency

programs along with new and improved technologies (renewable generation and battery storage) installed at the customer level reducing the overall customer usage and demand. Additionally, the utility may be incorporating new technologies such as AMI that allows for significant data collection for multiple benefits (energy efficiency, demand side management, distribution network management, improved data quality and accurate billing). Even with all of these impacts, the utility will be committed in providing competitive and equitable rates to their customers.

3. Develop an internal cost of service study to provide staff a resource tool for the purpose of concurring with the study performed by a third party and to allow for internal analysis and understanding of implications of different modifications to utility rate tariffs.

The utility at the recommendation of Hometown Connections will continue to conduct a rate and cost of service study every three to five years, performed by an independent, outside entity. However, staff believes it is in the best interest of the utility to perform a cost of service study to compare results with the independent cost of service study to ensure accuracy and agreement of assumptions used in the cost of service study while providing staff a tool to perform different analysis on rate structures and understand the implications.

4.2 Power Supply Strategy

Power Supply Strategy is an important strategic issue because it represents 70% of TCL&P's operating costs and impacts Traverse City's local economy through the utility's rate structure. With industry experts providing knowledge to the Board and staff through planned education sessions, the utility is able to make knowledgeable decisions regarding TCL&P's power supply future. Having a diverse portfolio and implementing state and Board requirements, including energy efficiency and renewable energy, allows the utility to be in regulatory compliance while not at major risk with only one fuel source. The areas focused on for this strategic issue include:

- Manage load growth through energy efficiency programs.
- Create a diversified cost-effective generation portfolio.

The Operating Strategy for Power Supply Strategy is to:

“Ensure sufficient power supply in a fiscally responsible manner.”

Five main Business Goals were identified to sustain and improve TCL&P's Power Supply Strategy:

- 1. Implement recommendations from the Energy Optimization Program Planning Report that are in the best interest of the utility to achieve energy savings that manage load growth and are aimed at reducing on-peak demand, while also exploring other opportunities that may achieve the same results, but are not outlined in the report. (ON-GOING)**
Knowing that *“the lowest cost energy is the energy that is saved,”* TCL&P has developed a plan outlining opportunities that have the biggest impacts on the utility and make financial sense. The utility will continue to focus special efforts on ways to optimize energy efficiency program offerings that directly manage load growth, therefore reducing the amount of capacity needed and reducing or shifting on peak demand to off peak.
- 2. Implement recommendations from the IRP report. (ON-GOING)**
The IRP will be updated with the latest actual information and review and update recommendations for power supply purchases going forward. The utility will continue to work through the Michigan Public Power Agency to strategically structure purchases to allow for flexibility while insulating customers from the volatile power market.
- 3. Investigate generation opportunities that complement the power supply mix. (ON-GOING)**
In combination with the state's new energy plan, the utility will work with the Michigan Public Power Agency in evaluating future power supply opportunities that provide stability in rates, while diversifying the power supply portfolio of the utility.
- 4. Develop a long term plan for the energy efficiency program.**
Staff recognizes that a long term strategy needs to be developed on how to evolve this program in the future towards more of a non-incentive based program by embedding it through the construction code requirements while finding a way to measure the effectiveness of these efforts.
- 5. Investigate renewable generation opportunities in a fiscally responsible manner to achieve or exceed State mandates.**

The State's recent legislation signed into law mandates the utility resources from renewable generation increase from the current 10 to 15 percent by 2022. The utility will work with the Michigan Public Power Agency in evaluating power supply opportunities that are cost effective within the utility's energy portfolio while meeting or exceeding the State mandate.

4.3 System Reliability & Power Quality

System reliability is the utility's plan that will help analyze and select system improvement projects based on a rating system of several criteria to increase the utility's reliability. TCL&P will be working closely with other city departments, utilities, and customers in order to maximize the effect of the project with joint construction efforts. The areas focused on for this strategic issue include:

- Enhance and develop new system maintenance programs.
- Define and implement system improvement strategies.
- Improve communication processes with customers, other utilities and city departments.

The Operating Strategy for System Reliability is to:

“Take a proactive approach to maintain a high level of system reliability in a cost effective manner.”

Five main Business Goals were identified to enhance TCL&P's System Reliability & Power Quality throughout the electrical system:

- 1. Annually review, enhance and develop system maintenance programs ensuring Average Service Availability Index (“ASAI”) remains above 99.970%. (ON-GOING)**
ASAI is the ratio of the total number of customer hours that service was available during a given time period to the total customer hours demanded (in 2015 it was 99.990). TCL&P plans to continue with its circuit rehabilitation program in 2016 with circuit BW-31. TCL&P has begun to implement inspection programs throughout the system from poles to pad mount cabinets. This data will be used as criteria within the rating system to determine which areas are in most need of maintenance.
- 2. Annually review and enhance the rating system that prioritizes capital system improvements. (ON-GOING)**
This system will be utilized annually in the utility's capital improvements project planning process. The system will help staff and the board prioritize projects over the next six years with the goal of increasing system reliability, accessibility and power quality to TCL&P customers.
- 3. Coordinate construction projects between TCL&P, other city departments, and other utilities. (ON-GOING)**
TCL&P will continue to work with City departments through the City's annual capital improvements process in coordinating City and TCL&P capital projects. This coordination will create efficiencies and less inconvenience to ratepayers through the construction process. TCL&P will also work with other area utilities such as cable and telephone to coordinate projects. This is especially important when it comes to undergrounding as available right-of-way is limited in some areas. It is a priority of TCL&P to maintain communications with affected customer through e-newsletters, neighborhood meetings, direct mailers or door hangers regarding upcoming projects and throughout construction.

4. Formalize written switching and tagging procedures. (ON-GOING)

Switching and tagging procedures are a written set of instructions used to de-energize, energize or transfer load between equipment and or substations. Following these written instructions minimizes the risk of unnecessary outages, damage to equipment and helps ensure the safety of employees involved. Formalizing these procedures will ensure completeness and uniformity in the preparation of switching orders as well as the actual switching and tagging conducted in the field.

5. Perform System Wide Sectionalizing Study.

Sectionalizing in an electric utility refers to protective devices (fuses & relays) working in a coordinated manner such that the minimum number of customers experience interruptions in electric service for system disturbances. This coordination includes distribution, substation, and transmission protective devices and is in large part dependent on system short circuit currents at all points in the TCLP system. The result of this initiative will be an increase in reliability for TCLP customers and has a direct correlation with goal 4.3.1 which addresses Average Service Availability Index (ASAI).

4.4 Technology

Technology plays a valuable role within all strategic areas and is at the forefront of the electric utility. In recent years, technical innovation has become a leading factor in modernizing the face of the electric utility by creating efficiencies within all aspects of the business. Therefore, it is necessary to embrace technology as a strategic issue. The areas focused on for this strategic issue include:

- Ensuring security for the integrity of the utility.
- Implementing energy efficiency technologies.
- Maximizing operational efficiencies.
- Enhancing communications.
- Keeping abreast of future technology opportunities.

The Operating Strategy for Technology is to:

“Embrace technologies for the benefit of the customers and community.”

Seven main Business Goals were identified to sustain and improve TCL&P’s Technical efficiencies:

1. Continue to progress the utility’s Geographic Information System (GIS).

As technology enhancements continue to increase productivity at electrical utilities, GIS continues to be at the forefront of these enhancements. As such, TCL&P is investing a considerable amount of time and energy into ensuring our GIS System is accurate and up to date. This year, Staff will be implementing an application known as Collector. This application will streamline field collection data of assets and automatically import information into the GIS environment.

2. Investigate a Fiber to the Premise (FTTP) Infrastructure.

TCL&P is currently undergoing a feasibility study and business plan to fully understand the impacts of deploying such a service to the community. The Board and Staff are currently in the process of educating themselves regarding the benefits and appropriateness for TCL&P as a potential business venture to diversify the electrical portfolio offering of the utility.

3. Investigate and implement a lit fiber network and rate for an additional service offering to dark fiber.

TCL&P currently offers dark fiber leases to the community. As an additional service, TCL&P would partner with existing Internet Service Providers (ISP) in the area to allow reselling lit fiber to customers. This is a low cost solution to help expand broadband connectivity throughout the community and take advantage of TCL&P’s existing fiber network.

4. Update the utility’s Supervisory Control and Data Acquisition (SCADA) System to current technology. (ON-GOING)

The new SCADA systems are designed from SQL database and web-based deployment and are much more convertible than the existing system TCL&P has today. Integrating the current SCADA technology ensures that as system updates and advances in functionality are needed TCL&P will be able to accept those updates seamlessly.

5. Implementation of the Advanced Metering Infrastructure (AMI). (ON-GOING)

TCL&P is looking to deploy an AMI network. There are many different reasons and benefits that a utility would look to gain in doing an AMI project. The Board and staff are currently in the process of going out for bid on this project. Completion will result in advancement of several different areas of the strategic plan objectives.

6. Safeguard the utility from cyber threats to stay current with industry standards. (ON-GOING)

The cyber security threat environment is one that is constantly changing and evolving rapidly. The Federal Energy Regulatory Commission (FERC) and National Electric Reliability Commission (NERC) have guidelines and standards to follow for cyber threats. By following these guidelines TCL&P will maintain an electric system that is highly reliable against cyber intrusions that could affect TCL&P customers. On the business side, examples of cyber threats include data theft, denial of service attacks, website defacement and customer information disclosure or privacy breaches. On the operations side, cyber threats could target the generation and delivery of power. The greatest threat to electricity delivery is a sophisticated and coordinated cyber-physical attack on the operations side aimed at causing regional power outages. TCL&P will continue to adapt and follow guidelines provided by NERC and FERC to ensure system reliability.

7. Effectively implement technology that will communicate pertinent utility information with customers. (ON-GOING)

Technology will continue to be an evolving tool to better communicate with customers. Continuous feedback will be obtained through communication efforts to determine the most appropriate methods. However, this year we will be finalizing the IVR system with enhancements that allow for automatic recognition of customer addresses. During this process we will be working towards obtaining updated contact information. This will then be followed by implementation of texting and smart phone applications.

4.5 High Quality Workforce

TCL&P recognizes the value and importance of employees who are an essential component to the successful operations of the utility. Promoting and encouraging a high quality workforce needs to continue and strengthen in order to ensure that TCL&P provides excellent service to its customers and community. The areas focused on for this strategic issue include:

- Maintain a safe work environment through collaborative efforts between management and the union.
- Foster a work environment that encourages professional development for the betterment of the organization.
- Ensure the organization's efforts attract and retain qualified candidates.
- Communication throughout the organization that will allow for transparency, accountability, trust and respect amongst management and union employees.

The Operating Strategy for High Quality Workforce is to:

“Create and maintain an organizational culture that empowers and educates employees with the end result being a safe, motivated, and highly skilled workforce.”

Four main Business Goals were identified to sustain and improve the quality of TCL&P's workforce:

- 1. Continue engaging in efforts towards employee professional development and performance management in order to ensure that the workforce has the knowledge, skills and abilities to evolve in their positions and are accountable in the work being performed. (ON-GOING)**
For 2017, individualized professional development plans will be created for each employee. One-on-one meetings will be held to receive feedback about future goals within the utility and discuss and develop an education plan that will help in reaching those goals.
- 2. Continue to engage employees on issues facing the utility through communications efforts that are effective. (ON-GOING)**
TCL&P will continue working on implementing techniques that effectively communicate information internally. In addition to more traditional approaches, technology has and will continue to be utilized which will require ongoing training of employees.
- 3. Modify and enhance recruitment strategies, selection techniques and retention efforts to ensure that the utility is successful in attracting and retaining qualified candidates.**
Staff will focus attention on modifying current processes to include implementation of applicant testing. We will also research and determine the “value” employees place on benefit offerings based on varying life circumstances for both recruitment and retention.

4. Continue to promote employer and worker awareness of, commitment to, and involvement with safety to affect positive change in the workplace culture through cooperative efforts and strong leadership. (ON-GOING)

Staff will continue to implement the actions and objectives identified in the Safety Development Plan. Included in this is a review of the revised APPA Safety manual, to be released in early 2017, along with training on the National Electric Safety Code. Staff will also continue to share resources to promote safety within our community.

4.6 Customer Satisfaction

Although Customer Satisfaction is affected by all of the previous Strategic Issues identified in this Plan, there are many ways for the utility to encourage, track, and modify the way services are provided to customers that will assist in striving for a high level of customer satisfaction. The areas focused on for this strategic issue include:

- Maintaining a high level of customer service.
- Improving current and developing new communication avenues with customers.
- Providing a variety of value-added programs to customers.
- Strengthening partnerships for the betterment of the community.
- Ensuring lowest rates possible while meeting customer expectations.

The Operating Strategy for Customer Satisfaction is to:

“Sustain and improve the utility’s goodwill to all customers by going the extra mile.”

Five main Business Goals were identified to sustain and improve TCL&P Customer Satisfaction levels:

1. Maintain a customer satisfaction rating above 95%. (ON-GOING)

The 2016 Customer Satisfaction Survey reported 98% overall satisfaction with TCL&P services. The utility will continue to monitor the pulse of both its customers and community through quarterly outage surveys and implementation of automated phone surveys following customer service interaction to ensure we remain at or above this threshold.

2. Maintain customer rates lower than other utilities in the area. (ON-GOING)

It has been communicated to staff by the Board that it is important to keep rates low when compared to other utilities within the local area as this is an important benefit of being a public power utility. TCL&P will measure the utility’s success in this area by completing a biennial rate survey of utilities throughout the state, and by completing a cost of service study no less than every five years to be used for a rate analysis. If this goal is not achievable or financially feasible, an explanation will be provided to the board and the operations or the goal will be revised.

3. Continue to evolve the utility’s communications efforts and community involvement (ON-GOING)

Staff will utilize the results of the 2016 Customer Satisfaction Survey to research and implement communication channels outlined in the survey as most effective. However, communication channels are only effective when the message is timely and clearly written. Therefore, staff will draft an external communications procedure that will include guidance on when, how and what to communicate for instances such as planned outages, neighborhood projects and community wide announcements.

4. The utility will begin to formulate a plan to address the evolving needs of its customer. (ON-GOING)

Utilities of the future need to be more than just a provider of energy. They need to provide the tools necessary to empower the customer to be in charge of their energy future. This plan will include program options, implementation of technology outlined in the Technology Strategy and the timeframes for completion.

5. Continually evaluate and implement services focused on assisting the unique needs of the utility's key account and critical service customers. (ON-GOING)

Key account and critical service customers represent some of the utility's largest consumers and most impactful from a community service standpoint. Although all customers are of value to TCL&P, the distinct needs of this customer group require additional attention from staff due to the level of electrical consumption and the economic impact of their business on the greater community. Specific programs will be analyzed and implemented to assist these customers to successfully do business in the Traverse City region.

5. Conclusion

The fundamental purpose of TCL&P's strategic planning process was to identify, consider and act on the internal and external issues that are expected to have the greatest influence on TCL&P's ability to successfully achieve its vision and mission in the future.

Staff will provide quarterly updates to the Board on its progress towards implementing and/or achieving the identified goals. As the utility moves forward, this Plan will be used as a guide for future strategic planning.

Annually, the Board and staff, through the budgeting process, will review and update the Plan as necessary to reflect changing Board and customer expectations of its public power utility. The utility must stay in-tune with the evolving electric industry, economic conditions, and customer expectations. The strategic issues of today including financial stability, power supply strategy, system reliability and power quality, technology, high quality workforce, and customer satisfaction may not be the strategic issues of the utility in the future. It is the intent of TCL&P staff and its Board that this Plan be modified from time-to-time to remain relevant and useful in managing the utility.

TCL&P has a very long and proud history of serving the electrical needs of the Traverse City community. The utility looks forward to implementation of this Plan for the betterment of the City of Traverse City, its residents and all TCL&P customers.

