

Lyndonville Electric Department

Year End Report

To the Board of Trustees and the citizens of the Village of Lyndonville, Vermont.

In regards to LED Plant, 2016 was somewhat of a sedate year; in regards to personnel change within the Department it was a monumental year. After forty years of service, long time manager Ken Mason decided not to accept reappointment to the General Manager position but, decided to begin his golden years as a retiree. Ken's career began at LED in 1976 as Superintendent (Operations Manager). That in itself had its challenges as there was an eclectic group of "salty dogs" within the Operations Department that must have been difficult to manage. After only two years as head of Operations, Ken moved into the big office and assumed General Manager duties. Ken's accomplishments throughout his tenure are numerous and that alone could be a topic of its own report however, milestones of my recent memory and residence at LED are: cutover of the old 2400/4800 volt system to the current 7200/12470 volt, increasing reliability and efficiency of LED's distribution system; and the unbelievable accomplishment of having Vermont Electric Power Company (VELCO) place their new 115kV Substation in Lyndonville as the primary source of power delivery to LED's customers. This one achievement alone has done more to increase reliability and stability to LED's grid than all other previous measures. As a young manager at VELCO I had heard many times that the odds of a 115kV substation in Lyndonville were unfavorable to non-existent. By any measure, Ken overwhelmingly beat the odds and accomplished what many within the state's electrical industry said wouldn't be done. Well done Ken.

With Ken's departure and after a nationwide search for his replacement I became General Manager on October 3, 2016. For those of you that do not know who I am, I'll provide a brief recap of my professional history. Graduated from Lyndon Institute in 1975 however, I didn't begin work in the utility industry until the last week of 1979 in the small town of Nephi, Utah. After many happy years working throughout the United States for my employer I was approached by VELCO to join a line crew they were assembling to maintain the newly constructed DC Transmission line running from the Canadian border to Monroe, NH. I accepted their offer and worked for VELCO as a lineman for a couple of years then taking a leave of absence to finish my college degree. After college I returned to VELCO, first as a consultant to their Right-of-Way Department, than as a lineman based out of their Wenlock Station in Ferdinand. In 1992 I accepted a position at VELCO's headquarters in Rutland, building and then managing their Purchasing and Inventory Control department. As I was sitting in my office in 1999, an engineer brought to my attention that LED was looking to fill their Superintendent (Operations Manager) position; I contacted Ken and after the interview and background check, I begin working for LED on October 14, 1999. Fast forward 17 years and I am now sitting in the General Manager's chair.

With my move to General Manager, the vacated Superintendent position needed to be filled. After soliciting resumes throughout New England and numerous interviews and a background check we hired a local individual who resides on our system, Jason Lefebvre. Jason had been the Utility Manager and

then Operations Manager for Burke Mountain for a number of years and his skills and experience at the mountain are greatly missed, so I am told. We decided to hire Jason due to his training as an electrician thus knowing electrical theory, his vast managerial experience in operations, purchasing, inventory control, PLC control logic, public relations, title abstraction, college level courses in GIS/GPS mapping and above all, crisis management. In the short time Jason has been with us he has developed into an asset to the Department and I foresee him continuing to develop his skill set as our Superintendent.

With regard to LED plant, after an extended out of service period, Vail Hydro Station saw a major rebuild this year. The rebuild was prompted by the need to replace a slightly bowed, wobbling turbine shaft that necessitated the plant be taken out of service to prevent further damage. Knowing the shaft needed to be replaced and that the lead time from shaft removal to installation of the replacement would be approximately ten weeks; we utilized that time by stripping the machine down to its individual components for inspection and if warranted, its repair or replacement. In tandem, we rehabbed and modified the ancient Woodward governor; incorporating a High Pressured Unit to govern the hydraulic controls which are integrated into a Power Logic Control (PLC) scheme that allows computer based control and status inquiry of the unit. This improvement allows the plant operator to adjust the turbine via a computer interface and when off site, to inquire on the status of the generator via the web. Additionally, generation from Vail can be used by LED to satisfy Tier II requirements of the new Vermont Energy Standard that went into effect on January 1st of this year. LED may use the energy certificates to satisfy our compliance requirements and once satisfied any remaining certificates can be sold to other utilities suffering from compliance needs.

Additionally, it was discovered that Great Falls' number three generator also was afflicted with shaft issues. Beginning at the low water period of late summer, number three generator was taken out of service and disassembly began. The shaft was removed and sent off for duplication. As with Vail the time period between shaft removal and shaft installation was utilized to inspect other components of the generator for repair or replacement. The condition of number three generator was such that it did not require such an extensive rebuild as Vail. At the writing of this report, number three generator has been online for a week without issue. In the year ahead we plan to upgrade the number three's governor with a high pressure unit similar to Vail Station and incorporate a PLC control scheme.

In 2016 we saw another 500kV Net Metered solar field come online feeding into our system. This would be the second 500kV solar generator connected to LED's grid. In 2017 there are tentative plans for a 300kV Net Metered solar field and two 500kV Standard Offer fields to be constructed and energized. In addition to these large projects we expect to continue connecting home size Net Metering systems to the grid however, we believe that home sized systems connections will be less than in recent years. In an attempt to slow the growth of Net Metering systems to a manageable pace, the Vermont Public Service Board revised the Net Metering Rules which necessitated LED rewriting and filing a new Net Metering Tariff to comply with the new guide lines. Our new Tariff went into effect on January 1st of this year. Major changes in the rule are the removal of the 15% cap of our gross system load that we were on the threshold of meeting our Net Metering capacity which would have allowed us to reject future Net Metered systems. Under the newly revised rule we have to accept all Net Metered systems that apply and pass the application and inspection criteria. Additionally, the financial compensation for solar

generation was reduced along with changing the compensation criteria. We agree with the State that the revised ruling will slow growth of solar Net Metering slightly as a result of the time period for investment recovery being extended.

Mother Nature was kind to the Department in 2016; LED experienced no Major Storms and we easily met our Service Quality and Reliability Plan benchmark as established by the State of Vermont. However, the months of June, July, August and October were busy months with outages resulting from localized wind/weather but not reaching the Major Storm threshold.

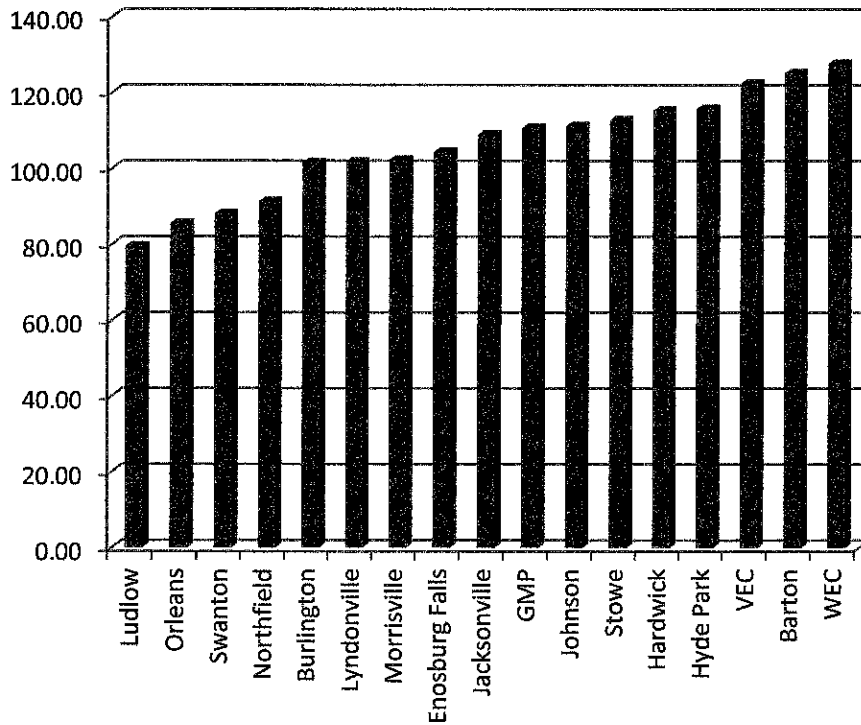
Burke Mountain suffered yet another setback in its development plans with the EB5 fiasco. At the time, LED was in negotiations with previous management to finalize a payment plan that would eliminate monies owed in arrears within a four month period. Would this agreement been successful? We will never know. In April, when the Feds assumed authority and management of the mountain, placing it into receivership, LED established new accounts for all metering points associated with the mountain and the receivership started off with zero balances. To date, the receivership has remained current on all accounts however; monies owed prior to the receivership were placed into protection via a court order. LED has received a payment of ten percent of monies owed with assurance of more to come within a ninety day period. To be proactive, LED is seeking to attach a lien on the property to give some assurance of being in a position of receiving what is owed however, this has to be done via an attorney in the Southern District of Florida whom has to file a motion to revise or lift the stay. We are confident of a successful outcome on this action.

All of the above directly impact LED's Cost of Service and as you can see by the table and chart on the following page, LED still remains in the lower third of Kilowatt Hour (kWh) costs for Distribution Utilities within the State. We strive daily to ensure our customers receive power at the lowest possible cost and we shall continue to make every effort to so. Also, I want to express my heartfelt gratitude to LED employees and the other Village and Town departments for their result oriented hard work, dedication, willing cooperation and enthusiasm to solve issues we've encountered throughout this past year.

Vermont Public Power Supply Authority
Vermont Utility Rankings Based on Monthly Residential Bills

Utility	200 kWh	Utility	600 kWh	Utility	1,000 kWh
Vermont Electric Coop	\$ 46.37	Washington Electric Coop	\$ 127.66	Washington Electric Coop	\$ 220.69
Green Mountain Power	45.65	Barton	124.92	Barton	208.99
Hyde Park	43.27	Vermont Electric Coop	122.45	Vermont Electric Coop	198.53
Stowe	42.69	Hardwick	115.94	Hardwick	193.08
Barton	41.75	Hyde Park	115.77	Jacksonville	188.86
Johnson	41.66	Stowe	112.73	Hyde Park	188.27
Hardwick	38.80	Johnson	112.06	Stowe	182.77
Burlington Electric	36.78	Green Mountain Power	110.61	Johnson	182.46
Lyndonville Electric	36.29	Jacksonville	108.90	Green Mountain Power	175.57
Morrisville	35.17	Enosburg Falls	104.29	Enosburg Falls	173.79
Enosburg Falls	34.78	Morrisville	102.20	Morrisville	169.23
Washington Electric Coop	34.62	Lyndonville Electric	101.70	Lyndonville Electric	167.11
Swanton	33.92	Burlington Electric	101.57	Burlington Electric	166.35
Orleans	32.17	Northfield	91.29	Northfield	151.71
Northfield	30.87	Swanton	88.05	Swanton	142.18
Jacksonville	28.95	Orleans	85.50	Orleans	138.84
Ludlow	26.74	Ludlow	79.50	Ludlow	132.26

Ranking Based on Average Monthly Residential Bills



**2016 BUDGET TO 2016 ACTUAL & 2017 BUDGET
COST OF SERVICE SHEET**

	2016 BUDGET	2016 ACTUAL	2017 BUDGET
OPERATING REVENUE			
SALE-ENERGY KWHS	9,608,153	9,467,717	9,480,388
OTHER OPERATING REVENUE			
MERCHANDISE SALES	65,000	53,548	60,000
INTEREST & DIVIDENDS	359,363	405,806	439,149
MISCELLANEOUS	300,000	312,512	306,539
UNBILLED REVENUE	10,000	(82,378)	5,000
TOTAL REVENUES	10,342,516	10,157,205	10,291,076
OPERATING EXPENSES			
POWER GENERATION	180,220	175,331	158,532
PURCHASE POWER	6,528,883	6,307,518	5,947,846
TRANSMISSION	25,065	24,311	34,132
DISTRIBUTION	729,165	844,380	955,125
CUSTOMER ACCTS	332,822	403,125	370,156
ADMINISTRATIVE	1,035,751	1,054,106	1,080,222
DEPRECIATION	485,298	469,238	472,607
TAXES-PROPERTY	380,000	381,831	390,000
TAXES-S/S	178,784	184,895	188,757
INTEREST	49,723	46,321	47,199
TOTAL EXPENSES	9,925,711	9,891,056	9,644,577
INCOME OR (LOSS)	416,805	266,149	646,499

Respectfully Submitted
Village of Lyndonville Electric Department
Bill Humphrey
LED General Manager