

Section III

Light Fund

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Mission Statement

The mission of Concord Municipal Light Plant is to supply reliable and cost effective energy services, in a responsible and courteous manner, which meets the current and future needs of our customers.

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NOTE: The Light Plant differs from all other municipal departments in that it operates on a calendar year basis per MA DPU requirements.

Light Fund Highlights

- The cost of purchased power, a pass-through expense to the customer, makes up approximately 74.7% of operating expenditures.
- In 2019, the Light Plant expects to achieve its goal of supplying 100% of its purchased power from renewable resources: 10.0% from wind, 6.8% from hydro, 5.6% from solar, 2.4% from landfill gas, and 75.2% from the purchase of Renewable Energy Certificates (RECs).
- The Light Plant has a three-tiered rate schedule for residential customers to encourage conservation; the more electricity that a customer uses the higher the rate.
- Since 2014, CMLP has offered broadband service to residences and businesses by using extra capacity available in the fiber optic cables installed as part of the Smart Grid program.

Operating and Net Income Summary

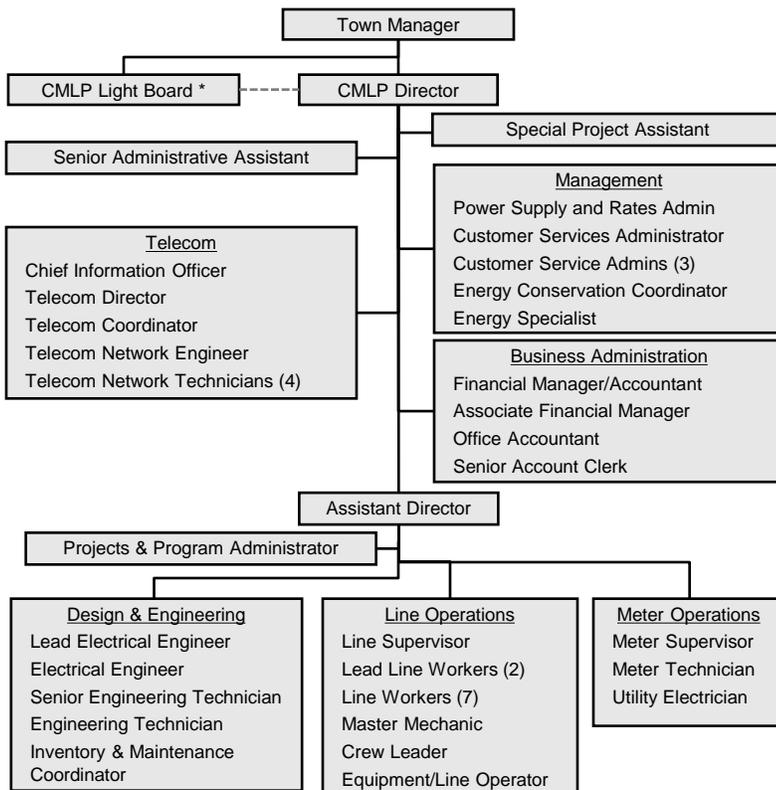
	2016 Actual	2017 Actual	2018 Estimated	2019 Budgeted
Net Income	\$ 1,549,882	\$ 380,415	\$ 1,051,795	\$ 1,446,205
Net Position	\$47,207,101	\$47,587,516	\$48,639,311	\$50,085,516

Description

The Concord Municipal Light Plant (CMLP) is responsible for providing 190,000 megawatt hours of electricity to 6,898 residential customers, 1,244 commercial customers, and 69 municipal customers in Concord. Since the Light Plant does not have generating capability, it purchases its power from outside suppliers. To distribute the electricity, the CMLP operates three substations along with transmission and distribution facilities. Power lines are maintained by CMLP line workers. To monitor the system, the Light Plant has a modern, consolidated operations center.

As a Town Enterprise, the Light Plant is supported by revenue raised from electric utility rates and other charges paid by its customers. Current resources are allocated to pay for the upkeep of existing infrastructure, purchase of power, administration and CMLP customer-related programs.

The Telecommunications Division within CMLP, managed by the Chief Information Officer who reports to the CMLP Director, provides broadband service to residences and businesses.



The Concord Municipal Light Plant is committed to providing the Town with reliable power while decreasing the Town’s dependence on electricity generated from fossil fuels. In 2019, the Light Plant will achieve its goal of supplying 100% of its purchased power from renewable resources: 10.0% from wind, 6.8% from hydro, 5.6% from solar, 2.4% from landfill gas, and 75.2% from the purchase of Renewable Energy Certificates (RECs). In addition, the Light Plant has initiated programs and policies to encourage energy efficiency and conservation measures by its residential and commercial customers.



Purchased Power: Energy and Capacity

Purchased power is comprised of two components: energy and capacity. To understand the difference, one can use the analogy of water distribution. Electrical energy (kilowatt hours) can be compared to the amount of water consumed (gallons) over time. Electrical capacity (megawatts or more precisely mega volt amperes that includes power lost during distribution) can be compared to the size of the water pipe or the capacity to deliver water (i.e. the larger the pipe the more water it can carry). So energy has to do with consumption over time while capacity measures the amount of electricity delivered at any one moment. The Town must purchase both.

Purchased Power: Power Supply Portfolio (24.8% from Renewable Sources)

The 2019 power supply portfolio is planned to consist of the purchase of electricity from the following sources:

• Non-Renewable Sources	
• Shell Energy Natural Gas	39.1% of total MWh
• Nexera Rise Energy	18.2%
• ISO Energy Purchases	<u>17.9%</u>
	75.2%
• Renewable Sources	
• NYPA (Hydro)	3.8%
• Kearsage 2 (Solar)	3.6 %
• Spruce Mountain (Wind)	3.3%
• Miller (Hydro)	3.0%
• Saddleback (Wind)	2.9 %
• New Bedford (Landfill Gas)	2.4%
• Canton Mountain (Wind)	2.2%
• Granite (Wind)	1.6 %
• Kearsage 1 (Solar)	1.1%
• Nugen Capital (Solar)	0.6%
• Solect Solar Project (Solar)	<u>0.3%</u>
	24.8%

Purchased Power: Local Conservation Initiatives

The Light Plant has initiated programs and policies to encourage energy conservation. The Smart Grid Infrastructure will allow CMLP to better manage its customers’ electricity demands. A new residential rate structure adopted in May 2015 has tiers in which users of lower amounts of electricity will pay a lower unit rate.

An active rebate program has been put in place by CMLP to promote local conservation initiatives. For residential and commercial customers, CMLP provides rebates for LED lighting fixture upgrades and heat pumps. Additional rebates for residential customers are available for weatherization and to encourage the adoption of electric vehicles (EVs).

Electricity Revenue

Total operating revenue expected to be raised through electric operations in 2019 is projected to be \$27,917,745 as shown in the following categories:

Residential sales:	\$11,722,069
Commercial sales:	12,868,014
Municipal sales:	<u>1,556,110</u>
Sales subtotal:	\$26,146,194
Change in Unbilled Revenue:	-109,445
Provision for Rate Refund:	1,180,907
Provision for Rate Stabilization:	<u>700,089</u>
Total:	\$27,917,745

Electric Rate Highlights

- Effective on September 1, 2018, the residential rate (R-1) is set at a meter charge of \$9.00 per month for a single phase system and the following three-tiered energy rates:

		per kWh
Tier 1:	first 600 kWh	\$0.04853
Tier 2:	next 316 kWh	\$0.06311
Tier 3:	over 916 kWh	\$0.09107

The distribution charge is \$0.03160 and the energy charge is \$0.07418. Pursuant to a greenhouse gas emission reduction strategy adopted by the Concord Municipal Light Board in 2017, CMLP has implemented a \$0.01 per kilowatt-hour energy surcharge to all bills effective on September 1, 2018.

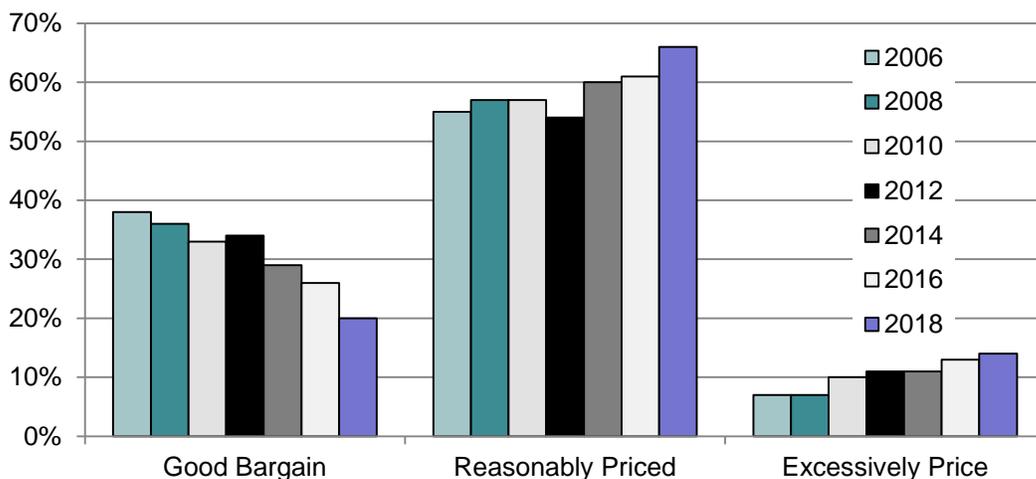
Surcharges

Each electric utility bill includes a 1.5% Underground Surcharge and a 0.52% Conservation and Renewable Energy Service (CARES) surcharge. The money raised through the underground surcharge is used to place power lines underground. As a result of this activity and in association with zoning requirements for new developments, the Town currently has approximately 50% of its power lines underground.

The Conservation and Renewable Energy Service surcharge pays for the energy conservation activities sponsored by the Light Plant. Among them are services like energy audits and financial assistance through rebates to help customers become more energy efficient.

Citizen Survey

From 2006 to 2018, the Town conducted a survey of Concord residents and inquired about the opinion of the price of electric rates? In 2018, the response was that 20% thought that the price is a Good Bargain and 66% thought that it is Reasonably Priced, and 14% thought it was Excessively Priced.



Program Implementation

For Calendar Year 2018, the Concord Municipal Light Plant is projecting that it will have \$30.5 million in operating revenues and \$28.4 million in operating expenditures.

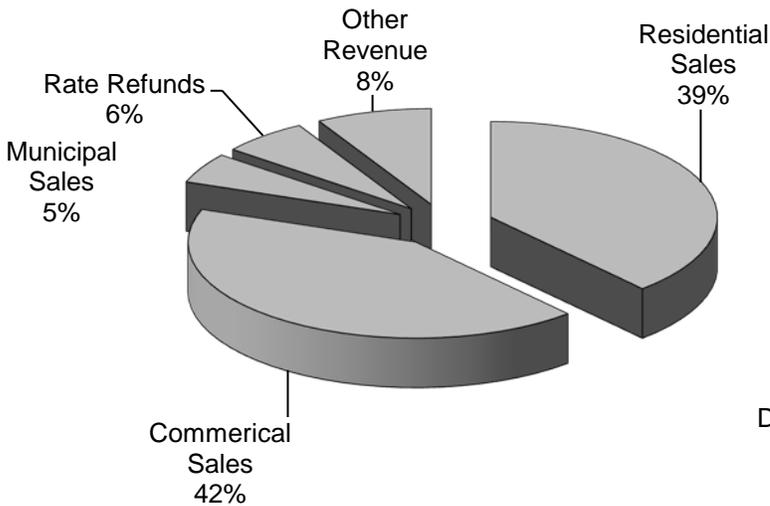
For revenues, funds collected from the sale of electricity are expected to decrease from \$26.8 million in 2018 to \$26.1 million in 2019.

For expenditures, the primary cost is the power supply expense. From 2018 to 2019, it is forecast that the power supply expense will increase from \$20.6 million to \$21.2 million. Purchased power expense is passed directly onto customers.

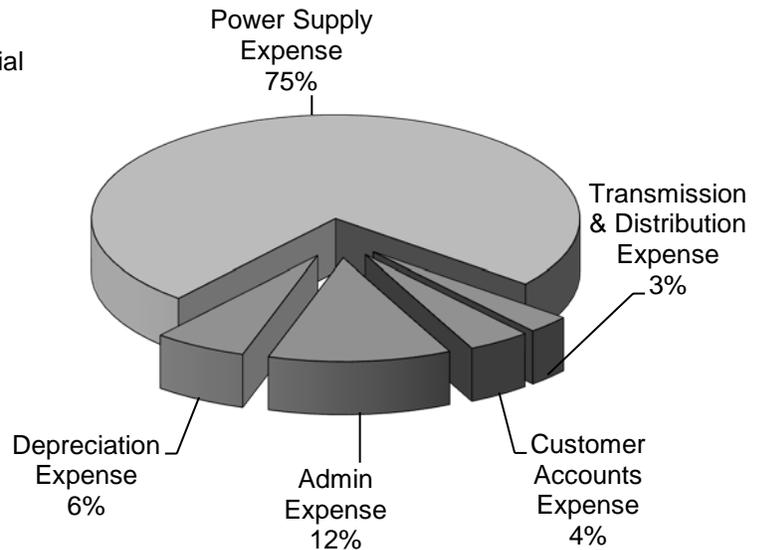
In 2019, the Light Plant is expected to have operating income of \$2,098,829 and net income from operations of \$1,446,205.

For the calculation of the Return per DPU formula, the sum of net income from operations (\$1,446,205), Payment in Lieu of Taxes (\$478,000), Underground Surcharge (\$385,528) and CARES Surcharge (\$133,649) are added together and divided by the previous year's Cost of Plant for Returns Calculation (\$62,649,425) for Return Per DPU Formula of 3.90%.

2019 Operating Revenues
Totaling \$30,420,982



2019 Operating Expenditures
Totaling \$28,431,390



OPERATING REVENUES

	Calendar Year:			
	2016	2017	2018	2019
	Actual	Actual	Estimated	Budgeted
Sales of Electricity				
Residential Sales	\$ 11,072,975	\$ 10,852,841	\$ 12,049,069	\$ 11,722,069
Commercial and Industrial Sales	13,064,292	12,706,888	13,226,981	12,868,014
Municipal Sales	1,658,274	1,588,953	1,599,519	1,556,110
Miscellaneous Sales	-	-	-	-
Operating Revenues Billed Total	\$ 25,795,541	\$ 25,148,682	\$ 26,875,569	\$ 26,146,194
Net Change in Unbilled Revenues	(39,652)	(249,473)	(112,498)	(109,445)
Provision for Rate Refund	-	269,699	159,756	1,180,907
Provision for Rate Stabilization	(868,274)	709,958	719,619	700,089
Electric Operating Revenues	24,887,615	25,878,866	27,642,446	27,917,745
Other Operating Revenues				
Telecom Rental and Fiber Lease	84,805	98,495	108,345	87,353
Underground Surcharge	293,741	368,685	396,283	385,528
CARES Surcharge	101,830	127,810	137,377	133,649
Income from Merchandise and Jobbing	170,467	224,203	187,604	188,350
Other Miscellaneous Operating Revenue	141,519	93,473	29,841	29,618
Purchases Surcharge	-	-	558,771	1,678,484
Audit Adjustment	(75,298)	(48,538)	-	-
Other Operating Revenue	717,064	864,128	1,418,221	2,502,982
Operating Revenues Total	\$ 25,604,679	\$ 26,742,994	\$ 29,060,667	\$ 30,420,728

OPERATING SALES (kWh)

	Calendar Year:			
	2016	2017	2018	2019
	Actual	Actual	Estimated	Budgeted
Kilowatt-hours Sold:				
Residential	70,077,788	68,832,294	74,369,576	72,351,262
General Services	86,238,993	85,005,349	87,907,272	85,521,559
Municipal	10,267,419	9,969,993	9,957,283	9,687,053
Street Lighting	448,117	444,581	296,617	288,567
Private Area Lighting	23,639	25,971	-	-
Unbilled Sales Adjustment	(989,142)	(519,993)	(892,679)	(868,453)
Electric Sales Billed Total	166,066,814	163,758,195	171,638,069	166,979,988
<i>Source: 2016 & 2017 data are actual data from audited financial statements; 2018 data is estimated; and 2019 data is proposed.</i>				

OPERATING EXPENSES (\$)

	Calendar Year:	2016	2017	2018	2019
		Actual	Actual	Estimated	Budgeted
Operating Accounts:					
Power Supply Expense					
Power Supply Expense		\$16,888,138	\$18,690,028	\$ 20,591,560	\$ 21,245,188
Audit Adjustment		(99,098)	(71,741)		
		<u>\$16,789,040</u>	<u>\$18,618,287</u>	<u>\$ 20,591,560</u>	<u>\$ 21,245,188</u>
Transmission & Subtrans. Expenses:					
Operation		6,225	7,230	13,000	9,227
Maintenance		69,321	56,030	82,500	77,706
		<u>\$ 75,546</u>	<u>\$ 63,259</u>	<u>\$ 95,500</u>	<u>\$ 86,933</u>
Distribution Expenses:					
Operation		195,834	258,632	220,000	226,190
Maintenance		557,198	539,984	397,297	501,051
Audit Adjustment					
		<u>\$ 753,031</u>	<u>\$ 798,616</u>	<u>\$ 617,297</u>	<u>\$ 727,241</u>
Customer Accounts Expenses:					
Customer Accounts		305,342	257,043	265,000	235,025
Customer Information Services		437,857	612,544	785,672	941,616
Audit Adjustment		366,367	7,205		
		<u>\$ 1,109,566</u>	<u>\$ 876,792</u>	<u>\$ 1,050,672</u>	<u>\$ 1,176,641</u>
Administrative & General Expenses:					
Electric Operations					
Salaries and Benefits		2,205,014	2,368,062	2,247,189	2,409,831
Other Operating Expenses		913,270	992,093	862,807	815,069
Smart Grid Operations		17,002	16,633	26,000	17,636
Maintenance of General Plant		200,028	187,021	206,500	200,717
Audit Adjustment	64208	(309,863)	(122,911)		
		<u>\$ 3,025,451</u>	<u>\$ 3,440,898</u>	<u>\$ 3,342,496</u>	<u>\$ 3,443,253</u>
Operating Accounts Subtotal		\$21,752,634	\$23,797,852	\$ 25,697,525	\$ 26,679,256
Depreciation Expense		\$ 1,758,435	\$ 1,800,938	\$ 1,727,375	\$ 1,752,134
Operating Expenses Total		\$23,511,070	\$25,598,791	\$ 27,424,900	\$ 28,431,390
Source: 2016 & 2017 data are actual data from audited financial statements; 2018 data is estimated; and 2019 data is proposed.					

Light Fund

Revenues and Expenditures

		July 1, 2018 - June 30, 2019		July 1, 2019 - June 30, 2020		
		Fiscal Year 2019		Fiscal Year 2020		
Code	Position Title	Grade	# Positions	\$ Amount	# Positions	\$ Amount
Light Plant Operations						
	Director	EM-5	1	153,722	1	153,722
	Assistant Director	EM-4	1	130,515	1	130,515
	Power Supply & Rates Admin	EM-4	1	110,250	1	110,250
	Lead Electrical Engineer	EM-2	1	112,793	1	115,405
	Electrical Engineer	EM-2	1	94,300	1	94,300
	Financial Manager & Accountant	MP-5	1	94,661	1	97,650
	Associate Financial Manager	MP-3	1	76,500	1	76,500
	Customer Service Supervisor	MP-3	1	110,250	1	110,250
	Customer Service Admin	MP-3	1	99,091	1	99,091
	Customer Service Represent.	AC-3	3	171,432	3	171,531
	Energy Conservation Coord.	MP-3	1	92,696	1	92,696
	Energy Specialist	MP-2	1	72,324	1	72,324
	Meter Supervisor	EM-1	1	88,826	1	88,826
	Senior Eng. Technician	MP-2	1	78,849	1	78,849
	Engineering Technician	MP-1	1	69,644	1	69,644
	Office Accountant	MP-2	1	77,286	1	74,604
	Sr. Administrative Assistant	ACL-5	1	72,143	1	72,162
	Sr. Account Clerk	ACL-3	1.88	128,362	1.88	128,831
	Line Supervisor	EL-6	1	110,163	1	110,163
	Lead Line Worker	EL-5	2	204,696	2	204,061
	Lineworker, Grade 1	EL-4	3	288,222	3	288,293
	Lineworker, Grade 2	EL-3	0	0	0	0
	Lineworker, Grade 3	EL-2	4	277,267	4	278,958
	Utility Electrician	EL-3	1	78,822	1	78,822
	Meter Technician	EL-2	1	69,969	1	69,969
	Master Mechanic	TCL-5	1	76,943	1	76,943
	Crew Leader	TCL-5	1	75,417	1	75,503
	Equipment/Line Operator	TCL-4	1	63,450	1	65,000
	Maintenance & Inventory Coord.	TCL-3	1	53,993	1	54,810
	FTE Subtotal		36.88	\$ 3,132,586	36.88	\$ 3,139,672
	Line Worker Stand-by Pay		1320 hrs.	51,070	1320 hrs.	51,230
	Engineering Stand-by Pay			31,320		31,320
	Salary Subtotal			\$ 3,214,976		\$ 3,222,221
	Allowance for Salary Increases					125,587
17X	Group Insurance:					
	Health, Life, Dental			329,814		360,566
	Retirement			572,244		752,565
	OPEB Contribution			94,100		72,089
	Soc. Sec. & Medicare Tax			44,805		46,423
	Clothing Allowance			3,600		3,600
	Benefits Subtotal			\$ 1,044,563		\$ 1,235,243
	Personnel Services Total			\$ 4,259,539		\$ 4,583,051

NET INCOME

	Calendar Year:			
	2016	2017	2018	2019
	Actual	Actual	Estimated	Budgeted
Statement of Net Income				
Operating Revenues	\$ 25,604,679	\$ 26,742,994	\$ 29,060,667	\$ 30,420,728
Less Operating Expenses	<u>(23,511,070)</u>	<u>(25,598,792)</u>	<u>(27,424,900)</u>	<u>(28,431,390)</u>
Operating Income	\$ 2,093,609	\$ 1,144,202	\$ 1,635,767	\$ 1,989,337
Non-Operating Revenues (Expenses)				
Interest Income	\$ 122,590	\$ 56,106	\$ 36,752	\$ 94,523
Interest Expense	(207,918)	(185,439)	(195,700)	(174,625)
Other	<u>31,255</u>	<u>29,980</u>	<u>35,976</u>	<u>14,969</u>
Non-Operating Income Subtotal	\$ (54,073)	\$ (99,353)	\$ (122,972)	\$ (65,133)
Net Income Before Other Financing	\$ 2,039,536	\$ 1,044,849	\$ 1,512,795	\$ 1,924,205
Other Financing Financing (Uses)				
Loss on Disposal of Capital Assets	(24,154)	(190,434)		
Payment in Lieu of Taxes	(465,500)	(474,000)	(461,000)	(478,000)
Provision for Rate Refund	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Subtotal	\$ (489,654)	\$ (664,434)	\$ (461,000)	\$ (478,000)
Change in Net Position	\$ 1,549,882	\$ 380,415	\$ 1,051,795	\$ 1,446,205

NET POSITION

	Calendar Year:			
	2016	2017	2018	2019
	Actual	Actual	Estimated	Budgeted
Change in Net Position	\$ 1,549,882	\$ 380,415	\$ 1,051,795	\$ 1,446,205
Net Position				
Beginning of Year	45,657,219	47,207,101	47,587,516	48,639,311
End of Year	47,207,101	47,587,516	48,639,311	50,085,516

RETURN ANALYSIS

	Calendar Year:			
	2016	2017	2018	2019
	Actual	Actual	Estimated	Budgeted
Return per DPU Formula				
Net Income from Operations	1,549,882	380,415	1,051,795	1,446,205
Payment in Lieu of Taxes	465,500	474,000	461,000	478,000
Underground Surcharge	293,741	368,685	396,283	385,528
CARES Surcharge	101,830	127,810	137,377	133,649
Return per DPU Formula	2,410,953	1,350,910	2,046,455	2,443,382
Cost of Plant				
Cost of Plant (Year End)	61,457,574	62,469,452	62,649,425	64,252,050
Cost of Plan for Return Calculations	59,794,807	61,457,574	62,469,452	62,649,425
Return per DPU Formula Percentage				
Return per DPU Formula	2,410,953	1,350,910	2,046,455	2,443,382
Cost of Plan for Return Calculations	59,794,807	61,457,574	62,469,452	62,649,425
DPU Return Percentage	4.03%	2.20%	3.28%	3.90%
Effective Return Percentage				
Net Income from Operations	1,549,882	380,415	1,051,795	1,446,205
Cost of Plan for Return Calculations	59,794,807	61,457,574	62,469,452	62,649,425
Effective Return Percentage	2.59%	0.62%	1.68%	2.31%
<p>Note: Return Percentages are calculated using the current year Return per DPU Formula and Effective Return, respectively, divided by the previous year's Cost of Plan for Return Calculations. For 2016 and 2017, Net Income from Operations is derived from the Audited Financial Statements.</p>				

DEBT SERVICE

	FY17 <u>Actual</u>	FY18 <u>Actual</u>	FY19 <u>Estimated</u>	FY20 <u>Budgeted</u>
Long Term Debt (Cash Basis):				
Principal	\$ 705,000	\$ 662,500	\$ 662,500	\$ 650,000
Interest	<u>196,174</u>	<u>174,938</u>	<u>152,063</u>	<u>129,375</u>
Totals	\$ 999,133	\$ 837,438	\$ 814,563	\$ 779,375

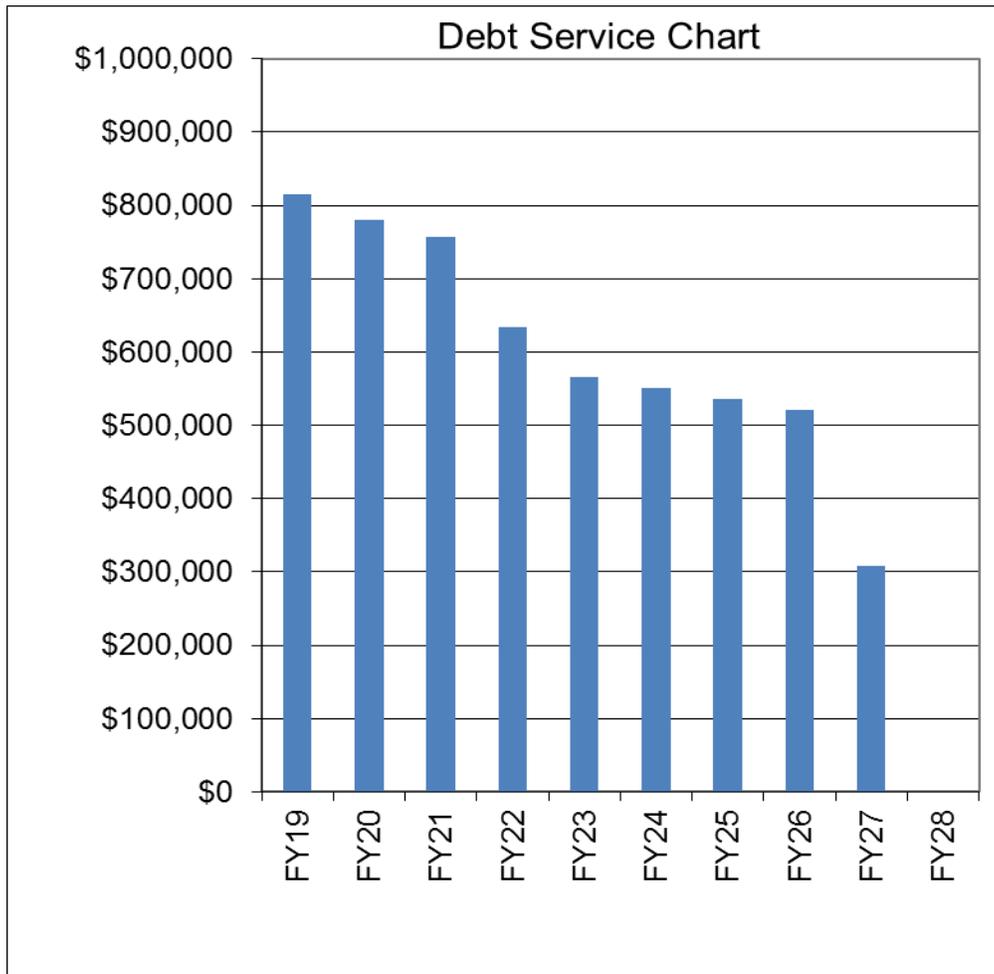
Note: Debt Service data is presented for fiscal years beginning July 1st and ending June 30th, since debt issuance occurs with other Town issuances which are recorded on the fiscal year.

PAYMENTS TO THE GENERAL FUND

Town Fiscal Year Basis	FY17 <u>Actual</u>	FY18 <u>Actual</u>	FY19 <u>Estimated</u>	FY20 <u>Budgeted</u>
Financial & Administrative Services:				
Town Manager's Office	\$ 98,286	\$ 105,990	\$ 112,565	\$ 115,994
Facilities Management	-	-	-	11,563
Town Accountant	55,286	59,713	65,979	50,627
Treasurer-Collector	57,414	59,106	58,579	57,831
Information Systems	-	76,198	96,911	111,295
Finance Administration	46,905	53,645	58,033	57,558
Human Resources	62,701	72,399	80,444	86,717
Town House Facilities	<u>5,633</u>	<u>6,261</u>	<u>6,500</u>	<u>6,967</u>
Subtotal	\$ 326,225	\$ 433,312	\$ 479,011	\$ 498,552
Natural Resource Protection:				
Planning	\$ 11,156	\$ 12,218	\$ 12,428	\$ 13,159
Natural Resources	<u>21,360</u>	<u>23,261</u>	<u>23,265</u>	<u>23,866</u>
Subtotal	\$ 32,516	\$ 35,479	\$ 35,693	\$ 37,025
Landscaping @ Substations:				
Parks & Trees	\$ 7,225	\$ 8,764	\$ 12,291	\$ 10,000
Total	<u>\$ 365,966</u>	<u>\$ 477,555</u>	<u>\$ 526,995</u>	<u>\$ 545,577</u>
 Payment in Lieu of Taxes (PILOT)	 \$ 465,500	 \$ 474,000	 \$ 461,000	 \$ 478,000
Calendar Year of PILOT Payment	2016	2017	2018	2019

LIGHT FUND DEBT SERVICE

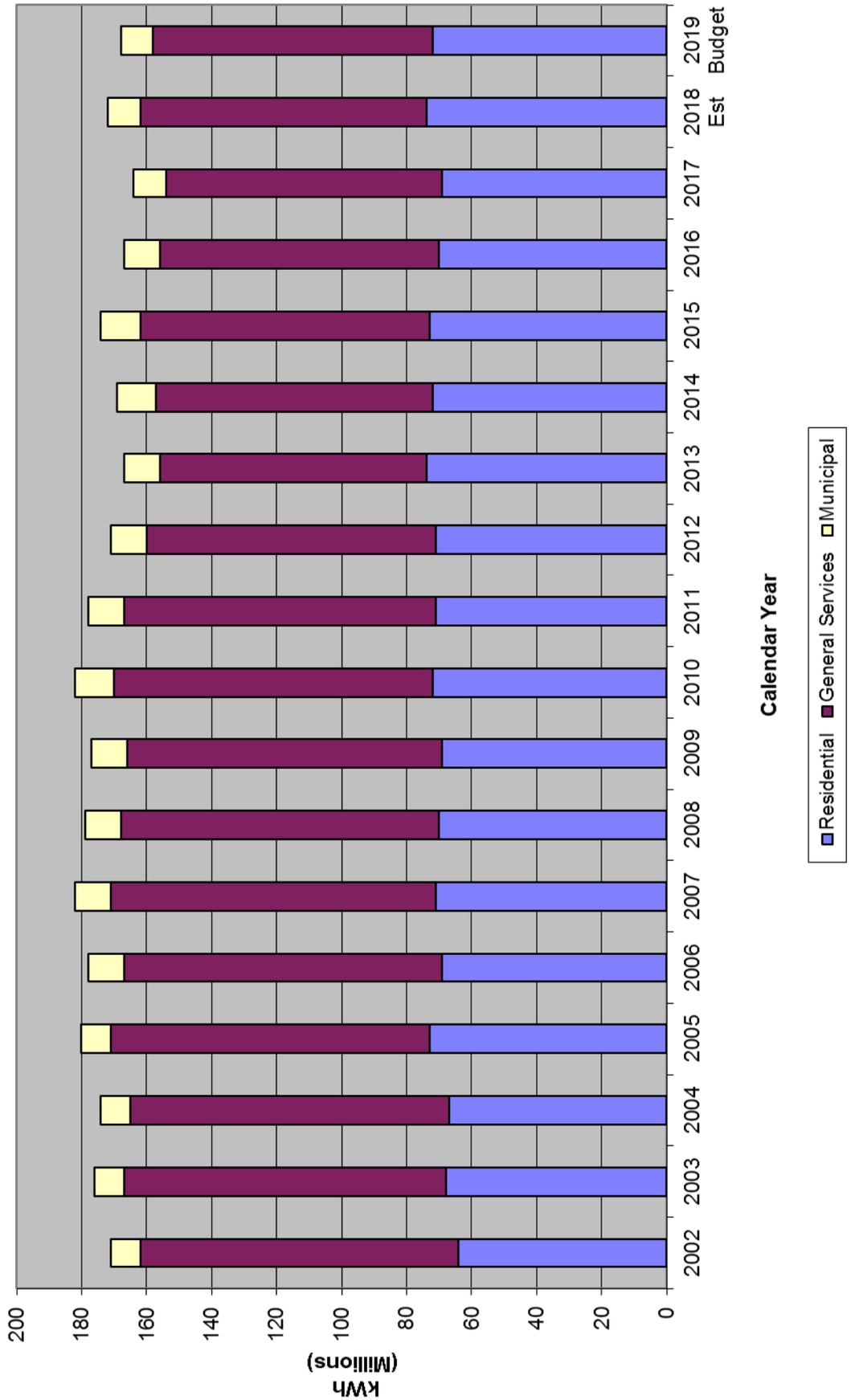
Fiscal Year	Principal	Interest	Total
FY19	662,500	152,063	814,563
FY20	650,000	129,375	779,375
FY21	650,000	106,875	756,875
FY22	550,000	84,375	634,375
FY23	500,000	65,625	565,625
FY24	500,000	50,625	550,625
FY25	500,000	35,125	535,125
FY26	500,000	21,625	521,625
FY27	300,000	7,500	307,500
FY28	0	0	0
Totals	\$4,812,500	\$653,188	\$5,465,688



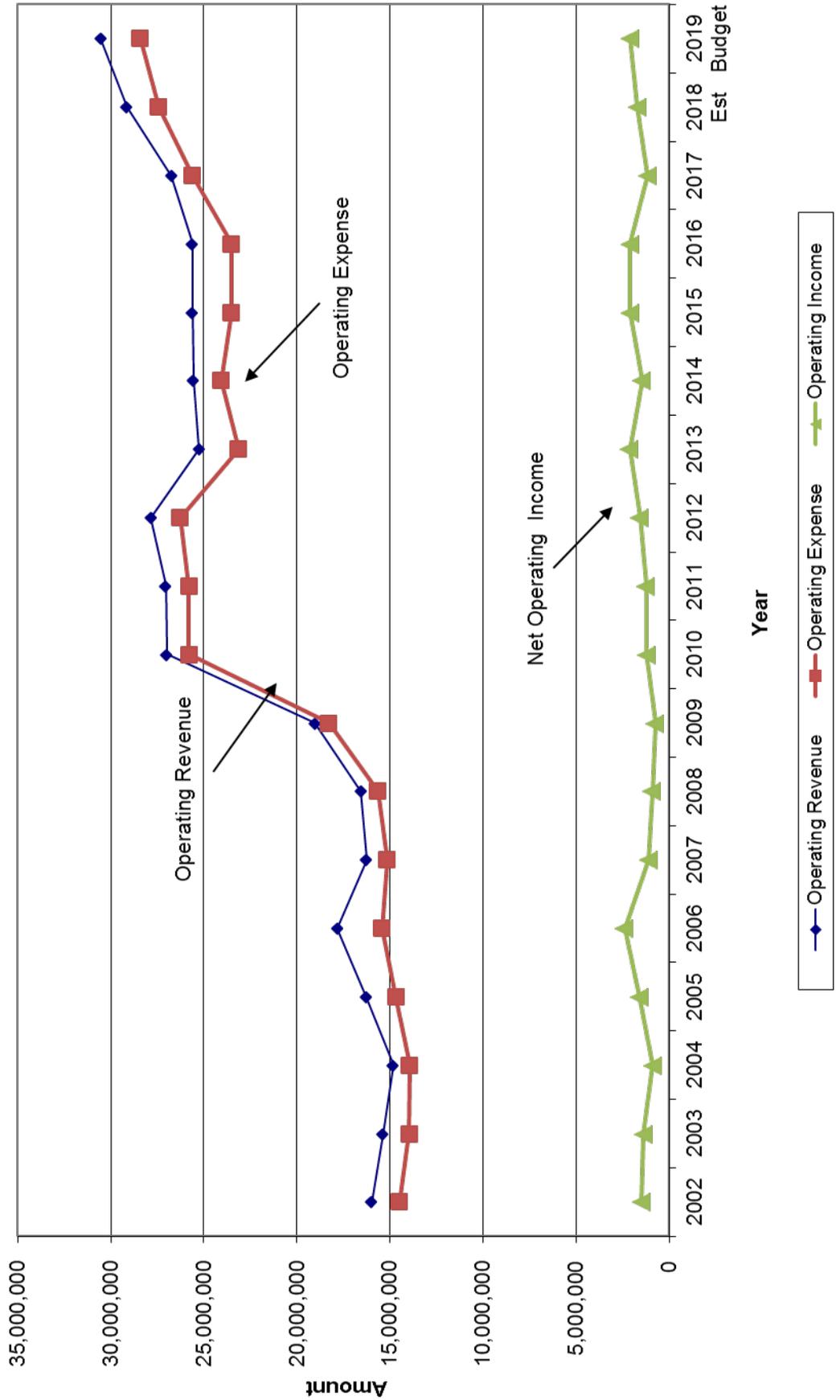
Concord Municipal Light Plant
kWhs Sold, Revenues, Expenses, and Operating Income
 (2002-2017 Actual, 2018 Estimated, and 2019 Budgeted)

Calendar Year	kWhs Sold (Millions)				Operating Revenues	Operating Expenses	Operating Income	Net Income
	Residential	Commercial	Municipal	Total				
2002	64	98	9	171	15,975,614	14,495,030	1,480,584	1,779,995
2003	68	99	9	176	15,366,040	13,976,203	1,389,837	1,644,664
2004	67	98	9	174	14,825,982	13,945,302	880,680	887,184
2005	73	98	9	180	16,298,994	14,690,064	1,608,930	2,066,462
2006	69	98	11	178	17,829,056	15,433,837	2,395,219	3,052,974
2007	71	100	11	182	16,248,165	15,155,781	1,092,384	2,123,283
2008	70	98	11	179	16,548,218	15,647,921	900,297	1,351,285
2009	69	97	11	177	19,036,385	18,302,574	733,811	986,123
2010	72	98	12	182	27,001,169	25,793,559	1,207,610	1,794,797
2011	71	96	11	178	27,040,652	25,793,559	1,247,093	1,810,770
2012	71	89	11	171	27,848,934	26,283,418	1,565,516	1,900,452
2013	74	82	11	167	25,253,854	23,142,707	2,111,147	1,760,119
2014	72	85	12	169	25,547,828	24,078,883	1,468,945	2,118,998
2015	73	89	12	174	25,604,679	23,511,070	2,093,609	1,537,839
2016	70	86	11	167	25,604,679	23,511,070	2,093,609	1,549,882
2017	69	85	10	164	26,742,994	25,598,792	1,144,202	380,415
2018 Est	74	88	10	172	29,133,395	27,424,900	1,708,495	1,051,795
2019 Budget	72	86	10	168	30,530,220	28,431,390	2,098,830	1,446,205

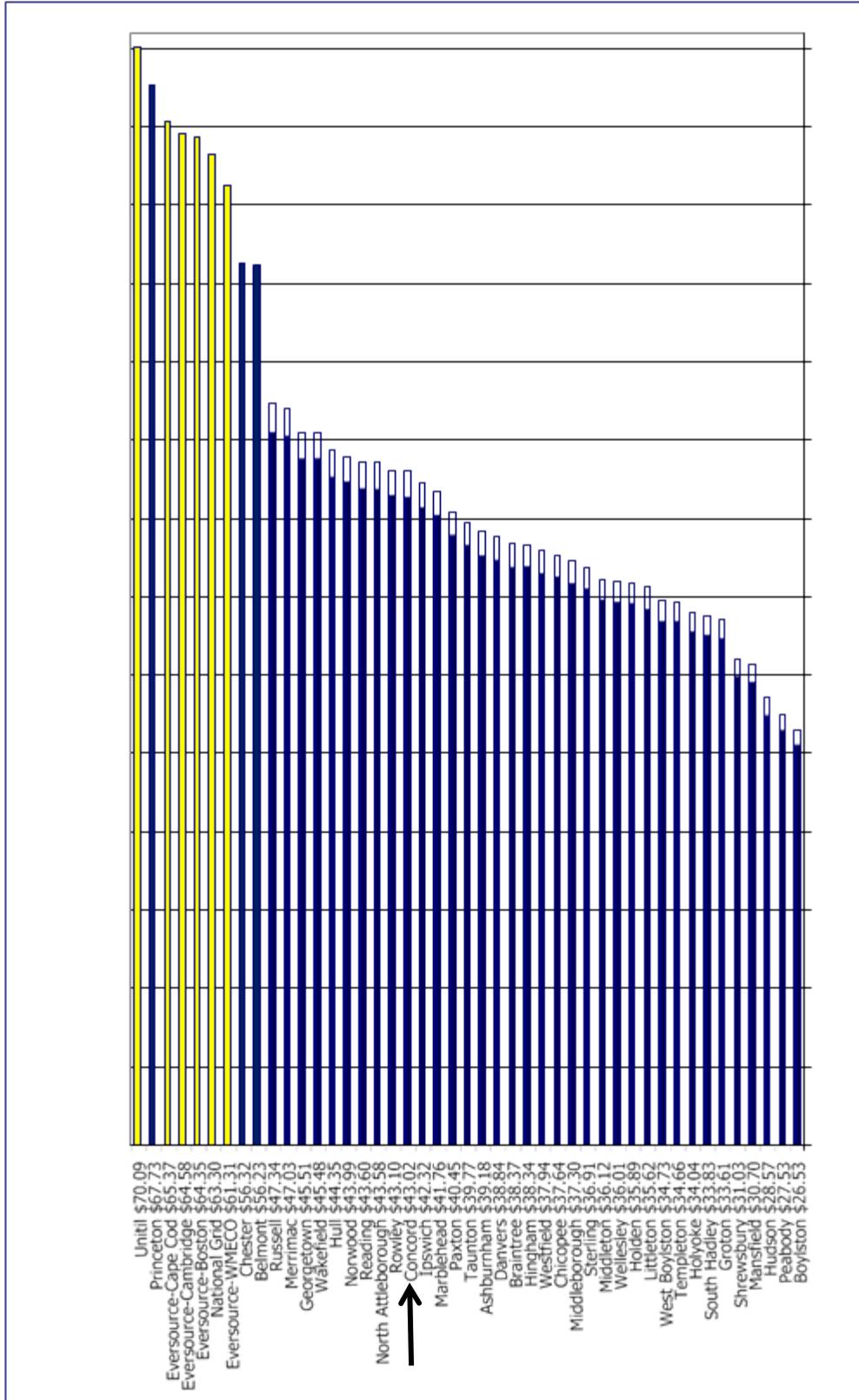
Concord Municipal Light Plant
Electricity Sales



Light Fund
Operating Revenue, Operating Expense, and Operating Income



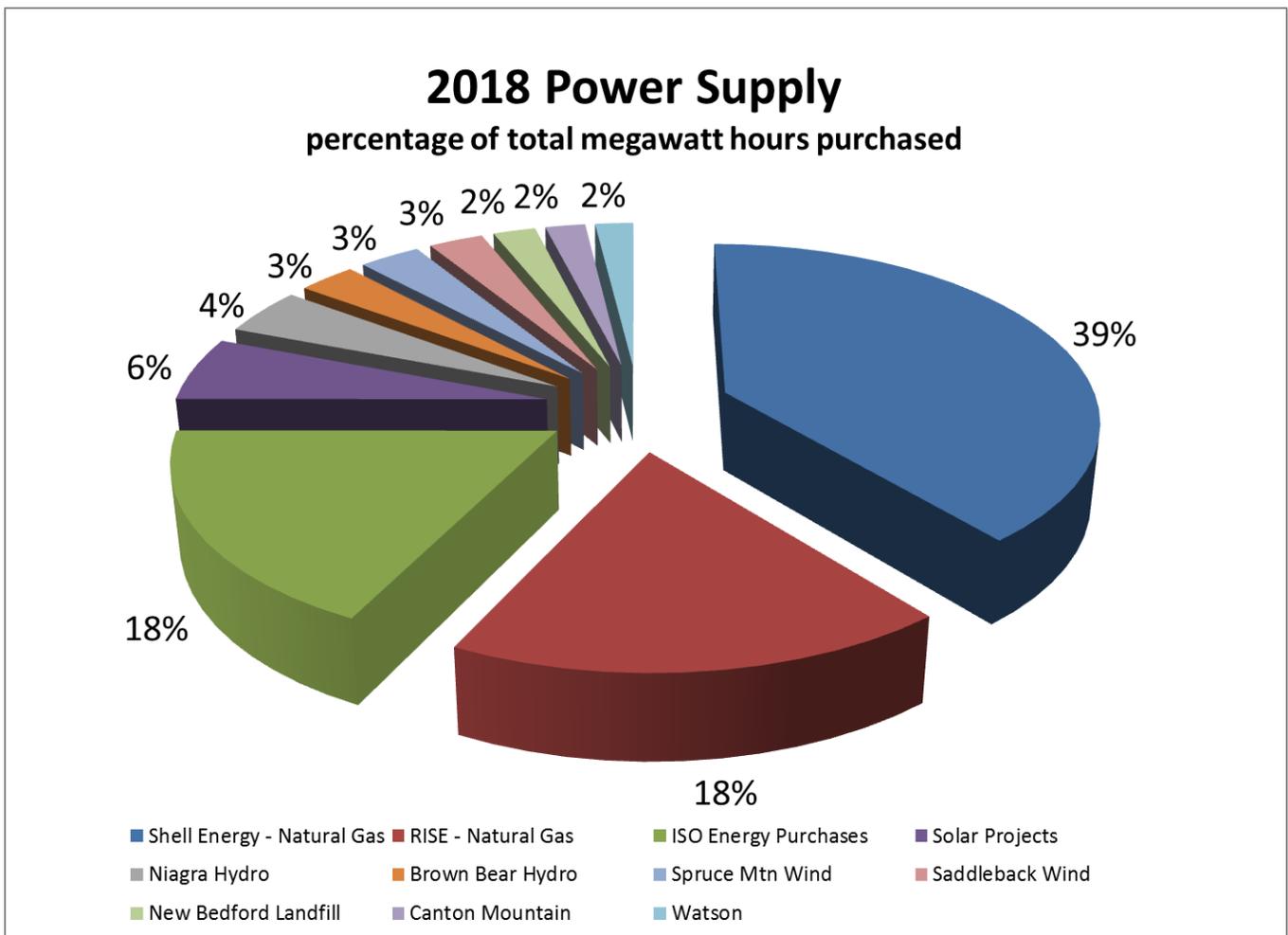
2018 Average Residential Monthly Cost of 250 kWh



Power Supply Portfolio

Since the Concord Municipal Light Plant does not generate electricity, CMLP must purchase power with individual suppliers outside of Concord through purchase power agreements which specifies the pricing per kilowatt hour that is used. One of CMLP's objectives in the area of power supply is to purchase as much energy from renewable sources as possible provided that economics are in line with conventional power supply options.

The power supply portfolio for 2018 is shown in the graph below. Seventy-five percent (75%) of the electricity that the Town used was sourced from the regional grid representing a mix of natural gas, nuclear and renewable resources. The remaining twenty-three percent (23%) came from renewable sources: seven percent (7%) from hydro-electric, six percent (6%) from wind generation, five percent (5%) from solar panels, and five (5%) from landfill methane gas generation.



Mission Statement

The mission of the Concord Municipal Light Plant Telecommunications Division is to provide cost effective reliable telecommunications services which meets the current and future needs of our customers. CMLP currently provides High Speed Internet and dark fiber leasing.

Telecommunications Highlights

- Since March 2014, High Speed Internet service has been available to both commercial and residential customers of CMLP.
- Over 1,215 High Speed Internet customers were connected by January 2019, an increase of over 250 since December 2017. The 2019 plan assumes growth to about 1500 customers by year end 2019.
- In 2017, CMLP completed major technology upgrades which enables support for up to 3,000 customers.
- Concord Light Broadband generated a positive NET income in 2017 and 2018.
- In 2019, new staff is planned to provide support for the customer base and sustain continued system growth.

Telecommunications Contents

Overview p. 17
 Programs p. 18
 Business Results and Plan P. 19
 Revenues & Expenditures p. 20
 Debt Schedule p. 21

NOTE: As a division of the Light Plant, Telecom operates on a calendar year basis.

Operating and Net Income Summary

	2016 Actual	2017 Actual	2018 Estimated	2019 Proposed
Operating Income	\$ 571,690	\$ 764,996	\$ 994,719	\$ 1,128,108
Operating Expense	\$ (653,249)	\$ (682,676)	\$ (865,081)	\$ (1,101,637)
Net Position	\$ (414,749)	\$ (341,855)	\$ (232,037)	\$ (222,816)

Description

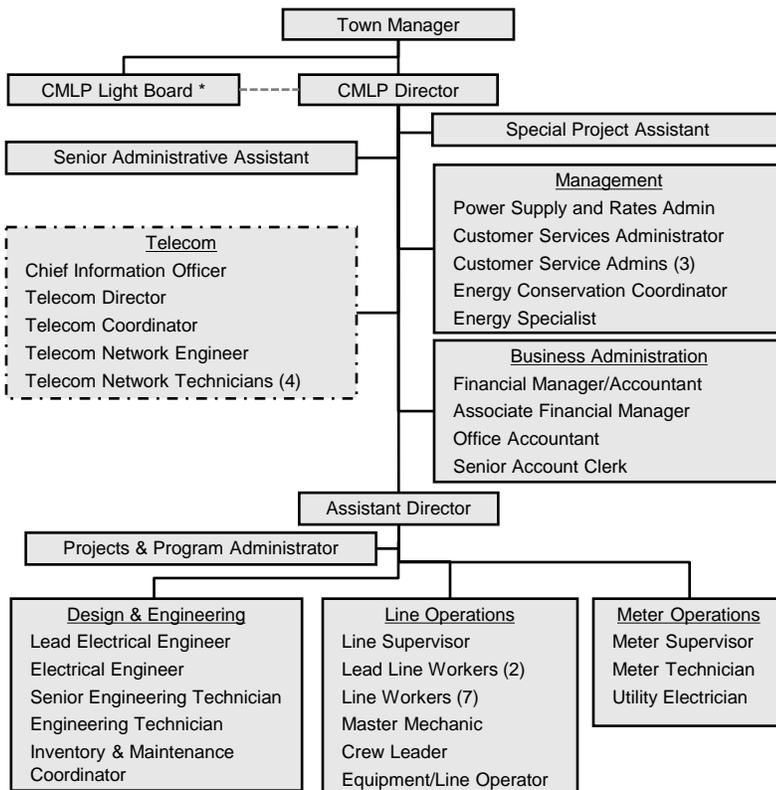
The CMLP Telecommunications Division provides telecommunication services to the electric utility, supports the Town’s municipal operations and offers High Speed Internet service to Concord residents and businesses.

In 2018, the Telecommunications Division staff was managed by the CIO and includes a Telecommunications Coordinator, Network Engineer and three Telecom Technicians. In 2019, CMLP expects to add a Telecom Director to manage the team and a fourth Network Technician.

This management structure benefits both the Town’s municipal operations and CMLP’s electrical operations with access to in-house networking resources.

Business Administration and Customer Service for the Telecommunications Division is shared with Electric operations. Engineering and Line Operations also performs some of the outside plant management.

24x7 first Level Broadband Support is provided through a contracted Help Desk. Other contracts provide the Division with installation, emergency restoration, and network performance monitoring. Billing and account management are integrated with Electric Utility billing.



Telecommunications Business Results

2018 was another year of steady growth for the broadband business. Revenue from residential and business subscribers grew by 26%, and the number of subscribers grew to over 1,200. Average monthly revenue was up by 26%. 2018 revenue grew by 27% overall and achieved 96% of budgeted forecast. Operating Expenses remained level in 2018 and installations expenses driven by new subscriptions were also about the same as 2017. Both were in line with the business model. Overall growth in subscribers continued to be steady. Demand for the service is still strong as an average of 21.5 new subscribers were added each month in 2018 versus 23 per month in 2017. CMLP will continue to address demand in a controlled way by balancing initial installation cost to achieve growth that remains within the funding plan.

Revenue comes from the following activities:

- One-time installation fees of the fiber optic service to homes and business;
- Monthly fees for High Speed Internet Service;
- Monthly fees for private data services.

Telecommunications Programs

The Light Plant, Town Government and the other Town enterprises need to have access to high quality telecommunications. Public Safety, Education and Administration are all increasingly dependent on data and data communications. The Light Plant's investment in fiber laid the foundation for a number projects which contribute to efficient and effective operations. The Telecommunication Division provides the necessary operational capability to utilize the fiber network. There are three main program areas:

Broadband Services (Details at: <http://www.concordma.gov/broadband>)

The 2013 Annual Town Meeting approved a \$1 million borrowing authorization which enabled CMLP to finance the startup and initial capital costs of retail broadband telecommunication services. An additional \$1 million in borrowing was authorized by the 2017 Annual Town Meeting. The second authorization has not been used yet, but will enable continued growth in new service connections and capital investments. Telecommunications revenue is used to repay the expenses and the debt service. As the broadband operating revenue grows it helps to reduce the burden on the electric operations of maintaining the fiber network.

CMLP offers High Speed Internet to residential and business customers. CMLP also provides Internet and private data services for Town's operations. By providing a fiber optic based internet service, CMLP is filling a gap in the service available to the community while generating revenue to help pay for the fiber investment and the telecommunications staff. Customer interest and satisfaction remains high.

Smart Grid Infrastructure

CMLP's Smart Grid Infrastructure supports the distribution of electricity to customers. Advanced meters, load control, and customer engagement applications have been deployed. The Telecommunications Division deploys and maintains this network. The network contains over 800 devices capable of real time communications with our customers throughout the service area.

The fiber network is also being leveraged to support the Water and Sewer enterprises as well. Command and control of this important infrastructure is more reliable, comprehensive and secure as a result the use of fiber.

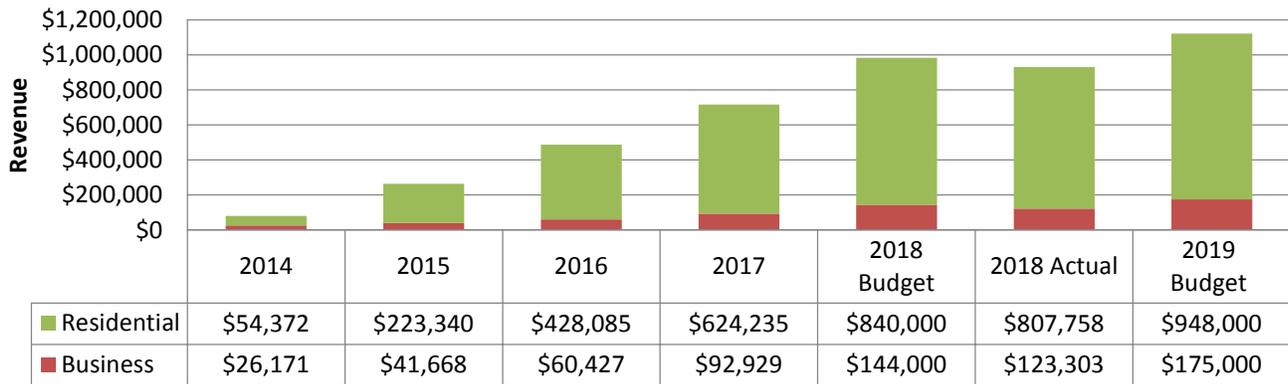
Municipal Operations Support:

The telecommunications needs of Town Departments are constantly evolving. Separately, neither the Town or the Light Plant could realistically afford to have in-house resources to help meet the requirements. The resulting dependency on vendors and suppliers would be costly and responsiveness would also be reduced. The costs of for providing municipal support for the data and voice network are recovered by the Telecommunication Division through labor sharing agreements that benefit both the Town and the Light Plant. Management by the CIO enables effective coordination given the close interrelationship between Information Technology and Telecommunications. In 2018, CMLP extended this municipal cooperation to include the Town of Bedford.

2017 Broadband Service Growth Results

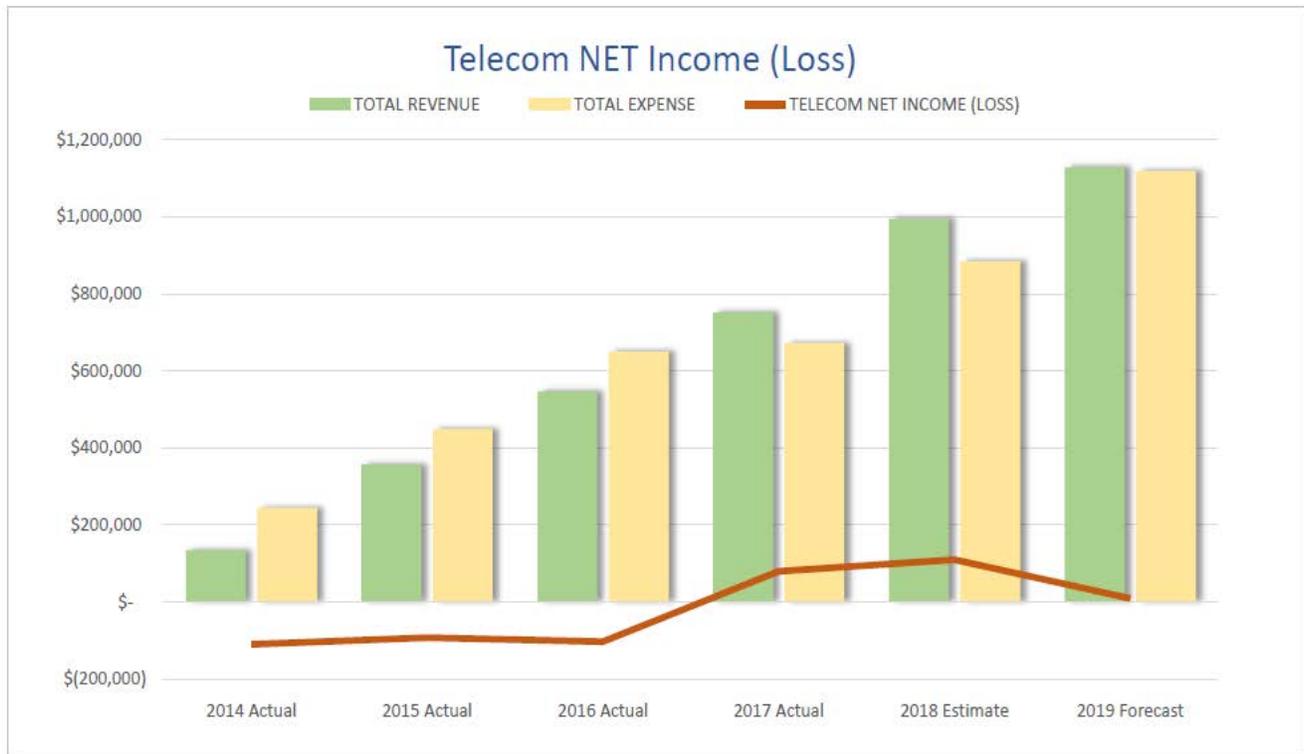
As of March 2019, the Broadband services has been available for five years. Subscriptions and monthly revenue have grown steadily. Residential growth has been the most consistent, slowing only during the winter when fiber optic installations are limited due to the weather. The 2017 CMLP survey indicated that 86% of customers are satisfied with Concord Light Broadband, and 90% indicated that would recommend the service.

**Concord Light Broadband
Annual Billing**



Financial Planning

The chart provides a five-year operational history and an overview of the Broadband Service. Net Income since 2017 has been positive. The 2019 Budget targets a less than 1% Telecom rate of return.



FINANCIAL INFORMATION

	Calendar Year:	2016	2017	2018	2019
		Actual	Actual	Estimated	Proposed
Operating Revenue					
Residential & Commercial Fees		\$ 508,025	\$ 748,164	\$ 984,000	\$ 1,123,000
Municipal Fees		38,600	3,600	5,000	5,000
Other		116	91	5,719	108
<i>Audit Adjustment</i>		24,949	13,141	-	-
Operating Revenue Total		\$ 571,690	\$ 764,996	\$ 994,719	\$ 1,128,108
Operating Expenditures					
Broadband Bandwidth		\$ 109,388	\$ 129,235	\$ 186,000	\$ 204,957
Operating		343,591	414,524	442,931	644,419
Depreciation		19,777	37,286	22,000	65,016
Customer Accounts		30,800	22,661	36,150	38,354
Distribution		142,359	65,471	178,000	148,891
<i>Audit Adjustment</i>		7,334	13,499	-	-
Operating Expense Total		\$ 653,249	\$ 682,676	\$ 865,081	\$ 1,101,637
Operating Income (Loss)		\$ (81,559)	\$ 82,320	\$ 129,638	\$ 26,471
Nonoperating Revenues (Expenses)					
Interest Income		\$ -	\$ -	\$ -	\$ -
Interest Expense		(15,507)	(18,896)	(19,819)	(17,250)
Other		6,474	9,470	-	-
<i>Audit Adjustment</i>		-	-	-	-
Operating Expense Total		\$ (9,033)	\$ (9,426)	\$ (19,819)	\$ (17,250)
Net Income (Loss)		\$ (90,592)	\$ 72,894	\$ 109,818	\$ 9,221
Net Position					
Net Position at Beginning of Year		\$ (324,157)	\$ (414,749)	\$ (341,855)	\$ (232,037)
Net Position at End of Year		\$ (414,749)	\$ (341,855)	\$ (232,037)	\$ (222,816)

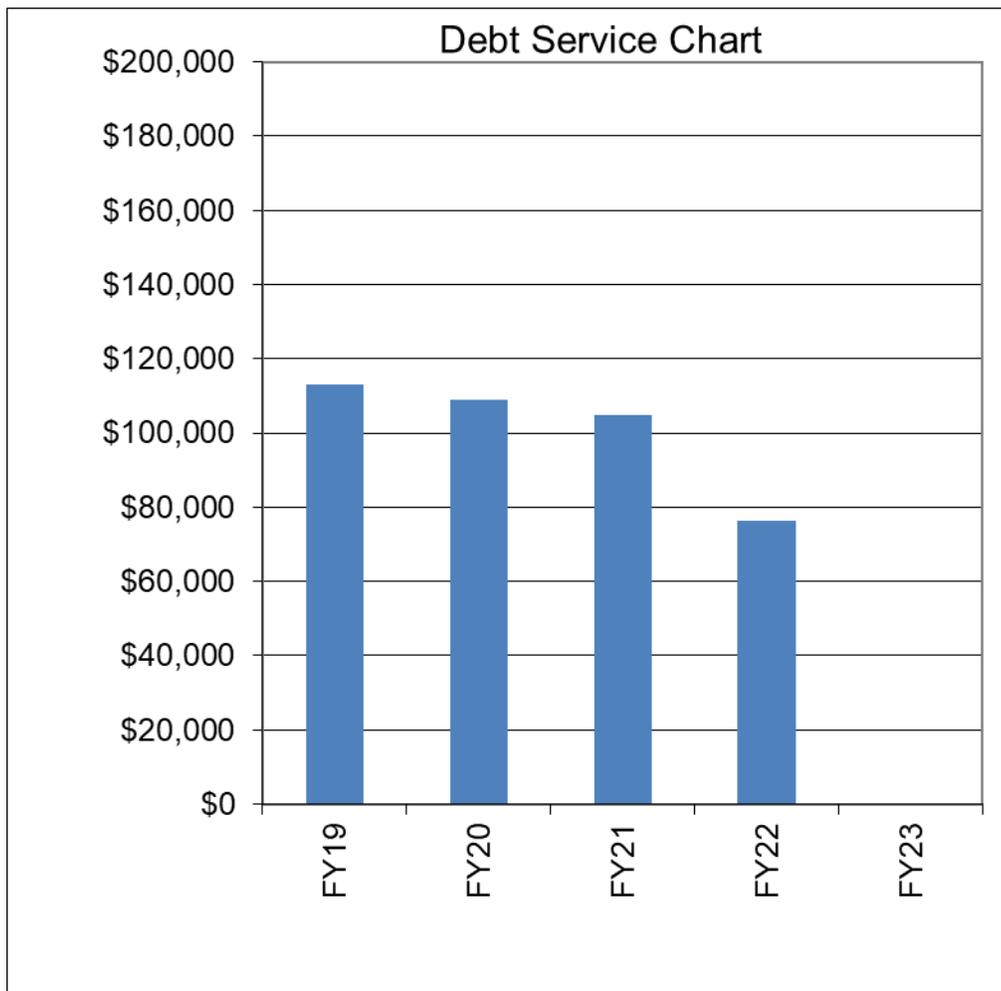
Source: 2016 & 2017 data are actual data from audited financial statements; 2018 data is estimated from the year ending on September 30, 2018; 2019 data is proposed.

AUTHORIZED POSITIONS

		FY19 Budget		FY20 Proposed	
		FTE	Amount	FTE	Amount
Telecommunications					
Chief Information Officer	MP-7	0.40	62,726	0.40	73,550
Telecommunications Director	TM-2	0.00	-	1.00	72,188
Telecom Coordinator	MP-4	1.00	91,051	1.00	95,598
Network Engineer	MP-4	1.00	90,000	1.00	94,500
Telecom Network Technician	MP-2	3.00	234,649	4.00	282,509
FTE Subtotal		5.40 FTEs	478,426	7.40 FTEs	618,345

TELECOM DEBT SERVICE

Fiscal Year	Principal	Interest	Total
FY19	100,000	13,000	113,000
FY20	100,000	9,000	109,000
FY21	100,000	5,000	105,000
FY22	75,000	1,500	76,500
FY23	-	-	-
Totals	\$ 375,000	\$ 28,500	\$ 403,500



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