

Section III
Light Fund

THIS PAGE INTENTIONALLY LEFT BLANK

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.

Light Fund Contents

Overview	pp. 1-3
Revenues and Expenditures	pp. 4-11
Electricity Sales Data and Chart	p. 12-14
Rate Comparison	p. 15
Energy Supply	p. 16
Telecommunications	p. 17-21

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 75% of operating expenditures.
- 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.
- Electricity from renewable energy sources equals approximately 23% of the kilowatt hours of all purchased power. The Light Plant Board's goal is to increase the percentage of renewable energy to 30% by 2020.
- In 2014, CMLP implemented its 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

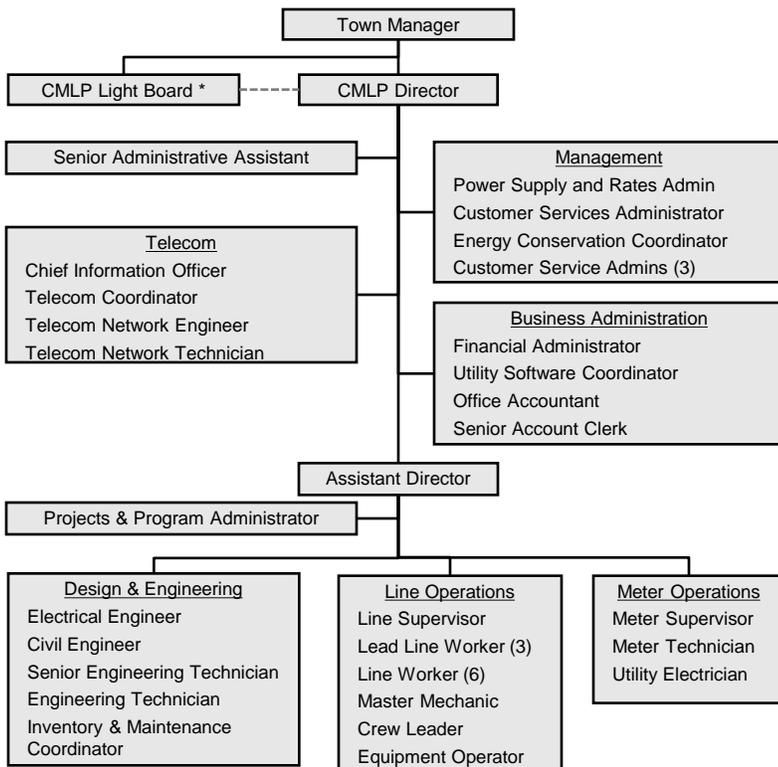
	2015 Actual	2016 Actual	2017 Estimated	2018 Budgeted
Operating Income	\$ 2,321,971	\$ 2,093,609	\$ 2,435,454	\$ 2,658,802
Net Income	\$ 253,825	\$ 338,147	\$ 651,709	\$ 902,684

Description

The Concord Municipal Light Plant (CMLP) is responsible for providing electricity to more than 8,300 residential, municipal, and business customers throughout 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. In addition, the CMLP staff is responsible for reading electric and water meters, and for providing customer service.

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 reporting 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. CMLP has upgraded its transformers and increased the pass-through capacity of its power grid. At the same time, CMLP has set a goal to obtain 30% of its electricity from renewable sources by 2020. 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 (23% from Renewable Sources)

The 2017 power supply portfolio consists of the purchase of electricity from the following sources:

- Non-Renewable Sources
 - Shell Energy Natural Gas 24% of total MWh
 - Exelon Natural Gas 19%
 - RISE Natural Gas 18%
 - ISO Energy Purchases 16%
 - 77%
- Renewable Sources
 - Solar Projects 5%
 - Niagra Hydro 4%
 - Brown Bear Hydro 3%
 - Spruce Mountain Wind 3%
 - Granby Landfill Gas 3%
 - Saddleback Wind 3%
 - New Bedford Landfill Gas 2%
 - 23%

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 1, 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 efficient lighting fixture upgrades and energy star appliance purchases. Additional rebates for residential customers are available for weatherization and central A/C efficiency projects.

Electricity Revenue

Total operating revenue expected to be raised through electric operations in 2018 is projected to be \$28,601,606 as shown in the following categories:

Residential sales:	\$11,591,632
Commercial sales:	13,540,960
Municipal sales:	<u>1,707,770</u>
Sales subtotal:	\$26,840,362
Provision for Rate Stabilization:	991,033
Other Revenue:	<u>770,211</u>
Total:	\$28,601,606

It is forecast that 2018 residential sales in kilowatt hours will be 67.0 million, commercial sales 83.9 million and municipal sales 10.5 million.

Electric Rate Highlights

•Effective on February 2, 2017, 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 \$0.06418. The above rates per kWh will be adjusted plus or minus in accordance with a formula specified in the Power Cost Adjustment Clause and the NYPA Power Cost Adjustment Clause.

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 is financial assistance to help customers purchase energy efficient systems and appliances.

Citizen Survey

In 2010, 2012, 2014, and 2016 the Town conducted a survey of Concord residents. For the Light Plant, the following question was asked: "What is your opinion of the price of electric rates?" In 2016, the response was that 26% thought that the price is a Good Bargain and 61% thought that it is Reasonably Priced. Only 13% thought electricity was Excessively Priced.



Program Implementation

For Calendar Year 2018, the Concord Municipal Light Plant is projecting that it will have \$28.6 million in operating revenues and \$25.9 million in operating expenditures.

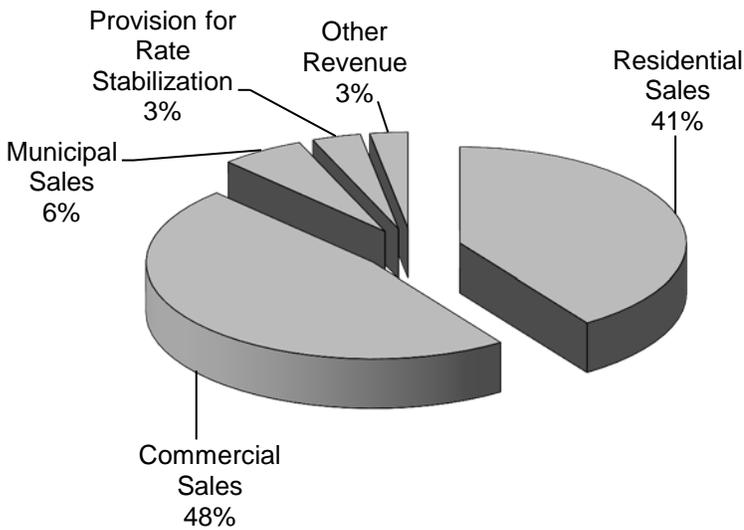
For revenues, funds collected from the sale of electricity are expected to increase from \$25.7 million in 2017 to \$26.8 million in 2018.

For expenditures, the primary cost is the power supply expense. From 2017 to 2018, it is forecast that the power supply expense will increase from \$19.0 million to \$19.2million. Purchased power expense is passed directly onto customers.

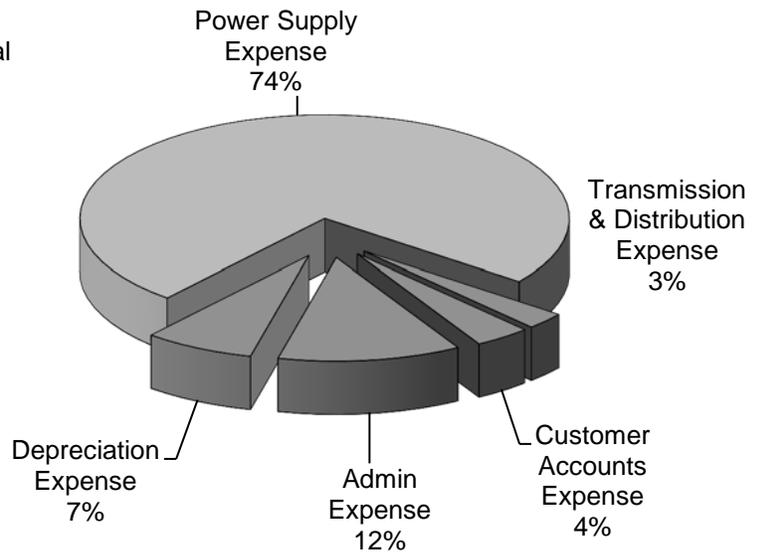
In 2018, the Light Plant is expected to have operating income of \$2,658,802 and net income from operations of \$902,684.

For the calculation of the Return per DPU formula, the sum of net income from operations (\$902,684) , Payment in Lieu of Taxes (\$461,000), Underground Surcharge (\$419,174) and CARES Surcharge (\$137,487) are added together and divided by the previous year's Cost of Plant for Returns Calculation (\$60,327,892) for Return Per DPU Formula of 3.18%.

2018 Operating Revenues
Totaling \$28,601,606



2018 Operating Expenditures
Totaling \$25,942,802



OPERATING REVENUES

	Calendar Year:			
	2015	2016	2017	2018
	Actual	Actual	Estimated	Budgeted
Sales of Electricity				
Residential Sales	\$ 11,427,849	\$ 11,072,975	\$ 11,558,670	\$ 11,591,632
Commercial and Industrial Sales	13,447,261	13,064,292	12,531,860	13,540,960
Municipal Sales	1,816,560	1,658,274	1,628,617	1,707,770
Miscellaneous Sales	108,859	-	-	-
Operating Revenues Billed Total	\$ 26,800,529	\$ 25,795,541	\$ 25,719,147	\$ 26,840,362
Net Change in Unbilled Revenues	(293,056)	(39,652)	-	-
Provision for Rate Stabilization	(1,319,076)	(868,274)	1,252,042	991,033
Electric Operating Revenues	25,188,397	24,887,615	26,971,189	27,831,395
Other Operating Revenues				
Telecom Rental and Fiber Lease		112,021	64,050	64,050
Underground Surcharge	361,337	381,558	406,271	419,174
CARES Surcharge	125,177	125,177	130,000	137,487
Income from Merchandise and Jobbing	153,874	166,908	100,000	100,000
Other Miscellaneous Operating Revenue	30,846	3,805	49,500	49,500
Audit Adjustment		(72,405)		
Other Operating Revenue	671,234	717,064	749,821	770,211
Operating Revenues Total	\$ 25,859,632	\$ 25,604,679	\$ 27,721,010	\$ 28,601,606

OPERATING SALES (kWh)

	Calendar Year:			
	2015	2016	2017	2018
	Actual	Actual	Estimated	Budgeted
Kilowatt-hours Sold:				
Residential Sales	72,156,349	70,075,635	70,571,218	69,966,585
Commercial and Industrial Sales	88,323,302	86,266,031	84,613,493	83,888,529
Municipal Sales	11,868,467	10,715,536	10,567,850	10,477,291
Electric Sales Billed Total	172,348,118	167,057,202	165,752,561	164,332,405
<i>Source: 2015 & 2016 data are actual data from audited financial statements; 2017 data is estimated from the year ending on September 30, 2017; 2018 data is proposed.</i>				

OPERATING EXPENSES (\$)

Calendar Year:	2015	2016	2017	2018
	Actual	Actual	Estimated	Budgeted
Operating Accounts:				
Power Supply Expense				
Power Supply Expense	\$ 17,188,829	\$16,789,040	\$ 19,042,840	\$ 19,273,974
Audit Adjustment				
	<u>\$ 17,188,829</u>	<u>\$16,789,040</u>	<u>\$ 19,042,840</u>	<u>\$ 19,273,974</u>
Transmission & Subtrans. Expenses:				
Operation	6,112	6,225	15,000	13,000
Maintenance	86,292	69,321	0	82,500
	<u>\$ 92,404</u>	<u>\$ 75,545</u>	<u>\$ 15,000</u>	<u>\$ 95,500</u>
Distribution Expenses:				
Operation	200,020	194,911	203,500	204,000
Maintenance	712,678	551,377	457,500	385,500
Audit Adjustment	7,187	6,743		
	<u>\$ 919,885</u>	<u>\$ 753,031</u>	<u>\$ 661,000</u>	<u>\$ 589,500</u>
Customer Accounts Expenses:				
Supervision	36,145	30,561	35,000	40,000
Meter-reading Labor and Expenses	19,416	22,158	20,000	20,000
Billing, Collecting, & Assoc. Costs	187,794	235,440	200,000	200,000
Uncollectible Accounts	(61)	17,183		5,000
Customer Information Services	295,735	103,570	408,480	691,256
Audit Adjustment	3,867	700,654		
	<u>\$ 542,896</u>	<u>\$ 1,109,566</u>	<u>\$ 663,480</u>	<u>\$ 956,256</u>
Administrative & General Expenses:				
Electric Operations				
Administrative & General Salaries	903,065	977,715	1,000,860	1,105,842
General Fund Services	394,670	412,907	420,000	430,500
Office Supplies and Expense	75,699	92,241	80,000	80,000
Outside Services Employed	141,212	141,017	142,000	86,000
Property Insurance	48,923	44,291	55,000	50,000
Employee Pensions & Group Ben.	635,091	661,190	680,000	628,347
Employee Training	79,756	72,195	60,000	61,000
Sick Leave/Vac. Leave/Holidays	444,398	465,737	410,000	422,000
Miscellaneous Expenses	29,376	231,375	54,200	55,000
Smart Grid Operations	13,604	17,002	11,000	11,000
Maintenance of General Plant	205,164	200,028	206,500	206,500
Audit Adjustment	64208	65,140	(290,246)	
	<u>\$ 3,036,098</u>	<u>\$ 3,025,452</u>	<u>\$ 3,119,560</u>	<u>\$ 3,136,189</u>
Operating Accounts Subtotal	\$21,780,113	\$21,752,634	\$ 23,501,880	\$ 24,051,419
Depreciation Expense	\$ 1,757,549	\$ 1,758,435	\$ 1,783,676	\$ 1,891,383
Operating Expenses Total	\$23,537,661	\$23,511,070	\$ 25,285,556	\$ 25,942,802
Source: 2015 & 2016 data are actual data from audited financial statements; 2017 data is estimated from the year ending on September 30, 2017; 2018 data is proposed.				

AUTHORIZED POSITIONS

Code	Position Title	July 1, 2018 - June 30, 2018		July 1, 2018 - June 30, 2019		
		Grade	# Positions	\$ Amount	# Positions	\$ Amount
Light Plant Operations						
	Director	EM-4	1	146,430	1	146,430
	Assistant Director	EM-3	1	122,199	1	122,199
	Power Supply & Rates Admin	EM-3	1	106,446	1	103,378
	Electrical Engineer	EM-2	1	106,715	1	106,715
	Financial Administrator	MP-4	1	89,080	1	93,838
	Civil Engineer	MP-3	1	87,168	1	87,168
	Customer Service Admin	MP-3	1	98,356	1	90,149
	Energy Conservation Coord.	MP-3	1	90,438	1	90,438
	Meter Supervisor	EM-1	1	86,674	1	86,674
	Utility Software Coordinator	MP-2	1	69,150	1	69,150
	Senior Eng. Technician	MP-2	1	77,516	1	76,936
	Engineering Technician	MP-1	1	67,339	1	67,339
	Office Accountant	MP-2	1	73,753	1	74,604
	Sr. Administrative Assistant	ACL-5	1	65,379	1	65,397
	Sr. Account Clerk	ACL-3	1.88	115,580	1.88	116,011
	Sr. Department Clerk	ACL-3	1	52,911	1	53,182
	Line Supervisor	EL-6	1	104,880	1	104,881
	Lead Line Worker	EL-5	3	280,416	3	280,441
	Lineworker, Grade 1	EL-4	3	267,012	3	263,570
	Lineworker, Grade 2	EL-3	0	0	0	0
	Lineworker, Grade 3	EL-2	2	118,814	2	118,642
	Utility Electrician	EL-3	1	75,064	1	75,064
	Meter Technician	EL-2	1	64,480	1	65,418
	Master Mechanic	TCL-5	1	73,268	1	73,268
	Crew Leader	TCL-5	1	68,325	1	68,403
	Equipment/Line Operator	TCL-4	1	58,902	1	58,903
	Building Maintenance Cust.	TCL-2	1	53,447	1	53,662
	FTE Subtotal		31.88	\$2,619,743	31.88	\$2,611,860
	Line Worker Stand-by Pay		1320 hrs.	48,783	1320 hrs.	48,326
	Engineering Stand-by Pay			31,320		31,320
	Salary Subtotal			2,699,845		2,691,506
	Allowance for Salary Increases					104,474
517X	Group Insurance:					
	Health, Life, Dental			280,000		308,000
	Retirement			403,508		423,095
	OPEB Contribution			10,478		15,509
	Soc. Sec. & Medicare Tax			40,000		42,500
	Clothing Allowance			3,600		3,600
	Benefits Subtotal			737,586		792,704
	Personnel Services Total			\$3,437,431		\$3,588,684

NET INCOME

	Calendar Year:			
	2015 Actual	2016 Actual	2017 Estimated	2018 Budgeted
Statement of Net Income				
Operating Revenues	\$ 25,859,632	\$ 25,604,679	\$ 27,721,010	\$ 28,601,606
Less Operating Expenses	<u>(23,537,661)</u>	<u>(23,511,070)</u>	<u>(25,285,556)</u>	<u>(25,942,802)</u>
Operating Income	\$ 2,321,971	\$ 2,093,609	\$ 2,435,454	\$ 2,658,803
Non-Operating Revenues (Expenses)				
Interest Income	\$ 37,816	\$ 122,590	\$ 50,000	\$ 50,000
Interest Expense	(232,863)	(207,918)	(152,200)	(130,125)
Other	29,192	31,255	(3,774)	-
Non-Operating Income Subtotal	\$ (165,855)	\$ (54,073)	\$ (105,974)	\$ (80,125)
Net Income Before Other Financing	\$ 2,156,116	\$ 2,039,536	\$ 2,329,480	\$ 2,578,678
Other Financing Financing (Uses)				
Loss on Disposal of Capital Assets	(145,877)	(24,154)		
Payment in Lieu of Taxes	(472,400)	(465,500)	(474,000)	(461,000)
Provision for Rate Refund	-			
Subtotal	\$ (618,277)	\$ (489,654)	\$ (474,000)	\$ (461,000)
Change in Net Position	\$ 1,537,839	\$ 1,549,882	\$ 1,855,480	\$ 2,117,678
Less				
Bond & Notes Principal	(797,500)	(705,000)	(667,500)	(658,333)
Undground Surcharge	(361,337)	(381,558)	(406,271)	(419,174)
CARES Surcharge	<u>(125,177)</u>	<u>(125,177)</u>	<u>(130,000)</u>	<u>(137,487)</u>
Net Income from Operations	253,825	338,147	651,709	902,684

NET POSITION

	Calendar Year:			
	2015 Actual	2016 Actual	2017 Estimated	2018 Budgeted
Change in Net Position				
Electricity Operations	\$ 1,537,839	\$ 1,549,882	\$ 1,855,480	\$ 2,117,678
Telecommunication Operations	<u>(94,938)</u>	<u>(90,592)</u>	<u>106,232</u>	<u>97,750</u>
Change in Net Position	1,442,901	1,459,290	1,961,712	2,215,428
Net Position				
Beginning of Year	43,890,161	45,333,062	46,792,352	48,754,064
End of Year	45,333,062	46,792,352	48,754,064	50,969,492

RETURN ANALYSIS

	Calendar Year:	2015	2016	2017	2018
		Actual	Actual	Estimated	Budgeted
Return per DPU Formula					
Net Income from Operations		253,825	338,147	651,709	902,684
Payment in Lieu of Taxes		472,400	465,500	474,000	461,000
Underground Surcharge		361,337	381,558	406,271	419,174
CARES Surcharge		125,177	125,177	130,000	137,487
Return per DPU Formula		1,212,739	1,310,382	1,661,980	1,920,345
Cost of Plant					
Cost of Plant (Year End)		59,268,832	60,327,892	64,233,513	64,578,987
Cost of Plan for Return Calculations		59,268,832	59,298,362	60,327,892	64,233,513
Return per DPU Formula Percentage					
Return per DPU Formula		1,212,739	1,310,382	1,661,980	1,920,345
Cost of Plan for Return Calculations		59,268,832	59,298,362	60,327,892	64,233,513
DPU Return Percentage		2.16%	2.21%	2.80%	3.18%
Effective Return Percentage					
Net Income from Operations		253,825	338,147	651,709	902,684
Cost of Plan for Return Calculations		59,268,832	59,298,362	60,327,892	64,233,513
Effective Return Percentage		0.45%	0.57%	1.10%	1.50%

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.

DEBT SERVICE

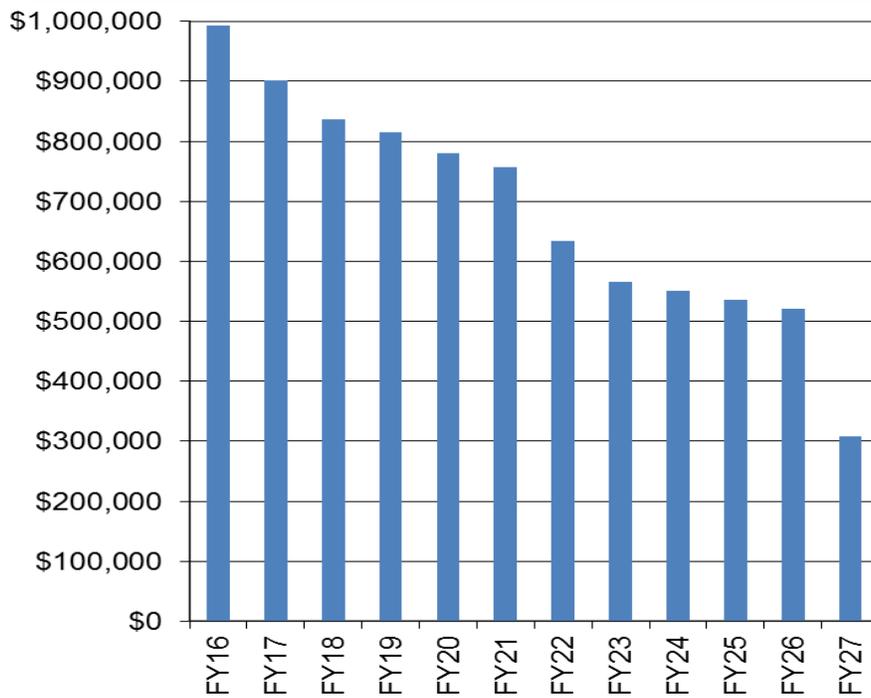
	FY16 Actual	FY17 Actual	FY18 Estimated	FY19 Budgeted
Long Term Debt (Cash Basis):				
Principal	\$767,500	\$705,000	\$662,500	\$662,500
Interest	224,938	196,174	174,938	152,063
Totals	\$999,133	\$901,174	\$837,438	\$814,563

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	FY16 Actual	FY17 Actual	FY18 Estimated	FY19 Budgeted
Financial & Administrative Services:				
Town Manager's Office	\$101,540	\$98,286	\$103,693	\$103,454
Town Accountant	53,275	55,286	56,600	57,638
Treasurer-Collector	56,507	57,414	58,863	58,446
Finance Administration	44,597	46,905	50,702	48,517
Human Resources	57,403	62,701	65,371	68,028
Town House Facilities	5,612	5,633	5,846	5,879
Subtotal	318,934	326,225	341,075	341,962
Natural Resource Protection:				
Planning	\$10,627	\$11,156	\$11,463	\$11,857
Natural Resources	\$20,556	\$21,360	\$21,740	\$22,423
Subtotal	\$31,183	\$32,516	\$33,203	\$34,280
Landscaping @ Substations:				
Parks & Trees	\$7,225	\$7,225	\$7,225	\$8,764
GIS Administrator:				
CPW Engineering	\$2,967	\$0	\$0	\$0
Adjustment (Fiscal to Calendar Year)	\$34,361	\$46,941	\$38,497	\$45,494
Total	\$394,670	\$412,907	\$420,000	\$430,500
Calendar Year for General Fund Services	2015	2016	2017	2018
Payment in Lieu of Taxes (PILOT)	\$472,400	\$465,500	\$474,000	\$461,000
Calendar Year of PILOT Payment	2015	2016	2017	2018

CMLP Debt Obligations



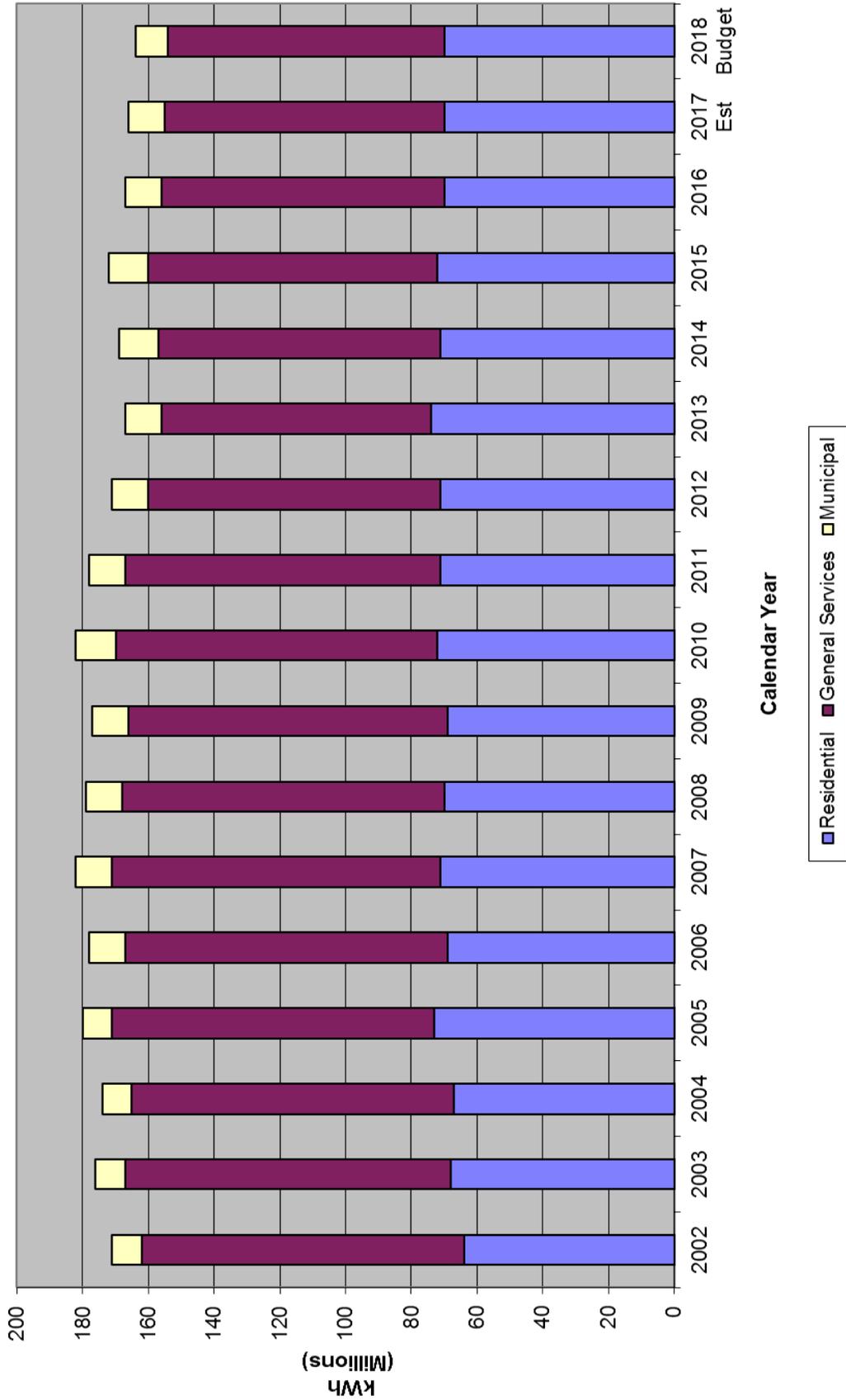
Fiscal Year	Principal	Interest	Total
FY16	767,500	224,938	992,438
FY17	705,000	196,174	901,174
FY18	662,500	174,938	837,438
FY19	662,500	152,063	814,563
FY20	650,000	129,375	779,375
FY21	650,000	106,875	756,875
FY22	550,000	84,375	634,375
FY23	500,000	65,625	565,625
FY24	500,000	50,625	550,625
FY25	500,000	35,125	535,125
FY26	500,000	21,625	521,625
FY27	300,000	7,500	307,500
Totals	█ \$6,947,500	█ \$1,249,238	\$9,195,871

Concord Municipal Light Plant
kWhs Sold, Revenues, Expenses, and Operating Income
(2002-2016 Actual, 2017 Estimated, and 2018 Budgeted)

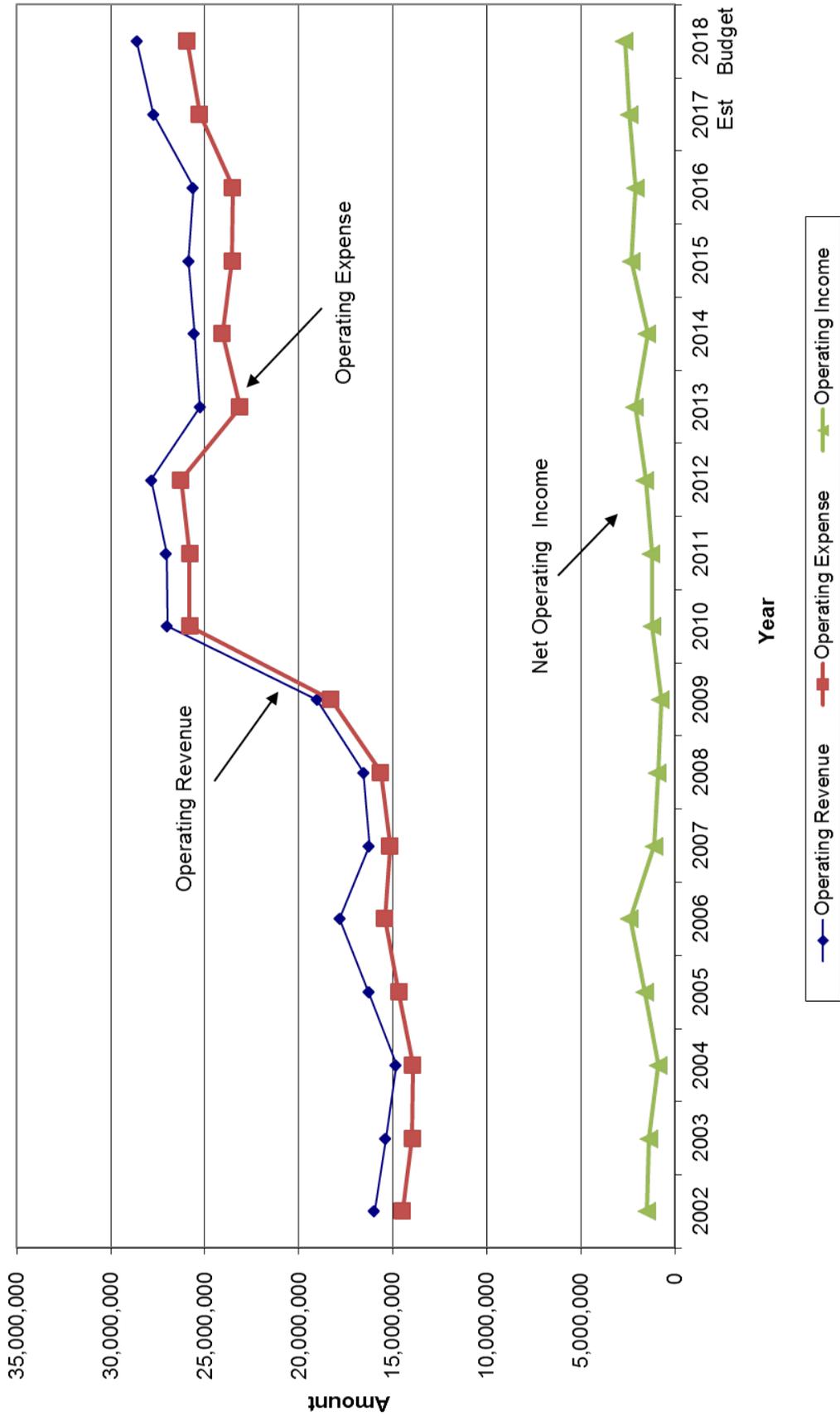
Calendar Year	kWhs Sold (Millions)				Operating Revenues	Operating Expenses	Operating Income
	Residential	Commercial	Municipal	Total			
2002	64	98	9	171	15,975,614	14,495,030	1,480,584
2003	68	99	9	176	15,366,040	13,976,203	1,389,837
2004	67	98	9	174	14,825,982	13,945,302	880,680
2005	73	98	9	180	16,298,994	14,690,064	1,608,930
2006	69	98	11	178	17,829,056	15,433,837	2,395,219
2007	71	100	11	182	16,248,165	15,155,781	1,092,384
2008	70	98	11	179	16,548,218	15,647,921	900,297
2009	69	97	11	177	19,036,385	18,302,574	733,811
2010	72	98	12	182	27,001,169	25,793,559	1,207,610
2011	71	96	11	178	27,040,652	25,793,559	1,247,093
2012	71	89	11	171	27,848,934	26,283,418	1,565,516
2013	74	82	11	167	25,253,854	23,142,707	2,111,147
2014	71	86	12	169	25,547,828	24,078,883	1,468,945
2015	72	88	12	172	25,859,632	23,537,661	2,321,971
2016	70	86	11	167	25,604,679	23,511,070	2,093,609
2017 Est	70	85	11	166	27,721,010	25,285,556	2,435,454
2018 Budget	70	84	10	164	28,601,606	25,942,802	2,658,802

Note: Dues to a reclassification, operating revenues for 2015 to 2018 have been slightly restated from previous budget book presentations.

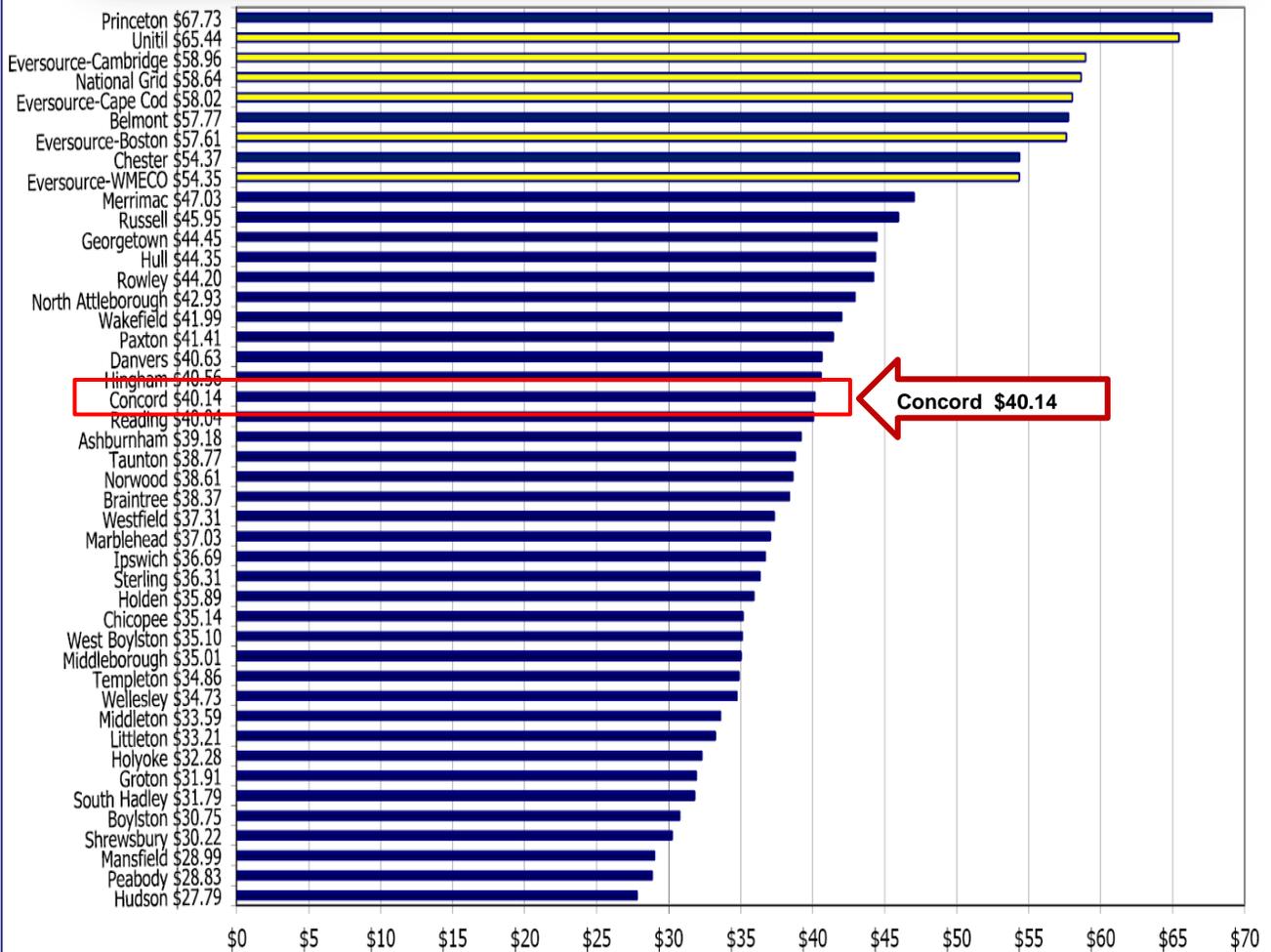
Concord Municipal Light Plant
Electricity Sales



Light Fund
Operating Revenue, Operating Expense, and Operating Income

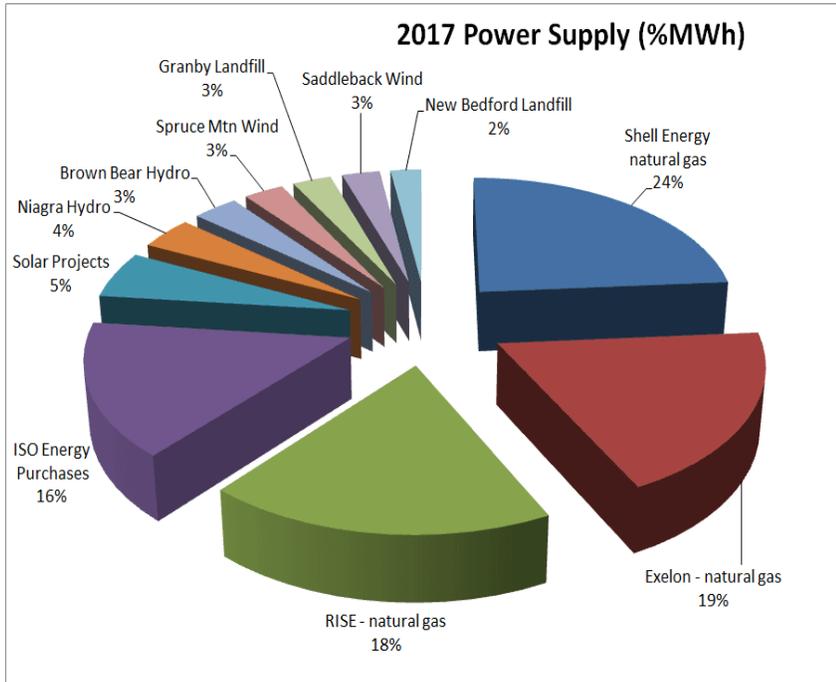


2017 Average Residential Monthly Cost of 250 kWh



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.



In 2017, the power supply portfolio is shown in the graph to the left. Seventy-seven percent (77%) of the electricity that the Town used was purchased from conventional sources, primarily suppliers of electricity generated from natural gas. 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

- In 2017 Concord Town Meeting authorized CMLP to borrow an additional \$1,000,000 to fund the capital expenses associated with continued expansion of commercial and residential Internet services.
- In March 2014, High Speed Internet service was made available to both commercial and residential customers of CMLP.
- Over 1000 High Speed Internet customers were connected by January 2018, An increase of over 300 since December 2016. The 2017 plan assumes growth to about 1300 customers by year end 2018
- In 2017 CMLP completed major technology upgrades which enables support for up to 3000 customers.

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				
	2015 Actual	2016 Actual	2017 Estimated	2018 Budgeted
Operating Income	\$ 357,013	\$ 571,690	\$ 754,492	\$ 976,500
Operating Expense	\$ (449,061)	\$ (653,249)	\$ (639,566)	\$ (872,250)
Net Position	\$ (324,157)	\$ (414,749)	\$ (308,517)	\$ (210,767)

Description

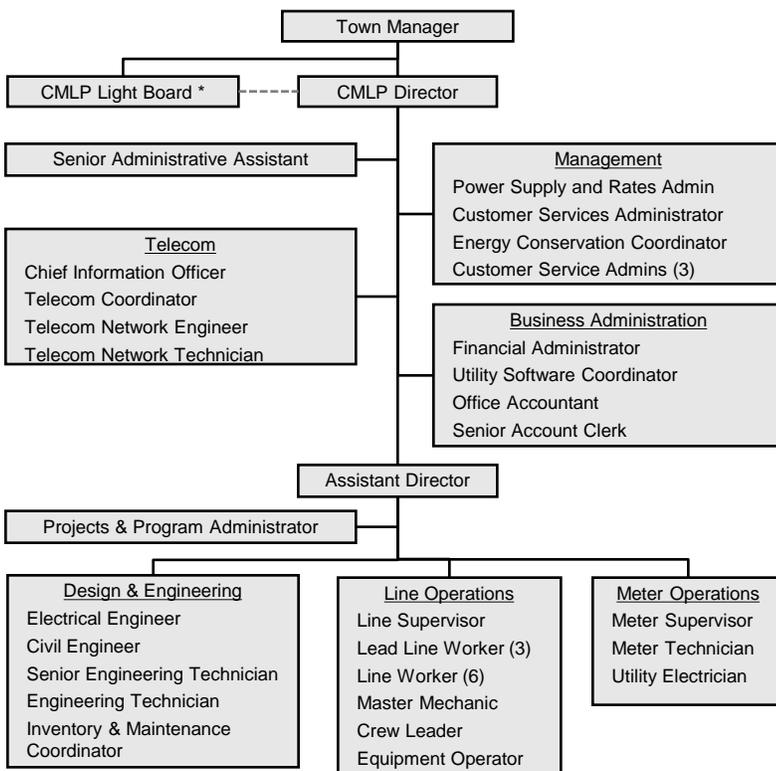
The CMLP Telecommunications Division provides telecommunication services to the electric utility, supports the Town's municipal operations and offers High Speed Internet service to Concord residents and businesses.

In 2016, the Telecommunications Division staff was managed by the CIO and included a a Telecommunications Coordinator, and three Telecomm Technicians. The CIO also manages the Town's Information Technology Department. In 2018, a Network Engineer has been added to the staff. The Engineer is under contract to provide support to Bedford as well as Concord.

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

2017 was another year of strong, steady growth for the broadband business. Revenue from residential and business subscribers grew by 39% and the number of subscribers grew to over 1000. Average monthly revenue was up 34 percent. 2017 Revenue grew 38% overall and exceeded the budget forecast by 6% which was about \$42,000. Operating Expenses, remained level in 2017 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, in 2017 an average of 23 new subscribers were added each month vs. 26 per month in 2016. CMLP will continue to address demand in a controlled way, 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 borrowing authorization which enabled CMLP to finance the startup and initial capital costs of retail broadband telecommunication services. 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. The 2017 plan continues to repay the intra-fund loan recorded within the Light Plant's operations. An additional \$1 million in borrowing was authorized by the 2017 Town Meeting. This authorization enables continued growth in new service connections.

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 are both 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:

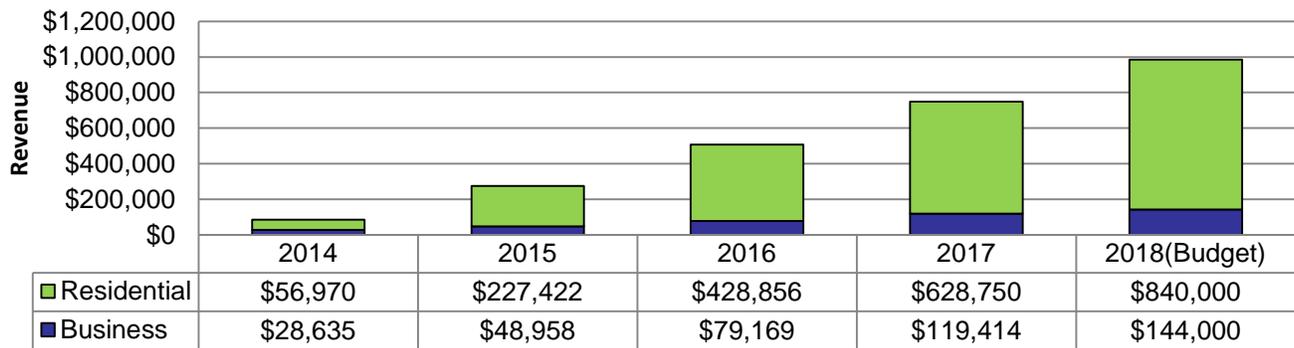
The telecommunications needs of Town Departments is constantly evolving. Separately, neither the Town or the Light Plant could realistically afford to have in-house resources to help meet the requirements. The resulting dependency on vendors and suppliers would be costly and responsiveness would also 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 and given the close interrelationship between Information Technology and Telecommunications. In 2018 CMLP is extending this municipal cooperation to include the Town of Bedford.

2016 Broadband Service Growth Results

As of March 2018 the Broadband services had been available for four years. In that time 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.

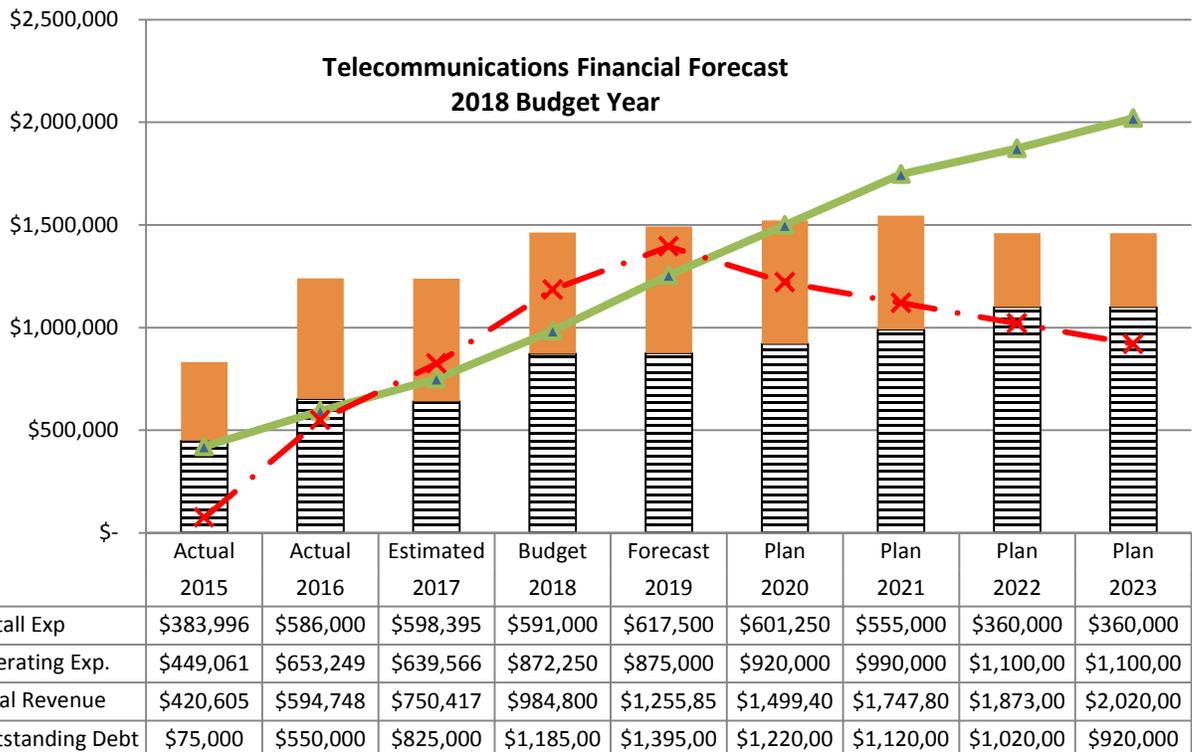
Concord Light Broadband

Annual Billing



Financial Planning

The chart provides a history and an overview of the five-year financial plan for the Broadband Service. Outstanding debt should peak in 2019. By 2020 annual operating revenue should exceed the total of annual operating and capital expenses.



FINANCIAL INFORMATION

	Calendar Year:	2015	2016	2017	2018
		Actual	Actual	Estimated	Budgeted
Operating Revenue					
Residential & Commercial Fees		\$ 293,405	\$ 532,974	\$ 746,952	\$ 966,000
Municipal Fees		63,600	38,600	3,465	5,000
Other		8	116	4,075	5,500
Operating Revenue Total		\$ 357,013	\$ 571,690	\$ 754,492	\$ 976,500
Operating Expenditures					
Broadband Bandwidth		\$ 98,707	\$ 109,388	\$ 125,945	\$ 186,000
Operating		242,040	350,924	381,596	450,250
Depreciation		8,854	19,777	19,777	22,000
Customer Accounts		19,917	30,800	20,951	36,000
Distribution		79,543	142,360	91,297	178,000
Operating Expense Total		\$ 449,061	\$ 653,249	\$ 639,566	\$ 872,250
Operating Income (Loss)		\$ (92,048)	\$ (81,559)	\$ 114,926	\$ 104,250
Nonoperating Revenues (Expenses)					
Interest Income		\$ -	\$ -	\$ -	\$ -
Interest Expense		(4,371)	(15,507)	(12,769)	(12,000)
Other		1,481	6,474	4,075	5,500
Operating Expense Total		\$ (2,890)	\$ (9,033)	\$ (8,694)	\$ (6,500)
Net Income (Loss)		\$ (94,938)	\$ (90,592)	\$ 106,232	\$ 97,750
Net Position					
Net Position at Beginning of Year		\$ (229,219)	\$ (324,157)	\$ (414,749)	\$ (308,517)
Net Position at End of Year		\$ (324,157)	\$ (414,749)	\$ (308,517)	\$ (210,767)

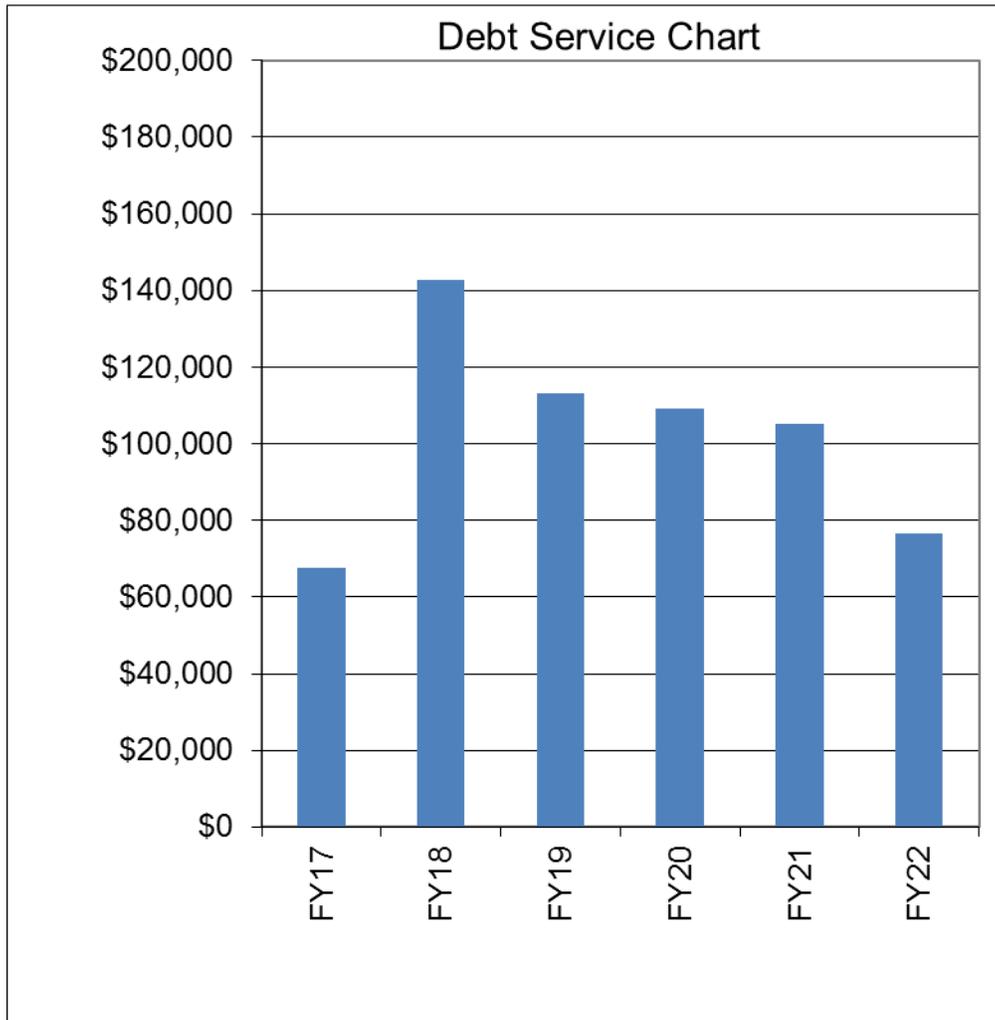
Source: 2015 & 2016 data are actual data from audited financial statements; 2017 data is estimated from the year ending on September 30, 2017; 2018 data is proposed.

AUTHORIZED POSITIONS

			FY18 Budget		FY19 Proposed	
			FTE	Amount	FTE	Amount
Telecommunications						
Chief Information Officer	MP-7		0.40	62,726	0.40	62,726
Telecom Coordinator	MP-4		1.00	90,928	1.00	91,051
Network Engineer	MP-4		1.00	90,000	1.00	90,000
Telecom Network Technician	MP-2		3.00	234,526	3.00	234,649
FTE Subtotal			5.40 FTEs	\$478,180	5.40 FTEs	\$478,426

TELECOM DEBT SERVICE

Fiscal Year	Principal	Interest	Total
FY17	50,000	17,444	67,444
FY18	125,000	17,750	142,750
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
Totals	\$550,000	\$63,694	\$613,694



THIS PAGE INTENTIONALLY LEFT BLANK