



Article 24

FUNDING FOR TELECOMMUNICATIONS SERVICES

ARTICLE 24. To determine whether the Town will vote to raise and appropriate, transfer from available funds in the Treasury or authorize the Town Treasurer with the approval of the Select Board to borrow by the issuance of bonds or notes under the provisions of Chapter 44 of the Massachusetts General Laws, the sum of \$1,000,000, or any other sum, to be expended under the direction of the Town Manager for the purpose of providing telecommunication services to Concord residents and businesses, including broadband internet services and telephone, said funds to be used for equipment, contract services and other functions necessary to offer telecommunications services for a fee, the cost of such services to be paid for by the users of such services, and further that any premium received by the Town upon the sale of any bonds or notes approved by this vote, less any such premium applied to the payment of the costs of issuance of such bonds or notes, may be applied to the payment of costs approved by this vote in accordance with Chapter 44, Section 20 of the Massachusetts General Laws, thereby reducing the amount authorized to be borrowed to pay such costs by a like amount, provided further that while any bonds or notes issued pursuant to this vote will be general obligations of the Town, and it is the Town's intent that debt service is to be paid from revenues of the Telecommunications Fund established by vote under Article 48 of the 2013 Annual Town Meeting, or take any other action relative thereto.



Article 24

Funding for Telecommunications Services

Purpose

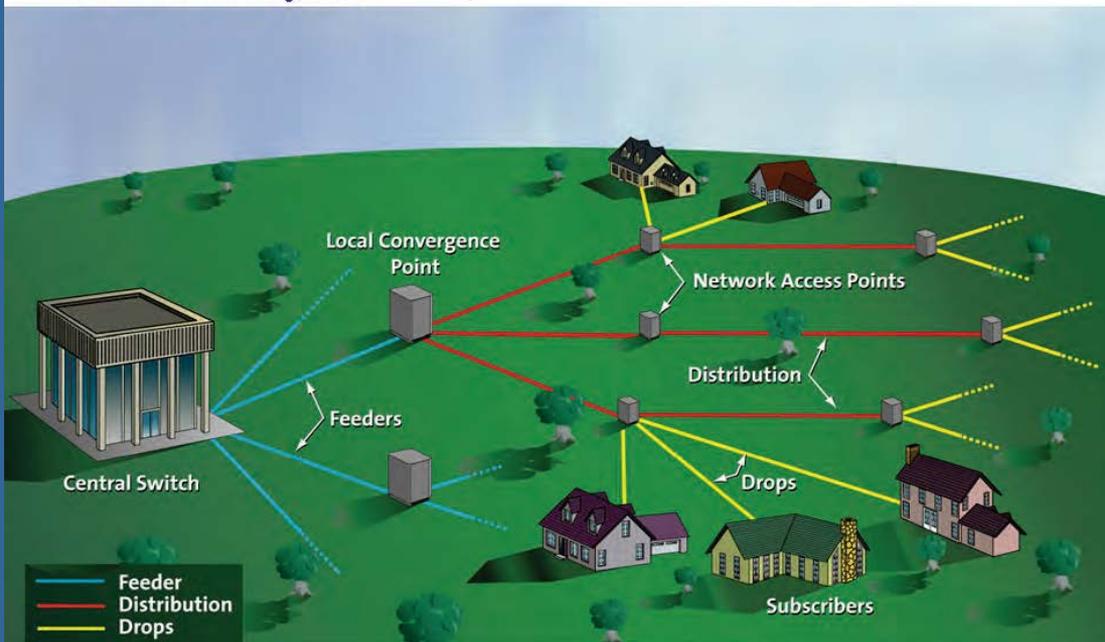
- Authorizes the Town to borrow funds to expand CMLP's telecommunications operations in order to provide high speed Internet service to business and residential subscribers. Those funds are to be repaid through fees charged to users of the service.
- The funds will be used to:
 - Finance expenses related to connecting customers to the fiber optic network, such expenses are recovered over time through the rates.
 - Procure equipment and services needed to expand the broadband data service operated by the Concord Municipal Light Plant (CMLP).
- Neither Tax or Electricity revenues will be used to fund or repay expenses related to telecommunications operation.

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Funding for Telecommunications Services Background



Generic Layout Gigabit Passive Optical Network



Graphic: Corning Incorporated



CMLP Fiber Optic Network

- Construction completed in 2012
- Included everything except “Drops”
- Supported “Smart Grid” already

2013 Funded the Startup

- \$1M Initially authorized in 2013
- Added high capacity “upstream” connections to the Internet
- Added central switch equipment to handle data traffic
- Business Administration and Service Management processes
- Already has over 800 customers

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Funding for Telecommunications Services Service Offering

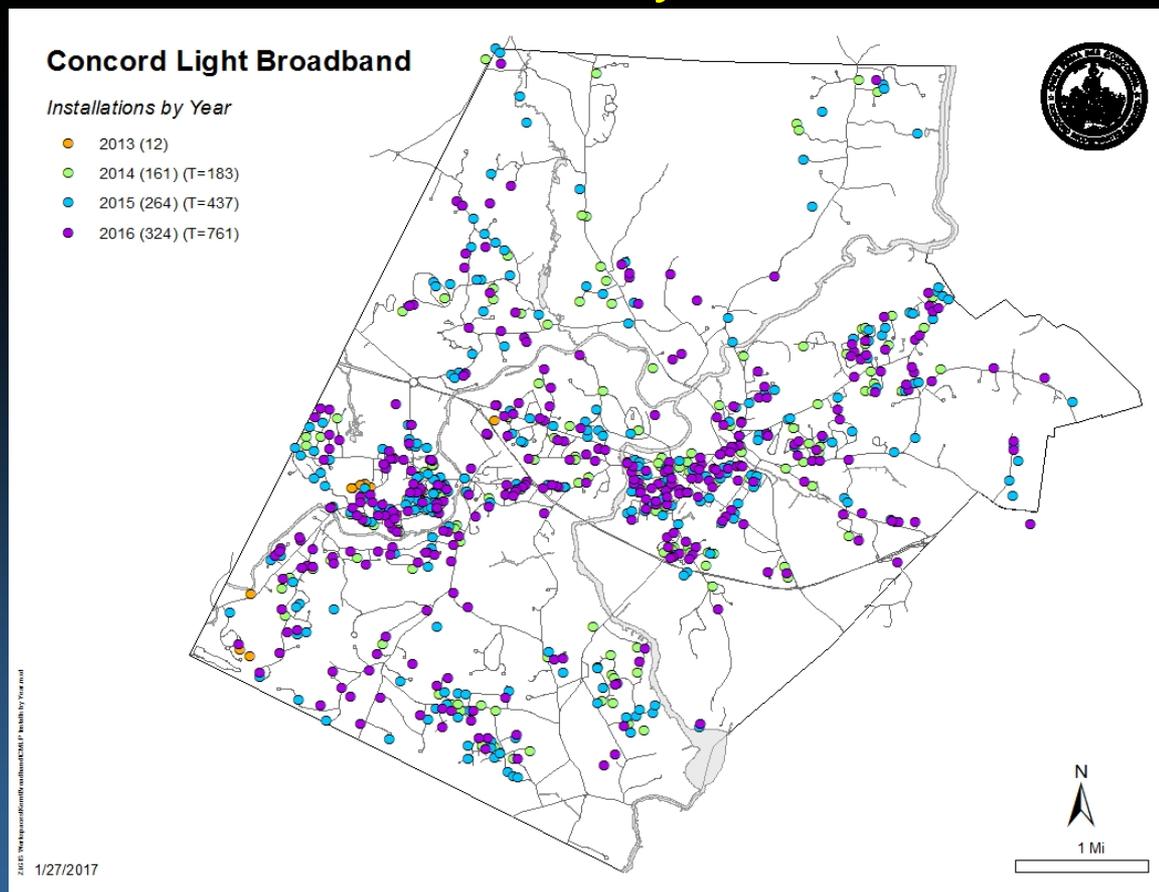
Since March 2014 CMLP has offered High Speed Internet to business and residential customers.

- **Provides another option where only one existed before**
 - A variety of speeds are available from 25 Mbps to 200 Mbps
 - Top speeds of up to 1 gigabit per second are possible
 - Expands on existing CMLP programs
- **Increased competition within Concord**
 - Rates compare favorably to other suppliers
 - Voice, Video and other Services can be accessed by customers through the data connection. (e.g. Vonage, Netflix, Hulu, Gmail, etc. details at www.concordma.gov/broadband)



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Funding for Telecommunications Services Installations by Year

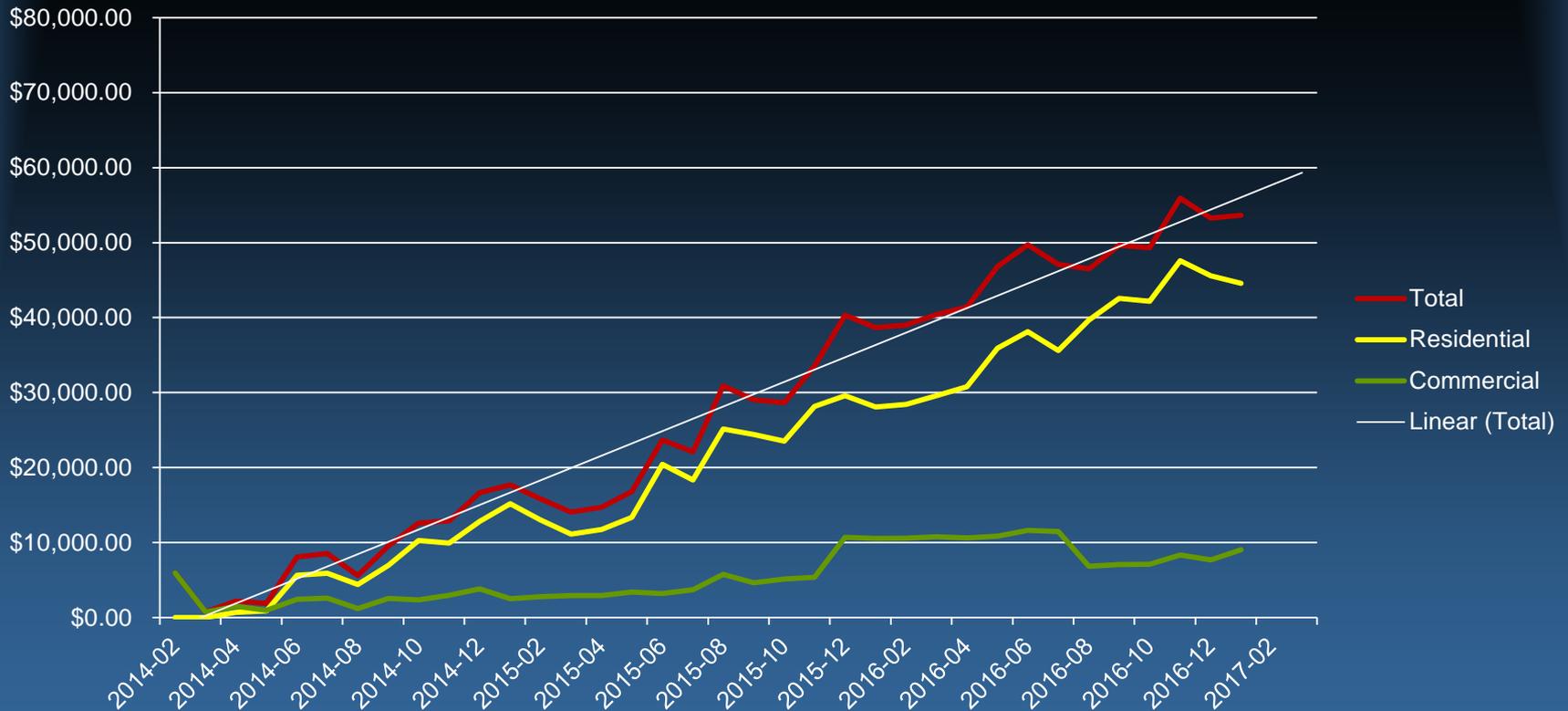




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Funding for Telecommunications Services Broadband Revenue Growth

Internet Service Billing February 2014 to January 2017





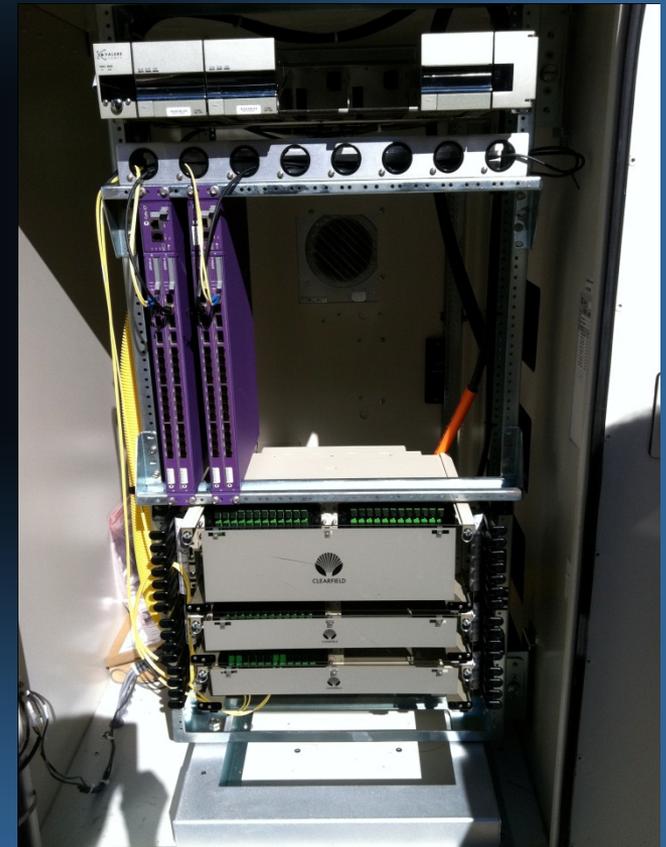
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Funding for Telecommunications Services

Use of Funds

The 2017 borrowing authorization will enable the growth to continue.

- **Customer Installations:**
 - ✓ \$600,000 to finance new customer drops
 - ✓ Each new customer requires a new connection which costs \$1500 to \$2000 on average.
 - ✓ Installations are done in response to customer orders.
 - ✓ By 2020 the installations can be funded by telecommunications revenues
- **Additional Routing Equipment**
 - ✓ Up to \$200,000 is expected to be spent on larger routers in response to the size of the subscriber base.

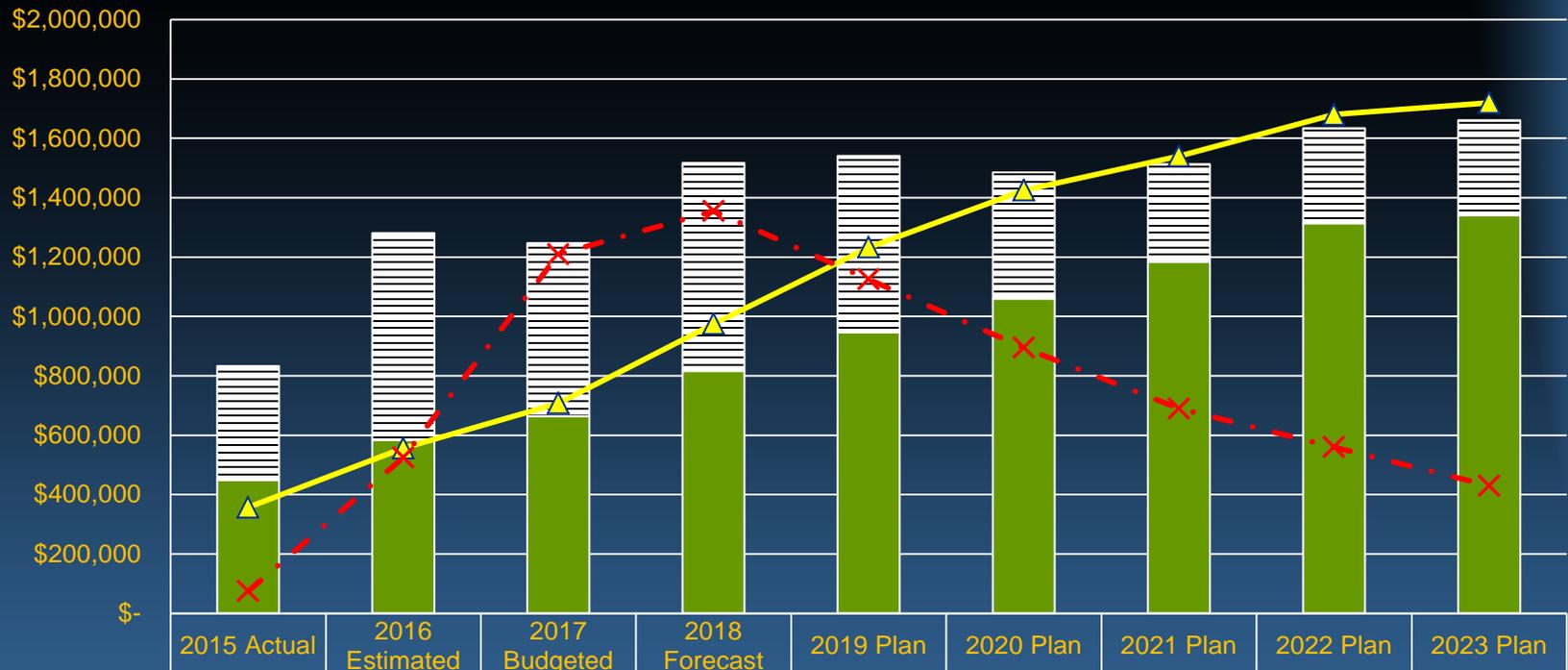




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Funding for Telecommunications Services Broadband Business Plan

Telecommunications Financial Forecast



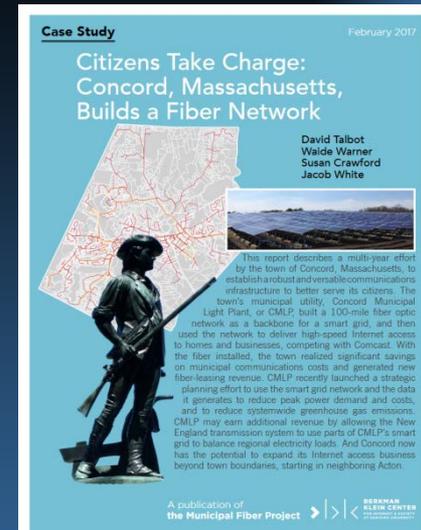
Installation Expense	383,996	697,274	583,000	700,000	595,000	425,000	330,000	320,000	320,000
Operating Expenses	449,061	583,480	664,250	817,000	946,000	1,060,000	1,183,000	1,314,000	1,341,000
Operating Revenue	357,013	556,248	708,000	975,200	1,233,000	1,425,000	1,540,200	1,680,400	1,720,000
Outstanding Debt	75,000	525,000	1,210,000	1,355,000	1,125,000	895,000	690,000	560,000	430,000



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Funding for Telecommunications Services Broadband Benefits

- **Economic:**
 - Consumers pay less in communities with municipal options for telecommunications than those that do not.
 - Supports Property Values, Business Activity, Occupancy
- **Supports electric utility operations**
 - Depreciation, Data Collection, Control Operations
- **Supports municipal operations**
 - Data Networks are critical to Town Operations creates the opportunity to have key skills in house
 - Provides cost effective connections for Town buildings
- **Concord's History has been documented**
 - <https://cyber.harvard.edu/publications/2017/MF/Concord>





Article 48

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Questions?

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