

Evaluated Broadband Project Presentations - Pros and Cons

Last updated: March 13, 2018

The Broadband Committee is responsible for advising the Charlemont Select Board on broadband solutions for Charlemont and making recommendations to the Select Board regarding broadband solutions for Charlemont. Over the last several years, the Broadband Committee has reviewed a number of different technologies, solutions and business models, and we continue to review new plans and solutions that are brought before us.

Currently, the Broadband Committee has recommended a town-owned municipal fiber-optic network as "Plan A". The committee is using a state grant from EOHEd (the Executive Office of Housing and Economic Development) to create a detailed network design and secure detailed construction cost estimates to determine if the project is financially feasible.

This document summarizes the pros and cons of all of the major alternatives the Broadband Committee has evaluated, including both Plan A and other potential Plan B options. These Plan B solutions could be potential options for the town if Plan A is not feasible. The Plan B options are not listed in any particular order.

Town-Owned Fiber Network (Plan A)

Summary: A municipal fiber to the home network under the state EOHEd Grant Program. Partnering with Westfield Gas & Electric for design and construction management.

Pros:

- "Future-proof" fiber solution
- Town control over coverage area and selection of service providers
- Town controls whether capital debt service costs are paid by subscribers (higher monthly charge), through property taxes, or some combination.
- Lowest subscriber costs for fiber to the home service (\$70 to \$100 depending on take rate and debt service allocation)
- Town has received state grant for \$960,000
- State has approved additional funding to cover cost overruns for make-ready costs for projects under this grant program (but only this program)
- This is the solution being implemented by most other non-cable towns (Colrain, Rowe, Heath, Leyden, Ashfield, Cummington, Plainfield, Windsor, Shutesbury, Otis, Leverett, Mount Washington, Alford, Becket, etc.)
- Potential for cost savings through regionalization
- Towns that have incumbent cable providers are looking at building municipal fiber networks
- Municipal networks allow services to be treated equally respecting "net neutrality".

Cons:

- Town must borrow for the initial capital investment (\$1.75 million) in addition to state grant
- Town assumes network operation and network maintenance risks
- Town must insure network assets against catastrophic loss

- Town will need to put the ISP and network operation/maintenance contract out to bid every several years. Potential bidders include Westfield Gas & Electric, Wired West, OTT, Crocker Communications or others.
- Town faces competition risk from future technologies that might serve the area at a lower price for a similar service level

Matrix

Summary: Fiber to the home network under the state Flexible Grant Program.

http://broadband.masstech.org/sites/mbi/files/documents/flexible-grant-proposals/2018-MBI-01_ResponseToNOFA_Matrix_Charlemont_%2011-28-2017.pdf

Pros:

- Private ownership of network reduces maintenance risk to the town
- Network construction would be paid for by Matrix
- Knowledgeable and helpful sales representative
- “Future-proof” fiber solution
- Buy back provision for town to acquire network assets
- Cheaper than town-owned network if state funding is approved and depending on make-ready costs

Cons:

- Minimum monthly cost is \$100-\$105 per month (higher for 100Mbps service)
- \$500 installation charge and a two year service commitment required
- Requires 366 homes (a minimum of 6 homes / mile served, around 53% of Charlemont homes) to pre-subscribe before network will be built
- Matrix has limited experience as a consumer ISP
- Town is locked in to a single provider (private for-profit company)
- Buy back provision is the primary recourse for poor service
- Town would be responsible for all make-ready costs, a highly uncertain component of the total cost. No additional state funding is available to cover overruns.
- State funding would be only on a reimbursement basis after the project is completed.
- Matrix has poor track record of receiving approval for state broadband funding

Crocker/ Fujitsu

Summary: Fiber to the home network (partial coverage) under the state Flexible Grant Program

http://broadband.masstech.org/sites/mbi/files/documents/flexible-grant-proposals/2018-MBI-01_ResponseToNOFA_Crocker_Charlemont_11-28-2017.pdf

Pros:

- Private ownership reduces maintenance risk to the town
- Network and home electronics would be subsidized by Crocker/Fujitsu.
- Local company with contracts to serve middle mile customers
- “Future-proof” fiber solution
- High likelihood of approval for state funding

Cons:

- Fixed monthly cost (\$99.99 base cost).
- Subscribers would pay either a monthly lease fee or would need to purchase the home electronics outright. (The amount of this was not specified in the proposal evaluated. Crocker representatives have indicated that they are continuing to “tweak” the terms.)
- Subscribers will be responsible for the cost of connecting fiber from the street to their home.
- Will build out only as far as the money goes; will not serve everyone. Estimated 50% to 60% of town as part of the initial build out.
- Town is locked in to single provider (private for-profit company)
- No recourse for poor service

WiValley

Summary: No formal proposal for Charlemont- wireless-fiber hybrid presentation to the broadband committee that could utilize the state Flexible Grant Program.

http://broadband.masstech.org/sites/mbi/files/documents/flexible-grant-proposals/2018-MBI-01_ResponseToNOFA_WiValley_11-10-2017.pdf

Pros:

- Low initial cost of service (from \$60 to \$110 per month depending on speed, higher cost for business class service)
- Capital investment covered completely by the state grant program
- Fast deployment (6-12 months)
- Regional wireless model allows for some economies of scale
- Solution preferred by Hawley, Savoy, possibly Florida and Monroe

Cons:

- Fiber deployment is unlikely to be actualized
- Fiber buildout relies on overlashing and ownership of the new fiber assets by MBI. This has not been allowed in the past and MBI has said it won't be allowed.
- Would use our "one-shot" grant money, no state funding for fiber later on
- Slower speeds than fiber
- Uneven service levels (some homes will not be able to get fastest service)
- Will not meet the FCC definition of broadband for some homes
- Maintenance and insurance of assets born by the town(s)
- State funding would be only on a reimbursement basis after the project is completed.
- History of failures with other local wireless projects from other providers
- May raise citizen concerns over possible health impacts (the science is contradictory)

Comcast

Summary: No formal proposal, but Comcast met with town officials and verbally presented information about bringing Comcast service to Charlemont. Comcast would require our full state grant allocation (\$960,000) plus an additional \$1.1 million to serve 75% of residents or \$1.7 million to serve 96% or more of residents.

Pros:

- National brand with well-known service offerings
- Subscribers could purchase cable TV as well as internet

- Regional pricing is regulated; we would receive same pricing/packages as 35 other Western Mass towns.
- Private ownership eliminates maintenance and insurance risks to the town

Cons:

- No written proposal was provided to the town or submitted to the state
- State officials said no additional state funding is available to be used
- Comcast expressed concern over the legality of direct payment from the town
- Any town funding would likely have to be paid indirectly through MBI to attempt to comply with municipal finance law
- Town would have to borrow \$1.7 million to cover 96% of residents
- Town borrowing would have to be repaid from taxes, not subscriber fees
- Town is locked in to single provider (private for-profit company)
- Comcast has poor reputation for service (in the top 20 most hated companies in America in a 2018 survey reported in USA Today, <https://www.usatoday.com/story/money/business/2018/02/01/bad-reputation-americas-top-20-most-hated-companies/1058718001/>)
- No recourse for poor service
- No ability to negotiate or change pricing or packages
- Slower internet speeds than fiber
- Many Massachusetts municipalities are considering or actively building fiber networks as an alternative to Comcast, including a number in western Mass.

WiredWest

Summary: The original WiredWest solution was a regional multi-town fiber to the home network. The current role of WiredWest would be to act as a regional ISP/operator to run town-owned fiber networks cooperatively. WiredWest is one potential option for ISP/operator if we build a town-owned network.

- Regional multi-town fiber to the home network no longer offered.

Axia Networks

- Withdrew from consideration