

LEGISLATIVE COMMITTEE MINUTES

SB170

Bill as Introduced

SB 170 - AS INTRODUCED

2017 SESSION

17-0794
06/01

SENATE BILL **170**

AN ACT relative to the authority of towns to issue bonds for the expansion of broadband infrastructure.

SPONSORS: Sen. Kahn, Dist 10; Rep. Bordenet, Ches. 5

COMMITTEE: Public and Municipal Affairs

ANALYSIS

This bill permits municipalities to issue bonds for the purpose of providing or expanding broadband infrastructure.

Explanation: Matter added to current law appears in **bold italics**.
 Matter removed from current law appears [~~in brackets and struck through~~].
 Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Seventeen

AN ACT relative to the authority of towns to issue bonds for the expansion of broadband infrastructure.

Be it Enacted by the Senate and House of Representatives in General Court convened:

- 1 1 Municipal Finance; Purpose of Issue of Bonds or Notes. Amend RSA 33:3 to read as follows:
2 33:3 Purpose of Issue of Bonds or Notes. A municipality or county may issue its bonds or notes
3 for the acquisition of land, for planning relative to public facilities, for the construction,
4 reconstruction, alteration, and enlargement or purchase of public buildings, for other public works
5 or improvements of a permanent nature including broadband infrastructure as defined in
6 RSA 38:38, I(e), ~~to be purchased or constructed in areas not served by an existing broadband~~
7 ~~carrier or provider,~~ for the purchase of departmental equipment of a lasting character, for the
8 payment of judgments, and for purposes of economic development which shall include public-private
9 partnerships involving capital improvements, loans, and guarantees. The public benefit in any
10 public-private partnership must outweigh any benefit accruing to a private party. Bonds or notes
11 for the purposes of economic development may be issued only after the governing body of the
12 municipality or county has held hearings and presented the public benefit findings to the public and
13 after such issuance has been approved by the legislative body. A municipality or county shall not
14 issue bonds or notes to provide for the payment of expenses for current maintenance and operation
15 except as otherwise specifically provided by law.
- 16 2 Definitions; Revenue-Producing Facilities. Amend RSA 33-B:1, VI to read as follows:
17 VI. "Revenue-producing facilities" means water works, broadband infrastructure as defined
18 in RSA 38:38, I(e), ~~purchased or constructed in areas not served by an existing broadband carrier~~
19 ~~or provider,~~ sewerage systems, sewage treatment or disposal facilities, solid waste disposal or
20 resource recovery facilities, parking facilities, facilities for the production, generation, transmission,
21 or distribution of electricity or gas, any other real or personal property or interests in a municipality
22 or regional water district owned or controlled by the municipality or regional water district, from
23 the operation of which revenues are or are expected to be derived by the municipality, or regional
24 water district, and qualifying energy conservation and clean energy improvements for which a
25 municipality provides financing pursuant to RSA 53-F.
- 26 3 Effective Date. This act shall take effect 60 days after its passage.

Amendments

Sen. Kahn, Dist 10
February 14, 2017
2017-0455s
06/03

Submitted to
Committee - not
brought forward



Amendment to SB 170

1 Amend RSA 33:3 as inserted by section 1 of the bill by replacing it with the following:

2

3 33:3 Purpose of Issue of Bonds or Notes. A municipality or county may issue its bonds or notes
4 for the acquisition of land, for planning relative to public facilities, for the construction,
5 reconstruction, alteration, and enlargement or purchase of public buildings, for other public works
6 or improvements of a permanent nature including broadband infrastructure as defined in RSA
7 38:38, I(e) ~~[- to be purchased or constructed in areas not served by an existing broadband carrier or~~
8 ~~provider,]~~ **when operation or maintenance is open to a competitive proposal process that**
9 **allows commercial broadband providers to contract with the municipality for services,** for
10 the purchase of departmental equipment of a lasting character, for the payment of judgments, and
11 for purposes of economic development which shall include public-private partnerships involving
12 capital improvements, loans, and guarantees. The public benefit in any public-private partnership
13 must outweigh any benefit accruing to a private party. Bonds or notes for the purposes of economic
14 development may be issued only after the governing body of the municipality or county has held
15 hearings and presented the public benefit findings to the public and after such issuance has been
16 approved by the legislative body. A municipality or county shall not issue bonds or notes to provide
17 for the payment of expenses for current maintenance and operation except as otherwise specifically
18 provided by law.

Committee Minutes

- The only study regarding this was done by UNH in 2015. It describes Cheshire County as the most underserved county in the state, with 25% of its households underserved.
- This is enabling legislation where the public would need to approve a bond through their municipality.
- Rather than seeing this bill as one that will compete with current providers, it is an act that will enable collaboration. It allows a community to define the level of service it wants and then work with providers to get that service.
- This will promote the economic development of our region. This is our highway project. We need outstanding broadband access.

Rep. Marge Shepardson – Cheshire 10

- I am speaking in support of this bill.
- We just had a similar bill in the House. It is critical to progress in our state that we have better broadband.
- We currently can't do bonding if the community is already served.
- We had 168 votes in favor, which means quite a few Republicans voted with us. I don't think it should be a partisan issue. There are many communities in need of this service.

Joel Huberman – Peterborough, NH

- I am speaking in support of this bill.
- I am a member of the Enhanced Broadband Committee, which is working on plans to bring better broadband to Peterborough.
- One of my tasks on the committee is to research how other communities have brought in faster internet speeds. There are 80 communities throughout the United States, none in NH, that have successfully used bonding to partner with private internet providers and bring in faster broadband speeds.
- The first community to do this was Chattanooga, TN. During the hearing for HB 191, representatives of established telecom companies cited this community as a failure. It is true that during its first few years of operation, they did lose money. That's no longer true. They now offer 10 gigabit/second in speed and the economy is improving dramatically. They charge \$70/month for 1 gigabit/second. That's about what I'm paying now for 25 megabits/second through Comcast.
- Leverett, MA also used municipal bonding to bring this service to their households. In this case, they pursued a public-private partnership. They own the infrastructure but a private company runs the service.
- In Peterborough, MA, the Comcast representatives explained that current statute would allow us to bond for those portions of our community that are underserved, but our town council tells us that it's too ambiguous to safely bond. It needs to be clearer.

- The Comcast representatives indicated that they would be happy to help us expand our broadband service, but we'd have to come up with the money. They wouldn't have a return on investment in the sparsely populated parts of our town.

Sen. Ward

- (Q) Is this something you've discussed with the taxpayers of Peterborough? Do they know how much they'll be paying?
 - (A) **Joel Huberman:** That would be premature. We can't discuss the issue until we have the legal authority to bond. Many people are enthusiastic about getting better broadband.

Sen. Kahn

- (Q) There's currently not enough security for the town to bond, correct?
 - (A) **Joel Huberman:** Yes.

Rebecca Landry – Keene, NH

- I am speaking in support of this bill.
- This has been an ongoing discussion for a dozen years now.
- Our goal in Keene is to do everything we can to drive economic development. This has been identified as a top priority for my community.
- Years ago we were in growth management mode, but now we have to nurture and incentivize development. Businesses need broadband in their offices, factories, and homes of prospective employees. Our labor force does not meet the demand.
- I read that there are 19 broadband service providers in Keene, which is not the case. If we look only at services that meet the federal minimum, the list is far shorter. If we need 100 megabits to compete with communities in neighboring states, that list is down to 2 or 3 providers with sparse coverage and a high price point.
- I contacted our bond council, Devine Millimet, and they explained that statute currently states that municipalities may bond for broadband only in underserved areas. It does not address areas that meet the federal minimum definition but costs are too high or there are gaps in service.
- Recently, two businesses did not get the services they needed to expand in downtown Keene, but we can't bond there. One had to expand outside of the city and another had to run its own fiber to get the bandwidth they needed at a sustainable price point.
- In a remote neighborhood in Keene, we have a biotech contractor who can only get DSL and cannot continue to run his business.
- Broadband is a top criteria for site selection. The technology has outpaced the legal framework and current law will not allow us to bond.

- If the new language passes and we are able to bond, we would not become an ISP. We want to make the infrastructure available to providers to benefit both providers and customers. Broadband is now considered a basic utility.
- 25% of the Monadnock region does not have access to the federal minimum of broadband services. This has been done elsewhere and they've worked out the kinks.
- We have a long history of responsible bond funding practices.

Sen. Kahn

- (Q) Why didn't services reach those businesses in downtown Keene?
 - (A) **Rebecca Landry:** There were services near the building, but the price point was 2 to 4x what they would have to pay if they went elsewhere.
- (Q) They would need to enter into a long term contract, correct?
 - (A) **Rebecca Landry:** I'm not sure.

Cordell Johnston – NH Municipal Association

- I am speaking in support of this bill.
- The problem with current statute is that bonding is limited to areas that are not served. The bond council has informed municipalities that this language prevents them from having the authority to issue bonds for broadband.
- You may hear that municipalities should not compete with private industry. However, private industry in these areas is not competing; they aren't providing the service. Municipalities want to provide this where it is not being provided.
- Municipalities provide water, trash pickup, police protection, ambulance services, etc. These are sometimes provided by private industry. If they are not available or only available at excessive cost, the government will step in to provide the service.
- Some argue that this would be too risky for towns because they don't know what they're doing. Towns can worry about that. If towns want to issue a bond, they need 2/3 vote of the governing body. It will not be undertaken lightly. People are smart enough to decide if it's a risk they're willing to take.

Sen. Birdsell

- (Q) What was the House bill?
 - (A) **Cordell Johnston:** HB 191.

Sen. Gray

- (Q) If a community wanted to write a bond and enter into an agreement with Comcast, would you be amenable to that?
 - (A) **Cordell Johnston:** The cities and towns interested in this are not trying to be service providers—they're trying to provide the infrastructure. If you wanted to put in language saying that when they

create that infrastructure they would then enter into an agreement with a private company, I'd have to look into it.

Sen. Kahn

- (Q) The bill as written already includes public-private partnerships, correct?
 - (A) **Cordell Johnston:** Correct.

Phil Suter – Greater Keene Chamber of Commerce

- I am speaking in support of this bill.
- I disagree with Jim Roche and have asked the BIA to reconsider its position on this matter.
- We cover 500 member organizations and over 40 towns in our part of the state. Workforce, energy, transportation, transit, and housing issues come up all the time. Without exception, the thing that comes up the most often is broadband.
- It's not just because business can or cannot connect to the internet; it's because they're concerned about employees and their families. They cannot telecommute. The kids cannot connect to the internet from home for schoolwork. The employees' parents cannot access telemedicine services.
- Unlike neighboring states, NH has chosen not to invest tens of millions of dollars to improve broadband infrastructure in rural areas. I understand that. However, the state has also said communities cannot do it either.
- Do we listen to the people who live and work in our regions or do we let the providers decide? This bill puts broadband infrastructure back into the same category as everything else. It's enabling legislation.

Jeanne Dietsch – Peterborough Economic Development Authority

- I am speaking in support of this bill.
- I am distributing three letters to the committee.
- This bill needs to pass in order to clarify the legal situation around the municipal bonding of broadband. Our bonding council has informed us that we cannot bond, even with the Special Assessment District language.
- Regarding the non-competitive language that you're suggesting as a potential amendment, we would discourage any language that makes the situation less competitive.
- We have some companies wanting the protection of public utilities, but because we don't consider internet as a public utility or control pricing, we should not protect them as such.
- The green line on the map is an open access network built with public funds; any company can build out from this line. I believe municipalities should be able to decide which lines need to be extended. The area may not meet the requirements of the telecom company for return on investment.

Sen. Gray

- (Q) Can you speak to bonding?
 - (A) **Jeanne Dietsch:** Towns should decide where the important areas are. Unless they replace the phone lines, companies cannot improve their service. This is why we need bonding. The BIA said workforce development is their primary request from companies. This is part of the reason why we can't attract the workforce. One might expect that residential property taxes would increase because of bonding. However, property taxes will continue to rise because of issues due to lack of broadband.

Sen. Birdsell

- (Q) On what basis is the legal counsel saying the town cannot bond?
 - (A) **Jeanne Dietsch:** You'd have to ask the legal counsel.

Brad Roscoe – Chesterfield, NH

- I am speaking in support of this bill.
- I am a Selectman in Chesterfield.
- Chesterfield does not provide water or sewer. We don't want to provide broadband, but we want to facilitate it.
- We're a small town of 3,600 people. I conducted a survey and 51% telecommute at least once a week. 24% telecommute at least 4 times a week.
- Comcast said they have no interest in providing any more service to Chesterfield. Other providers have improved service in town but have not extended their reach. There is no business model for companies to do that. It has to be done by the town through bonding.
- In our town, 18% of people do not have coverage. In two town meetings about broadband, over 60+ people attended both times. We have a warrant article for a \$50,000 expendable trust. If we could bond this, it would make the penalty a lot less. Bonding is currently only allowed for unserved areas, not underserved.
- We don't want to compete or provide this service, but for companies there is no incentive.
- The FCC reports do not accurately reflect the service in our town.

Summary of testimony presented in opposition:

Chris Hodgdon – VP of Government Affairs, Comcast

- I am speaking in opposition to this bill.
- This bill takes the focus off of solutions for the small percentage of residents who lack access to the internet and instead focuses public resources on duplicating networks where they already exist.

- According to FCC data, 93%+ of NH has access to a minimum of 25Mbps/3Mbps, which is the current standard for broadband. This is a marked improvement from the prior year's report when 83% had access. The agency's 2015 report found that only 3% lack access to 4Mbps/1Mbps delivered by a wired provider and virtually the entire state has access through wireless and satellite technologies.
- We rank very well compared to states that are similarly rural. Private sector providers are succeeding in delivering service.
- Across our entire NH footprint we offer the same speeds at the same price for our residential customers. Business class services are priced differently, which is a different issue.
- We have offered communities to partner with us through a cost sharing mechanism to cover areas that are unserved. Overbuilding is not going to accomplish what these communities need.

Sen. Gray

- (Q) Are you amenable to working with the Municipal Association to get language in here that allows communities to bond with companies to provide services in these areas?
 - (A) **Chris Hodgdon:** Yes, so long as the state stays focused on serving the unserved areas of the state. I would caution policy makers from picking winners and losers in terms of specific companies.

Stefanie Lamb – Business & Industry Association

- I am speaking in opposition to this bill.
- This bill is unnecessary; over the summer we conducted roundtable discussions across the state. The high cost of electricity and having a dependable, well-qualified workforce were the primary concerns for businesses. It was not telecom services.
- It would be in the municipalities' best interest to stay out of this and work with telecom providers to get the services they need.

Sen. Kahn

- (Q) Have you received input from businesses in Cheshire County?
 - (A) **Stefanie Lamb:** We aren't getting the calls that these are concerns of theirs. We have companies expanding and moving elsewhere because of the high cost of electricity, not because of a lack of services from telecom providers.

Ellen Scarponi – Fairpoint Communications

- I am speaking in opposition to this bill.
- Providers as a whole believe in broadband—we want it to be expanded. That can be seen in the growth we've had in the past few years. The report cited earlier

was 2013 data. In Peterborough we now have the FCC standard in a large portion of the town for residents, on our dime.

- For businesses, FairPoint has extensive fiber throughout the state. I have provided this information to those towns to encourage them to invest money in those areas.
- As to employees' families needing service, it's out there.
- Existing language does not need to change. Bonding can be provided to the unserved and underserved. In towns with shortages, they can create special assessment districts of like-minded people to bond for this service. Towns can also use ERZs.

Sen. Kahn

- (Q) When rural communities want to have city-level services, what are they looking at?
 - (A) **Ellen Scarponi:** What you need for broadband is "what you need for what you need to do" We offer the same services throughout the state at the same price. Our technology is distance sensitive. For business services, you can get it if you're willing to pay for it.

Tim Wilkerson – New England Cable and Telecommunications Association

- I am speaking in opposition to this bill.
- About 10 years ago, a statewide entity was established in MA to administer broadband. For the first 8 ½ years, tens of millions of dollars of bond money was spent to deploy miles of broadband. They laid more fiber than any other place in the country. If you look at that middle mile today, it is a stranded investment.
- They met with local communities and providers and came to a new process of asking companies to bid to bring broadband to unserved areas instead. Of the 41 cities and towns that were unserved, that number is shrinking dramatically in less than a year.

Sen. Gray

- (Q) What does this have to do with bonding?
 - (A) **Tim Wilkerson:** The only way that 96% was reached was because there were statewide bonding funds available that the state used to reimburse the construction costs of broadband that would not be deployed otherwise.

Sen. Birdsell

- (Q) This is the state itself supporting it versus municipalities, correct?
 - (A) **Tim Wilkerson:** Correct. That leverage of funds is the only way these communities are being reached.

Sen. Kahn

- (Q) If the problem is more local, do you think a targeted effort would work in NH?
 - (A) **Tim Wilkerson:** I'm not suggesting that you need to start a state-wide entity, but you need to look at local needs with the technology that's going to meet those needs. Every community is different.

Neutral Information Presented:

Carol Miller – Director of Broadband Technology, NH DRED

- I am neutral on this bill.
- This bill has come back for the past 8 years and has continued to fail. I am providing you with the latest statistics, which is why we need NH mapping. The FCC reports are inaccurate.
- It's rare to find town leadership willing to do something about broadband. Most communities hope that providers will address their needs.
- Bonding is not a highly utilized tool for communities. There's nothing stopping towns from partnering with providers right now. ERZ's and Special Assessment Districts are another tool available. There is a tax incentive program allowing providers to use their business enterprise tax with a match to fund gigabit technologies, which failed miserably.
- There are many providers offering these services in the state. Most towns don't want to get into this business. The few towns that do will need to get public support.

Sen. Kahn

- (Q) Do you agree that current language is limiting for municipalities?
 - (A) **Carol Miller:** It is restrictive. It was originally passed to help the unserved areas, versus the underserved.
- (Q) The table you provided shows that this is a local issue. We may be at 94% state-wide, but there are places that have 25% underserved. What are your thoughts on this?
 - (A) **Carol Miller:** What is considered underserved has changed over the years. We used to be concerned about availability.

Sen. Birdsell

- (Q) Are Special Assessment Districts meant to allow towns to bond?
 - (A) **Carol Miller:** They don't have to bond; they can raise and allocate money in their town budgets.
- (Q) If that was put into place for purposes such as this, on what basis is the counsel in Peterborough determining that they can't bond?
 - (A) **Carol Miller:** I have questions about that too. No one has tried bonding for this yet.

Future Action: Pending

KEF

Date Hearing Report completed: February 14, 2017

Speakers

Senate Public & Municipal Affairs Committee

SIGN-IN SHEET

Date: 02/08/2017 Time: 9:00 a.m.

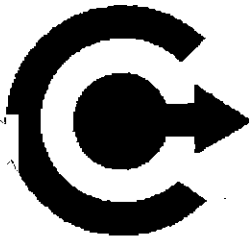
SB 170 AN ACT relative to the authority of towns to issue bonds for the expansion of broadband infrastructure.

Name/Representing (*please print neatly*)

<i>Jay Keenan</i>	Support <input checked="" type="checkbox"/>	Oppose <input type="checkbox"/>	Speaking? <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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Testimony



**THE CHESHIRE
CAREER
CENTER**
LEARNING FOR LIFE

February 8, 2017

James Gray, Chair
Public and Municipal Affairs Committee
State of New Hampshire
Office of the Senate
State House, Room 302
107 North Main Street
Concord, NH 03301

Re: SB170
Support

Chairman Gray and Committee Members:

This is to extend input on the favorable passage of SB170. On behalf of the students and staff of the Cheshire Career Center at Keene High School we unanimously support this bill. Cheshire Career Center has an enrollment of 800 Junior and Senior high school students from Keene High School, Fall Mountain Regional High School and Monadnock Regional High School. Collectively, CCC represents students and families from 21 rural towns in the southwest area of New Hampshire.

Attached please find fact sheets compiled from various agencies supporting the necessity and benefits of high speed internet brought only by modernized broadband that reaches all towns and their families. To coin their phrase: Speed Matters!

The Cheshire Career Center (CCC) offers 16 program ranging from Manufacturing to Computer Programming to Networking to Engineering. In the past two years approximately \$200,000 has been spent to modernize technology in the classrooms only to find internet connections inadequate to support these technology based programs. As can be imagined, this negatively impacts students every day contributing to an inability to increase students' digital literacy putting them at a disadvantage in this workforce development training ground.

At the CCC and other career and technical education centers around the state we train firefighters, emergency medical technicians, manufacturers and engineers. We educate and prepare students to become teachers, business managers, accountants and graphic designers. Auto technology personnel must diagnose first, using the internet and students in health care field must be technology savvy to secure jobs in the medical field. Software engineers and computer programmers are the top jobs today so not having reliable internet greatly impacts our ability to provide education and employment opportunity that mirror industry needs.

Consider the following obstacles:

- Industry certification test taking is almost exclusively on line;
- Home-school relationships are fostered through communication conducted electronically;
- Digital literacy takes practice: 1:1 devices are critical for achievement and broadband is essential to ensure 1:1 computing can be supported;
- Standardized tests are on-line;
- On-line opportunities are necessary in every program area at Cheshire Career Center;
- Fundraising is moving towards on-line sales;
- Streaming video's, gaming, impromptu assessments., on-line chats, interactive services, networking, e-books and reference materials are critical resources for classroom teachers; and
- Professional development is online; all teachers are required to log professional development hours for recertification over three year intervals.

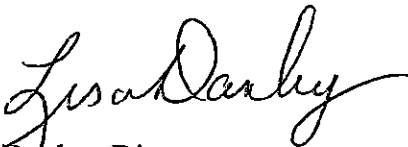
A recent survey of four classrooms in CCC for a total of 46 students, 35% reported inaccessibility to internet or unreliable internet. If this sample is reflective of CCC that would mean approximately 280 students had unreliable or no accessibility to the internet. The community you reside should not have this level of impact on students preparing for their careers.

A final thought, class materials are hosted in the cloud and teachers are using Web 2.0 tools such as Google classroom to deliver content rich experiences. Students with limited or no access will be at a severe disadvantage creating an even greater divide in future career and post-secondary opportunities.

Again, on behalf of the Cheshire Career Center and the need for digital literacy for all students, we strongly support this legislation.

Please refer to a lengthy study: *Future Ready Schools: Building Technology Infrastructure for Learning.*

Feel free to contact me with any questions.



Lisa Danley, Director
ldanley@sau29.org
603-352-0640 X3465

HIGH SPEED INTERNET AND K-12 EDUCATION



OVERVIEW

High speed Internet enhances every level of education from kindergarten through high school to college to graduate school. Advances in information and communications technology means that education is no longer confined to the classroom. New broadband-enabled educational tools allow for remote collaboration among fellow students on projects, videoconferences with teachers and real-time video exploration of faraway areas. The educational advantage possible with high speed Internet has become indispensable to students preparing to enter the 21st Century workforce. Those students with limited or no access in their formative elementary school years are falling behind. Computer skills must go beyond technical competency, to include higher-level skills such as critical thinking and problem solving as well as the creative use of technology. The earlier every student in America is connected to high speed Internet, the brighter our country's future will be.

CURRENT CHALLENGES

Students on the losing side of the digital divide are being denied the powerful educational advantages possible with high speed Internet, while those in connected areas become accustomed to the digital world at an early age. Although general broadband adoption rates are rising, this increase is happening at disproportionate rates among different demographic groups. In 2008, the Pew Internet & American Life Project found that only 25 percent of low-income Americans had broadband at home, compared with over 50 percent among American adults. Students with little exposure to digital technologies translate to adults with limited career opportunities. Workers lacking technological versatility put the American workforce at a competitive disadvantage within the world economy.

BENEFITS OF HIGH SPEED INTERNET

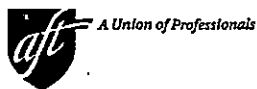
- Two-way, interactive video conferencing allows busy parents to confer with their students' teachers more frequently and conveniently.
- Fast connection speeds allow students to easily form online study groups and work on school projects both in face to face and virtual communities.
- Broadband connections enhance curricula at every grade level with dynamic and interactive Internet applications. For example, virtual field trips take students on tours of faraway places such as to our nation's capitol and the streets of foreign cities, or even to the depths of oceans and to the far reaches of outer space.
- Students in remote locations can have access to education specialists.
- Elementary and high school students with high speed Internet at home can access the resources of their school libraries remotely, including digital videos and high-volume data files.

RECOMMENDATIONS

- Efforts to expand broadband must focus on underserved areas and demographics so every American student can take advantage of the educational benefits of high speed Internet.
- Community organizations should be engaged in working with community members to facilitate the use of tools and applications available through high speed Internet.
- Educators must have access to high quality professional development in effective technology use.
- Quality maintenance and technical support for computers should be readily available in every school.

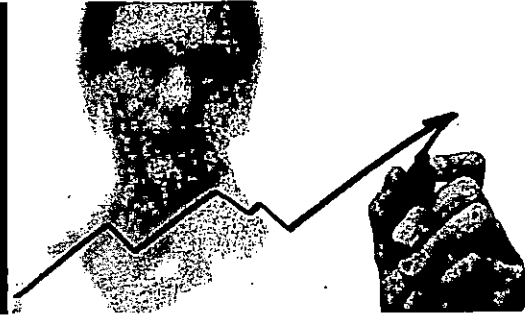
FOR MORE INFORMATION

Visit aft.org, nea.org and speedmatters.org



HIGH SPEED INTERNET

ECONOMIC GROWTH AND JOBS



OVERVIEW

Expanded access to high speed Internet generates major economic growth and rapid job creation. High speed connections accelerate business development by providing new opportunities for innovation, expansion and e-commerce. Connected communities create wealth and opportunity by attracting businesses that want to locate in areas with a strong broadband presence.

In the new global economy, access to broadband has become as essential to individual and community economic prosperity as electricity and roads. From rural to urban areas and everywhere in between, all people stand to benefit economically from a national high speed Internet network.

CURRENT CHALLENGES

America has fallen behind other nations in crafting communications policies that effectively facilitate job growth and business advancement. Unfortunately, many lawmakers still conceive of high speed Internet as an optional luxury instead of a necessary foundation for economic success. The longer the U.S. waits to expand access to affordable broadband, the longer our economy will miss out on the enormous advantages of a connected country.

BENEFITS OF HIGH SPEED INTERNET

- Studies show that each additional \$5 billion investment in broadband creates 250,000 jobs – 100,000 direct and indirect jobs from telecom and IT equipment spending plus another 150,000 in “network effects” spurring new online applications and services. With every percentage point increase in broadband penetration, employment expands by nearly 300,000 jobs.

- Jobs involved in the building and expansion of broadband networks pay 42 percent more than the average for manufacturing jobs in America.
- From 1998 to 2002, employment in communities with broadband grew 1 percentage point more than in communities without it.
- Broadband networks attract investment to areas that would not otherwise be viable to many businesses such as rural areas and inner-city regions.
- The expansion of energy efficient smart grids, which high speed communications are an integral part of, is expected to dramatically improve economic growth and provide thousands of new quality U.S. jobs.

RECOMMENDATIONS

- Support tax incentives for broadband providers to expand networks with speed requirements capable of sustaining the business demands of tomorrow.
- Encourage efforts to expand high speed networks to economically depressed areas with high unemployment and underserved rural areas
- Connect programs for affordable computer purchase, broadband access and digital literacy linked with job training for low-income and displaced workers.
- Policy makers should focus on programs to support delivering one gigabyte of capacity to institutions that anchor our communities – libraries, schools and hospitals – so that all Americans will benefit from the build out of a high speed broadband infrastructure.

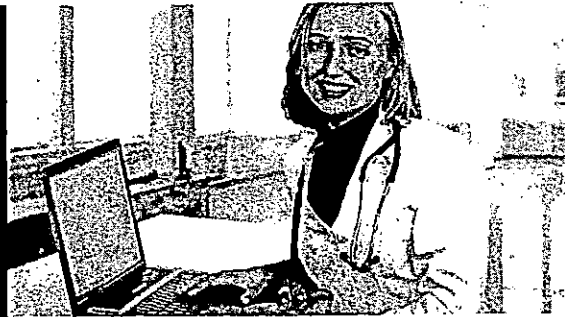
FOR MORE INFORMATION

Visit itif.org and speedmatters.org



HIGH SPEED INTERNET

AND HEALTH CARE



OVERVIEW

The potential for using high speed Internet technology to help expand access and quality of health care in the United States is enormous. The use of advanced communications technology to transmit medical data and imaging in real-time, while linking patients to providers for direct consultation, removes geographical barriers and allows people to receive the medical care they need when and where it's needed.

In the face of rising medical costs and increasing gaps in insurance coverage, the cost-cutting efficiencies of telemedicine – the delivery of quality health-related services and information using telecommunications technologies – are more valuable than ever. Universal high speed Internet access would help bring the prospect of affordable and quality health care for all Americans closer to reality.

CURRENT CHALLENGES

To make the practice of telemedicine possible nationally requires a commitment to pay for health services delivered to the point of need. While this may require an investment in both medical and communications infrastructure, studies show the savings of telemedicine will far outweigh costs. Improvements in both access to care and the quality of care delivered will be immediate. Legal issues including rules that prevent consultations across state lines must be addressed in order for some telemedicine services to be available nationwide. Before the full potential of telemedicine can be realized, high-speed two-way Internet lines must be made universally available.

BENEFITS OF HIGH SPEED INTERNET

- Real-time transmission of medical imagery enables

the interpretation of MRI, ultrasound, X-rays, and other diagnostic procedures to be performed remotely.

- The number of strenuous patient transfers, such as from a nursing home to a doctor's office, or for expectant mothers seeking prenatal care from a distant hospital, can be significantly reduced through remote monitoring and online consultations only possible through a high speed Internet connection.
- A study from the University of Texas Medical Branch estimates that the U.S. health care system can save \$4.28 billion from the elimination of patient transfers alone. This benefit of high speed Internet does not include the potential savings from remote monitoring or interpretative services.
- High speed Internet allows physicians to connect with distant specialists for real-time guidance in emergency situations, potentially saving lives by eliminating the delay of long ambulance rides when seconds count, such as during a stroke or heart attack.

RECOMMENDATIONS

- Substantial investment in the research and development of existing and new telemedicine applications and techniques.
- The deployment and adoption of two-way high speed Internet networks capable of reliable and secure transmission of medical imaging and data should be encouraged.
- Policy makers focus on delivering one gigabyte of capacity to institutions that anchor our communities – libraries, schools and hospitals – so that all Americans will benefit from the build out of a high speed broadband infrastructure.

FOR MORE INFORMATION

Visit americantelemed.org and speedmatters.org



HIGH SPEED INTERNET AND DIGITAL LITERACY



OVERVIEW

Having the skills to use a computer and navigate the Internet – often referred to as “digital literacy” – allows people to benefit more fully from high speed Internet. Digitally literate Americans are more attractive to prospective employers, and businesses comfortable with digital technology are more economically competitive. Tech-savvy students use high speed Internet to improve their academic performance and prepare for future jobs. Broadband enables people familiar with teleconferencing and online social networks to strengthen their ties with faraway friends and family. Fundamentally, high speed Internet is a tool with endless potential, and only the digitally literate have the skills to harness it effectively.

CURRENT CHALLENGES

Computers connected to high speed Internet are of little use to those unfamiliar with digital technology. In both rural and urban areas, a significant portion of Americans cannot afford a computer, or the sometimes high cost of broadband subscriptions. Furthermore, many choose not to subscribe to high speed Internet even when it is available in their area because they do not understand the benefits it provides. In this fast-evolving information economy, digitally illiterate students and workers without access to broadband are at a stark disadvantage compared with those who are able to tap the resources of the Internet with ease. Expanding telecommunications infrastructure into underserved areas is vital, but it must happen alongside efforts to raise awareness of the benefits of high speed Internet and create digitally literate citizens.

BENEFITS OF DIGITAL LITERACY

- As more services go online, digitally versatile workers have an increasing advantage in many sectors ranging from information technology (IT) to the service industry. Digital skills apply to and transfer across many professions, and even enhance a worker’s ability to apply for a job.
- Digitally literate students improve the quality of their school work by easily accessing online resources including lecture videos, library databases and teacher-student e-mail correspondence.
- Digitally literate people save time and money by paying bills, applying for jobs, doing their taxes and banking online.
- Digitally literate computer owners are far more likely to incorporate the Internet into their daily routine and realize the countless benefits of broadband.
- When an entire family is digitally literate and connected to broadband, social networking, video conferencing, and e-mail correspondence can strengthen family ties across vast geographic distances.

RECOMMENDATIONS

- Measures to expand broadband to unserved and underserved areas should also provide technology training and support which promote digital literacy.
- Initiatives to improve digital literacy should target groups that need the most help like low-income families and communities.
- Programs designed to provide affordable computers and broadband to low-income areas should be supported.

FOR MORE INFORMATION

Visit one-economy.com and speedmatters.org



HIGH SPEED INTERNET

AND RURAL COMMUNITIES



OVERVIEW

High speed Internet breaks down the barriers of distance and time, allowing residents of rural areas to participate in economic and civic life far beyond their geographic region. Communications made possible by broadband technology eliminates the logistical constraints of regionally-based business models, allowing businesses in isolated areas to compete with their big-city counterparts. Ultimately, the numerous economic and social advantages enabled by the availability of high speed Internet in rural areas benefits the entire country.

CURRENT CHALLENGES

The Pew Internet & American Life Project has found that rural residents are much less likely to subscribe to broadband than their urban counterparts. A study by Connected Nation finds that 19 percent of rural residents say they do not subscribe to broadband because it is not available in their area. Equally challenging is that many residents are not aware of the enormous benefits provided to them by high speed Internet. Nearly half of rural residents without a home broadband connection say it is because they do not need it. Cost can also present a problem for both providers and residents: 22 percent of rural residents say they do not subscribe to broadband because it is too expensive. Infrastructure investment in sparsely populated rural areas is often seen as unsustainable by telecommunications companies.

BENEFITS OF HIGH SPEED INTERNET

- When given access to affordable broadband, rural businesses restricted to local markets, such as "mom and pop" shops or home-based businesses, can expand their market reach across the nation and even the world.

- Broadband brings the opportunity for direct access to education and health care for rural residents who are otherwise forced to travel long distances for college courses and medical treatment.
- Rural libraries newly enhanced by high speed Internet often experience a resurgence of community interest and participation. High speed Internet provides rural residents access to global information and cultural resources.
- Affordable broadband enables historically urban businesses like graphic design, Web site design, and other creative industries to experience new life in rural settings while competing on the same level as city-based companies.
- Farmers gain real-time access to vital information such as crop prices or weather forecasts, and marketing opportunities through high-speed networks.

RECOMMENDATIONS

- Focus efforts to expand high speed Internet infrastructure to unserved and underserved rural communities.
- Target communities with low adoption rates to increase public awareness about the importance of high speed Internet.
- Support initiatives to keep the price of high speed Internet in underserved rural communities affordable.

FOR MORE INFORMATION

Visit connectednation.org and speedmatters.org





Connected Learning: A Primer for State Policymakers

Second of four reports



Expanding Broadband Access for All Learners

BY SUNNY DEYE

The digital age provides abundant opportunities to expand learning to times and places beyond the classroom, with access to global knowledge and resources available at the click of a mouse or the touch of a screen. To realize the full benefits of the digital age, young people need access to broadband—high-speed Internet access that is always on and faster than traditional dial-up access—in order to maximize collaboration, creation and research.

Current Internet connections in schools and libraries are becoming increasingly inadequate to support individualized technology-based learning for all students. While nearly all of the country's schools and libraries are connected to the Internet at a basic level, educational use of computers, tablets, mobile devices and other online applications have increased the demand for higher-performance broadband connectivity.

The federal E-rate program, launched in 1997, has provided a basic level of broadband connectivity to America's schools and libraries, and the Federal Communications Commission is currently in the process of reforming and expanding the program. Since learning often takes place beyond these institutions, access to higher-performance broadband connectivity at home and at other non-school locations is also important.

Policy Considerations – Broadband for Education

State legislatures are acting to ensure that broadband access is thoughtfully deployed to meet both the needs of today's learners, as well as the increasingly individualized, technology-enhanced learning needs of future generations. Previous efforts by federal and state policymakers have brought some level of Internet connectivity to nearly all the nation's schools and libraries, but while the speed of the connections in many schools was acceptable for yesterday's technologies, it is nowhere near adequate for today's classrooms. The bandwidth required for today's students to upload interactive media content, participate in online learning opportunities, and develop electronic portfolios of work far exceeds what was required a decade ago. Access to high-speed Internet in schools is particularly important for rural and low-income communities. When Internet connections in schools are too slow, and students don't have access at home, students miss the benefits of educational technologies altogether.

Increasingly, the learning that takes place in and out of a classroom is blurring, so that students are truly learning at any time, any place, and at any pace. States are looking to implement digital upgrades sufficient to move schools, homes, community centers, libraries and museums toward the full potential of Internet capability, so that all students will be able to use digital devices to enhance learning in multiple locations.

State Policy Approaches

State legislatures are enacting policies that emphasize state and district planning, standards, methodology and funding to upgrade broadband and education technology infrastructure.

ARIZONA

- **SB 1488 (2014)** creates the Joint Committee on Broadband Expansion and Education Technology to review the availability of high-speed Internet access within the state, particularly in rural areas; the technological needs of school districts and charter schools in the state, including infrastructure, Internet connectivity, data security and information technology personnel; federal programs relating to Internet accessibility, including the federal E-rate program, and availability and access to federal monies, especially for rural districts; the development of high-speed Internet access in other states, including model governance structures; and the state's current contracts for carrier services and telecommunications and the potential to offer incentives to expand Internet access throughout the state.

FLORIDA

- **HB 5101 (2014)** outlines the details of the state's \$40 million digital classroom allocation, including requiring the Department of Education to develop a five-year strategic plan for implementing



technology in classrooms for learning and teaching. The plan will identify minimum technology requirements for hardware, devices, network security and bandwidth capacity and guidelines for the ratio of students to available devices.

LOUISIANA

- **SB 622 (2014)** requires the Department of Education to develop and implement a statewide educational technology plan for public elementary and secondary schools. The plan is to include recommended standards for devices, Internet bandwidth, software applications and local network capacity; clear short-term and long-term goals and standards for school technology readiness; a realistic strategy, timeline and cost estimates to meet both minimum and optimal standards; and consideration of the technology needs of high-poverty and rural areas.

MARYLAND

- **SB 170 (2014)** provides a \$3.5 million appropriation for the Digital Learning

Innovation Fund to be distributed to local education agencies in need of funds to accelerate their transition to digital learning. The fund will also help agencies upgrade their information technology infrastructure to implement the online Partnership for Assessment of Readiness for College and Careers tests.

- **HB 1388 (2014)** requires the Department of Education to report on existing broadband speeds and connections in all public schools in the state. The bill also requires the department to report on each local school system's plan to reach a broadband speed of 1 gigabyte per 1,000 students by FY 2020 through public and private efforts, and to offer classroom teachers support and training in the use of education technology tools.

NEW MEXICO

- **SB 159 (2014)** defines "education technology infrastructure" and dedicates up to \$10 million per year from the Public School Capital Outlay Fund in FY 2014 through FY 2019 to correct education technology infrastructure

deficiencies. It requires the Public School Capital Outlay Council to develop a methodology and standards for correcting education technology infrastructure deficiencies.

TENNESSEE

- **SB 2519 (2014)** requires Local Education Agencies to survey students as to availability of Internet in their homes and to report results to the Department of Education.

GEORGIA

- **HB 283 (2013)** establishes a grant program that offers incentives to use digital learning in K-12 classrooms, commits school systems to expand and pay for bandwidth for five years, and requires each school to demonstrate or develop a technology plan for student learning that includes professional development for staff.

KANSAS

- **HB 2390 (2012)** creates a program to facilitate the use of “broadband technology-based video communication” as a tool for distance learning in schools and libraries.

Considerations for State Policymakers

The state policy examples discussed here encompass a wide range of approaches to improving broadband connectivity and planning for infrastructure upgrades to meet the needs of the 21st century learner. Broadband upgrades are needed to move schools, homes, libraries and community centers toward the full potential of Internet capability, so that all students will be able to use digital devices to enhance learning both in and out of school. As the use of mobile devices, computers and the Internet increases, both in intensity of use and the bandwidth

requirements of applications being used, the capacity of broadband will continue to be a critical issue for states.

Learning institutions—including schools, libraries, museums and community centers—are finding new ways to increase access to learning opportunities, and state policy can help accelerate these efforts by providing frameworks for higher-performance broadband connectivity. Other briefs in this series explore how state legislatures are adjusting policies to harness the power of technology in the classroom, protect student privacy and promote digital literacy so that young people know how to communicate, collaborate and behave ethically online.

Recommended Resources

Learner at the Center of a Networked World is the 2014 report of the Aspen Institute Task Force on Learning and the Internet.

The Connected Learning Alliance is a network of organizations, projects and people working to make learning relevant by integrating personal interests, peer relationships and the tools of the digital age.

The State Education Technology Directors Association works to build and increase the capacity of state and national leaders to improve education through technology policy and practice.

NCSL Resources

State legislative involvement has been an important factor for successful implementation of a variety of broadband projects. NCSL closely tracks state broadband legislation here: www.ncsl.org/research/telecommunications-and-information-technology/telecommunications-technology-and-regulation.aspx



Policy Questions to Consider

1. What is the vision for learning that technology will be supporting? Bandwidth requirements depend on the role technology plays in supporting teaching, learning and assessment within districts and schools. Before making decisions about technology, schools and districts need to articulate how students will use technology to learn.
2. Does the state have the broadband necessary for students to be able to use their computing devices at school and at home? Legislation, like Arizona's SB 1488 (2014) and Louisiana's SB 622 (2014), (described on pages 2 and 3) can appoint working groups to review the technological needs and availability of broadband within the state and make recommendations about standards, goals, strategies, timelines and cost estimates to meet both minimum and optimal standards.
3. What resources are available to fund the transition? One of the most important resources available for the transition to sustainable broadband connectivity in schools is the Schools and Libraries Universal Service Support Program, also known as the E-rate program. The Federal Communications Commission's E-rate program provides discounts of up to 90 percent to help elementary and secondary schools and eligible libraries connect to the Internet and maintain internal connections. The highest discounts are provided to high-poverty schools and libraries, and rural schools and libraries can also apply for higher discount rates.
4. Is support available to help school districts leverage federal, state and public-private partnership programs that support their broadband needs? States are creating departments, commissions or other government structures to support broadband deployment to schools, homes, community centers, libraries and museums. For example, New Mexico SB 159 (2014) dedicates up to \$10 million per year to correct education technology infrastructure deficiencies and tasks the Public School Capital Outlay Council with developing a methodology and standards for correcting the deficiencies.

Acknowledgments

This is the second publication in the NCSL Connected Learning series, exploring how the opportunities and realities of the digital age expand access to continuous learning for youth and adults.

NCSL is grateful to the John D. and Catherine T. MacArthur Foundation for supporting this project and recognizing the critical role of state legislatures in education policy.

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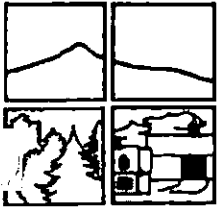
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Southwest Region Planning Commission

37 Ashuelot Street, Keene, NH 03431

603-357-0557 Voice

603-357-7440 Fax

February 6, 2017

Senate Public & Municipal Affairs Committee
Legislative Office Building, Room 102
Concord, NH 03301

Re: SB 170

Dear Chairman Gray and Committee Members:

I am writing to provide input on SB 170. During its meeting of January 10, 2017, the Southwest Region Planning Commission's Board of Directors expressed its interest in and support for the bill. The bill as proposed would enable municipalities greater flexibility in issuing bonds to facilitate the placement of broadband infrastructure in their communities. We believe the bill has merit for several reasons including:

- Access to affordable broadband/high speed internet is a necessity for all of New Hampshire in order to maintain vibrant economies and quality of life. Yet many parts of our state are unserved or underserved. As these tend to be the more rural parts of the state, they are showing signs of falling behind and are less able to remain economically viable.
- Broadband is critical to a region's ability to attract a quality workforce and is considered basic infrastructure to retain younger adults in our communities.
- Broadband is required by multiple sectors including business, education, government, health/medicine, and emergency response. Without access, these sectors fall behind in their ability to provide state-of-the-art functionality.
- In a 2015 report entitled *Broadband: The Connection to New Hampshire's Future* prepared by the University of New Hampshire in conjunction with the NH Office of Energy and Planning, NH Department of Resources and Economic Development, and the state's nine regional planning commissions, the case is clearly made regarding the importance of broadband in today's society. The report contains 37 recommendations, one of which calls for enabling legislation to extend municipal financing of broadband expansion projects through bonding authority – precisely that suggested by SB 170.
- As SB 170 represents enabling legislation, it does not require or obligate a municipality to issue bonds for broadband expansion – rather, it simply provides an option for consideration by municipalities. Why would the state not provide this option?

We hope that you will consider these points in your review and deliberation of SB 170. Thank you for this opportunity to provide comment. Please contact me if you have questions about our position.

Sincerely,

Tim Murphy
Executive Director

TDD Access: Relay NH 1-800-735-2964
web site: www.swrpc.org

Testimony of Owen Smith, Vice President of AT&T
NH Senate Bill 170
Relative to the authority of towns to issue bonds for the expansion of Internet service
February 8, 2017

Thank you for the opportunity to testify on SB-170, relative to the authority of towns to issue bonds for the expansion of Internet service. AT&T is opposed to this bill for a number of reasons, many of the same reasons that have been cited over the past ten years when this issue has come before legislators. Those same arguments are even stronger today because all the providers can show what has been done in NH to bring greater access to internet service choices, and what is planned.

Since 1996 the private sector has invested \$1.5 trillion to develop and expand network infrastructure. In a five year period, 2009-2014, AT&T alone invested \$120 billion in our networks.

From 2013-2015 AT&T invested nearly \$100 million in its New Hampshire networks, with 101 upgrades including new cell sites, additions of wireless and wired network capacity, and new broadband network connections in the state.

Because of these investments over 97% of NH's population is now covered by the AT&T Mobile Broadband network, but we are not done. And neither are the many competitors that NH consumers can now choose from for Internet services, many of whom you will hear from today in opposition to this bill. In addition to private investments, the FCC has allocated to NH, \$30 million with Connect America funds over the next 7 years for the deployment of internet services to areas that would otherwise be uneconomic to serve.

Nothing will put more of a damper on future private sector investment in certain areas than to pass legislation like SB-170, which would allow municipalities to compete unfairly with private providers. Cities and towns can borrow at much lower rates, and would put these communities in direct competition with private Internet providers.

Proponents will cite the experiences of other communities that have tried to develop public networks, but when you dig a bit deeper you see a different story. These networks are expensive to build, maintain, operate and upgrade, and they vie for the same public tax dollars that should go to public education, fire and police services, and our roads.

The consequences of a government-owned network gone bad are far reaching and saddle communities with tremendous financial liability. Taxpayers could be on the hook for 20-30 years for a bond issue that deployed a network which became obsolete far sooner. Failed systems in Groton, CT, Burlington, VT, Provo, UT, Monticello, MN and elsewhere have resulted in either substantial cost-over runs, downgrades to municipal bond ratings, or subsidies with general fund dollars.

We ask you to find SB-170 inexpedient to legislate for these reasons. Let the private sector do what it does best in a competitive market place, provide the latest technology to the consumer at an affordable price with no risk to the property taxpayer.



STATE OF NEW HAMPSHIRE
DEPARTMENT of RESOURCES and ECONOMIC DEVELOPMENT
DIVISION OF ECONOMIC DEVELOPMENT
172 Pembroke Road Concord, New Hampshire 03301

603-271-2591
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February 8, 2017

Senator James Gray, Chairman
Public and Municipal Affairs
Legislative Office Building, Rm 102
Concord NH, 03301

Testimony on 170 – relative to the authority of towns to issue bonds for the expansion of broadband infrastructure

Good afternoon Chairman Barry and Members of the Committee

My name is Carol Miller and I am the Director of Broadband Technology at the Division of Economic Development, at the NH Department of Resources and Economic Development. I neither support nor oppose the bill as proposed. It is a policy matter that I do not wish to step into the middle of an issue that can only be determined by policy makers. You will hear testimony from constituents and the industry.

I am here as a neutral party to instead take a few moments to brief the committee on where NH is at with regards to broadband availability statewide and the population served by the FCC definition of Broadband at 25Mbps upstream and 3Mbps downstream. New Hampshire has always been considered a High Tech state. For a rural state we always score within the top 15 states for availability, use, and adoption of broadband services.

I've included the latest available stats and map based on the latest FCC data required from all providers as of June 2015 with my testimony prepared by the NH Broadband Mapping and Planning Program at the University of NH. New FCC data will be available mid 2017. At a state level full federal funding for the program lapsed in Dec 2014 but since then we have been able to secure some federal funding from Northern Border Regional Commission to continue mapping efforts in distressed counties while processing statewide availability percentages. You can see from the stats broken down by County that NH is fairly well served with 93.7% of the population having access to 25Mbps by 3Mbps and 6.1% served at a slower rate of speed. The map represents a visual look with the recorded gaps in service in blue.

In hearing this bill you will hear testimony from constituents and the industry. There have been many attempts over the years to amend the bonding legislation which have failed. Again testifying as neutral party I would like to highlight some of my experiences coming from the industry and working with communities over the last 7 years looking to expand services.

I have worked with more than 50 communities and hundreds of your constituents doing educational presentations, offering advice, doing analysis of their communication landscape, advocating for constituents in need, running a help desk. Everyone who has a problem with their provider who complains to the Public Utilities Commission, Office of Consumer Advocate, the Governor's Office, Congressional Delegation and even NH Representatives and Senators ends up on my desk. Much of the time I spend educating constituents on



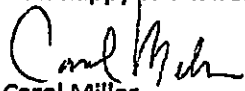
what is available to them and helping them to push an issue up the ladder in the industry. Some get resolved and others don't but all are addressed.

I have facilitated many community meetings with town leadership and it is rare to find a town that is actually willing to do something about broadband. Most communities are hands off hoping for the provider to magically fix their gaps. Bonding for infrastructure will not be a highly utilized tool for those communities. In reality there are very few communities that would attempt to bond when faced spending millions of dollars when most of their taxpayers have broadband and are buying lower tier services based on affordability. Bonding requires a public process and in my experience taxpayers vote with their wallets. In general people with broadband really don't care about people without it.

There are other tools that are much more useful for communities with gaps. A few years ago legislation was passed to allow for Special Assessment Districts where a neighborhood could apply, sign on, and the town would finance the broadband gap expansion and property owners of the affected neighborhood could pay it back over time with an assessment rate added to their tax bill. That way the folks that need it pay for it. Last year we worked on a bill to create a tax incentive program for provider to expand broadband using BET, BPT credits and a provider match to fund gigabit technologies. It failed. Committee members all thought broadband was important, but were not willing to commit to passing the bill.

So in closing I would remind you that we have a vibrant provider industry in the state. There are no less than 70 providers out there offering many technologies. They contribute to that local economy personally and corporately. They are the conduits of content who manage and support very large networks. Do most towns really want to get into the business? No. Do a few towns want to get into the business? Yes Will those town be able to get the public support for? Don't know.

I appreciate the opportunity to share my experiences in the field and am very glad you are the policy makers. I am happy to answer any questions.



Carol Miller

Director of Broadband Technology
Division of Economic Development
NH Department of Resources and Economic Development
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Broadband and Other Internet Availability in New Hampshire by County based on Population

County	Total Population (2010)	Served (25+ Mbps down 3+ Mbps up)		Underserved - Other Internet Access (6-25 Mbps down x 1.5-3 Mbps up)	
		Population	%	Population	%
Belknap	60,088	57,917	96.4%	2,149	3.6%
Carroll	47,818	46,157	96.5%	1,638	3.4%
Cheshire	77,117	58,363	75.7%	18,148	23.5%
Coos	33,055	25,820	78.1%	5,587	16.9%
Grafton	89,118	80,724	90.6%	8,203	9.2%
Hillsborough	400,721	381,214	95.1%	19,470	4.9%
Merrimack	146,445	135,196	92.3%	11,153	7.6%
Rockingham	295,223	292,870	99.2%	2,353	0.8%
Strafford	123,143	120,217	97.6%	2,926	2.4%
Sullivan	43,742	35,483	81.1%	8,199	18.7%
State of New Hampshire	1,316,470	1,233,961	93.7%	79,826	6.1%

Broadband Availability in New Hampshire: All Technologies

Broadband Available

Download speed: 25+ Mbps
 Upload speed: 3+ Mbps

Other Internet Access

Download speed: 6 - 25 Mbps
 Upload speed: 1.5 - 3 Mbps

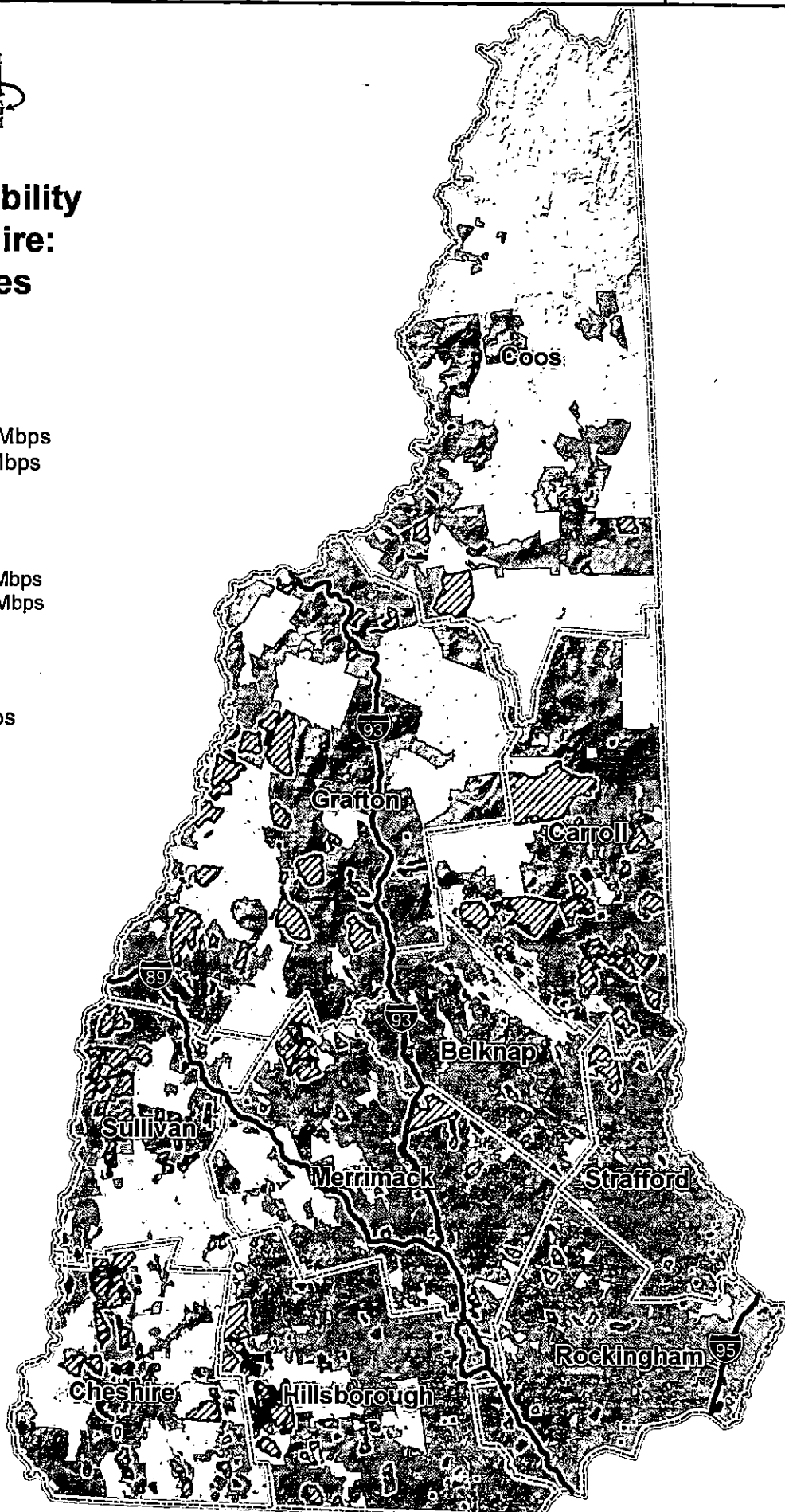
Gaps in Service

Report(s) of service gaps

Other Features

- Major Routes
- County boundaries
- Lakes and ponds

Based on FCC Form 477 data,
 Version 2, June 2015.



Support for the NHBMP is provided by
 the Northern Border Regional Commission,
 Grant #NBRC16GNH11

February 8, 2017

TO: Whom It May Concern

FROM: Brad Roscoe
Selectman, Town of Chesterfield, NH
Selectman-b@nhchesterfield.com

SUBJECT: Town Bonding for Broadband

I am one of the selectman representing the town of Chesterfield, NH. Chesterfield is in the southwestern part of the state between Keene and Brattleboro, VT. The town has about 3600 residents and 143 businesses. Many of the businesses are small and run out of the home. A list of these businesses can be found on our town website at <http://nhchesterfield.com/business-directory/>

One of my activities this last year has been to see what can be done to improve internet coverage for the town. The reason for this is many fold and includes Housing prices, Economic development, and the needs of the community. There are three primary providers of internet for the town including Fairpoint (68%), Argent (18%), Comcast (2%), and another 12% from other sources (Cell and Satellite). The percentages are based on a survey performed in the spring of 2016 by the town and may not currently be accurate, but they do give an indication of the distribution. I keep using the word internet rather than broadband since the definition of broadband is a minimum 25 Mbps download speed and a 3 Mbps upload speed. This is according to the FCC and State of NH RSA 38:38.

As I mentioned, the survey that was performed asked a host of questions and a full report of the results is available at <http://nhchesterfield.com/wp-content/uploads/2016/06/Broadband-Survey-Report.pdf> . A few highlights are: 99% of the people use the internet daily, 18% use it for a full time or home based business, 51% telecommute at least once per week, **25% telecommute at least 4 times per week**, and everyone agrees that access to broadband affects home sale prices. This becomes more evident if one talks to realtors or potential home buyers. In the last 3 months, I have had questions from potential home buyers in Chesterfield about what type of broadband service they could get at their prospective location. The survey also showed that there was a large amount of dissatisfaction with the internet providers due to speed and service quality issues.

Of the major service providers, FairPoint covers the entire town using their DSL service. They are able to provide 25/3 service to some areas along Rt-9, but as distance from Rt-9 increases, their performance degrades to the point that some locations can only connect by modem. We have received a proposal from them to improve their reach, but their installed technology is old and the newer technology does not allow full coverage of the town without significant investment. They are unwilling to do anything without the town helping with the cost. Some improvements should be covered by CAF funding, but they have chosen to spend those funds elsewhere. Interestingly, the maps provided by the fed on areas qualifying for CAF funding were in error for Chesterfield in that the areas with the best internet coverage received funding for work while the areas with the worst service got nothing. See attached maps.

Comcast covers only a small section of town on the west side near Brattleboro, VT (see attachments), that they obtained when they purchased Adelphia. In conversations I had with their Government Relations Manager, Pam Mackenzie, in May of 2016, she flatly stated that Comcast had no interest in investing anything more in Chesterfield. Since then, Pam is no longer in her position and I have been

unable to talk to her replacement or get any response Comcast after multiple attempts. I think this clearly shows their lack of interest.

Argent, another cable provider, covers most of the town and is able to supply 25 Mbps or higher to all locations it serves. Most of the >25 Mbps coverage of the town is provided by them. Unfortunately, they do not cover the entire town and their franchise agreement states that they only have to address areas where there are 14 houses per mile or more continuous coverage. We have been in discussion with them on expanding their reach and they might be interested if a viable business model can be put together (which would mean investment from the town).

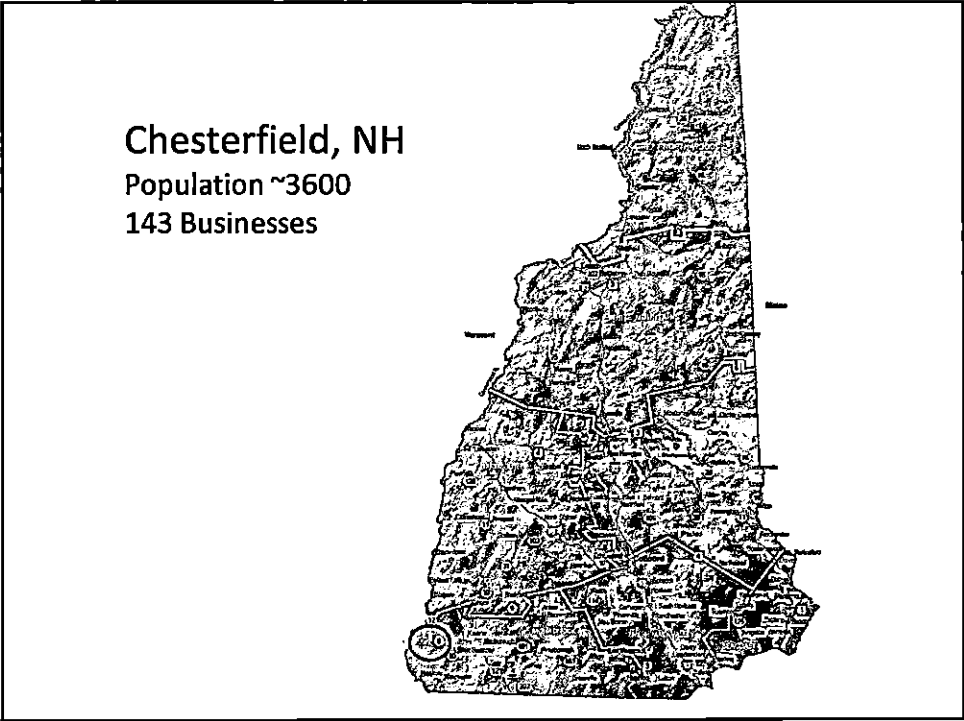
Looking at other potential solutions for the town, the town funded a "strawman" wireless study to look at what would be required for a wireless broadband company to serve the needs of the town. The study identified pole and tower locations that could potentially serve all of the underserved residents. In addition, the study provided capital and operational costs for this approach. The bottom line of the study was that a 40% subscription rate was required for this to be economically feasible, even with some town investment. Therefore, the only working business model would allow this provider to come in and compete with existing providers. We are currently in active conversation with 2 wireless companies (WiValley and New England Wireless) to see if this might work. Currently, the models we are looking at include the town owning the poles and renting them to the provider. These are items that could be bonded if we were permitted.

Basically, because of the rural nature of Chesterfield, there does not appear to be an adequate business model for a provider to provide service to all of the town residents without some support or financial investment from the town. So the next question comes up is "where does the town get the funds for this?". We have looked into the USDA "Community Connect Grants" and a town in our situation does not qualify. Therefore, we are looking at the town funding this effort directly thru a warrant article for \$50k in 2017 and another \$50k in 2018 to cover the cost of this initiative. At this time, I do not know if the town will approve this expense since it is a large expense that is paid in those 2 years and we are a very small town. The option of bonding this investment would be much easier for the average tax payer and preferred by the town. Unfortunately, we are not allowed to bond for this type of investment since the providers that are refusing to work with us have successfully lobbied to prevent us from bonding.

I strongly support the initiative to allow towns to bond for broadband infrastructure development and/or expansion so that the economic development of small towns like ours will not be at an economic disadvantage over the larger towns where the major broadband providers are willing to invest heavily.



Brad Roscoe
561 Poocham Road
W. Chesterfield, NH 03466
Selectman-b@nhchesterfield.com



Internet Providers in Chesterfield

Primary Providers	Secondary Providers
Fairpoint (68%)	WiValley (2-4 customers)
Argent (18%)	Vtel (None that I know of)
Comcast (2%)	AT&T
	Verizon 10%
	HughesNet (2-4 customers)

Broadband is 25/3 Mbps as defined by the FCC and State of NH RSA 38:38

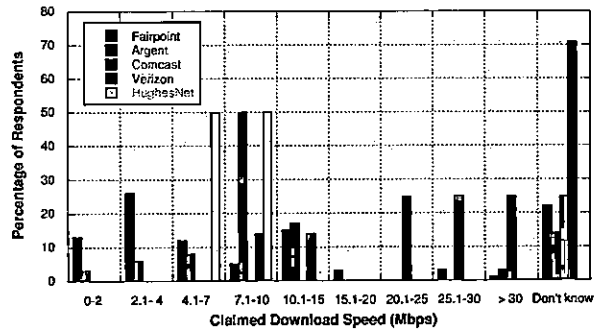
Chesterfield Broadband Survey – 2016

13% Response Rate (203 out of 1600)

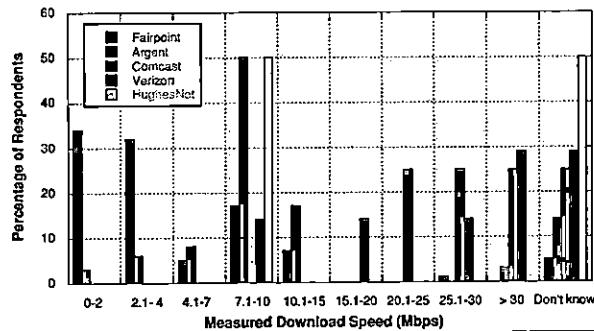
- 99% use the internet on a daily basis.
- 18% use the internet for a full-time or home-based business.
- 51% telecommute from home at least once a week,
 - 24% telecommute at least 4 times per week.
- 35% are 60 or older
 - 34% are in their 50's.
- 30% attend regional school system or local colleges
- 97% say that broadband access would affect their decision on buying or renting a home
 - 75% saying it would “strongly” affect their decision

Download Speed

Claimed



Tested

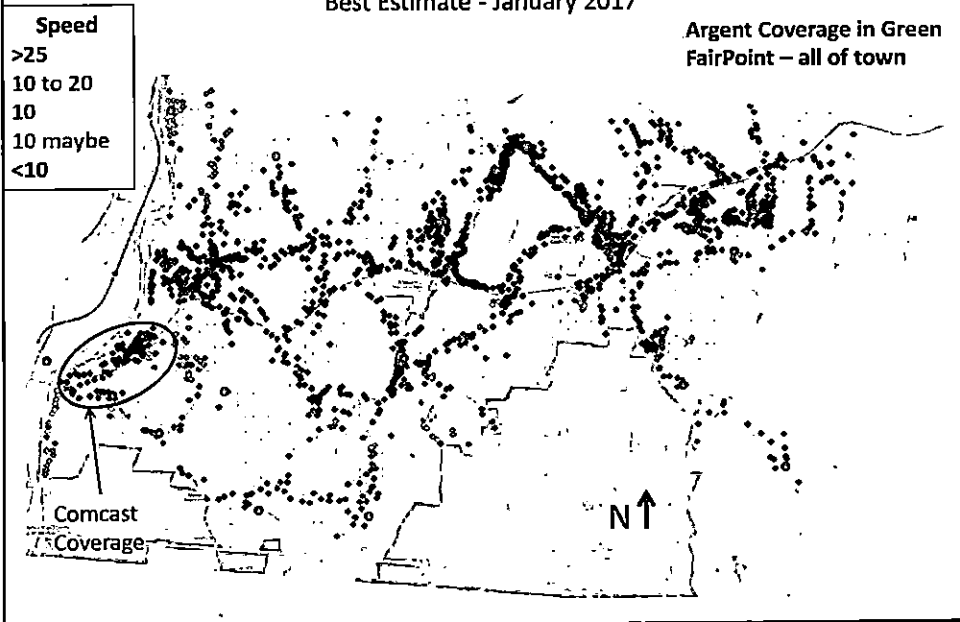


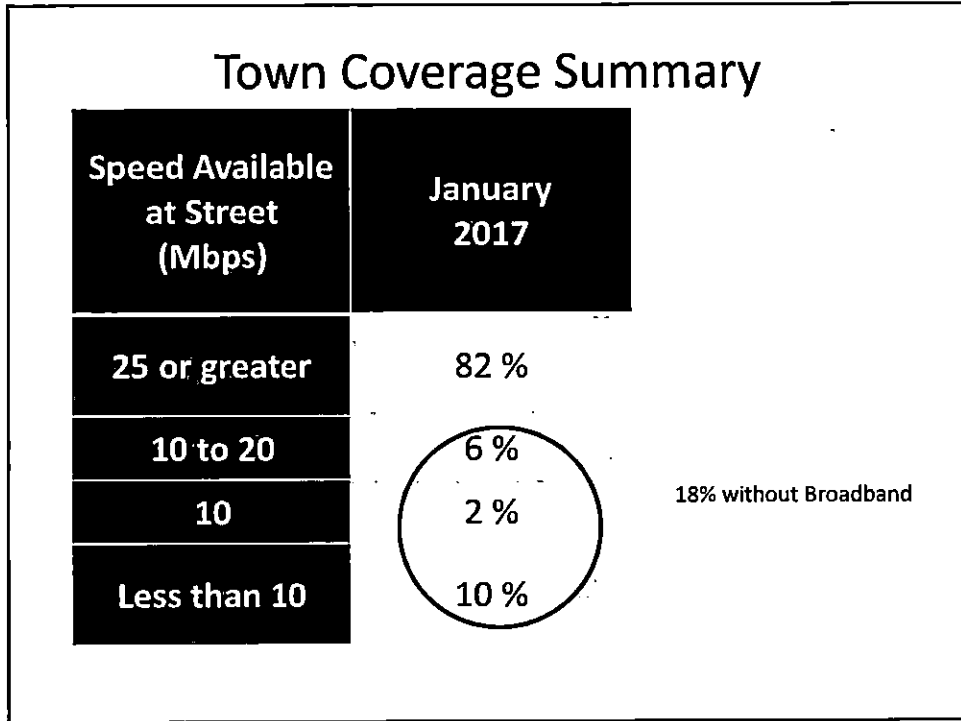
Satisfaction with Current Provider

Provider	% Not Satisfied
Fairpoint	60
Argent	33
Comcast	17
Verizon	33
HughesNet	100

Broadband Internet Coverage – Chesterfield, NH

Best Estimate - January 2017

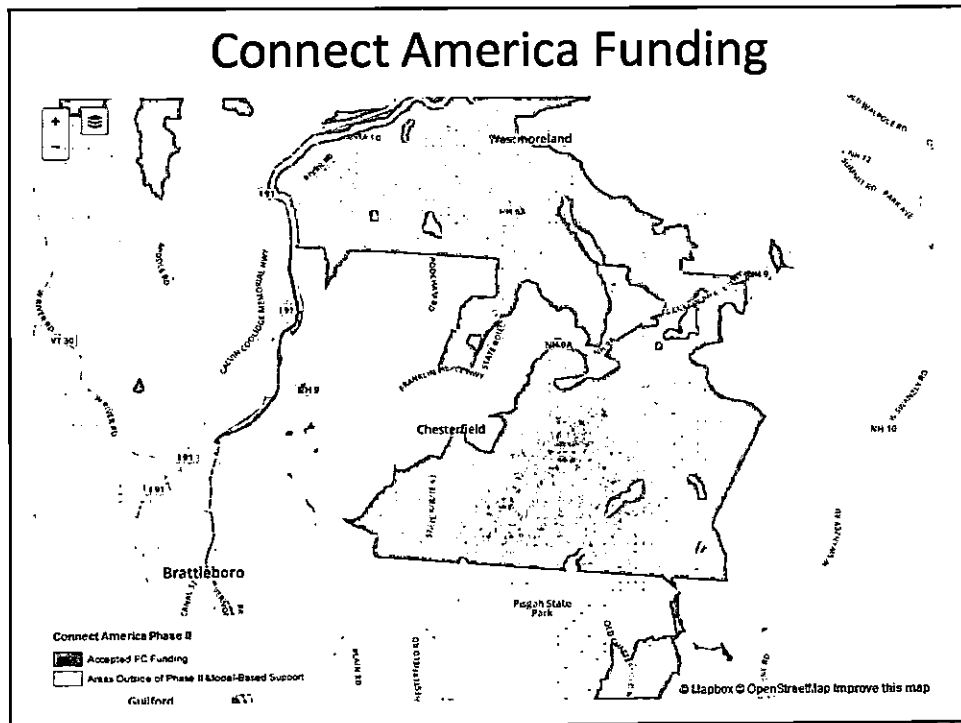




- ### Broadband Improvement Strategy
- Town does not want to own or run Broadband
Looking for Partners*
- **Wired – Talk and work with existing providers**
 - Cable
 - Argent – Active Participant
 - Comcast – No Interest
 - May 2016: Pam Mackenzie (Government Relations Manager)
 - DSL/Phone
 - Fairpoint – Active Participant – but unable to deliver 25/3 to entire town
 - **Wireless – Commissioned our own Strawman Study**
 - Business model must allow access to already served customers in addition to underserved (Including town owning poles)
 - WiValley – Active Participant
 - New England Wireless Co. – Active Participant
 - TCC Networks LLC/Skywire Broadband – Passive Participant

Funding Sources for Efforts (Partnering)

- Federal Grants: USDA – Community Connect
– Do not qualify
- Connect America Funding (only for Fairpoint)
- Taxpayer \$ by Warrant Article
- Taxpayer \$ by bonding (not available)
 - Groups fighting bonding are those that are refusing to work with us and/or can't provide service

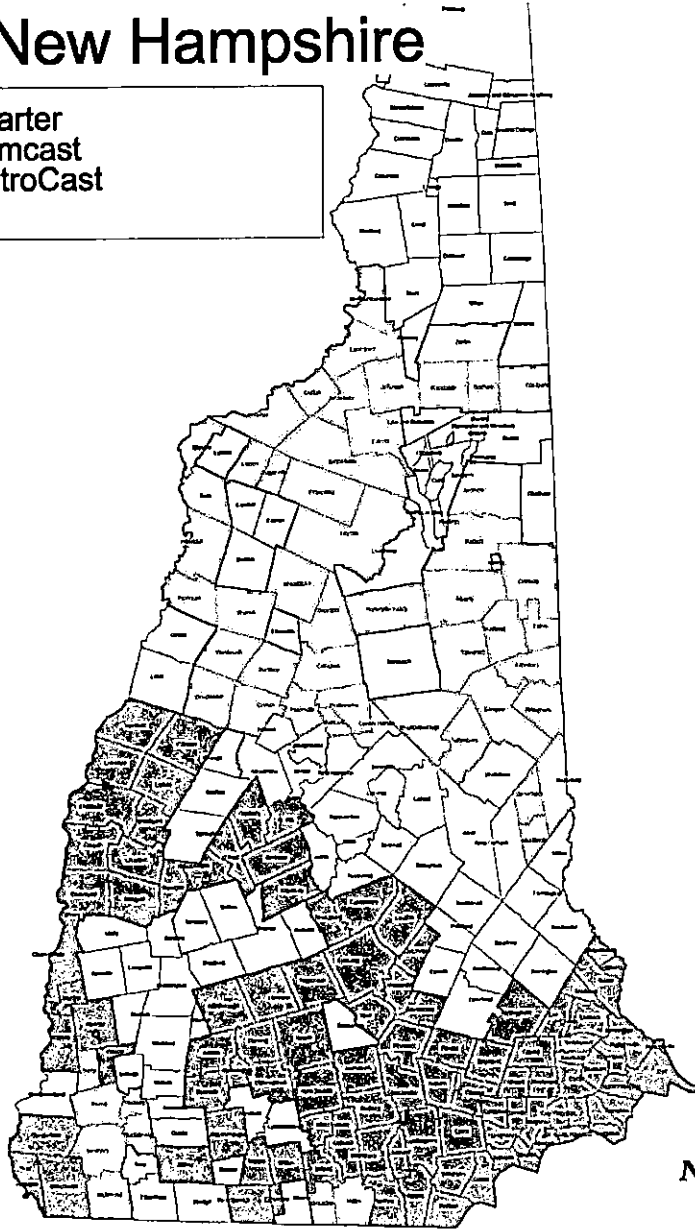
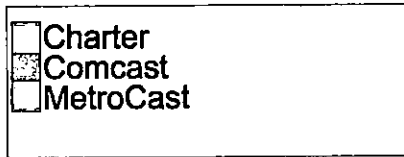




New England Cable & Telecommunications Association, Inc.

February 8, 2017

Comcast-Charter-MetroCast- of New Hampshire



New England Cable & Telecommunications Association, Inc.

Charter, Comcast and MetroCast Service Area

- 184 communities served
- More than 695,000 Homes and Businesses served by hybrid/fiber infrastructure
- 100% of network broadband capable
- Scalable infrastructure designed to offer speeds up to 10Gbps for business customers
- Over 2425 New Hampshire based Employees
- More than 450,000 New Hampshire Business and Residential customers



New England Cable & Telecommunications Association, Inc.



Keene Area Communities

(Keene, Surry, Roxbury, Marlborough, Swanzey, Richmond)

**Have access to High Speed Broadband Available to
16,162 Homes & Businesses through Charter's network**

In 2017, Charter will be increasing residential broadband speeds to 60 Mbps x 5 Mbps and 100 Mbps x 10 Mbps. The current top residential broadband speed is 50 Mbps x 5 Mbps; speeds will be doubling this year.

Charter will also be launching Spectrum Internet Assist, a low cost broadband service for low income families & senior citizens receiving SSI benefits



New England Cable & Telecommunications Association, Inc.



New England Cable & Telecommunications Association, Inc.

New England Cable & Telecommunications Association, Inc.
Ten Forbes Road • Suite 440W • Braintree, MA 02184
TEL: 781.843.3418 • FAX 781.849.6267

Testimony of Timothy O. Wilkerson

Vice President & Policy Counsel, New England Cable and Telecommunications Association, Inc.

February 8, 2017

SB 170, Relative to the authority of towns to issue bonds for the expansion of

broadband infrastructure

Senate Public and Municipal Affairs Committee

Good Afternoon, members of the committee, my name is Tim Wilkerson and I am Vice President and Policy Counsel of the New England Cable and Telecommunications Association (NECTA). NECTA is the regional trade association representing substantially all cable companies in New Hampshire and other New England states. Our members include Charter, Comcast and MetroCast which all serve the citizens of New Hampshire. NECTA respectfully submits testimony in opposition to Senate Bill 170.

NECTA opposes SB 170 because current law allows for the use of municipal bonding for broadband deployment in UNSERVED areas. The State should encourage public investment only in areas where broadband is not available, the so called "unserved" areas of the state. Therefore, the proposed change in law is unnecessary. Second, given the pace of technological change and need for ongoing investments in infrastructure, governments are ill equipped to make the investments necessary to build, operate and continuously upgrade broadband networks. Third, a decade of experience shows us that government entities often have unrealistic business plans and lack understanding of the marketplace both creating barriers to competition and leading to risky, debt laden scenarios for taxpayers.

Senate Bill 170 is not necessary to serve the "unserved"

Currently, pursuant to NH RSA's Chapter 33; Chapter 33-B and Chapter 52-A any municipality may use General Obligation Bonds, Revenue Bonds and Special Assessment District as tools to finance infrastructure investments. Specifically, NHRSA 33:3 states "*A municipality or county may issue its bonds or notes for the acquisition of land, for planning relative to public facilities, for the construction, reconstruction, alteration, and enlargement or purchase of public buildings, for other public works or improvements of a permanent nature*

including broadband infrastructure as defined in RSA 38:38, I(e), to be purchased or

constructed in areas not served by an existing broadband carrier or provider,” The meaning of this language is clear. If an area is not served by an existing broadband carrier a municipality can issue bonds for the acquisition of broadband infrastructure. SB 170 is an effort to shift the focus away from unserved areas. This is a mistake which will result in governments using public dollars to duplicate private investment and overbuild private networks.

The Rapid Pace of Technological Innovation

New Hampshire is a leader in broadband speeds and deployment thanks to the investment of private capital in this State. Currently, in New Hampshire the cable industry serves approximately 195 communities and over 695,000 homes and businesses. One hundred percent of the 695,000 homes and business served by NH cable companies can receive broadband speeds through these networks. Speed enhancements which require major capital investments in network equipment and electronics in customer's homes have allowed companies to increase network speeds on average more than once per year over the last 15 years. For example, more than 50% of Comcast's customers now subscribe to a 200Mbps service and 80% a 50Mbps service.

A final example of technological innovation is the city of Keene, which is served by Charter Communications. Charter's network passes 11,079 homes and businesses. Today, Charter can provision any level of broadband service to businesses through direct fiber connections. In March, Charter will be increasing its broadband speeds to 60x5Mbps and 100x10 Mbps for residential customers. This is just one example of our members enhancing services to not only meet--but exceed the needs of their customers.

The massive and ongoing investment required to maintain the competitiveness of these networks makes the prospect of local government bonding to build duplicate networks highly risky. Cisco predicts in its 2016 Visual Networking Index that IP Traffic will grow at a 19% Compounded Annual Growth Rate nearly tripling between 2015 and 2020. Wi-fi and mobile networks will account for 66% of IP traffic by 2020 and the average number of connected devices per capita in the United States will be 12.3 with 71% of consumer IP traffic originating from non-PC devices.

Unrealistic and incomplete business plans

When evaluating the merits of spending taxpayer dollars to finance broadband infrastructure, many factors must be considered beyond the initial deployment. For example,

significant maintenance will be required, repairs will be required and upgrades will be
demanded. Storms will happen, outages will need to be addressed. Consumer demand will change and greater speeds and capacity will be demanded. These issues can only be addressed by spending more capital.

In addition to the current and future costs of the infrastructure, one must consider what customer base exists. One government funded network that serves Southwestern New Hampshire is NHFastRoads. In a Monadnock Ledger Article dated December 21, 2015 Jack Dugan, president of the Monadnock Economic Development Corporation (MEDC), highlights some of the challenges faced by government subsidized networks. Mr. Dugan, speaking on behalf of the MEDC said “the nonprofit (MEDC) is being forced to question if it should subsidize NHFastRoads any longer, since only 15 percent of the Internet infrastructure NHFastRoads built from Rindge to Enfield is utilized. NHFastRoads is a MEDC program. MEDC was required to invest \$2 million in the \$7 million project.”

Municipal broadband networks likewise require significant and ongoing investment and time and time again history has shown that municipalities must draw on taxpayer funds because of unrealistic business plans based on inaccurate cost estimates and overly optimistic revenue assumptions. Our neighbors in Vermont and Connecticut learned this lesson. In Vermont, Burlington Telecom illegally and secretly funneled \$17 million in general fund resources to subsidize their networks operations. In Groton, CT the network ran up \$11M in operating losses before selling at loss which ran into the tens of millions.

Closer to home, similar warning signs should be heeded. In Business Monadnock’s Jan/Feb 2016 issue it was reported that years into its operation in 19 towns, NHFastroads only has 362 “entities”, presumably paying customers, connected to the network. This once again highlights the risk of investing public dollars when the actual demand for services and the competitive environment is not fully understood and realistic business models are not developed.

It is far better public policy to encourage and incent competitive market participants, with access to private capital, to deploy and upgrade technology than to permit municipalities to overbuild networks with infrastructure that will demand ongoing investment and subsidies to keep up with technological innovation and consumer demand.

Government as Competitor

It is also important to understand that when the private sector faces a municipal competitor, the municipality wields significant influence and power as a permitting, taxing and ordinance issuing entity. This creates an unavoidable, unlevel playing field allowing the

municipality to pick winners and losers. The list of ways in which a municipality favors itself
over the private sector is long. For example: it receives preferential tax treatment, it hides the true cost of the service by subsidizing it with tax revenue, it hides construction and maintenance costs inside other departments, it asserts that it should have free access to utility poles and not bear the cost of making those poles safe, it waives, accelerates or avoids all together permitting requirements and frequently it provides itself free or reduced service removing a customer from the marketplace. These tactics help to create the illusion that the network is an appropriate and sound investment for the community.

When governments pick winners and losers and duplicate private investment transparency and accountability suffer. SB 170 offers no protections against the type of malfeasance which occurred in Burlington and Groton, and it offers no mechanisms to create transparency or accountability.

Unanswered Questions

We believe that before any such public policy is considered many questions should be answered. These questions include:

- **What is the scope of the problem that the legislature seeks to solve?**
 - **Is the goal to serve the unserved or is the goal to create new networks where others already exist?**
- **Is there a realistic business model?**
- **Is this about NHFastRoads seeking more public dollars?**
- **If the public policy goal is to enhance economic development opportunities, does the use of municipal funding for broadband deployment help to achieve that goal?**
- **Is it sound policy to enable a government entity that has regulatory and police powers to compete directly with the private sector? What are the potential ramifications?**
- **In what ways could a municipality use its powers to create an unlevel playing field?**
- **Will the presence of a municipally funded and backed broadband network provide greater incentive for competitors to invest in their networks or cause them to spend capital elsewhere?**
- **What is the effect on availability, pricing and service in a community where there are private sector providers and government owned networks?**
- **Who is financially responsible if a municipally has issued bonds and fails to generate the anticipated revenue either from vendors or end users? Is it similar to Burlington Telecom where the taxpayers and not the systems users or vendors are ultimately responsible?**
- **Will the state or any other communities bear a financial burden if a town or towns fail to meet their bond obligations?**
- **How might bond ratings of municipalities be impacted?**
- **Is it wise to exempt this type of bonding from debt limits?**

- **Has any municipality shown that they possess the expertise to develop, build and maintain a broadband network to serve residential broadband customers?**

Viable Alternative Solutions

There are examples of successful public private partnerships where government and industry marshal resources to reach unserved areas. Last year both Charter and Comcast entered into agreements with Massachusetts to provide high-speed broadband to 1,500 new residences and businesses. State grants reimburse a portion of the costs to construct broadband internet extensions to new homes and businesses. In the majority of these nine Western and North Central Massachusetts' communities, the overall coverage level will reach or exceed 96%. By extending internet service meeting or exceeding the FCC's definition of broadband service to residents in these formally partially served communities, it allows these homes and businesses to access the communications tools, educational resources, and content they need to fully participate in the digital economy. The Massachusetts experience demonstrates that through a collaborative approach, internet providers can deliver reliable, sustainable and affordable broadband solutions to previously unserved areas.

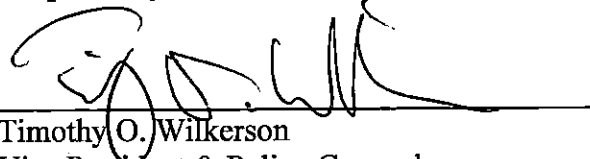
Conclusion:

In conclusion, we believe that SB 170 is unnecessary and bad public policy. At best, SB 170 raises a wide range of complicated issues and questions that merit close attention and scrutiny.

New Hampshire should continue encouraging investment in areas of the State that remain unserved. SB 170 does not achieve that goal. The cable industry has invested a significant amount of private capital in New Hampshire and serves the vast majority of the State's population. If SB 170 passes and allows for public investment in areas already served, it will create disincentives for ongoing industry deployment and investment. Further, SB 170 allows for risky scenarios given that municipalities are ill equipped to make the ongoing major investments necessary to build and operate broadband networks. New Hampshire taxpayers, like those in Burlington Vermont and Groton Connecticut would be at risk.

We thank you for your attention and urge you to recommend SB 170 inexpedient to legislate.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'Timothy O. Wilkerson', is written over a horizontal line.

Timothy O. Wilkerson

Vice President & Policy Counsel

New England Cable & Telecommunications Assn.

Inc. (NECTA)

Ten Forbes Road Suite 440W

Braintree, MA 02184

twilkerson@necta.info

Phone: 781-843-3418

Cell: 339-237-2235

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Re: SB 170 relative to the authority of towns to issue bonds for the expansion of broadband infrastructure

To: Chair Gray and Members of the Senate Public and Municipal Affairs Committee

From: Founder, MobileRobots Inc, Jeanne Dietsch; Chair, Peterborough EDA Strategic Planning & Broadband

As a three-time entrepreneur and head of strategic planning and broadband for the Peterborough Economic Development Authority, I believe the committee should **recommend SB 170 PASS, in order to clarify the legal situation around municipal bonding of broadband.**

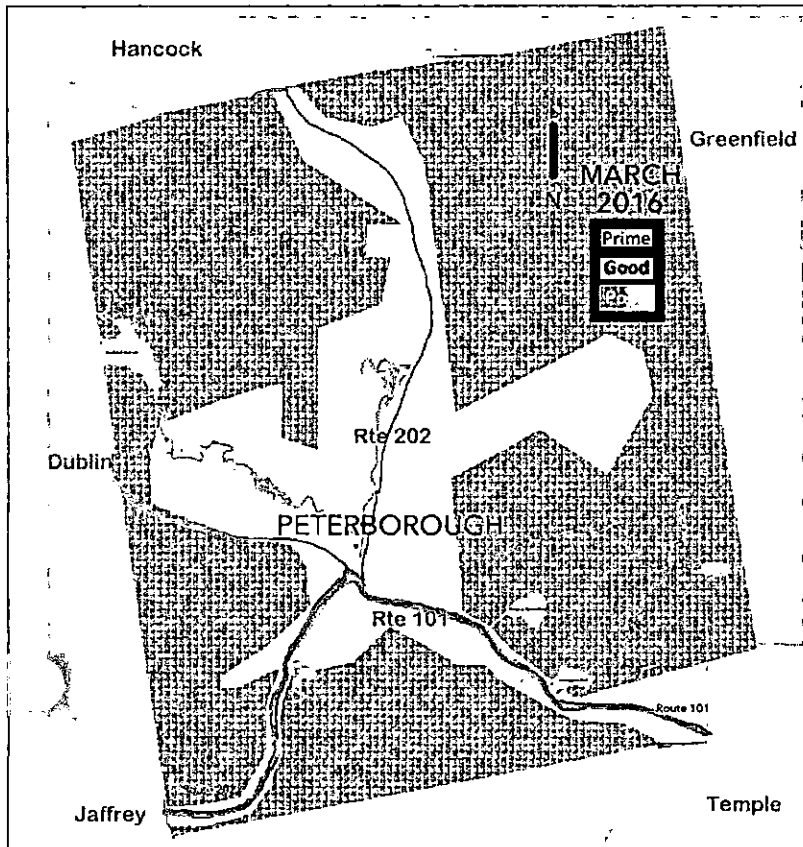


Figure 1: Broadband coverage around the Peterborough, NH area

Prime (Green line): Open-access optical fiber FastRoads network, coax/optical fiber and DSL, plus private direct lines are all available along this corridor.

Good (White areas): Coax/optical fiber and DSL, plus private direct lines are available here.

Poor (Dark and Light Gray areas): 40% of Peterborough residents and 100% of Dublin, Harrisville (not shown) and Greenfield residents have only DSL, or private direct lines. Unless customers pay to have a direct line installed, available speeds do not meet the federal definition of broadband.

Information on this map is based on survey data gathered by the Peterborough Economic Development Authority and on visual inspection of line hardware by trained interns and aff employed by the Town of Peterborough.

1) Legal counsel has advised the Town of Peterborough, just as the bond counsel has advised Keene, that the Town may not bond any broadband improvements under the existing regulation RSA33.3.

2) While more densely populated areas have good to excellent broadband access, 40% of Peterborough residents (dark & light gray areas) do not have access to high-speed broadband (25mbps+ down). If outlying areas of Peterborough are not built out, lines will not reach Dublin, Greenfield, Harrisville and more remote areas.

3) The State of NH has refused to match federal funds for broadband infrastructure. Telecoms have refused to build to areas that do not meet their density requirements for Return on Investment. What option remains but for towns to engage in public or public-private investment that requires bonding?

4) If SB 170 does not pass:

- a) Rural areas cannot attract talent or youths
- b) Hospitals cannot cut costs through telemedicine
- c) Poorly connected schools cannot cut communication costs or use most online resources
- d) Unconnected homes, already selling at a 20% discount, will continue to drop in value
- e) Businesses will not flourish, and may even move, because of lack of employees.
- f) Residential property taxes will continue to rise as the commercial property base dwindles (Please note this when you hear from the man who calls himself "the New England Rate Payers Association." He will complain about the cost of broadband. The fact is if we don't expand broadband, residential property taxes and costs will rise because of the factors listed above!)



42 GROVE STREET P.O. BOX 59
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603-924-3321 FAX 603-924-8563
www.PetersonsRealEstate.com

February 8, 2017

Re: SB 170 relative to the authority of towns to issue bonds for the expansion of broadband infrastructure

To: Chair James Gray and members of the Senate Public and Municipal Affairs Committee

From: Heather Peterson, President
The Petersons, Inc. Real Estate
Peterborough, NH 03458

I am a native of Peterborough, the third generation to head a real estate company founded by my grandfather. I grew up in the town and was lucky enough to have a job here so my children could grow up in Peterborough. Part of the strength of the community is that residents work here, raise families here, play here, shop here, worship here and retire in place. When that dynamic was challenged in the 1960's citizens banded together to create industrial parks and build housing for workers.

Those buildings, once large centers of employment, need to be repurposed as large corporations, are consolidating, not opening satellites in rural America, especially not in states with 2.7% unemployment rate. A large commercial building was assessed 10 years ago for 6.2 million dollars. It sold that year for 2.6 million dollars and then more recently for much less. Without a strong commercial tax base, the burden of supporting town services is now on residential real estate. Peterborough tax rate is in the top 25 in the state.

Without good paying jobs and with a high cost of living, our town and area towns are losing young families. Working online may allow workers to choose more rural towns. I have lost many house sales and a chance of young families to settle in the area because of poor internet connectivity. We are too distant from urban job centers for commuting. To keep our town a region dynamic of live, work and play in place, we need a way for people to earn money. Otherwise we are condemned to be a community of old people and the people who take care of them.

Broadband would allow people to work from home. It would breathe new life into our empty commercial buildings. We, at The Petersons Real Estate, represent several of these buildings. To attract tenants to a non-urban center we need an extraordinary incentive. Superfast internet would be that incentive. High speed internet that is available everywhere is not enough.

Downtown Peterborough in the 1980s and 1990s was a hub for the publishing industry. Publishing companies paid for the installation of T-1 lines for their businesses. Without big users, the utility provider at that time, Verizon, had no incentive to provide quality internet to the small businesses. As a small business located in the downtown, I struggle to find a good internet



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service. The publishing industry left the town and for years those buildings were vacant until new technology was available. It was still a struggle to attract tenants, because internet providers would not provide high enough speeds for our town's commercial space to be competitive.

Peterborough has both Comcast and Fairpoint DSL internet. With the current tax rate, I am not anxious to have the town spend money that will raise it higher. I am more afraid of being a cutesy tourist town with retirees instead of a vibrant, age diverse community. Ten years have passed since we lost our major employers. We cannot wait much longer to master our fate. We cannot rely on the telecom companies to build the infrastructure we need.

SB170 does not require anything. It permits towns to bond broadband if they choose. Please let the towns that want to chart a more prosperous future the right to choose. The legislature in the past has given towns the right to create "TIF" districts to facilitate infrastructure improvements. SB170 gives towns a tool that is needed now.

Sincerely yours,

THE PETERSONS, INC.

By

Heather Peterson
President

HP/dmd

February 7, 2017

Members of the Senate Public and Municipal Affairs Committee,

As a founder of Dyn and builder of Internet infrastructure, I know the importance of attracting talent to New Hampshire. It's an area that I've worked on from the early days of MYPN to Stay Work Play and now with the New Hampshire High Tech Council to improve workforce attraction in the state.

Without pervasive broadband, employees and companies in our state cannot compete. Broadband has simply become table stakes along with water, power, and electricity. Tech employees need reasonable access as do workers in every field whether it's for school, banking, or health care.

States and private industry will not always lead the charge to build out networks. The state can however give municipalities the power to build out networks through its shared lending.

Therefore, I urge the committee to recommend SB 170 PASS.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Hitchcock', written in a cursive style.

Jeremy Hitchcock



Senate Bill 170

An act relative to issuance of bonds for the expansion of broadband infrastructure

Testimony on behalf of
FairPoint Communications

By Ellen G. Scarponi

February 8, 2017

Good Morning Mr. Chairman and Committee Members. Thank you for the opportunity to talk with you today. My name is Ellen Scarponi and I represent FairPoint Communications in opposition to SB 170.

Let me be clear – our opposition is not to the expansion of broadband or fear of competition from municipalities – as the NH Municipal Association will tell you. Our opposition is to spending public dollars to overbuild existing broadband infrastructure **INSTEAD** of spending them to expand to those last unserved in their communities. The title of this bill is incomplete. It says, “An act relative to the authority of towns to issue bonds for the expansion of Internet services.” The towns can already do that under existing law – to “areas not served by an existing broadband carrier or provider...” (RSA 33-B:1 VI*). What the sponsors of this bill really want is to be able to spend public dollars to overbuild areas that are already served.

I am here to share good news:

- NH is in great shape regarding broadband availability – and this is the message we should be sending to attract prospective businesses and residents to our state!
 - Providers want everyone to have broadband too – enough broadband to do whatever someone needs to do.
 - This is evidenced by the significant buildout – at provider expense - over the past three years. Just look at the UNH report* and map* from last year. 99.8% of the population has broadband availability – that includes residences and businesses, government, schools, libraries and hospitals. And the availability has improved even more since then.
 - There are many providers whose services make up this number – for example in Peterborough there are 15 internet service providers and in Keene there are 19. These include: Time Warner Cable, Comcast Cable, Sovernet, FairPoint Communications, WiValley, First Light, 186 Communications, AT&T, Verizon and US Cellular plus others
 - Let me tell you about FairPoint’s expansion in New Hampshire that demonstrates that understand the need for broadband:
 - \$75million in dedicated broadband upgrades and expansions
 - >\$360 million in network upgrades and expansions

- 7100 miles of new fiber optic cable
 - DSL speed upgrades from a previous maximum of 3Mbps to 25Mbps
 - DSL availability from 63% to >95%
 - Introduction of full spectrum of State of the Art fiber Ethernet services 5/5 to 10gig to over 95% of our territory
 - 1300 lit buildings
 - 5000 business tenants
 - 2200 Ethernet circuits
 - Fiber backhaul to nearly 400 cell towers
- Rather than overbuilding existing networks, the focus should be on how to pay for that last 2%. Providing the remaining 2% of the un- and underserved is VERY expensive – no matter who provides the service. But it is far less expensive than building a whole new network.
 - We are advocating for the best use of taxpayer dollars
 - Do not overbuild or duplicate services where service already exists
 - Target those un- and underserved addresses and get service to them
 - Work with existing providers and partner to expand to those areas. It is far less expensive to run fiber from an existing node to a new remote terminal (\$50-\$100K total) than to run new fiber at \$30-\$40,000+/mile for a new network that needs to go throughout the town. Quotes that we have seen go into the \$1million+ area. That equates to a hefty increase in property taxes.
 - Use the Special Assessment District law (HB 486, Chapter 240*) passed in 2015 – not everyone in town wants to pay for the unserved. This way those who want it pay for it.
 - If need to bond, use the existing laws.
 - The only reason for this legislation is to overbuild what is already there and still, those networks might not be able to afford to get to the most remote addresses. There are too many examples of municipal broadband networks gone wrong (Burlington VT, Cedar Falls IA, Chattanooga TN, etc. – Dirty Dozen report*) to consider this as responsible spending.
 - Even the FCC is promoting that the best use of spending taxpayer dollars is to use it on the last mile to remote areas not building new networks. (FCC Commissioner O’Rielly Comments 12/6/16*)

In summary, FairPoint Communications asks your committee consider whether the proposition laid forth in the bill – to enable municipalities to bond for broadband infrastructure in served areas – will solve the problem of providing affordable broadband to the unserved in New Hampshire. We urge you not to pass this bill.

Thank you.

Ellen G. Scarponi - Director Government Relations & Economic Development NH
 FairPoint Communications | 770 Elm Street, Manchester, NH 03101 | escarponi@fairpoint.com
 603-656-8118 office | 603-703-7315 cell

*All items identified by asterisk are available upon request



Business and Industry Association
New Hampshire's Statewide Chamber of Commerce

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February 8, 2017

The Honorable Chair, Senator James Gray
Senate Public and Municipal Affairs Committee
Legislative Office Building - Room 102
Concord, New Hampshire 03301

SB 170 – An act relative to the authority of towns to issue bonds for the expansion of broadband infrastructure

Mr. Chair, members of the Public and Municipal Affairs Committee,

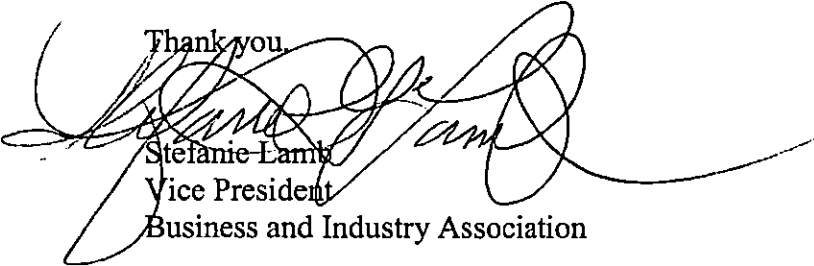
Thank you for the opportunity to discuss SB 170 with you today. My name is Stefanie Lamb and I am the vice president of public policy at the Business & Industry Association (BIA), the state's leading business advocacy group. With more than 400 members throughout New Hampshire, we serve as the statewide chamber of commerce.

I come before you today to register the BIA's opposition to SB 170. This legislation would allow municipalities in New Hampshire to invest in as well as over build existing broadband infrastructure in areas that are already served by private telecommunications companies. Significant investment and business expansion is already occurring including service to areas not previously served. Allowing other entities to compete directly with private industry sets a bad precedent and would have a negative impact on private investment in the state and New Hampshire's economy as a whole.

Given the economic challenges that the state's economy is facing, the legislature should take a long hard look at any bill that could hurt private investment in New Hampshire. The state should be encouraging private investment and not placing its largest employers in a no win regulatory scheme aimed at driving them out of business.

I would gladly address any questions that the committee may have.

Thank you.



Stefanie Lamb
Vice President

Business and Industry Association



**Comcast Testimony regarding SB 170
Public and Municipal Affairs Committee
February 8, 2017**

Good morning, Chairman Gray members of the committee, my name is Chris Hodgdon I am Comcast's Vice President of Government Affairs in New Hampshire. Thank you for the opportunity to address the committee regarding our concerns with SB 170. SB 170 takes the focus off finding solutions to the small percentage of residents who lack access to the internet and instead focuses public resources on duplicating networks where they already exist.

By any objective measure, the availability and quality of broadband service in New Hampshire make the state a leader. According to the Federal Communications Commission's *2016 Broadband Progress Report*, more than 93% of New Hampshire has access to at least 25Mbps/3Mbps which is current standard for broadband. This is a marked improvement from the prior year's report when 83% had access. While the FCC no longer reports data for slower speeds, the agency's 2015 report found that only 3% lack access to 4Mbps/1Mbps service delivered by a wired provider and virtually the entire state has access through wireless and satellite technologies.

New Hampshire consistently ranks among the best states in terms of availability even with our relatively large rural population. Only 6 states had a smaller percentage of their rural population without access to advanced broadband services, states such as Rhode Island, Connecticut and Delaware have relatively small rural populations while nearly 40% of NH's population is rural, living in 92% of the state's land area. New Hampshire's private sector providers are succeeding in deploying services despite its rural landscape.

Often heard rhetoric suggests that the quality of broadband is lacking. Data from the FCC disproves this and instead shows that Comcast and New Hampshire's other cable providers offer exactly the same service at the same price throughout their service area. Comcast's fastest residential speed, available to 100% of its service areas, is 200mbps. Similarly, Charter offered 100mbps service throughout its network and has announced upgrades to the former Time Warner Cable communities to offer 100mbps as well. Critically, the FCC's 2016, *Measuring Broadband America Fixed Broadband Report* found that Comcast and other cable providers consistently delivered speeds that meet or exceed advertised speeds.

Encouraging investment in areas that lack broadband access should be the continued focus in New Hampshire. Whether it is through existing statute which already allows bonding to build in areas unserved by broadband or by other policy means, New Hampshire should stay focused on creating an environment which encourages private investment.

Thank you for your attention to my testimony this morning, I would be happy to answer any questions you may have.

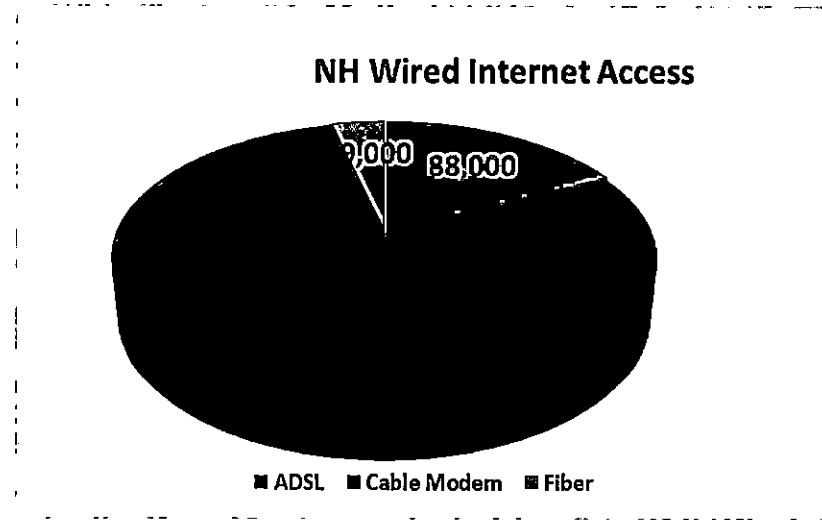


Municipal and Public Affairs Committee
February 8, 2017

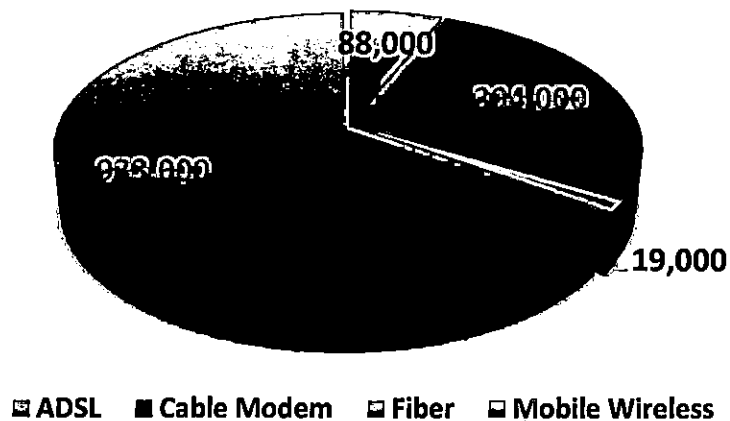
Internet Access in New Hampshire

FCC, 2016 Broadband Status Report 93% of NH residents have access to a minimum of 25mbps/3Mbps Broadband service

According to the US Census Bureau 39% of NH's citizens live in rural areas which represent 92% of NH's area



**NH Internet Access
Wired and Wireless**



New Hampshire's median download speed in 2016 was 43.1 Mbps

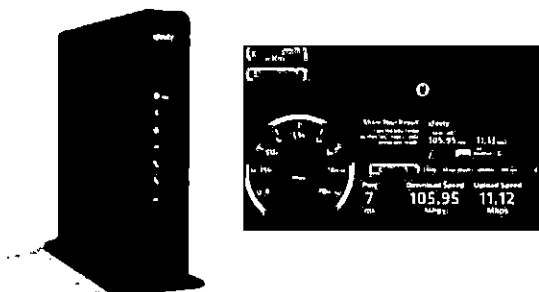
U.S. median download speed was 39Mbps a 22% increase over the prior year.

Source: FCC "Internet Access Services: Services as of 6/31/2015" Report published August, 2016
 FCC "Measuring Fixed Broadband Report 2016" published 12/16

Comcast investment in New Hampshire



- 18 Million Wi-Fi hotspots in U.S.
- In-home Wi-Fi speeds of up to 700Mbps
- 201,000 NH Wi-Fi hotspots



Over 2700 NH families connected through broadband adoption program



Residential Speeds

- 2Gbps/2Gbps FTTP deployed 12/2015
- 200 Mbps/10Mbps service built on hybrid fiber/co-axial network
- 80% of customers choose a service offering speeds greater than 50Mbps
- Nearly 50% of customers choose our 200Mbps product.
- Docsis 3.1 deployment delivers multi Gigabit speeds over existing infrastructure

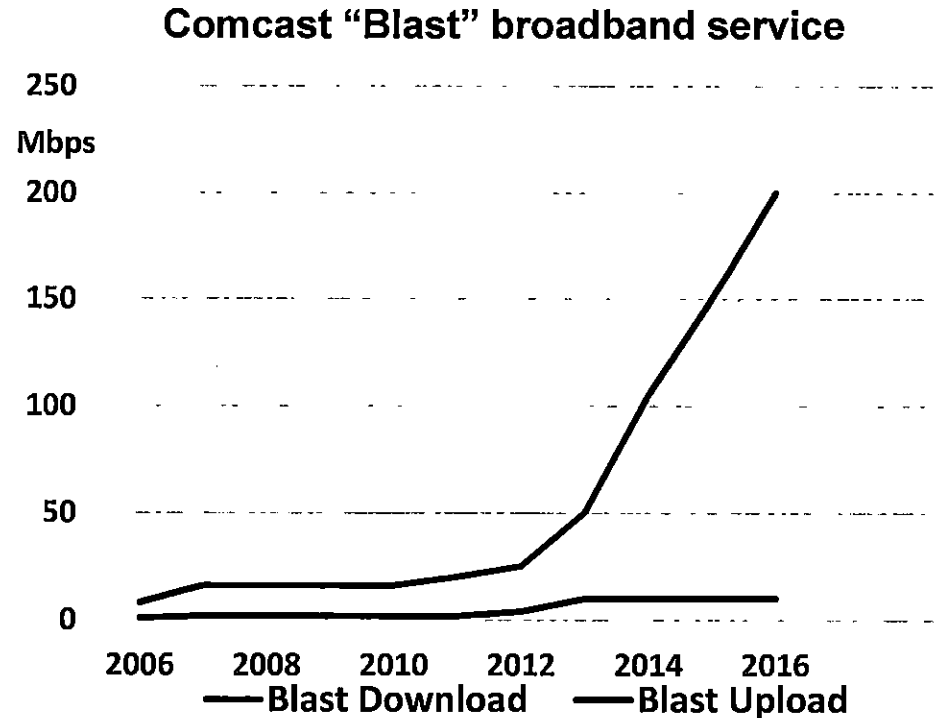
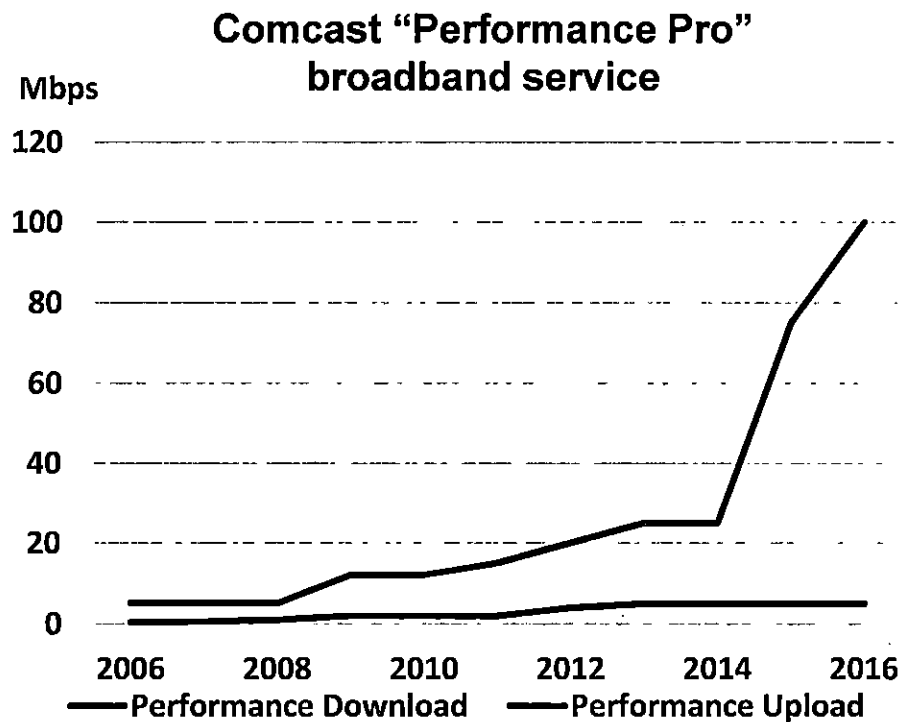
Business Speeds

- Customizable service offerings up to 10Gbps
- Wi-Fi solutions

Comcast Broadband “Performance” and “Blast” Speed Enhancements 2006-2016

Residential Speeds

- 100% broadband capable network
- Available to more than 525,000 homes and businesses
- Ookla’s Speedtest.net awards Comcast NH’s “Fastest Internet Service Provider”



February 7, 2017

Thank you Mr. Chairman, Ladies and Gentleman:

I am Kendall Lane, Mayor of the City of Keene and I am here this morning to speak in support of SB 170.

I am from the western part of New Hampshire, a more rural part of the state, an area of the state that does not have an interstate highway or a railroad. We are far from Boston, we are not close to any other urban part of the state.

That said, we need to work together to support our local economy. Our local businesses, the job providers in our part of the state, cannot compete without broadband to support them.

Currently the only providers in our region are Fairpoint, Time Warner and Comcast. There is a lack of competition in the free market. Our region has the highest percentage of households in New Hampshire with less than the minimum internet access. Those few businesses that do have broadband access pay rates far in excess of what is paid in Nashua or Manchester.

This bill gives us an option. We do not want to build our own broadband system and are not out to compete with the current providers. However, we would like the option to do so if it becomes appropriate.

This is simply an option to allow local municipalities to support their local economy when others are not doing so.

It has been said we already have the authority to issue bonds to support local broadband, however, our bond council tells us we do not and cannot issue bonds for this purpose.

It has also been said we have all the broadband we need. This is not about what we need. This is not about what the providers believe we need; it is about what the businesses need, it is about what is necessary to support our local economy and prepare our local businesses for the 21st century economy.

We are asking for your help to give us the ability to support existing businesses and attract new businesses. We are not asking for any financial assistance from the state, although that is always nice, but we do need permission to allow us to provide support at the local level.

The information highway is as important to us as I-93 is to Manchester and Nashua. The system is not currently delivering the broadband we need. We are asking for your help to make broadband a reality for the western part of New Hampshire.

Thank you.

Statement of Joel Huberman to the Senate Public and Municipal Affairs Committee, February 8, 2017, re: SB 170

Good afternoon! My name is Joel Huberman. I'm a retired biochemist, living in Peterborough, NH.

When I moved to Peterborough four years ago, I was happy to discover that I lived in a portion of the town served by Comcast, which uses cable technology to provide Internet service. Comcast provides me with currently reasonable Internet speeds (25 Mbps download, 5 Mbps upload; see table below).

But soon I discovered that many of my new friends in Peterborough live outside the area served by Comcast, so they have to be content with the slower speeds provided by Fairpoint, which uses DSL technology. I also found out that there are some Peterborough residents who live in areas not served by either cable or DSL.

This uneven distribution of Internet speeds seemed unfair to me. That's why I volunteered to serve on Peterborough's Enhanced Broadband Committee, which has the goal of eventually bringing high-speed Internet to every home in our town.

One of my functions on that committee has been to find out what other towns and cities have done to improve their Internet speeds. My research revealed that there are currently *more than 80 towns and cities* (all in other states) that offer Internet at a speed—1 Gbps—that's 40 times faster than my current upload speed for both download and upload, frequently at prices similar to what I'm now paying. These towns and cities offer their high speeds to every resident, not just those in favored portions of their towns (<https://muninetworks.org/communitymap>).

My research revealed that every town or city took a different pathway to reach the 1 Gbps goal, but most of them used some form of bonding to obtain the capital needed for building up their broadband infrastructure. I offer two examples. The first example is a municipally owned and operated service, while the second is a public-private partnership.

Chattanooga, TN, was the first city in the country to bring 1 Gbps service, via optical fiber, to every home within its borders. Two thirds of the capital costs for this project came from revenue bonds (\$225 million; <http://www.tennessean.com/story/money/2016/06/14/chattanooga-mayor-gigabit-speed-internet-helped-revive-city/85843196/>). Chattanooga's fiber installation was completed in 2010. The resulting revenue stream is permitting the bonds to be repaid and is providing extra funds for further investment. As a result of additional investment, Chattanooga was able to offer an even faster speed—10 Gbps—in 2015. Current prices are \$57.99/month for 100 Mbps, \$69.99/month for 1 Gbps, and \$299.00 per month for 10 Gbps (<https://epb.com/home-store/internet>).

Chattanooga now offers some of the fastest, perhaps the fastest, Internet speeds in the world. It's now clear that this has had a profound positive effect on its economy. In return for the \$225 million spent on revenue bonds, the city's economy has grown by more than \$865 million (<http://www.timesfreepress.com/news/business/aroundregion/story/2015/sep/16/epb-fiber-optics-gives-city-boost/325362/>). A Volkswagen plant has moved into Chattanooga, unemployment has dropped from 7.8% to 4.1% over the past three years, and the average wage has climbed dramatically. People are

moving back into downtown, attracted not only by affordable housing with superb Internet speeds, but also by the restaurants and music halls that are thriving there.

But Chattanooga is a fairly large city, located far from Peterborough. The small rural Western Massachusetts town of Leverett provides a more relevant example. Although Leverett's population is only 1,800, that population includes several citizen volunteers with the expertise and passion to convince the town of the desirability of bonding to build a fiber-to-the-home broadband network. At Leverett's 2012 town meeting, citizens voted 9:1 to issue general obligation municipal bonds to finance three fourths of the network construction costs (http://www.bbcmag.com/2015mags/Nov_Dec/BBC_Nov15_LeverettNet.pdf; total expenses were \$3,733,734; of these \$2,900,917 came from bonds; <https://leverettmlp.files.wordpress.com/2016/03/leverettnet-presentation-16-03-06.pdf>).

The resulting network is owned by Leverett, but the town partners with private companies and with the municipal electric utility of the neighboring town of Holyoke, MA, for network operator, Internet Service Provider, and maintenance functions. The current cost is \$78.90 per month for 1 Gbps service (see table below; <https://mlp.leverettnet.net>). Because the network was finalized just last June, it's still too early to see improvements in economic statistics, but the citizens of Leverett are confident that economic development will accelerate dramatically (<https://opencape.org/news/case-study-leverett-ma-and-initial-results-from-town-wide-ftth-deployment>).

Back in Peterborough, our Enhanced Broadband Committee has negotiated with Comcast and Fairpoint regarding upgrading and broadening their services. Unfortunately both companies feel that, due to the dispersed character of the currently underserved portions of our Town, they can't commit to broadening their services unless the Town will provide funding for the expansion. How can the Town obtain funds for an expansion by Comcast or Fairpoint? Are we blocked by RSA 33:3?

In discussion with our Enhanced Broadband Committee a year ago (January 12, 2016), Comcast representatives told us that the purpose of RSA 33:3 is to prevent competition between towns and established broadband providers and that, according to RSA 33:3, all New Hampshire towns, including Peterborough, are free to issue bonds for improvement of broadband services in portions of their jurisdictions not currently served by an existing provider. That would be nice if it were valid.

But it's not that simple. Although most of our town does have access to Fairpoint DSL service, that service doesn't meet the current definition of broadband. Is Peterborough then entitled to issue bonds to improve service in the areas served by Fairpoint but not by Comcast? According to our town counsel, RSA 33:3 is stricter than that, and it effectively prohibits our issuing bonds for service improvement *anywhere* in our town.

The bottom line is that all New Hampshire towns, including Peterborough, need to be able to bond for improved Internet services, in order to be able to negotiate good deals with Comcast, Fairpoint, or other providers. If rural New Hampshire's economy is to remain viable in the future, all its towns need fiber-to-the-home networks, with service prices and speeds comparable to those in Chattanooga and Leverett. Otherwise, the rest of the country will pass us by. I urge the members of this Committee to approve SB 170 and give NH municipalities the option to bond if they wish to improve Internet service.

Locality	Public/Private	Download Speed	Upload Speed	Monthly Fee
Peterborough, NH (My Comcast Account)	Private	25 Mbps	5 Mbps	\$60
Chattanooga, TN	Public	1 Gbps	1 Gbps	\$69.99
Leverett, MA	Public-Private Partnership	1 Gbps	1 Gbps	\$78.90

Testimony given by Marc Brown of the New England Ratepayers Association to the New Hampshire Senate Public and Municipal Affairs Committee on February 8, 2017.

Thank you members of the committee. My name is Marc Brown and I am the President of the New England Ratepayers Association (NERA), a non-profit which advocates for policies that lower the costs of utilities to the families and businesses in New Hampshire and throughout New England. We oppose SB 170, which would give municipalities the ability to bond so that they can (over) build government-owned broadband networks where networks already exist.

Current law already allows for municipalities to issue bonds to build in areas unserved by broadband. Granting municipalities the ability to borrow money to build in areas that already have broadband presents a significant risk to ratepayers and taxpayers. In addition to the slippery slope this creates public-policy wise, we need only to look to our neighbors in Vermont and Connecticut to see the dangers of municipally-owner broadband networks.

In 2005, the city of Burlington, Vermont began offering municipal broadband to its residents and businesses. By 2009 Burlington Telecom was \$51 million in debt and had failed to pay back a \$17 million loan from the city, violating state law. In 2014 the network was "sold" to Blue Water Holdings for \$6 million in debt, with the funds used to pay back a portion of a \$10.5 million (out of a total of \$33.5 million) settlement between the city and Citibank. As you can see from the letter provided to the committee from former Vermont Governor and NERA advisor Jim Douglas, Burlington Telecom is certainly a cautionary tale of what can go wrong with government owned networks.

A similar scenario unfolded in Groton, Connecticut. In 2003 the city established Thames Valley Communications—and authorized nearly \$7 million to develop a municipal broadband network. By May of 2004 parts of the network were up and running. Between 2006 and 2008 the city borrowed \$34.5 million to build-out its network—\$5 to 10 million more than original estimates. After years of subsidizing losses, the city could no longer afford to support the network, and in 2013 was forced to sell the network for \$550,000—leaving taxpayers responsible for \$27 million in debt.

More recently, in October of 2016 the state of Virginia released a 124-page audit report of the Bristol Virginia Utilities Authority, which has a telecommunications division named OptiNet. While the report focuses on criminal charges as a result of fraud and mismanagement, it also identifies the inherent risk to taxpayers of municipal broadband. It stated:

The BVU Authority's OptiNet Division has a potential going concern issue, as it appears that they do not have the resources to continue operating without cross-subsidization, which the Code of Virginia prohibits. The BVU Authority has cross-subsidized services within OptiNet over the years by not properly allocating interest and principle debt payments across OptiNet services, by improperly writing off \$13.7 million of interfund debt between OptiNet and the Electric Division, and by not paying OptiNet's share of pole attachment fees.

For the record, I am not aware of any New Hampshire statute that provides similar protections from cross-subsidization.

Lawmakers should look beyond the false allure of building municipally owned networks and look at some of the "solutions" that have been offered to fix debt-ridden networks: iProvo went bankrupt and sold its \$39 million network to Google for \$1; Utah's Utopia network lost so much money it had to bill residents in its towns a \$20 monthly surcharge even if they don't subscribe to the network; in Mooresville and Davidson, North Carolina in order to try to recover some of MI Connections \$35 million in debt a \$200 cross-subsidizing garbage pick-up fee was charged to residents; and electric ratepayers in Chattanooga financing a nearly \$400 million bond for its muni-broadband network—a cross-subsidy from electric ratepayers to muni-broadband subscribers. Loma Linda, California built a network for \$8 million and after 12 years has only paid down \$1 million in debt.

Closer to home, we have FastRoads in western NH, which despite receiving millions of dollars in taxpayer grants, cannot attract enough usage to break even, leaving its parent, Monadnock Economic Development Corporation, which is paying \$6,000-\$7,000 a month to keep FastRoads afloat, questioning its ability to continue supporting the system.

An October 2016 Washington Post article describes why Google is no longer expanding its "Fiber" network—mainly because it isn't profitable for them. In 1997 Palo Alto, CA, one of the wealthiest cities in America, built a 41-mile fiber ring. Twenty years later, after Google Fiber withdrew its plans to connect

residential customers, the city still has not figured out how to provide service to homes in the community. If Silicon Valley can't figure it out—why do we think Hanover, Keene or Portsmouth will be any different?

When considering SB 170 lawmakers should give serious consideration to who is at risk when municipalities overbuild broadband networks, or even when they build in unserved areas with borrowed money? Is it the contractor? Potential ISP provider? NO—it's taxpayers and other utility ratepayers.

I think we all agree that access to broadband is important to both business and residential customers alike; which is why we should be thankful that, according to a report released by the Federal Communications Commission only 7% of New Hampshire's population is unserved by broadband (25/3 mbps as defined by the FCC). This represents more than a 50% decrease in the unserved population from the previous year. The private marketplace is responding to demand for broadband, and there are other solutions available to assist in extending service to the few remaining areas lacking coverage. Why would we expose our tax and ratepayers to unnecessary risk? SB 170 is a solution looking for a problem and we hope you will recommend it for ITL.

Thank you.



New England Ratepayers Association

January 12, 2017

Dear New Hampshire Science, Technology and Energy Committee:

The saga of Burlington Telecom is not a happy one and the experience of Vermont's largest city has been troublesome. It has encompassed violations of the City Charter and Public Service Board conditions, allegations of misappropriation of municipal funds, default on lease purchase payments and lowered credit ratings.

I was never enthusiastic about this project from the start. As state treasurer when the Burlington Telecom program began, I expressed concern about this expansion of the role of government into an enterprise that had principally been served by private firms. The state's financial advisor had counseled caution, explaining that the weakened creditworthiness of a major issuer within a state, such as its largest city, could reflect adversely on the state's reputation in the capital markets. Nevertheless, the general assembly tries to accommodate the desires of municipal corporations in enacting charter amendments and it was approved.

The BT buildout was more expensive than anticipated and the 'take rate' was below expectations. Those greater costs and softened revenues resulted in financial stress that rendered repayment of a loan from the city's cash pool impossible within the authorized timeframe. The completion of the project was not achieved by the agreed-upon deadline and BT defaulted on its lease-purchase payments to Citibank. Moody's downgraded ratings on Burlington Electric Department and Burlington International Airport bonds, as well as the city's overall rating, while assigning a negative outlook.

There were state and Federal criminal investigations, as well as a lawsuit by Burlington taxpayers. While no charges were filed, the local prosecutor proclaimed the city guilty of "mismanagement, lack of oversight, lack of accountability, lack of communication, ignorance, arrogance and bad judgment."

In the end, an agreement with Citibank was reached for far less than the \$33.5 million they were owed, but Burlington taxpayers are still on the hook for \$17 million borrowed from the cash pool. Perhaps the circumstances were unique, but the experience should serve as a cautionary note to other municipalities considering such a business.

Sincerely,

James H. Douglas
Governor of Vermont 2003-11

Zach Luse
Paragon Digital Marketing
Keene NH 03431
603-399-6401
zach@paragondigital.com

February 7, 2017

Senate Public and Municipal Affairs Committee
Concord NH

Re: Testimony on SB170

Dear Senators,

I'm writing today to give my perspective as a resident who moved to New Hampshire 7 years ago, as well as a business owner who founded a business in Keene 5 years ago. My story is a long one because internet reliability and speed has been one of the biggest pain points for my business. I appreciate the committee taking time to hear my real-world experience that is very different from the story the providers are telling. Although this legislation does not fix the issue in itself, it gives communities like Keene the tools to invest in our own futures in areas where ISPs are not investing adequately. Allowing us to become a more competitive and attractive community for businesses and younger residents.

I am the founder of Paragon Digital Marketing in Keene. I started my business on Main Street in the heart of Keene five years ago. We are now a team of 8 and looking to hire at least two more employees in the coming months. We serve businesses all over the country and some abroad. Paragon helps businesses market their products and services online as well as develop websites for businesses and nonprofits. We depend on the high-speed quality internet service to communicate with our clients and deliver our services. This year we did over a million dollars in revenue, much of which came from out of state and was retained in the state through wages paid to NH residents and local business services. I tell you this because I have considered at times, moving my office out of New Hampshire to an area of Vermont or Massachusetts with better internet services which I believe would be a great loss for the community that I love.

ISPs are not adequately serving our area of the state at the residential or small business level. They claim that they provide "access" to a large percentage of NH residents and businesses but access is only part of the story. In many areas of Keene, businesses and residents may only have one option for internet service and the price is higher and quality of the service is far behind other areas of the country. This includes areas of Vermont that have successfully undertaken municipal broadband projects.

I have struggled as a business owner to find office space where my growing business can have adequate access to affordable internet services. Myself, my employees, friends, fellow business owners and my neighbors are all frustrated with the current providers, their lack of investment in our community and the high prices they charge for inadequate services. Internet access has quickly become a necessity that's just as crucial to businesses as electricity. If EverSource were to say, most of the state has "access" to power but it failed to provide adequate and reliable power to most of the homes it would be unacceptable. The internet service providers should be held accountable for the quality and reliability of

their services and not just "access" to their services. If they fail to provide quality, reliable services, communities should have the tools to fix the problem for themselves.

My first office in Keene could only be serviced by Time Warner Business Class. FairPoint could not service my address on Main Street in downtown Keene. During peak times in the afternoon we could not host web conferences with our clients because the service, which was over \$300/month, was so poor. As a startup, our only other options were to pay \$8,000 or more to get fiber to the building or to get enterprise services from one of the current providers, which start around \$1,000/month with a 3-year contract with terrible terms that you can't get out of. The cost would have been more than our rent and the terms of the agreement would have been worse than a commercial lease.

We ended up moving our office to a new location to get acceptable internet we could afford. We were able to work with a local provider, WiValley, to come up with a solution to get affordable fiber optic service to our office using the Fast Roads network but it still cost thousands of dollars to get fiber to the new office.

We outgrew that office last year and began the search for a new office to support our growth. Internet access quickly became the biggest issue we faced with finding a new office, not location, quality of the space or anything else. It was lack of adequate internet access that crossed nearly all the offices off our list. It was a nightmare dealing with Time Warner and FairPoint trying to find out where we could get access to fiber. Most of the time they said it wasn't available (quite a different story from what they tell publicly) even when I knew other people in the building were using their fiber services. Until someone from the city connected me to the government relations representatives at these two providers, it was nearly impossible to even find out where they could provide fiber services and where they couldn't.

We had to abandon our ideal office location because it was nearly \$30,000 for any of the providers to get adequate service to and the only service available was 10Mb FairPoint DSL. This office space was in a Keene business park.

Eventually we ended up in a less than ideal office because WiValley already had fiber service in the building. WiValley has been great to work with but they are a small provider with limited resources and because of the issues around pole access caused by the utility companies, it's very difficult for them to make the last mile connections. It can take many months to get pole permits, the incumbent providers have been known to obstruct projects and the business has to bare the huge costs. Municipal bonding could make this a more efficient and cost effective process by connecting all the buildings and homes on a street at once.

On the residential side, access to a high-quality internet connections has been shown to increase property values and is crucial to attracting and retaining younger generations.

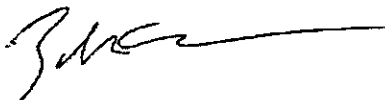
The current residential options in Keene are Time Warner, FairPoint in some areas and WiValley in very limited areas. Time Warner charges between \$60-80/month for 50-60 Mbps service in Keene which from personal experience and experience of friends and neighbors, rarely reaches advertised speeds and often measures below 10 Mbps during peak times with very high latency. If you can get FairPoint service, it's equally expensive and generally slower speeds. I've found it to be slightly more reliable during peak times but overall still subpar by today's standards.

For comparison, residential internet access is available in the rural area of Chester, VT for \$80-90/month at Gigabit speeds (1,000 Mbps). If you go to Time Warner's website and choose an internet package, after entering a Keene address all of the listed prices go up and the speeds go down but you'll end up with about 50 Mbps for a similar price.

The future of our state, being an attractive place for young families and small businesses, depends on quality, reliable and affordable internet services. Not just "access" to poor quality services that can't reliably run a web conference, stream Netflix or handle a web based security camera.

Thank you for your time and consideration. I hope you will make a choice that moves us closer to removing this barrier to small business growth and attracting/retaining younger residents in our aging state.

Sincerely,

A handwritten signature in black ink, appearing to read 'Zach Luse', with a long horizontal flourish extending to the right.

Zach Luse
Founder
Paragon Digital
Keene, NH

Testimony on SB 170
February 7, 2017

Thank you Senators for your time.

My name is Daniel J. White. I am a photographer and filmmaker in the city of Keene. My family is an old military family and we had the privilege to travel to every state in the US and some countries abroad. When my father retired we returned home to the town and state that my family has lived in since before the Civil War. I call Fitzwilliam, New Hampshire my home town. I married a wonderful woman and we have two great little children. We hope to remain here in New Hampshire to raise our children. Although this state is in the top ten for quality of life we find it difficult to stay when so many of our friends are leaving for states with more opportunities. Many of these opportunities are tech related in states with a more advanced broadband infrastructure. Our hope is that the passing of Senate Bill 170 will give our state a slight advantage. Other states that have concentrated on high speed internet have seen success.

Forbes Magazine:

"Chattanooga, Tennessee built out a gigabit fiber network that has helped attract businesses like Amazon and Volkswagen, creating more than 3,700 local jobs.

In Kansas City, the Google Fiber initiative is bringing gigabit service to residential consumers, and startup tech companies have begun flocking to the area, spawning KC's new nickname -- the "Silicon Prairie."

A few advantages this bill may allow in our state include keeping young skilled workers, improving real estate market, spur small business and help working families have more time together by telecommuting.

In my line of work, we rely on young skilled workers coming to the state for internships and hopefully long term employment. It is extremely difficult to keep skilled young workers when we cannot even provide decent internet speeds. We have lost many who had hoped to live here to bigger cities with greater tech infrastructure in other states. Retaining young skilled workers and families is a major concern in this state. Affordable quality high speed internet accessibility is good for all business and helps the young workforce.

This is akin to Rural Electrification of the 1930s. When rural areas were able to access electricity they also became consumers of things like refrigerators, washing machines and a great example would be a lathe. Small businesses were bound to come from this new access. The same is true today of the internet. The internet is arguably as important as electricity. Practically every business and home needs it. From the coffee shop that uses it for point of sales, the stay at home parent that sells their crafts on etsy, the smartphone app maker, the web designer, the student getting an education online, to yes perhaps even the buggy whip ferrier who orders parts online. Internet speed ranks up there with childcare in discussions among my generation. Most new job growth comes from small business. This can potentially

help create small business' and perhaps help small businesses become big business. **Internet access is not a luxury it is by law defined as a utility.** If my friend on the other side of town had less water or electricity but paid more than I think we can agree that is wrong. We would deserve equal service. So it is true with internet access. If, as a state, we want to be compete and excel we need to improve our slow internet access.

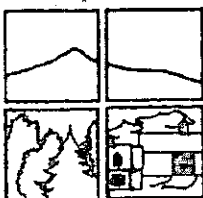
This can also be a boon to the housing market in New Hampshire. When friends were looking at a house on my street that was for sale the first question they asked me was "how is the internet speed?" For his internet based business high speed internet is crucial. But something important here is he works as much as possible from home to spend more time with his wife and children. People need a home where children are able to do their homework using the internet for research. The old Funk and Wagnalls Encyclopedia no longer cuts it. This bill has the potential to increase home sales in NH. One real estate agent said "...if the house doesn't have it, in my opinion, it is unlikely to sell."

If this bill is passed it will allow the towns to expand this utility to better serve their citizens. This will not take away business from the primary internet service providers and in fact will allow them access to more customers. They would be profitable companies and we would be happy customers.

My family supports affordable high speed internet access. We support a town's ability to decide how we access that utility. We support SB 170. We ask you for your support.

Respectfully,
Daniel, Jamie, Jack and Laurel White
Keene, NH

Tim Murphy SB 170



Southwest Region Planning Commission
37 Ashuelot Street, Keene, NH 03431 603-357-0557 Voice 603-357-7440 Fax

February 6, 2017

Senate Public & Municipal Affairs Committee
Legislative Office Building, Room 102
Concord, NH 03301

Re: SB 170

Dear Chairman Gray and Committee Members:

I am writing to provide input on SB 170. During its meeting of January 10, 2017, the Southwest Region Planning Commission's Board of Directors expressed its interest in and support for the bill. The bill as proposed would enable municipalities greater flexibility in issuing bonds to facilitate the placement of broadband infrastructure in their communities. We believe the bill has merit for several reasons including:

- Access to affordable broadband/high speed internet is a necessity for all of New Hampshire in order to maintain vibrant economies and quality of life. Yet many parts of our state are unserved or underserved. As these tend to be the more rural parts of the state, they are showing signs of falling behind and are less able to remain economically viable.
- Broadband is critical to a region's ability to attract a quality workforce and is considered basic infrastructure to retain younger adults in our communities.
- Broadband is required by multiple sectors including business, education, government, health/medicine, and emergency response. Without access, these sectors fall behind in their ability to provide state-of-the-art functionality.
- In a 2015 report entitled *Broadband: The Connection to New Hampshire's Future* prepared by the University of New Hampshire in conjunction with the NH Office of Energy and Planning, NH Department of Resources and Economic Development, and the state's nine regional planning commissions, the case is clearly made regarding the importance of broadband in today's society. The report contains 37 recommendations, one of which calls for enabling legislation to extend municipal financing of broadband expansion projects through bonding authority – precisely that suggested by SB 170.
- As SB 170 represents enabling legislation, it does not require or obligate a municipality to issue bonds for broadband expansion – rather, it simply provides an option for consideration by municipalities. Why would the state not provide this option?

We hope that you will consider these points in your review and deliberation of SB 170. Thank you for this opportunity to provide comment. Please contact me if you have questions about our position.

Sincerely,

Tim Murphy
Executive Director

TDD Access: Relay NH 1-800-735-2964
web site: www.swrpc.org

Committee Report

STATE OF NEW HAMPSHIRE
SENATE
REPORT OF THE COMMITTEE

Wednesday, February 22, 2017

THE COMMITTEE ON Public and Municipal Affairs

to which was referred **SB 170**

AN ACT relative to the authority of towns to issue bonds for
the expansion of broadband infrastructure.

Having considered the same, the committee recommends that the Bill

IS INEXPEDIENT TO LEGISLATE

BY A VOTE OF: 3-1

Senator James Gray
For the Committee

Kelly Flathers 271-3093

PUBLIC AND MUNICIPAL AFFAIRS

SB 170, relative to the authority of towns to issue bonds for the expansion of broadband infrastructure.

Inexpedient to Legislate, Vote 3-1.

Senator James Gray for the committee.