

Testimony of Jonathan Gibson and Chuck Finberg,
Town of Shrewsbury Residents, on H. 513
Senate Finance Committee, April 18, 2019

1. Introduction

Jonathan Gibson and Chuck Finberg live in Shrewsbury and are members of an ad hoc Telecom Working Group comprised of local residents. As indicated in a letter we have with us, our presentation today has the support of the Shrewsbury Selectboard.

We recognize the wonders and benefits of high-speed broadband, including enhanced economic opportunity for business operations and telecommuting, educational uses, rapid data uploads and downloads, streaming video, internet TV, and many more. But we are also aware that many advances have deficiencies and downsides that we learn about only later. Think about painkillers that become addictive, medical implants that cause unforeseen complications, DDT and more recently glyphosate, automobiles that provide mobility but are major contributors to climate change, the Boeing 737 Max, and many other modern marvels.

For all the positive features of high-speed broadband, we believe there is also a flaw that has not been widely recognized by our public agencies, the Legislature, or the media. This is the vulnerability that fiber optic and cable phone service has to electrical outages due to its dependency on electricity to function properly.

Our experience in Shrewsbury has exposed a dangerous hole in the digital highway that needs to be recognized and repaired. There is a serious deficiency in phone service via broadband, and attention to it has somehow fallen through the cracks. It is a flaw that especially affects the most vulnerable Vermonters.

The problem is not unique to Shrewsbury, but affects, we can say threatens, every town in Vermont that is now or expects soon to be served by fiber optic, cable, or VoIP (Voice over Internet Protocol) systems. Shrewsbury raises this issue for three reasons: 1) we want public officials, other towns, and the public to be aware of the vulnerability in existing and proposed broadband systems and to devise and demand remedies to reduce the risks, 2) we want to help other municipalities “connect the dots” as we did after a November 2018 outage so they will proceed with caution in embracing broadband, and 3) we want solutions for the Shrewsbury community – we are simply asking to have basic and emergency E-911 telephone service that is as reliable as it was before we had battery-dependent broadband.

2. Background of Shrewsbury’s telecom efforts

Shrewsbury’s awareness of this issue coalesced following a November 2018 electric power outage that lasted three days. Residents realized that many of us had no telephone service after only a few hours into the outage. The fiber optic system that the Vermont Telephone Company, Inc. (VTel) installed in 2015 relies on electric power to run the Optical Network Terminals (ONT) that convert fiber optic signals to the copper wires inside our homes. If there is an electricity outage, these devices rely on backup power batteries, and these batteries run down in a few hours.

The disturbing fact that people without generators cannot dial 9-1-1 to obtain emergency assistance focused the attention of Shrewsbury residents and our local

officials. The Town's first public involvement was in the form of a January 16, 2019 letter from the Selectboard to Department of Public Service Commissioner June Tierney asking among other things that the 2018 Vermont Telecommunications Plan recognize the link between electric power supply and telecommunication service and address the need for solutions when this link is broken because of a power outage. We have yet to know whether or how the PSD will modify the ten-year Plan to address our concerns. For the last three months, the residents and officials of Shrewsbury have continued to try to bring this critical communication and public safety issue to the attention of our administrative agencies and elected officials.

One such effort was a letter of March 20 from eight members of our Telecom Working Group to President Pro Tem Ashe and House Speaker Johnson, with copies to Sen. Cummings and Rep. Briglin. We understand that Sen. Ashe also conveyed the letter to the Committee. The letter referenced a telecom survey that our group administered on Town Meeting Day; the survey and tabulated results were attached. We ask you to review that letter and attachments (four pages total). To cite two findings from the survey, 59% of respondents said they have generators, while only 25% have decent cell service – those without either are the most at risk of loss of 9-1-1 service, so a significant number of people in Shrewsbury are affected.

3. Statement of issue

In our view, the fact that the new telecom technologies rely on customers to have backup electric power equipment in order to have telephone service has created a vulnerability that is greatest in 9-1-1 emergency service, and a flaw that falls most heavily on the most vulnerable Vermonters, those older and lower-income people who qualify for lifeline service or who lack the technical and financial capability to avoid loss of 9-1-1 service. We have a troubling impression that the 9-1-1 outage problem in Vermont is not being adequately addressed by the state agencies that are charged with representing the public interest, ensuring reliable and secure telecommunication, and advocating strongly for consumer protection and the public good.

You know very well what the consequences are of not having emergency service: a person with a chimney fire can't report it, someone whose spouse has a stroke can't get help, a parent whose child's fever spikes to 104 can't reach a pediatrician. Imagine a repetition of the five-day ice storm in northern Vermont in 1998, or the 2008 ice storm in New Hampshire that left 430,000 people without power. The potential loss of E-911 service now embedded in our telecommunication system poses an unacceptable risk to the entire population of Vermont if an extreme weather event, a system malfunction, a cyber-attack, or a terrorist incident were to take down a portion or more of the Northeast electrical grid. The electricity-dependency of 9-1-1 service is the Achilles heel, the weak link at which the system will fail under duress, and it must be addressed if public safety and security are to be protected.

The entire telecommunication paradigm has changed. Responsibilities that once rested with utilities are now outsourced to their customers. Consumers have become responsible for maintaining the integrity of their provider's infrastructure. They must visit company websites to learn about the new equipment; monitor the battery life in their backup units; learn how to test, disconnect, and replace the batteries; take on the task of locating and purchasing new batteries; and the like.

Utilities are supposedly making “public education” efforts to inform customers about their new obligations. However, in practical, real life terms, these programs are inadequate and ineffective. We do not know about other companies, but what VTel does is de minimus – and without aggressive information efforts, customers are unaware of or ill-equipped to assume their new duties as battery managers.

Without forceful oversight by the PSD, the PUC, and the Enhanced 9-1-1 Board, the telecoms have little incentive to improve their consumer information efforts. These three agencies should be required to adopt policies and promulgate rules that call for state-of-the-art, energy-efficient backup power equipment. Telecoms should be required to implement a “best practices” approach to informing and assisting consumers on how to use, check charge, unhook, replace, and acquire batteries. Companies must be required to file annual reports with detailed descriptions and documentation of all of their “customer education” actions and materials. And they should be required to provide technical and financial support to customers (e.g. bulk purchase and sale of batteries), not unlike what energy companies do for their customers.

At the March 12 request of the Public Service Department, the Public Utility Commission has initiated an inquiry to “undertake a workshop process to examine and review the steps facilities-based fixed, residential voice service providers are taking to ensure their compliance with 47 C.F.R. §12.5: Backup power obligations.” The workshop is scheduled for April 30, and Shrewsbury looks forward to participating in it. The topic, however, is defined as the narrowest possible aspect of what we believe is a much bigger – and critically important – problem. We will be asking the PUC to continue its inquiry to by expanding the topic to cover the much broader issue of the electricity-dependency of our telecommunications system and ways to obtain information about and to address that vulnerability. We will appreciate this Committee’s support for such an expansion of the PUC inquiry.

4. Documentation of problem

We are presenting our experience with VTel to illustrate the nature and extent of the problem. We are not singling out VTel for criticism. VTel employees provide excellent customer service; the company supports charitable activity and presents a positive image to the public. Our comments focus on VTel because it is the company that serves most of Shrewsbury (a portion of our town is served by Consolidated). The problems we have experienced with VTel provide a lens to view a deficiency that we believe is generic to broadband technology and that this Committee must address before approving legislation that further expands broadband systems in Vermont.

We will present as exhibits specific information to illustrate the basis for our concern:

1. GMP information on history of power outage at Shrewsbury residence
2. Telco outage information
3. summary page from “VTel GigE Home” Welcome Kit, 2015
4. VTel 12x15 inch mailed poster advertising broadband service
5. backup power notice on reverse of VTel monthly bill (September 2018)
6. current battery information on VTel website (a earlier four-page brochure was provided to the Committee by VTel’s Gordon Mathews in his Feb. 14 testimony)
7. Graybar website information on availability of batteries
8. FCC notice of backup power obligations effective February 13, 2019

5. Lack of reporting of 9-1-1 outages

Reporting of 9-1-1 outages to the Vermont Enhanced 9-1-1 Board is not occurring as it should. Our Shrewsbury neighbor and Telecom Working Group member Martha Sirjane supplied written testimony to document this problem to the Committee. That testimony was submitted on her behalf by Steven Whitaker on February 25. We refer you back to Ms. Sirjane's testimony which describes her experience in requesting information on 9-1-1 outages in Shrewsbury from the 9-1-1 Board.

To have confidence in the E-911 system, public officials at the State and municipal levels, and the general public, need to have as much information as possible about the communication systems that are critical for ensuring public welfare and safety, including information on how well the systems are functioning, particularly when the systems are under stress. The modus operandi at the 9-1-1 Board seems to be to collect as little data and provide as little oversight as possible. This is not the attitude that we expect or deserve from our Vermont state agencies and employees.

6. Request for action

As the Committee revises and acts on House-passed H.513, we ask you to take cognizance of the broadband vulnerabilities we have identified and the cautionary comments we have offered. We urge you to insert a provision stating that no broadband system, new or existing, will be approved for funding or rate increase unless the provider demonstrates that all electricity dependency risks have been identified, addressed, and resolved to meet standards set by the funding or regulatory agency.

We ask the Committee to include in H.513 a clear mandate for the PSD and PUC to define a best practices approach for telecoms to inform and assist consumers with backup power equipment and to issue and enforce stringent directives and requirements for the utilities to demonstrate they are using such an approach.

We ask the Committee to include provisions in H.513 that will require timely and complete reporting by telecom companies to the Enhanced 9-1-1 Board and other agencies as appropriate (PSD, PUC) of all service outages, regardless of cause.

Finally, we believe there must be maximum transparency, disclosure, and public records access to any telecom information that is relevant to efficient operation and proper regulation of telecom infrastructure. If expanding public records access is beyond the jurisdiction of this Committee, we ask you to work with your colleagues on the committees whose jurisdiction it is to increase information disclosure, whether through statutory changes in permissible exemptions, revised reporting forms, or other measures.

Attachment (Selectboard Letter, January 16, 2019) and Exhibits 1-8