AT&T's Answers to Senator Brock's Questions Regarding Broadband Service:

1. In your opinion does Vermont have a broadband strategy? Can you articulate it and does it make sense?

Vermont has a goal that each address in the state has access to broadband service. The strategy seems to be a combination of supporting Communications Union Districts via appropriations and VEDA loans, and for-profit wireline providers via the Connectivity Initiative and the High Cost Fund.

Title 30: Public Service- Telecom Plan (2014) Goal

By the end of the year 2024 every E-911 business and residential location in Vermont has infrastructure capable of delivering Internet access with service that has a minimum download speed of 100 Mbps and is symmetrical.

2. How important is a statewide telecommunications plan? How many years should such a plan cover? What are the essential elements of such a plan, who should be in charge of commissioning it and who should do the work (state employees, independent firm, etc.)? What are your thoughts about the state's last draft plan?

AT&T's perspective is focused on mobile wireless and it has been doing a good job building out service in various parts of the state and hopes to continue doing so. Suggestions from the State about area where service could be enhanced are certainly welcome and will be evaluated based on whether a business case exists to upgrade or install new facilities.

States seeking to go beyond broadband adoption programs by establishing a funding program for broadband deployment should only do so in a manner that complements federal programs and that continues to incentivize private sector investment and deployment.

- State programs should be carefully crafted to not interfere where the market is working, nor should they replace opportunities where the market can work. Most critically, public/private partnerships should be considered in the first instance over government-owned networks to address those areas where no private sector will build.
- Because of the state's close proximity to VTers, the state is uniquely positioned to identify the barriers to adoption and to work with local governments, schools etc to address them, whether the issue is, alone or in combination, the internet's perceived lack of relevance to people's lives; lack of access to devices; lack of digital literacy skills; etc. VT should also identify the specific communities/groups that comprise non-adopters (statistically, these most often are e.g., seniors; non-English speakers; people of color; people who have low incomes; people with less educational attainment; etc) to tailor efforts effectively.

- A state broadband fund should be designed to get service to the most people who are unserved and likely to remain unserved, in the most cost-effective and efficient manner possible. Guiding principles:

  - Target unserved locations that are not being addressed by the private sector and are not eligible for federal government broadband funding programs. Homes that lack at least 10/1 Mbps should be prioritized.

  - Use "reverse auction" competitive bidding to award funding in a technologically neutral manner.

  - Refrain from requiring matching dollars. They undercut the financial support provided by state funding.

  - Allow funds to be used for both capital and operational costs.

  - Avoid imposing additional regulatory obligations that can disincentivize provider participation; and

  - Appropriate state general funds to pay for any state broadband funding program.

3. Vermont has created a short-term broadband plan to expand coverage using federal COVID-19 funds as a result of the pandemic. To the extent that you are familiar with all or part of that plan, what are your thoughts about it?

The short term broadband plan does not directly relate to mobile wireless service. See page 16.

However, the plan implies on page 16 that it would be preferable if the customers of the different mobile wireless providers could roam on the other providers networks or otherwise share facilities. AT&T recently entered into a roaming agreement whereby AT&T customers can roam on 62 sites, located in 52 towns, owned by a provider of fixed wireless service. This has resulted in a significant expansion of AT&T's coverage in the state.

4. Please comment on Vermont's Communications Union District initiatives. What are the obstacles to success of CUD's and what, if anything, should the General Assembly do to help make them successful? How should conflicts between CUD's and legacy providers be resolved? Should CUD's have veto power over expansion by other providers in their areas?

Some CUDs have stated that they need to serve 100% of the locations within their territory in order to work. This is totally unreasonable. Regarding CUD's veto power, this would likely be a violation of the 1996 Telecom Act. Competition is important and has been the driving force in

BB and mobile wireless in Vermont.

5. How can short-term installation of fixed wireless best integrate with fiber or other long-term solutions?

Mobile wireless service can provide broadband access and the state should continue to support the deployment of mobile wireless infrastructure by keeping section 248a in force.

Fixed wireless internet service shouldn't be viewed solely as a short-term solution for getting connectivity to people who lack it, particularly in less dense or otherwise expensive to serve areas. From a cost-per-location perspective, deploying fiber everywhere may simply not be feasible. FWI can provide very robust internet service – for example, the CAF II auction awarded funds to FWI providers for 25/3 low latency and even 100/20 low latency services.

6. What are your thoughts regarding Vermont's regulatory environment? What should management of broadband deployment look like and what agencies of government, if any, should be involved?

The permitting of mobile wireless facilities by the PUC under section 248a works well. The statute balances the public good associated with increasing mobile wireless service coverage with local concerns regarding the siting of mobile wireless facilities.

~We understand what the legislature wants- interaction with municipalities.
~The system has been working as intended for over 10 years.
~There's no reason at this stage to continually "ratchet up" more regulation / requirements every three years.
~Certainty is critical when it comes to planning investments and building out a network.
~Thank you for passing Senate Bill 301 and extending 248a.

VT should recognize that the nationwide light-touch regulatory approach to BB is what has enabled private sector providers to push out faster broadband to so many areas so quickly since the 1990s and early 2000s, driven by consumer demand. According to USTelecom, from 1996 through 2018, the U.S. broadband industry made capital investments totaling more than $1.7 trillion and invested about $80.0 billion in network infrastructure in 2018 alone. Because deploying broadband infrastructure is one of the costliest – if not the costliest – undertaking in the U.S. economy, VT should exercise care to ensure that it does not interfere with the commercial market and should ensure that it continues to maintain an investment-friendly atmosphere. Such a light-touch approach at the state level is also the practical one given that broadband internet access is an interstate information service, not subject to the state's jurisdictional authority.

7. If you wanted to bring broadband at 100/100 to every Vermonter, how would you go about it?

AT&T generally think that state BB funding mechanisms should be technology neutral and designed in a manner that would get the most unserved people BB for the least program funding. FTTP obviously tends to be the most expensive technology solution, so that directing BB funding to FTTP means that you'll generally be able to connect fewer locations per program dollar. This is not an optimal outcome given that government funding to address BB needs in areas that are uneconomic is finite, and needs in all likelihood far exceed available funding.

8. To what extent should our thoughts about broadband include cell phone access and availability? Are these technologies so independent of one another that there is no crossover or common denominators in planning?

Providing broadband service via mobile wireless service is an option. In most areas 4G LTE mobile service delivers speeds faster than 25/3.

Since private sector mobile wireless carriers are well on their way to deploying 5G service and investment continues apace, VT should continue to recognize that the nationwide light-touch regulatory approach to mobile wireless services has enabled private sector providers to push out more coverage and faster mobile speeds throughout the nation so quickly since the 1990s, driven by consumer demand. VT should exercise care to ensure that it does not interfere with the commercial market and should ensure that it continues to maintain an investment-friendly atmosphere.

9. How should electric utilities be involved in broadband expansion? Is information about pole attachments and provisioning public or proprietary?

To the extent electric utilities own fiber optic cable that cable could possibly be used for backhaul for mobile wireless facilities. If consideration is given to allowing electric utilities to become providers of broadband service, the legislature must make sure that there are safeguards put in place to prevent the electrics from taking advantage of their monopoly position in their core business to unfairly subsidize their entry into broadband.

10. What else should we be thinking about concerning broadband expansion, economy and execution? What are the major impediments to these and what recommendations do you have for us to address them?

- States are uniquely positioned to identify local barriers that impede adoption where broadband is available, and to develop needed strategies to address them.
- An important strategy VT could pursue is finding ways to get people to make use of broadband where and when it is available to them. FCC data for broadband service at

speeds of at least 25/3 Mbps indicate that about 94% of U.S. homes have physical access but only about 58% of households actually subscribe.

- The federal government provides the funding necessary to more accurately map broadband and programs like the CAF and RDOF but is not addressing adoption.
- VT is in a better position to address adoption through education and training and it complements the federal efforts.

FCC's Rural Digital Opportunity Fund (RDOF) program that will be awarding up to $16B in a reverse auction scheduled to begin October 29th to address BB availability needs in census blocks that are entirely without 25/3 Mbps service. The FCC has estimated that ≈ 26,000 VT locations are in census blocks that will be eligible for the RDOF auction.

FCC's CAF program- 38,000 unserved/ underserved locations are currently being connected/ upgraded through the Connect America Fund

BB mapping – federal Broadband DATA Act requires FCC to create location-by-location Broadband Serviceable Location Fabric – which states will be able to access, subject to uniform nationwide standards. VT should rely upon and use this federal map and not undertake its own mapping efforts