

Peter Bluhm Testimony to Vermont Senate Finance Committee, Sept. 2, 2020

1. **Reaching the Broadband goal.** Much of the recent CI grant money has gone to extend proprietary broadband networks. This tactic may perhaps have been a reasonable emergency measure given the COVID emergency, but there are still lots of problems with this approach.
 - a. If your goal is still to eventually get high quality broadband to nearly everyone in the state, this strategy is becoming expensive.
 - i. Years ago this strategy was easy to start, and the low hanging broadband fruit was picked early. In the towns and cities, the proprietary providers used private capital, but they only built broadband as far as it seemed profitable at the time.
 - ii. Now the state wants to pick the fruit higher up the tree, and the costs are much higher, and now require you to use public funds. In some cases, you are spending up to \$4,000 per address served under the CI grants. There seems like an extraordinary benefit to relatively few individuals. This increase in unit cost over time is likely to continue.
 - b. It's not clear that this strategy will ever fully succeed.
 - i. The recent CI grants could ultimately make it harder for CUDs to make a profit on new fiber runs. As I understand it, Vermont law now requires that CUDs be cash flow positive when they place new fiber runs. In a few years, when a CUD is looking at a new fiber run to the end of a rural road, the most profitable (densely populated) portions will already be served by the proprietary networks, and some of those customers will have been served only because of the recent CI grant subsidies. This will leave the CUDs with very high costs for the remaining unserved customers. In short, today's subsidies to the proprietary networks can work at cross purposes to tomorrow's CUD task of serving every last household.
 - ii. The ever-increasing public subsidy needed to reach the highest fruit on the broadband tree may require you to bail out before you complete the task. The choice may be between continuing large subsidies to CUDs and admitting failure once more to reach every household.
 - c. Having some kind of endgame seems essential if 100 Mbps for all is what you really expect. It's not like any other states have figured this out completely, but some are doing better. But having a good state plan to get consensus around that endgame would be extremely helpful. Your interim steps shouldn't make the endgame more difficult.
 - d. One possible endgame is to abandon subsidies to proprietary providers and limit support to credible CUD efforts.

- i. But if CUDs are a reasonable endgame strategy, they will not solve the problem soon. Some CUDs are relying on volunteers, although they have received grants recently and that lets them get started. Vermont relies heavily on volunteers, but providing a utility service is a task that is too complex to complete without at least occasional technical help and a consistent management presence.
 - ii. The CUDs need: more experience; engineering help, and guidance or a prototype on how to adopt best practices. They also need training on how to live with the public records and public meeting rules.
 - iii. Giving the CUDs technical and advisory help getting on their feet would be a very good idea.
 - e. Deploying fixed wireless broadband, instead of fiber, may be a near-best solution in many areas.
 - i. Fixed wireless creates other synergies. Money spent here can also help expand cell network coverage and emergency communications.
 - ii. Getting access to good chunks of wireless spectrum is essential, and would require some public-private partnership. VTel owns a lot of very useful spectrum. In my recent work for CVFiber, I found Vtel to be a public spirited company that was willing to make mutually beneficial deals regarding its spectrum holdings. We started to negotiate a deal wherein Vtel would provide spectrum for CVFiber's fixed wireless service, and CVFiber would provide pole access to support Vtel's mobile wireless business. I thought a mutually beneficial deal was possible, but CVFiber dropped the proposal.
- 2. **Secrecy.** The state has allowed private companies to keep many details of their operations confidential. Even the locations of fiber runs in the public right of way are now generally kept as confidential secrets. Utility regulators properly keep trade secrets confidential. But secrecy has far outgrown its proper bounds.
 - a. For something to be a "trade secret" it must first be capable of being an actual secret.
 - i. There is nothing hidden or secret about fiber runs on roadside utility poles. Anyone can simply drive around and see where there are fiber runs.
 - ii. The owner of the visible fiber might potentially be secret, but not if the fiber is used to provide services to nearby customers or the fiber is mounted on an electric company's utility pole.
 - b. Even if the location of fiber runs can be potentially a secret, there should be a strong public policy presumption against secrecy. The importance of publishing facility location and pricing is a lesson we have learned at least twice before.
 - i. We learned this lesson in the 1920s when we required telephone companies to interconnect with each other.

- ii. We learned it again in the 1990s when we tried to create something called competitive local exchange providers. The 1996 Telecommunications Act required the filing of all interconnection agreements, in order to give buyers more notice of the prevailing prices.
- c. Compiling and publishing GIS data on pole and fiber locations could produce several potential benefits.
 - i. The database could facilitate interconnection planning. CUDs could potentially find easier ways to move their customers' packets to the internet backbone if all existing fiber in their area were already mapped.
 - ii. The database could promote lower prices for fiber transport. Markets require pricing signals. The current secrecy about fiber offers network owners an opportunity to exert market power. The situation is similar to the market power that the telephone companies exerted ten or twenty years ago when they were able to keep their "special access" prices effectively secret. By keeping all existing interconnection agreements secret, new buyers were placed at a disadvantage.
 - iii. The database could make it easier to anticipate transmission failures, like the isolation of telephone switches following storm damage.
 - iv. The database could have benefits for tax policy. State tax policy for telephone property is obsolete. It depends upon accounts kept for regulatory purposes, and those accounts reflect an increasingly small subset of useful assets, while also using favorable depreciation rules. Fiber runs might be a plausible alternative tax base if the taxes on telecommunications property is to become more like the taxes on other kinds of property.