



Testimony on H 117: February 18, 2015

Mr. Chairman and Members:

I am Michael Birnbaum, the managing partner of Cloud Alliance, one of six or eight Vermont fixed-wireless ISPs (WISPs). In its 11th year, Cloud Alliance offers real broadband in seventeen towns in Washington, Lamoille, Caledonia, and Orleans counties. WISPs traditionally were founded in forsaken areas to provide broadband using unlicensed wireless, but increasingly, WISPs are moving to licensed wireless and fiber. I'm also active in WISPA, our national trade association, which has led me to testify twice both on Capitol Hill and at the FCC. I speak to you both as a representative WISP owner and as a general observer of Vermont's broadband landscape.

Thank you for inviting me to share my impressions of H 117. It's been several years since I last testified before this and other legislative committees. Before I make specific comments on the bill, I'd like to say that the idea of the VTA was a good and noble one, and I am sorry to see it go.

The Department of Public Service bet on DSL, and the congressional delegation bet on fixed LTE. According to the maps, they were successful, but one has to question that. The physical capacity limits of DSL's twisted-pair copper have been virtually reached, particularly in crucial upload capability. The stimulus-funded, fixed-LTE deployment is woefully behind schedule. Its ultimate performance when under load and its ubiquity are far from certain. And, the scale of both of these projects had chilling effects on other segments of Vermont's broadband environment. Based largely on these two bets, Governor Douglas and, more recently, Governor Shumlin made aspirational promises to Vermonters about broadband and mobile communications that they were unable to



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keep. Nevertheless, they both declared victory. I leave it to you to determine if that is good politics or not.

In the heady, early days of the VTA, anything was possible, but it soon became clear that there was lots of learning to do. Under the direction of the first executive director, the VTA took some wrong turns and squandered much time and money. As a friend of the VTA, I was a strong, constructive critic of their early decisions. The Legislature was not thrilled.

Things slowly turned around, and under the leadership of subsequent executive directors, the VTA got it. They fostered multiple initiatives, which really helped and will really help, when completed. Perhaps the most significant initiative was the building of connectors to already-built—but dormant—dark fiber networks. These aggregated networks are the model with the most potential to help Vermont achieve its long-term goal. More about this, later.

I think the Administration and the Legislature made a big mistake last year by disbanding the VTA. The built-up expertise will not be easily, if ever, replaced. I have high respect for the Commissioner, the Director, and the analysts at the Department of Public Service, but they are regulators, and their institutional bias understandably appears to be with fostering—even assuring—the stability of the state's ILECs.

It's, of course, clear that the Department is going to get its second shot at guiding Vermont's broadband and mobile future. The current Act already allows for the Secretary of Administration to domicile the VTA's functions in any appropriate departments. Why enshrine the DPS as the permanent solution? Why not give it two years to see how it goes?



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Why should a regulatory body administer and encourage development? Aren't these inherently at cross-purposes? At least, skill sets differ, at worst, conflicts of interest are possible. Here's an example of a regulatory approach to grants: the current RFP for the Connectivity Fund allows for no payment for the funded buildout until the project is fully completed and verified as to promised standards. This could involve considerable time without compensation for investment requiring larger companies to self-fund and smaller ones with the additional challenge of convincing lenders to loan funds against future grant payments. By increasing the costs, this becomes a clear disincentive to smaller companies. There are other ways to structure grants that still protect the taxpayers' money.

I favor an early revision of the Telecommunications Plan, so recommend an interim review this year. The architects of the plan failed to consult any WISPs, last year. I favor mandating consultation with at least one industry member of each technological type.

I favor an Advisory Board with more accountability to the public and more influence. To that end, I favor some changes to its makeup and to its stated role and meeting schedule. There is no need for the treasurer, if the \$40M bonding authority is not in play. The House and Senate should appoint one of their own plus one at-large member, each. The Governor can appoint three, instead of four, at-large members, who, with his two appointed Secretaries, result in a majority of the nine members. The Board should elect its own Chair and meet in public sessions with the Commissioner or the Director at least six times, yearly.



I favor elimination of the 768/200 broadband standard as ridiculously out-of-date. Why bother documenting such coverage? I suggest adding to the 4/1 category another at 10/1 or 10/2.

I am no fan of the High Cost Fund. I think it fails to further our long-range objectives. Rather, it's a handout to ILECs to potentially overbuild their competitors with DSL rather than extend more advanced, higher speed wireless or fiber broadband to the unserved. I favor its melding into the Connectivity Fund or, in the alternative, a further shrinking of the proportion between these funds from 30:70 to 10:90.

Finally, I favor the Connectivity Fund being applied to investment in sharable dark fiber or towers in lieu of or in addition to grants. Grants serve a smattering of locations, but towers and "open access," dark fiber is a path to the future.

I also have suggested the elimination of some redundant language (e.g. open access and continually) and other minor tweaks.

Suggested changes for H 117, as introduced, some nits, most substantial:

page 5, line 10—§202d.(d) ~~representatives of telecommunications utilities, other providers~~ **at least one representative of each of telephone, cable, mobile-wireless, fixed-wireless, and fiber broadband and voice providers**

page 6, line 10—§202d.(f) [insert] **An interim review shall be conducted and an interim plan shall be adopted by September 1, 2015.**

page 7, line 15—§202e.(a)(3) ~~service capabilities~~ **services capable of meeting the objectives in paragraph (a)(4), below.**



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page 7, line 16—§202e.(a)(4) **continuous**

page 8, line 2—§202e.(a)(5) [insert after “development”] **funding, and implementation**

page 8, line 2—§202e.(a)(5) **open-access**

page 9, line 8—§202e.(b)(7) [and, in all subsequent similar entries, reverse to read]

broadband and mobile telecommunications

page 9, line 18—§202e.(c)(1) [insert after “telecommunications”] **and broadband**

page 11, line 11—§202e.(e)(2) **0.768 Mbps 4 Mbps**

page 11, line 12—§202e.(e)(2) **0.2 Mbps 1 Mbps**

page 11, line 11—§202e.(e)(2) **0.768 Mbps 768 kbps** [if kept, 0.75 Mbps, more accurately]

page 11, line 12—§202e.(e)(2) **0.2 Mbps 200 kbps** [if kept]

page 11 line 14—§202e.(e)(3) **combined**

page 11, line 14—§202e.(e)(3) [insert after “download”] **speed of at least 10 Mbps**

page 11, line 14—§202e.(e)(3) **5 2**

page 12, line 5—§202f.(a) [insert after “purpose of”] **reviewing and**

page 12, line 9—§202f.(a)(1) [strike all]

page 12, line 13—§202f.(a)(4) [insert after “member”] **and one at-large member**

page 12, line 15—§202f.(a)(5) [insert after “member”] **and one at-large member**

page 12, line 17—§202f.(a)(6) **four three**

page 13, line 1—§202f.(b) **Governor Board shall select elect**

page 13, line 5—§202f.(c) **and the Chair**

page 13, line 9—§202f.(c) [note if at-large members are not changed as above, there would be four not five as stated in this paragraph]

page 14, line 9—§202f.(c) **Authority Division for Telecommunications and Connectivity or its Advisory Board**



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page 14, line 20—§202f.(f) **annually every two months**

page 14, line 21—§202f.(f) [insert at end] **A recording and meeting minutes shall be promptly posted online.**

page 15, line 18—§6(c) [insert after Division for] **Telecommunications and**

page 17, line 15—§7516 **30 10**

page 17, line 15—§7516 **70 90**

page 18, line 10—§7515(c) **telephony**

page 18, line 16—§7515(d)(1) [insert after “all”] non-seasonal

page 18, line 16—§7515(d)(1) [insert after “locations”] within 0.5 miles of public highways and served by public grid power

page 20, line 17—§7515(j) [insert after “existing”] **fixed wireless or**

page 21, line 8—§7515b.(a) **4 10**

page 21, line 8—§7515b.(a) **or**

page 21, line 9—§7515b.(a) , **whichever is higher,**

page 21, line 10—§7515b.(a) **2013 2014**

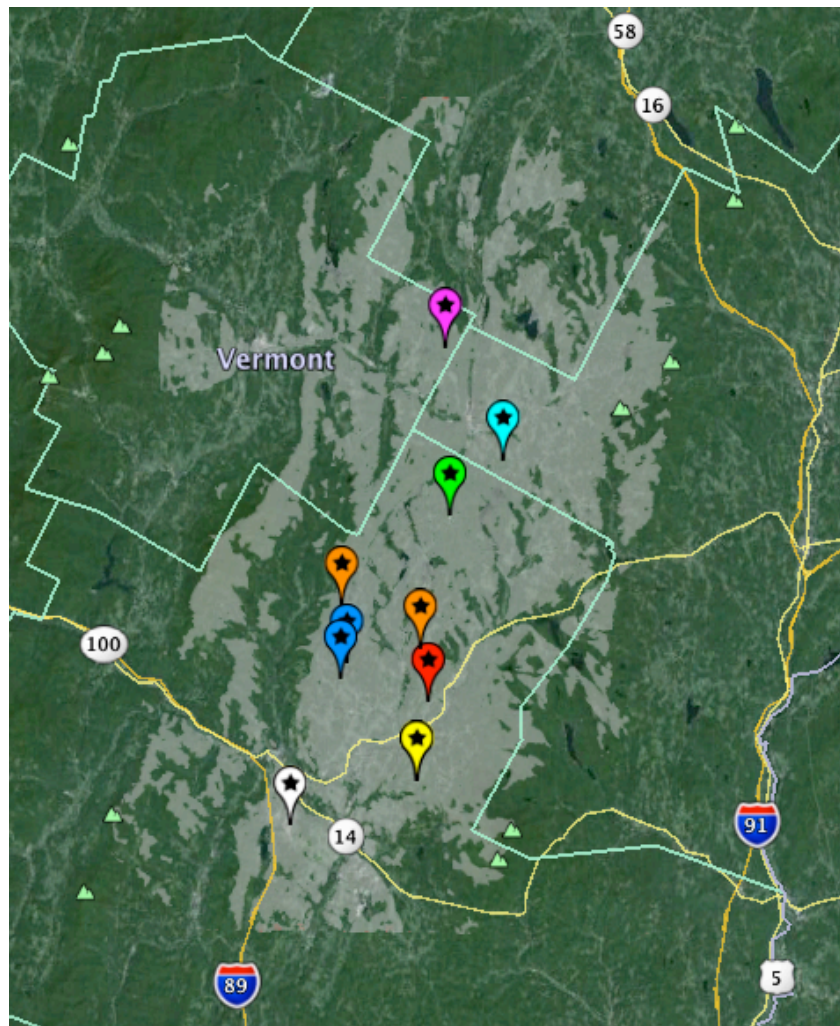
page 21, line 18—§7515b.(a) **continuously**

page 21, line 20—§7515b.(a) **service capabilities** reflecting the rapid evolution in **the capabilities of available broadband and mobile telecommunications technologies, and the capabilities of broadband and mobile telecommunications services needed by persons, businesses, and institutions in the State.**



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2015 facilities and coverage area





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Some wireless telecommunications facilities

Original Plainfield facility (pole) and new WiMAX-equipped tower





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Marshfield facility prior to WiMAX upgrade





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Calais facility





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Berlin utility pole with fiber access and wireless backhaul





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Woodbury WiMAX-equipped facility





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Hardwick WiMAX-equipped facility

