

Testimony at House Energy and Technology Committee  
Michael Birnbaum, Kingdom Fiber  
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Chair Briglin, Vice Chair Sibilica, Ranking Member Chestnut-Tangerman, and committee members, my name is Michael Birnbaum. I am pleased to testify about broadband on NEK Day at the Legislature. Though I live in central Vermont, I consider myself a Kingdomer by dint of my time spent in the NEK on the part of my two internet service provider companies. I am a principal owner and the manager of Cloud Alliance, a wireless internet service provider or WISP, which offers premise-based 4G broadband service in central Vermont and four NEK towns. I founded Kingdom Fiber, and am proud to announce that we are renewing inaugural installations next week, after a disheartening October setback that was beyond our control.

I moved to Plainfield in 1968 and have three grown children who were born, raised, and schooled there. Though each of my kids love Vermont, after college, they all moved out of state for job opportunities. So, the aging of Vermont and its resultant economic effects is personal to me. I am motivated to drive economic development to turn this tide.

Kingdom Fiber is an ambitious, new, fiber-to-the-premise, internet service provider or an FTTP ISP. As a genuine public/private partnership, this ISP was born out of an enormous amount of vision, investment, and perseverance on the part of at least ten entities including Senator Leahy's office, NorthLink and the US EDA, New Hampshire Optical Systems and the ARRA BTOP program, Northern Border Regional Commission, Vermont Electric Cooperative, the Vermont Telecommunications Authority, the Vermont Department of Public Service, and my company, Pear Networks. Kingdom Fiber entered into a long-term lease arrangement with the State to serve residences, businesses, and institutions along the entirety of the NEK Dark Fiber Network—a fully interconnected, 170-mile collection of smaller networks passing through 22 towns and a gore.

Kingdom Fiber also contributed the engineering and management for the development of the Town of Craftsbury's municipally owned dark fiber network funded by USDA Rural Development, Northern Border Regional Commission, and the Vermont Connectivity Initiative and our company became its long-term lessee. Without the presence of the NEK Dark Fiber Network and a provider like Kingdom Fiber to serve both networks together, the Craftsbury network would not be feasible. Individual towns, which can raise the capital to build networks would

still be very hard-pressed to sustain a broadband enterprise without aggregating revenue with other towns or allying with an operator that does.

Kingdom Fiber is offering symmetrical upstream and downstream data plans of 10 Mbps to 1 Gbps as well as unlimited domestic voice services. It will add 10 Gbps data speeds soon and video services later. Our pricing is competitive with similar offerings in the state, but the company's mission is not so much to compete as to fill voids where other companies do not offer true broadband.

It has long been obvious to all, that true broadband is requisite for economic development. Realtors, students, parents, businesspeople, and government officials all clamor for true broadband in rural Vermont. They all recognize that our towns will keep shrinking until this crucial, modern infrastructure arrives ubiquitously. This is increasingly true the more remote the area, and most of the Northeast Kingdom certainly qualifies.

Of course, the main obstacle to more broadband is also economic. The cable companies offer generally good broadband but have already expanded everywhere that their returns on investment are sufficient to satisfy their investors. The phone companies have deployed their slower broadband where it's profitable to them or where required to meet PUC edicts or FCC obligations. The underfunded mom and pop WISPs sort of fall in between, often with good services, but in limited areas. The solution is subsidies, but the State's ability to fund them is severely limited. Federal subsidies are now constrained by USDA policy to not compete with previously funded projects such as the massive VTel Wireless one.

Kingdom Fiber's main subsidy actually developed over a period of about ten years—mostly before our company even existed. The NEK Dark Fiber Network was largely built with federal and state tax dollars and all the organizations I mentioned earlier. Without reasonable access to this combined network, there would simply be no business case for our company to start up.

To the south, EC Fiber struggled mightily for years, before it finally got going for real. That organization is to be admired for its current achievements. Based largely on the EC Fiber model, Communications Union Districts—new municipalities such as CV Fiber in central Vermont—hold promise, but the huge obstacle for any startup is finding serious funds prior to establishing a financial track record. Reducing the risks carried by commercial lenders and the early

financing burdens carried by broadband developers, is the single best way to encourage this broadband expansion. To that end, I strongly urge efforts from the Legislature and the executive branch to authorize very significant development financing by VEDA with easier terms backed by revenue bonds and similar financial vehicles—every possible tool. Mature corporations and organizations may not need such funding, but emerging organizations—be they municipal, non-profit, or for-profit ones—do. I also urge increased support for Connectivity Initiative grant funding.

Another major obstacle to the prompt and affordable development of fiber broadband, are the extreme delays making utility poles ready for cable attachment. There are PUC rules in place limiting the time for pole-owners to respond to each stage of "make-ready" and licensing, yet it has been our experience and that of EC Fiber, that these rules are flouted. Delays of 12 to 18 months beyond the allowed times are not uncommon.

The main issue is excessive time to replace the poles that are too old or too short for additional attachments. Weather is often blamed for the delays, but it appears that the pole owners tend to have insufficient numbers of crews to handle the workload. If they don't hire enough personnel, we need the right to pass the work to approved contractors, should pole owners fail to keep to the time limits. This can be accomplished through legislation or PUC rule-making. We welcome either or both solutions.

We are excited to finally be bringing our dream to 22 towns in the Northeast Kingdom this year. We look forward to expanding within those towns and to new ones in the coming years.

I'm glad to now take any questions that time allows.