

1 **Fiber Committee**  
2 **MEETING MINUTES**  
3 November 12, 2019

4 *All minutes are draft until approved by the Committee please check future minutes for approval of these*  
5 *minutes. Meetings may be videotaped; recordings are held by Green Mountain Access Television. GMATV*  
6 *info: PO Box 581, Hyde Park, 05655; [info@greenmountainaccess.tv](mailto:info@greenmountainaccess.tv) or 802-851-1592*

7 Members Present: Anne Geiersbach; Carol Fano; Michael Rooney; Jack Wool  
8 Others Present: Ron Rodjenski, Hyde Park Town Administrator; Lea Kilvadyova, LCPC; Bruce  
9 Wheeler; Jim Robert; Charlie Gallanter; Douglas Molde; Carol Caldwell-  
10 Edmonds; Bob Malbon; State Rep. Dan Noyes; GMATV did not videotape this  
11 meeting

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12 Ron welcomed everyone and the meeting opened at 5:05 p.m.

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- 14 1. **Welcome** – Introductions made with one agenda item; Meet with Kingdom Fiber
  - 15 2. **Regional Broadband Efforts & Fiber** – Lea Kilvadyova from Lamoille County Planning  
16 Commission reviewed the on-going efforts of the regional planning office to support towns in their  
17 consideration of broadband expansion in Lamoille County, noting that a Dec 10th meeting (3:00  
18 p.m. Hyde Park Municipal Offices) with the State Department of Public Service Broadband Staff is  
19 scheduled with a possible Cambridge meeting with electric utilities may be held soon. Michael  
20 Birnbaum, representing Cloud Alliance and Kingdom Fiber, reviewed his interested in wireless  
21 and fiber technologies. Cloud Alliance started as an ISP and Michael B. became involved about  
22 15 years ago. 25/3 Mbps is currently provided by many wireless providers but for the long-term  
23 fiber is needed in some or most of the network. Michael B. noted that in the Northeast Kingdom,  
24 the State realized that multiple entities had invested in fiber networks but they were disconnected  
25 and not really doing anything for anybody so the State stitched these “dark fiber” or underutilized  
26 lines together to be one cohesive network with the condition for “open access”. The problem with  
27 that was big corporates were not interested in open access nor did they believe that their profits  
28 on these networks would be sufficiently high, so they declined the opportunity to lease the dark  
29 fiber. Michael noted that this outcome was a disappointment to the State, which wanted to see the  
30 public benefit from the new network. Michael B. recommended that fiber needs to go big to be  
31 successful, with multiple towns achieving cost effectiveness. A map showing the existing fiber  
32 network “partial loop” through the NEK was displayed and Kingdom Fiber has a 20yr lease for the  
33 use of the 22-town, 170-mile NEK Dark Fiber Network. Craftsbury received grants from Northern  
34 Border Regional Commission and USDA Rural Development to fund 13 miles of new fiber lines to  
35 add to the Kingdom Fiber network. EC Fiber struggled for the first of its 10 years and eventually  
36 got past design and financing issues and secured bonds to implement the Communications Union  
37 District (“CUD”) concept that is now successful. Revenue bonding was recently made possible by  
38 defining CUDs as municipalities, with multiple towns participating with elected board members.  
39 Michael B. explained that wireless technology is increasing in its effectiveness to the point of 40  
40 Gbps which is an option to get to every door where population density is very low. Michael B.  
41 noted that “5G” mobile wireless will be difficult to build out in rural Vermont due to the need for  
42 towers every ¼ mile and is costly so combining fiber with wireless technology might be equally  
43 effective and less expensive. Michael B. noted that that EC Fiber and MC fiber are strong  
44 advocates for only fiber. Carol asked about the difficulty with wireless bandwidth and Michael B.  
45 stated it can be done with expert knowledge of the technology and installations that avoid  
46 potential conflicts to ensure a good consistent signal. Carol asked about why laying fiber is so  
47 expensive. Michael explained that fiber cables are not expensive but the license and rent costs for  
48 poles or attachment license is a cost, especially the cost of “make ready” where utilities are  
49 required to move wires or replace poles to gain more space for new fiber lines (each line has a  
50 separation distance from other wires by codes and standards) and labor for fiber installation is  
51 specialized and expensive. Can Xfinity control internet costs to limit fiber advancement to which  
52 Michael B. stated that the first broadband / fiber provider in an area definitely has an advantage  
53 so that it can be difficult to compete against for the second provider, noting that for Xfinity to

1 expand they have the same pole attachment issues as new fiber. Michael Rooney stated that our  
2 local tech school, GMTCC, should be training fiber installers and Michael B agreed, noting that  
3 companies are needed to compete with Eustis, currently the primary fiber installer in northern  
4 Vermont. Michael B. noted that the Vermont Council for Rural Development is a great resource to  
5 assist in helping rural towns organize community solutions, noting Craftsbury combined grants  
6 totaling \$350,000 to extend fiber lines to business areas and 50% of the town's homes to create  
7 jobs. Craftsbury came close to meeting all proposed business projections in just 6 months with 35  
8 miles remaining to complete the Craftsbury network. Currently, the Craftsbury fiber network  
9 approaches the Lamoille County in Eden (via Eden Mountain Road) and Wolcott (via Wild Branch  
10 Road Road). The network stops at Craftsbury town lines. Craftsbury may consider a hybrid  
11 solution with fiber-wireless to complete their network. Michael B. noted that there is plenty of fiber  
12 in Vermont but no access to homes, as existing lines are limited to business interests.  
13 Consolidated Communications would consider building fiber to every home if funds are provided  
14 by the towns. In the future federal support may be provided similar to the original expansion of  
15 telephone. If a town can raise funds, there are many options for private entities to then build and  
16 operate the network. Velco has fiber capacity on transmission routes and has recently shown  
17 interest in backhauling services whereas in the past they were not interested in opening access to  
18 anyone. Michael B. noted that new poles cost \$2,000-3,000 each if needed to gain space for fiber.  
19 Michael B. stated that CV Fiber is now 15 months old with 18 towns, they have a strong  
20 leadership team pursuing grant funding to expand their network with about 120 new miles being a  
21 goal for next year. NEK with 55 towns and a low population, has three broadband planning  
22 projects going on; one through NVDA developing CUD concepts (multiple town districts), one  
23 CUD could grow from the Brighton, Glover, Craftsbury, Greensboro, Hardwick area and another  
24 from Lyndon and several of adjoining towns. The CUDs provide structure and good things can  
25 happen with sharing of talent, decision-making, revenue bonds only (no taxing authority) and  
26 grants, etc. At \$30,000 per mile and 70 miles to be served with fiber, the cost would be \$2.1  
27 million to run fiber. USDA has some funds with other agencies but their process is costly and  
28 time-consuming, and FCC might be a future source of funds for rural areas through the "Connect  
29 America Fund", a.k.a. CAF, which is going into it's 3<sup>rd</sup> round to support broadband expansion  
30 which will be opened up to more than just telephone companies. Charlie Galanter noted that  
31 CAF3 funding might not be available, because we have the minimum broadband service already  
32 covering Johnson. Michael B. noted that a CUD boundary could omit the served areas from its  
33 grant application so that it qualifies for the grant, especially if other towns have similar unserved  
34 area. Towns can reach out to the regional planning commission to help begin the discussions on  
35 forming CUDs but the State should also provide support through the State Broadband Staff –  
36 more information will be forthcoming on state support at the meeting on December 10. Lea asked  
37 if a survey to determine potential take rate, or how many homes would switch to fiber if offered,  
38 would be good information to which Michael B. agreed that it is beneficial but only if the data and  
39 conclusions from the survey have sufficient credibility to match what banks need to hear. Dan  
40 Noyes asked what percentage of residents on a road saying they would sign up would indicate  
41 fiber being successful. Michael B. responded that a good rule of thumb is a 40% take rate in areas  
42 with no cable and 10% take rate in areas with existing cable. In year one, the expected take rate  
43 would likely be half that EC Fiber is reporting 24% take rate against existing cable and 60-90%  
44 where no cable. Michael B. suggested cutting expected take-up rates in half for planning  
45 purposes and spreading that growth over 3 years, then running the costs against that projected  
46 revenue to determine how large the CUD needs to be. Dan Noyes asked if any states can draw  
47 down Medicaid funds for telemedicine. Michael B. said he was not aware of any so Dan offered  
48 that he could be explore that option, i.e. can funds from a Medicaid waiver be applied to fiber  
49 extensions to residents that would benefit from telemedicine. Lea noted that she is continuing to  
50 reach out to other communities and will have more information at the December 10 meeting.

51 3. **Next Meeting** – The next meeting is with the State Broadband staff on December 10, 2019 at  
52 3:00 p.m. at the Hyde Park Municipal Offices.

53 4. **Adjourn** – Motion by Michael to adjourn, so voted at 4:30 p.m.