

ECFiber: What Can We Do Now?

- Mission: build world-class broadband (FTTP) to every premises in our 31 town district.
- Finishing our original 23 member towns.
- Designing 8 new towns admitted during 2020: Topsham, Newbury, Washington, Corinth, Bradford, West Fairlee, Fairlee, and Windsor
- Construction will begin later in the year
- Currently 6,000 customers on 1400 miles
- At maturity will pass 31,000 premises and have 15k-18k customers on 2000 miles of network

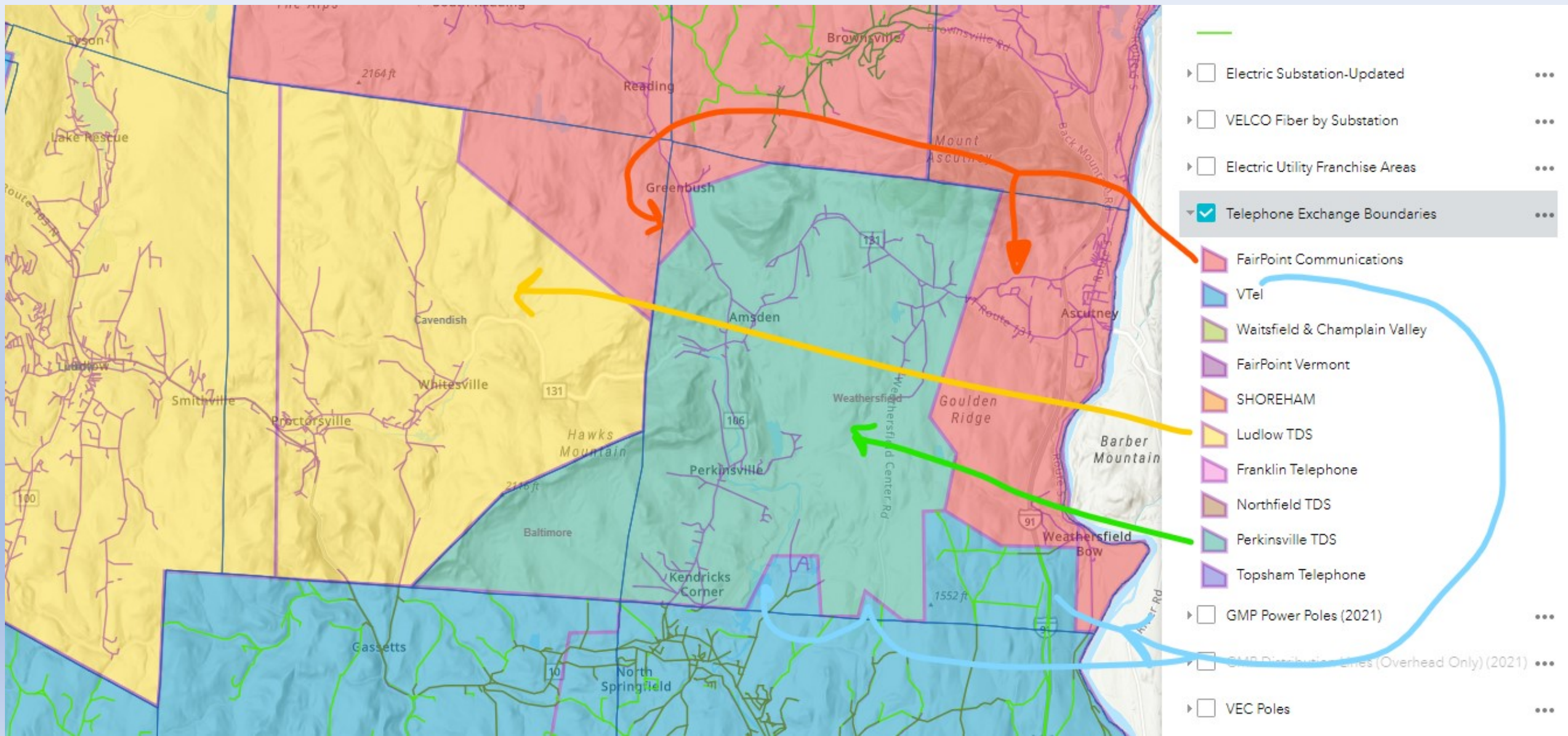
ECFiber Secret Sauce Ingredients

- District owns but does not operate network
- Board has zero involvement with day to day ops
- Fortunate to have ValleyNet as operating partner: it is a non-profit ISP dedicated to rural broadband
- Now completely funded with long-term, low-cost capital: municipal revenue bonds

Personal thoughts on local telcos

- TDS covers parts of 4 towns on our south border between us and Vtel
- Their management has expressed an interest in converting their network to FTTP and has done so in rural NY with govt support; open to discussion
- ECFiber's expansion committee will begin work next month as direction of legislation becomes clearer
- Lots of ways to do this, state interest should be universal reach and accountability

Phone Exchanges in TDS area



ECFiber: What about Affordability

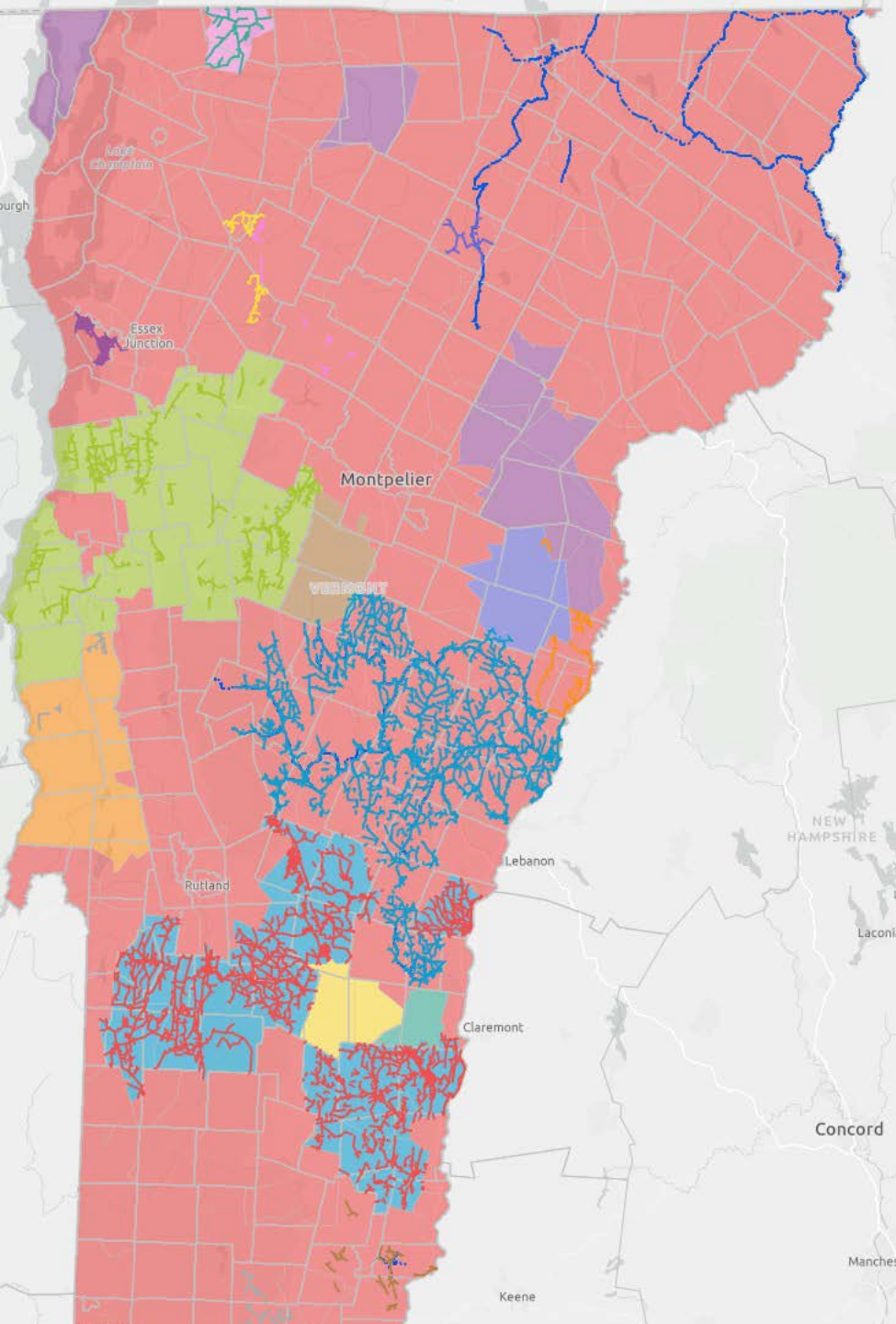
- ECFiber has an informal program supporting students
- We decided to figure out a more formal one and realized it is a social services delivery challenge
- Can't put those expenses on district, it puts financial results required by our bonds at risk
- Donated \$100,000 to newly formed Equal Access to Broadband, Inc.
- Note this effort originally began with no idea that we'd be able to ask and have state seriously entertain making EAB grants of millions.

Why can't you just offer a \$22 plan?

- Breaks the economic model of the business plan that is carefully figured to match needs to fund construction, likely revenue, and therefore how much we need to borrow and what we can afford to borrow.
- Expensive to build FTTP in rural Vermont. Our lowest rate, for 25/25, is \$72. If required by law to offer a \$25 plan, our higher speed plans would have to be far too high, even in the pockets of prosperity we serve. We could never even get started.

Future of Affordability

- EAB's model and pilot programs will be successful and easily expanded beyond serving students in ECFiber district
- EAB will be a designated agency providing tools to social service workers to connect clients with service, and coordinate supply of devices and training. You can start right away.
- Service providers will get \$22 or so from customer, and rest from a federal, state or private source.
- Providers like ECFiber can donate to the private funds



The Goal: Statewide World Class Broadband ($\geq 100/100$)

- FTTP only technology certain to deliver.
- Colors indicate phone company areas -- most of the state, the salmon color, is CCI, the landline phone exchanges once owned by New England Telephone.
- Lines indicate where FTTP is available now.
- Example: VTel delivers to most of its “plain old telephone service (POTS)” landline exchanges (red lines).
- Example: ECFiber is built mostly in CCI territory (blue lines).
- We need to get to the point where “lines” are everywhere

Challenge\$\$\$\$\$

An informed estimate of what it will cost to cover the state with fiber over a 5 to 7 year period (eventually paid for by revenue)

Item	Amount	Notes
Miles	10,212	Excludes fiber areas and dense towns that incumbents will serve
Premises	237,223	
Preconstruction	\$63,333,000	Includes pole data, design, and makeready
Construction	\$296,153,000	Includes cost of premises drops and equipment at 5 customers per mile
Total	\$359,486,000	Delivers FTTP statewide and connects 50,000 customers. Does not address affordability, this is for availability only

The Product

• World Class Broadband

- Fiber-Optic Infrastructure is Future-Proof
- Installed Plant has 50 year lifetime well in excess of even 30 year bonds
- Symmetrical service – upload and download same
- 800/800 now; 5000/5000 (like everyone in Hong Kong has) coming
- “Neighborhood slowdown” – just doesn’t happen in the real world
- WiFi calling, multiple Zoom meetings, multiple streamers and gamers – all the contention issues go away

Our Own Way Forward

- Professionally Coordinated at the State level (VCBA)
- Minimize duplication of jobs across CUDs in terms of legal, financial and technical work
- A must because we have to pay salary premiums to make up for lack of profit participation, stock options, and (sad but true) cold weather

Questions?

Vermont's Communications Union Districts

*Laying the infrastructure
for a world
that is coming
faster than we expected*

Prepared by F. X. Flinn

Chair, East Central Vermont Communications Union District

Challenge\$\$\$\$\$

The biggest barrier is the initial investment needed to start delivering FTTP. Once up and running customer revenues eventually pay back the cost.

CUD Name	Premises	Miles	Pole Data	Design	Makeready	Construction	DropsCPE	Total
CVFiber	25,640	1,131	\$681,000	\$681,000	\$5,654,000	\$24,870,000	\$7,914,000	\$39,800,000
DVFiber	30,183	1,476	\$885,000	\$885,000	\$7,380,000	\$32,477,000	\$10,334,000	\$51,961,000
ECFiber	4,317	312	\$187,000	\$187,000	\$1,562,000	\$6,872,000	\$2,187,000	\$10,995,000
NEKBroadband	37,992	2,368	\$1,420,000	\$1,420,000	\$11,840,000	\$52,093,000	\$16,574,000	\$83,347,000
NWFiber	28,075	1,103	\$662,000	\$662,000	\$5,516,000	\$24,267,000	\$7,720,000	\$38,827,000
None	40,340	840	\$505,000	\$505,000	\$4,200,000	\$18,476,000	\$5,876,000	\$29,562,000
LamoilleFiberNet	11,470	504	\$303,000	\$303,000	\$2,520,000	\$11,088,000	\$3,528,000	\$17,742,000
CatamountFiber	19,649	699	\$419,000	\$419,000	\$3,495,000	\$15,379,000	\$4,893,000	\$24,605,000
AddisonFiber	16,894	926	\$557,000	\$557,000	\$4,631,000	\$20,383,000	\$6,485,000	\$32,613,000
OCFiber	22,663	778	\$468,000	\$468,000	\$3,889,000	\$17,111,000	\$5,444,000	\$27,380,000
Grand Total	237,223	10,137	\$6,087,000	\$6,087,000	\$50,687,000	\$223,016,000	\$70,955,000	\$356,832,000

Excludes towns with significant FTTP footprint even if CUD member, includes study towns and unaffiliated towns with little or no internet. Intended to provide dimension of need not definitive district by district data.