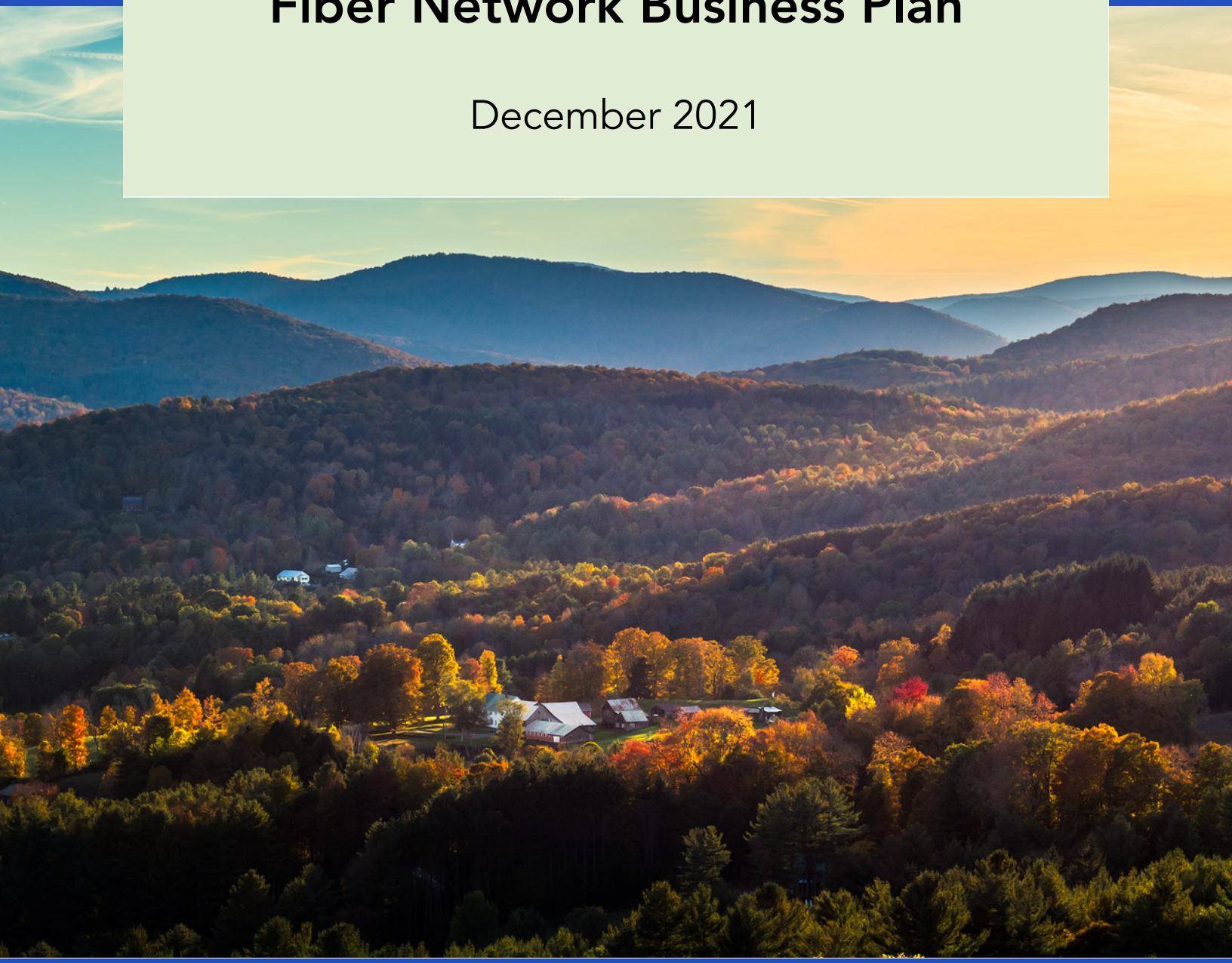
Otter Creek Communications Union District

Fiber Network Business Plan

December 2021



PREPARED BY
RURAL INNOVATION STRATEGIES, INC AND
VALLEYNET

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1. Executive Summary

Deploying future-proof broadband is a time and resource-intensive process. However, for the first time, the Rutland Region has a clear path to universal service via the Otter Creek Communications Union District (henceforth Otter Creek or the CUD). Importantly, this path is the product of Rutland County towns and local leaders taking their telecommunications needs into their own hands to ensure quality service, establish local control, and bring world-class fiber optic internet to even the most remote locations in the area, in alignment with the goals of the CUD and goals of the legislature as established by Act 71.

Though Otter Creek's plans have pivoted and been delayed over the past year due to RDOF awards, private investment in the region that has changed the CUD's financial outlook, and volatility in the market brought on by the most significant nationwide spending on broadband construction this nation has ever seen, the CUD has established a strong financially and technologically viable path via a partnership with a local provider, and the outlines of a partnership framework that leverages the CUD's strengths and abilities.

This iteration of the plan is predicated on several important assumptions regarding financing and costs, namely:

1) Otter Creek will receive grants totaling at least 11 million for pre-construction (if needed) and construction.
2) Otter Creek will be able to raise additional funds to augment grant money, from local institutions, private lenders, and/or municipal revenue bonds.
3) The CUD's chosen partner will have assets and resources that will reduce the cost of construction to well below what Finley Engineering estimated to make the project feasible at a reasonable cost to end customers

If the above conditions hold true or improve, Otter Creek will be able to execute its mission and build to every unserved and underserved premises in its territory over the next four to five years.

The next major step CUD must take, as outlined in this document, is to launch a Request for Proposals process to codify the expected partnership outlined in this document, or potentially surface another partner with a more appealing framework.

To ensure success, the CUD's chosen partner should then oversee the majority of steps needed to deploy broadband and serve constituents, from the creation of construction-grade designs to construction, installation, and operations. Ultimately, the CUD's role in the expected public private partnership will be arranged to guarantee universal, future-proof service to residents while at the same time shielding itself and residents from risk.

Lastly, this Business Plan – especially the financial projections – should be considered a living document. As the CUD monitors construction costs, adjusts their network design and cost estimates, and solidifies their partnership(s), the projected financials (like the cost of the network, the charge to customers, etc) will flex. The need to periodically adjust the financial projections is a normal part of the broadband

planning process, and the project team that created this Plan is happy to continue providing assistance to the CUD as they evolve.

2. Introduction & Background

Who is Otter Creek?

Otter Creek is a Communications Union District (CUD) in the Rutland County region of Vermont. As a CUD, Otter Creek is an all-volunteer, not-for-profit municipal corporation, and "exists to bring connectivity solutions that support municipalities in and near the Regions of Rutland, Vermont." For more information on the CUD and the Rutland Region, please see the Feasibility Study completed for the CUD in December of 2020.

The Project Team

This Business Plan was prepared by two organizations with support from Otter Creek:

Rural Innovative Strategies, Inc. (RISI)|[1] Based in Hartland, VT, RISI, is dedicated to helping rural areas find renewed prosperity by growing entrepreneurship, digital economy jobs, and skills training. RISI's broadband team specifically works to set the foundation for this economic development work by creating comprehensive and actionable Fiber to the Home (FTTH) broadband plans for our rural partners and clients.

ValleyNet[2] **|** A nonprofit organization, ValleyNet operates the ECFiber and LymeFiber networks. ValleyNet acts as the design/build/operate partner to these providers and provides consulting services to a number of new and emerging New England fiber networks.

Organizations Contributing to Otter Creek's Planning and Deployment

Finley Engineering: Finley Engineering is a nation-wide, full service engineering firm that serves the broadband and energy sectors.[3] Finley Engineering completed a high level network design and cost analysis for the CUD in the fall of 2021, which informs this plan.

ECFiber[4] **|** ECFiber is a Communications Union District providing 25 to 800 Mbps service in its area which extends north to Brookfield, south to West Windsor, west to Rochester and Hancock, and east to Thetford. Data from the ECFiber network was used extensively in the Otter Creek feasibility and business planning process. ECFiber launched in 2011, and is currently the only Communications Union District in Vermont actively providing broadband service to customers.

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[1] "Rural Innovation Strategies, Inc." Accessed September 2021, *https://ruralinnovationstrategies.com/*
[2] "ValleyNet," Accessed September 2021, *https://www.valley.net/*
[3] "Finley Engineering" Accessed December 2021, *https://finleyusa.com/*
[4] "ECFiber," Accessed September 2021, *https://www.ecfiber.net/*

Municipal Capital Markets Group, Inc.[5] (MCM) | MCM is a municipal bond underwriting and advisory firm. MCM reviewed the feasibility study for this project, validating the assumptions and conclusions that were made at that time. They continue to be a source of guidance for CUDs in Vermont, and are a potential fundraising partner for Otter Creek in the future.

Vermont Community Broadband Board[6] (VCBB) | The VCBB is developing policies and programs to accelerate community efforts to deploy broadband, in accordance with the State of Vermont's goal of facilitating universal access to reliable, high-quality, affordable, fixed broadband of 100 Mbps symmetrical speeds or greater. The board of the VCBB, and Executive Director Christine Hallquist, bring substantial experience in telecommunications, utility management, legal, regulatory, and business planning. The VCBB is charged with managing the $150 million in funding for rural broadband that the State of Vermont received from the American Recovery Plan Act. The VCBB intends to grant those funds to entities, including CUDs, to build out Vermont's broadband network.

Broadband Innovation Grant Process

The Rutland County Regional Planning Commission was awarded a Broadband Innovation Grant (BIG) from the Vermont Department of Public Service in 2019. It used the BIG funding to create a Feasibility Study as well as this Business Plan.

The Feasibility Study found that the Rutland County Region presented no major technical challenges to building a fiber network, but noted that due to the high degree of existing cable and fiber in the jurisdiction, the CUD was likely limited in potential partners to a local Incumbent Local Exchange Carrier (ILEC), or to a provider that was already operating in a neighboring district and so could expand efficiently.

Municipal Capital Markets Group, Inc. provided a third-party review of the Feasibility Study, writing that the assumptions in the Feasibility Study were reasonable and conclusions sound. After this third-party validation, the State of Vermont formally certified the Feasibility Study. This Plan reflects the sound fiscal and technical planning that underpins Otter Creek's efforts and communicates specifics about Otter Creek's implementation path.

Between the Feasibility Study's publication and the publication of this Plan, the Vermont Legislature passed H.360/Act 71, which established the Vermont Community Broadband Board (VCBB) and established guidelines and priorities for all CUDs. The VCBB is the primary governmental entity responsible for overseeing the CUDs' deployments, including setting standards and guidelines for engineering and facilitating grant applications and awards. This Plan is consistent with the priorities outlined in H.360/Act 71 and the guidelines established by the VCBB.

[5] "Municipal Capital Markets Group, Inc," Accessed September 2021, *https://www.municapital.com/*
[6] "VT Community Broadband Board," Accessed September 2021, *https://publicservice.vermont.gov/vcbb*

3. Operational Model and Partnership

Otter Creek will run a Request for Proposals (RFP) process to pick a partner to build, operate, and maintain a fiber network in their region. However, as is best practice, the CUD has been meeting with potential respondents and partners to ensure that viable responses will be submitted and to understand what RFP responses may look like.

Given the make-up of the region, and the projections from Finley Engineering, Otter Creek's partner will need to contribute resources or assets to the project to make it a viable collaboration. This could take the form of a private, competitive ISP contributing significant cash to match grant funds the CUD may receive.

Alternatively, a partnership with the regional ILEC(s) is one possibility for an efficient and cost-effective for the region. Consolidated Communications, Inc. (CCI), operating their fiber network under the name Fidium, has extensive experience partnering with municipalities in New England, and has a repeatable partnership model they have developed that could be applied to the Rutland Region. (A small portion of the Otter Creek region is also served by OTELCO; though OTELCO does not have the same history of public-private partnerships in Vermont and New England, they have expressed enthusiastic interest in the exploration and creation of a partnership that ensures universal coverage is achieved in the regions of overlap between OTELCO and the CUD).

The following is a summary of an agreement between CCI and the town of Dublin, NH, which illustrates many of the items that will apply to an agreement between Otter Creek and CCI in Vermont. After the agreement is a list of areas where the agreement may be modified to fit the Vermont CUD context.

Summary of Consolidated Communications Inc, agreement with Dublin, NH

Construction

- Municipality pays for construction of unserved areas via a general obligation bond; CCI pays to overbuild cabled areas
- CCI has 24 Months to complete construction of the municipal-funded network, and will pay a $1K per day late penalty should that deadline not be met

Ownership

- Municipality retains ownership of municipal-funded network components
- CCI owns the "drops" to the house, as well as CCI-funded network and facilities
- CCI has exclusive operating authority for Municipality-Funded Network for 20 years

Payment Structure

- CCI will pay a Network Operation Fee to the municipality of $96,000/year to cover town's debt service payments
- CCI will leverage $11.50/mo surcharge for all internet customers (not for voice-only customers) to fund this Network Operations Fee

- Customer surcharge will decrease by $0.25 a year
- Surcharge will be levied for as long as CCI is obligated to pay Network Operation Fee

Customer Experience / Internet Product Details

- Monthly broadband service fees for customers in the municipality will be in line with those charged to similarly-situated subscribers in other portions of New Hampshire
- CCI will not throttle speeds or establish data caps
- Customer service will be provided via a dedicated fiber product customer customer service team

Additional Terms and Considerations

- CCI provides free service to municipal buildings
- CCI will not be obligated to pay any taxes assessed on or related to the town funded network
- Municipality has no right to manage or control Consolidated's operation or maintenance so long as CCI is compliant with the terms of the agreement

Areas where Otter Creek agreement may diverge from the Dublin Structure

The exact terms of the agreement between CCI and Otter Creek would have to be established with legal assistance. That said, two notable changes that Otter Creek and CCI will need to make include the following:

1) Given the larger scale of the Rutland Region, CCI may not be able to build in 2 years; further, they have already stated that their 2023 construction season is filling up. Timing of construction will need to be determined during the RFP process and negotiations

2) Dublin financed their network using General Obligation (GO) bonds. These bonds are not available to the CUD. Instead, the surcharge paid by CCI to the CUD must instead be enough for the CUD to access Revenue Bonds to fund the construction of the network.
    a. Though the Dublin surcharge is designed to cover GO bond payments exactly, the CUD surcharge will need to cover more than just the revenue bond payments. Typically, entities using revenue bonds must have earnings that cover 25% more than the debt service on the bonds, .This is referred to as an EBITDA (Earnings before interest, taxes, depreciation, and amortization) coverage ratio of 1.25 or greater.

3. Financial Projections

Cost Savings with ILEC partnership

A partnership with an ILEC – either with CCI in their territory, or with OTELCO in their territory – will allow the CUD to eliminate or save substantially on several planning and construction costs and reduce the estimate provided by Finley Engineering. Notable areas of savings include the following:

1. Because fiber will be over-lashed to existing plant already on the poles, the CUD will not have to pay for make-ready (the process by which space is made on the poles to allow another attachment), or pay for the steel strand that is typically placed on poles first, in a strand-and-lash construction method.

2. Given the ILEC will build and operate the network, the CUD will not have to pay for the detailed engineering to be done as the ILEC will want to design it themselves. In addition, the CUD will be able to leverage existing hubs and central offices owned by the ILEC, and so will not need to build that infrastructure.

3. The CUD will likely *not* need to build as many route miles to provide redundant routes to the network or connect disparate areas; they may be able to leverage existing fiber from the ILEC and therefore reduce the total route miles needed to be built.

Financial modeling was done to take a preliminary look at what the surcharge may need to be to allow the CUD to build to their entire region, leveraging grant money from the state, private debt, and then revenue bonds. Two scenarios were analyzed based on data from the high-level design and cost estimate provided by Finley Engineering. These scenarios differ primarily on the assumed amount of mileage built in the CUD network.

Scenario 1: Adjusted Finley Costs, Finley Mileage Estimates

This scenario uses the following assumptions:

1. **Finley estimated costs for per mile materials and labor, minus anticipated savings: $58,000/mile**
    a. To account for anticipated savings, cost of ONTs (part of the drops which the ILEC would own), hubs (again provided by ILEC), make-ready (since ILEC's poles are used), and the cost of construction engineering (since ILEC will engineer their own network).

2. **Finley assumptions for total passings,** but with a staggered assumption for penetration rate

a. Finley assumed penetration and drops would happen all at once, which will not be the case for the CUD.
b. ILECs have reported achieving upwards of 70% or greater penetration in areas without other cable or fiber competition, because the vast majority of households are already phone customers of the ILEC and so their conversion to being fiber customers is fairly easy. As such, the following staggered penetration rates are assumed for the first 4 years:

Year	1	2	3	4
Penetration Rate	30%	55%	63%	65%

3. **Finley's assumed total network mileage** -- 631 network miles
    a. This includes redundant loops needed for network resiliency and to connect disparate unserved areas
4. **Otter Creek grant funding from the state will be $11M**
    a. This calculation divided the total unserved miles in current Otter Creek member towns by the total unserved mileage in the entire state, and multiplied that by $250M to arrive at the proportion of grant funding that may be allocated to the CUD.
5. **Otter Creek has nominal overhead costs of $30K/year**
    a. The CUD will likely need just a part time bookkeeper to monitor cash flows and handle audits, if applicable
6. **As with NH jurisdictions, the ILEC puts a surcharge on customer bills that goes directly to the CUD**
    a. This surcharge is assumed to be the only means of revenue the CUD has from the network; it is assumed that if applicable, CCI would provide enterprise service and/or backhaul for cell towers and that the CUD would not engage in servicing those entities

Results of Scenario 1:

Under this scenario, Otter Creek will have a challenging time making the financial outlook work at a relatively low cost to the end user because the grant money available to the CUD only covers a fraction of the total build estimated by Finley Engineering. Takeaways are as follows:

- The CUD will need to either borrow a significant amount a subordinated debt to complete construction and then replace that debt with revenue bonds once revenues increase
- A customer fee of approximately $35 dollars a month could be needed to allow the CUD to fund the full construction of the network
    - Clearly, this is in neither the CUD nor their partners' interests to put such a significant surcharge onto a customer bill

- The surcharge could begin to be lowered in year 7 when all short-term debt from construction has been transferred to revenue bonds and all built areas are close to their peak penetration rates

Thankfully, this is a worst case scenario, and the CUD is likely to achieve savings in a few areas. For one, the CUD is likely to be able to access additional grant funding from the state or other sources.

Second, the cost per mile of construction may be less than $58,000/mile due to any number of the following reasons:

- The scale and buying power at which an ILEC partner can operate
- A calming of the materials market as production increases
- Additional points of savings due to an ability to leverage ILEC's existing construction plans and/or the ILEC's RDOF (Rural Digital Opportunity Fund) funding (and obligations)

Third, it is highly unlikely the CUD will need to build all of the miles estimated by Finley; in fact, the CUD may only need to build half of those miles. The following scenario looks at a scenario where the CUD does not need to build as many network miles.

Scenario 2: Finley Costs, State Mileage Estimates

The assumptions in this analysis are the same as in scenario 2, except the route mileage has been reduced to the unserved mileage assumed by the state of VT: **340 network miles.** (See Appendix A for a chart of served and unserved mileage by town according to the latest PSD analysis.)

This route mileage is likely to be more in line with what the CUD would have to build in a partnership with the ILEC(s), where the CUD could leverage existing ILEC infrastructure to reach all unserved premises, and build a network with redundant routes for security and resiliency.

Results of this scenario

There is a good chance that the CUD's costs of construction will not be as high as assumed in this scenario (again, the ILEC may be able to provide efficiencies of scale that reduce the per mile cost below what Finley projects). However, even if costs for construction are as high as modeled, the CUD has a fairly straightforward path towards providing service under a scenario where they only have to build 340 miles.

- Under this scenario, Otter Creek should be able to fund their operations and complete construction with $11M in grants and a customer surcharge of approximately $15/month
- The CUD may also begin gradually lowering their surcharge in years 5 or 6

Adjustments to the modelling

The modeling done for this business plan should not be considered final, and decisions about what to charge customers should continue to be reevaluated as the CUD gains more information.

Much of this information will be gathered as the CUD enters a collaborative partnership with partners, and generates refined engineering and route maps. As that partnership forms, the partner may provide

updated metrics that the Business Plan project team can use to help the CUD refine their model. The following are factors the CUD should monitor that will lead to adjustments in the next iteration of planning.

- **Number of passings**
    - Modeling for this plan did not make adjustments to the numbers of anticipated passings when route mileage was reduced; it is likely the passings will ultimately be different than what Finley assumes in a scenario where the CUD does not build the full 631 network miles
- **Route mileage**
    - Given that the network the ILEC would design and build is different than what Finley would assume, this will provide a meaningful impact the analysis
- **Construction costs**
    - Given the ILEC's resources, including fiber and construction capabilities, it is likely that their costs may be lower than what Finley assumed
    - RDOF areas that were won by the ILEC should not be double-funded by the CUD

Lastly, the CUD will likely receive bids in an RFP process from competitive ISPs; if those bids include a cash match significant enough so that the CUD's costs are at or below the levels outlined in scenario 2, this could be a very viable option to the CUD. Every potential respondent will have a different proposal and suggested structure; to this end, the CUD should request in their RFP process significant information on proposed structure and match availability to allow them to update and adjust their model to evaluate the feasibility of the bidder, as described in the Request for Proposals section below.

Though details on the financial modeling are considered confidential to the CUD and therefore are not published publicly in this document, the project team will work with the CUD to ensure they have the updated models they need to make informed decisions moving forward.

4. Request for Proposals

The CUD's next major step is to issue an RFP to find their ultimate partner(s). At a high level, the RFP should:

- Summarize the CUD structure, make-up, and planning the CUD has done to date
- Outline the CUD's priorities and needs as well as the needs and priorities listed in Act 71 in terms of service offerings, quality, and values
- List the roles the CUD is hoping to play in the partnership, as well as the roles the CUD needs the partner to play (e.g., design, build, operate, maintain)
- Be fully explicit with instructions and the questions the CUD needs answered to find the right partner

The project team, the VCBB, and/or VCUDA can provide sample RFPs and review the RFP before it goes out.

The CUD should construct the RFP in a way that invites multiple viable solutions and partnerships. For example, given that the CUD needs to serve the entire region, the CUD may describe their footprint and invite respondents to propose solutions for all or part of the region, with the explicit direction that the CUD chose multiple partners for different regions. (This would allow, for example, CCI to bid on areas of overlap with their territory, OTELCO to do the same for their territory).

The CUD should also encourage bids that provide a solution for all of the steps needed to deploy broadband and serve customers – namely, the detailed design, the construction and construction management, the operations, and the maintenance. Bidders may respond to say that they themselves can handle all the steps; alternately, they may respond with partners that cover all of the steps. Bids that do not include some of the steps should not be excluded, but for simplicity's sake and to ease the administrative burden and oversight needs, the CUD may prefer to make an award to an entity that can handle all of the substantial steps to deployment.

Additionally, the CUD should structure the RFP so that they can collect all of the information they need to vet and model the full range of potential partnerships. For example, the CUD may get bids from any number of competitive ISPs known to the CUD, or not yet known. The CUD should ask for details in the RFP that described respondents' ideal partnership structure(s), proposed split of roles and responsibilities between the CUD and ISP, ISP match available, build timeline, network engineering structure, and service values (net neutrality, transparent pricing, minimum uptime, etc).

Lastly, the CUD should keep in mind that the RFP process is not the final step in finding a partner – substantial negotiations are likely to happen after the fact as well. The RFP process, however, should identify the most viable partner(s) that the CUD feels well aligned with and feels they can work well with as the final details to the agreement are negotiated.

5. Ensuring Universal and Affordable Service

Otter Creek's mission, informed by Act 71, is to provide universal service in its district. The RFP process as outlined in this Business Plan will allow the CUD to meet that goal. Any partners the CUD selects must be able to meet that goal as well. Thankfully, the likely potential partners the CUD has been in discussion with are able to agree to that goal, and are committed to collaboratively ensuring that goal is met.

The CUD's potential partnership with the ILEC will also position the CUD to use several strategies to ensure service is affordable for constituents. For one, the more efficient the build is, the less cost to the CUD that would need to be passed on to the customer. The CUD's efforts to work with the most efficient provider are one mechanism they are using to control costs.

CCI's hope is to provide service in the Otter Creek territory at the same cost as they do across the state. Their current rates are as follows:

Fidium Fiber (by Consolidated Communications)		
50/50Mbps	$35/mo	Limited time offer; 55/mo after 1 year
250/250Mbps	$60/mo	Limited time offer; 85/mo after 1 year
1/1Gbps	$70/mo	Limited time offer; 95/mo after 1 year

Importantly, Fidium also offers free installation on all plans, eliminating any one-time costs that can be a barrier to entry.

This being the case, the CUD's best options for ensuring affordability include:

1) Leveraging as much grant money as possible to ensure the customer surcharge is as small as possible
2) Helping CUD constituents apply for and enroll in the federal Broadband Benefit subsidy, which is challenging to apply for but can provide a $30/month subsidy to qualified individuals
3) Support and encourage the growth of "Equal Access to Broadband," a Vermont non-profit organization, founded to provide mechanisms for subsidizing service to low-income households; leverage Equal Access Broadband tools and resources as that organization grows

Additionally, non-standard installation costs, like houses on private roads or with long driveways or those that must be connected with underground conduit, are typically passed on to the customer. This can be a significant expense. Otter Creek can use revenue from the network, or grant funding if available, to subsidize these installations.

6. Market Analysis

What Should be Considered a Competitive Service?

There are many technologies that can be used to transfer data from one point to another and connect to the internet. Some are greater competitive threats to fiber networks than others. DSL (digital subscriber line) service, 4G LTE Cellular Service, and satellite internet do not offer universal access or the speed and quality connections that consumers want and need today. Although LEO (low earth orbit) satellites (i.e., Starlink) provide better service than traditional satellites, upload speeds are still significantly constrained, service is expensive compared to most wireline options, a connection is not reliable 100% of the day, and service can be blocked by trees and weather. Given these constraints, Otter Creek believes that DSL service, 4G LTE Cellular Service, and satellite internet do not represent significant competition to Otter Creek's fiber offerings.

5G service, though it represents a technological breakthrough that provides high-capacity data transfer wirelessly, is unlikely to impact the customer market in Rutland County. The propagation characteristics of 5G are not suited for sparse rural areas because the signal decays quickly from the source and is

severely impacted by walls and other obstacles. As such, investment in 5G technology is unlikely in rural areas in the foreseeable future. See *Appendix B: Information on Alternate Broadband Technologies* for more information on DSL, 4G, 5G, and LEO satellites.

Lastly, a partnership with local ILECs will allow Otter Creek to avoid having to compete with cable or other fiber providers, as a partnership with the ILECs will reduce the need for the CUD to overbuild other wireline providers. That said, this business plan includes information on cable and fiber competition so the CUD can be informed and understand the competitive dynamics that could occur if conditions change and another entity emerges as the best partner in an RFP process.

Cable Competition in Rutland County

Comcast is the primary cable internet provider in Rutland County. Cable internet packages and pricing for residential and business customers are summarized in *Appendix C: Information on Alternate Plans and Pricing*.

It is important to note that Comcast does not provide clear pricing for its services online. It also utilizes aggressive "teaser rates" linked to long term contracts and many fees in the fine print. Providers of this size are adept at changing prices at will when they deem it beneficial.

It may be the case that when overbuilt, Comcast will drop its prices to compete for customers or offer special short-term discounts. There have been examples of both in Vermont. Comcast has dropped prices in Burlington after the deployment of Burlington Telecom's network but kept prices stable in smaller Vermont markets even after being overbuilt by fiber. Through the entire build and especially in instances of overbuilding direct competitors like cable, Otter Creek will monitor its competitor's activities and adapt its actions appropriately.

Fiber Competition in Rutland County

In addition to existing cable offerings, there is an increasing amount of fiber deployed or being deployed in the Rutland County region.

Consolidated Communications, Inc. (CCI) serves the majority of Rutland County as the ILEC, and has been deploying fiber in denser downtown areas (like in Rutland City), and won blocks in the FCC's latest Rural Digital Opportunity Fund (RDOF) in the region. They have reported that 98% of locations they are deploying fiber in Vermont already have a cable option – their fiber investment strategy is focused on competing with cable providers.

VTel offers fiber services and has been building within its ILEC territory, and the CUD should not plan on serving locations with existing fiber service. Historically, VTel has not expressed interest in serving customers with fiber outside of their ILEC territory, though any RFPs that the CUD issues should go to VTel on the chance that they have reevaluated their historical stance.

OTELCO, an ILEC that covers several towns on the western side of Vermont, is reportedly investing upwards of $5 million in fiber within its footprint. How much of this investment OTELCO puts towards last-mile fiber is not public information. OTELCO was recently acquired by Oak Hill Capital, a private equity firm that also owns GoNetSpeed, another FTTP operator, and Lantek Fiber Optic Services, Inc., a fiber construction company.[7] Oak Hill Capital's and OTELCO's investment strategy and competitive deployments are being closely monitored.

Generally, the first company to deploy fiber in an area enjoys a significant head start with customer acquisition among consumers seeking top-tier connectivity. Otter Creek will not overbuild existing fiber plants unless that overbuilding needs to reach unserved or underserved locations. However as discussed, partnership with fiber providers to extend their footprint to all premises, beyond what would be attractive for them to invest in proactively, is an efficient option for bringing fiber service to every premise.

Fiber and cable internet packages and pricing, as well as a coverage map of cable and fiber in the region, can be found in *Appendix C: Fiber and Cable Plans and Pricing*.

Dark Fiber Services

FirstLight, Consolidated Communications, and Vermont Electric Power Company (VELCO) have dark fiber (currently unused fiber) availability throughout this region. In addition, Lumen connects from Albany, NY through Vermont to Burlington. Otter Creek will rely exclusively on WCVT to handle connections to the broader internet. However, it may decide to make arrangements with a dark fiber provider to facilitate local network resiliency by creating redundant rings or connecting hubs together.

Otter Creek's mission is to provide an FTTP distribution network to all unserved and underserved locations throughout the area. Only if there is excess fiber on the network might it compete with dark fiber providers in the region. One possible scenario would be if Otter Creek was built with a fiber bundle of 36 or 48 strands, where only 12 to 24 strands are needed and could supply a local cell tower or other users with backhaul using the excess capacity. Otter Creek should feel no pressure to pursue the sale of dark fiber in the short term – the financial health of their network must be built upon the residential customers in their region.

Ethernet Services

FirstLight, Consolidated Communications, Lumen, and VTEL offer ethernet services to large commercial and municipal customers. Ethernet services provide dedicated fiber to enterprise businesses and entities. Bandwidths range from 1 Gbps to 100 Gbps. Prices depend on the bandwidth, location, network configuration, whether the service is protected or unprotected, has a switched or mesh structure, and a service level agreement. Generally, these services are not available to non-commercial premises. Otter Creek may compete for these contracts in situations where its network passes large entities, such as

[7]Otelco, *April 5, 2021,* "Oak Hill Completes Acquisition of Otelco, Inc." https://www.otelco.com/news/oak-hill-capital-completes-acquisition-of-otelco-inc/

hospitals, large municipal buildings, or major employers. Rural networks are supported primarily by residential customers; ethernet services are unlikely to make up a significant portion of the network's revenue.

Businesses Customers

Rural fiber networks need to be built around a critical mass of residential customers. Unlike urban areas where business customers and large entities are numerous and are willing to pay enterprise rates, in an area like Vermont, residential subscribers are the engine that allows rural networks to succeed. This Plan is based on revenue generated by residential subscribers, however, Otter Creek may compete strategically for business revenue when opportunities arise.

Unlike residential customers who may be hesitant to switch from cable due to their service being bundled with TV, historical data from ValleyNet indicates that a greater share of businesses often do not need TV packages but do need the synchronous upload capability provided by a fiber network. That said, businesses are typically located in downtown areas with existing cable or fiber, and there are unlikely to be many (if any businesses) that the CUD will pass in a partnership with an ILEC where the CUD is not required to overbuild any downtown areas to reach unserved areas. Any businesses the CUD may serve will be smaller, home-based businesses that may prefer to have a residential connection and not need business services and products. As such, this plan does not count on revenue from Rutland region businesses.

7. Marketing Plan and Pre-subscription Campaign

Ideally, the partnership Otter Creek forms should incentivize all parties to participate in marketing and promotion of the network. If the partnership is predicated on a surcharge for every customer, it is in the CUD's best interests to assist with customer acquisition in the early years to allow them to establish predictable revenue as fast as possible that allows them to access the revenue bond market.

The best way to build subscribers quickly is to establish a pre-subscription campaign, where people sign up indicating they will subscribe to the service as soon as it is available. This pre-subscription campaign may best be run through the ILEC's website, in which case, the CUD could simply assist with the marketing of that tool.

Pre-Subscription Campaign

The main benefit of a presubscription campaign is that it ensures customers join the network at the earliest point possible. ValleyNet's historical experience shows that about 85% percent of those who sign up during a pre-subscription campaign eventually became customers. These campaigns allow for substantial savings in the first series of installations; whereas a piecemeal installation performed one

residence at a time can cost $1,400, performing multiple installations in a row in a single neighborhood can yield hundreds of dollars of savings.

As Otter Creek gets closer to a network construction start date the pre-subscription campaign will also be used as a marketing tool to create grassroots energy and word-of-mouth excitement. It is best to wait to perform significant outreach until after product offerings and pricing are established so that potential customers can accurately evaluate whether they would like to subscribe. Lastly, a strong pre-subscription campaign should increase lenders' confidence in the project and can increase the likelihood of securing a variety of funding sources.

While it is not necessary to take deposits during a pre-subscription campaign, it is necessary to entice the potential customer to choose their service level and to morally commit to subscribing.

Ultimately, community engagement and grassroots energy are more important to the success of a pre-subscription campaign than, for example, the software used or the use of a deposit. Promotion through digital outreach and social media will be a major component of the pre-subscription campaign. Otter Creek will create a social media toolkit complete with graphics, pre-made posts, and links that can be shared with CUD representatives, and also with town email and social accounts, local institutions, and local businesses interested in co-marketing.

8. Risk Management

Otter Creek's Business Plan carries significantly less risk than many other new deployments. Otter Creek's likely partner(s) are established and knowledgeable in the region, do not need to establish a new base of operations, nor reach a critical mass of customers at a certain pace to be viable.

The following three items are the greatest risks to the project.

Materials Availability

Manufacturing of essential fiber network materials has been delayed, primarily due to factories experiencing temporary shutdowns during the COVID-19 pandemic. Additionally, it is likely that there will be increased demand that could cause delays and result in increased materials costs should a large amount of broadband infrastructure investment occur at once. In 2010, the American Recovery and Reinvestment Act (ARRA) funded broadband projects, causing lead time for the delivery of optical fiber to increase from four to six weeks to four to six months in a very short period. As of Fall 2021, suppliers are reporting delays on fiber of nine or even 12 months on certain types of fiber (typically higher count fiber).

Otter Creek's ability to partner with a large and established entity like CCI, who has stockpiled significant fiber and can purchase fiber using dedicated industry contacts, is the best remedy to this concern. Given that CCI's 2023 construction season is filling up, the CUD should work efficiently to establish a

partnership that gives CCI and the CUD the confidence to allow CCI to set aside existing fiber for the project, or place an order if their existing fiber is not sufficient. The CUD would have a much harder time procuring fiber, even for the 2023 construction season, if they had to procure materials themselves.

Pole Make-Ready Delays

To deploy fiber, it is first necessary to complete make-ready on utility poles, which involves moving existing wires to make room for new attachments. If this work must be done by the pole owner, who may not always be motivated to move quickly, significant delays are possible. Make-ready delays are one of the most common obstacles in broadband deployment. Though this was listed as a risk in the Feasibility Study, Otter Creek's likely partners are pole owners and/or already own space on poles and can overlash new fiber on their existing plant. This eliminates the need to do make-ready and effectively eliminates this potential concern or risk.

Construction Vendor Scarcity & Construction Cost Inflation

Construction costs for fiber deployment have already begun to increase and given demand and the scarcity of vendors and labor able to do the required work, costs will likely continue to increase.

Again, leveraging the size and scale of an ILEC partner will help in this regard. Not only does the ILEC have some construction capabilities in house, they have contracts with other vendors for construction this year and beyond. If partnerships work out as planned, this likely means that the CUD's only concern is getting a partnership together in time to ensure the build can start in the 2023 construction season.

Given the fact that neither the CUD nor an ILEC partner would want a customer surcharge to be too high, there is mutual incentive to keep construction costs low. That said, the CUD should not short-change the due diligence they need to perform when negotiating the construction costs. Due diligence should involve comparing construction costs across different vendors for other CUDs, as well as getting access to transparent projections for likely costs from their partner, and having a third party validate those costs before signing any contract.

9. Conclusion

There is a reason that broadband has not yet been universally deployed in Vermont: the logistical hurdles are immense, the capital costs are significant, the subject matter is esoteric, the legal constraints are often challenging, and the return on investment is often minimal or nonexistent in sparsely populated areas.

Otter Creek has spent the past year overcoming these obstacles. Today, this plan provides a defined strategy for a path to success that fits the regions' needs, assets, and abilities. The project team looks

forward to continuing to work with the CUD to refine this plan as new information allows, and execute on this important work for the people of the Rutland Region.

Appendix A: Served and Unserved Road Miles in Otter Creek Member Towns

Town Name	Fiber Miles	Cable Miles	No Fiber/Cable Miles	Miles with No Premises
BRANDON	25.53396027	30.36582131	26.13555864	9.303054473
CASTLETON	27.86892788	41.81962154	20.69422876	5.302356997
CHITTENDEN	7.40718197	27.45981364	16.90502296	13.49680268
FAIR HAVEN	23.1795153	4.720587841	7.287104811	3.850013512
MENDON	21.09074997	7.309917671	11.86493049	2.181075139
PITTSFORD	17.80777748	44.22609641	18.98376475	1.789293019
HUBBARDTON		1.907832532	44.29364305	4.361637553
GOSHEN	0.2393676772		19.94178758	8.644950702
BENSON			64.84452229	2.981920673
PAWLET	40.64072796			0.01610661309
POULTNEY	19.53279909	38.58791224	26.33092402	5.217482177
RUTLAND TOWN	60.26514386	4.646269877	0.4809853767	0.3174530109
WELLS	20.93989139	24.89514002	4.850974587	2.74774566
WEST RUTLAND	31.43581697	3.352589296	4.989426768	2.276009736
PAWLET	2.715664916	12.46277124	14.07574778	0.5321318404
SUDBURY			32.49589262	3.064529604
WEST HAVEN			27.42281627	14.69721614
RUTLAND CITY	81.11786997	1.173736997	0.229463385	
TOTALS	**379**	**242**	**341**	**81**

Source: Vermont Community Broadband Board, December 2021

Appendix B: Glossary of Terms

1G/10G/100G	Short for 1/10/100 Gigabits per second connection speed
Accrued Interest	Interest that is not paid in cash, but 'accrued' and added to the principal balance
Aerial Drop	Drop that is all above ground on poles
ARPU	Average Revenue per Unit – a standard telecom metric measuring the average revenue derived each month from a customer
Attenuation	The measure of the loss in signal strength due to distance, splicing, bends, etc.
Backhaul	Refers to an ISP's connection from its network to the broader Internet
Balloon Repayment	The repayment of a loan or bond in one lump sum at the end of its maturity – i.e., principal not amortized over time
Capex per Customer	Amount of capital expenditures required to reach a customer
Capex per Passing	Amount of capital expenditures required to pass a customer
Conduit	Pipe or tubing through which cables can be pulled or housed. Usable conduit for pulling fiber is typically 2+" in diameter and must have rounded sweeps, i.e., fiber cannot be bent at a sharp angle without a significant attenuation in signal strength
Cost of Goods Sold	Variable cost of providing service – for ISPs, this includes wholesale cost of phone service, Internet backhaul, video (if offered) and sometimes pole rental
Customer	A residence or business that is receiving service
Customers per Mile	An alternative to Penetration Rate which considers the density of the network
Dark Fiber	Fiber that is in place on the poles but not "lit" by electronics at either end – allows companies to buy/lease fiber infrastructure rather than an actual connection
Debt Service Covenant	An agreement with lender to maintain debt service at a certain level – ex., EBITDA must be greater than 1.25X Debt Service
Debt Service Coverage	A standard financial ratio measuring the ability to service interest and principal payments on debt = EBITDA / Debt Service (Interest and Principal) for a given time period (usually annually)
Density	Linear Density of an area equals homes per linear mile of network
Distributed Splitting	32-way fiber signal splitter located in the field (not the hub) – reduces fiber count

Distribution Fiber	Typically, 12-24 strands used for local distribution
Drop	The connection from the road to a premise
EBITDA Margin	EBITDA divided by revenue as a percentage
EBITDA	Earnings Before Interest Taxes Depreciation and Amortization – a standard financial metric that measures the ability to service debt
FAP	Fiber Access Point – the point at which a connection is spliced from the road (mainline network) to a premise
Fiber Count	The number of fiber strands in each fiber cable – typically highest close to hubs and between hubs and lowest on dead-end roads – a multiple of 12 (see Fiber Tube)
Fiber Strand	A single strand of fiber thinner than a human hair coated with a colored material to make it identifiable when splicing
Fiber Tube	Fiber is divided into tubes of 12 fiber strands
FTTH/P	Fiber to the Home or Premise – fiber goes all the way to each customer
GPON	Gigabit Passive Optical Network – requires no electronics between central hub site and premise – uses 32 way splitters – used by Verizon Fios and most FTTH providers in the US
Gross Margin	A measure of network profitability = Revenues less Cost of Goods Sold – can also be expressed as a percentage of revenue
Hub Site	Houses transceivers to distribute and receive laser light signals for the “last mile”. Typically 10-15 miles in Vermont or roughly one hub site in the center of each town
Installation	Installing the home transceiver (ONT) for the fiber network (and attaching phone where necessary)
ISP	Internet Service Provider - the entity providing Internet service
Last Mile Fiber	Fiber designed for local distribution with FAPs (a local road with access to each driveway along it)
Latency	The delay between sending a bit and receiving a response – can be very high for geo-stationary satellite connections making certain Internet capabilities (such as VPN) impossible
Lit	A network is lit once light levels have been tested and electronics are activated in the hub
Long Haul Fiber	Like Middle Mile but longer – typically used for Internet backhaul (to Boston or Albany or Portland)
Make-Ready	The process and cost of making utility poles ready to accept an ISP’s gear – this is performed by utilities – the timing and cost of this can be a major factor in a new ISP’s success (or failure)

Middle Mile fiber	Fiber typically routing from town to town, with no FAPs for local distribution (similar to an Interstate highway with limited exits)
Non-recourse Debt	Debt that is not supported by a general obligation of the town – can be secured by assets or revenues or be unsecured
ONT/CPE	Optical Network Transceiver/Consumer Premises Equipment – typically comes with a WiFi router built in
OTMR	One Touch Make-Ready – regulations whereby one (or at most two) trucks/crews are sent out to make a pole ready (rather than each attachee – phone/cable/other ISP sending its own).Does not generally apply to make-ready by electric utilities because of the special training and equipment needed to operate in the electrical "space"
Passing	A residence/business/E911 location that is passed by the lit network
Peak Hour	The hour of the day where Internet usage peaks – typically 9-11 PM (streaming) but changing now due to the pandemic
Penetration Rate	Customers divided by Passings, also referred to as Take Rate
Revenue Bonds	Bonds that are supported by the revenues from a given asset financed by the bonds
Strand	The "other" strand - The metal carrier cable to which fiber is attached between poles
Streaming	Usually refers to watching video over an internet connection (but can also be music/audio) – Streaming requirements vary by user hardware and streaming video providers
Subscriber	A residence or business that has signed up for service
Symmetrical	A connection supporting the same upload and download speeds
Transport Fiber	Fiber used for communications from hub-to-DSP (digital signal processor) or hub-to-hub
Underground Drop	Drop that is underground – typically in a conduit., Fiber can share the conduit with phone or cable plant but not electricity – some homes with underground drops have only one conduit (for electricity) – the phone lines are "direct buried" without conduit – in these cases the customer must install new conduit
Universal Coverage / Universal Service	Access to broadband for every on-grid premises in a town or region
VOIP	Voice Over Internet Protocol (i.e., voice service over Internet)
VPN	Virtual Private Network – used by companies to secure their employee's connection to company servers when working away from the office - can also be used to disguise an Internet user's actual location by sending and receiving traffic through an intermediate server

Appendix C: Information on Alternate Broadband Technologies

VTel 4G Wireless Internet Services

VTel provides wireless internet from a range of towers throughout the region, supported primarily through the USDA Reconnect program in 2010. VTel has received $2 million[8] from the State of Vermont to expand its wireless services in the region; however, neither the existing service nor potential expansion of 4G wireless should be considered a threat to Otter Creek's plans.

This service purports to provide download speeds of *up to* 100 Mbps, or in VTel's words "Faster than DSL." These packages require customers to pay per GB (gigabit) of data used, from $10/month for 2GB, to $140/month for 500GB; a customer can receive service capped at 100GB for $60 monthly after the promotional price of $50 monthly for 2 years. This service is not typically competitive with cable or fiber, unless a household has a direct line of sight to a tower and very low data needs. Importantly, VTel does not require long-term contracts, thus any new customers on an expanded VTel Wireless Network will be able to switch to a fiber option as it becomes available.

Cellular (4G LTE)

The primary 4G LTE providers in Rutland County are AT&T, Verizon, and VTel. While cell phone providers have claimed that Vermont is well covered by 4G LTE mobile service, the Vermont Public Service Department (PSD) tested those claims in 2018 by driving every mile of Vermont state roads and measuring the actual speeds provided by each carrier. The PSD found actual speeds were slow or nonexistent in many areas.[9]

PSD 2020 Mobile Wireless Drive Test[10]

Moreover, there are serious coverage gaps in Rutland County. Towns in the far eastern and western parts of the region have particularly uneven service. Even Middlebury and other relatively populous towns have "dead spots" where no 4G LTE coverage is available. While several cell carriers may have improved their coverage since 2018 by leasing tower access from VTel, the drive test showed many areas where no cell coverage existed from any provider.

Cellular broadband is less reliable, more expensive, and slower than wired broadband such as coaxial cable or fiber, and therefore is not a competitor to fiber internet. However, as cell service continues to improve in the region, more people will use only a cell phone and have no "landline" in their homes. This

[8]Trombly, Justin. "Nearly $4 million in state grants announced for internet providers," *VTDigger,* August 25, 2020. https://vtdigger.org/2020/08/25/nearly-4-million-in-state-grants-announced-for-internet-providers/
[9]Dillon, John. "State official went roaming around Vermont testing cell service claims." *VPR.* January 16, 2019. https://www.vpr.org/post/state-official-went-roaming-around-vermont-test-cell-coverage-claims#stream/0
[10] An interactive version of this map is available at https://publicservice.vermont.gov/content/mobile-wireless-drive-test

will result in fewer people bundling phone service and internet together. This anticipated decline in phone service is incorporated in the financial model.

Low Earth Orbit (LEO) Satellite Internet

LEO satellite internet is an emerging technology that has received significant attention in the past year. Elon Musk's company SpaceX and its internet company Starlink is currently emerging from a beta test of the service, which was available to a select number of Vermonters as well as others across the country.

LEO satellite companies aim to create a constellation of satellites to provide better internet coverage than traditional satellites. Because these satellites are closer to earth, they provide connections with lower latency than traditional satellite internet.

Anecdotal user reports in the press indicate that users without a better option were generally happy with the service during the beta test, however reliability issues, price, and the possibility of data caps on the service in the future caused some concerns.[11,12]

The reliability of LEO service is impacted by a few factors. First, trees and other obstacles have a material effect on the service and can block the signal for a time until the satellite moves past the obstacle, which means service is less consistent in a hilly and forested place like Vermont. Second, the receiver dishes will always have to reorient from one satellite to the next as they pass over (the satellites are not geo-synchronous meaning they do not orbit at the same rate the earth spins), potentially resulting in an interruption in service until the satellite constellation is complete. Third, and most importantly, it is yet to be seen how speed and reliability will be affected as more people join the network. Like any network and in particular wireless networks, as user volume increases, speeds become progressively slower since there is a fixed amount of bandwidth available to be shared amongst users.

In general, LEO satellite service may be a good option for camps and off-grid premises across the state. Starlink's service does not replace the need to build fiber to as many premises as possible. Starlink's service may not scale on track with accelerating bandwidth demand and is incapable of symmetrical speeds. Importantly, the satellites will also need to be replaced approximately every five years. If the service is not successful, SpaceX may choose to abandon the project rather than replace failed satellites, or the service may shutter altogether.

[11] Michael Sheetz, "What early users of SpaceX's Starlink satellite internet think about the service, speed and more," *CNBC*, April 15, 2021, https://www.cnbc.com/2021/04/15/spacexs-starlink-early-users-review-service-internet-speed-price.html.
[12] Amanda Gokee, "Lawmakers skeptical of Starlink solution for broadband problems," *VTDigger*, March 7, 2021, https://vtdigger.org/2021/03/07/lawmakers-skeptical-of-starlink-solution-for-broadband-problems/.

5th Generation Mobile (5G)

There are no known 5G networks in Rutland County. In fact, there are limited 4G services available to Rutland County residents. 5G will not be a relevant offering in Rutland County soon, or perhaps ever for the following reasons:

- The potential internet speeds 5G is capable of supporting are often overstated. 5G providers promote the fastest potential speeds, not the real world speeds achieved. For example, 5G signals are hindered by common physical barriers such as hills and trees.[13] Overall, actual speeds experienced by wireless users are often only 15 percent of the peak data connection rate, even though the peak data connection rate is the speed advertised.[14]
- Wireless internet solutions are generally less stable than wired internet solutions.
- Not all 5G is created equal. When people speak about 5G internet, they often refer to "high-band" 5G., Rural areas will likely be served on a "low-band" frequencies, which will provide the user with lower latency than 4G networks, but only marginally faster speeds than 4G networks.[15] Fast "high-band" 5G internet, in particular, relies on small cell nodes that are only 300 to 500 feet apart.[16] This type of wireless internet is unlikely to be profitable in less dense areas. As cell carriers decide where to begin deploying 5G networks, they will likely focus first on high density cities and may never bring 5G to rural areas.

Each 5G antenna requires a fiber service to provide backhaul, so if the service is eventually deployed in rural Vermont, it may be a source of revenues for CUDs providing fiber.

Ultimately, as Vantage Point Solutions (an engineering and consulting firm) concluded in a 2017 report, 5G internet can complement, but not successfully replace, cable or fiber internet.[17]

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[13] Sascha Segan, "Testing Verizon 5G in Chicago: Speedy, But Watch Out for That Tree," *PC Mag*, May 17, 2019 https://www.pcmag.com/news/testing-verizon-5g-in-chicago-speedy-but-watch-out-for-that-tree.

[14] Larry Tompson and Warren Vande Stadt, "5G is Not the Answer for Rural Broadband," *BroadbandCommunities Magazine*, March/April 2017, https://www.bbcmag.com/rural-broadband/5g-is-not-the-answer-for-rural-broadband.

[15] Sascha Segan, "What Will 5G Do for Rural Areas?," PC Mag, December 19, 2018, https://www.pcmag.com/news/what-will-5g-do-for-rural-areas.

[16] Larry Tompson and Warren Vande Stadt, "5G is Not the Answer for Rural Broadband," *BroadbandCommunities Magazine*, March/April 2017, https://www.bbcmag.com/rural-broadband/5g-is-not-the-answer-for-rural-broadband.

[17] Larry Tompson and Warren Vande Stadt, "Evaluating 5G Wireless Tecnology as a complement or Substitute for Wireline Broadband," *Vantage Point*, February 2017, https://www.ntca.org/sites/default/files/legacy/images/stories/Documents/Press_Center/2017_Releases/02.13.17%20fcc%20ex%20parte-ntca%20letter%20submitting%202017%20technical%20paper%20wc%2010-90.pdf.

Residential Retail Broadband in Rutland County Region

Download MBPS	**PRICE**	**INCLUDES**
Consolidated Communications DSL (lower speeds most widely available)		
7 Mbps	$28.99	New Residential, Limited Time Offer, 2 Yr Contract
7 Mbps	$43.98	New Residential bundled with phone, Limited Time Offer, 2 Yr Contract
7 Mbps	$68.99	New Residential bundled with Direct TV, Limited Time Offer, 2 Yr Contract
7 Mbps	$78.98	New Residential bundled with Direct TV & Phone, Ltd Time Offer, 2 Yr Contract
10 Mbps	$31.39	New Residential, Limited Time Offer, 2 Yr Contract
15 Mbps	$34.59	New Residential, Limited Time Offer, 2 Yr Contract
25 Mbps	$40.99	New Residential, Limited Time Offer, 2 Yr Contract
Fidium Fiber (by Consolidated Communications)		
50/50Mbps	$35/mo	Limited time offer; 55/mo after 1 year
250/250Mbps	$60/mo	Limited time offer; 85/mo after 1 year
1/1Gbps	$70/mo	Limited time offer; 95/mo after 1 year
Comcast/Xfinity*		
100	$54.99	For first 12 months
200	$49.99	For first 12 months
400	$75.99	For first 12 months
*This reflects updated pricing as of September, 2021.		
OTELCO Fiber		
100	$59.95	
300	$69.95	

Small Business Retail Broadband in the Rutland County Region

Consolidated Communications		
7	$42.58	3 Year Contract
25	$60.58	3 Year Contract
100	$83.98	3 Year Contract
Comcast/Xfinity		
35	$69.95	2 Year Contract
100	$69.99	For 24 months with 3 year contract
200	$89.99	For 24 months with 3 year contract
300	$139.99	For 24 months with 3 year contract
600	$189.99	For 24 months with 3 year contract