



Pacific Northwest Rural Broadband Alliance, Ltd.

PACIFIC NORTHWEST
RURAL BROADBAND ALLIANCE

The Digital Divide & Americas Broadband Crisis

Over 70 million American's lack broadband access.



Montana ranks **50th** in the country in broadband access.

Source: The Pew Charitable Trust & BroadbandNOW.com

Our Mission:



PACIFIC NORTHWEST
RURAL BROADBAND ALLIANCE

1. To provide the resources needed for rural communities to build fast and affordable broadband networks, helping connect rural Montanan's to the global economy.

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2. To foster the creation of opportunities and organizations that can provide Montanan's with highly skilled, desirable, sustainable jobs.
3. To advocate for sustainable community internet providers, universal broadband access, net neutrality, online privacy, security, and digital rights.



Traditional Centralized Internet Providers:

- DSL and Cable providers spend millions of dollars over decades burying thousands of miles of middle-mile infrastructure.
- Building last-mile infrastructure wiring each home individually is tedious, time consuming, and expensive.



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- Wireless providers spend millions of dollars building cell towers and leasing expensive tower space.
- Centralized cell towers can only serve closely surrounding homes limited by hills, trees and tall buildings.

Enter Althea: Decentralized Mesh Networking

Althea is a cutting edge technology creating locally owned broadband service for communities around the world.



The network starts with fiber connected gateways built by us.

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Property owners host relays and earn revenue for connecting neighbors.



Customers connect to relays for cheap and secure internet service.

Where Else Althea Can Be Found?

The Althea technology platform is rapidly growing and being adopted around the world!

There are **40+** cities across the US and Canada actively building **Community Owned & operated** Althea networks.

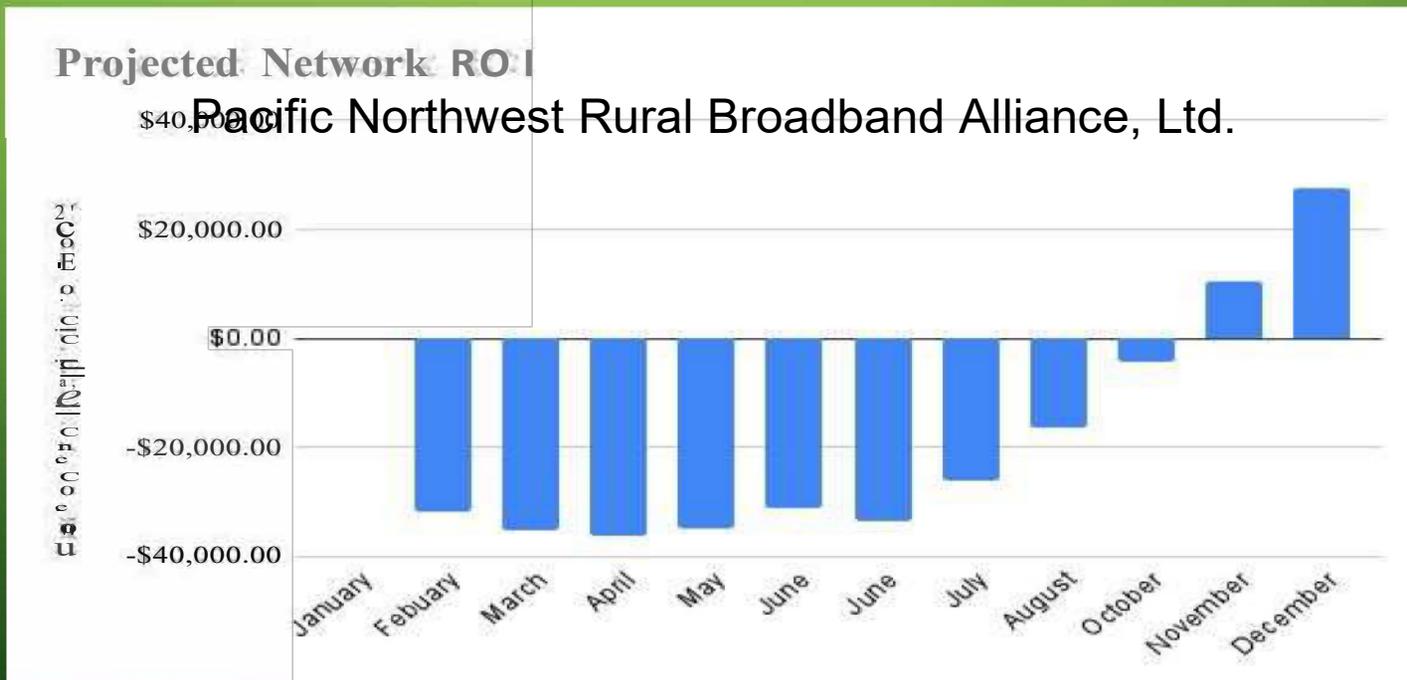


Economics of an Althea Network

Startup costs and network ROI:

- Networks can be launched for a little as \$30,000
- Sustainable network operations require as few as 25 customers.
- A network of just 480 customers, connecting an average of 4 per week, will ROI in under a year.

Network ROI with 40 customer installs per month:

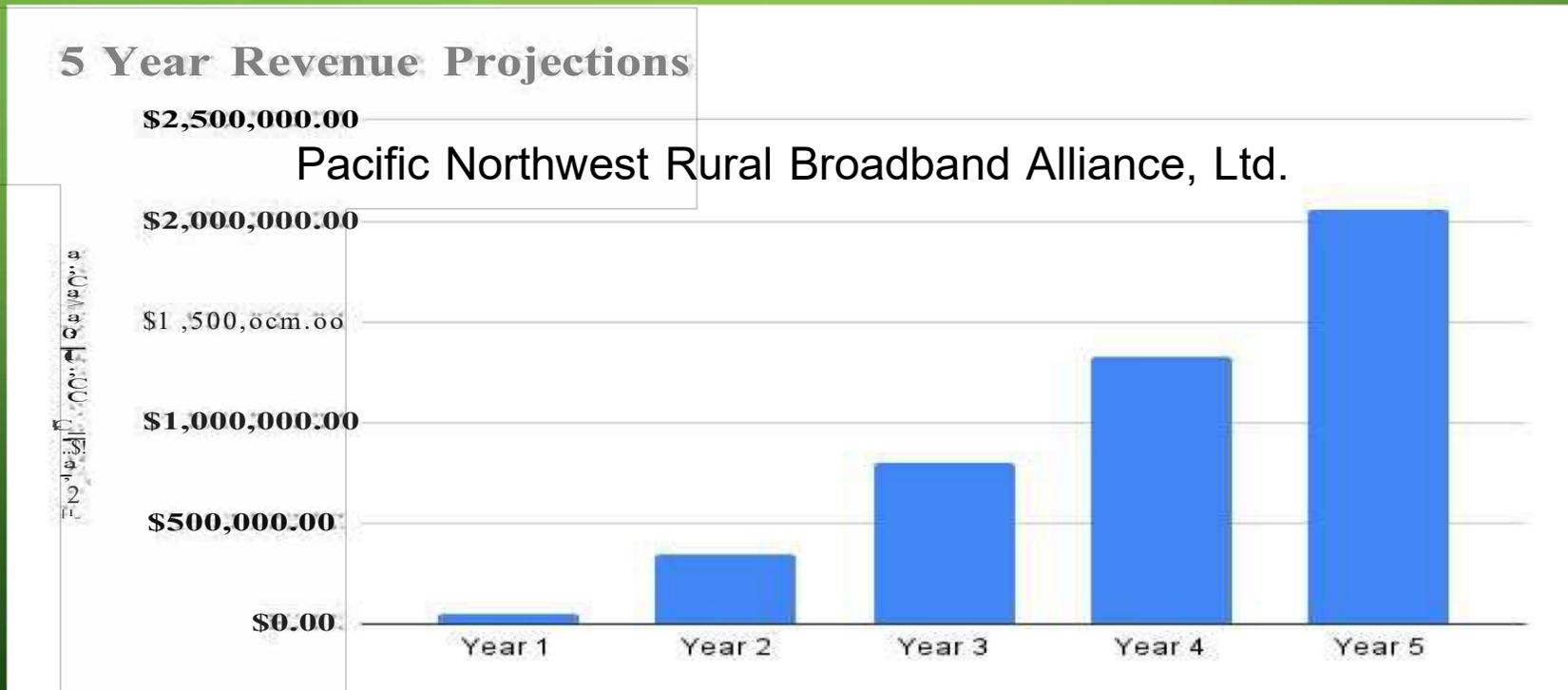


Rural Broadband Market Conditions

Rural broadband market conditions:

- Areas the size of Missoula county have roughly 50,000 households, over 15,000 lack adequate broadband access.
- Customers are dissatisfied being locked into a single provider.
- Achieving these revenue figures requires only 2,600 customers, or roughly 5% of total households / 17% of under-served and un-connected homes.

5yr Network Revenue Projections:



Flagship Network: The Missoula Valley Internet Co-op

Results of Network Soft Launch, January-July 2021:

- Faster, more reliable, and cheaper service than Spectrum.
- Initial service area covering over 400 homes.
- Network profitability was reached at the 14 customer mark, and currently serves over 50 customers and growing.
- Over 500 pre-registered customers, and counting, waiting to be connected!



How do we compare?

How does the Missoula Valley Internet Co-Op stack up against the competition?

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	MISSOULA VALLEY INTERNET CO-OP	SPECTRUM	STARLINK	VIASAT
SPEEDS	100-500mb/s Up 100-500mb/s Down	20-30mb/s Up 200-400mb/s Down	17-25mb/s Up 40-93mb/s Down	1.2mb/s Up 12.5mb/s Down
COST	Lite: \$25-\$30 Average: \$50-\$70 Heavy: \$80-\$100	Base Tier: \$89.95 Top Tier: \$155.95	\$99	\$70-\$150
TYPICAL CUSTOMER RELAY REVENUE	\$15-\$85/month	N/A	N/A	N/A
NETWORK UPTIME	99.99%	99.9%	94.9%	99%
CUSTOMER SUPPORT	Fast and friendly local support	Out-sourced call centers	Out-sourced call centers	Out-sourced call centers

5 Year Revenue Projections

Milestones for meeting 5 year revenue projections:

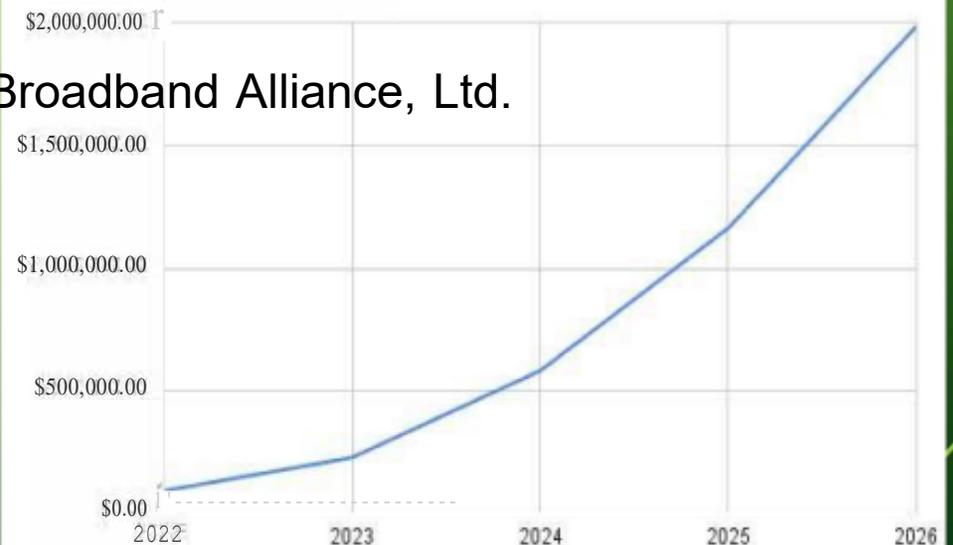
- Continued stable growth of Missoula Valley Internet Co-op Network.
- Launch of the Mission Valley network in Q4 of 2021
- Launch of the Anderson Island, WA network Q4 of 2021
- Launch of 3rd Montana-based network in Q2-Q3 2022 (location TBD)

Initiatives planned to increase projected revenue:

- Development of Mission Valley Internet Co-op semi-automatic provisioning model.
- Building middle-mile fiber network for cheaper and more reliable bandwidth.
- Develop Helium ultra-long-range wireless IoT network.
- Deploying public WiFi and CBRS / LTE roaming data services.
- Securing state or federal grants.
- Charitable donor outreach.

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5 Year Projected Revenue



Projects, Partnerships, and Continued Growth:



With over 100 customer pre-registrations, in partnership with Mission West Community Development Partners we are helping found the Mission Valley Internet Co-op to serve Mission Valley and Flathead Lake area residents. A model we plan to replicate with CO's across Montana.

With Net Equity we will be deploying community owned fiber networks to provide our networks with reliable, faster, and more affordable bandwidth.



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We're working with New Use Energy to develop green energy solar and battery operated off-grid broadband infrastructure solutions.



In partnership with Decentralized Web Technologies we'll be deploying long range wireless mesh networks for IoT device connectivity to improve Montana's agricultural sector's operational efficiency and technology adoption.

As a member of the Electronic Frontier Alliance we'll be hosting educational events about online privacy and security, and community calls discussing issues around digital rights advocacy and universal broadband access.



ELECTRONIC FRONTIER FOUNDATION

Our Board of Directors:



Elvis Nuno
President, Co-Founder, and Head of Montana Operations

Elvis was born and raised in Missoula, Montana and is a veteran in the telecom and wireless ISP industry, with a specialization in network engineering, systems automation and cloud engineering, as well as a senior developer operations team leader.



Kevin Mesiah
Vice President, Co-Founder, and Head of Business Operations

Kevin was raised in Tacoma, Washington, with over twenty-five years as a full stack developer and engineer with a wide and varied background forming numerous tech start-ups, as well as extensive experience inside the technology industry including the telecom and wireless ISP industry.

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Jacob
Co-Founder and Head of Washington Operations

Jacob was born and raised in Gig Harbor Washington, with over 13 years experience working on enterprise, small business and consumer grade networks and infrastructure. He has successfully completed over 15 large scale network deployment as well as numerous small and medium scale networks. He has extensive experience with building, supporting and maintaining both wired and wireless networking infrastructure.

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Contact Us For More Information!

SEND YOUR EMAILS TO: INFO@NWBROADBANDALLIANCE.ORG

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