High Country Online, LLC (HCO) is a small, woman-owned, SBA-certified HubZone (pending)company located in Johnson County Tennessee, part of the southern Appalachia region. HCO seeks funding for the opportunity to:

- Provide affordable, non-discriminatory wireless broadband access to _difficult to serve_ unserved and underserved rural Appalachia communities in Northeast Tennessee (TN), Northwest North Carolina (NC), and Southwest Virginia (VA).
- Connect critical community anchor institutions and facilities lacking sufficient access to high speed broadband service to better serve vulnerable Appalachia populations and facilitate rural community economic development and jobs creation.
- Provide high speed broadband access through cost-effective terrestrial fixed wireless technology minimizing environmental impact to this pristine mountainous region and preserving its natural beauty.

Reaching Appalachia's Isolated Rural Populations – The Appalachia High Country Broadband Project is needed to serve the isolated rural counties of northeast TN, northwest NC, and southwest VA. This southern Appalachia area has a rich heritage and wide range of historical and picturesque places of interest. The elements which create the beauty of this area, its many mountains, hollows, and waterways, also contribute to its isolation. The area is mostly underserved or unserved due to its mountainous terrain, low economic growth, and lack of basic telecommunication technology (coax cable, fiber optic, and digital subscriber line (DSL)) commonly deployed by large for-profit corporations. High Country Online located in this Appalachia region in 2006 to fill this telecommunication void. We offer economically disadvantaged and vulnerable rural populations affordable wireless high speed access to the Internet. Furthermore, we are prepared to begin infrastructure expansion immediately upon funding. We have the necessary plans, partners, agreements, office facilities, and staff in place and ready to work!

The Project's proposed service area contains ten rural counties that are comprised of contiguous census blocks and are described in Table 1. These counties have widespread populations with few Census Designated Places (CDPs). Many of the CDPs within these counties provide little or no data to support grant-requested information. Thus, available and reliable statistical data for this region are mostly provided at the county level. To ensure data accuracy and consistency for this application, we have selected the counties as the census designated communities within our service area. HCO is committed to serving these counties in their entirety – unserved, underserved, and served populations alike.

Table 1 also provides required data such as the number of households passed, businesses passed, and community anchor institutions, public safety entities, and critical community organizations passed, as well as other data relevant to the service area.

Table 1 Proposed Service Area Description

Service Area CDC	% rural	Unserved/ Underserved	Total Pop	# of Hseholds	# of Bus	# Comm Fac	Sq Miles
Johnson TN	100	underserved	17499	6827	1293	23	298
Carter TN	85	underserved	56740	23486	3340	47	341
Unicoi TN	75	underserved	17667	7516	1023	24	186
Ashe NC	100	underserved	24384	10411	2603	31	426
Watauga NC	100	underserved	42693	16540	5131	41	312
Avery NC	100	underserved	17167	6532	2101	34	247

Mitchell NC	100	underserved	15687	6551	1493	27	221
Washington, VA	100	underserved	51103	21056	4016	42	563
Grayson, VA	100	underserved	16881	7259	1034	28	443
Smyth, VA	100	underserved	33081	13493	2098	30	452
Totals	96%		292902	119671	24132	327	3489

Our Service Area is estimated to be 96% rural based on population data. Within these areas we estimate that there are 23,226 unserved households. These estimates are based on data obtained from the connectnation.org organization.

Offering Affordable Reliable Broadband Access – HCO currently provides wireless high speed broadband services to a portion of our proposed service area and wishes to expand and enhance those services. The service offerings we propose are shown in Table 2.

Table 2 Proposed Service Offerings

Name of Tier	Advertised Speeds		Average Speeds			Aver Rate
	down	up	down	up	Latency	per mo
Residential						
Entry Level Speed	3	3	2	2	48	29.95
Maximum Speed	20	15	15	10	32	54.95
Other Tier	8	6	6	4	38	34.95
Business						
Entry Level Speed	3	3	2	2	48	39.95
Maximum Speed	20	15	15	10	32	89.95
Other Tier	8	6	6	4	38	59.95

Providing Fair Access to All – Since its inception in 2006, High Country Online has been committed to providing wireless broadband and dial-up access in a non-discriminatory and open manner. In preparing this application we reviewed and adapted our policies to the NOFA's non-discrimination and network interconnection obligations. We display our policy in our office lobby and in a prominent location on our web page. We also notify our customers of policy changes on our web page and by email broadcasts [redacted]

Deploying Leading-edge Broadband Technology in a Cost-Effective, Feasible, and Timely Manner –We employ terrestrial fixed wireless technology to gain the greatest access to the inhabitants in our rural service area. Through strategic tower placement and installation of low-cost repeaters we reach populations practically un-reachable through other broadband technologies.

Building on a Sustainable Foundation – High Country Online has provided broadband services to the Appalachia High Country since 2006, and currently has [redacted] business and residence subscribers. In addition, we have the following qualifications/assets to invest in the project:

- Infrastructure valued at over [redacted] including [redacted] towers/repeaters and numerous supporting electronic devices.
- A fully staffed office centrally located in the service area, plus one service vehicle.
- A management team comprised on highly qualified professionals, each with over 30 years relevant experience [redacted]
- 24/7 customer support
- Established network management, customer service, and business systems and procedures.

- Partners offering experienced staff, substantial resources, and subject matter expertise:
  - [redacted]

Supplying Realistic Projections based on First Hand Knowledge – High Country Online provides the following projections based on our past performance and on-the-job experience serving the southern Appalachia High Country:

- The overall infrastructure cost of the broadband system is projected to be [redacted].
- The overall expected subscriber 3-year projection for the project is [redacted]
- The number of jobs estimated to be created/saved as a result of this project is [redacted]