

BEAD Program: A Framework to Allocate Funding for Broadband Availability

State Broadband Report: North Dakota

January 2024





1 Eligible Locations

How many unserved/underserved locations are eligible for BEAD funding?

2%
6K LOCATIONS

OF NORTH DAKOTA LOCATIONS LACK HIGH-SPEED BROADBAND IN JUN 2023
VS. 9% STATE/TERRITORY AVERAGE

UNSERVED LOCATIONS, JUN. 2024



3.6K
LOCATIONS

Are estimated to lack broadband access at 25/3 Mbps

UNDERSERVED LOCATIONS, JUN. 2024



0.6K
LOCATIONS

Are estimated to lack broadband access at 100/20 Mbps

These locations are primarily in rural areas and are eligible for BEAD funding to deploy broadband service.

2 Total Funding

How much capital funding is the State/Territory estimated to have?

\$130M

IN BEAD FUNDING HAS BEEN ALLOCATED TO NORTH DAKOTA
VS. \$743M STATE/TERRITORY AVERAGE

ESTIMATED BEAD FUNDING:

BEAD Funds allocated by NTIA

\$130M

Estimated Provider Match

\$12M

Estimated Total Capital

\$143M

The provider match is estimated using a high-level service provider business case. See national summary deck for full details.

3 Deployment

How many locations can be covered with fiber and other technologies?

\$9M-\$130M

OF BEAD FUNDS IS REQUIRED TO BUILD HIGH-SPEED BROADBAND TO ALL ELIGIBLE LOCATIONS

DEPLOYMENT SCENARIOS:



Baseline Fiber



Maximum Fiber

100% LOCATIONS REACHED

23% FIBER LOCATIONS

100% LOCATIONS REACHED

70% FIBER LOCATIONS

\$21M
TOTAL CAPITAL COST

\$121M
REMAINING BUDGET

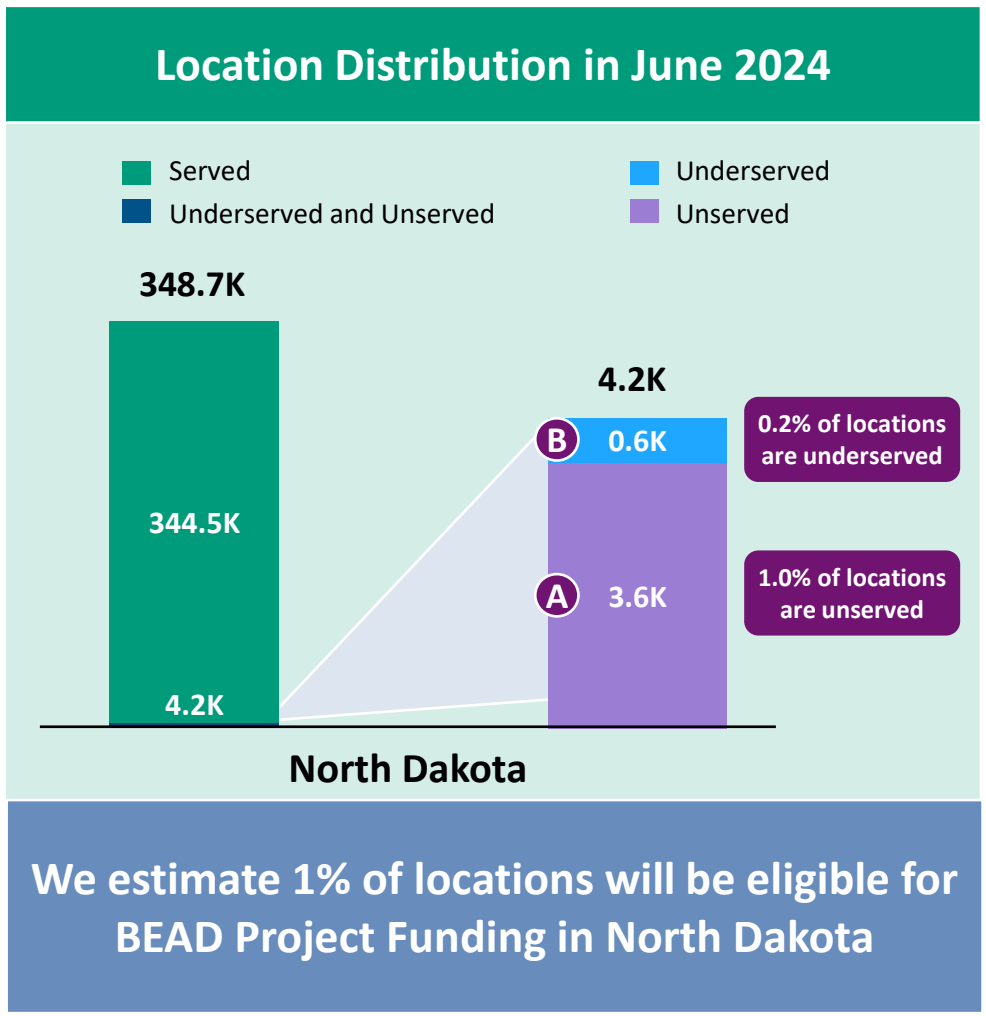
\$143M
TOTAL CAPITAL COST

\$--M
REMAINING BUDGET

1 Estimate Eligible Locations

North Dakota | Estimated Eligible Locations for BEAD Projects

June 2023 FCC Broadband Locations	Unserved <i>(less than 25Mbps/3Mbps)</i>	Underserved <i>(less than 100Mbps/20Mbps)</i>
Subsidy Program Funded Locations ¹	0.8K	0.8K
Incremental Build ² <i>(13% annual build, for 12 months)</i>	0.5K	--
Jun. 2024 Estimated Eligible Locations	3.6K A	0.6K B

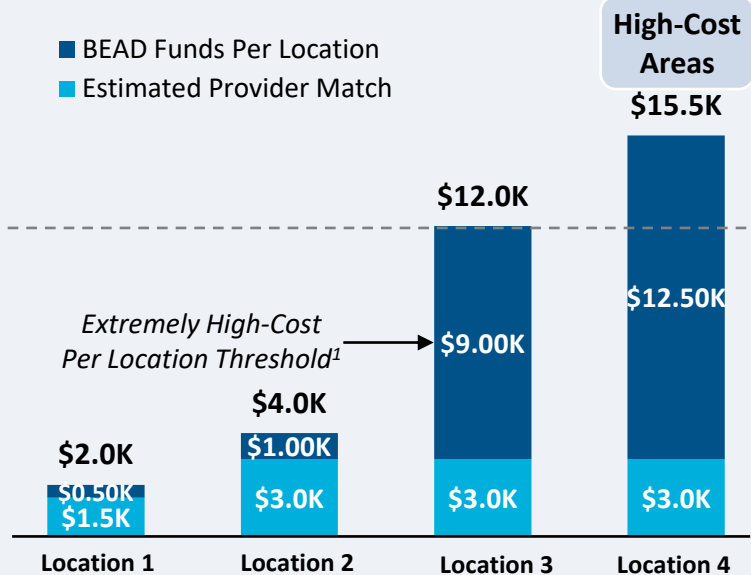


1. Locations with "commitments" to receive support from federal subsidy programs
 2. Given the uncertainty around the magnitude of locations moving from unserved to underserved, we have not made incremental builds adjustments to underserved locations
 BEAD eligible locations does not account for state-specific eligibility rules set forth in Initial Proposals
 Source: Cartesian, FCC National Broadband Map (June 2023 data, released in November 2023)
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Provider Match Examples

Total Deployment Cost per Location

- BEAD Funds Per Location
- Estimated Provider Match

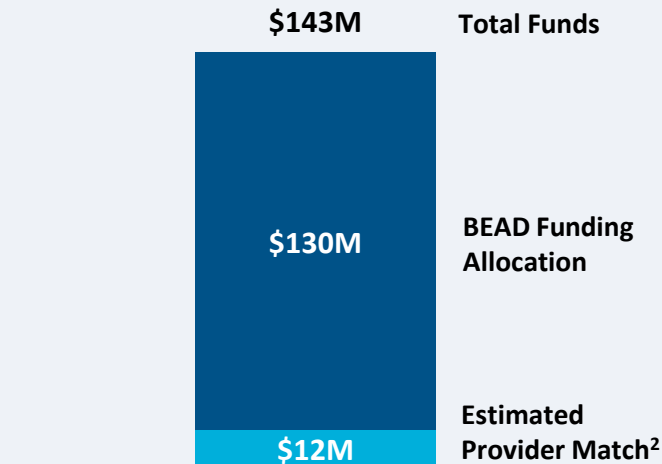


Provider Match %

75%	75%	25%	19%
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To be conservative, we assume provider match amounts have a maximum of 75% and a minimum of 25%, except in high-cost areas

Total Capital Available - North Dakota



\$143M in total capital is estimated to be available to serve unserved/underserved North Dakota locations (combining BEAD funding and estimated provider match)

Provider Match - North Dakota

Total Estimated Provider Match: **\$12M**

Total Estimated Eligible Locations: **4.2K**

Average Provider Match: **\$2,966 PER LOCATION**

We estimate the average provider match will be \$2,966 – provider matches will be 75% where cost to deploy is less than \$4K

1. The model uses a \$9k threshold, however, States/Territories will individually need to determine their appropriate extremely high-cost threshold

2. In reality, providers will determine the viable level of match funding for each project using a business case model. They will be willing to contribute a greater match in some locations and less in others. Locations which are hardest to serve may need to be fully funded by BEAD with no match. Competitive bidding should drive provider matches towards this level.

Source: Cartesian, FCC National Broadband Map (June 2023 data, released in November 2023), Benton, NTIA

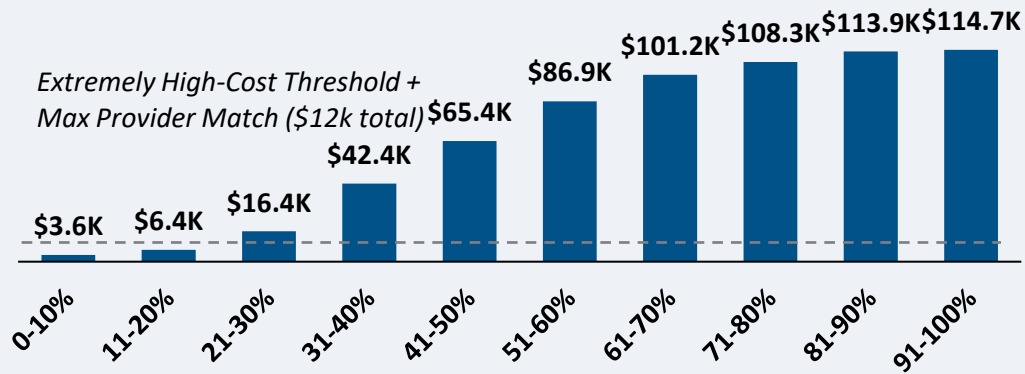
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North Dakota | Cost to Deploy Fiber by Decile

CAPEX Fiber Deployment Cost per Location Segmented by Cost Deciles¹

Unserved Locations

Overall Average Cost per Location: \$69,633



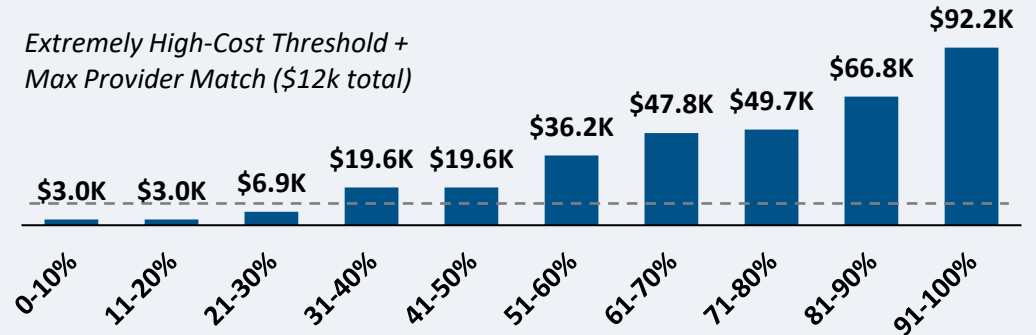
Average Tract Density (Location per sq. Mile)

52	14	42	1	5	1	1	1	1	0
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3.6K Locations

Underserved Locations

Overall Average Cost per Location: \$38,142



Average Tract Density (Location per sq. Mile)

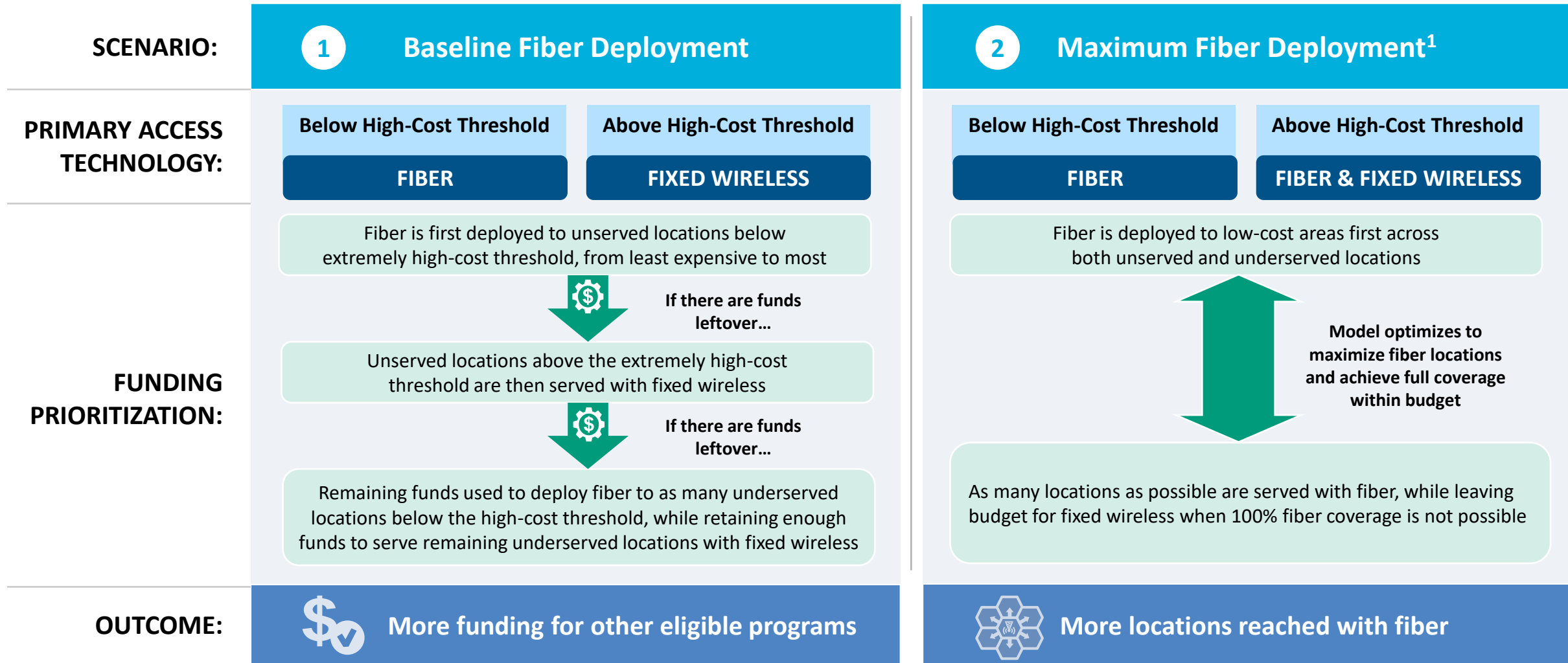
152	152	49	38	38	20	3	1	1	5
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0.6K Locations

Over 20% of locations are estimated to fall below the High-Cost Threshold + Provider Match

1. Chart values are average cost per location for each decile bucket
 Source: Cartesian, FCC National Broadband Map (June 2023 data, released in November 2023)
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North Dakota | Fiber Preferencing Scenarios



1. Scenario 2 deploys fiber beyond the extremely high-cost threshold
 Source: Cartesian
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3 Develop Deployment Scenarios

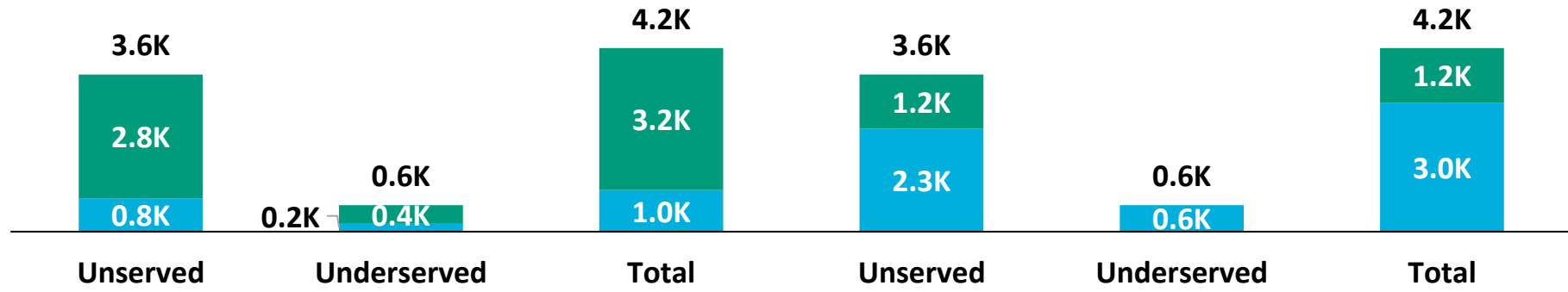
North Dakota | Scenario Analysis Results

SCENARIO:

1 Baseline Fiber Deployment

2 Maximum Fiber Deployment

■ Fixed Wireless
■ Fiber



	Scenario 1	Scenario 2
Capex Required per Locations ¹	\$5,063	\$32,080
BEAD Funds Available to State	\$130M	\$130M
+ Estimated Provider Match	\$12M	\$12M
= Total Available Capital	\$143M	\$143M
- Capex Required to Build	\$21M	\$143M
= Remaining Funds	\$121M	\$--M
% of Locations Reached	100%	100%
% of Locations Reached with Fiber	23%	70%

1. Funding to deploy fiber before the maximum \$3k provider match per location
 Source: Cartesian, FCC National Broadband Map (June 2023 data, released in November 2023), Benton, NTIA
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North Dakota | Conclusion



Funding Summary

North Dakota is expected to receive

\$130M in BEAD funding



\$12M in estimated provider matching

We estimate the funding is sufficient to reach all of North Dakota's 4.2k eligible locations with high-speed broadband



Key Findings

North Dakota will need to decide how far to deploy fiber while considering the trade-off of having higher fiber coverage vs. retaining funds for other BEAD eligible programs

A Baseline Fiber Deployment...



Maximizing Fiber...

- Leaves \$121M additional funds for affordability programs
 - Reaches 23% of locations with fiber
 - Requires 77% to be reached with other tech.
- Exhausts funds without leaving additional funds for affordability programs
 - Reaches 70% of locations with fiber
 - Requires 30% to be reached with other tech.

States/Territories will set their own extremely high-cost threshold and may choose a threshold or funding paradigm different from these two scenarios

North Dakota | ACA Connects Members

Member Name
Arvig
Cable One, Inc.
Cable Services, Inc.
Clarity Telecom LLC DBA Bluepeak
Consolidated Cable Vision
Consolidated Communications, Inc.
Daktel Communications
Dickey Rural Services
Halstad Telephone Company
MLGC, LLC
North Dakota Telephone Company
Northwest Communications Cooperative
RC Technologies
Red River Rural Telephone Association
Reservation Telephone Cooperative
Venture Communications Cooperative
West River Cooperative Catv



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