



MINNESOTA



BEAD Program Impact Assessment

Eligible Locations

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

9% 196K LOCATIONS **OF MINNESOTA LOCATIONS LACK HIGH-SPEED BROADBAND IN JUN 2023**

VS. 9% STATE/TERRITORY AVERAGE

UNSERVED LOCATIONS, JUN. 2024



74.5K **LOCATIONS**

Are estimated to lack broadband access at 25/3 Mbps

UNDERSERVED LOCATIONS, JUN. 2024



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.

Total Funding

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

\$652M

IN BEAD FUNDING HAS BEEN **ALLOCATED TO MINNESOTA**

VS. \$743M STATE/TERRITORY AVERAGE

ESTIMATED BEAD FUNDING:

BEAD Funds allocated by NTIA

\$652M

Estimated Provider Match

\$362M

Estimated Total Capital

\$1.0B

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

Deployment

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

\$430M-\$652M

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

DEPLOYMENT SCENARIOS:



Baseline Fiber

ກຸດດຸກ Maximum **Fiber**

100% LOCATIONS **REACHED**

53% FIBER

LOCATIONS

100% **LOCATIONS REACHED**

67% **FIBER LOCATIONS**

\$792M **TOTAL CAPITAL COST**

\$222M REMAINING BUDGET

\$1.0B **TOTAL CAPITAL COST**

\$--M **REMAINING BUDGET**



Estimate Eligible Locations

Minnesota | Estimated Eligible Locations for BEAD Projects

	Unserved (less than	Underserved (less than	Location Distribution in June 2024
June 2023 FCC Broadband Locations	25Mbps/3Mbps) 125.9K	100Mbps/20Mbps) 70.5K	Served Underserved Underserved Underserved Unserved 2.1M
 Subsidy Program Funded Locations¹ 	40.3K	23.8K	2.0M 121.2K 2.2% of locations are underserved
Incremental Build ² (13% annual build, for 12 months)	11.1K		A 74.5K 3.6% of locations are unserved Minnesota
Jun. 2024 Estimated Eligible Locations	74.5K A	46.7K B	We estimate 6% of locations will be eligible for BEAD Project Funding in Minnesota

^{1.} Locations with "commitments" to receive support from federal subsidy programs

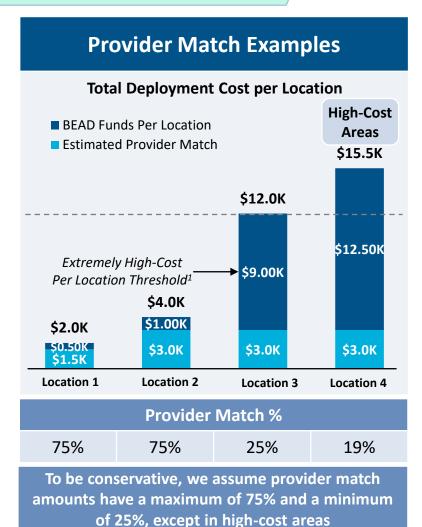




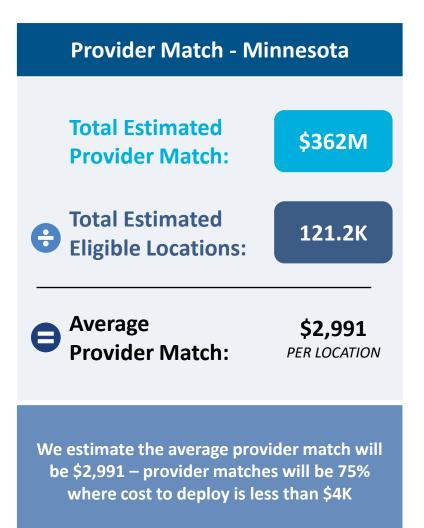
^{2.} Given the uncertainty around the magnitude of locations moving from unserved to underserved, we have not made incremental builds adjustments to underserved locations BEAD eligible locations does not account for state-specific eligibility rules set forth in Initial Proposals

Calculate BEAD Funding

Minnesota | BEAD Funding & Estimated Provider Match



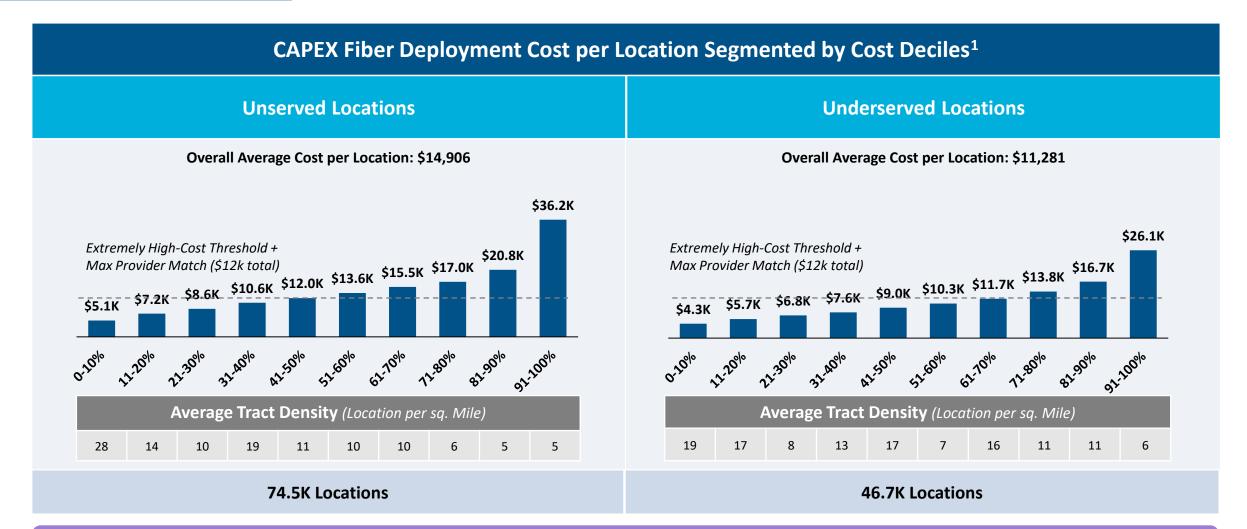






^{1.} The model uses a \$9k threshold, however, States/Territories will individually need to determine their appropriate extremely high-cost threshold

^{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



Over 55% of locations are estimated to fall below the High-Cost Threshold + Provider Match



SCENARIO:

Baseline Fiber Deployment

PRIMARY ACCESS TECHNOLOGY: **Below High-Cost Threshold**

Above High-Cost Threshold

FIBER

FIXED WIRELESS

Fiber is first deployed to unserved locations below extremely high-cost threshold, from least expensive to most



If there are funds leftover...

Unserved locations above the extremely high-cost threshold are then served with fixed wireless



If there are funds leftover...

Remaining funds used to deploy fiber to as many underserved locations below the high-cost threshold, while retaining enough funds to serve remaining underserved locations with fixed wireless

OUTCOME:

FUNDING

PRIORITIZATION:



More funding for other eligible programs

Maximum Fiber Deployment¹

Below High-Cost Threshold

Above High-Cost Threshold

FIBER

FIBER & FIXED WIRELESS

Fiber is deployed to low-cost areas first across both unserved and underserved locations

> Model optimizes to maximize fiber locations and achieve full coverage within budget

As many locations as possible are served with fiber, while leaving budget for fixed wireless when 100% fiber coverage is not possible

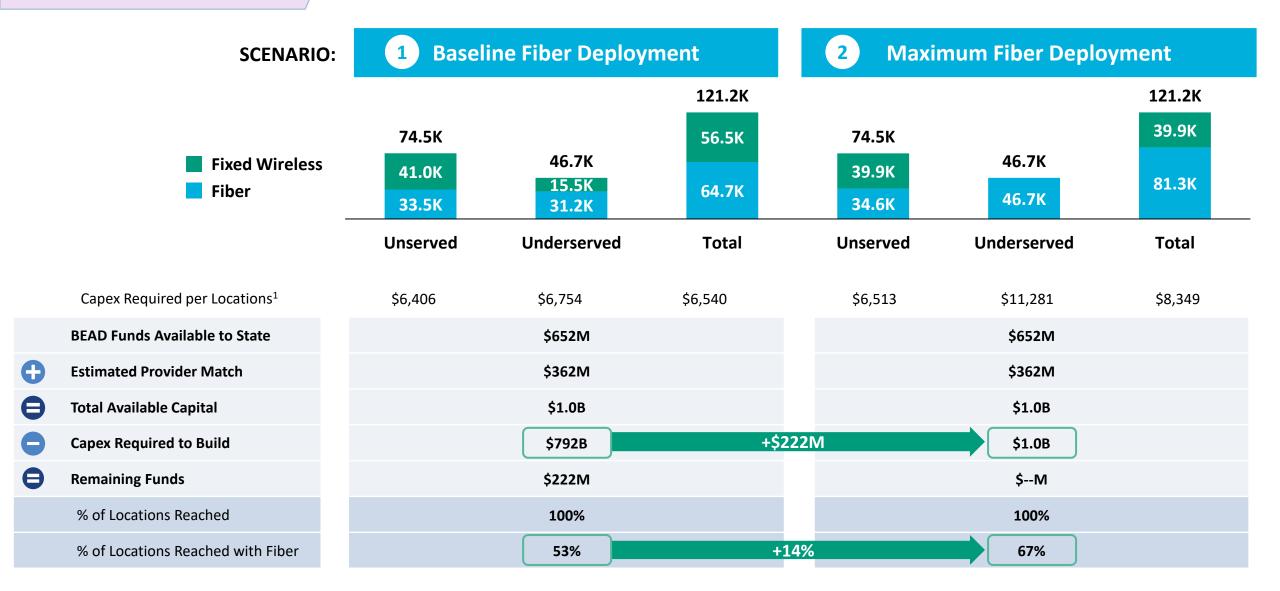


More locations reached with fiber

VERSION 4.0

Develop Deployment Scenarios

Minnesota | Scenario Analysis Results







Minnesota | Conclusion



Funding Summary



Key Findings

Minnesota is expected to receive

\$652M in BEAD funding



\$362M in estimated provider matching

We estimate the funding is sufficient to reach all of Minnesota's 121.2k eligible locations with high-speed broadband Minnesota 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 \$222M additional funds for affordability programs
- Reaches 53% of locations with fiber
- Requires 47% to be reached with other tech.

- Exhausts funds without leaving additional funds for affordability programs
- Reaches 67% of locations with fiber
- Requires 33% 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

Minnesota | ACA Connects Members

Member Name			
Ace Telephone Assoc dba Acentek	Kasson Mantorville Telephone Co dba KMTelecom		
Arvig	Mediacom, LLC		
Bagley Public Utilities	Metronet		
Barnesville Cable TV	Mutual Telephone Company Ia		
Beamspeed	Nuvera Communications, Inc.		
Benton Cablevision	Red River Rural Telephone Association		
Cable One, Inc.	Rsfiber Cooperative		
City Of Monticello dba Fibernet Monticello	Runestone Telephone Association		
Clarity Telecom, LLC dba Bluepeak	Savage Communications, Inc.		
Consolidated Communications, Inc.	Schurz Communications, Inc.		
Consolidated Telephone Company	Sjobergs, Inc.		
Emily Coop Telephone Catv Division	Sleepy Eye Telephone Co		
Garden Valley Telephone Co	Spring Grove Communications		
Gardonville Cooperative Telephone Association	TDS Telecom		
Halstad Telephone Company	Wikstrom Systems, LLC		
Hanson Communications, Inc.	Windom Cable Communications		
Harmony Cable, Inc.	Winnebago Cooperative Telecom Assoc		
Interstate Telecommunications Coop, Inc.			





www.acaconnects.org

GRANT SPELLMEYER

PRESIDENT AND CEO

GSPELLMEYER@ACACONNECTS.ORG

BRIAN HURLEY
CHIEF REGULATORY COUNSEL
BHURLEY@ACACONNECTS.ORG

www.cartesian.com

MICHAEL DARGUE
VICE PRESIDENT
MICHAEL.DARGUE@CARTESIAN.COM

SAMUEL KORNSTEIN
MANAGING DIRECTOR
SAMUEL.KORNSTEIN@CARTESIAN.COM