BEAD Program: A Framework to Allocate Funding for Broadband Availability

State Broadband Report: Missouri

January 2024

VERSION 4.0

MISSOURI

BEAD Program Impact Assessment

1 Eligible Locations

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

15%
388K LOCATIONS

OF MISSOURI LOCATIONS LACK HIGH-SPEED BROADBAND IN JUN 2023

VS. 9% STATE/TERRITORY AVERAGE

UNSERVED LOCATIONS, JUN. 2024

141.7K LOCATIONS

Are estimated to lack broadband access at **25/3 Mbps**

UNDERSERVED LOCATIONS, JUN. 2024

73.9K 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?

$1.7B

IN BEAD FUNDING HAS BEEN ALLOCATED TO MISSOURI

VS. $743M STATE/TERRITORY AVERAGE

ESTIMATED BEAD FUNDING:

BEAD Funds allocated by NTIA	**$1.7B**
Estimated Provider Match	**$616M**
Estimated Total Capital	**$2.4B**

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?

$594M-$1.5B

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

DEPLOYMENT SCENARIOS:

Baseline Fiber		Maximum Fiber	
100% LOCATIONS REACHED	**68%** FIBER LOCATIONS	**100%** LOCATIONS REACHED	**100%** FIBER LOCATIONS
$1.2B TOTAL CAPITAL COST		**$2.1B** TOTAL CAPITAL COST	
$1.1B REMAINING BUDGET		**$226M** REMAINING BUDGET	

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Missouri | Estimated Eligible Locations for BEAD Projects

June 2023 FCC Broadband Locations	Unserved *(less than 25Mbps/3Mbps)*	Underserved *(less than 100Mbps/20Mbps)*
	277.4K	110.7K
− Subsidy Program Funded Locations[1]	114.5K	36.8K
− Incremental Build[2] (13% annual build, for 12 months)	21.2K	--
= Jun. 2024 Estimated Eligible Locations	141.7K Ⓐ	73.9K Ⓑ

Location Distribution in June 2024

- ■ Served
- ■ Underserved and Unserved
- ■ Underserved
- ■ Unserved

2.5M

2.3M

215.6K

215.6K

Ⓑ 73.9K — **2.9% of locations are underserved**

Ⓐ 141.7K — **5.6% of locations are unserved**

Missouri

We estimate 9% of locations will be eligible for BEAD Project Funding in Missouri

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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Missouri | BEAD Funding & Estimated Provider Match

Provider Match Examples

Total Deployment Cost per Location

- ■ BEAD Funds Per Location
- ■ Estimated Provider Match

		High-Cost Areas

$15.5K

$12.0K

Extremely High-Cost Per Location Threshold[1] →

$9.00K

$12.50K

$4.0K

$2.0K

$0.50K
$1.5K

$1.00K
$3.0K

$3.0K

$3.0K

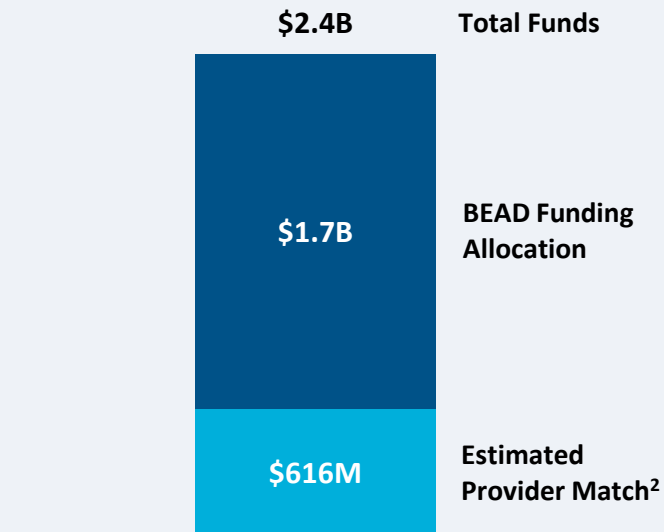| Location 1	Location 2	Location 3	Location 4
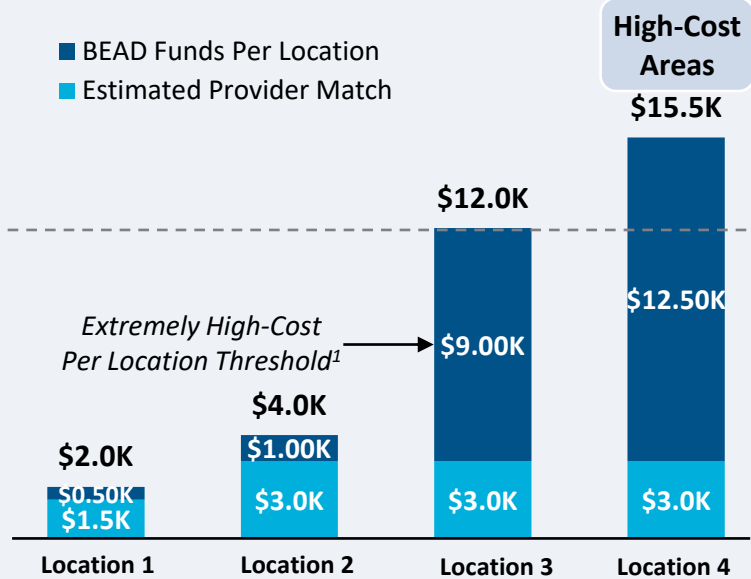
Provider Match %

75%	75%	25%	19%

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 - Missouri

$2.4B — Total Funds

$1.7B — BEAD Funding Allocation

$616M — Estimated Provider Match[2]

$2.4B in total capital is estimated to be available to serve unserved/underserved Missouri locations (combining BEAD funding and estimated provider match)

Provider Match - Missouri

Total Estimated Provider Match: — **$616M**

÷ **Total Estimated Eligible Locations:** — **215.6K**

= **Average Provider Match:** — **$2,860** *PER LOCATION*

We estimate the average provider match will be $2,860 – 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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Missouri | Cost to Deploy Fiber by Decile

CAPEX Fiber Deployment Cost per Location Segmented by Cost Deciles[1]

Unserved Locations	Underserved Locations

Unserved Locations

Overall Average Cost per Location: $10,693

Extremely High-Cost Threshold + Max Provider Match ($12k total)

- 0-10%: $2.5K
- 11-20%: $4.2K
- 21-30%: $5.3K
- 31-40%: $6.3K
- 41-50%: $7.9K
- 51-60%: $9.8K
- 61-70%: $12.4K
- 71-80%: $14.6K
- 81-90%: $17.6K
- 91-100%: $25.7K

Average Tract Density *(Location per sq. Mile)*

26	20	10	15	7	16	9	6	10	5
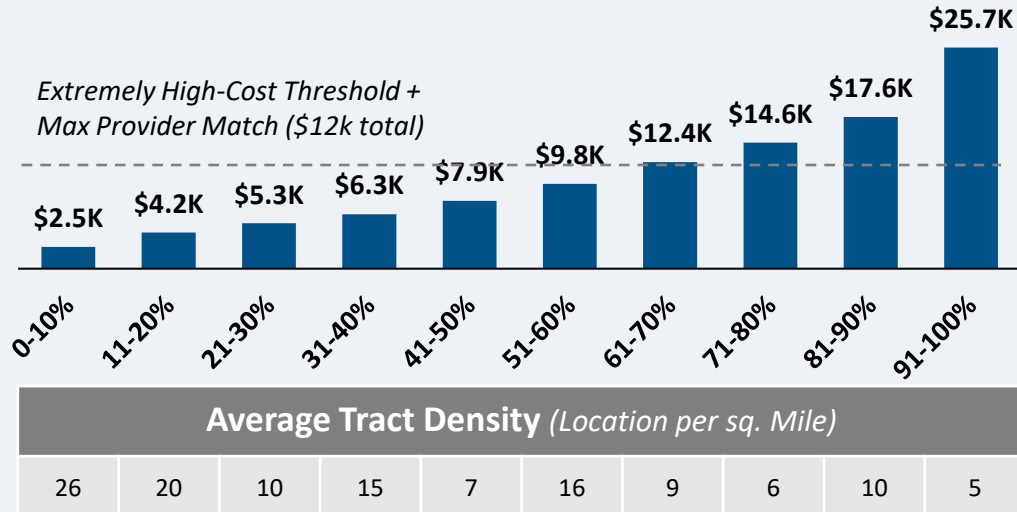
141.7K Locations

Underserved Locations

Overall Average Cost per Location: $8,294

Extremely High-Cost Threshold + Max Provider Match ($12k total)

- 0-10%: $2.9K
- 11-20%: $3.1K
- 21-30%: $3.6K
- 31-40%: $4.4K
- 41-50%: $5.5K
- 51-60%: $6.8K
- 61-70%: $8.9K
- 71-80%: $11.2K
- 81-90%: $14.3K
- 91-100%: $21.4K

Average Tract Density *(Location per sq. Mile)*

40	26	9	15	13	8	15	7	9	10
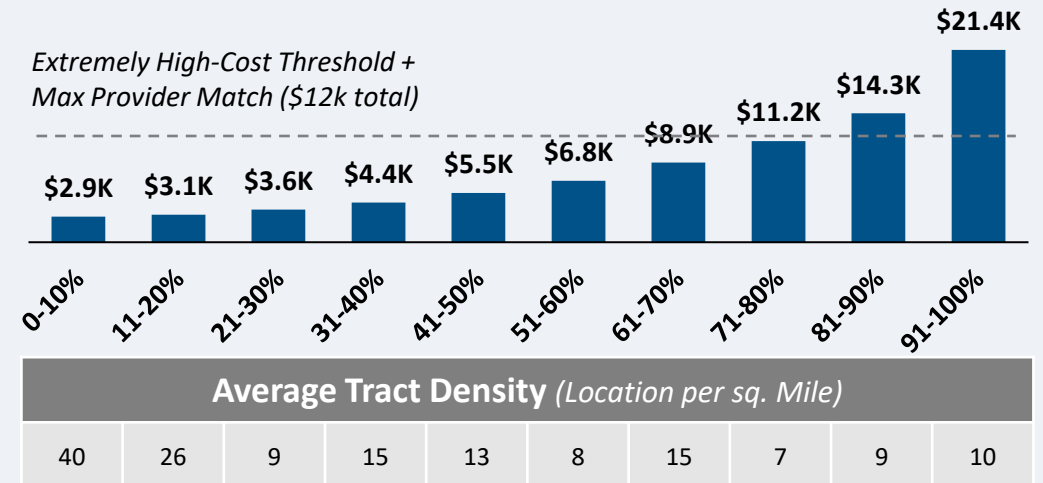
73.9K Locations

Over 65% of locations are estimated to fall below the High-Cost Threshold + Provider Match

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Missouri | Fiber Preferencing Scenarios

	1 Baseline Fiber Deployment	**2** Maximum Fiber Deployment[1]
SCENARIO:		

PRIMARY ACCESS TECHNOLOGY:	Below High-Cost Threshold	Above High-Cost Threshold	Below High-Cost Threshold	Above High-Cost Threshold
	FIBER	**FIXED WIRELESS**	**FIBER**	**FIBER & FIXED WIRELESS**

FUNDING PRIORITIZATION:

Scenario 1:

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

Scenario 2:

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

OUTCOME:	More funding for other eligible programs	More locations reached with fiber

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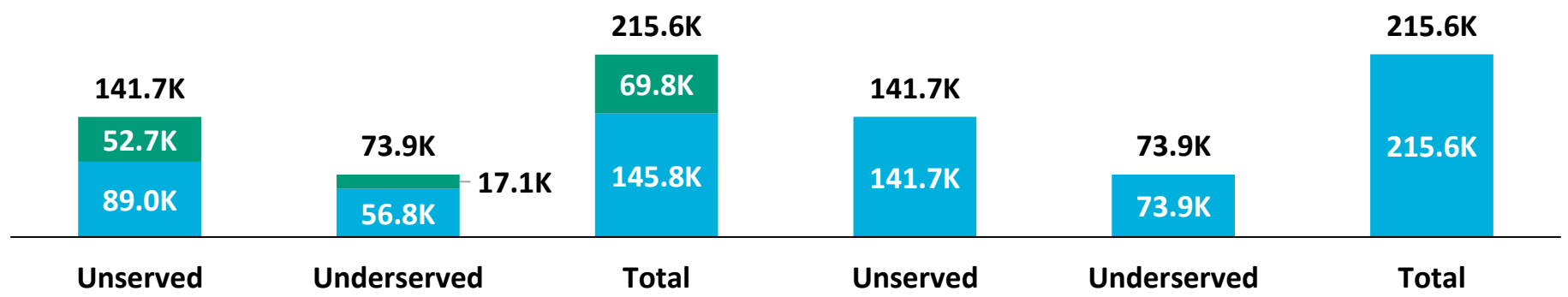Source: Cartesian

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Missouri | Scenario Analysis Results

SCENARIO:

| **①** Baseline Fiber Deployment | **②** Maximum Fiber Deployment |

Fixed Wireless (green)
Fiber (blue)

Scenario 1 — Baseline Fiber Deployment

	Unserved	Underserved	Total
Fixed Wireless	52.7K	17.1K	69.8K
Fiber	89.0K	56.8K	145.8K
Total	**141.7K**	**73.9K**	**215.6K**

Scenario 2 — Maximum Fiber Deployment

	Unserved	Underserved	Total
Fiber	141.7K	73.9K	215.6K
Total	**141.7K**	**73.9K**	**215.6K**

	Scenario 1 Unserved	Scenario 1 Underserved	Scenario 1 Total	Scenario 2 Unserved	Scenario 2 Underserved	Scenario 2 Total
Capex Required per Locations[1]	$5,737	$5,384	$5,616	$10,687	$8,294	$9,867

	Scenario 1	Scenario 2
BEAD Funds Available to State	$1.7B	$1.7B
+ Estimated Provider Match	$616M	$616M
= Total Available Capital	$2.4B	$2.4B
– Capex Required to Build	$1.2B	$2.1B
= Remaining Funds	$1.1B	$226M
% of Locations Reached	100%	100%
% of Locations Reached with Fiber	68%	100%

Capex Required to Build: **+$916M** (from $1.2B to $2.1B)

% of Locations Reached with Fiber: **+32%** (from 68% to 100%)

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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Missouri | Conclusion

Funding Summary

Missouri is expected to receive

$1.7B in BEAD funding

+

$616M in estimated provider matching

We estimate the funding is sufficient to reach all of Missouri's 215.6k eligible locations with high-speed broadband

Key Findings

Missouri appears well positioned to reach all eligible premises and have funding for other BEAD eligible programs

A Baseline Fiber Deployment…	vs.	Maximizing Fiber…

A Baseline Fiber Deployment…

- Leaves $1.1B additional funds for affordability programs
- Reaches 68% of locations with fiber
- Requires 32% to be reached with other tech.

Maximizing Fiber…

- Leaves $226M additional funds for affordability programs
- Reaches 100% of locations with fiber
- Requires 0% 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

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Missouri | ACA Connects Members

Member Name	
American Broadband	MidAtlanticBroadband, Inc.
Boycom Cablevision, Inc.	Ozarksgo, LLC
Cable One, Inc.	Ralls Technologies, LLC
Chariton Valley Communications Corp	Rock Port Cablevision
Citizens Cablevision, Inc.	Skyfinet, LLC
Citizens Mutual Telephone Cooperative, Inc.	Socket Telecom, LLC
Como Comm, Inc.	Stimulus Technologies Of Missouri, LLC
Consolidated Communications, Inc.	TDS Telecom
Crawkan Telephone Cooperative, Inc.	United Services, Inc.
Grain Capital	WH I3B Holdings, LLC
Mediacom, LLC	

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www.**acaconnects**.org

www.**cartesian**.com

GRANT SPELLMEYER
PRESIDENT AND CEO
GSPELLMEYER@ACACONNECTS.ORG

MICHAEL DARGUE
VICE PRESIDENT
MICHAEL.DARGUE@CARTESIAN.COM

BRIAN HURLEY
CHIEF REGULATORY COUNSEL
BHURLEY@ACACONNECTS.ORG

SAMUEL KORNSTEIN
MANAGING DIRECTOR
SAMUEL.KORNSTEIN@CARTESIAN.COM