BEAD Program: A Framework to Allocate Funding for Broadband Availability

State Broadband Report: South Carolina

January 2024

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SOUTH CAROLINA

BEAD Program Impact Assessment

1 Eligible Locations

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

7% 142K LOCATIONS

OF SOUTH CAROLINA LOCATIONS LACK HIGH-SPEED BROADBAND IN JUN 2023

VS. 9% STATE/TERRITORY AVERAGE

UNSERVED LOCATIONS, JUN. 2024

50.1K LOCATIONS

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

UNDERSERVED LOCATIONS, JUN. 2024

44.8K 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?

$552M

IN BEAD FUNDING HAS BEEN ALLOCATED TO SOUTH CAROLINA

VS. $743M STATE/TERRITORY AVERAGE

ESTIMATED BEAD FUNDING:

BEAD Funds allocated by NTIA	$552M
Estimated Provider Match	$283M
Estimated Total Capital	$835M

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?

$380M-$551M

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

DEPLOYMENT SCENARIOS:

Baseline Fiber		Maximum Fiber	
100% LOCATIONS REACHED	84% FIBER LOCATIONS	100% LOCATIONS REACHED	100% FIBER LOCATIONS
$663M TOTAL CAPITAL COST		$835M TOTAL CAPITAL COST	
$172M REMAINING BUDGET		$142K REMAINING BUDGET	

Source: Cartesian, NTIA

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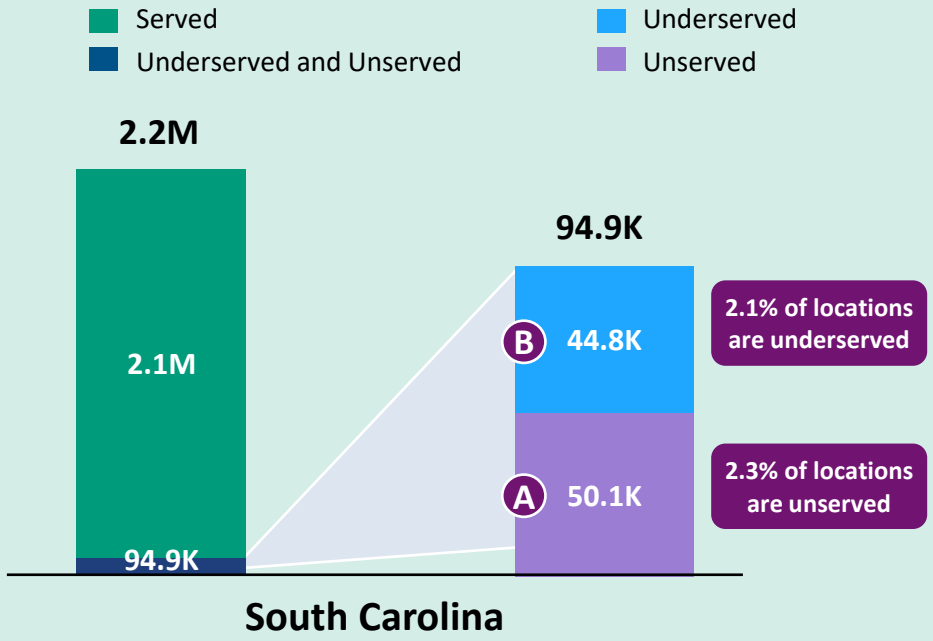
South Carolina | Estimated Eligible Locations for BEAD Projects

	Unserved *(less than 25Mbps/3Mbps)*	Underserved *(less than 100Mbps/20Mbps)*
June 2023 FCC Broadband Locations	**86.1K**	**55.8K**
− Subsidy Program Funded Locations[1]	28.5K	11.1K
− Incremental Build[2] (13% annual build, for 12 months)	7.5K	--
= **Jun. 2024 Estimated Eligible Locations**	**50.1K** (A)	**44.8K** (B)

Location Distribution in June 2024



We estimate 4% of locations will be eligible for BEAD Project Funding in South Carolina

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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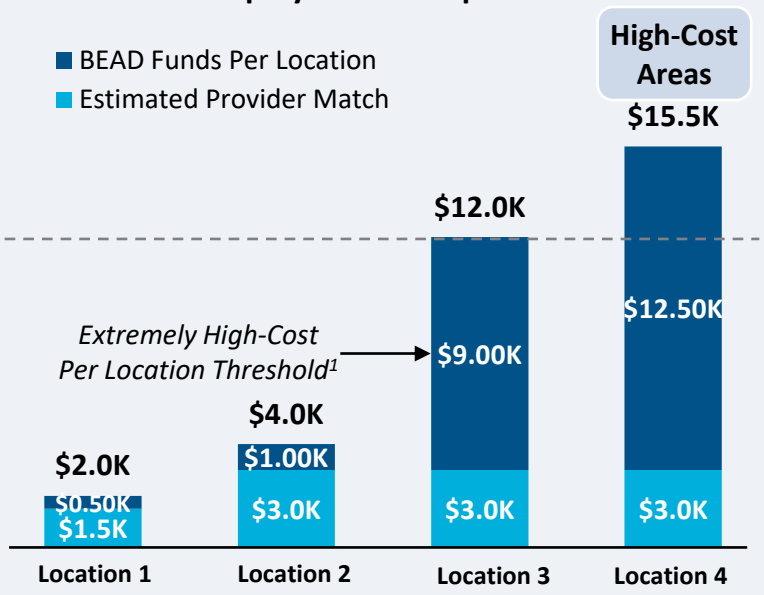
2 Calculate BEAD Funding

South Carolina | BEAD Funding & Estimated Provider Match

Provider Match Examples

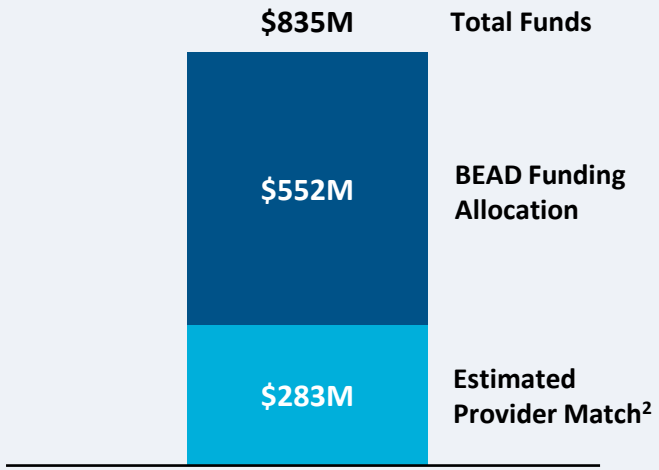
Total Deployment Cost per Location



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 - South Carolina



$835M in total capital is estimated to be available to serve unserved/underserved South Carolina locations (combining BEAD funding and estimated provider match)

Provider Match - South Carolina

Total Estimated Provider Match: $283M

÷ **Total Estimated Eligible Locations:** 94.9K

= **Average Provider Match:** $2,987 *PER LOCATION*

We estimate the average provider match will be $2,987 – 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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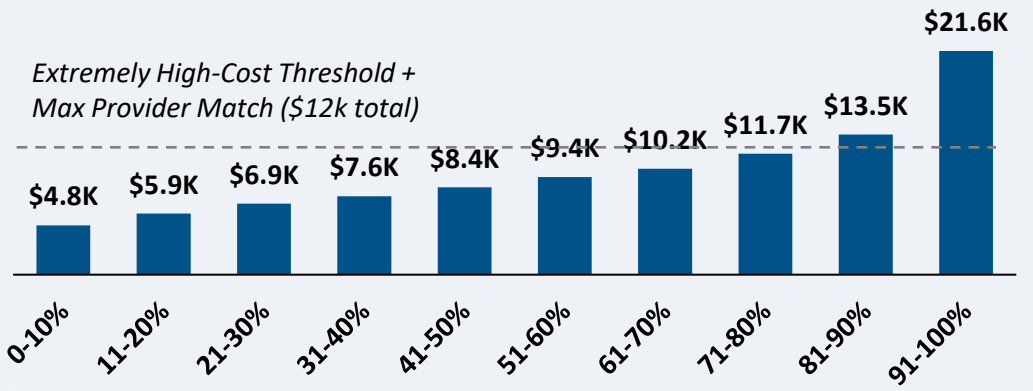
South Carolina | Cost to Deploy Fiber by Decile

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

Unserved Locations

Overall Average Cost per Location: $10,065

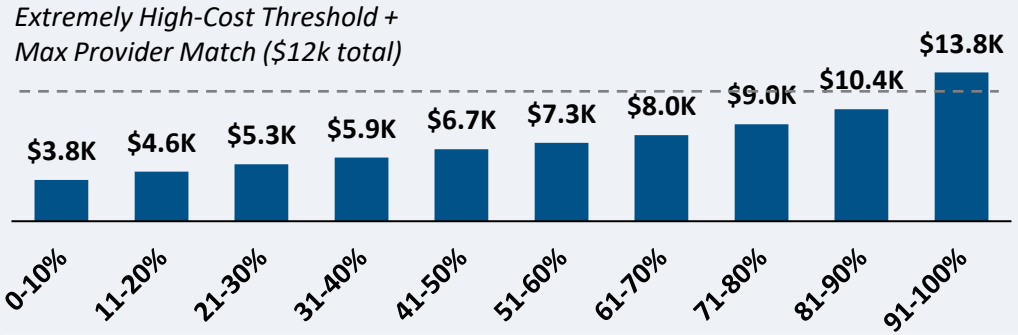


Average Tract Density *(Location per sq. Mile)*									
16	14	13	8	17	9	8	6	6	6

50.1K Locations

Underserved Locations

Overall Average Cost per Location: $7,503



Average Tract Density *(Location per sq. Mile)*									
38	19	13	19	10	8	8	7	7	64

44.8K Locations

Over 80% 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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South Carolina | Fiber Preferencing Scenarios

	1 Baseline Fiber Deployment	2 Maximum Fiber Deployment[1]
PRIMARY ACCESS TECHNOLOGY:	Below High-Cost Threshold: **FIBER** Above High-Cost Threshold: **FIXED WIRELESS**	Below High-Cost Threshold: **FIBER** Above High-Cost Threshold: **FIBER & FIXED WIRELESS**
FUNDING PRIORITIZATION:	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	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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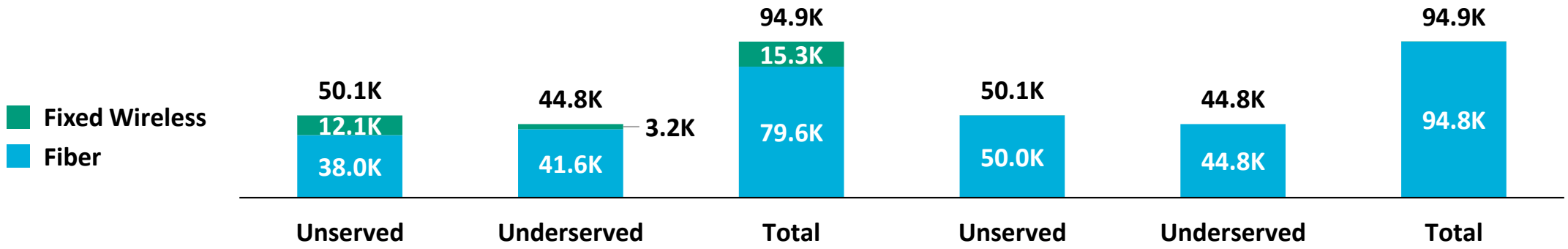
South Carolina | Scenario Analysis Results

SCENARIO:

1 Baseline Fiber Deployment

2 Maximum Fiber Deployment



	Baseline Fiber Deployment			Maximum Fiber Deployment		
Capex Required per Locations[1]	$7,165	$6,790	$6,988	$9,955	$7,503	$8,798
BEAD Funds Available to State		**$552M**			**$552M**	
Estimated Provider Match		**$283M**			**$283M**	
Total Available Capital		**$835M**			**$835M**	
Capex Required to Build		**$663M**		**+$172M**	**$835M**	
Remaining Funds		**$172M**			**$142K**	
% of Locations Reached		**100%**			**100%**	
% of Locations Reached with Fiber		**84%**		**+16%**	**100%**	

1. Funding to deploy fiber before the maximum $3k provider match per location

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South Carolina | Conclusion

Funding Summary

South Carolina is expected to receive

$552M in BEAD funding

+

$283M in estimated provider matching

We estimate the funding is sufficient to reach all of South Carolina's 94.9k eligible locations with high-speed broadband

Key Findings

South Carolina will need to decide how far to deploy fiber while considering the trade-off of having higher fiber coverage vs. greater remaining funds for other BEAD eligible programs

A Baseline Fiber Deployment…	vs.	Maximizing Fiber…
• Leaves $172M additional funds for affordability programs • Reaches 84% of locations with fiber • Requires 16% to be reached with other tech.		• Leaves $142K 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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South Carolina | ACA Connects Members

Member Name
Atlantic Broadband
Berkeley Cable Television, Inc.
Cable One, Inc.
Catawba Services, Inc.
Consolidated Communications, Inc.
Horry Telephone Cooperative, Inc.
Hotwire Communications Ltd
Palmetto Rural Telephone Cooperative, Inc.
Sandhill Telephone Cooperative, Inc.
TDS Telecom
Truvista Communications, Inc.
Vyve
West Carolina Communications
Wide Open West Networks, LLC
Wilkes Communications, Inc.

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

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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

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