

BEAD Program: A Framework to Allocate Funding for Broadband Availability

State Broadband Report: Virginia

January 2024





1 Eligible Locations

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

14%

398K LOCATIONS

OF VIRGINIA LOCATIONS LACK HIGH-SPEED BROADBAND IN JUN 2023

VS. 9% STATE/TERRITORY AVERAGE

UNSERVED LOCATIONS, JUN. 2024



199.1K
LOCATIONS

Are estimated to lack broadband access at 25/3 Mbps

UNDERSERVED LOCATIONS, JUN. 2024



46.6K
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?

\$1.5B

IN BEAD FUNDING HAS BEEN ALLOCATED TO VIRGINIA

VS. \$743M STATE/TERRITORY AVERAGE

ESTIMATED BEAD FUNDING:

BEAD Funds allocated by NTIA

\$1.5B

Estimated Provider Match

\$728M

Estimated Total Capital

\$2.2B

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?

**\$1.0B-
\$1.4B**

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

DEPLOYMENT SCENARIOS:



Baseline Fiber



Maximum Fiber

100% LOCATIONS REACHED

86% FIBER LOCATIONS

100% LOCATIONS REACHED

100% FIBER LOCATIONS

\$1.7B
TOTAL CAPITAL COST





\$478M
REMAINING BUDGET

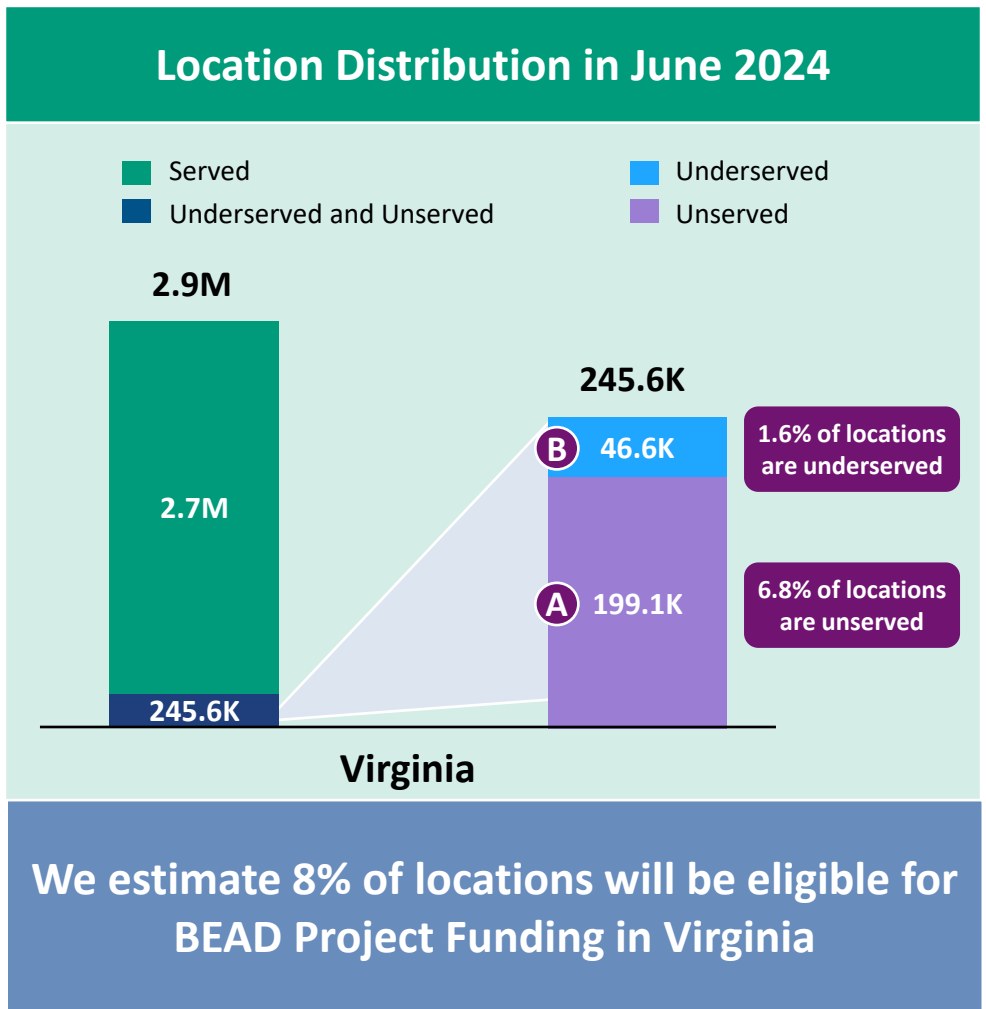
\$2.1B
TOTAL CAPITAL COST

\$121M
REMAINING BUDGET

1 Estimate Eligible Locations

Virginia | Estimated Eligible Locations for BEAD Projects

|  June 2023 FCC Broadband Locations | Unerved <i>(less than 25Mbps/3Mbps)</i> | Underserved <i>(less than 100Mbps/20Mbps)</i> |
|--|--|--|
| | | 331.1K |
|  Subsidy Program Funded Locations ¹ | 102.3K | 20.7K |
|  Incremental Build ² (13% annual build, for 12 months) | 29.7K | -- |
|  Jun. 2024 Estimated Eligible Locations | 199.1K A | 46.6K B |

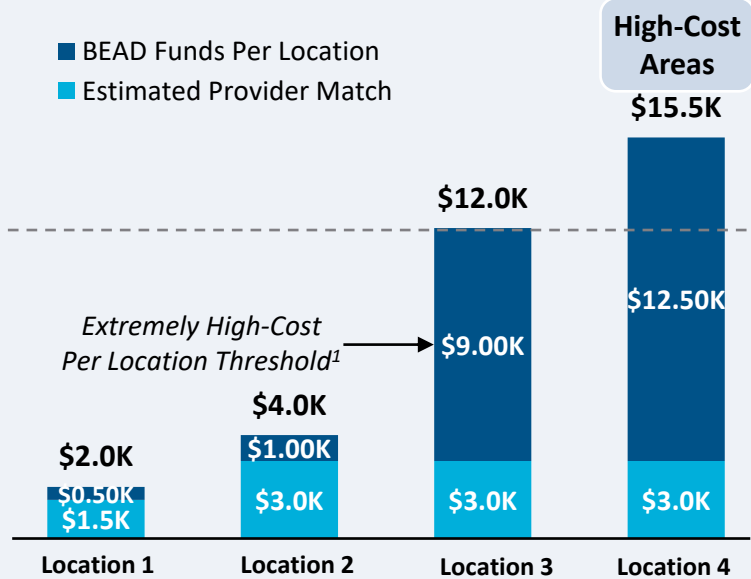


1. Locations with "commitments" to receive support from federal subsidy programs
 2. Given the uncertainty around the magnitude of locations moving from unerved to underserved, we have not made incremental builds adjustments to underserved locations
 BEAD eligible locations does not account for state-specific 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

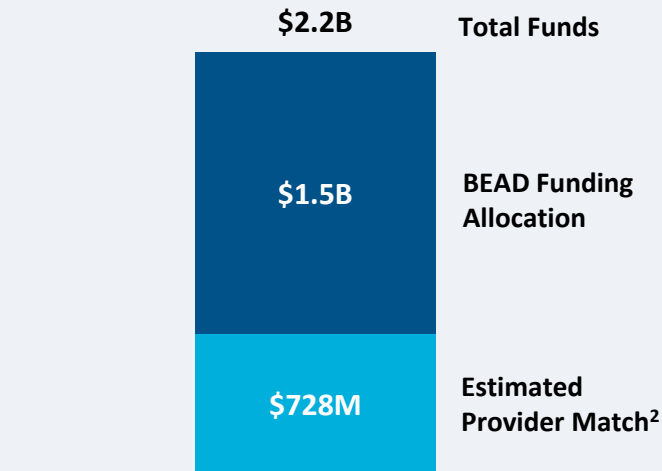


Provider Match %

| | | | |
|-----|-----|-----|-----|
| 75% | 75% | 25% | 19% |
|-----|-----|-----|-----|

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 - Virginia



\$2.2B in total capital is estimated to be available to serve unserved/underserved Virginia locations (combining BEAD funding and estimated provider match)

Provider Match - Virginia

Total Estimated
Provider Match:

\$728M

Total Estimated
Eligible Locations:

245.6K

Average
Provider Match:

\$2,962
PER LOCATION

We estimate the average provider match will be \$2,962 – 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

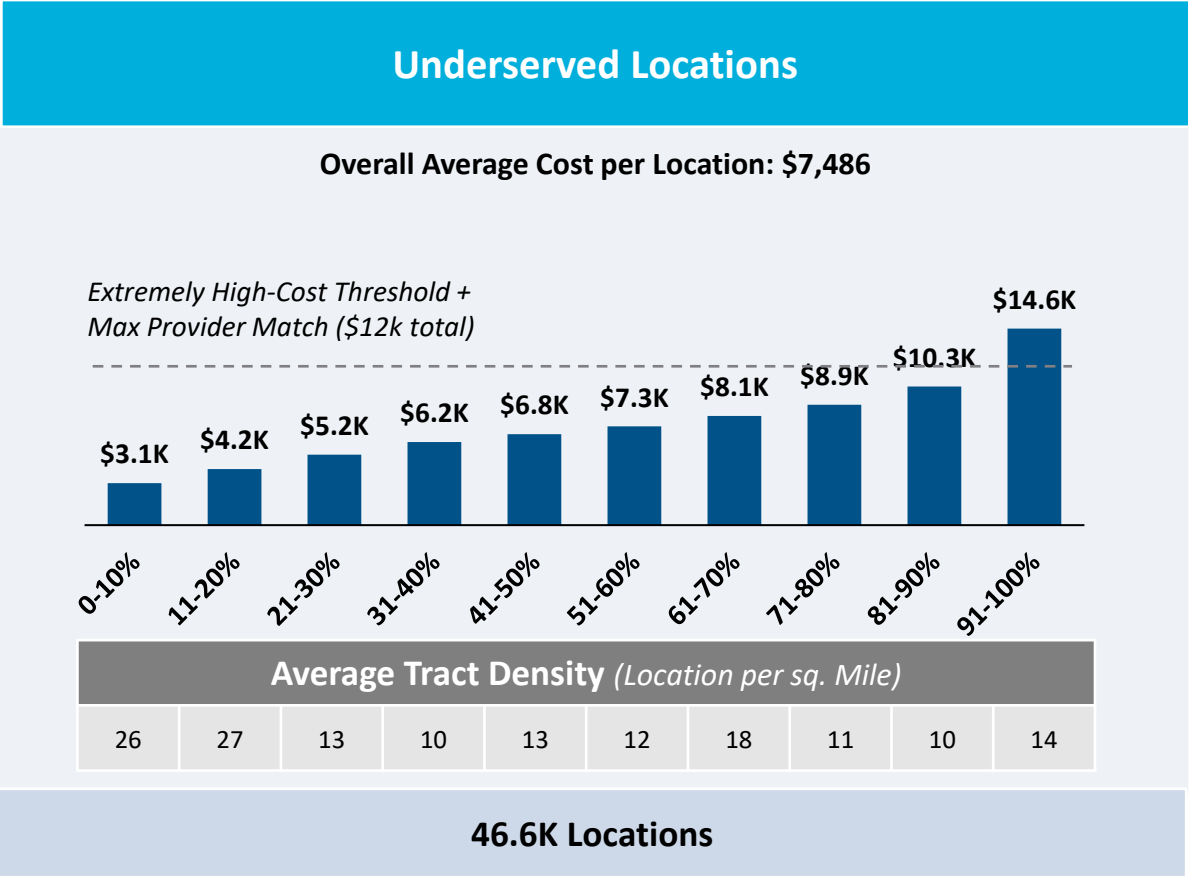
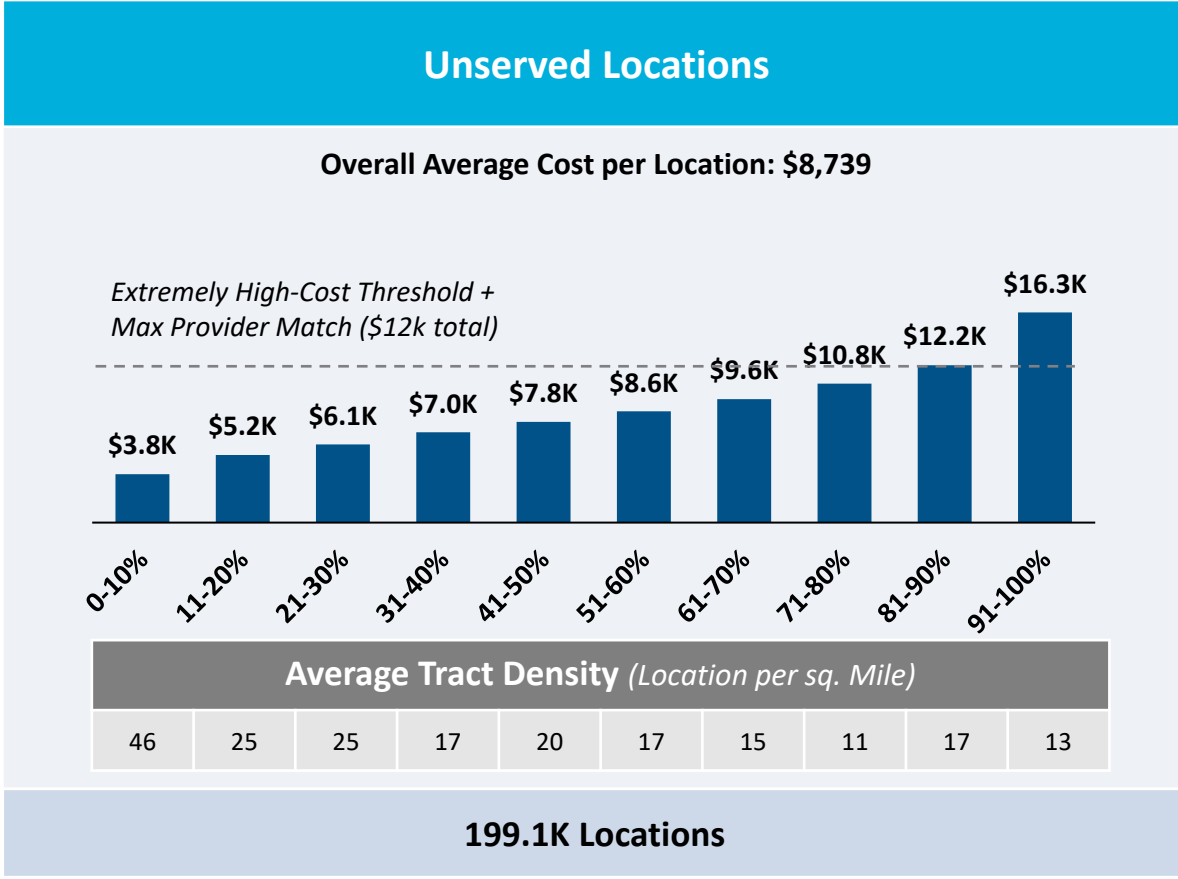
2. In reality, providers will determine the viable level of match funding for each project using a business case model. They will be willing to contribute a greater match in some locations and less in others. Locations which are hardest to serve may need to be fully funded by BEAD with no match. Competitive 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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Virginia | Cost to Deploy Fiber by Decile

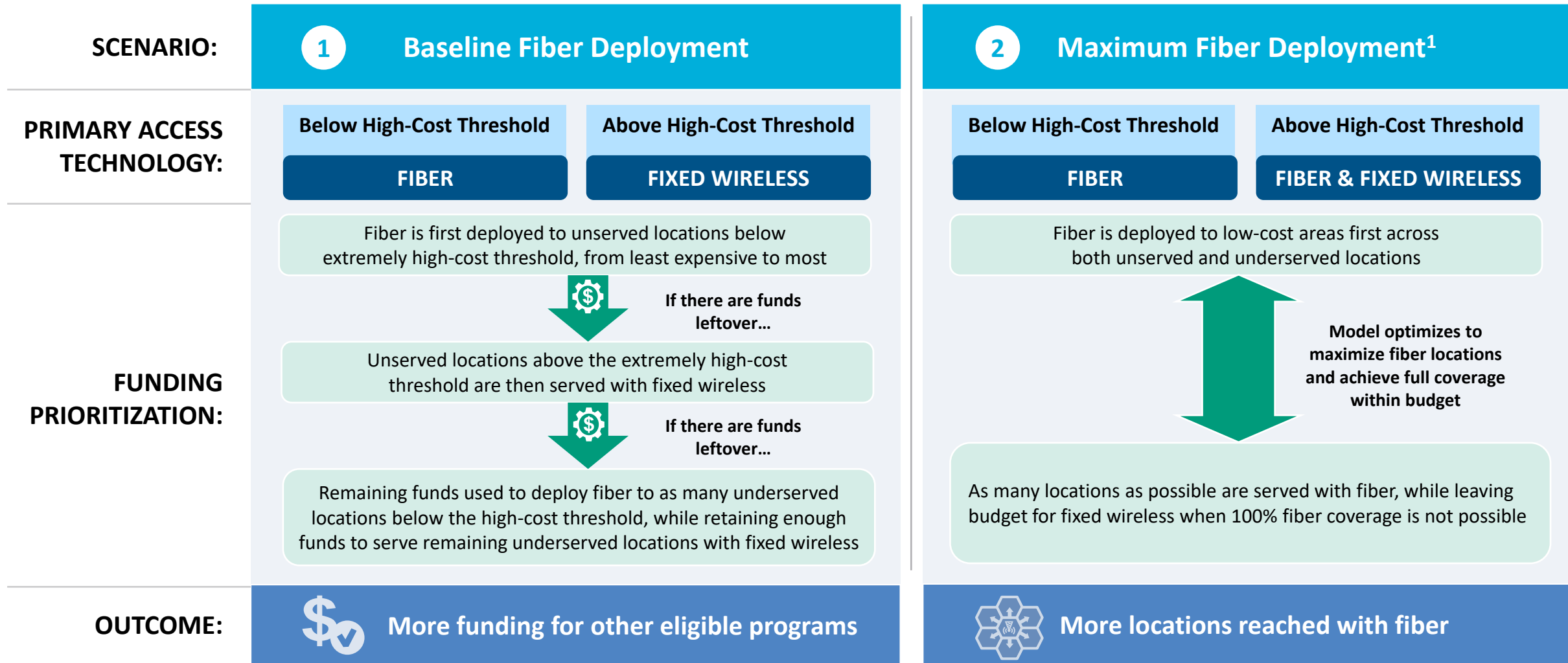
CAPEX Fiber Deployment Cost per Location Segmented by Cost Deciles¹



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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Virginia | Fiber Preferencing Scenarios



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

3 Develop Deployment Scenarios

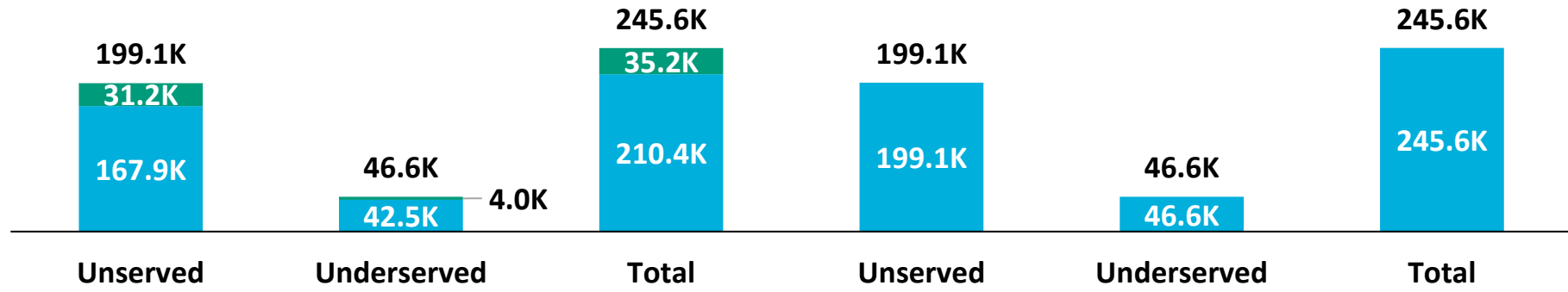
Virginia | Scenario Analysis Results

SCENARIO:

1 Baseline Fiber Deployment

2 Maximum Fiber Deployment

■ Fixed Wireless
■ Fiber



| | Scenario 1 | Scenario 2 |
|---|------------|------------|
| Capex Required per Locations ¹ | \$7,152 | \$8,737 |
| BEAD Funds Available to State | \$1.5B | \$1.5B |
| + Estimated Provider Match | \$728M | \$728M |
| = Total Available Capital | \$2.2B | \$2.2B |
| - Capex Required to Build | \$1.7B | \$2.1B |
| = Remaining Funds | \$478M | \$121M |
| % of Locations Reached | 100% | 100% |
| % of Locations Reached with Fiber | 86% | 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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Virginia | Conclusion



Funding Summary

Virginia is expected to receive

\$1.5B in BEAD funding



\$728M in estimated provider matching

We estimate the funding is sufficient to reach all of Virginia's 245.6k eligible locations with high-speed broadband



Key Findings

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

A Baseline Fiber Deployment...



Maximizing Fiber...

- Leaves \$478M additional funds for affordability programs
- Reaches 86% of locations with fiber
- Requires 14% to be reached with other tech.

- Leaves \$121M 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

Virginia | ACA Connects Members

| Member Name |
|--|
| Astound Broadband |
| Atlantic Broadband |
| Beamspeed |
| Citizens Cablevision, Inc. |
| Consolidated Communications, Inc. |
| Holston Electric Cooperative, Inc. |
| Hotwire Communications Ltd |
| Inter Mountain Cable, Inc. |
| Lumos |
| Mediacom, LLC |
| Nelson County Cablevision |
| Point Broadband, LLC |
| Scott Telecom And Electronics, Inc. |
| Shenandoah Cable Television, LLC |
| Skyline Telephone Membership Corporation |
| TDS Telecom |
| Vyve |
| Wilkes Communications, Inc. |



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