BEAD Program: A Framework to Allocate Funding for Broadband Availability

State Broadband Report: Delaware

January 2024

VERSION 4.0

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DELAWARE

BEAD Program Impact Assessment

1 Eligible Locations

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

3% 11K LOCATIONS

OF DELAWARE LOCATIONS LACK HIGH-SPEED BROADBAND IN JUN 2023

VS. 9% STATE/TERRITORY AVERAGE

UNSERVED LOCATIONS, JUN. 2024

0.9K LOCATIONS

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

UNDERSERVED LOCATIONS, JUN. 2024

6.7K 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?

$108M

IN BEAD FUNDING HAS BEEN ALLOCATED TO DELAWARE

VS. $743M STATE/TERRITORY AVERAGE

ESTIMATED BEAD FUNDING:

BEAD Funds allocated by NTIA	$108M
Estimated Provider Match	$23M
Estimated Total Capital	$131M

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?

$29M-34M

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

DEPLOYMENT SCENARIOS:

	Baseline Fiber	Maximum Fiber
LOCATIONS REACHED	100%	100%
FIBER LOCATIONS	93%	100%
TOTAL CAPITAL COST	$52M	$57M
REMAINING BUDGET	$79M	$73M

Source: Cartesian, NTIA

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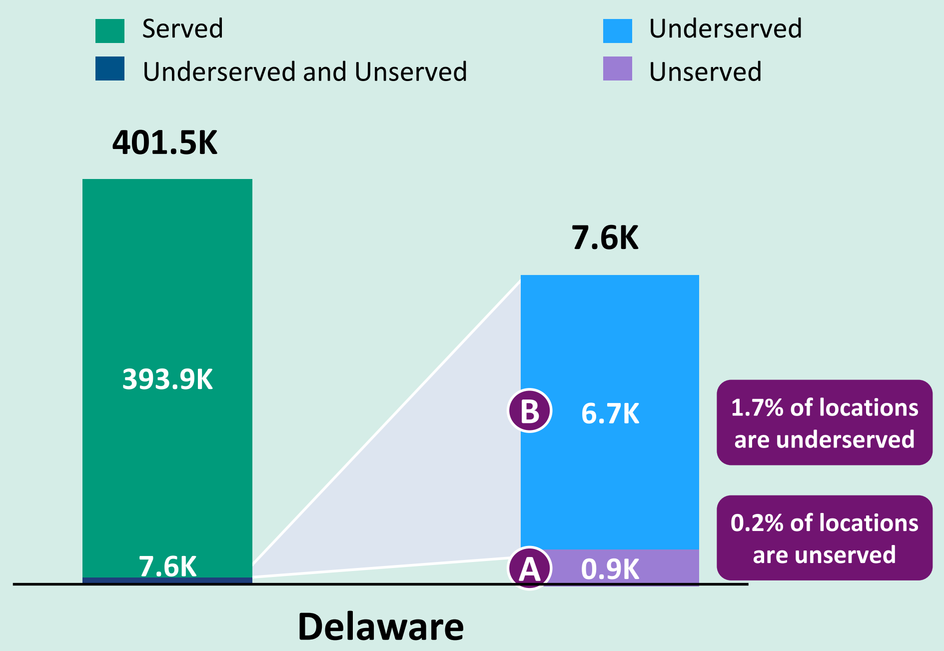
1 Estimate Eligible Locations

Delaware | Estimated Eligible Locations for BEAD Projects

June 2023 FCC Broadband Locations	**Unserved** *(less than 25Mbps/3Mbps)*	**Underserved** *(less than 100Mbps/20Mbps)*
	1.5K	**9.2K**
− Subsidy Program Funded Locations[1]	0.5K	2.5K
− Incremental Build[2] (13% annual build, for 12 months)	0.1K	--
= **Jun. 2024 Estimated Eligible Locations**	**0.9K** A	**6.7K** B

Location Distribution in June 2024



We estimate 2% of locations will be eligible for BEAD Project Funding in Delaware

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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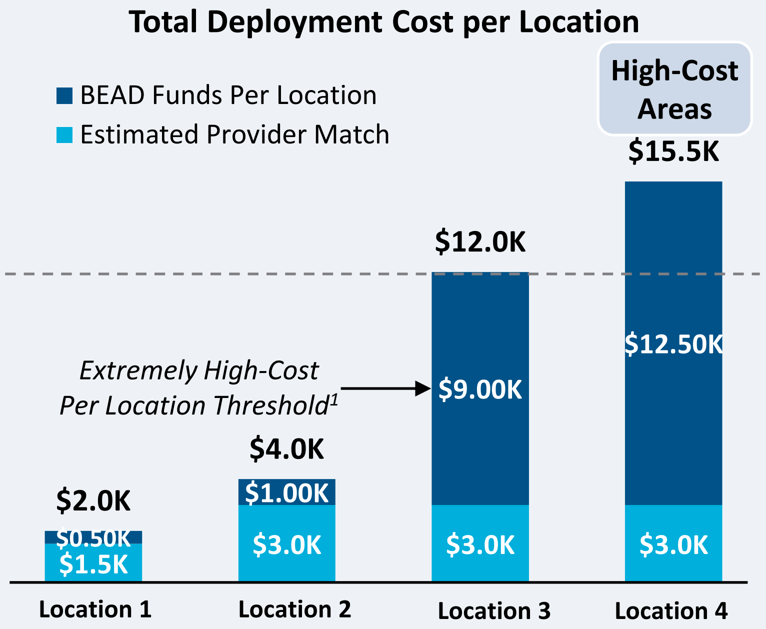
2 Calculate BEAD Funding

Delaware | BEAD Funding & Estimated Provider Match

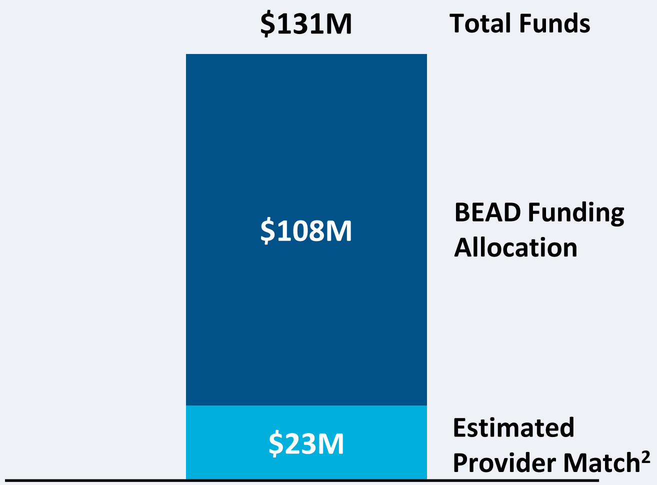
Provider Match Examples



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 - Delaware



$131M in total capital is estimated to be available to serve unserved/underserved Delaware locations (combining BEAD funding and estimated provider match)

Provider Match - Delaware

Total Estimated Provider Match: **$23M**

÷ Total Estimated Eligible Locations: **7.6K**

= Average Provider Match: **$2,995** *PER LOCATION*

We estimate the average provider match will be $2,995 – 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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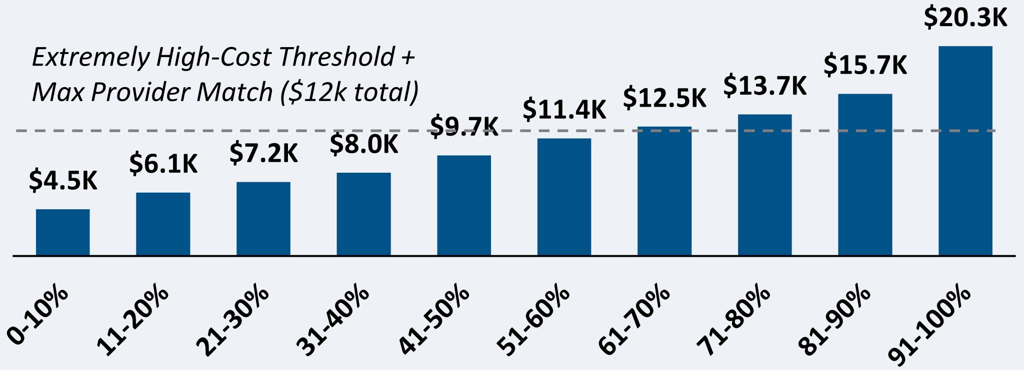
Delaware | Cost to Deploy Fiber by Decile

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

Unserved Locations

Overall Average Cost per Location: $11,183

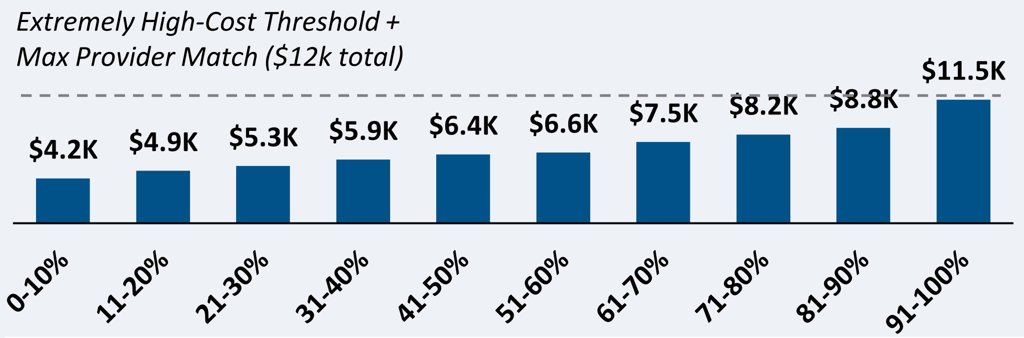


Average Tract Density *(Location per sq. Mile)*									
110	44	6	13	10	5	4	4	10	5

0.9K Locations

Underserved Locations

Overall Average Cost per Location: $7,038



Average Tract Density *(Location per sq. Mile)*									
38	8	9	11	6	15	5	7	10	9

6.7K Locations

Over 95% 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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Delaware | Fiber Preferencing Scenarios

SCENARIO:	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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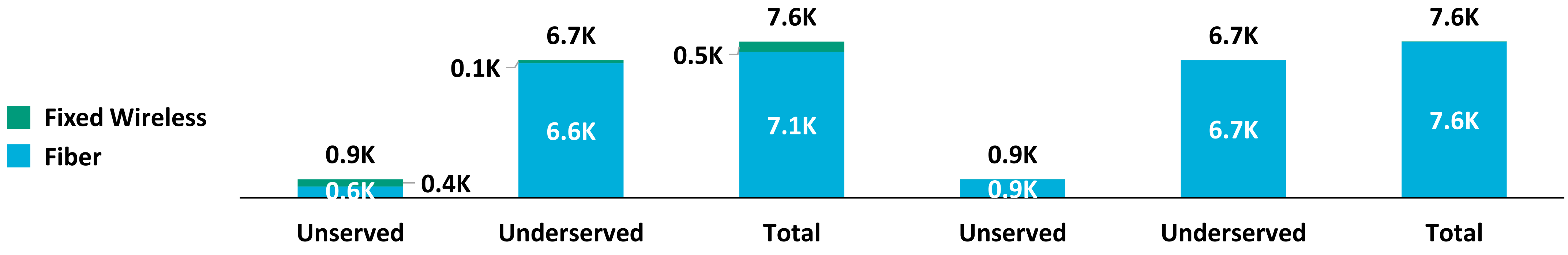
Delaware | Scenario Analysis Results

SCENARIO: ① Baseline Fiber Deployment | ② Maximum Fiber Deployment



	Baseline Unserved	Baseline Underserved	Baseline Total	Maximum Unserved	Maximum Underserved	Maximum Total
Capex Required per Locations[1]	$6,779	$6,775	$6,776	$11,077	$7,038	$7,517

	1 Baseline Fiber Deployment		2 Maximum Fiber Deployment
BEAD Funds Available to State	**$108M**		**$108M**
+ **Estimated Provider Match**	**$23M**		**$23M**
= **Total Available Capital**	**$131M**		**$131M**
− **Capex Required to Build**	**$52M**	**+$6M**	**$57M**
= **Remaining Funds**	**$79M**		**$73M**
% of Locations Reached	**100%**		**100%**
% of Locations Reached with Fiber	**93%**	**+7%**	**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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Delaware | Conclusion

Funding Summary

Delaware is expected to receive

$108M in BEAD funding

+

$23M in estimated provider matching

We estimate the funding is sufficient to reach all of Delaware’s 7.6k eligible locations with high-speed broadband

Key Findings

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

A Baseline Fiber Deployment…	vs.	Maximizing Fiber…
• Leaves $79M additional funds for affordability programs • Reaches 93% of locations with fiber • Requires 7% to be reached with other tech.		• Leaves $73M 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

Source: Cartesian, NTIA

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Delaware | ACA Connects Members

Member Name
Atlantic Broadband
Mediacom, LLC

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

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