BEAD Program: A Framework to Allocate Funding for Broadband Availability

State Broadband Report: Connecticut

January 2024

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ACA
CONNECTS

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1 Eligible Locations

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

1%
8K LOCATIONS

OF CONNECTICUT LOCATIONS LACK HIGH-SPEED BROADBAND IN JUN 2023
VS. 9% STATE/TERRITORY AVERAGE

UNSERVED LOCATIONS, JUN. 2024

5.8K LOCATIONS
Are estimated to lack broadband access at **25/3 Mbps**

UNDERSERVED LOCATIONS, JUN. 2024

1.3K 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?

$144M

IN BEAD FUNDING HAS BEEN ALLOCATED TO CONNECTICUT
VS. $743M STATE/TERRITORY AVERAGE

ESTIMATED BEAD FUNDING:

BEAD Funds allocated by NTIA	**$144M**
Estimated Provider Match	**$21M**
Estimated Total Capital	**$165M**

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?

$44M-53M

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

DEPLOYMENT SCENARIOS:

Baseline Fiber		Maximum Fiber	
100% LOCATIONS REACHED	**87%** FIBER LOCATIONS	**100%** LOCATIONS REACHED	**100%** FIBER LOCATIONS
$65M TOTAL CAPITAL COST		**$75M** TOTAL CAPITAL COST	
$101M REMAINING BUDGET		**$91M** REMAINING BUDGET	

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Connecticut | Estimated Eligible Locations for BEAD Projects

		Unserved *(less than 25Mbps/3Mbps)*	Underserved *(less than 100Mbps/20Mbps)*
	June 2023 FCC Broadband Locations	**6.7K**	**1.3K**
−	Subsidy Program Funded Locations[1]	<0.1K	--
−	Incremental Build[2] (13% annual build, for 12 months)	0.9K	--
=	**Jun. 2024 Estimated Eligible Locations**	**5.8K** Ⓐ	**1.3K** Ⓑ

Location Distribution in June 2024

■ Served
■ Underserved and Unserved
■ Underserved
■ Unserved

1.1M

1.1M

7.1K

7.1K

Ⓑ 1.3K — 0.1% of locations are underserved

Ⓐ 5.8K — 0.5% of locations are unserved

Connecticut

We estimate 0.6% of locations will be eligible for BEAD Project Funding in Connecticut
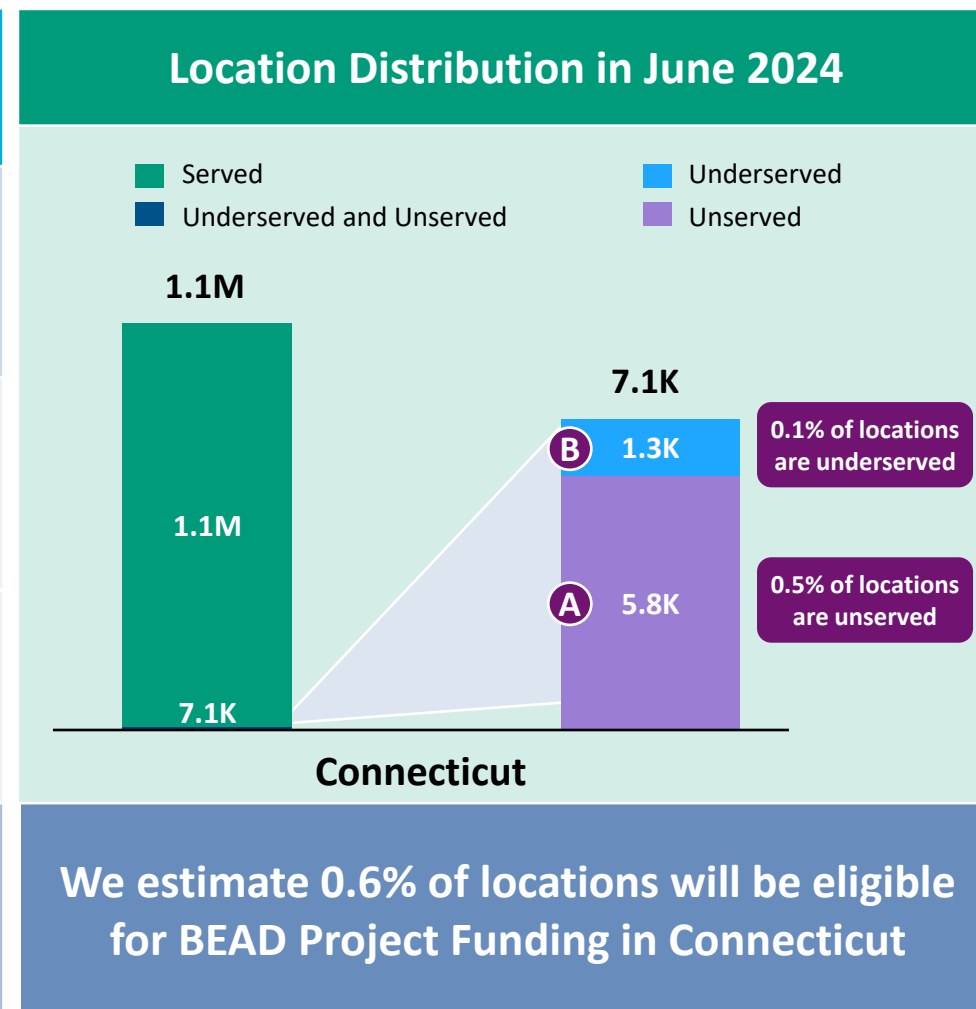
1. Locations with "commitments" to receive support from federal subsidy programs
2. Given the uncertainty around the magnitude of locations moving from unserved to underserved, we have not made incremental builds adjustments to underserved locations
BEAD eligible locations does not account for state-specific eligibility rules set forth in Initial Proposals
Source: Cartesian, FCC National Broadband Map (June 2023 data, released in November 2023)
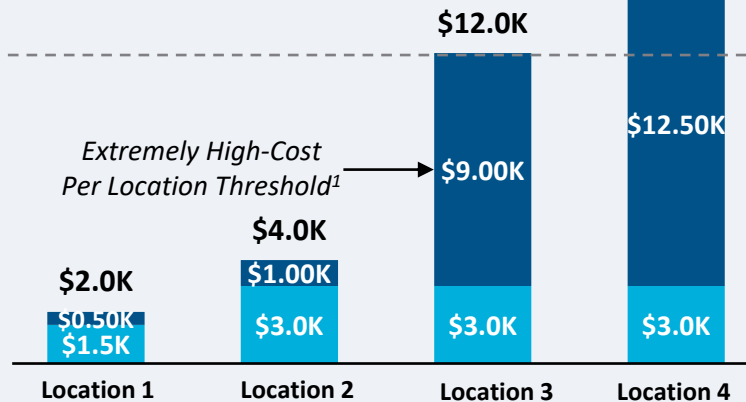
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Connecticut | BEAD Funding & Estimated Provider Match

Provider Match Examples

Total Deployment Cost per Location

- ■ BEAD Funds Per Location
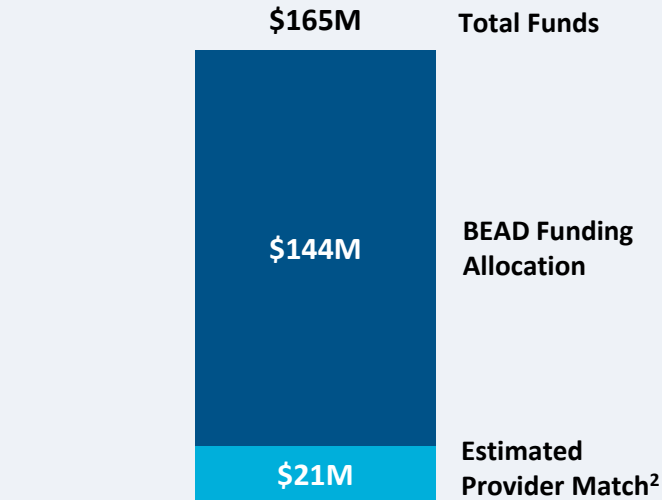- ■ Estimated Provider Match

High-Cost Areas

$15.5K

$12.0K

Extremely High-Cost Per Location Threshold[1] →

$9.00K

$12.50K

$4.0K

$2.0K

$1.00K

$0.50K
$1.5K

$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 - Connecticut

$165M — Total Funds

$144M — BEAD Funding Allocation

$21M — Estimated Provider Match[2]

$165M in total capital is estimated to be available to serve unserved/underserved Connecticut locations (combining BEAD funding and estimated provider match)

Provider Match - Connecticut

Total Estimated Provider Match: — **$21M**

÷ **Total Estimated Eligible Locations:** — **7.1K**

= **Average Provider Match:** — **$2,978** *LOCATION*

We estimate the average provider match will be $2,978– 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.
Connecticut fiber deployment costs are based on national averages
Source: Cartesian, FCC National Broadband Map (June 2023 data, released in November 2023), Benton, NTIA

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Connecticut | Cost to Deploy Fiber by Decile

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

Unserved Locations

Overall Average Cost per Location: $9,835

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

Bar chart values by decile:
- 0-10%: $5.3K
- 11-20%: $8.4K
- 21-30%: $9.2K
- 31-40%: $10.0K
- 41-50%: $10.4K
- 51-60%: $10.6K
- 61-70%: $10.7K
- 71-80%: $11.0K
- 81-90%: $11.0K
- 91-100%: $11.2K

Average Tract Density *(Location per sq. Mile)*									
80	22	15	9	7	6	4	3	2	2

5.8K Locations

Underserved Locations

Overall Average Cost per Location: $11,973

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

Bar chart values by decile:
- 0-10%: $3.1K
- 11-20%: $9.7K
- 21-30%: $11.7K
- 31-40%: $12.2K
- 41-50%: $12.7K
- 51-60%: $13.3K
- 61-70%: $13.6K
- 71-80%: $14.0K
- 81-90%: $14.2K
- 91-100%: $14.5K

Average Tract Density *(Location per sq. Mile)*									
154	23	10	8	6	5	3	3	2	1

1.3K Locations

Over 90% of locations are estimated to fall below the High-Cost Threshold + Provider Match

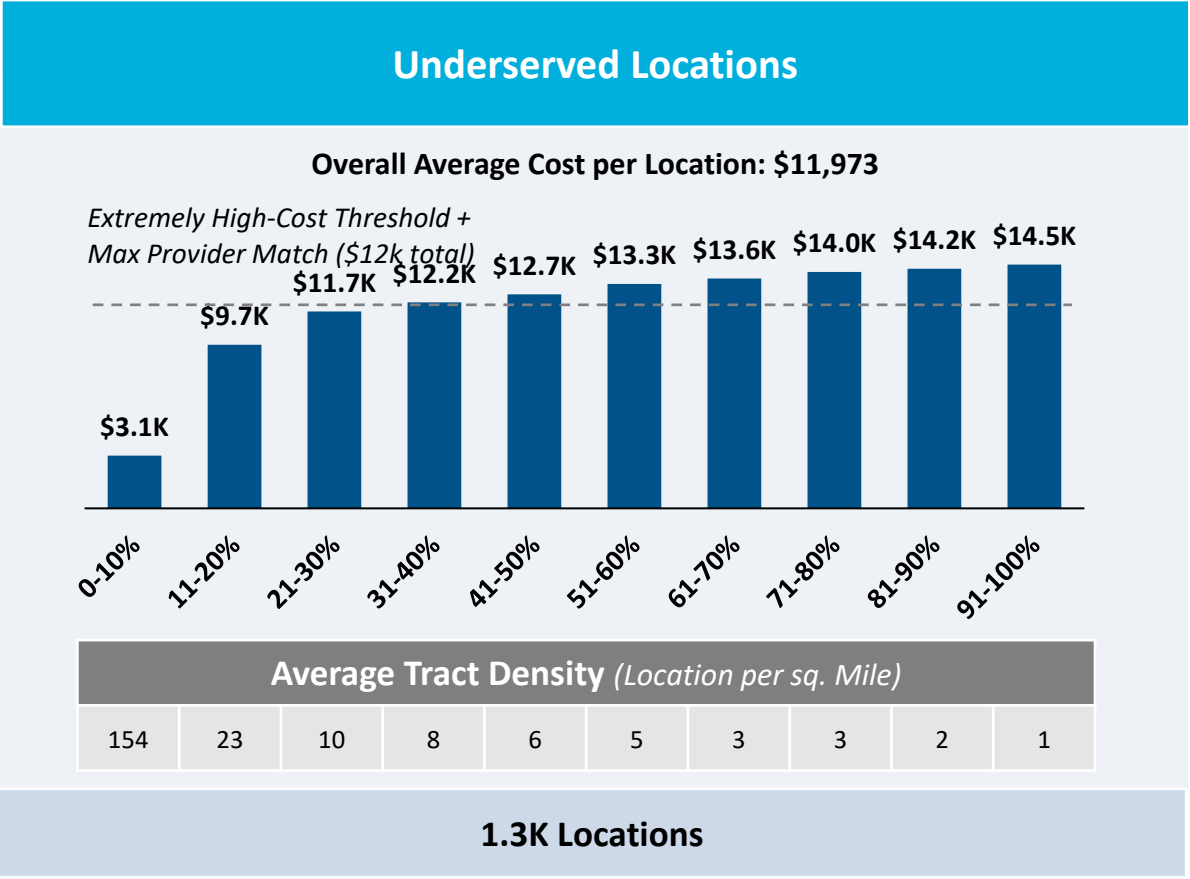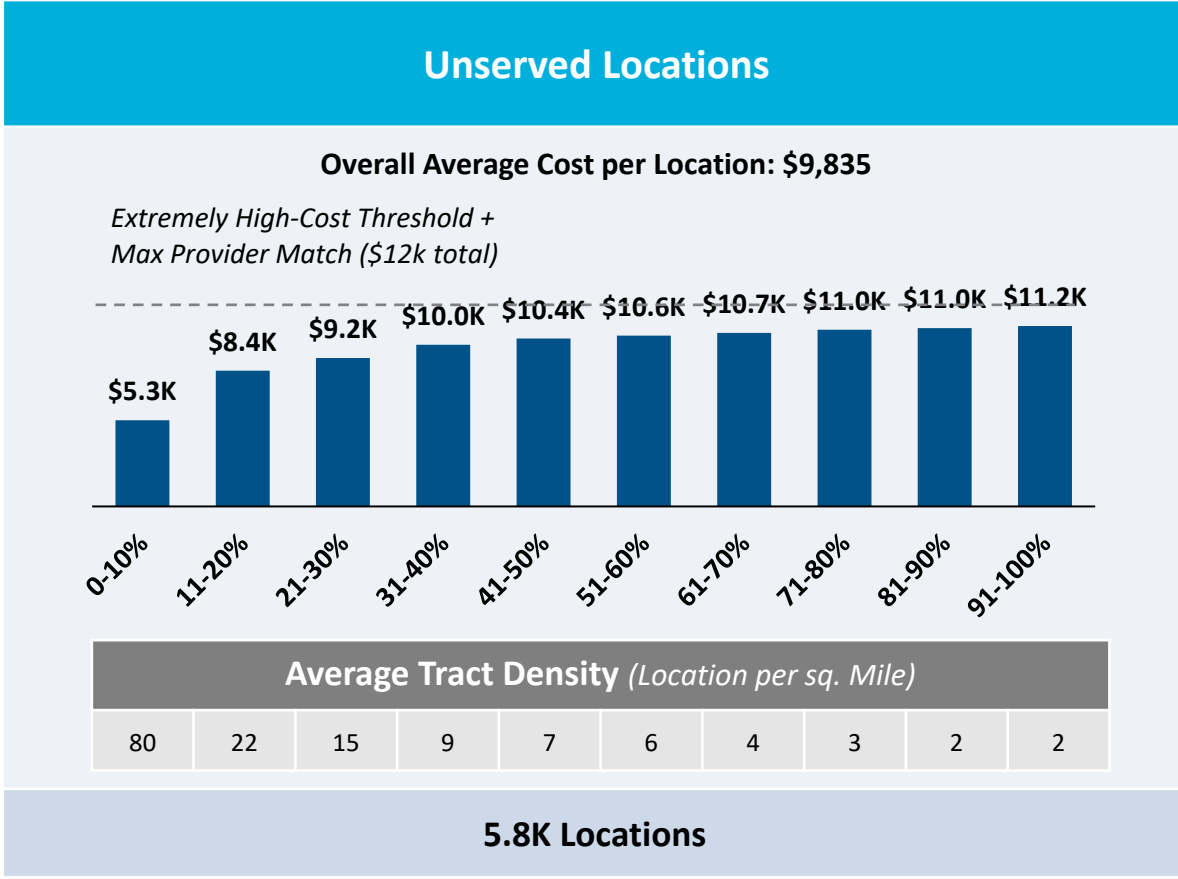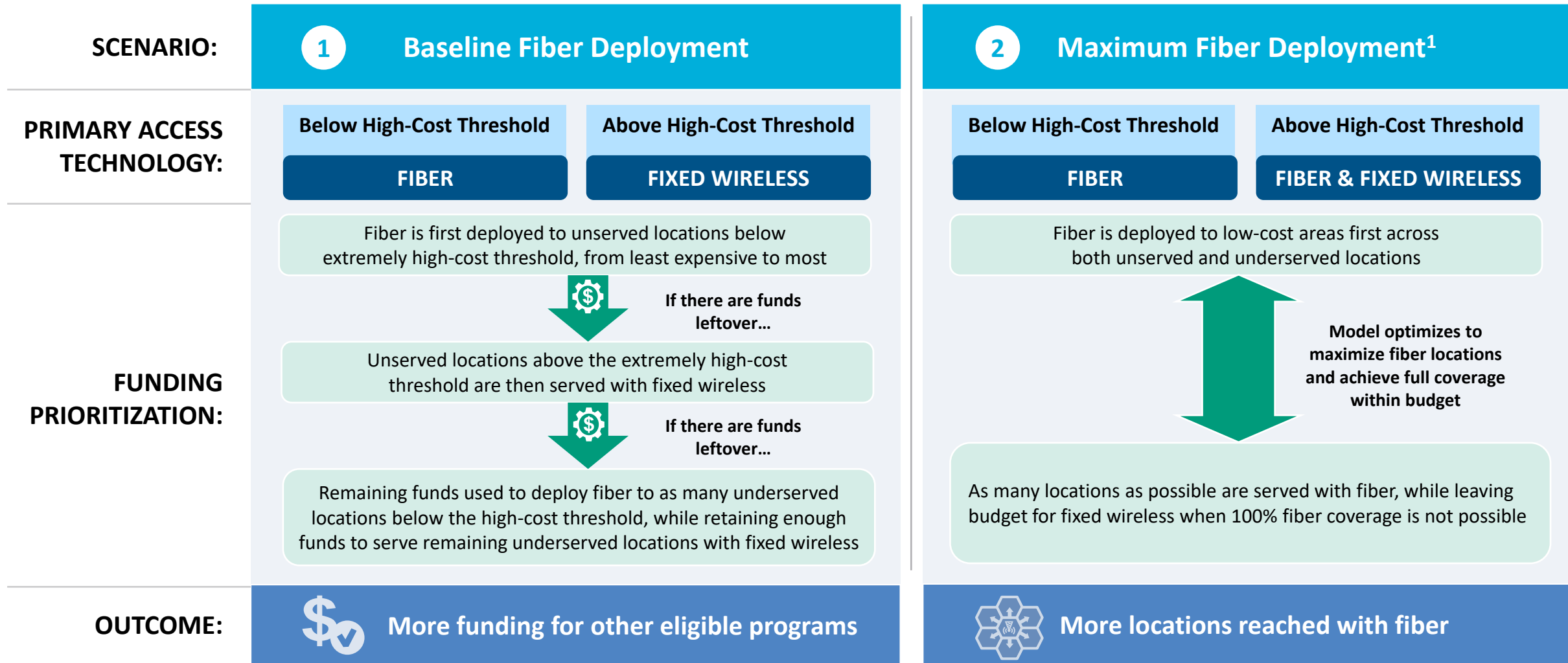1. Chart values are average cost per location for each decile bucket
Connecticut fiber deployment costs are based on national averages
Source: Cartesian, FCC National Broadband Map (June 2023 data, released in November 2023)

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Connecticut | Fiber Preferencing Scenarios

	1 Baseline Fiber Deployment		**2** Maximum Fiber Deployment[1]	
SCENARIO:				
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		Fiber is deployed to low-cost areas first across both unserved and underserved locations	
	If there are funds leftover… Unserved locations above the extremely high-cost threshold are then served with fixed wireless		**Model optimizes to maximize fiber locations and achieve full coverage within budget**	
	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		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

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Connecticut | Scenario Analysis Results

SCENARIO:

1 **Baseline Fiber Deployment**

2 **Maximum Fiber Deployment**

- ■ **Fixed Wireless** (green)
- ■ **Fiber** (blue)
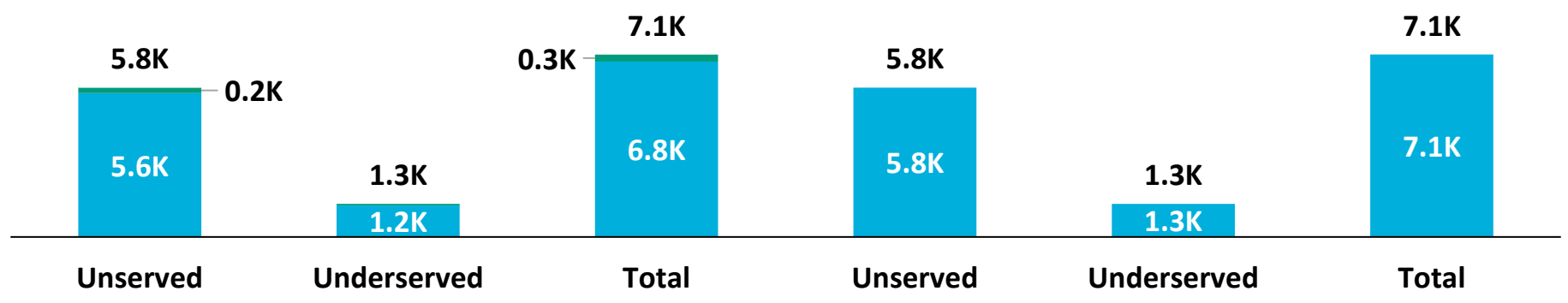
	Baseline Fiber Deployment			Maximum Fiber Deployment		
	Unserved	**Underserved**	**Total**	**Unserved**	**Underserved**	**Total**
	5.8K / 5.6K (0.2K)	1.3K / 1.2K	7.1K / 6.8K (0.3K)	5.8K / 5.8K	1.3K / 1.3K	7.1K / 7.1K
Capex Required per Locations[1]	$9,835	$5,882	$9,116	$9,813	$11,973	$10,206

	Baseline	Maximum
BEAD Funds Available to State	$144M	$144M
+ **Estimated Provider Match**	$21M	$21M
= **Total Available Capital**	$165M	$165M
− **Capex Required to Build**	$65M → +$10M →	$75M
= **Remaining Funds**	$101M	$91M
% of Locations Reached	100%	100%
% of Locations Reached with Fiber	87% → +13% →	100%

1. Funding to deploy fiber before the maximum $3k provider match per location
Connecticut fiber deployment costs are based on national averages
Source: Cartesian, FCC National Broadband Map (June 2023 data, released in November 2023), Benton, NTIA

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Connecticut | Conclusion

Funding Summary

Connecticut is expected to receive

$144M in BEAD funding

+

$21M in estimated provider matching

We estimate the funding is sufficient to reach all of Connecticut's 7.1k eligible locations with high-speed broadband

Key Findings

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

A Baseline Fiber Deployment…	vs.	Maximizing Fiber…
• Leaves $101M additional funds for affordability programs		• Leaves $91M additional funds for affordability programs
• Reaches 87% of locations with fiber		• Reaches 100% of locations with fiber
• Requires 13% to be reached with other tech.		• 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

Connecticut fiber deployment costs are based on national averages
Source: Cartesian, NTIA

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Connecticut | ACA Connects Members

Member Name
Atlantic Broadband
Consolidated Communications, Inc.
Metronet

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