

BEAD Program: A Framework to Allocate Funding for Broadband Availability

State Broadband Report: Kentucky

January 2024





1 Eligible Locations

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

14%

267K LOCATIONS

OF KENTUCKY LOCATIONS LACK HIGH-SPEED BROADBAND IN JUN 2023

VS. 9% STATE/TERRITORY AVERAGE

UNSERVED LOCATIONS, JUN. 2024



127.0K LOCATIONS

Are estimated to lack broadband access at 25/3 Mbps

UNDERSERVED LOCATIONS, JUN. 2024



53.2K 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?

\$1.1B

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

ESTIMATED BEAD FUNDING:

BEAD Funds allocated by NTIA

\$1.1B

Estimated Provider Match

\$531M

Estimated Total Capital

\$1.6B

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?

\$710M-\$929M

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

DEPLOYMENT SCENARIOS:



Baseline Fiber



Maximum Fiber

100% LOCATIONS REACHED

88% FIBER LOCATIONS

100% LOCATIONS REACHED

100% FIBER LOCATIONS





\$1.2B TOTAL CAPITAL COST

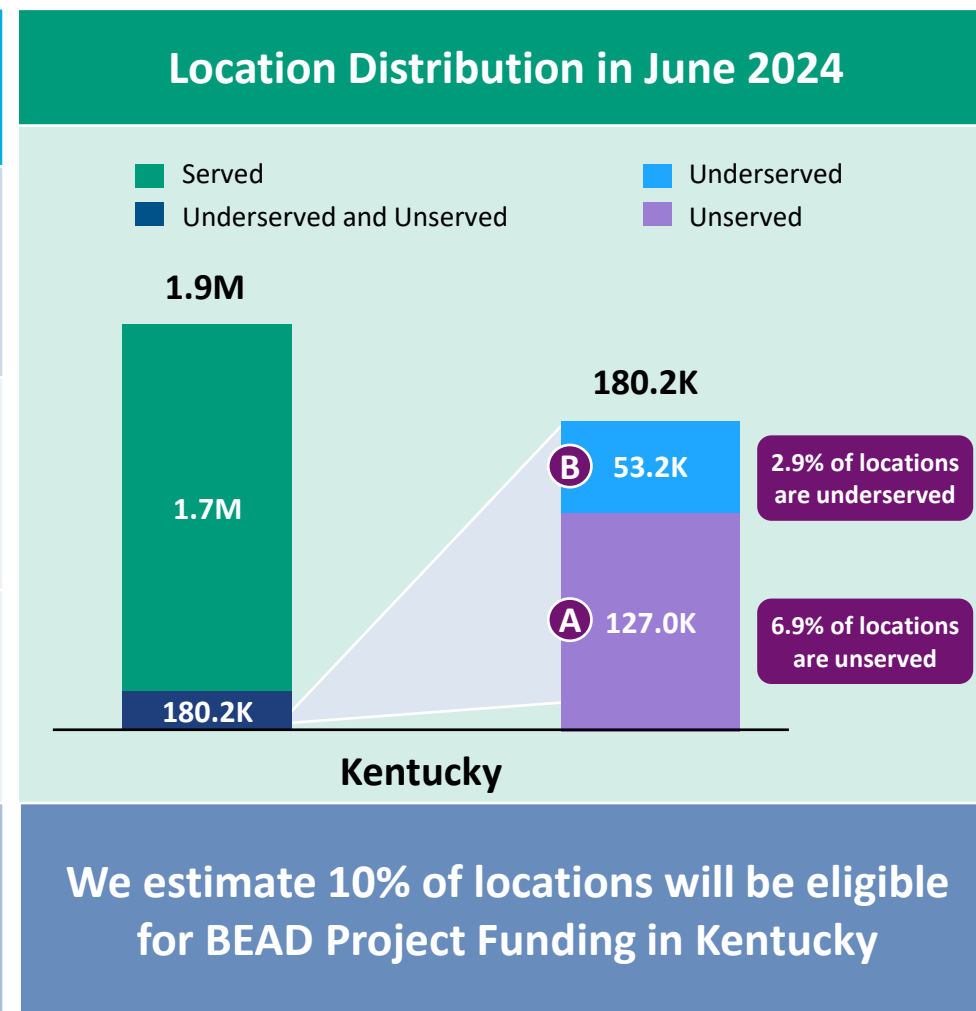
\$1.5B TOTAL CAPITAL COST

\$376M REMAINING BUDGET

\$157M REMAINING BUDGET

Kentucky | 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>
		203.2K
 Subsidy Program Funded Locations ¹	57.2K	10.8K
 Incremental Build ² (13% annual build, for 12 months)	19.0K	--
 Jun. 2024 Estimated Eligible Locations	127.0K (A)	53.2K (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

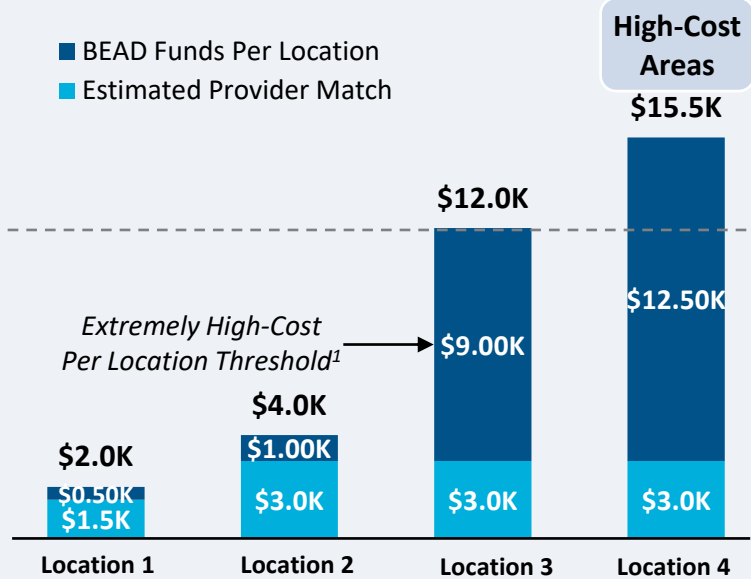
Source: Cartesian, FCC National Broadband Map (June 2023 data, released in November 2023)

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Provider Match Examples

Total Deployment Cost per Location

- BEAD Funds Per Location
- Estimated Provider Match

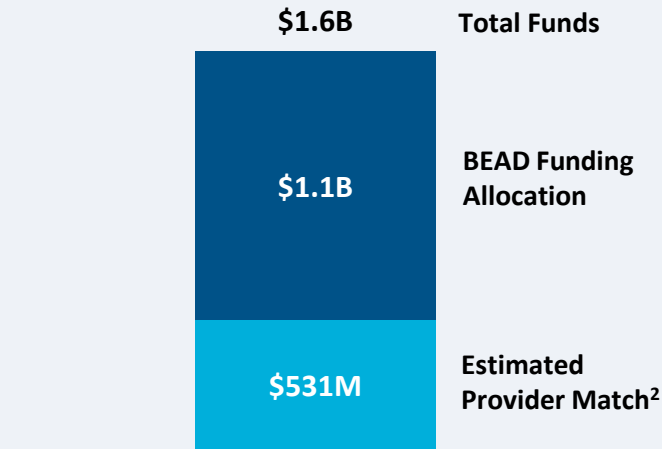


Provider Match %

75%	75%	25%	19%
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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 - Kentucky



\$1.6B in total capital is estimated to be available to serve unserved/underserved Kentucky locations (combining BEAD funding and estimated provider match)

Provider Match - Kentucky

Total Estimated Provider Match:

\$531M

Total Estimated Eligible Locations:

180.2K

Average Provider Match:

\$2,947
PER LOCATION

We estimate the average provider match will be \$2,947 – 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

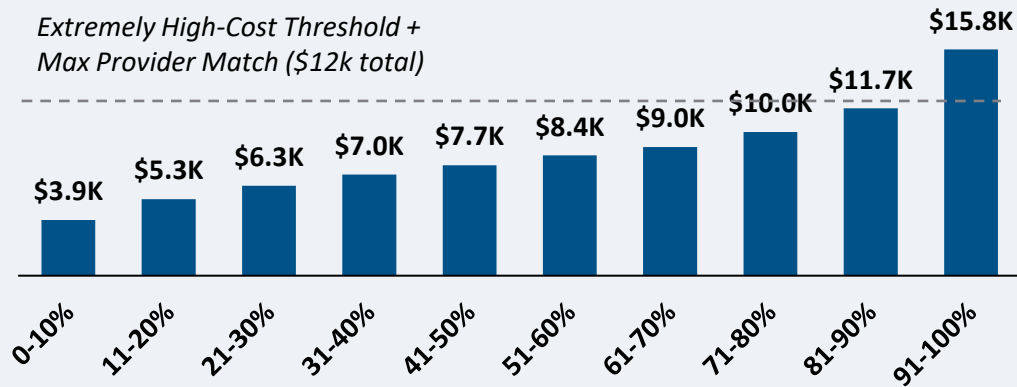
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Kentucky | Cost to Deploy Fiber by Decile

CAPEX Fiber Deployment Cost per Location Segmented by Cost Deciles¹

Unserved Locations

Overall Average Cost per Location: \$8,532

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

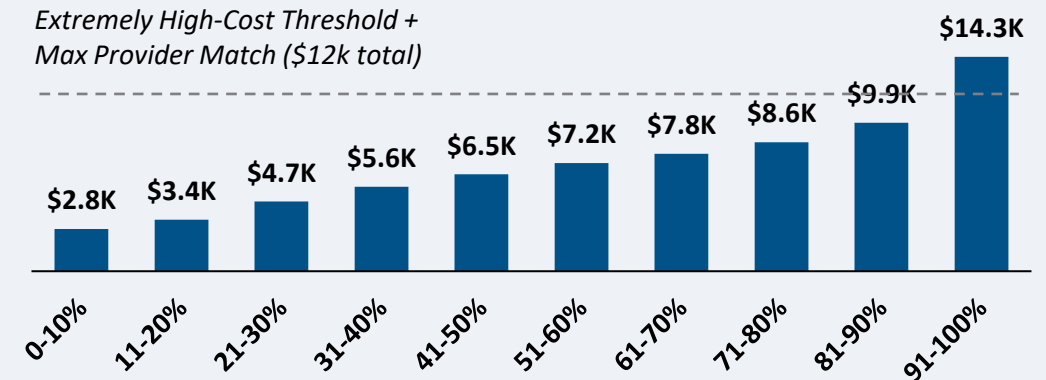
Average Tract Density (Location per sq. Mile)

12	19	8	12	16	11	10	7	6	5
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127.0K Locations

Underserved Locations

Overall Average Cost per Location: \$7,108

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

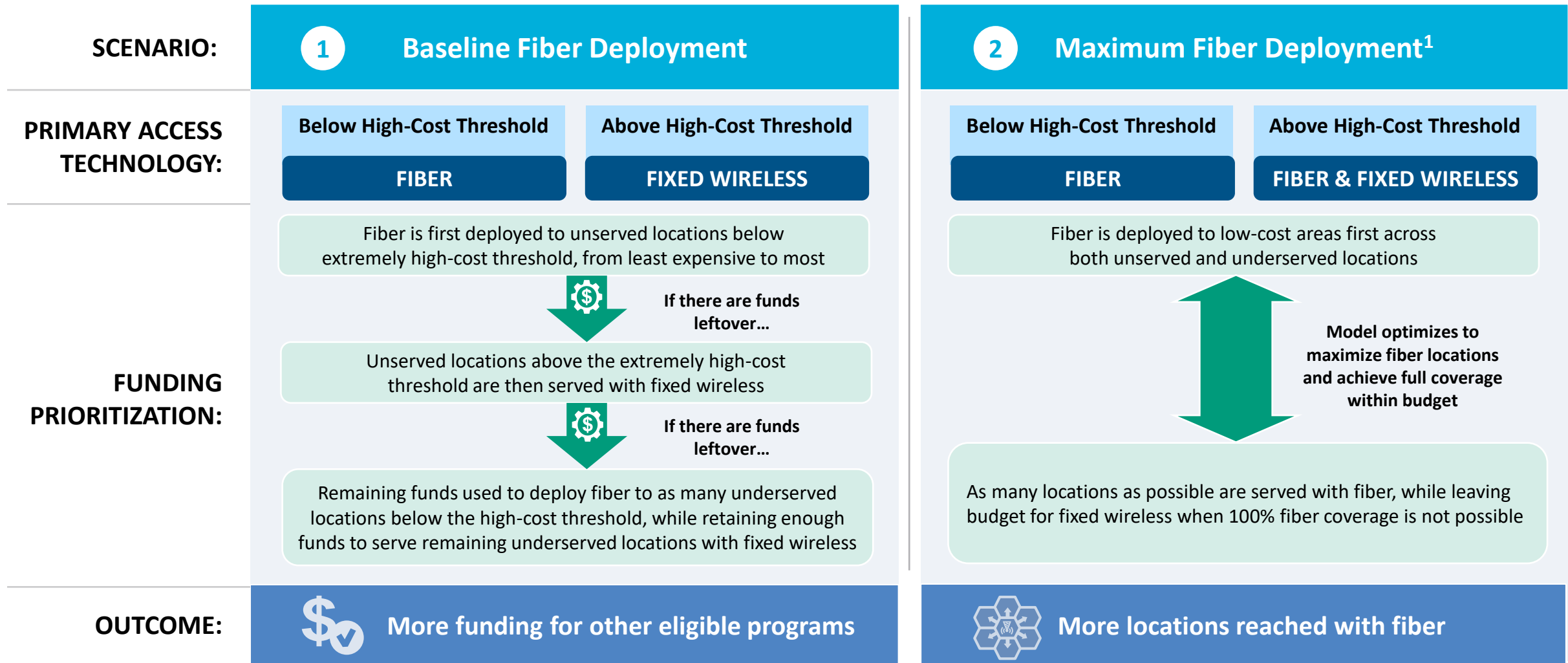
Average Tract Density (Location per sq. Mile)

47	18	8	5	7	6	4	7	5	5
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53.2K Locations

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

Kentucky | Fiber Preferencing Scenarios



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

Source: Cartesian

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3 Develop Deployment Scenarios

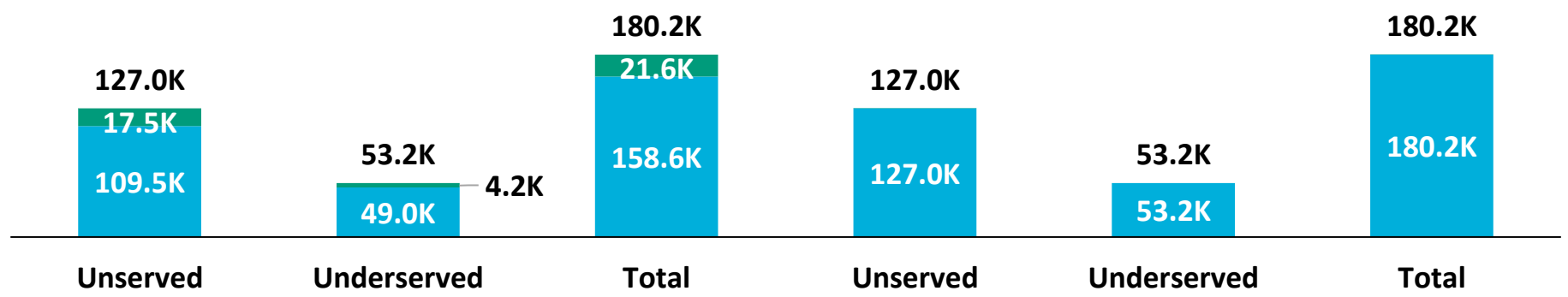
Kentucky | Scenario Analysis Results

SCENARIO:

1 Baseline Fiber Deployment

2 Maximum Fiber Deployment

■ Fixed Wireless
■ Fiber



	Scenario 1	Scenario 2
Capex Required per Locations ¹	\$7,134	\$8,522
BEAD Funds Available to State	\$1.1B	\$1.1B
+ Estimated Provider Match	\$531M	\$531M
= Total Available Capital	\$1.6B	\$1.6B
- Capex Required to Build	\$1.2B	\$1.5B (+\$219M)
= Remaining Funds	\$376M	\$157M
% of Locations Reached	100%	100%
% of Locations Reached with Fiber	88%	100% (+12%)

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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Kentucky | Conclusion



Funding Summary

Kentucky is expected to receive

\$1.1B in BEAD funding



\$531M in estimated provider matching

We estimate the funding is sufficient to reach all of Kentucky's 180.2k eligible locations with high-speed broadband



Key Findings

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

A Baseline Fiber Deployment...



Maximizing Fiber...

- Leaves \$376M additional funds for affordability programs
- Reaches 88% of locations with fiber
- Requires 12% to be reached with other tech.

- Leaves \$157M 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

Kentucky | ACA Connects Members

Member Name	
Access Cable Television, Inc.	Inter Mountain Cable, Inc.
Armstrong	Irvine Community Television
Ballard Rural Telephone Cooperative Corp, Inc.	Lycom Communications, Inc.
Barbourville Utilities Commission	Mediacom, LLC
Benton Ridge Telephone Company	Metronet
Brandenburg Telephone Company	Mountain Rural Telephone Cooperative Corporation
Cincinnati Bell, Inc.	Murray Electric System
City Of Bardstown Kybardstown Cable TV	North Central Communications
Consolidated Communications, Inc.	Peoples Rural Telephone Cooperative Corporation
Cumberland Cellular, LLC	Point Broadband, LLC
CW Cable, Inc.	Shenandoah Cable Television, LLC
Eastern Cable Corporation	South Central Telcom, LLC
EPB Of The City Of Russellville	Standard Tobacco Company, Inc.
Foothills Broadband Aka Foothills Rural	TDS Telecom
Frank Howard TV Cable, Inc.	TV Service, Inc.
Frankfort Electric Water Plant Board	Twin Lakes Communications, Inc.
Gibson Connect, LLC	West Kentucky Rural Telephone Coop Corp, Inc.
Glasgow Electric Plant Board	White Cloud Communications Us, LLC dba Broadlinc
Harlan Community Television, Inc.	



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