BEAD Program: A Framework to Allocate Funding for Broadband Availability

State Broadband Report: Texas

January 2024
1. Eligible Locations

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

9% of Texas locations lack high-speed broadband in Jun 2023 vs. 9% state/territory average

- Unserved Locations, Jun. 2024: 364.7k locations
  - Are estimated to lack broadband access at 25/3 Mbps

- Underserved Locations, Jun. 2024: 199.1k 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?

- Estimated Bead Funding:
  - Bead Funds allocated by NTIA: $3.3B
  - Estimated Provider Match: $1.6B
  - Estimated Total Capital: $4.9B

$3.3B in Bead funding has been allocated to Texas vs. $743M state/territory average

3. Deployment

How many locations can be covered with fiber and other technologies?

- Estimated Bead funding: $1.8B - $3.3B
  - Of Bead funds is required to build high-speed broadband to all eligible locations

DEPLOYMENT SCENARIOS:

Baseline Fiber

- 100% Locations reached
- 100% Fiber locations
- $3.4B total capital cost
- $1.6B remaining budget

Maximum Fiber

- 72% Locations reached
- 92% Fiber locations
- $4.9B total capital cost
- $--M remaining budget

The provider match is estimated using a high-level service provider business case. See national summary deck for full details.
Texas | Estimated Eligible Locations for BEAD Projects

### June 2023 FCC Broadband Locations

- **Subsidy Program Funded Locations**¹
  - Total: 209.4K
  - Underserved: 33.5K

- **Incremental Build**²
  - (13% annual build, for 12 months)
  - Texas: 54.5K

### Jun. 2024 Estimated Eligible Locations

- **Total Estimated Eligible Locations**: 364.7K
  - **A**: 199.1K

#### Location Distribution in June 2024

- **Served**
- **Underserved and Unserved**
- **Unserved**

We estimate 6% of locations will be eligible for BEAD Project Funding in Texas

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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)
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
## Texas | Cost to Deploy Fiber by Decile

### CAPEX Fiber Deployment Cost per Location Segmented by Cost Deciles

#### Unserved Locations

<table>
<thead>
<tr>
<th>Cost Decile</th>
<th>Average Cost per Location</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10%</td>
<td>$2.8K</td>
<td>364.7K</td>
</tr>
<tr>
<td>11-20%</td>
<td>$4.4K</td>
<td>33</td>
</tr>
<tr>
<td>21-30%</td>
<td>$5.3K</td>
<td>32</td>
</tr>
<tr>
<td>31-40%</td>
<td>$6.5K</td>
<td>27</td>
</tr>
<tr>
<td>41-50%</td>
<td>$7.6K</td>
<td>24</td>
</tr>
<tr>
<td>51-60%</td>
<td>$8.9K</td>
<td>19</td>
</tr>
<tr>
<td>61-70%</td>
<td>$10.5K</td>
<td>15</td>
</tr>
<tr>
<td>71-80%</td>
<td>$13.2K</td>
<td>15</td>
</tr>
<tr>
<td>81-90%</td>
<td>$19.6K</td>
<td>14</td>
</tr>
<tr>
<td>91-100%</td>
<td>$45.0K</td>
<td>5</td>
</tr>
</tbody>
</table>

**Overall Average Cost per Location:** $12,399

#### Underserved Locations

<table>
<thead>
<tr>
<th>Cost Decile</th>
<th>Average Cost per Location</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10%</td>
<td>$3.0K</td>
<td>199.1K</td>
</tr>
<tr>
<td>11-20%</td>
<td>$3.5K</td>
<td>53</td>
</tr>
<tr>
<td>21-30%</td>
<td>$4.3K</td>
<td>33</td>
</tr>
<tr>
<td>31-40%</td>
<td>$5.2K</td>
<td>31</td>
</tr>
<tr>
<td>41-50%</td>
<td>$6.6K</td>
<td>12</td>
</tr>
<tr>
<td>51-60%</td>
<td>$8.3K</td>
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<tr>
<td>61-70%</td>
<td>$10.0K</td>
<td>16</td>
</tr>
<tr>
<td>71-80%</td>
<td>$12.5K</td>
<td>14</td>
</tr>
<tr>
<td>81-90%</td>
<td>$16.1K</td>
<td>9</td>
</tr>
<tr>
<td>91-100%</td>
<td>$34.4K</td>
<td></td>
</tr>
</tbody>
</table>

**Overall Average Cost per Location:** $10,468

**Average Tract Density (Location per sq. Mile):**

#### Unserved Locations

- 68
- 33
- 32
- 27
- 24
- 19
- 15
- 15
- 14
- 5

#### Underserved Locations

- 53
- 33
- 14
- 31
- 12
- 14
- 12
- 16
- 14
- 9

**364.7K Locations**

**199.1K Locations**

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1. Chart values are average cost per location for each decile bucket.

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5.0
### Scenario 1: Baseline Fiber Deployment

**PRIMARY ACCESS TECHNOLOGY:**
- Below High-Cost Threshold: Fiber
- Above High-Cost Threshold: Fixed Wireless

**FUNDING PRIORITIZATION:**
- Fiber is first deployed to unserved locations below extremely high-cost threshold, from least expensive to most.
- Unserved locations above the extremely high-cost threshold are then served with fixed wireless.
- 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.

**OUTCOME:**
- More funding for other eligible programs

### Scenario 2: Maximum Fiber Deployment

**PRIMARY ACCESS TECHNOLOGY:**
- Below High-Cost Threshold: Fiber
- Above High-Cost Threshold: Fiber & Fixed Wireless

**FUNDING PRIORITIZATION:**
- Fiber is deployed to low-cost areas first across both unserved and underserved locations.
- As many locations as possible are served with fiber, while leaving budget for fixed wireless when 100% fiber coverage is not possible.

**OUTCOME:**
- More locations reached with fiber

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

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Source: Cartesian
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## Texas | Scenario Analysis Results

### SCENARIO:

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Total</th>
<th>Unserved</th>
<th>Underserved</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Baseline Fiber Deployment</strong></td>
<td>563.8K</td>
<td>156.5K</td>
<td>199.1K</td>
<td>407.2K</td>
</tr>
<tr>
<td><strong>2. Maximum Fiber Deployment</strong></td>
<td>563.8K</td>
<td>516.8K</td>
<td>199.1K</td>
<td>715.9K</td>
</tr>
</tbody>
</table>

### Fixed Wireless vs. Fiber

- **Fixed Wireless:** 102.4K, 54.2K, 46.9K, 46.9K, 0.0K
- **Fiber:** 262.3K, 144.9K, 54.2K, 364.7K, 199.1K

### Key Figures

1. **BEAD Funds Available to State:** $3.3B
2. **Estimated Provider Match:** $1.6B
3. **Total Available Capital:** $4.9B
4. **Capex Required to Build:** $3.4B (Baseline), $4.9B (Maximum)
5. **Remaining Funds:** $1.6B (Baseline), $--M (Maximum)

### Results

- **% of Locations Reached:**
  - Baseline: 100%
  - Maximum: 100%
- **% of Locations Reached with Fiber:**
  - Baseline: 72%
  - Maximum: 92%

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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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Texas | Conclusion

### Texas will need to decide how far to deploy fiber while considering the trade-off of having higher fiber coverage vs. retaining funds for other BEAD eligible programs

<table>
<thead>
<tr>
<th>A Baseline Fiber Deployment...</th>
<th>Vs.</th>
<th>Maximizing Fiber...</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Leaves $1.6B additional funds for affordability programs</td>
<td>• Exhausts funds without leaving additional funds for affordability programs</td>
<td></td>
</tr>
<tr>
<td>• Reaches 72% of locations with fiber</td>
<td>• Reaches 92% of locations with fiber</td>
<td></td>
</tr>
<tr>
<td>• Requires 28% to be reached with other tech.</td>
<td>• Requires 8% to be reached with other tech.</td>
<td></td>
</tr>
</tbody>
</table>

**Funding Summary**

Texas is expected to receive

- $3.3B in BEAD funding
- $1.6B in estimated provider matching

We estimate the funding is sufficient to reach all of Texas’s 563.8k eligible locations with high-speed broadband.

**Key Findings**

- Texas is expected to receive $3.3B in BEAD funding + $1.6B in estimated provider matching.
- States/Territories will set their own extremely high-cost threshold and may choose a threshold or funding paradigm different from these two scenarios.
# Texas | ACA Connects Members

<table>
<thead>
<tr>
<th>Member Name</th>
<th>Member Name</th>
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</thead>
<tbody>
<tr>
<td>American Broadband</td>
<td>Industry Inet, Inc.</td>
</tr>
<tr>
<td>Astound Broadband</td>
<td>Metronet</td>
</tr>
<tr>
<td>Beamspeed</td>
<td>MidAtlanticBroadband, Inc.</td>
</tr>
<tr>
<td>Broken Bow Cable</td>
<td>Mountain Zone TV Systems</td>
</tr>
<tr>
<td>Cable One, Inc.</td>
<td>Nortex Communications</td>
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<tr>
<td>Cableco, LLC</td>
<td>NTS</td>
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<tr>
<td>Cap Rock Telephone Cooperative</td>
<td>Southern Plains Cable TV</td>
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<td>Coastallink Communications, LLC</td>
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<td>GenerateUbiquity Management, LLC</td>
<td>Vyve</td>
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<td>Geus</td>
<td>Westex Telco, LLC</td>
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<td>XIT Telecommunications Technology</td>
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<td>Hotwire Communications Ltd</td>
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