High Cost and the Connect America Fund

Expanding access to modern communications networks across rural America

Presentation to NARUC Staff Subcommittee on Telecommunications

Phoenix, AZ

July 14, 2018
Welcome

Today’s Speaker:

Victor Gaither
Vice President of High Cost
USAC
Agenda

Connect America: Modernizing High Cost

The HUBB Portal: Tracking Broadband Deployment

Compliance: Ensuring Program Integrity

Mobility Fund II Challenge Process: Expanding 4G LTE
Connect America: Modernizing High Cost
Program Goals

• Preserve and advance universal availability of voice service

• Drive universal availability of modern networks capable of providing voice and broadband service to homes, businesses and community anchor institutions

• Drive universal availability of modern networks capable of providing advanced mobile voice and broadband service

• Ensure that rates for broadband and voice services are reasonably comparable in all regions of the nation

• Contain administrative costs and minimize the universal service contribution for consumers and businesses through efficient, effective program management
Modernization of the High Cost Program Creates the Connect America Fund

Since 2011, a series of FCC modernization orders has radically transformed the High Cost Program to create the Connect America Fund.

**Legacy**
- High Cost
- Voice
- Maintaining service
- Cost-based funding
- Forms-based reporting requirements
- Beneficiary audits
- Compliance

**Modernized**
- Connect America
- Voice and broadband
- Maintaining and expanding service
- Incentive-based support
- Systems-based portal
- In-program deployment verification
- Success
## Connect America Program

### CAF Funding in Price Cap Areas

<table>
<thead>
<tr>
<th>CAF Phase I Incremental</th>
<th>CAF Phase II Model</th>
<th>CAF Phase II Auctions</th>
<th>Rural Broadband Experiments (RBE)</th>
<th>CAF Intercarrier Compensation (ICC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Interim program to spur broadband deployment</td>
<td>• Provides support based on a cost model</td>
<td>• Provides support through a reverse auction to areas declined in CAF II, extremely high-cost areas and certain other census block that were removed from model offer</td>
<td>• Provided support in Price Cap areas through an auction</td>
<td>• Allows recovery of revenues reduced due to ICC reforms in 2012</td>
</tr>
<tr>
<td>• $486 million</td>
<td>• $1.7 billion annually</td>
<td>• Six-year support term</td>
<td>• $41 million over ten years</td>
<td>• Support intended to invest in broadband infrastructure</td>
</tr>
<tr>
<td>• Build out to locations unserved by 4/1 Mbps</td>
<td>• Provide locations with speeds of at least 10/1 Mbps</td>
<td>• Ten-year term of support</td>
<td>• Build out to unserved locations with speeds between 10/1 Mbps and Mbps</td>
<td>• Program will phase out for Price Cap carriers in July 2019</td>
</tr>
<tr>
<td>• 523,753 locations deployed over two rounds</td>
<td>• Deployed by Dec 2020, 3.5 million locations</td>
<td>• Build out to unserved locations with speeds of at least 10/1 Mbps to 1GB/500Mbps</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Connect America Program

### CAF Funding in Rate-of-Return Areas

<table>
<thead>
<tr>
<th>Alternative Connect America Cost Model (A-CAM)</th>
<th>High Cost Loop Support (HCLS)</th>
<th>Connect America Broadband Loop Support (CAF BLS)</th>
<th>CAF Intercarrier Compensation (ICC)</th>
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</thead>
<tbody>
<tr>
<td>• Support based on cost model</td>
<td>• Legacy program to support voice</td>
<td>• Supports voice, voice and broadband, and broadband-only services</td>
<td>• Allows recovery of revenue reduced due to ICC reforms in 2012</td>
</tr>
<tr>
<td>• Provide locations with speeds of at least 10/1 Mbps and 25/3 Mbps</td>
<td>• Provides support for the last mile of connection in areas where the cost to provide service exceeds 115 percent of the national average cost</td>
<td>• Replaced ICLS</td>
<td>• Support intended to invest in broadband infrastructure</td>
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<tr>
<td>• Some 4/1 Mbps and reasonable request</td>
<td></td>
<td>• Five-year deployment obligation milestone</td>
<td>• CAF ICC support recipients must provide broadband with minimum speed requirements of 4/1 Mbps</td>
</tr>
<tr>
<td>• 714,000 locations deployed by 2026</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Connect America Program

## CAF Funding in Non-Contiguous Areas

### Alaska Plan
- Aims to provide 10/1 Mbps service to as many Alaskans as possible
- Given unique climate conditions and geographic challenges, deployment obligations are tailored to each Alaska carrier’s circumstances
- Filing obligations include both last-mile wireline locations served, as well as middle mile infrastructure (including fiber and microwave network maps)

### Uniendo a Puerto Rico And Connect USVI Fund
- Almost $900 million in medium and long-term support to restore communications networks following 2017 storms and improve broadband access on the islands
- Immediate infusion of almost $64 million for near-term restoration efforts
- Proposing fixed broadband investment of $444.5 million for Puerto Rico and $186.5 million for the Virgin Islands over next decade
- Proposing investment of $259 million to expand 4G LTE service in Puerto Rico and Virgin Islands
## Connect America Program

### CAF Funding – Mobile Services

#### Mobility Fund Phase I
- $300 million in non-tribal areas
- $50 million in tribal lands
- Build-out of networks to support:
  - 3G – 50/200 Kbps
  - 4G – 200/768 Kbps
  - Voice and Broadband Services
  - Letter of credit requirement

#### Mobility Fund Phase II
- $4.53 billion over 10 years
- Will support build-out of 4G LTE wireless networks
- Will target funding at places that lack unsubsidized 4G LTE service with minimum download speeds of at least 5 megabits per second
- Voice and broadband services
- Letter of credit requirement
The HUBB Portal: Tracking Broadband Deployment
High Cost Universal Broadband (HUBB) Portal

A system that collects the geographic coordinates (latitude and longitude) of locations where carriers are deploying broadband using Connect America support

- A tool for collecting location-specific service availability data from carriers across all Connect America Fund (modernized) programs – millions of individual records
- Real-time validation of data submissions
- Serves as a platform for verification and compliance
- Provides the foundation for a public map that will show the impact of CAF funding on broadband expansion across rural America
- Began with the July 2017 filing for Price Cap carriers, followed by March 2018 filing for carriers in multiple modernized funds
Deployment Data Currently in the HUBB

As of the March 2018 filing deadline, carriers participating in the following funds had filed latitude and longitude coordinates for all locations deployed in the following years:

- **Connect America Fund (CAF) Phase II**: locations deployed in 2016 and 2017, as well as any locations deployed before 2016 that carriers have *refiled* with the HUBB to meet deployment milestones
- **Alternative Connect America Cost Model (A-CAM)**: locations deployed in 2017
- **Rural Broadband Experiments (RBE)**: locations deployed in 2017
- **Alaska Plan (other than carriers with individualized performance plans that only require them to maintain service at existing levels)**: wireline, last mile end-user locations deployed in 2017 (and 2016 on an optional basis)
- **Connect America Fund-Broadband Loop Support (CAF-BLS - less than 80 percent deployed)**: locations deployed from May 26, 2016 (the effective date of the Rate of Return order) – December 31, 2017
What data is USAC collecting?
(may vary by fund and with new HUBB releases)

<table>
<thead>
<tr>
<th>Field</th>
<th>Example</th>
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<td>SAC*</td>
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<tr>
<td>Longitude*</td>
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<td>Download/Upload Speed Tier*</td>
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<td># of Units*</td>
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HUBB Resources

For more information about the HUBB, please visit the HUBB Resources Page on the High Cost Website:


Resources include:
Links to FCC Public Notices and Orders
FAQs
A Guide to Geolocation Practices
Data Formatting Instructions
USAC created a tool to give state commissions access to data in the HUBB for their states by filing year and fund. Tool launched on August 28, 2017.

The data in the HUBB, along with the data filed on carriers’ FCC Forms 481, will assist states in making their annual October certification of eligible telecommunications carriers (ETCs) pursuant to 47 CFR § 54.314.

USAC is seeking state commission officials to participate in user testing for the HUBB state access tool in early August. If interested, please contact Joelle Tessler at Joelle.Tessler@usac.org
HUBB STATE ACCESS TOOL

This tool provides state commissioners with the deployed location data currently in the online HUBB Portal certified as of the date provided below. In the search criteria below, please select the “Fund Type” and “Filing Year” then select “Search” and your results will populate below for browser viewing. You can download the selected location data in a .csv (commas separated value) file by clicking the “Export” button. To view the carrier’s progress towards meeting it total deployment obligation (the percentage towards meeting its final milestone), click the SAC number in the table after your results are populated.

Please note: Certain fields in the glossary (For Example, “City”) are not shown in the browser view but are available upon download.

You can find details on all fields in the HUBB State Access Tool - Data Glossary.

Search Criteria

State *
Select

Fund Type *
Select

Filing Year *
Select

Data provided are locations certified as of midnight May 01, 2018 to account for certifications after the March 1 deadline.

* Required Field
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<th>Longitude</th>
<th>Date of Deployment</th>
<th>Download/Upload Speed Tier</th>
<th>Address</th>
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</table>
USAC is developing a public map that will show the impact of Connect America Fund support on broadband expansion across rural America. The CAF Map will:

• Use broadband deployment data submitted by carriers to the HUBB
• Display USF-funded broadband network availability by location, technology, speeds
• Display summary data by state, as well as individual broadband deployment location

The CAF Map will be linked to USAC’s Open Data platform, which is where the data will reside.

CAF Map launching in 2018
USAC Open Data

Using the power of data to provide insights and transparency into universal service programs

- E-rate
  Explore and analyze the datasets within the E-rate Program
- High Cost
  Explore and analyze the datasets within the High Cost Program
- Lifeline
  Explore and analyze the datasets within the Lifeline Program
- Rural Health Care
  Information not available, coming soon
Compliance: Ensuring Program Integrity
CAF compliance process consists of two parts:

**Validations and Verifications**

To ensure that carriers participating in modernized funds are building out broadband as required
Validations

- Automated in the HUBB

- Ensure that latitude and longitude of a reported location fall within area eligible for funding and that the location is not a duplicate of one already submitted

- Support calculation of milestone compliance (i.e. > or < 40 percent as of 12/31/17)
Confirming Broadband Buildout

Verifications

• After a carrier’s locations are certified and validated in the HUBB, High Cost staff conducts verification review to ensure carriers have deployed broadband at the reported locations
• Process begins with announcement to carrier and sample selection
• Carriers submit documentation to show evidence of broadband deployment
  ▪ Documentation may include customer subscription records and online service qualification tools
  ▪ Documentation will be unique to each carrier and may vary by region of the country
• USAC reviews documentation and provides feedback to carriers
• USAC conducts exit conference to discuss results of the review with carrier
• Closure letter identifies any locations that fail to meet deployment obligations, if applicable
FCC Form 481

Annual submission required of all carriers that receive High Cost support with the exception of carriers that only receive Mobility Fund support

Contains operational and financial information used to validate carrier support, including:

- Functionality in emergency situations
- Tribal lands reporting
- Rate comparability
- Balance sheet, income statement, cash flow statements for privately held Rate of Return carriers
FCC Form 481

- Filing is due July 16 this year
- Filing must be made via online 481 system, accessible through USAC’s E-file system
- Starting with the 2018 filing year, USAC will provide public access to most Form 481 data
  - Carriers can request confidential treatment of data not considered confidential by default
    - FCC will make determination on confidentiality requests
  - USAC will provide state commissions and tribes with access to all Form 481 data for carriers that serve their states
    - Carriers no longer have to file Form 481 separately with state commissions and tribes
    - State commissions and tribes will access Form 481 data through the existing 54.314 certification system in order to perform the 54.314 certifications (October certifications)
      - USAC has granted access to the 54.314 certification system to at least one person at every state commission
## 54.314 Certification

Please select the Study Area Codes (SACs) to be certified below.

<table>
<thead>
<tr>
<th>Select All</th>
<th>SAC</th>
<th>Carrier Name</th>
<th>State</th>
<th>Carrier Type</th>
<th>Certified Last Year</th>
<th>Certified This Year</th>
<th>Filing Number</th>
<th>Status</th>
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<tbody>
<tr>
<td></td>
<td>810000</td>
<td>ADAK TEL UTILITY</td>
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<td>ILEC</td>
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<td></td>
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</tr>
</tbody>
</table>

Filing Year: 2017

[Download 481 Filing]

[Proceed to Certification]
FCC Form 690

Annual submission required of all carriers that receive Mobility Fund support

- Contains operational information
  - Coverage and performance
  - Tribal lands reporting
  - Project update
- Filing must be made via online 690 system, accessible through USAC’s E-file system
- Filing was due July 2
- Carriers must file with the FCC, USAC and state commissions
  - State commissions use to inform their 54.314 certifications
Mobility Fund II Challenge

Process:
Expanding 4G LTE Service
Mobility Fund Phase II (MF-II) Challenge Process

- MF-II will make up to $4.53 billion available over 10 years (up to $453 million annually) to preserve and expand 4G LTE wireless coverage in unserved rural areas, including tribal lands
  - According to the FCC, at least 575,000 square miles (about 750,000 road miles and 3 million people) either lack 4G LTE service or are being served only by subsidized providers

- MF-II will target funding at places that lack unsubsidized 4G LTE service with minimum download speeds of at least 5 megabits per second

- The MF-II Challenge Process gives stakeholders an opportunity to submit evidence through a USAC portal to show that an area lacks unsubsidized wireless service with minimum download speeds of at least 5 megabits per second and should therefore be eligible for support
  - **Challenge Process is open to wireless providers, as well as state, local and tribal government entities**
  - Challenge Process portal opened on March 29, 2018
MF-II Challenge Process: How it Works

• **INITIAL ELIGIBILITY:** To determine which areas should be eligible for MF-II support, the FCC collected standardized, up-to-date 4G LTE coverage data from mobile providers and supplemented that data with existing USAC subsidy information.

• **THE CHALLENGE PROCESS:** The MF-II Challenge Process gives wireless carriers, as well as state and local government entities, the opportunity to contest the coverage data used to determine initial eligibility. Challengers submit speed test measurements taken in areas initially deemed ineligible to demonstrate that existing coverage is below the 5-megabits-per-second minimum speed benchmark.

• **THE RESPONSE:** Wireless providers that serve a challenged area will have the opportunity to respond to a challenge by submitting their own speed test data and speed reduction reports.

• **FINAL ELIGIBILITY:** When the Challenge Process is complete, the FCC will determine and publish the final list of areas eligible for the MF-II support. MF-II will then use a reverse auction to award ongoing support to winning bidders that commit to offer service in eligible areas.
Requesting Access to the MFII Challenge Process Portal

https://www.fcc.gov/MF2-Challenge-Portal/form
Step 1: Downloading Data

- The **Download Data** page allows you to download a zip archive containing confidential, provider-specific coverage maps (polygon shapefiles), as well as baseline eligible areas and tabular data for each state (or state equivalent).

- In order to view polygon shape files, you will need software that can view shape files (.cpg, .dbf, .prj, .shp, .shx), such as ArcGIS or QGIS.

- This data is used for purposes of creating “Challenges” to coverage areas.

- Each state and state equivalent is intersected by a 1 km² grid.
Step 2: Creating Challenges

- Authorized user can download the speed test template and help manual
- Users can upload Challenge speed test data file by state (or state equivalent)
Collecting and Formatting Speed Test Data

- Challenger Speed Test files must be structured according to the USAC file template, which shows all the fields that you must include.
- You must upload your Challenger Speed Test file to the Mobility Fund II Challenge System as a plain-text CSV file. To convert a Microsoft Excel (.xlsx) spreadsheet into a CSV file, within Excel, select File > Save As, choose CSV (Comma delimited), and select Save.

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<tr>
<th>Field</th>
<th>Sample</th>
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</table>
Creating a Challenge for a State

- Select the state for which you would like to upload speed test data from the dropdown menu on the Challenge Upload form.
- Click on the Upload File button.
- Select a properly formatted Challenger Speed Test CSV file from your computer and click OK to upload the file.
Step 3: Validating Data

- Challenge speed test data can be viewed on a map
- Each speed test point is buffered
- System validates which part of coverage map(s) have been “Challenged” with speed test data < 5 Mbps
Step 4: Certifying Challenges

- Challengers must certify to the accuracy and completeness of the submitted data in order to complete the challenge for one or more grid cell.
- A particular 1 km² grid cell is presumptively considered “Challenged” if $\geq 75\%$ of the coverage is “tested”
Mobility Fund Phase II Challenge Process Resources

For more information, please visit the MF-II Challenge Process resource page on the High Cost Website:


Resources include:
Links to Initial Eligible Areas Map and Portal Access Request Form
Links to FCC Public Notices, Orders and Webinar User Guide and Data Formatting Instructions
Data Upload Template
Questions?