

The 5G Fund for Rural America: Legacy High-cost Support Program Reforms

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Questions

At any point during or after this webinar
you can email questions to:

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Rural Broadband Auctions Overview

- **Connect America Fund Phase II (completed):**
 - \$1.48 billion over 10 years for fixed broadband and voice services
- **Rural Digital Opportunity Fund (in progress):**
 - Up to \$20.4 billion over 10 years for fixed broadband and voice services
 - Phase I: up to \$16 billion (Auction 904)
 - Phase II: up to \$4.4 billion + remainder of Phase I budget
 - Phase I auction bidding commenced on October 29, 2020
- **5G Fund for Rural America (adopted):**
 - Up to \$9 billion for 5G service in two phases
 - Phase I: up to \$8 billion
 - Phase II: up to \$1 billion + remainder of Phase I budget
 - Phase II will support network deployments facilitating precision agriculture

How Did We Get Here?

- **2011 USF Transformation Order**
 - Introduced new funding approach for mobile high-cost areas using competitive bidding to allocate support
 - Froze and commenced 5-year phase-down of legacy mobile high-cost support
- **2012 Mobility Fund Phase I & Tribal Mobility Fund Phase I**
 - Awarded one-time support for carriers to deploy 3G & 4G LTE services in unserved areas
 - Mobility Fund Phase I awarded \$300 million in support for unserved/underserved areas
 - Tribal Mobility Fund Phase I awarded \$50 million in support specifically for Tribal areas
- **2014 Legacy Mobile High-cost Support Phase-down Paused**
 - Phase-down of legacy mobile high-cost support was paused at 60% of the frozen level because FCC had not yet implemented Mobility Fund Phase II

Mobility Fund Phase II

- **2016 Working Toward Mobility Fund Phase II Staff Report**
 - Staff analyzed and issued a report detailing the extent of 4G LTE coverage and the misallocation of legacy mobile high-cost support:
 - Up to 75% of legacy high-cost support may be misallocated, and
 - Only 20% of the country lacked unsubsidized 4G LTE service
 - Report concluded that mobile carriers receive approximately \$300 million each year in subsidies to provide service even though those subsidies are unnecessary to ensure the availability of 4G LTE in subsidized areas
- **2017 Mobility Fund Phase II Established**
 - FCC established the framework for the Mobility Fund Phase II auction to award up to \$4.53 billion in support for carriers to deploy 4G LTE service
 - Areas eligible for support: places that lacked unsubsidized 4G LTE service with minimum speeds of 5 Mbps as reported through one-time collection of data generated using standardized propagation modelling parameters

Mobility Fund Phase II

- **2018 Mobility Fund Phase II Challenge Process**

- Carriers and state, local, or Tribal governmental entities could challenge accuracy of coverage data during a window to file challenges
 - Challenges adjudicated as successful would make eligible otherwise ineligible areas
- Challengers required to conduct and submit speed tests showing download speeds < 5 Mbps using carrier-approved handsets

- **2019 Mobility Fund Phase II Coverage Map Investigation Report**

- Staff launched an investigation of whether major carriers violated the mapping rules in light of challenges and evidence submitted in the record
- Staff conducted drive tests in 12 states to evaluate coverage data accuracy
- Staff report concluded that 4G LTE coverage data submitted by three major carriers did not match actual coverage in many cases
- Report recommended terminating Mobility Fund Phase II challenge process

5G Fund for Rural America Framework

- In October 2020, the Commission adopted the 5G Fund for Rural America to replace Mobility Fund Phase II
- Up to \$9 billion in support over 10 years
 - High-cost support to serve areas with voice and 5G mobile broadband service
- Two-phased auction approach
 - Phase I: award support to deploy to areas that will not see timely 5G service absent funding based upon collection of new coverage data (up to \$8 billion)
 - Phase II: award support to deployments that facilitate precision agriculture, as well as any areas unserved after Phase I auction (remainder of \$9 billion)
- Multi-round, reverse clock auction format, similar to CAF Phase II and Rural Digital Opportunity Fund Phase I auction formats

Changes to Legacy High-cost Support

- The 5G Fund R&O also adopted changes to the legacy high-cost support program that will take effect beginning January 1, 2021
- Legacy high-cost support only provided to mobile competitive ETCs
- Freeze remaining unfrozen high-cost support at 2020 levels
- 5G broadband public interest obligations for legacy support recipients
 - Carriers must use an increasing percentage of legacy support on the deployment, maintenance, and operation of networks that support 5G
 - 5G deployments must meet specified performance requirements
 - Legacy support recipients must submit initial and annual reports on their current service offerings
 - Staff will propose and, after notice-and-comment, adopt carrier-specific 5G deployment coverage requirements for legacy support recipients
- Geographic flexibility in the use of legacy support for carriers that have multiple study areas (directly or via affiliated competitive ETCs)

Legacy Support Public Interest Obligations

- Legacy support recipients must spend an increasing percentage of support on 5G service as a new broadband public interest obligation:
 - 2021 requirement: at least 1/3rd of legacy support
 - 2022 requirement: at least 2/3rd of legacy support
 - 2023 requirement and thereafter: all legacy support
- Legacy support recipients that cannot meet the 2021 support usage requirement may avail themselves of support usage flexibility
 - Competitive ETCs taking advantage of such flexibility must proportionally increase the amount they spend in 2022 to make up for any shortfall in 2021
 - Additionally, carriers must file a certification with WCB early next year to take advantage of this flexibility
- Support must be used for the deployment, maintenance, and operation of mobile networks that provide voice and broadband data services meeting the 5G-NR technology standard and that meet performance requirements

Legacy Support Usage Example

- For example, assume a competitive ETC receives \$12 million per year in legacy high-cost support:
 - 2021 requirement: at least \$4 million (1/3rd of \$12 million)
 - 2022 requirement: at least \$8 million (2/3rd of \$12 million)
 - 2023 requirement and thereafter: \$12 million
- If its 2021 budget is already largely set and the competitive ETC can only spend \$2 million of its 2021 legacy support on 5G:
 - Actual 2021 support usage: \$2 million
 - 2022 requirement: at least \$10 million
 - The carrier must also submit a certification to WCB indicating how much it will spend in 2021 and certifying that it will make up the shortfall in 2022

Additional Legacy Support Public Interest Obligations

- The Commission directed staff to analyze the amount of legacy support each competitive ETC receives and determine carrier-specific 5G deployment coverage requirements
 - OEA/WCB will propose and seek comment on coverage requirements and service milestone schedules for each legacy support recipient, including whether to adopt any *de minimis* exceptions to these requirements
- Legacy support recipients must meet other public interest obligations:
 - Allow reasonable collocation by other carriers on cell-site infrastructure constructed with universal service support
 - Comply with the Commission's voice and data roaming obligations
 - Offer services at rates reasonably comparable to those offered in urban areas

Legacy Support 5G Performance Requirements

- 5G services provided using legacy support must meet minimum baseline performance requirements:
 - 5G-NR (3GPP release 15+ or any subsequent release adopted by WCB/OEA)
 - Data speeds: median of 35 / 3 Mbps with $\geq 90\%$ of measurements recording at least 7 / 1 Mbps
 - Latency: 100 milliseconds or less
 - Data allowance: at least one service plan with a data allowance equal to the average U.S. subscriber data usage as specified by OEA/WCB

Legacy Support Reporting Requirements

- Initial report of current service offerings (3 months after PRA approval):
 - Information about the carrier's current service offerings, including:
 - The highest level of technology deployed,
 - The target date for 5G broadband service deployment, and
 - Estimate of the percentage of area covered by 5G deployment
 - Accounting for how legacy support has been used for the previous 12 months
 - Detailed cell-site infrastructure information
 - Certifications about submission of deployment data and compliance
- Annual reports (July 1 of each year after submission of initial report):
 - Updated information about the carrier's current service offerings
 - Accounting of how legacy support has been used for the prior calendar year
 - Updated cell-site infrastructure information
 - Certifications about submission of deployment data and compliance
- Service milestone reports

Transitioning from Legacy High-cost Support

- The 5G Fund R&O also adopted a schedule to complete the reform of legacy high-cost support begun in the 2011 *Transformation Order*
- The transition of legacy support to 5G Fund support will be broadly similar to the schedule adopted for Mobility Fund Phase II
 - Legacy support will be phased down over 2 years in areas not eligible for 5G Fund support after map of final eligible areas is released
 - Legacy support will be phased down over 2 years for a recipient that is not the winning bidder for its subsidized area
 - Legacy support will be maintained for up to 5 years for one recipient in eligible areas not won in a 5G Fund auction

Legacy Support Transition Schedule

Eligibility	Auction Result	Bidder or Recipient Status	Support Type & Timing
Ineligible			2-year phase down commences after release of final eligible areas
Eligible	Won in auction	Carrier is the winning bidder but does not receive legacy support for the area it won	5G Fund support commences after auction close and bidder is authorized
Eligible	Won in auction	Carrier is the winning bidder and is a legacy support recipient for the area it won	Legacy support ceases and 5G Fund support commences after close of the auction and bidder is authorized for area
Eligible	Won in auction	Carrier is a legacy support recipient but is not the winning bidder in the area for which it receives support	Legacy support ceases and 2-year phase down commences after auction close
Eligible	Not won in auction	Carrier is a legacy support recipient but does not receive the minimum level of sustainable support for the area for which it receives support	Legacy support ceases and 2-year phase down commences after auction close
Eligible	Not won in auction	Carrier is a legacy support recipient and receives the minimum level of sustainable support for the area for which it receives support	Legacy support continues for no more than 5 years

Disaggregation of Legacy Support

- After the Commission releases the final map of areas eligible for 5G Fund Phase I support, legacy support will be disaggregated
 - In areas eligible for 5G Fund support, legacy support recipients will continue to receive legacy support until at least the close of the Phase I auction
 - In areas ineligible for 5G Fund support, legacy support will be phased down over 2 years (2/3rd of support in year one and 1/3rd of support in year two)
- The Commission will determine the areas eligible for the 5G Fund Phase I auction based on new mobile coverage data (i.e., “Option B”)
 - Coverage data will be collected via the Digital Opportunity Data Collection
 - Areas that lack unsubsidized 4G LTE coverage and that lack unsubsidized 5G coverage will be eligible for support

5G Fund Auction Design

- The 5G Fund auctions will use a descending clock auction design with competition between bidders and between areas
 - This design uses a single clock price that decreases in each round
- Bids are a commitment to provide service to eligible areas within the minimum geographic area for the area's support amount in a round
 - Support amount for each area is calculated by multiplying the adjusted square kilometers eligible for 5G Fund support by the auction clock price
- The Commission will determine the minimum geographic area for bidding during the pre-auction process
 - Areas will be no smaller than Census Block Groups and no larger than Tracts
- Auction will close after total requested support is below the budget and there are no more competing bids
- Both Phase I and Phase II will use the same auction design

Adjustment Factor

- Areas eligible for 5G Fund support will include an “adjustment factor” to account for the relative differences in costs between areas with different terrain and different business cases for 5G
 - Areas with more mountainous terrain or less of a business case will have a greater weight than areas with flat terrain or a greater business case
- The 5G Fund will incorporate this adjustment factor for bidding and for the disaggregation of legacy high-cost support
 - The total square kilometers of an eligible area will be multiplied by the area’s adjustment factor value to determine its adjusted square kilometers
- November 2020: staff adopted adjustment factor values informed by three economic models

5G Fund Public Interest Obligations

- 5G Fund support recipients will be required to deploy 5G broadband service similar to the requirements for legacy support recipients
 - 5G broadband service defined as 5G-NR (3GPP release 15 or later)
 - Minimum data speeds of 35 / 3 Mbps and 100 milliseconds or better latency
 - Data allowance corresponding to the average U.S. subscriber data usage
 - Rates charged reasonably comparable to urban rates
 - Collocation and voice / data roaming requirements
- 5G Fund support recipients will similarly be required to submit reports on their compliance with their respective public interest obligations and progress of 5G service deployment

5G Fund Service Milestones

- 5G Fund support recipients must deploy 5G service meeting the adopted performance requirements by service milestones:
 - Year 2: coverage of at least 20% of eligible areas within a state (optional)
 - Year 3: coverage of at least 40% of eligible areas within a state
 - Year 4: coverage of at least 60% of eligible areas within a state
 - Year 5: coverage of at least 80% of eligible areas within a state
 - Year 6: coverage of at least 85% of eligible areas within a state; and
coverage of at least 75% of eligible areas within the minimum geographic area for bidding (e.g., census block group or census tract)
- 5G Fund support recipients will be required to demonstrate compliance with these public interest obligations by conducting speed tests through a portion of the areas to which they deploy 5G

Additional Resources

The 5G Fund Report and Order can be downloaded on the 5G Fund web site:

<https://www.fcc.gov/5g-fund/>

After this webinar, general inquiries about the 5G Fund can be directed to:

5GFund@fcc.gov

Questions?