

# Rural Broadband Auctions: The 5G Fund for Rural America

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# Rural Broadband Auctions Overview

- **Connect America Fund Phase II (completed):**
  - \$1.48B over 10 years for fixed broadband and voice services
- **Rural Digital Opportunity Fund (adopted):**
  - Up to \$20.4B over 10 years for fixed broadband and voice services
    - Phase I: up to \$16B (Auction 904)
    - Phase II: up to \$4.4B + remainder of Phase I budget
  - Phase I auction bidding scheduled to commence on October 29, 2020
- **5G Fund for Rural America (proposed):**
  - Up to \$9B for 5G service in two phases
    - Phase I: up to \$8B
    - Phase II: up to \$1B + remainder of Phase I budget
  - Phase II would 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 \$300m in support for non-Tribal areas
    - Tribal Mobility Fund Phase I awarded \$50m in support 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 \$4.53b 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 April 2020, the Commission proposed to replace Mobility Fund Phase II with the 5G Fund for Rural America
- 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 would not see timely 5G service absent funding (\$8b)
  - Phase II: award support to deployments that facilitate precision agriculture, as well as any areas unserved after Phase I auction (remainder of \$9b)
- Multi-round, reverse clock auction format, similar to CAF Phase II and Rural Digital Opportunity Fund Phase I auction formats

# Paths to 5G Fund Phase I Auction

5G Fund NPRM proposed two approaches to get to a Phase I auction:

## Option A

- Would use existing data defining the ruralness of an area to determine eligible areas
- Particularly rural areas would be eligible for support
  - Priority given to areas that have historically lacked 3G / 4G LTE service
- Phase I auction held in 2021

## Option B

- Would collect and use new coverage data to determine eligible areas
- Areas lacking 4G LTE / 5G coverage would be eligible for support
- Phase I auction held in 2023 or later
  - Delay is due to the need to develop procedures to collect and process new coverage data

# 5G Fund Phase II Auction

- Phase II auction proposed budget: \$1b + remainder of Phase I budget
- Phase II proposed to target:
  - Network deployments that would facilitate precision agriculture and incorporate recommendations from Precision Agriculture Task Force
  - Any eligible areas that went unsold in the Phase I auction
- 5G Fund NPRM also proposed to incorporate updated coverage maps, if available, for Phase II regardless of Option A / Option B approach

# Auction Design

- 5G Fund NPRM proposed to 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 bidding at the area's support amount
  - Support amount for each area is calculated by multiplying the adjusted square kilometers eligible for 5G Fund support by the auction clock price
- Census tracts proposed as the minimum geographic area for bidding
- Auction would close after total requested support is below the budget and there are no more competing bids
- Both Phase I and Phase II proposed to use the same auction design

# Transitioning from Legacy High-cost Support

- 5G Fund NPRM proposed 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 would be broadly similar to the schedule adopted for Mobility Fund Phase II
- Under either Option A or Option B approach, legacy support would be phased down over 2 years in areas not eligible for 5G Fund support
- Legacy support would be phased down over 2 years for a recipient that is not the winning bidder for its subsidized area
- Legacy support would 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

# 5G Service Public Interest Obligations

- 5G Fund NPRM proposed requiring both legacy high-cost support and 5G Fund support recipients to deploy 5G broadband service
  - 5G broadband service defined as 5G-NR (3GPP release 15 or later)
  - Minimum speeds of 35/3 Mbps and < 100 ms latency
  - Minimum cell edge of 7/1 Mbps with 90% probability and 50% loading
  - Data allowance corresponding to the average U.S. subscriber data usage
  - Rates charged reasonably comparable to urban rates
  - Collocation and voice / data roaming requirements
- Proposed to require annual reports and interim / final 5G deployment milestone reports for support recipients
- NPRM proposed to require coverage maps and on-the-ground testing to demonstrate compliance with performance requirements

# 5G Fund Eligibility Requirements

- Eligibility requirements proposed in the 5G Fund NPRM are generally consistent with other universal service auctions (MF-I, CAF-II, RDOF)
- Applicants seeking to participate in a 5G Fund auction:
  - Would not need to be designated as an eligible telecommunications carrier (ETC) until after the auction (i.e., by the long-form application deadline)
  - Would need to demonstrate that they have access to spectrum adequate to meet the 5G performance requirements
  - Would need to demonstrate and certify to the requisite financial and technical capability to provide the supported services
- NPRM proposed to allow T-Mobile to participate, but not allow it to use any area it wins to meet its deployment commitments made as a condition to approval of its transaction with Sprint

# Application Requirements

- 5G Fund NPRM proposed to use two-stage auction application process broadly identical to prior universal service auctions
- Prior to the auction, applicants seeking to become bidders in a 5G Fund auction would be required to file a “short form” application
  - Financial, technical, and ownership information would be required for the short form application to participate
  - NPRM also proposed to revise the Commission’s existing Part 1, Subpart AA rules for competitive bidding for universal service support alongside amendments to the “red light rule” for universal service auctions
- After the auction concludes, winning bidders would be required to file a “long form” application in order to be authorized to receive support

# Procedural Matters

## 5G Fund NPRM comment cycle

- Comments: Jun. 25, 2020
- Reply comments: Jul. 27, 2020

## 5G Fund Adjustment Factor PN comment cycle

- Comments: Jul. 7, 2020
- Reply comments: Aug. 6, 2020

# Additional Resources

The 5G Fund NPRM & 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:

[ruralbroadband@fcc.gov](mailto:ruralbroadband@fcc.gov)

## Questions?