

# CBRS Auction 105

## What You Need to Know Before You Bid

**Monte R. Lee  
& Company**

**Welcomes You**

**March 12, 2020  
2pm CST**

Presented by:  
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and

Jerry Adams

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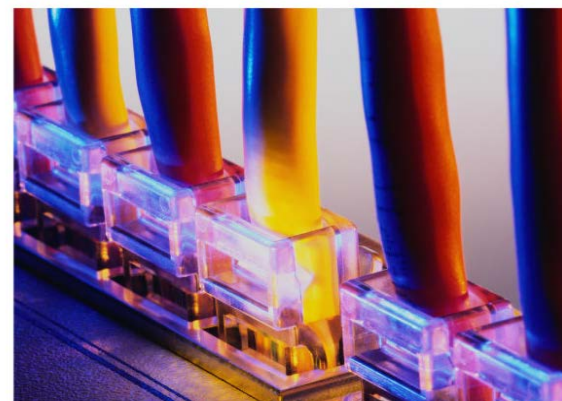
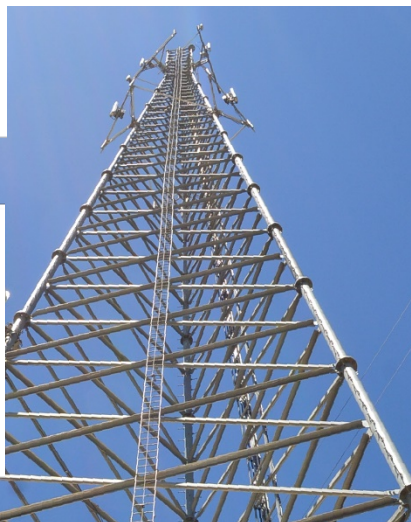
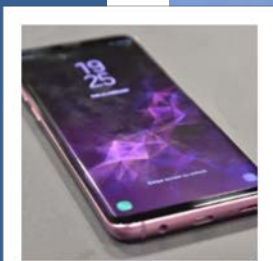
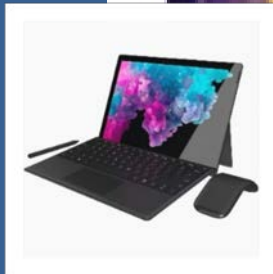
**Monte R. Lee & Company**

Consulting Engineers

525 Central Park Drive,  
Suite 300

Oklahoma City, OK 73105

405-842-2405





RWA's mission is to promote wireless opportunities for rural telecommunications companies through advocacy and education in a manner that best represents the interests of its membership.

They're a trade association representing rural wireless carriers who each serve fewer than 100,000 subscribers. RWA's members have joined together to speed delivery of new, efficient, and innovative wireless technologies to the populations of remote and underserved sections of the country.

***Supporting Rural America, Strengthens All of America  
Advocacy. Education. Relationships.***

Please visit [www.ruralwireless.org/membership](http://www.ruralwireless.org/membership) for all membership inquiries



### **Benefits of Joining RWA:**

- **Innovative advocacy by legal and regulatory experts devoted to strengthening policies that affect rural wireless companies**
- **Essential information provided to members as it unfolds**
- **Valuable relationships strengthened through committee participation, conferences, and member-only networking events**
- **Knowledgeable and responsive Public Policy Committee shapes the association's legislative and regulatory agendas to better serve our members**
- **Member-run Education Committee that uses webinars, briefings, white papers, and member teleconferences to inform and instruct**
- **Member-driven advocacy approach**
- **Member-elected Board of Directors consisting of C-levels each with over 20+ years of industry experience**
- **Member-only briefings detailing congressional and FCC actions, as well as other issues that impact rural carriers**

# Monte R. Lee and Company

Monte R. Lee and Company (MRL) has been providing consulting and engineering services for over 40 years in the telecommunications industry.

Our company designs broadband networks to fit local demographic needs with the specific geographic landscape of an area.

We approach each project by evaluating the existing system with emerging technologies, such as Fiber to the Home, Wireless, VoIP, and soft switching, to meet the ever-changing communications demands of the 21<sup>st</sup> century.

In addition to our licensed professional engineering design and project management services, we also offer financial analyses and acquisition assistance, regulatory compliance and monitoring, outside plant contract administration, and service area mapping.

#### Disclaimer

The information provided in this webinar does not, and is not intended to, constitute legal advice or appropriate bidding strategies; instead, all information, content, and materials available in this presentation are for general informational purposes only. Each applicant should consult all FCC rules and regulations on Auction proceedings prior to submitting any applications to bid.



# Today's Topics



- FCC PN Information
- Priority Access License (PAL)
- Spectrum Access System (SAS)
- Important Dates
- Bidding Credits
- Upfront Payments
- Short Form (175) Filing Requirements
- Auction Specifications
- Long Form (601)
- Questions

# Public Notice FCC 20-18

Auction 105 will offer 22,631 Priority Access Licenses (PALs) in the 3550 – 3650 MHz portion of the 3.5 GHz band in 3,233 license areas.

Each PAL will consist of a 10 MHz unpaired channels

Up to Seven (7) PALs may be licensed in any given county

PAL Licensees may bid and purchase up to Four (4) licenses within the band in any given license area

## PN Highlights

Auction 105 will deploy a clock auction format with NO assignment phase

Frequencies will be assigned on an dynamic Basis by frequency coordinators know as Spectrum Access Systems (SAS)

Priority Access Licensees MUST protect and accept interference from incumbent Access users

# FCC Public Notice DA 20-18

## Technical Guide on Bidding Procedures for Auction 105

- The Office of Economics and Analytics (Office) and the Wireless Telecommunications Bureau (Bureau) make available a guide that provides technical and mathematical detail regarding the bidding procedures for Auction 105, which will offer Priority Access Licenses in the 3550-3650 MHz band.
- This guide provides examples and serves as a supplement to the bidding and bid processing procedures for the auction as described by the Commission in the Auction 105 Procedures Public Notice.
- The guide, which is entitled Auction 105 Technical Guide, is available on the Commission's Auction 105 website ([www.fcc.gov/auction/105](http://www.fcc.gov/auction/105)) in the Education section, where it will remain available and accessible for reference



# CBRS Auction 105 Web Access

- 3.5 GHz (Auction 105) website:  
<http://www.fcc.gov/auction/105>
- 3.5 GHz Band Overview website:  
<https://www.fcc.gov/wireless/bureau-divisions/mobility-division/35-ghz-band/35-ghz-band-overview>
- FCC Electronic Document Management System (EDOCS):  
<https://www.fcc.gov/edocs>
- Auction 105 Access Portal:  
<https://auctions.fcc.gov> or <https://auctions2.fcc.gov>
- FCC Forms  
<https://www.fcc.gov/licensing-databases/forms>
- Electronic Code of Federal Regulations  
<https://www.ecfr.gov>

Important  
Links for  
Auction  
105

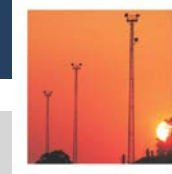
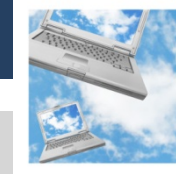


# Auction 105 Contacts



- FCC Auctions Hotline:  
General Question and Answers  
(888) 225-5322 (option 2)  
Auction Process & Procedures:  
(717) 338-2868
- 3.5 GHz licensing questions:  
[Jessica.Quinley@fcc.gov](mailto:Jessica.Quinley@fcc.gov)  
(202) 418-1991
- Auction legal questions:  
[Mary.Lovejoy@fcc.gov](mailto:Mary.Lovejoy@fcc.gov)  
(202) 418-0660
- Consumer and Governmental Affairs Bureau  
(202) 418-0990

# Priority Access License (PAL)



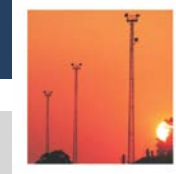
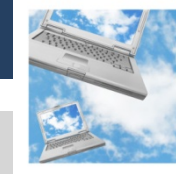
The Commission established licensing and operating rules for the 3.5 GHz band, including the assignment of up to seven Priority Access Licenses (PALs) per geographic license area through the use of competitive bidding.

## Priority Access License (70 MHz per County)

Auctioned in 10 MHz blocks

PALs are licensed and will have interference protection from GAA. An entity can obtain up to four (4) PAL licenses in any county. There are up to 70 MHz of PAL spectrum available per county, out of 100 MHz in the CBRS band (3550–3650 MHz).

# Spectrum Access System (SAS)



## Spectrum Access System (SAS)

SAS

Automated frequency coordinator that manages spectrum sharing on a dynamic, as-needed basis across three tiers of access

Tier 1

Incumbent users such as the Federal Government, Radar and Fixed Satellite Services (FSS)

Tier 2

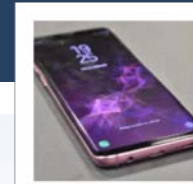
Priority Access License (PAL) users—licensed wireless users who acquire spectrum through Auction 105

Tier 3

Is for General Authorized Access (GAA) users who will deploy “lightly-licensed” devices

Spectrum that is not being used by one tier can be accessed by another tier via the SAS—securely and without harmful interference.

# Current FCC Approved SAS Providers



Current FCC Approved SAS Providers (Others are in the works)	Google	Google has announced the cost of \$2.25 per month, per household for fixed wireless SAS access. Mobility, Private-LTE, IoT, and other use cases will be billed per radio and price determined case by case. Carriers will have to reach out to Google to determine these charges.
	Federated Wireless	Must contact for pricing
	Commscope	Must contact for pricing
	Sony	Must contact for pricing

# Important Dates



Auction Application  
Tutorial Available (via  
Internet)

- No later than March 9, 2020

Bidding Begins in  
Auction 105

- June 25, 2020

Mock Auction

- June 22, 2020

Bidding Tutorial  
Available (via Internet)

- No later than June 11, 2020

Short-Form Application  
(FCC Form 175) Filing  
Window Opens

- March 26, 2020, 12:00  
p.m. Eastern Time (ET)

Short-Form  
Application (FCC Form  
175) Filing Window  
Deadline

- April 9, 2020, 6:00 p.m. ET

Upfront Payments (via  
wire transfer)

- May 21, 2020, 6:00 p.m. ET

# Preparations for CBRs Auction 105



**In order to participate in Auction 105 you must meet the following criteria:**

Demonstrate in your short-form (FCC Form 175) that you have the legal, technical, and financial qualifications.

Make various required certifications, including certifications related to statutory and regulatory requirements

Submit sufficient upfront payments and an FCC Remittance Advice Form (FCC Form 159) no later than 6:00 PM EST on May 21, 2020



# Auction 105: Bidding Credits



	<b>Very Small Business</b>	<b>Small Business</b>	<b>Rural Service Provider</b>
Requirements	3 year average annual gross revenues not exceeding \$20 million	3 year average annual gross revenues not exceeding \$55 million	Customer base of fewer than 250,000 combined subscribers and serves primarily rural areas
Bidding Credit	25%	15%	15%
Credit Cap	\$25 million	\$25 million	\$10 million

In addition, there is a \$10 million small market bidding credit cap on bidding credit discounts in counties within Partial Economic Areas (PEAs) 118-416, excluding 412.



# Auction 105: FCC Short Form 175



## Requirements for Participation

Those wishing to participate in Auction 105 must:

- Submit a short-form application\* electronically prior to 6:00 p.m. EST on April 9, 2020
- Submit a sufficient upfront payment and remittance advise by 6:00 PM EST on May 21, 2020
- Comply with all provisions outlined in Public Notice 20-18 and applicable Commission rules.

**\* [Auctions.fcc.gov](https://auctions.fcc.gov) or [Auctions2.fcc.gov](https://auctions2.fcc.gov)**

# Auction 105: FCC Short Form 175

## Minimum Software Requirements

Supported Auction application browsers are:

- Mozilla Firefox
- Google Chrome 46.1 or higher

Minimum Screen Resolution

- 1024 x 768

PDF viewer is required

- Adobe Acrobat Reader 5.0 or Higher is recommended

- *Apple MAC OS is NOT supported by the auction application system. Neither are Smart phones or tablets.*



# Auction 105: FCC Short Form 175

## Who's Filing?

**Applicant Information**

The Applicant Information section identifies the applicant, its responsible party (where applicable), its auction contact person, and its bidding credit eligibility. The contact individual will be sent all correspondence concerning this application. The applicant name will be used as the bidder name during the auction. The asterisk (\*) indicates a required field.

**Applicant Legal Classification** [Help](#)

\*To determine the applicant information required by the FCC please provide your Legal Classification.

**Note:** After selecting and saving your legal classification, you will be required to enter additional applicant information on subsequent pages of this form. If you later change your legal classification selection and save your changes or navigate away from this page, some of your previously-entered applicant information will be deleted as a result of the change and must be reentered.

- ☐ Consortium
- ☒ Corporation
- ☐ General Partnership
- ☐ Government Entity
- ☐ Individual
- ☐ Limited Liability Company
- ☐ Limited Liability Partnership
- ☐ Limited Partnership
- ☐ Trust
- ☐ Unincorporated Association
- ☐ Other

Consortium, Corporation, Limited Partnership etc...

\*Is the applicant, or any member of the applicant (in the case of a joint venture or consortium), a qualifying rural wireless partnership or a qualifying rural wireless partnership member that claims the exception provided in section 1.2105(a)(3) of the Commission's rules?

☐ Yes ☐ No

# Auction 105: FCC Short Form 175

## Authorized Bidders

Applicant Information

\* indicates required field

Authorized Bidders

Identify at least one but no more than three authorized bidders. Only individuals listed here will be able to place bids. Bidders may be changed during the auction.

\* First Name:

Middle Initial:

\* Last Name:

Suffix:

\* Phone:

\* Email:

Authorized Bidders	Phone	Email	Picture
She BA	(123) 456-7890	rganesh@fcc.gov	<input type="button" value="Edit"/> <input type="button" value="Remove"/>

You must provide the name, phone number, and email address for each individual authorized to place bids for the applicant in the auction. You must identify at least one authorized bidder for the applicant, and no more than three.

Caution: These individuals will be subjected to the Prohibited Communications Rules set forth in section 1.2105(c)

# Auction 105: FCC Short Form 175

## Bidding Credit Eligibility

Applicant Information

\* indicates required field

**Designated Entity Bidding Credit Eligibility** [Help](#)

This is the sole opportunity to assert eligibility for a designated entity bidding credit. The applicant will not be able to change this assertion after the initial deadline for filing the application.

\* Are you applying for a bidding credit?

☐ Yes ☐ No

If the applicant (in the case of a consortium), an existing rural partnership within the meaning of section 22.1109(a)(1)(C)(2) of the Commission's rules whose individual members' subscribers are not required to be aggregated and attributed to the applicant?

If yes, the applicant must submit an attachment that lists each member of the existing rural partnership and provides a brief description of the applicant's eligibility to claim the exception.

[Back](#) [Save](#) [Save & Continue](#)

Bidding Credits will be selected in the Short-form 175 application. Once you select the Small Business or Rural Service Provider, the system will prompt you to provide the qualifying information.

Bidding credits are NOT cumulative, you may claim Small Business or Rural Service Provider. Not both!

# Auction 105: FCC Short Form 175

## License Area Selection

Auction 105  
3.5 GHz

### License Area Selection

Select License Areas

During the initial filing window, license areas may be selected by uploading a text file with the .csv file type extension or by using the drop down and filter process thru the portal, or download the .CSV template and upload them into the portal.

Select file:  10MB max, / filename: 255 max, char

3 Selected License Area(s) out of 3233 Available

State:

No Filters have been applied.

Select All Items:

Show: 10 entries

Status	License Area Name	License Area Description	State	Bidding U
<input type="checkbox"/>	AK-013	Aleutians East, AK	AK	
<input type="checkbox"/>	AK-016	Aleutians West, AK	AK	
<input checked="" type="checkbox"/> Saved	AK-020	Anchorage, AK	AK	
<input checked="" type="checkbox"/> Saved	AK-050	Bethel, AK	AK	
<input checked="" type="checkbox"/> Saved	AK-060	Bristol Bay, AK	AK	
<input checked="" type="checkbox"/> Saved	AK-068	Denali, AK	AK	
<input type="checkbox"/>	AK-070	Ellington, AK	AK	
<input type="checkbox"/>	AK-090	Fairbanks North Star, AK	AK	
<input type="checkbox"/>	AK-100	Haines, AK	AK	50
<input type="checkbox"/>	AK-105	Healy, AK	AK	50

Showing 1 to 10 of 3233 entries

Previous 1 2 3 4 5 ... 324 Next

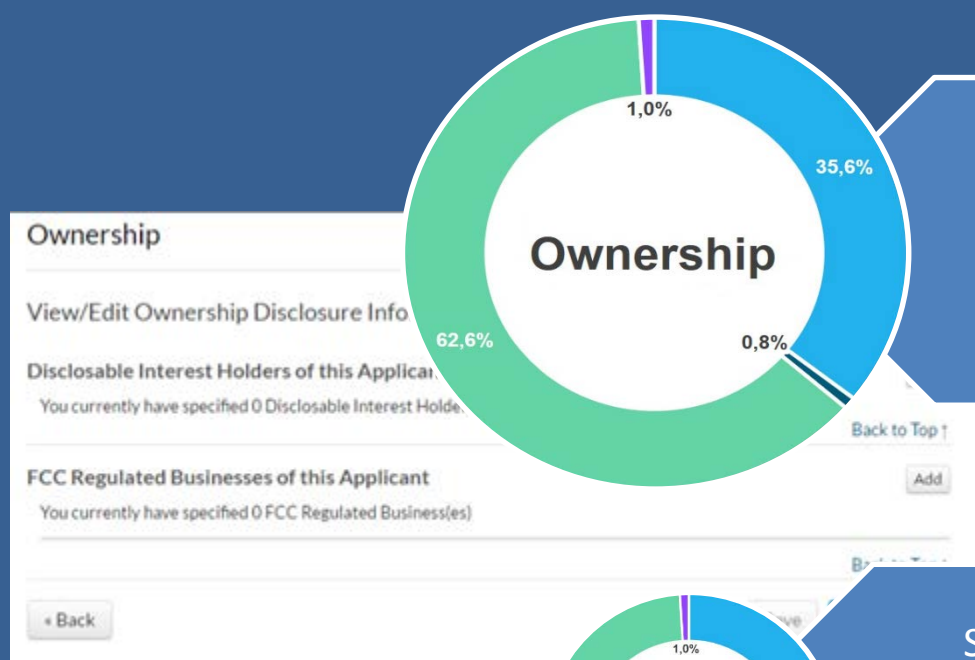
The applicant can either select the License areas via the drop down and filter process thru the portal, or download the .CSV template and upload them into the portal.

	A	B	C
1	county	county_name	
2	AL-017		
3	AL-019		
4	AL-021		
5			
6			

Example

# Auction 105: FCC Short Form 175

## Ownership Disclosure Information



An applicant must fully disclose information regarding the real party- or parties-in-interest in the applicant or application and the ownership structure of the applicant, including both direct and indirect ownership interests of 10% or more.

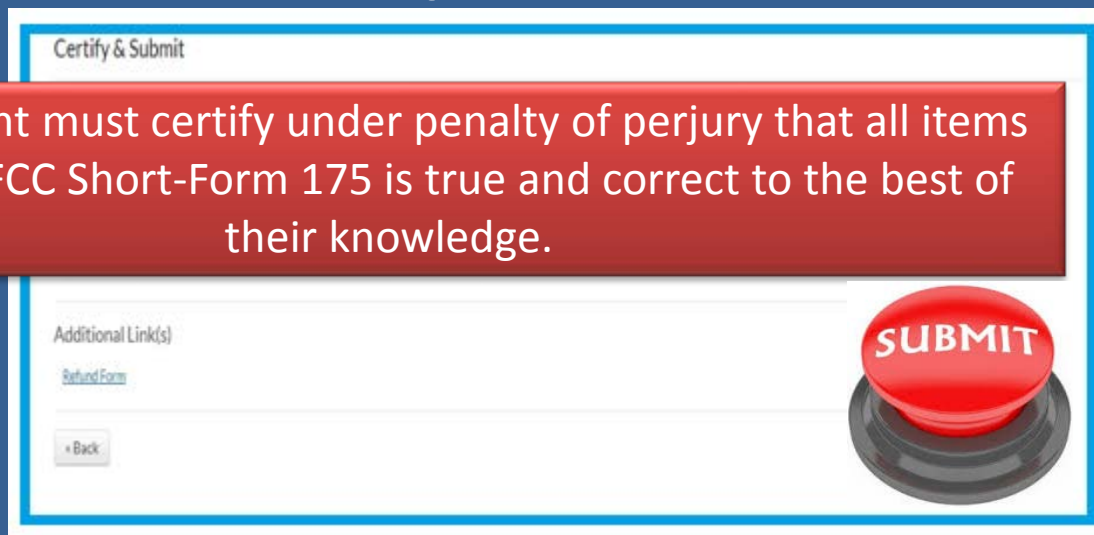
Section 310 of the Communications Act requires the Commission to review foreign investment in radio station licenses and imposes specific restrictions on who may hold certain types of radio licenses.



# Auction 105: FCC Short Form 175

## Certify and Submit

Each applicant must certify under penalty of perjury that all items listed their FCC Short-Form 175 is true and correct to the best of their knowledge.



After Commission staff review, there will be a window opened in which (if necessary) each applicant may make “Minor” adjustments to their short-form.

- Contact Persons
- Authorized Bidders
- Address, Telephone Numbers

**\*\*YOU WILL NOT BE ABLE CHANGE LICENSE AREAS OR OWNERSHIP DETAILS\*\***

# Upfront Payments

In order to be eligible to bid in Auction 105, a sufficient upfront payment and a complete and accurate FCC Remittance Advice Form (FCC Form 159) must be submitted before 6:00 p.m. ET on May 21, 2020. Eligibility cannot be increased after the Upfront payment deadline.

Counties	POP	Projected Auction Price	Per 10 MHz Block		
			Bidding Units	Upfront Payment	Minimum Opening Bid
EX-001	7,053	\$ 1,361,415.89	71	\$710	\$1,400
EX-003	177,934	\$ 1,537,996.73	1,800	\$18,000	\$36,000
EX-005	55,606	\$ 480,638.02	560	\$5,600	\$11,000

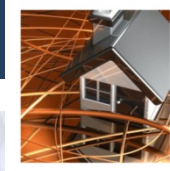
Former defaulters are subject to an additional 50% Upfront payment

The Commission assigned each generic block in a county a specific number of bidding units, equal to one bidding unit per \$10 of the upfront payment. The number of bidding units for one block in a given county is fixed, since it is based on the MHz-pops in the block and does not change during the auction as prices change.

The logo for Wire Transfer, featuring the words "WIRE" and "TRANSFER" in a bold, blue, sans-serif font. To the left of the text are three horizontal green bars of increasing length, creating a stylized "W" or signal-like graphic.

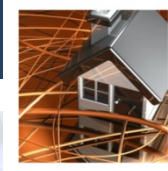
Wire transfer payments for Auction 105 must be received before 6:00 p.m. ET on May 21, 2020. No other payment method is acceptable.

# Auction 105: Basics



- General Information
  - Clock prices will increase each round.
  - Bids must be placed each round and cannot be carried over.
  - Bids each round will be restricted by the clock price.
  - Aggregate reserve price: \$107,991,840
- No Excess Supply Rule
  - Bids that would create or increase excess supply will not be applied.
- Simultaneous Stopping Rule
  - **All** bidding continues until there is no excess demand.
  - Winning bids will be equal to the posted price of the final round.
- Incrementing Rule
  - This allows prices to increase proportionately.
  - The increment will be between 5% and 20% and will initially be 10%. The price increase for any county is currently capped at \$10 million per round.

# Auction 105: Intra-round Bidding

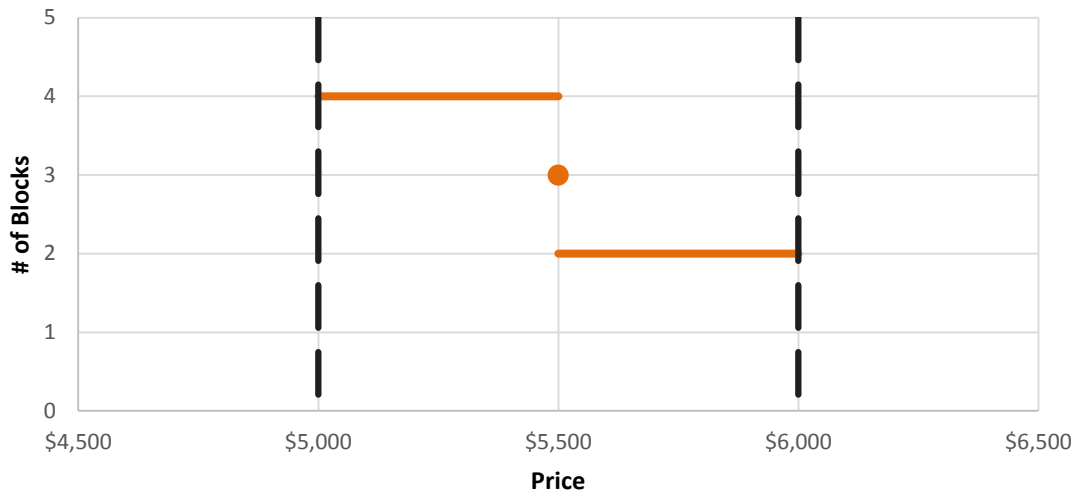


- Intra-round Bidding Restrictions
  - Must be a price between clock price and processed price
  - Must be an increase or decrease in demand
  - Must be one-directional
  - Cannot submit two bids at the same price for the same county

The objective for the auction and bidding system is for the supply to equal the demand.

# Auction 105: Intra-round Bidding

Bid to Decrease Demand at \$5,500



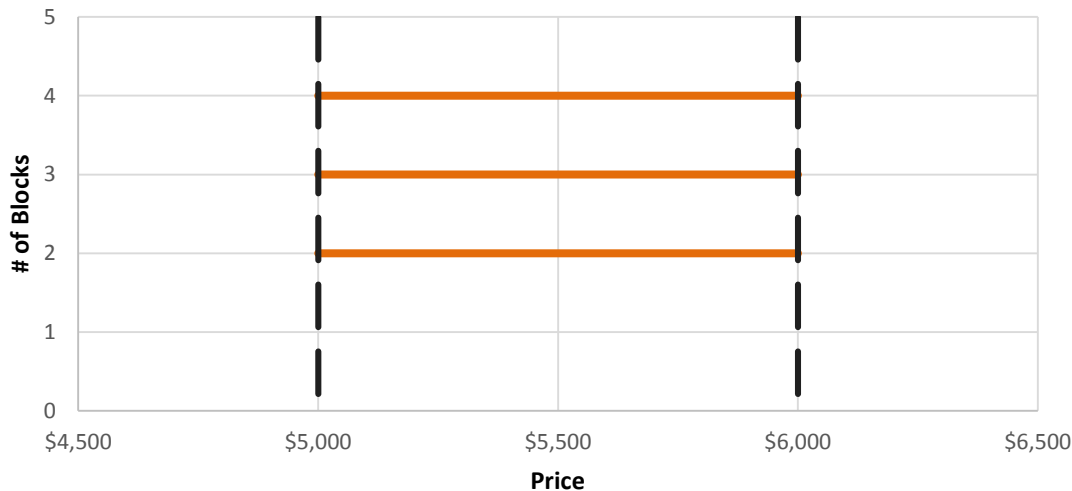
- Processed demand: 4 blocks at \$5,000
- Clock Price: \$6,000
- Submitted bid: 2 blocks at \$5,500
- Assumption: No one else is changing demand between the posted price of the previous round and the clock price.

## Possible Outcomes

Excess Demand	>2	2	1	0
Processed Blocks	2	2	3	4
Posted Price	\$6,000	\$5,500	\$5,500	\$5,000

# Auction 105: Intra-round Bidding

Bid to Increase Demand at \$5,500



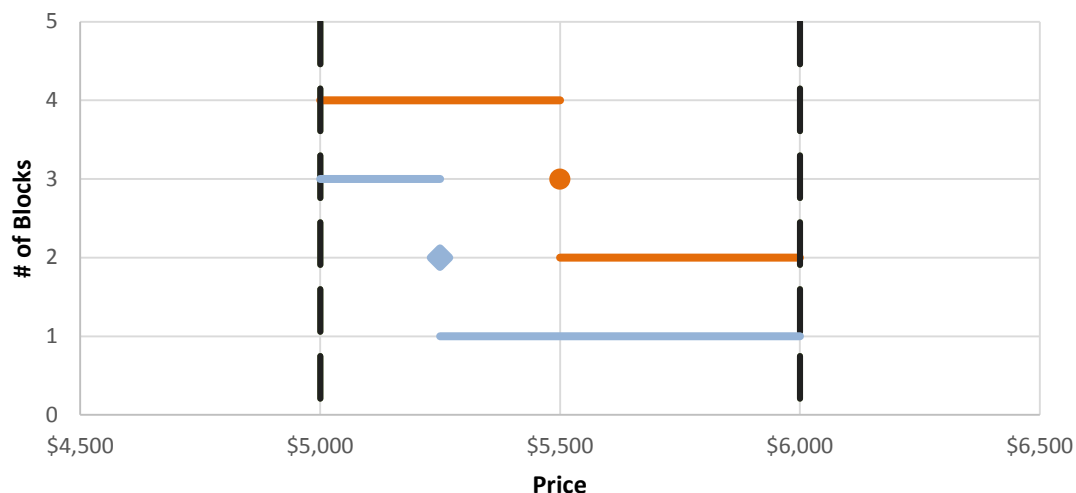
- Processed demand: 2 blocks at \$5,000
- Clock Price: \$6,000
- Submitted bid: 4 blocks at \$5,500
- Assumption: No one else is changing demand between the posted price of the previous round and the clock price.

## Possible Outcomes

Excess Eligibility	>2	2	1	0
Processed Blocks	4	4	3	2

# Auction 105: Bid Prioritization

Bids to Decrease Demand



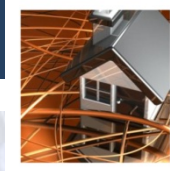
- Bids are processed by price point (PP) and pseudorandom numbers.
- $$PP = \frac{\text{bid price} - \text{posted price}_{n-1}}{\text{clock price} - \text{posted price}_{n-1}}$$
- Unapplied bids are placed in a queue that is re-tested after each partial or fully applied bid.

## Possible Outcomes

Excess Demand	>4	4	3	2	1	0
Processed Blocks (Orange, Blue)	2,1	2,1	3,1	4,1	4,2	4,3
Posted Price	\$6,000	\$5,500	\$5,500	\$5,250	\$5,250	\$5,000

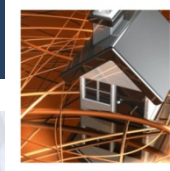


# Auction 105: Eligibility and Activity



- Eligibility is determined by the upfront payment.
- Activity: bidding units in the processed demand.
- Activity Rule: Bidders must bid at or above their activity lower limit for a given round or will lose eligibility.
  - The activity lower limit will vary between 90%-100% after the first round. The activity lower limit for the first round is set at 95%.
  - The activity upper limit will vary between 100% and 140%. The activity upper limit is set at 120% for rounds 2 and subsequent rounds.
- Bidders can bid up to their activity upper limit for a given round after the first round. However, no bids will be processed exceeding the bidder's eligibility.

# Auction 105: Caps on Bidding Credits



- Example: If a bidder's eligibility is 5,000 bidding units and the activity lower limit for the round is 95% (4,750 units) and the activity upper limit is 105% (5,250 units).



- If the activity is in the red, eligibility is decreased to
- Example: Using the activity requirements above, a bidder's processed activity is 4,600 bidding units. Their new eligibility is

$$4,600 * \left[ \frac{100}{95} \right] = 4,843 \text{ units}$$

# Auction 105: FCC Long Form (601)

## Post-Auction Procedures

The public notice announcing the close of the bidding and auction results will be released shortly after bidding has ended in Auction 105. This public notice will also establish the deadlines for submitting down payments, final payments, and the long-form applications (FCC Form 601) for the auction.


## Down Payments

Within 10 business days after release of the auction closing public notice for Auction 105, each winning bidder must submit sufficient funds (in addition to its upfront payment) to bring its total amount of money on deposit with the Commission to 20% of the net amount of its winning bids (less any bidding credits, if applicable).


## Final Payments

Each winning bidder will be required to submit the balance of the net amount for each of its winning bids within 10 business days after the deadline for submitting down payments.

# Auction 105: FCC Long Form (601)

- 
- The Commission's rules provide that, within 10 business days after release of the auction closing public notice, winning bidders must electronically submit a properly completed post-auction application (FCC Form 601) for the license(s) they won through the auction.
  - Winning **bidders claiming eligibility for a small business bidding credit or a rural service provider bidding credit must demonstrate its eligibility in its FCC Form 601** post-auction application for the bidding credit sought. Further instructions on these and other filing requirements will be provided to winning bidders in the auction closing public notice for Auction 105
  - license(s) won by a consortium must be applied for as follows: (a) an individual member of the consortium or a new legal entity comprising two or more individual consortium members must file for licenses covered by the winning bids; (b) each member or group of members of a winning consortium seeking separate licenses will be required to file a separate FCC Form 601 for its/their respective license(s) in their legal business name; (c) in the case of a license to be partitioned or disaggregated, the member or group filing the applicable FCC Form 601 shall include the parties' partitioning or disaggregation agreement with the FCC Form 601; and (d) if a bidding credit is sought (either small business or rural service provider), the applicant must meet the applicable eligibility requirements in the Commission's rules for the credit.

# Auction 105: FCC Long Form (601)



## • Tribal Lands Bidding Credit

- A winning bidder that intends to use its license(s) to deploy facilities and provide services to federally recognized tribal lands that are unserved by any telecommunications carrier or that have a wireline penetration rate equal to or below 85% is eligible to receive **a tribal lands bidding credit as set forth in sections 1.2107 and 1.2110(f) of the Commission's rules.**
- When initially filing the post-auction application, the winning bidder will be required to inform the Commission whether it intends to seek a tribal lands bidding credit, for each license won. The winning bidder will have 180 days from the close of the post-auction application filing window to amend its application to select the specific tribal lands to be served and **provide the required tribal government certifications.**

# Questions?

Please open your Chat window and submit questions, or email them to [Jadams@mrleng.com](mailto:Jadams@mrleng.com)



# Thank You for Attending

Madison Jones  
[mjones@mrleng.com](mailto:mjones@mrleng.com)

and

Jerry Adams  
[jadams@mrleng.com](mailto:jadams@mrleng.com)

**405-842-2405**

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