



Auction 110 Clock Phase Bidding System User Guide

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1. Introduction

This guide describes the features of the web-based FCC auction bidding system that bidders will use to bid in the clock phase of Auction 110. Additional information for this auction can be found on the FCC Auction 110 website: www.fcc.gov/auction/110.

1.1. Conventions

In this guide screen names are Capitalized, internet addresses are highlighted in blue, links in the bidding system are underlined, and the following text represents a Button.

Text boxes are used to indicate points where care is needed:

 *Care needed with this feature!*

In this guide, the term “bidder” refers to an applicant that has been identified by the FCC as qualified to bid in Auction 110 based on review of its FCC Form 175 application and receipt of a timely upfront payment. The terms “user,” “you,” and “authorized bidder” refer interchangeably to an individual authorized bidder identified on a qualified bidder’s Form 175 as authorized to access the bidding system and to submit bids on behalf of the qualified bidder.

Most of the examples in this guide are for “Reliable Access, Inc.,” a bidder that has not claimed a bidding credit. Representative examples are also given for a bidder that has claimed a rural service provider bidding credit and for a bidder that has claimed a small business bidding credit.

In this guide, the terms “PEA” and “market” are used interchangeably.

1.2. Guide Structure

This guide is set out as follows:

- Section 2 provides an overview of the clock phase of Auction 110
- Section 3 describes the system requirements for accessing the system and how to log in
- Section 4 explains how to navigate the system and provides a summary of the screens available to bidders
- Section 5 states where basic information about the auction can be found
- Section 6 describes the auction schedule and communications between the bidder and the FCC
- Section 7 describes how to bid in a clock round
- Section 8 describes how to verify bids submitted in a clock round
- Section 9 describes how to access results of a clock round
- Section 10 describes the downloads available in the bidding system for the clock phase

There are also four appendices:

- Appendix 1 provides troubleshooting tips for several different scenarios
- Appendix 2 provides additional information about RSA SecurID® tokens
- Appendix 3 provides a list of bid upload error codes
- Appendix 4 contains a glossary of terms

2. Overview of the Clock Phase of Auction 110

In Auction 110, bidders will bid for flexible-use licenses in the 3.45 – 3.55 GHz band. The auction will include 406 PEAs. Each PEA has 10 blocks available for licensing, and these blocks may be grouped into one or two bidding categories (Cat1 and Cat2), depending on the PEA. The combination of a PEA and a category is known as a product. The clock phase will determine the number of blocks won by each bidder in each product.

Auction 110 will be conducted in a series of timed bidding rounds. During a “clock round” — a round in the clock phase — users can place bids for products. Each bid will specify a requested quantity of blocks and a price. Auction 110 has a spectrum aggregation limit of four blocks, which means that a bidder cannot bid for or win more than four blocks in a PEA. This spectrum aggregation limit will apply across both categories in PEAs that contain Cat1 and Cat2 blocks.

In Round 1, a user indicates the number of blocks that it demands at the minimum opening bids (the opening prices) by uploading a file with its bids.

In each round after Round 1, each product is associated with a range of per-block prices. The lowest price in the range is the start-of-round price, and the highest price in the range is the clock price. For a given product, a user can either bid to maintain its demand from the previous round at the current round’s clock price or bid to change its demand at a price associated with the round.

After a round ends, the bidding system processes the bids and posts the results. For each product, users can see their “processed demand” — the number of blocks the bidder holds after bid processing — and the aggregate demand for each product as well as the price for each product after bid processing (the “posted price”). As long as there is excess demand for blocks in one or more products, the auction proceeds with another clock round, and users can see the clock prices for the next round.

If, after the bids are processed, there is no excess demand for blocks in any product, then the clock phase ends. If the (aggregate) reserve price has been met, bidders will win the number of generic blocks they hold at the end of the clock phase, and the final price for a block in a product will equal the posted price for that product for the last round. The auction will then progress to the assignment phase, in which a bidder that won generic blocks in the clock phase can optionally bid for frequency-specific licenses corresponding to its clock phase winnings.

If the reserve price has not been met at the time bidding stops in the clock phase, the auction will end, and no new licenses will be assigned.

3. System Requirements and Access

This section explains the system requirements for accessing the bidding system, how to log in, and other matters related to access.

3.1. Minimum System Requirements




At the minimum, the following is required to access the bidding system:

- Microsoft Windows® 10, or Apple® Mac® OS X® 10.13 with at least 8 GB of memory
- A recent version of Google Chrome™¹ or Microsoft Edge (Chromium).² The browser must be configured to accept cookies.³
- Access to the internet
- Excel 2013 or newer
- 1920 x 1080 screen resolution or higher⁴

Smartphones and tablets are not supported. The bidding system may run on different computer configurations, including browsers not listed above. It is the responsibility of the users to test any alternative configurations with the bidding system in advance of the auction—for example during the mock auction—and to ensure that they have access to one of the supported browsers should they experience problems. Any user attempting to access the bidding system with a computer configuration or device that does not meet the requirements listed above is solely responsible for any resulting failure to access the bidding system, failure to do so in a timely manner, or failure of the bidding system to process the user's attempted bidding or other actions (even if it appears that such actions were completed properly).

Users should not use web browsers containing third-party toolbars or other extensions. Third-party browser extensions may cause problems for users of interactive websites, including the auction bidding

¹ Google and the Google logo are registered trademarks of Google Inc.

² Microsoft Edge (Chromium) is available for Windows and can be downloaded from the Microsoft website. Its logo looks like this: . Older versions of Edge (known as Microsoft Edge Legacy) use a different logo: . All Edge versions at release 79 or later are Microsoft Edge (Chromium). To determine which version of Edge you have installed, you can inspect the version number by clicking on the three dots in the upper right corner, , then click on "Settings" and "About Microsoft Edge" (older versions may say "About this app"). For example, Version 92.0.902.55 is Microsoft Edge (Chromium), as it is at release 92.

Versions older than 44.18362 can cause some unexpected formatting, like rendering decimal values in numerical columns when there should be a whole number, or cutting off flash messages.

³ Appendix 1 explains how to check and/or reset these settings.

⁴ The system has been optimized to display all the information without horizontal scrolling on 1920 x 1080 screens with medium font size. If all the information from the bidding system cannot fit on your display when your browser is maximized (taking up the entire screen), you can either zoom out using your internet browser or scroll right and left using the scroll bars. To adjust the zoom, hold down the control ("ctrl") key and use the "+" and "-" keys to zoom in and out.

system, and may make users' computers more vulnerable to hacker attacks. If in doubt, you should consult your internal information technology departments in order to disable third-party browser extensions or, if necessary, obtain a clean installation of a supported web browser.

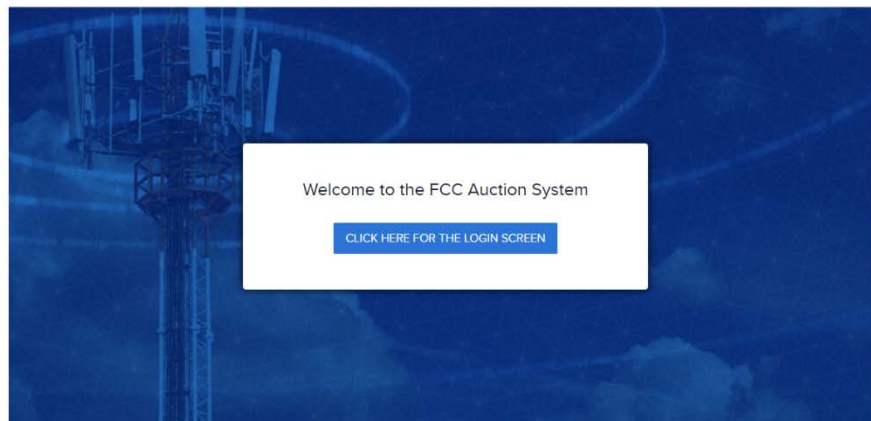
Users are discouraged from adding additional toolbars to their browsers, such as a toolbar for bookmarked pages. Additional toolbars may increase the likelihood that vertical scrolling is needed to see all fields on the screen.

To maximize protection against potential security vulnerabilities, users are advised to ensure the latest service pack (if applicable), security patches for their operating system, and the most recent version of Google Chrome and Microsoft Edge (Chromium) have been installed.

3.2. Logging In

Once the bidding system becomes available, you can log in at a URL provided only to qualified bidders in the registration materials. When available, a button to access the Login screen, as shown in Figure 1, will be visible. When the Login screen is not available, there will be a message to that effect on the screen, and the button to access the Login screen will not be visible.

Figure 1: Bidding system homepage



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Click on the **CLICK HERE FOR THE LOGIN SCREEN** button to get to the Login screen.

This guide provides two sets of login instructions: Section 3.2.1 describes initial login procedures where an authorized bidder creates a personal identification number ("PIN") and logs in for the first time; and Section 3.2.2 describes the standard login procedure used after the PIN is created.

Each authorized bidder listed on the qualified bidder's Form 175 will be provided with a unique bidding system username (user ID) for use in the auction bidding system. All authorized bidders for a qualified

bidder will use a password associated with the FRN (FCC Registration Number) used on the Bidder's FCC Form 175. The password may be either the password directly associated with the FRN in CORES or the password associated with a username that is linked to the FRN within CORES.

Each bidding system username will be associated with a specific RSA SecurID® token (RSA token) assigned to the authorized bidder for the auction. This RSA token generates a time-sensitive 6-digit tokencode that changes every 60 seconds. The username and RSA token should only be used by the authorized bidder to whom it was assigned. The bidding system logs all actions taken by a user based on the username entered when logging in.

RSA tokens will be sent by overnight delivery to the contact person identified in the FCC Form 175 for each qualified bidder, and the contact person must distribute an RSA token to each of the specified authorized bidders. Each authorized bidder will need to set a private PIN for his or her token.

Figure 2: An RSA SecurID® token



Please note that each RSA token is tailored to a specific auction. Therefore, RSA tokens issued for other auctions or obtained from a source other than the FCC will not work for this auction.

After the conclusion of bidding in Auction 110, the Commission will send each bidder a pre-addressed, stamped envelope in which to return its RSA tokens.

✍ Take care not to lose your RSA token! Replacing or reassigning an RSA token can be time-consuming, which in some cases could result in missing a bidding round and losing bidding eligibility.

3.2.1. First Time Login Procedures

The first time you log in to the bidding system, you must create an RSA PIN. Each authorized bidder for a qualified bidder will create an RSA PIN once—unless the authorized bidder gets a replacement RSA token (e.g., because an RSA token has been lost or broken). After the RSA PIN has been created, you must follow the standard login procedures.

You will need the following login credentials to access the bidding system for the first time:

- Username: FCC assigned
- Password: FRN password or associated Username password

- **RSA tokencode:** A six-digit code generated by the RSA SecurID® token

In the bidding system login area, type in the username, password and the current tokencode on the individually assigned RSA token as shown in Figure 3. Leave the PIN field blank and click **SIGN IN**.

If you forget your FRN password, you can contact the FCC Support Center at (877) 480-3201 option 1 (Mon-Fri 8:00 a.m. – 6:00 p.m. Eastern Time (ET)).


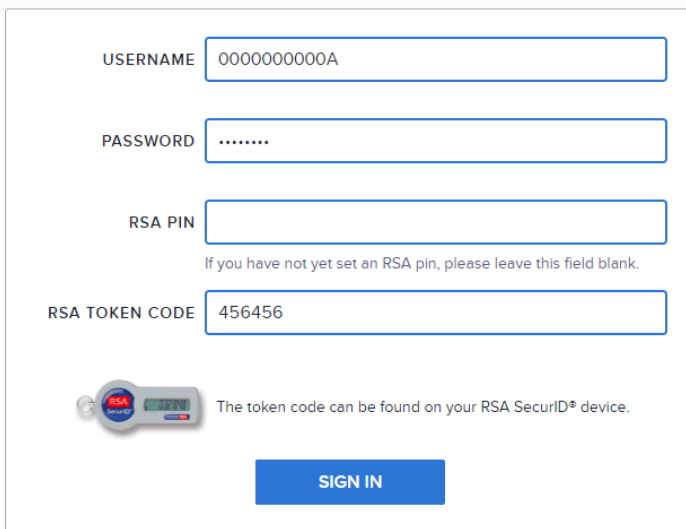
 *Token codes change every 60 seconds. Avoid using a code that is about to expire, as indicated on the token screen, by waiting for a new code to appear.*

Figure 3: First time login procedure




USERNAME

PASSWORD

RSA PIN

If you have not yet set an RSA pin, please leave this field blank.

RSA TOKEN CODE

 The token code can be found on your RSA SecurID® device.

SIGN IN

The RSA tokencode will be generated by your RSA SecurID® token and will not be the same as the code shown in Figure 3.

After you click **SIGN IN**, the system displays a screen to create a private PIN, as shown in Figure 4.

Figure 4: Set PIN screen

Set Your RSA Pin

Please enter a RSA pin within the allotted time to proceed. Your pin must be 4 to 8 digits long and numeric.

RSA PIN

RSA pin must be 4 to 8 digits long and numeric.

CONFIRM RSA PIN

🕒 107 seconds remain to enter your credentials

Type a 4 to 8-digit numeric PIN of your choice in the RSA PIN field. Enter it twice as requested to ensure accuracy. Then click **SUBMIT PIN**. Memorize this PIN! Note that you have a limited amount of time to set a new PIN and confirm your credentials, as shown by the expiration time on the screen.

You will then be asked to enter your PIN and tokencode, as shown in Figure 5.

Type in the PIN you just created and a **new** tokencode. Make sure that the number on the RSA token's display has changed, type this new number into the tokencode field, then click **SUBMIT PIN & TOKEN**.


Figure 5: Confirm RSA credentials screen

Re-enter Your Pin and Token Code

Please wait until the RSA token code changes on your RSA SecurID® device. Then enter your RSA pin and the new token code.

RSA PIN

RSA TOKEN CODE

 The token code can be found on your RSA SecurID® device.

🕒 114 seconds remain to enter your credentials

After completing the setup procedure, you will be able to log in to the bidding system and see the navigation bar on the left-hand side. Thereafter, the standard login procedure applies.

3.2.2. Standard Login Procedure

To log in to the bidding system, you will need the following login credentials:

- Username: FCC assigned
- Password: FRN password or associated Username password
- PIN: Numeric PIN created during the initial login (see Section 3.2.1)
- RSA tokencode: A six-digit code generated by the RSA SecurID® token

Enter the information on the Login screen (see Figure 6) and click **SIGN IN**.

If you forget your FRN password, you can contact the FCC Support Center at (877) 480-3201 option 1 (Mon-Fri 8:00 a.m. – 6:00 p.m. ET).

Figure 6: Login screen



WARNING
This system may contain Government information, which is restricted to authorized users ONLY. Unauthorized access, use, misuse, or modification of this computer system or of the data contained herein or in transit to/from this system constitutes a violation of Title 18, United States Code, Section 1030, and may subject the individual to Criminal and Civil penalties pursuant to Title 26, United States Code, Sections 7213, 7213A (the Taxpayer Browsing Protection Act), and 7431. This system is subject to monitoring to ensure proper performance of applicable security features or procedures. Such monitoring may result in the acquisition, recording and analysis of all data being communicated, transmitted, processed or stored in this system by a user. If monitoring reveals possible evidence of criminal activity, such evidence may be provided to Law Enforcement Personnel.
ANYONE USING THIS SYSTEM EXPRESSLY CONSENTS TO SUCH MONITORING

USERNAME

PASSWORD

RSA PIN

If you have not yet set an RSA pin, please leave this field blank.

RSA TOKEN CODE

 The token code can be found on your RSA SecurID® device.

SIGN IN

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3.2.3. Login Errors

During an auction, the system keeps track of the success or failure of each login attempt. In case of incorrect entry of data into any of the four required fields during login, you will receive an error message with an error code. For assistance call the Auction Bidder Line at the number provided with your registration materials.

3.3. Multiple Users for the Same Qualified Bidder

It is possible for more than one authorized bidder for the same qualified bidder to log in and access the system at the same time, each using his or her assigned username and credentials. Any updates made by one authorized bidder will be displayed on the screen of any other user for the same bidder after the screen is refreshed. You can refresh your screen by either clicking the Refresh/Reload button in your browser or by simultaneously pressing the 'Ctrl' and 'R' keys on your keyboard.

However, only one authorized bidder should bid at any given time to avoid a potential conflict in data that may produce a bid, or set of bids, that was not intended.

3.4. Automatic and Manual Logout

A single user cannot be logged in to the bidding system using two computers (or two browser sessions on the same computer) at the same time.

If a user tries to use the same username to access the bidding system from multiple computers or browser sessions, the bidding system will automatically log the user out from the first session and will display a logout notification. This is a protective feature for users because it allows a user to log in to the bidding system using a second computer if the first computer crashes before the user could log out of the system.

A user that is inactive for more than 30 minutes will be automatically logged out of the system and will need to log in again to access the site.

You may manually log out of the bidding system at any time using the **Logout** button, located at the bottom of the navigation bar on every screen, as shown in Figure 7. Logging out of the bidding system will not cause bids that were uploaded successfully to be lost.

3.5. Auction Bidder Line

The Auction Bidder Line is available to assist bidders with first time login procedures, review of round results and announcements, and auction-related questions. In general, telephonic bidding will not be available for the clock phase of Auction 110 because it would not be feasible given the requirement to upload a file to submit bids. However, a telephonic bid assistant will be able to submit bids to maintain the bidder's previous processed demands at the round's clock prices—that is, submit "default bids". The telephone number for the Auction Bidder Line is provided with your registration materials.

Bidders will need to provide the telephonic bid assistant with the appropriate login information (Username, RSA PIN and RSA tokencode) to access the bidding system.

3.6. Additional Information

Appendix 1: System Troubleshooting provides additional information about common errors that you may encounter when accessing the bidding system.

Appendix 2: RSA SecurID® Token Information provides additional information about RSA tokens. It explains what to do if a bidder wishes to change or replace an authorized bidder/user and what to do in the event of lost or damaged RSA tokens.

4. System Navigation and Overview

The bidding system provides bidding information on screens, accessed through the navigation bar; and through downloadable files.

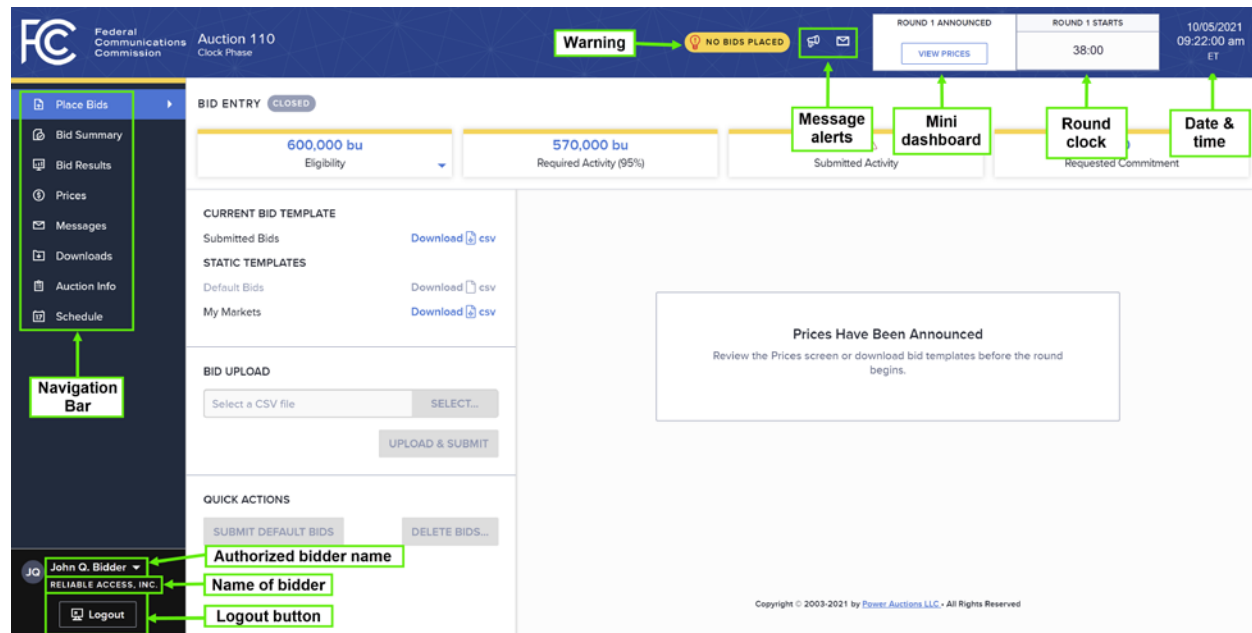
This section provides an overview of the bidding system and describes how to navigate through these screens.

4.1. Navigation Bar and Features Common to All Screens

All screens in the bidding system have a navigation bar on the left side, which provides links to the other available screens. Beneath the navigation bar is the name of the bidder and the authorized bidder who has logged in and the **Logout** button, as described in Section 3.4.⁵

The blue bar at the top of each screen is also common to all screens. It displays status and timing information. It shows Message alerts, a Mini Dashboard with the round number and round status, and links to the most useful screen(s) to be accessed at any given state, a countdown timer showing the time to the beginning or the end of a round, and the current date and time in Eastern Time. An illustration of the navigation bar and common screen features is shown in Figure 7.

Figure 7: Navigation bar and features common to all screens



⁵ Users are advised to use the navigation features of the bidding system rather than using a browser's forward and back navigation functions, which may produce unpredictable results.

4.2. Summary of Bidding System Screens

The navigation bar provides access to eight screens. Their functions are summarized in Table 1 below in the order in which they appear on the navigation bar.

Table 1: Summary of screens reached from the navigation bar

Screen	Description
Place Bids	Allows the user to submit bids during a round by uploading a bid file
Bid Summary	Displays a summary of all bids submitted on behalf of the bidder during a particular round
Bid Results	Displays the results of bid processing for the bidder in a given round for all products in which the bidder bid or had missing bids in the round
Prices	Indicates the prices in a given round for all products in all PEAs which the bidder selected on its Form 175
Messages	Allows the user to view announcements and messages from the FCC, and to send messages to the FCC
Downloads	Allows the user to download files about the bidder's bids and results
Auction Info	Displays information about the reserve price and all available products
Schedule	Shows the schedule for upcoming rounds

4.3. Features Common to Several Screens

This section describes some features that are common to several screens.

4.3.1. Filter

Several screens include a filter dropdown, which allows the user to see a subset of the relevant data on the screen (see Figure 8 for an example).

4.3.2. Search

Several screens include a search box, which can be used to search for a specific market by typing the Market ID or the Market Name (see Figure 8 for an example). You can search for all products in a given state by typing a comma followed by a space and then the two-letter abbreviation for the state (e.g., ", AL" for Alabama). This will bring up any product names that are followed by "AL".

If you are searching for a product by typing a product name that contains special characters such as "ñ" (e.g., Doña Ana), it is important to type those special characters correctly.

4.3.3. Pagination

When the number of relevant products exceeds 25, the information is split into multiple pages ("paginated") with up to 25 products per page, and a page selector is provided at the bottom of the screen (see Figure 8 for an example).

4.3.4. Print

Several screens include a print icon, which can be used to print the content of the screen. You can use the filters provided on the screen to reduce the number of products shown. It is also possible to print using your browser's print functionality, but the result may not be formatted appropriately. For some browsers it might be necessary to choose the "Landscape" format or to edit the scale, in order to fit all data on the page.

4.3.5. Round Selector

Several screens include a round selector which allows you to access the data for a previous round.

5. Viewing Product Information

The Auction Info screen contains two tabs: Products and General Info.

The Products tab provides static information about the products in the auction, including the opening price and supply of blocks for each product, as shown in Figure 8 below. This tab is paginated.

Figure 8: Products tab of Auction Info screen

The screenshot displays the Auction 110 interface with the following elements:

- Header:** Federal Communications Commission, Auction 110 Clock Phase, NO BIDS PLACED, ROUND 1 OPEN, ROUND 1 ENDS (53:18), 10/05/2021 11:06:42 am ET.
- Navigation:** Place Bids, Bid Summary, Bid Results, Prices, Messages, Downloads, Auction Info (selected), Schedule.
- Filters:** FILTER My Products, SEARCH Market ID or Name.
- Table:**

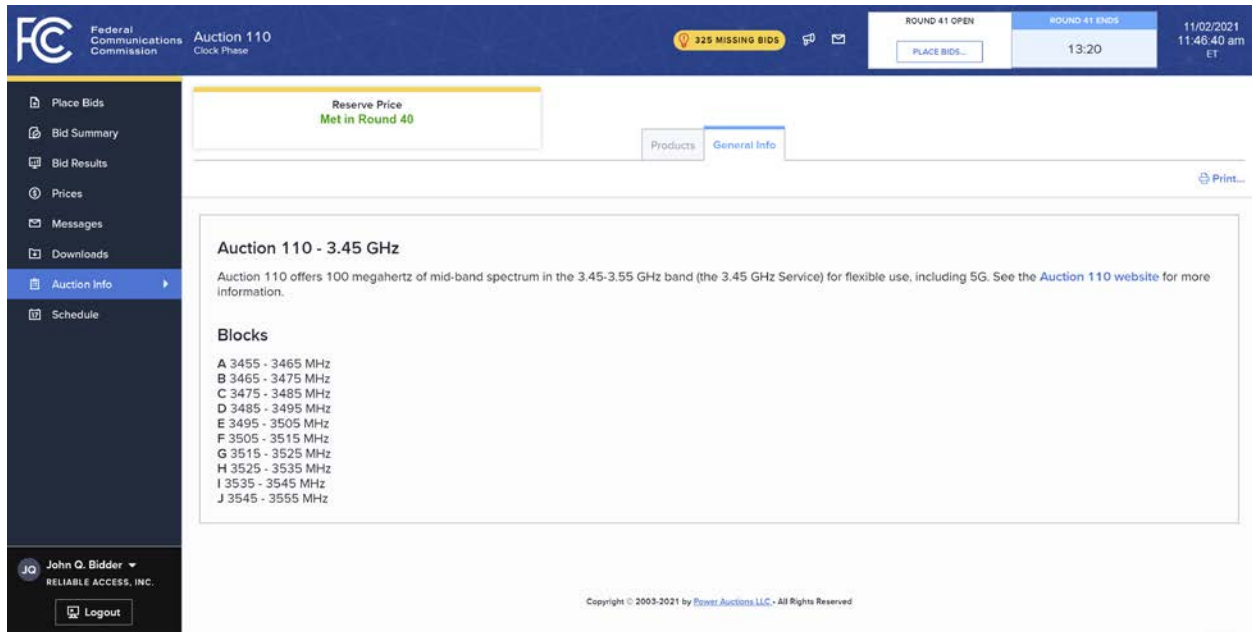
Market ID	Market Name	Category	Supply	Population	Bidding Units	Opening Price	Small Market Cap?	Notable	Selected?
PEA013	Orlando, FL	Cat1	10	4,562,642	4,560	\$1,369,000	No		Yes
PEA014	Cleveland, OH	Cat1	10	4,096,678	4,100	\$1,229,000	No		Yes
PEA015	Phoenix, AZ	Cat1	10	3,817,117	3,820	\$1,145,000	No		Yes
PEA016	Seattle, WA	Cat1	10	3,792,218	3,790	\$1,138,000	No		Yes
PEA017	Minneapolis-St. Paul, MN	Cat1	10	3,390,091	3,390	\$1,017,000	No		Yes
PEA018	San Diego, CA	Cat1	10	3,095,313	3,100	\$929,000	No		Yes
PEA019	Portland, OR	Cat1	10	3,022,643	3,020	\$907,000	No		Yes
PEA020	Denver, CO	Cat1	10	2,789,669	2,790	\$837,000	No		Yes
PEA021	Tampa, FL	Cat1	10	2,783,243	2,780	\$835,000	No		Yes
PEA022	Sacramento, CA	Cat1	10	2,722,415	2,720	\$817,000	No		Yes
PEA023	Pittsburgh, PA	Cat1	10	2,399,667	2,400	\$720,000	No		Yes
PEA024	Saint Louis, MO	Cat1	10	2,396,938	2,400	\$719,000	No		Yes
PEA025	Cincinnati, OH	Cat1	10	2,196,428	2,200	\$659,000	No		Yes
- Footer:** John Q. Bidder, RELIABLE ACCESS, INC., Logout, Copyright © 2009-2021 by Etwire Auctions LLC - All Rights Reserved.

There are two filter options on this screen: “All Products” and “My Products”. “All Products” lists all available products in the auction. “My Products” lists only products from markets that the bidder selected on Form 175.

The Notable column indicates the products that are subject to cooperative sharing restrictions or subject to restrictions resulting from the STA granted to Lockheed Martin Corporation. It is the bidder’s responsibility to investigate carefully the restrictions that apply to a given product. We note that DoD has created a workbook that specifically describes the coordination requirements for each Cooperative Planning Area and Periodic Use Area. See National Telecommunications and Information Administration, Transition Plans and Transition Data for the 3450-3550 MHz Band, <https://www.ntia.gov/other-publication/2021/transition-plans-and-transition-data-3450-3550-mhz-band> (last visited June 6, 2021).

The General Info tab contains general information about the auction, as shown in Figure 9 below. This tab may be changed at any time by the auction manager.

Figure 9: General Info tab of Auction Info screen



Both the Products and General Info tabs display a box showing the status of the auction with respect to the reserve price. If the reserve price has not yet been met, the box will show the estimated shortfall, rounded up to the nearest \$1,000,000. Otherwise, the box will indicate the round in which the reserve price was met, as illustrated in Figure 8 and in Figure 9.

6. Schedule and Messages

6.1. Schedule screen

The Schedule screen shows the current schedule for upcoming rounds in Eastern Time (ET), as illustrated in Figure 10. The schedule shows the date, duration, start time and end time for each round, the duration of the recess, and the status for each round.

The FCC may adjust the number of rounds per day as the auction proceeds. Additional rounds will be displayed as the auction progresses. The schedule displayed in the example does not indicate the expected number of rounds in the auction; the Schedule screen will show the next several rounds assuming the auction continues for that duration or longer.



Figure 10: Schedule screen

The screenshot shows the Auction 110 Schedule screen. The top navigation bar includes the FCC logo, 'Federal Communications Commission Auction 110 Clock Phase', a 'NO BIDS PLACED' indicator, 'ROUND 1 ANNOUNCED' and 'ROUND 1 STARTS 38:00' buttons, and the current date and time '10/05/2021 09:22:00 am ET'. A sidebar on the left contains navigation links: Place Bids, Bid Summary, Bid Results, Prices, Messages, Downloads, Auction Info, and Schedule (highlighted). The main content area displays the schedule for Tuesday, October 5 and Wednesday, October 6. Round 1 is 'ANNOUNCED' (10:00 am - 12:00 pm, 2 hr 0 min, 2 hr 0 min recess). Round 2 is 'SCHEDULED' (2:00 pm - 4:00 pm, 2 hr 0 min, 18 hr 0 min recess). Round 3 is 'SCHEDULED' (10:00 am - 12:00 pm, 2 hr 0 min, 2 hr 0 min recess). Round 4 is 'SCHEDULED' (2:00 pm - 4:00 pm, 2 hr 0 min, 2 hr 0 min recess). The bottom of the screen shows the bidder's name 'John Q. Bidder' and a 'Logout' button.

Round	Status	Start & End Time	Round Duration	Recess Duration
1	ANNOUNCED	10:00 am - 12:00 pm	2 hr 0 min	2 hr 0 min
2	SCHEDULED	2:00 pm - 4:00 pm	2 hr 0 min	18 hr 0 min
Wednesday, October 6				
3	SCHEDULED	10:00 am - 12:00 pm	2 hr 0 min	2 hr 0 min
4	SCHEDULED	2:00 pm - 4:00 pm	2 hr 0 min	2 hr 0 min

6.2. Messages: Announcements and Conversations

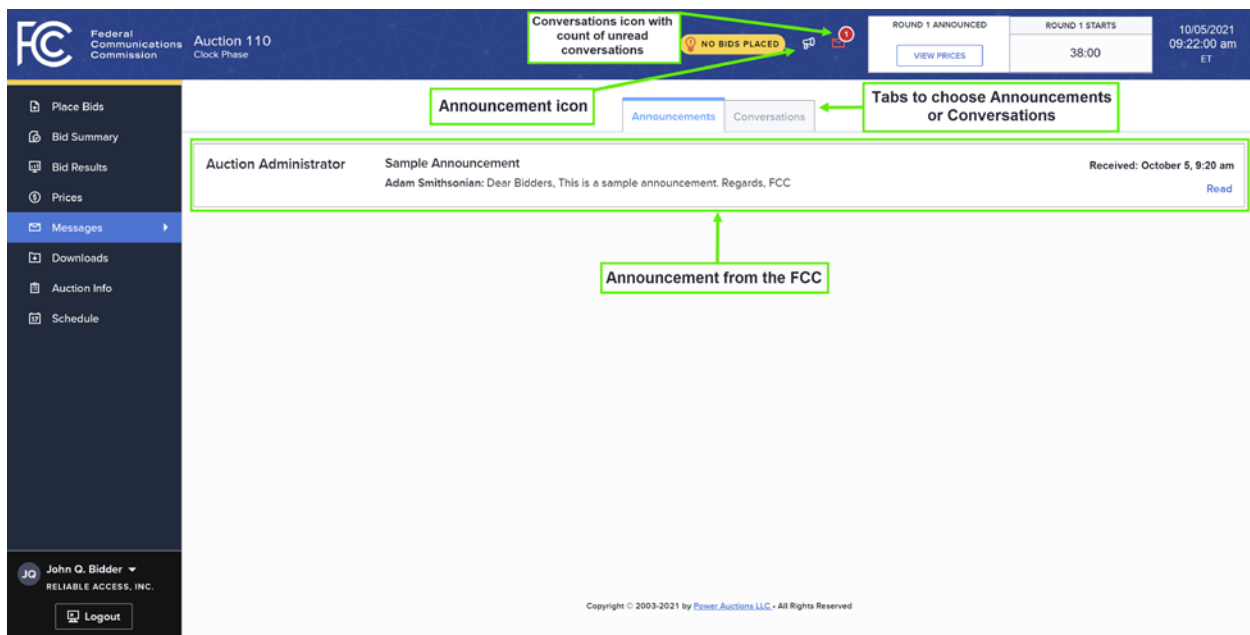
On the Messages screen you can see announcements made by the FCC. You can also communicate with the FCC through “conversations” by sending messages to and receiving responses from the FCC that are visible only to you and the other authorized bidders for the same qualified bidder. The Messages screen contains two tabs: Announcements and Conversations. Access this screen by clicking the [Messages](#) link

on the navigation bar or by clicking on the respective icon in the blue bar ( for announcements or  for conversations). The Announcements screen is shown by default when you click on the Messages link, as in Figure 11 below.


If you have any unread announcements or conversations, a count with the number of unread messages will appear in a red circle next to the announcement or conversation icon in the blue bar at the top of the screen, as shown in Figure 11 below.

To read announcements, click on the [Messages](#) link in the navigation bar or click on the Announcement icon in the blue bar. To send a message to the FCC or read a response from the FCC, click on the [Messages](#) link in the navigation bar and then choose the Conversations tab, or click on the Conversation icon in the blue bar. Once the Announcement or Conversations tab has opened, it will display the appropriate messages in reverse chronological order, showing the first line (or part of the first line) of each announcement or message. You must click on the [Read](#) link or the [Read/Reply](#) link to open and read an announcement or message in its entirety.

Figure 11: Messages screen



As shown in Figure 11 and Figure 15, if any message on the screen has not been read, the Announcements or Conversations icon displayed at the top of the Messages screen will indicate the number of unread announcements or messages. Any unread message has an orange “UNREAD” badge. After an unread announcement or conversation has been opened by clicking on the [Read](#) or [Read/Reply](#) link, the number next to the relevant icon will decrease accordingly. The number will not decrease until the [Read](#) or [Read/Reply](#) link has been clicked for the unread announcement or message.

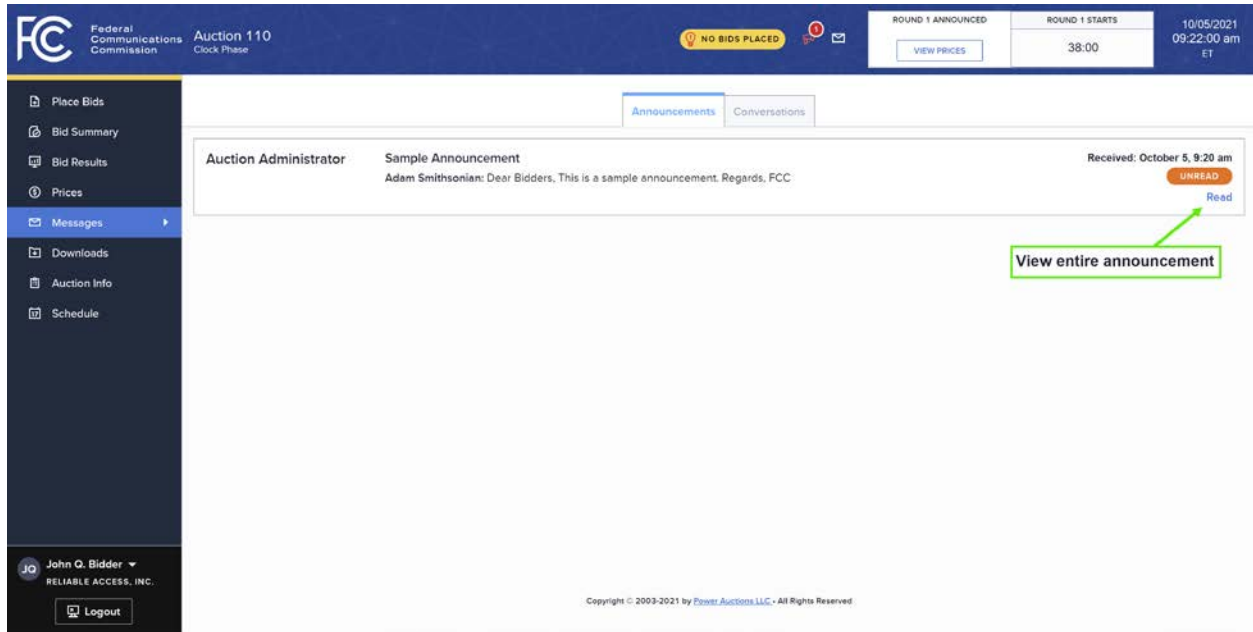
 Whenever you see an indication that a message is unread, you should go to the Messages screen to open and read the entire message.

Announcements and conversations can be printed by clicking on the [Print...](#) icon located in the top right-hand corner of the screen.

6.2.1. Receiving and Reviewing Announcements

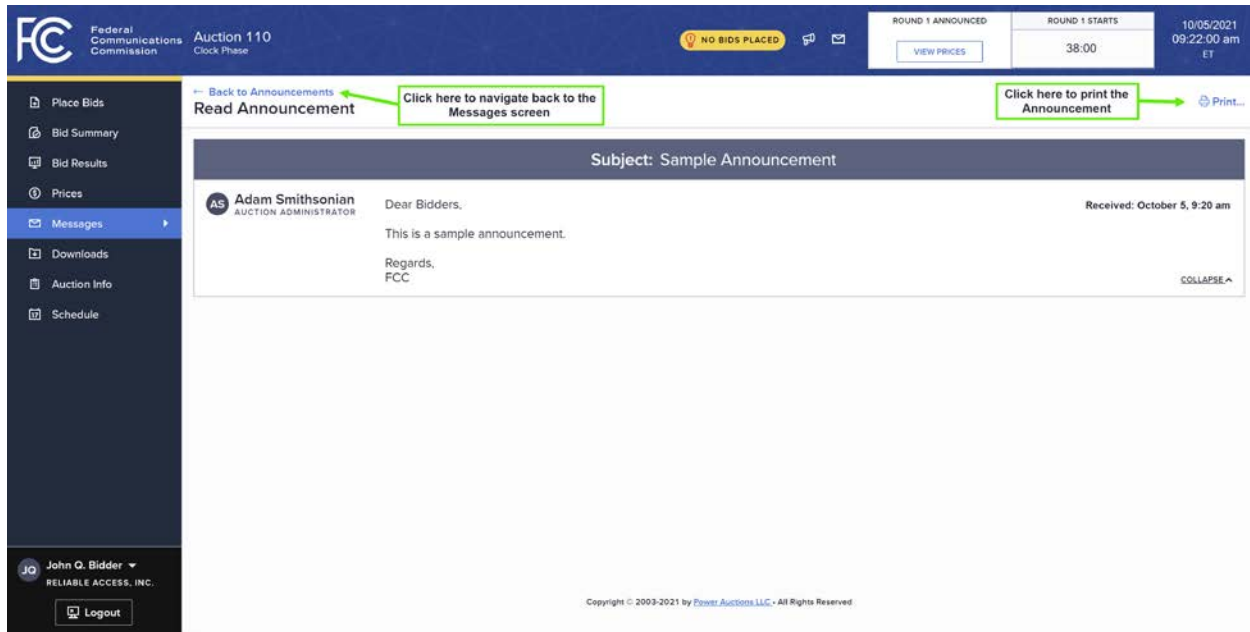
The FCC will send announcements to all bidders containing important bidder information such as changes in the number of rounds per day or the suspension of bidding due to unforeseen circumstances. The Messages screen will only show the first line or part of the first line of an announcement. As noted above, to view the entire text of an announcement, you must click on the [Read](#) link for the announcement you wish to read, as shown in Figure 12.

Figure 12: View entire announcement link




Clicking on the [Read](#) link loads the full text of the announcement as shown in Figure 13. To close the text of the announcement and return to the default Announcements tab on the Messages screen, click the [← Back to Announcements](#) link.

Figure 13: An open announcement



6.2.2. Conversations with the FCC

You can communicate with the FCC through the bidding system. A message from a user is associated with the bidder's FRN and the authorized bidder who sent the message. Only authorized bidders for a bidder can see such messages.

 *For time-sensitive issues, users should call the Auction Bidder Line phone number which is provided to qualified bidders.*

To compose a new message to the FCC, choose the Conversations tab and click on the **NEW CONVERSATION** button in the upper right corner of the Conversations screen (shown in Figure 15). This will open a new message text box. Next, enter the subject and content of the message in the relevant fields as shown in Figure 14 below. Click **SEND** to send the message. To cancel an unsent message, click on the **CANCEL** button.

Figure 14: Compose a new conversation

FC Federal Communications Commission Auction 110 Clock Phase

NO BIDS PLACED

ROUND 1 ANNOUNCED VIEW PRICES

ROUND 1 STARTS 38.00

10/05/2021 09:22:00 am ET

← Back to Conversations

New Conversation

SUBJECT:

MESSAGE **H B I U**

Dear FCC,
This is a sample conversation.
Regards,
John

We may respond by phone. If you need an immediate response, we suggest calling the hotline instead: 555 555 5555.

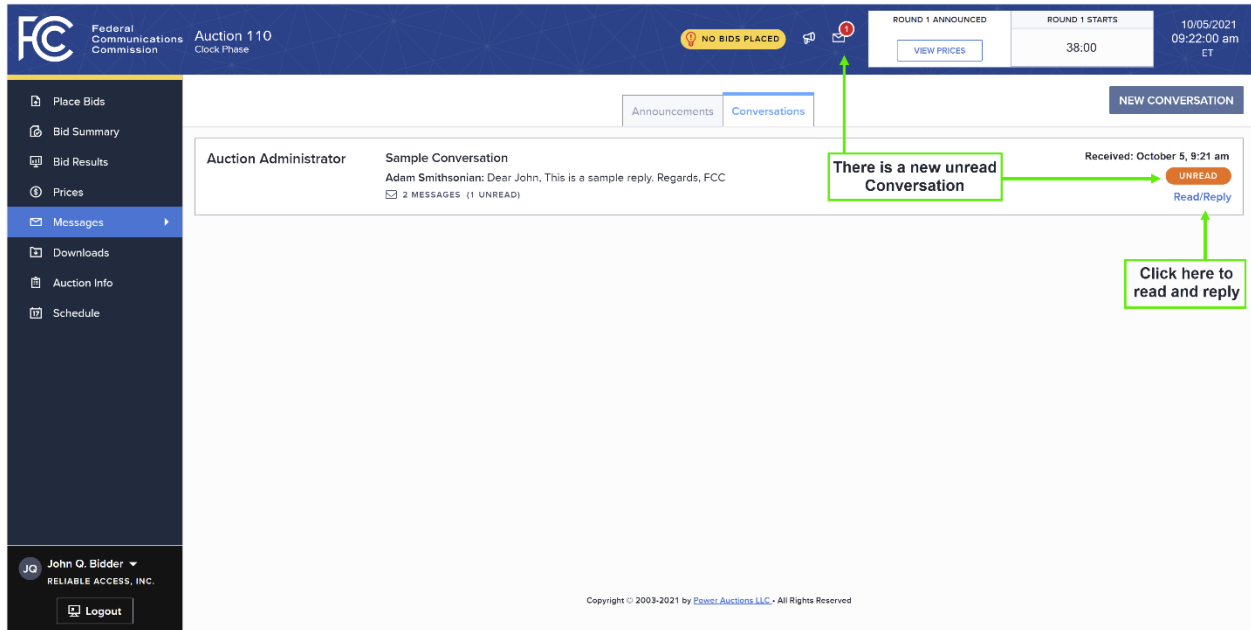
John Q. Bidder
RELIABLE ACCESS, INC.

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A sent conversation will appear as a new conversation in a box on the main screen of the Conversations tab of the Messages screen, as seen in Figure 15. The FCC may reply by sending an electronic message or by calling the contact person on the phone. If there is an electronic reply from the FCC, the reply will be added to that conversation.

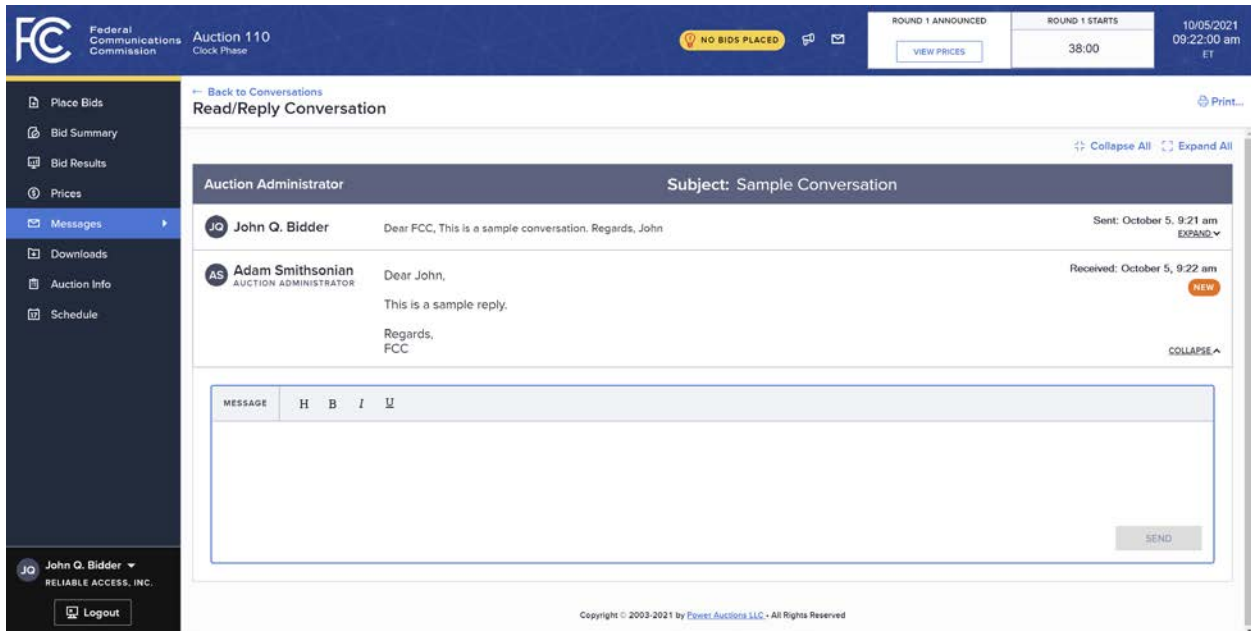
As with announcements, new conversations are indicated by a count next to the Conversations icon, and there is an orange “UNREAD” badge on the right side of the conversation box. All conversations are listed on the Conversations tab. For a given conversation, only the most recent message is shown, as illustrated in Figure 15. To view the complete message and all messages in a conversation, click on the [Read/Reply](#) link for that conversation.

Figure 15: View response to a conversation



Clicking on the link to view an entire conversation opens the full conversation on the screen, as shown in Figure 16. If you want to send a reply, type the message in the open box and click **SEND** to send it to the FCC. Click on the [← Back to Conversations](#) link to return to the Conversations tab of the Messages screen.

Figure 16: View entire conversation



7. Bidding

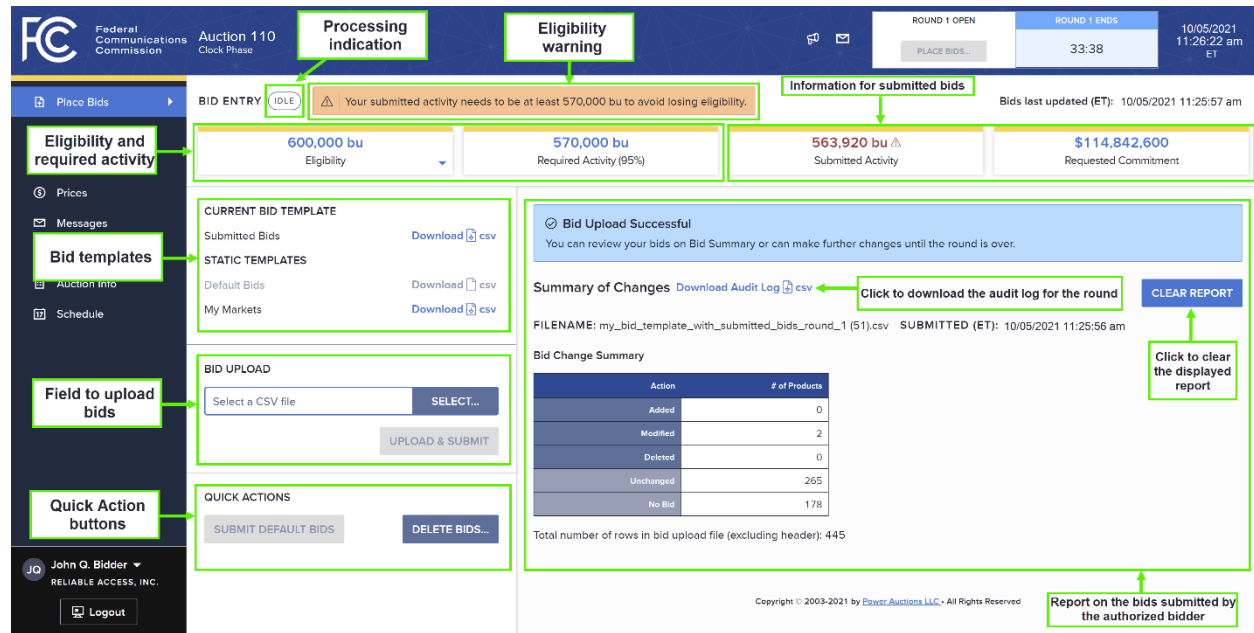
Users conduct all bidding activities through the Place Bids screen, which is accessed through a link on the navigation bar on the left.

This section describes the layout of the Place Bids screen and provides instructions for preparing a bid file, uploading it, and resolving any upload errors. It also describes how to submit bids to maintain the bidder’s demand from the previous round at the current round’s clock prices, an option that is available for rounds after Round 1.

7.1. Layout of the Place Bids Screen

The layout of the Place Bids screen is illustrated in Figure 17 below.

Figure 17: Layout of the Place Bids screen



The left side of the screen provides access to bid templates that the user can download to prepare its bid files. Below the templates box is a field to upload bid files. Below the bid upload field are two “quick action” buttons to submit default bids (discussed in Section 7.4.2) and to delete bids. The **SUBMIT DEFAULT BIDS** button is active only for rounds after Round 1. The **DELETE BIDS...** button is active only if there are submitted bids for the bidder in the round.

The right side of the screen provides a report after each successful or unsuccessful bid upload and after each “quick action” that is performed by the user. The report that appears on the right side of the screen provides the status of the last action by this authorized bidder and does not reflect information about the bid-related actions of other authorized bidders for the same company. If the user successfully submits bids (either via an upload or using the **SUBMIT DEFAULT BIDS** button) or deletes bids using

the **DELETE BIDS...** button, then the screen shows a summary of changes and a link to a downloadable audit log file. The screen also shows a report if a user's upload is unsuccessful due to errors in the bid file and provides a link to a downloadable file indicating the bidding errors.

The Bid Entry badge at the top left of the screen reads "IN PROGRESS" if the system is processing a bid upload or a "quick action," entered either by this user or by another authorized bidder of the same company. The button reads "IDLE" if the system is not currently processing any bid-related actions by any of the bidder's authorized users.

The top of the screen shows the bidder's eligibility and required activity for the round along with the bidder's submitted activity and requested commitment for the bids submitted so far in the round by any of the bidder's authorized users. The bidder's contingent bidding limit can be viewed by clicking a triangle beneath the eligibility information. Before any bids have been submitted for the round, the submitted activity will be 0 bidding units (bu) and the requested commitment will be \$0. The submitted activity and the requested commitment are updated every time that bids are successfully submitted or deleted. If the submitted activity is less than the required activity, a warning is displayed and the submitted activity is shown in red with a caution icon (a triangle containing an exclamation mark), as shown in Figure 17.



All authorized bidders for the same company will see the same submitted activity and requested commitment values on the Place Bids screen. This information will be updated every time bids are submitted on behalf of the company.

If the bidder has claimed eligibility for a bidding credit discount, the bidder's requested net commitment is shown on the screen instead of the requested commitment. Details regarding the bidding credit discount caps can be viewed by clicking a triangle beneath the requested net commitment information. See Section 7.5 for more information.

7.2. Available Bid Templates

A bidder's bid templates for a round are available as soon as the clock prices for the round have been announced (shortly after the results of the previous round have been posted) and remain available during the round. Although bids cannot be submitted before the round starts, the bid templates are available so that users have more time to prepare their bids.

The first six columns of a bid template are MARKET, CATEGORY, QUANTITY, PRICE, BID_TYPE, and SWITCH_TO_CATEGORY. The headings for these columns are in ALL CAPS to remind you that they are mandatory columns that must be included within the file. A bid template also includes other columns with information related to the products and/or your bids and results, but these are provided for convenience only, are not used by the bidding system, and can be excluded. The headings for these additional, information-only columns are in lower case.

Bid templates can be found on the Place Bids screen under the headers "CURRENT BID TEMPLATES" and "STATIC TEMPLATES" (see Figure 17). The following table summarizes the available bid templates.

Table 3: Summary of available bid templates

Bid Template	Description	Available for
Submitted Bids	Includes all products in PEAs that a bidder selected on its Form 175 with the quantities and prices bid, if any.	All Rounds
Default Bids	Includes all products for which the bidder has processed demand. The QUANTITY, PRICE, and BID_TYPE columns are filled in so that, if the user uploads this template, the bids will maintain the bidder's previous round processed demands at this round's clock prices.	Rounds after Round 1
My Markets	Includes all products in PEAs that the bidder selected on its Form 175.	All Rounds

Full details about the specifications of the bid templates and the requirements can be found in the Auction 110 file formats document located on the Auction 110 website in the Education section (available at www.fcc.gov/auction/110).

7.3. Bidding in Round 1

7.3.1. Preparing a Bid File for Round 1


In Round 1 of Auction 110, you or another authorized user for the bidder must upload at least one bid file indicating, for each product in which you wish to bid, how many blocks you demand at the opening price. You will only be able to bid for products in PEAs that were selected on the bidder's Form 175. A bidder that fails to have any bids placed on its behalf in Round 1 will have its eligibility reduced to zero and will not be able to bid for the remainder of the auction.

You can prepare your bid file by using one of the templates that are available on the Place Bids screen or by creating a .csv file that is formatted according to the file requirements.⁶ The bidding system treats bids prepared using a custom file the same way as it treats bids prepared using one of the available bid templates.

 Be sure to save your prepared bid file using a .csv format.

Make sure you save your bid upload file in a known place on your computer before you upload it. ***The most common user mistake is not to save your file before you upload it.***

⁶ The bid file must be a comma-separated value file and must contain ".csv" as its extension (e.g., "myuploadfile.csv"). This csv file must be encoded as ASCII, UTF-8, or UTF-8 BOM. The bid template files use UTF-8 BOM encoding. Contact your IT department if you have any questions on encoding.

 *In some older browsers, including the older Microsoft Edge Legacy, the browser may use a temporary folder to store your downloaded file. This is especially true if you click “Open” when the file is first downloaded instead of “Save”. Files stored in temporary folders are difficult to find on the computer. If you are using an older browser, make sure to save the file in a known location before you modify it, and then resave it before you upload it.*

If you are using an older version of Excel (e.g., Office 2010), you should save your template using “Save as” instead of “Save”. You may need to select “CSV (Coma Delimited (.csv))” as the “Save as type”. Otherwise, this older version of Excel may end up saving the file as a “.txt” file.*

It is best to use one of the supported browsers and versions of Excel.

The bid file must contain a header row and the first six headers must be: MARKET, CATEGORY, QUANTITY, PRICE, BID_TYPE, SWITCH_TO_CATEGORY. These first six columns must be in the specified order. Any additional columns will be ignored by the bidding system.

For each product for which you wish to bid, the Market ID must be in the MARKET column, the category (i.e., “Cat1” or “Cat2”) must be in the CATEGORY column, and you must include valid entries for the QUANTITY column (i.e., the number of blocks you are requesting), the PRICE column (i.e., the price of your bid), the BID_TYPE column (i.e., simple or switch), and the SWITCH_TO_CATEGORY column (which should be left blank in Round 1). For Round 1, the quantity can be 1, 2, 3, or 4 (but cannot exceed the product’s supply),⁷ and the price must be the opening price. The BID_TYPE should be “Simple”. In Round 1, you can only include one bid per product in the file, indicating the number of blocks of the product that the bidder demands at the opening price.

If you do not want to bid for a product that is included in your template, either leave the QUANTITY, PRICE, BID_TYPE, and SWITCH_TO_CATEGORY fields empty (as illustrated in Figure 18 below), or delete the entire row from the file. Once you have submitted a bid for a product, you can delete it following the instructions in Section 7.3.3.

⁷ In particular, for a Cat2 product with a supply of 2 blocks, the quantity in Round 1 can be either 1 or 2.

Figure 18: The My Markets template for Round 1 with bids

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
MARKET	CATEGORY	QUANTITY	PRICE	BID_TYPE	SWITCH_TO_CATEGORY	round	price_poin/missing_bir	market_na	small_mar	notable	population	bidding_urs	supply	previous_r	previous_r	start_of_rclock	price	
2	PEA001	Cat1	2	7571000	simple		1		New York, N	Y	25237061	25240	10			7571000	7571000	
3	PEA002	Cat1	2	5823000	simple		1		Los Angeles, N	N	19410169	19410	10			5823000	5823000	
4	PEA003	Cat1	2	2810000	simple		1		Chicago, IL, N	N	9366713	9370	10			2810000	2810000	
5	PEA004	Cat1	2	2708000	simple		1		San Francis N	N	9027937	9030	10			2708000	2708000	
6	PEA005	Cat1	2	2353000	simple		1		Baltimore, N	N	7842134	7840	10			2353000	2353000	
7	PEA006	Cat1	2	2276000	simple		1		Philadelph N	N	7587252	7590	10			2276000	2276000	
8	PEA007	Cat1	2	2033000	simple		1		Boston, M/ N	N	6776035	6780	10			2033000	2033000	
9	PEA008	Cat1	2	1936000	simple		1		Dallas, TX, N	N	6452472	6450	10			1936000	1936000	
10	PEA009	Cat1	2	1888000	simple		1		Miami, FL, N	N	6291880	6290	10			1888000	1888000	
11	PEA010	Cat1	2	1768000	simple		1		Houston, T N	N	5891999	5890	10			1768000	1768000	
12	PEA011	Cat1	2	1631000	simple		1		Atlanta, GA, N	Y	5435312	5440	10			1631000	1631000	
13	PEA012	Cat1	2	1541000	simple		1		Detroit, MI, N	N	5137479	5140	10			1541000	1541000	
14	PEA013	Cat1	2	1369000	simple		1		Orlando, FL, N	N	4562642	4560	10			1369000	1369000	
15	PEA014	Cat1					1		Cleveland, N	N	4096678	4100	10			1229000	1229000	
16	PEA015	Cat1					1		Phoenix, A, N	N	3817117	3820	10			1145000	1145000	
17	PEA016	Cat1					1		Seattle, W/ N	N	3792218	3790	4			1138000	1138000	
18	PEA016	Cat2					1		Seattle, W/ N	N	3792218	3790	6			1138000	1138000	
19	PEA017	Cat1					1		Minneapolis, N	N	3390091	3390	10			1017000	1017000	
20	PEA018	Cat1					1		San Diego, N	N	3095313	3100	4			929000	929000	
21	PEA018	Cat2					1		San Diego, N	N	3095313	3100	6			929000	929000	
22	PEA019	Cat1					1		Portland, CN	Y	3022643	3020	10			907000	907000	
23	PEA020	Cat1					1		Denver, CC, N	N	2789669	2790	10			837000	837000	
24	PEA021	Cat1					1		Tampa, FL, N	N	2783243	2780	10			835000	835000	

7.3.2. Uploading a Bid File

You can upload a bid file while the bidding round is open via the Bid Upload box on the Place Bids screen. To upload a bid file, click the **SELECT...** button in the bid upload box. This will allow you to search your directories for the appropriate file. Once you have selected the appropriate bid file, click the **UPLOAD & SUBMIT** button to upload your bids. This is illustrated in Figure 19 below.

Figure 19: Using the Place Bids screen to upload a bid file

When bids are successfully uploaded, the Place Bids screen will show a message at the top of the report section indicating that your bid upload was successful, and a summary of the bids will be provided below the message (see Figure 17). This summary, labeled “Bid Change Summary”, shows the number of bids

that were added, modified, deleted, and unchanged. As shown on Figure 17, the report field also provides a downloadable audit log file that includes all bidding actions for the bidder in the round.

In Round 1, until at least one bid is successfully placed for Round 1, the system will display a “No Bids Placed” badge. This badge is removed as soon as a bid has been successfully placed.

7.3.2.1. Bid Upload Errors

If a bid upload file contains errors that prevent the bids from being submitted successfully, the Place Bids screen will notify the user that the upload was not successful and will display one or more error messages in the report field, as illustrated in Figure 20. The bidding system will list up to ten errors in the report field, with the associated error codes. In addition, there is a [Download Report Details](#) link to a file containing the list of errors, capped at 50, along with explanations. See Appendix 3: Bid Upload Errors for a full list of the possible error codes and an example of each.

Figure 20: Place Bids screen after unsuccessful upload


The screenshot displays the 'Place Bids' interface with the following elements:

- Top Bar:** 'Warnings that no bids were submitted' (green box), 'NO BIDS PLACED' badge, 'ROUND 1 OPEN' and 'ROUND 1 ENDS' buttons, and a clock showing 11:26:22 am ET on 10/05/2021.
- Notification:** 'Your bids were not submitted.' (red box).
- Activity Summary:** 600,000 bu Eligibility, 570,000 bu Required Activity (95%), 0 bu Submitted Activity, and \$0 Requested Commitment.
- Left Sidebar:** Navigation menu including Place Bids, Bid Summary, Bid Results, Prices, Messages, Downloads, Auction Info, and Schedule.
- Main Content:**
 - BID ENTRY:** Status 'IDLE' with a warning: 'Based on your submitted activity, your next round eligibility will be too low to place bids.'
 - CURRENT BID TEMPLATE:** Options to download Submitted Bids, STATIC TEMPLATES (Default Bids, My Markets), and BID UPLOAD (Select a CSV file, SELECT..., UPLOAD & SUBMIT).
 - QUICK ACTIONS:** SUBMIT DEFAULT BIDS and DELETE BIDS...
 - Unsuccessful upload message:** 'Bid Upload Failed' with a 'Download error report here' link (green box).
 - Error Report:** 'Download Report Details' link and 'CLEAR REPORT' button.
 - Error List:** Table showing the first 10 errors. The first error (Line # 2) is expanded to show raw data: 'PEA001,Cat1,2,7471000,simple,1,,,New York, NY,NY,25237061,25240,10,,7571000,7571000'. A green arrow points to the 'Expand for more details' link (green box).

The bidding system may not report all errors in a given upload attempt. This can occur if something basic is wrong (e.g., one of six mandatory columns is missing), or if there are more than 50 errors. Once the reported errors are fixed and the file is uploaded again, the system will check the new file and report any further errors.

If an upload is unsuccessful, the system does not delete, change, or add any bids. The bids that were present prior to the unsuccessful upload remain.

To remove the error status from a screen, you can either fix the errors in the upload file and resubmit the file or click on the **CLEAR REPORT** button. Clicking on **CLEAR REPORT** removes the error report from the screen, but does not have any effect on the bidder’s submitted bids.

 Only bids that have been successfully uploaded will be processed by the system. If your bid upload is unsuccessful, be sure to correct the errors in the bid file and submit your bids before the round ends.

7.3.3. Adding, Changing, and Deleting Bids for Round 1

As long as Round 1 is open, you can add further bids, change the bids that have been submitted, or delete the submitted bids by uploading an additional bid file. You can prepare your bid file using the Submitted Bids template (which includes all submitted bids for the bidder) or by creating a correctly formatted .csv file.

To change a bid that has already been submitted, include that product in the bid file and enter the desired amount in the QUANTITY column and ensure the PRICE is kept at the opening price.

To add a bid for a product for which there is no submitted bid, include the product in your bid file, specify the desired number of blocks in the QUANTITY column, enter the opening price in the PRICE column, and enter “Simple” in the BID_TYPE column.

Each time you upload a new bid file, the bids in the new bid file replace your existing bids. Therefore, be sure to include all your bids in the new bid file, not just the ones you are changing.


If you wish to delete an existing bid for a given product without replacing it with a new bid for that product, include that product in the new bid file, specify “Delete”, “delete” or “DELETE” in the BID_TYPE column for that product and ensure that the QUANTITY, PRICE, and SWITCH_TO_CATEGORY columns are null (blank). For example, if you have already submitted a bid for the Cat1 product in PEA 003, you can delete that bid by uploading the file illustrated in Figure 21 below.

Figure 21: Deleting existing bids for some products

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	MARKET	CATEGORY	QUANTITY	PRICE	BID_TYPE	SWITCH_T	round	price_poi	missing_bi	market_ni	small_mar	notable	populator	bidding_u	supply	previous_r	previous_r	start_of_r	clock_price
2	PEA001	Cat1	2	7571000	Simple			1	1	New York, N	Y		25237061	25240	10			7571000	7571000
3	PEA002	Cat1	2	5823000	Simple			1	1	Los Angel	N	N	19410169	19410	10			5823000	5823000
4	PEA003	Cat1			delete			1	1	Chicago, Il	N	N	9366713	9370	10			2810000	2810000
5	PEA004	Cat1	2	2708000	Simple			1	1	San Franci	N	N	9027937	9030	10			2708000	2708000
6	PEA005	Cat1	2	2353000	Simple			1	1	Baltimore,	N	N	7842134	7840	10			2353000	2353000
7	PEA006	Cat1	2	2276000	Simple			1	1	Philadelph	N	N	7587252	7590	10			2276000	2276000
8	PEA007	Cat1	2	2033000	Simple			1	1	Boston, M	N	N	6776035	6780	10			2033000	2033000
9	PEA008	Cat1	2	1936000	Simple			1	1	Dallas, TX	N	N	6452472	6450	10			1936000	1936000
10	PEA009	Cat1	2	1888000	Simple			1	1	Miami, FL	N	N	6291880	6290	10			1888000	1888000

Delete existing bid for PEA003 Cat1

Another way to change the bids is to delete all the bids that have already been submitted for the bidder in the round by clicking on the **DELETE BIDS...** button and then upload a new bid file.

 The Delete Bids button will delete ALL bids for the round for your qualified bidder, including bids placed by other authorized bidders for your bidder.

7.4. Bidding in a Round after Round 1

In a round after Round 1, you can *either* bid to maintain the bidder's processed demand for a product (i.e., the demand after processing the previous round's bids) at the new round's clock price *or* bid to change demand at a price associated with the round. For PEAs with two categories, you can bid to switch some or all of your demand from one category to the other. You can also bid for additional products, provided you have eligibility to do so.

For a round after Round 1, you can submit your bids by uploading a bid file, similarly to Round 1. If you wish to maintain the bidder's processed demand for all products at the new round's clock price, you also have the option to submit these bids (the bidder's "default bids") by clicking a button on the Place Bids screen.

For rounds after Round 1, a bid upload must include bids for all products for which the bidder has processed demand. The system will display a "Missing Bids" badge if bids have not yet been placed. This badge is removed as soon as bids are placed for all products with processed demand.

7.4.1. Preparing and Uploading a Bid File for a Round after Round 1

You can prepare your bid file by using any of the templates available on the Place Bids screen or by creating a .csv file formatted according to the file requirements. The bidding system treats bids prepared using a custom file the same way as it treats bids prepared using one of the available bid templates.

As for Round 1 bids, the bid file must contain a header row and the first six headers must be: MARKET, CATEGORY, QUANTITY, PRICE, BID_TYPE, and SWITCH_TO_CATEGORY. For each product for which you wish to bid, the market ID must be in the MARKET column, the product category must be in the CATEGORY column, and you must include valid entries for the remaining columns. For a round after Round 1, the quantity can be 0, 1, 2, 3, or 4 (but cannot exceed the product's supply).⁸ A bid for the same quantity as the bidder's processed demand must be at the clock price. A bid for a quantity different than the bidder's processed demand can be at any price greater than or equal to the start-of-round price and less than or equal to the clock price. A bid for a quantity of 0 can only be used for a product for which the bidder has processed demand; such a bid is a request to reduce demand for the product to 0 blocks.

You may enter "Simple", "Delete", or "Switch" in the BID_TYPE column. Simple bids are used to increase, decrease, or maintain demand for a given product. Delete bids are used to remove bids for products for which you do not have processed demand. Switch bids allow you to switch demand across products in the same market. The SWITCH_TO_CATEGORY column should contain the category of product you wish to switch to if you are entering a switch bid and should be left blank otherwise.

If you want to increase or reduce demand for a product at multiple price points in the round, you can submit multiple bids for the product, each on a separate row in the bid file, and each indicating a different quantity and price. All bids for the same product must be one-directional in terms of price. That is, if all of the bids in a bid file for a product are put in ascending order by price, the corresponding quantities must all either increase or decrease starting from the bidder's processed demand. Figure 22


⁸ In particular, for a Cat2 product with a supply of 2 blocks, the quantity for a round after Round 1 can be 0, 1, or 2.

provides an example of a bid file with three bids for Cat1 in PEA002. In this example, the bidder's processed demand for this product is 4 blocks, the start-of-round price is \$5,823,000 and the clock price is \$6,406,000. The bid file of Figure 22 contains one bid to reduce demand to 3 blocks at price \$6,000,000, a bid to reduce demand to 2 blocks at \$6,200,000, and another bid to reduce demand to 1 block at price \$6,406,000.

Figure 22: Bid file with multiple bids for a product

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	MARKET	CATEGORY	QUANTITY	PRICE	BID_TYPE	SWITCH_TO	round	price_poir	missing_bi	market_n	small_mar	notable	populator	bidding_ui	supply	previous_t	previous_r	start_of_r	clock_price
2	PEA001	Cat1					2			New York, N	Y		25237061	25240	10	28		7571000	8329000
3	PEA002	Cat1	3	6000000	Simple					Los Angele	N		19410169	19410	10	16	4	5823000	6406000
4	PEA002	Cat1	2	6200000	Simple		2			Los Angele	N		19410169	19410	10	16	4	5823000	6406000
5	PEA002	Cat1	1	6406000	Simple		2			Los Angele	N		19410169	19410	10	16	4	5823000	6406000
6	PEA003	Cat1					2			Chicago, IL	N		9366713	9370	10	28		2810000	3091000

If you have processed demand for a product, you must list it in your bid file and complete the required columns. That is, you must specify your intentions for this product for this round. If you leave out a product with processed demand from your upload file, you will receive an error message upon upload. If, by the time the round ends, bids have not been placed for products with processed demand, then during bid processing the system will place bids on your behalf for each product with processed demand at the start-of-round price for a quantity of zero. (See Section 5.1 of the Auction 110 Clock Phase Technical Guide for details).

 *If you do not enter values for the third, fourth, and fifth columns (QUANTITY, PRICE, and BID_TYPE) for a product that does not have processed demand, the system assumes that you do not want to bid for this product.*

The process to upload a bid file for a round after Round 1 is the same as for Round 1 (see Section 7.3.2). After you have successfully uploaded bids, the system will include those bids in the Submitted Bids template for the round and will update the Missing Bids template appropriately.

If you wish to switch demand across categories in the same market, you must first delete the row corresponding to the category that you want to switch to, since all of the bid information will be contained in the row for the “switch from” product. In the remaining row for the market (for the “switch from” product), enter the quantity you want to *retain* in the category you are switching out of and the price at which you would like the switch to occur. The bid type must be Switch and the SWITCH_TO_CATEGORY column must contain the category that you are switching to.

Figure 23 shows the same bid file before and after it has been altered to enter a switch bid. The first image shows the bidder's Default Bids template for the round. In this example, the bidder has processed demand of 3 blocks for Cat1 in PEA 018, and does not have processed demand for Cat2 in PEA 018. The second image shows the bid file with a switch bid. The bidding system will interpret this switch bid as a request to switch demand for two blocks from Cat1 to Cat2 in PEA018 (leaving demand for one block in Cat1).

Figure 23: Switch bids

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	MARKET	CATEGORY	QUANTITY	PRICE	BID_TYPE	SWITCH_TO_CATEGORY	round	price_poin/missing_bi	market_na	small_marl	notable	population	bidding_ursupply	previous_r	previous_r	start_of_rc	clock_price		
2	PEA018	Cat1	3	1022000	Simple		2	1	San Diego, N	N		3095313	3100	4	11	3	929000	1022000	
3	PEA018	Cat2					2	1	San Diego, N	N		3095313	3100	6	24		929000	1022000	
4	PEA019	Cat1					2	1	Portland, CN	Y		3022643	3020	10	36		907000	998000	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	MARKET	CATEGORY	QUANTITY	PRICE	BID_TYPE	SWITCH_TO_CATEGORY	round	price_poin/missing_bi	market_na	small_marl	notable	population	bidding_ursupply	previous_r	previous_r	start_of_rc	clock_price		
2	PEA018	Cat1	1	1022000	Switch	Cat2		2	1	San Diego, N	N		3095313	3100	4	11	3	929000	1022000
3	PEA019	Cat1						2	1	Portland, CN	Y		3022643	3020	10	36		907000	998000

7.4.2. Submitting Default Bids

For a round after Round 1, if you wish to maintain demand at the current round’s clock prices for all products for which the bidder has processed demand, you can submit those bids simply by clicking on the **SUBMIT DEFAULT BIDS** button.

Alternatively, you can download the “Default Bids” bid template and upload those bids to the system. In the “Default Bids” bid template, the QUANTITY column contains the bidder’s processed demand (if any) and the PRICE column contains the clock price of the current round. All bids in the Default Bids template are Simple bids. Thus, by uploading the “Default Bids” bid template, you are submitting bids to maintain the bidder’s processed demands at this round’s clock prices.

7.4.3. Modifying Bids for a Round after Round 1

While the round is still open, you can add, change, and delete bids that have been submitted for the bidder in that round, using the Submitted Bids template or by creating a correctly formatted .csv file, as described for Round 1.


As in Round 1, once you correctly submit a new bid file, the bids in the new bid file will replace any bids that were already submitted in the round. Therefore, the new bid file must include all products with existing bids submitted in the round.

To change a bid that has already been submitted, enter the desired amounts in the QUANTITY and PRICE columns. If the QUANTITY is equal to the bidder’s processed demand, then the PRICE must be equal to the clock price.

To add a bid for a product for which there is no submitted bid, include that product in your bid file, specify the desired number of blocks in the QUANTITY column and the desired price in the PRICE column. Note that you can use the Submitted Bids template to add a bid, because this template includes all products that the bidder selected on its Form 175.

To delete a previously submitted bid for a given product without replacing it with a new bid for that product, include that product in the new bid file, specify “Delete”, “delete” or “DELETE” in the BID_TYPE column for that product, and ensure that the QUANTITY, PRICE, and SWITCH_TO_CATEGORY columns are null.

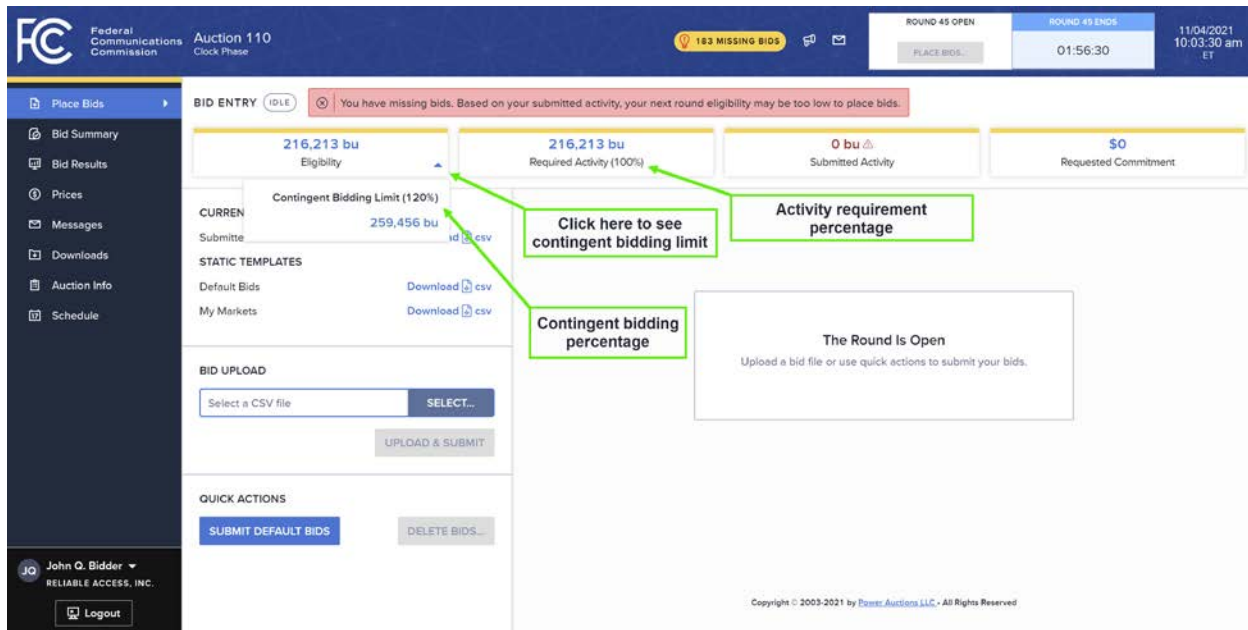
As in Round 1, another way to change the bids is to delete all the bids that have already been submitted for the bidder in the round by clicking on the **DELETE BIDS...** button and then upload a new bid file.

 Note that it is not possible to make changes to the bids submitted on behalf of the bidder after the round ends. Therefore, we strongly recommend that authorized bidders place their bids and verify these bids using the Bid Summary screen (and/or My Bids Download) early in the round to allow time to make any necessary changes before the round ends.

7.5. Monitoring Commitment and Activity

For each round, the bidding system calculates a bidder's eligibility, required activity, and contingent bidding limit based upon its processed activity from the previous round (i.e., the activity associated with the bidder's processed demand) or, for the first round, based upon its upfront payments. The top of the Place Bids screen displays the bidder's eligibility and required activity for the round (along with the activity requirement percentage for the round) in addition to the activity and the financial commitment associated with the bidder's submitted bids. The bidder's contingent bidding limit (along with the contingent bidding percentage for the round) can be viewed by clicking a triangle in the bottom of the bidder's Eligibility box (see Figure 24).

Figure 24: Place Bids screen showing contingent bidding limit



The screenshot shows the 'Place Bids' interface for Auction 110. At the top, there is a notification: '183 MISSING BIDS'. The main content area displays several key metrics:

- Eligibility:** 216,213 bu
- Required Activity (100%):** 216,213 bu
- Submitted Activity:** 0 bu
- Requested Commitment:** \$0
- Contingent Bidding Limit (120%):** 259,456 bu
- Activity requirement percentage:** 100%
- Contingent bidding percentage:** 120%

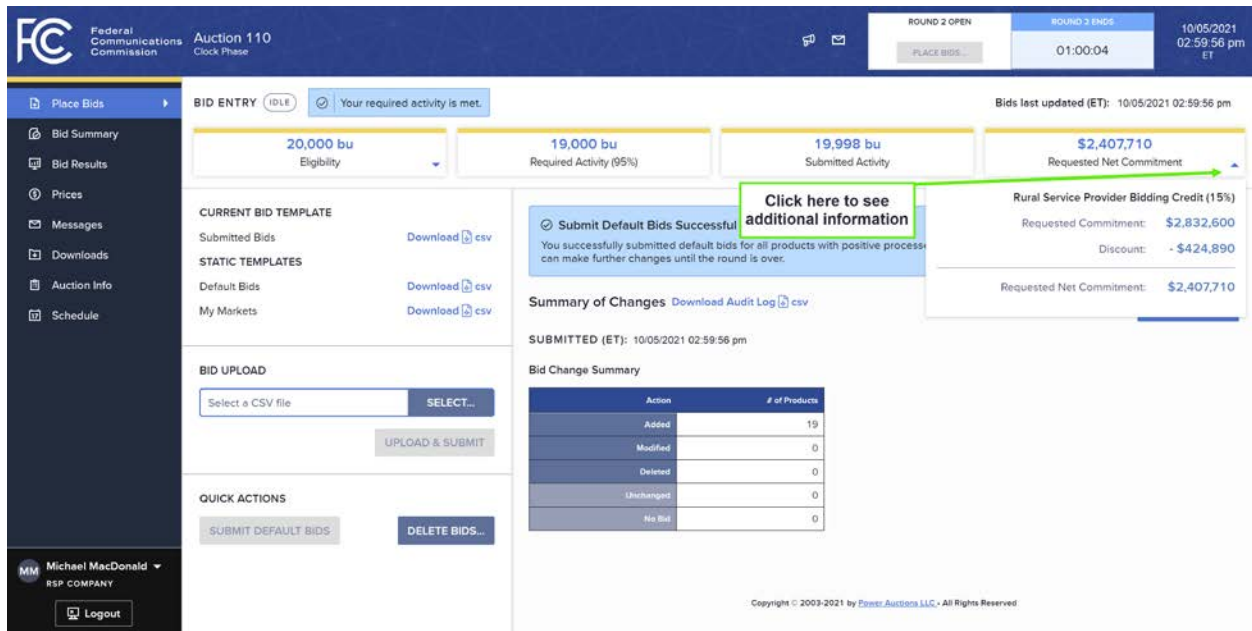
Annotations with green boxes and arrows point to the 'Contingent Bidding Limit (120%)' and 'Contingent bidding percentage' fields, with the text 'Click here to see contingent bidding limit'. Another annotation points to the 'Activity requirement percentage' field with the text 'Activity requirement percentage'. A large box on the right indicates 'The Round Is Open' with the instruction 'Upload a bid file or use quick actions to submit your bids.' The bottom of the screen shows 'QUICK ACTIONS' with buttons for 'SUBMIT DEFAULT BIDS' and 'DELETE BIDS...'. The user's name 'John Q. Bidder' and company 'RELIABLE ACCESS, INC.' are visible in the bottom left corner.

Every time you submit bids, the bidding system updates the bidder's submitted activity and requested commitment. The bidding system calculates these values under the assumption that your submitted bids will be fully applied during bid processing after the round and the posted prices will equal the clock prices. However, your processed activity for the round may be less or more than your submitted activity

if the bidding system cannot apply in full all of your bids to change demand. Your commitment for the round may also be different than your requested commitment if the bidding system cannot apply some of your bids and/or some posted prices are lower than the corresponding clock prices.

If a bidder has claimed eligibility for a bidding credit, the bidding system, by default, displays the requested net commitment (the requested commitment less any bidding credit discount) associated with the bidder’s submitted bids instead of the requested commitment on the screen. You can click on the triangle at the bottom right of the box to see the requested commitment and the corresponding discount (see Figure 25).

Figure 25: Place Bids screen for a bidder claiming a rural service provider bidding credit



If the bidder’s discount has been capped, the system will indicate that by including the text “(capped)” next to the discount, as shown in Figure 26 below. In that case, you can click on the triangle on the left of the discount to see uncapped discount information. Figure 26 illustrates this for a bidder that has claimed eligibility for the small business bidding credit discount.

Figure 26: Place Bids screen for a bidder claiming a small business bidding credit

The screenshot displays the 'Place Bids' interface for a bidder named Jane Bidder from Wireless Connection LLC. The top navigation bar includes the Federal Communications Commission logo, 'Auction 110 Clock Phase', and round status indicators: 'ROUND 4 OPEN' and 'ROUND 4 END' at 01:21:00. The current time is 10/06/2021 02:39:00 pm ET. The 'BID ENTRY' section shows 'Your required activity is met' and a 'Bids last updated (ET): 10/06/2021 02:38:49 pm' timestamp. A progress bar at the top indicates 60,000 bu Eligibility, 57,000 bu Required Activity (95%), 59,992 bu Submitted Activity, and a Requested Net Commitment of \$85,788,900. A 'Submit Default Bids Successful' message states: 'You successfully submitted default bids for all products with positive processes. You can make further changes until the round is over.' Below this is a 'Summary of Changes' table:


Action	# of Products
Added	24
Modified	0
Deleted	0
Unchanged	0
No Bid	0

A callout box with a green border and the text 'Click here to see additional information' points to a link in the 'Small Business Bidding Credit (25%)' section. This section shows a Requested Commitment of \$110,788,900 and a Discount (capped) of -\$25,000,000. A detailed note explains: 'Your discount for small markets was not capped, as it did not exceed the limit of \$10,000,000. Your discount for all markets (non-small markets + the discount for small markets) was capped at \$25,000,000.' Below this, it shows 'All Markets Discount (uncapped): \$27,697,225 of which, Small Markets Discount (uncapped): \$795,975' and a final Requested Net Commitment of \$85,788,900. The left sidebar contains navigation options like 'Place Bids', 'Bid Summary', 'Bid Results', 'Prices', 'Messages', 'Downloads', 'Auction Info', and 'Schedule'. The bottom left shows the user's name 'Jane Bidder' and a 'Logout' button. The footer contains the copyright notice: 'Copyright © 2003-2021 by Power Auctions LLC. All Rights Reserved.'

8. Verifying Bids

Only submitted bids are processed by the bidding system. The bidding system provides bidders with several ways to verify that their bids were submitted properly. You can view a summary of your submitted bids on the Bid Summary screen. You can download the My Bids file for the round from the Downloads screen to have a record of the bids submitted for the bidder in the round. You can also download the My Audit Log file to have a historical record of all bidding actions for the bidder in the round.

You should verify your bids in each round of the auction before the round ends.

 *It is strongly recommended that, before the round ends, you print or save the Bid Summary screen and/or download the My Bids file for a record of the bids submitted on behalf of the bidder in the round.*

8.1. Bid Summary Screen

Throughout the auction, you may verify on the Bid Summary screen the bids that have been submitted in a round (and in past rounds) on behalf of the bidder. This screen displays all bids submitted for a round and the associated submitted activity and requested commitment. A bid may have been submitted by you, by another authorized bidder for the bidder, or, if the bidder had missing bids, by the system when the round closes.⁹ If bids change while you are viewing the Bid Summary screen, a message will be displayed indicating this, and you can refresh the screen using the **REFRESH** button to view the updated information.

Note that this screen displays the bids that (assuming no further changes are made) will be processed when the round ends. This screen does not contain bids that were submitted earlier in the round but were subsequently changed.

The layout of the Bid Summary screen is shown in Figure 27. The first five columns display information specific to the product. For rounds after Round 1 of the auction, the next two columns show results of the previous round for the bidder (the aggregate demand and the bidder's processed demand with the posted price). The next column displays the clock price for the selected round. In Round 1 the last four columns display the bid type, the quantity, the bid price, and the requested commitment for the bid. Starting in Round 2, the price point percentage¹⁰ is also shown.

⁹ Missing bids are treated by the auction bidding system as requests to reduce to a quantity of zero blocks for the product.

¹⁰ On this screen, the price point percentages are rounded to two decimal places. The full 10 digits of the price point are provided in the My Bids download.

Figure 27: Layout of the Bid Summary screen

The screenshot shows the Bid Summary screen for Auction 110. At the top, there is a navigation bar with the Federal Communications Commission logo and the text 'Auction 110 Clock Phase'. A 'Round selector' dropdown is set to 'Round 2'. Below this, there are four summary boxes: Eligibility (85,369 bu), Required Activity (81,100 bu, 95%), Submitted Activity (99,525 bu), and Requested Commitment (\$30,220,300). A search bar is available with the text 'Products with Bids' and 'SEARCH Market ID or Name'. The main table is titled 'Showing 1 to 23 of 23 Products' and has columns for Product information, Previous round, Selected round clock price, and Selected round bid. The table contains 23 rows of bid data.

Product information					Previous round		Selected round clock price	Selected round bid				
Market ID	Market Name	Category	Bidding Units	Supply	Agg Demand	My Processed Bids	Current Round (Round 2) Clock Price	Bid Type	Quantity	Price	Price Point %	Requested Commitment
PEA007	Boston, MA	Cat1	6,780	10	34	2 @ \$2,033,000	\$2,237,000	Simple	2	\$2,237,000	100.00%	\$4,474,000
PEA008	Dallas, TX	Cat1	6,450	10	23	2 @ \$1,936,000	\$2,130,000	Simple	2	\$2,130,000	100.00%	\$4,260,000
PEA009	Miami, FL	Cat1	6,290	10	31	2 @ \$1,888,000	\$2,077,000	Simple	2	\$2,077,000	100.00%	\$4,154,000
PEA010	Houston, TX	Cat1	5,890	10	34	2 @ \$1,768,000	\$1,945,000	Simple	2	\$1,945,000	100.00%	\$3,890,000
PEA011	Atlanta, GA	Cat1	5,440	10	37	2 @ \$1,631,000	\$1,795,000	Simple	2	\$1,795,000	100.00%	\$3,590,000
PEA012	Detroit, MI	Cat1	5,140	10	34	2 @ \$1,541,000	\$1,696,000	Simple	2	\$1,696,000	100.00%	\$3,392,000
PEA013	Orlando, FL	Cat1	4,560	10	34	2 @ \$1,389,000	\$1,506,000	Simple	2	\$1,506,000	100.00%	\$3,012,000
PEA031	Indianapolis, IN	Cat1	1,770	10	32	0 @ \$531,000	\$585,000	Simple	2	\$542,046	20.46%	\$1,170,000
PEA040	Birmingham, AL	Cat1	1,400	10	0	0 @ \$420,000	\$462,000	Simple	4	\$432,769	30.40%	\$1,848,000
PEA081	Saginaw, MI	Cat1	770	10	0	0 @ \$46,000	\$51,000	Simple	3	\$50,478	89.56%	\$153,000
PEA097	Mankato, MN	Cat1	620	10	0	0 @ \$37,000	\$41,000	Simple	2	\$37,875	21.88%	\$82,000
PEA147	Sellsbury, MD	Cat2	420	6	0	0 @ \$13,000	\$15,000	Simple	1	\$13,017	0.85%	\$15,000
PEA148	Bellingham, WA	Cat1	410	4	0	0 @ \$12,000	\$14,000	Simple	2	\$12,487	24.35%	\$28,000
PEA193	Saint Joseph, MO	Cat1	320	10	0	0 @ \$9,600	\$11,000	Simple	3	\$10,370	55.00%	\$33,000
PEA197	Wheeling, WV	Cat1	310	10	0	0 @ \$9,400	\$11,000	Simple	2	\$9,831	26.94%	\$22,000
PEA203	Troyes, CT	Cat1	300	10	24	0 @ \$5,100	\$11,000	Simple	1	\$9,812	37.43%	\$11,000

The table on the Bid Summary screen only includes the bidder’s most recently submitted set of bids in the selected round. Only products with bids are displayed on this screen. The table includes one row of data for each of the bids. If the bidder has missing bids, this is indicated with a message and a banner at the top of the screen.

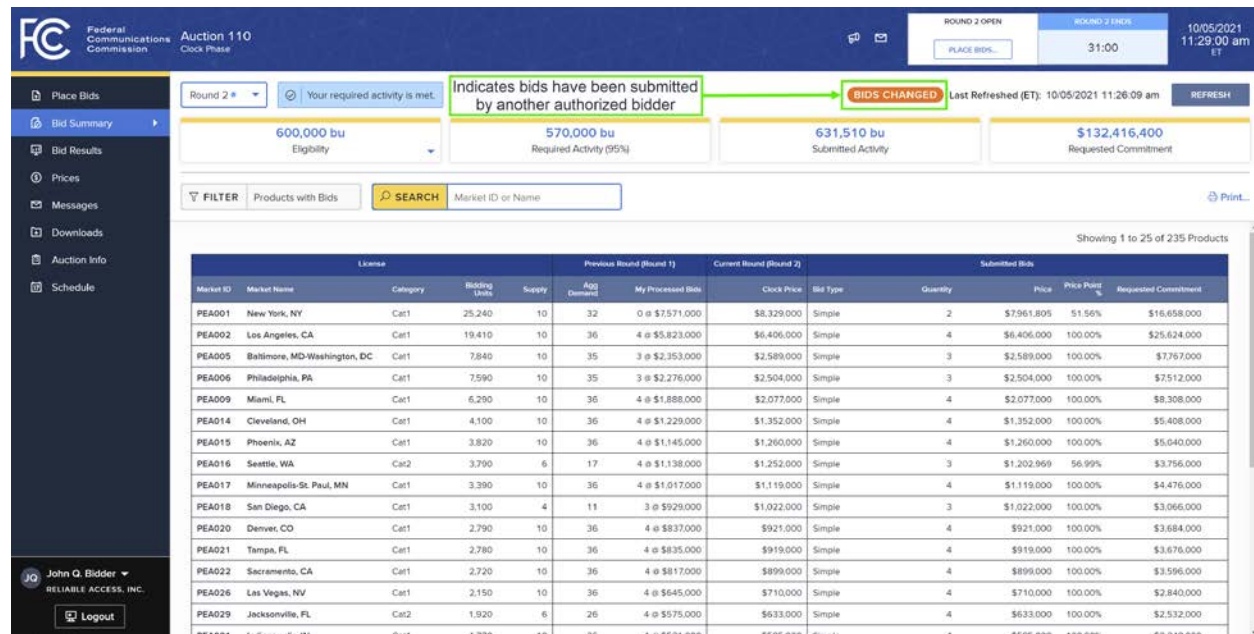
At the top of the Bid Summary screen is information regarding the eligibility (including the contingent bidding limit in a pulldown), required activity, submitted activity, and requested commitment for the bidder in that round, identical to the information on the Place Bids screen. Unlike the Place Bids screen, however, you may select a previous round to display values relating to that round.

If a bidder has claimed eligibility for a bidding credit, the bidding system will display by default the requested net commitment, taking into account the bidding credit discount and bidding credit discount caps. As on the Place Bids screen, you may also view the requested commitment and the bidding credit discount by clicking on the triangle at the bottom right of the box (for more information see Section 7.5).

Like other screens that show the products, the Bid Summary screen is paginated. The screen can be printed using the Print... icon located in the top right-hand corner of the screen.

If, while you are on the Bid Summary screen, bids are submitted on behalf of the bidder by another authorized bidder, a “Bids Changed” badge will appear at the top of the screen to alert you, as shown in Figure 28. You can remove the badge and see the summary of the new bids by clicking the **REFRESH** button near the top of the screen.

Figure 28: Bids Changed badge on Bid Summary screen



8.2. My Bids Download

You may also verify the bids that have been submitted for the bidder via the My Bids download file, which can be accessed from the Downloads screen (see Section 10 for information on the Downloads screen). Like the Bid Summary screen, the My Bids download provides up-to-date information about the bids submitted during the round. During the round, the file is updated to include the bids from the latest updates that were performed on behalf of the bidder.

Like the Bid Summary screen (see Section 8.1), the My Bids file provides the bidder’s submitted bids that will be processed when the round ends. It does not contain bids that were submitted earlier in the round but were subsequently changed.

8.3. My Audit Log

The audit log provides a history of all the bid actions that have been performed on behalf of the bidder during the auction. It can be downloaded from the Audit tab of the Downloads screen. The log includes all the bid upload attempts for a given product, including whether the upload attempt was successful, the name of the authorized bidder that uploaded the file, and the time of the upload. The audit log also contains a record of authorized bidders clicking on “quick actions” such as default bids or deleting bids, and the system placing missing bids when the round ends. You can download the audit log to have a record of that information.

9. Viewing Results

You can view information about results in several places: overall auction results are available in the Public Reporting System (PRS) and results specific to a bidder are available on the bidder's Bid Results screen. Only products for which a bid was submitted during the round or for which there was a missing bid are displayed on the Bid Results screen. You may view aggregate demand and price information on the Prices screen for all products from PEAs that the bidder selected on its Form 175. Finally, as described in Section 5, you may view the status of the auction with respect to meeting the reserve price on the Auction Info screen.

9.1. Auction Results

Information about the overall results of Auction 110 are available to bidders and to the general public on the PRS. The PRS can be accessed by the public at auctiondata.fcc.gov or from a link on the Auction 110 website (www.fcc.gov/auction/110) in the Results section.

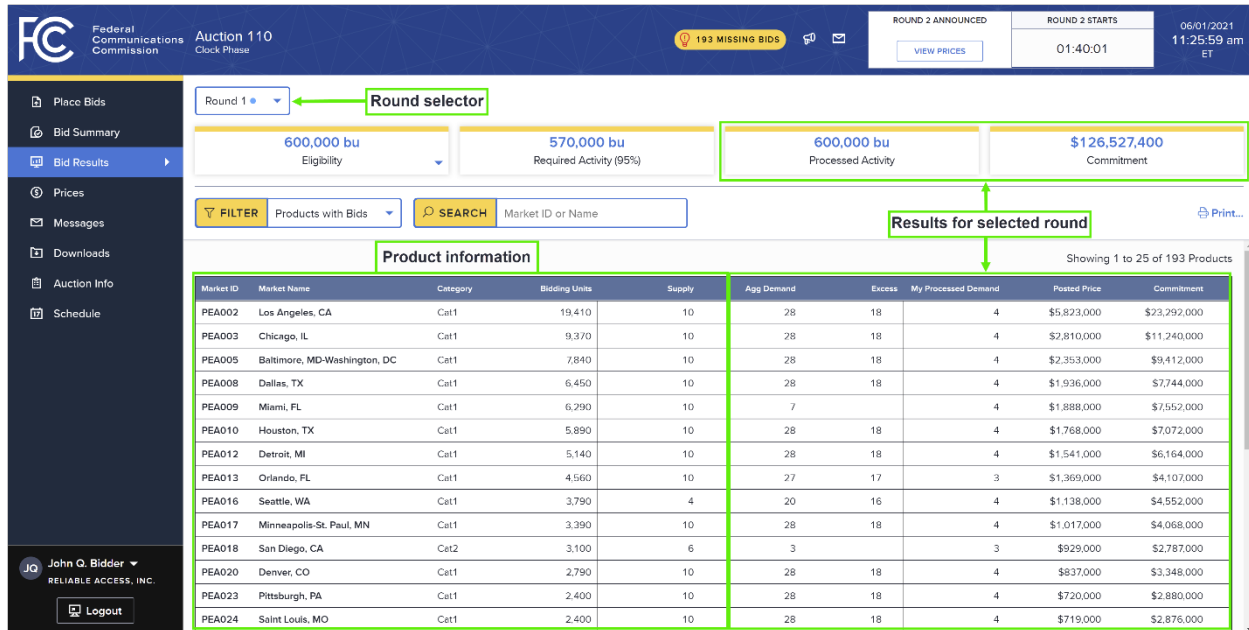
9.2. Bid Results Screen

After results for a round have been posted, you may view the results of bid processing for bids that were submitted in the round on the Bid Results screen. You may also view the results of bid processing for past rounds.

The layout of this screen is shown in Figure 29 below. The first four columns provide information about each product – specifically, the market ID and name, the category, and the number of bidding units. The next three columns provide supply and demand information – specifically, the supply, aggregate demand, and excess demand. The next three columns provide other results of bid processing – the bidder's processed demand, the posted price, and the bidder's commitment for the product.¹¹ Starting in Round 2, a "Details" column allows you to see additional explanation if the bidder's bid for that product was not applied in full.

¹¹ The bidder's commitment for a product is calculated as the product of the posted price and the bidder's processed demand.

Figure 29: Layout of the Bid Results screen



The top of the Bid Results screen shows the bidder’s eligibility (including a pulldown to view the contingent bidding limit), required activity, as well as the bidder’s processed activity and commitment after the bid processing for that round. The bidder’s processed activity and commitment are calculated based on the bidder’s processed demands.

If a bidder has claimed eligibility for a bidding credit, the bidding system will display by default the net commitment, taking into account the bidding credit discount and bidding credit discount caps. You may also view the commitment and the corresponding bidding credit discount by clicking on the triangle at the bottom right of the net commitment box. This is analogous to requested net commitment on the Place Bids screen (for more information see Section 7.5).

You may view the results from previous rounds on the Bid Results screen by selecting the round number from the round selector, located at the top of the screen.

You may print a record of the bid results for a round by clicking on the Print... icon on the Bid Results screen. Like other screens that show products, the Bid Results screen is paginated.

You can filter the products using one of the following options: “Products with Bids”, “Products with Bids Not Applied in Full” (not available for Round 1), and “Products with Processed Demand”.

If the bidder has one or more bids that were not fully applied, the Bids Results screen contains a message at the top of the page, and links to Result Details are provided for the corresponding products in the “Details” column of the table (see Figure 30). You may click on those links to obtain more information about any bid for a product that was not applied in full. You may also use the “Products with Bids Not Applied in Full” filter.

Figure 30: Bid Results screen when some bids were not fully applied

At the end of the auction, you can use the “Products with Processed Demand” filter on the Bid Results screen to view all products where you have won blocks (as illustrated in Figure 31 below). For a given product, the My Processed Demand column shows the number of blocks that the bidder won and the Posted Price column shows the price per block. The bidder’s overall commitment (or net commitment) is displayed at the top right of the screen.

Figure 31: Bid Results screen after the auction has concluded

9.3. Prices Screen

The Prices screen shows the prices for a round for all PEAs that were selected on the bidder’s Form 175 along with information about bidding units and supply.¹² For Round 1, the Prices screen shows the opening price for each product.

For a round after Round 1, as soon as the prices for the round have been announced, the Prices screen shows the price range for each product: the start-of-round price is the lowest price in the range, and the clock price is the highest price in the range. The % Increase column indicates the percentage by which the clock price exceeds the start-of-round price. Note that, because clock prices are rounded up, the % increase for a given product may exceed the increment percentage for the round.¹³

For a round after Round 1, the Prices screen also provides information about the results of the previous round: the Agg Demand column indicates the aggregate demand for the product and the Excess column indicates the excess demand.

An example of the Prices screen is provided in Figure 32 below. The screen has a round selector to view the data for a past round and is paginated. You may print the prices for a round by clicking on the [Print...](#) icon.

Figure 32: Layout of the Prices screen

Market ID	Market Name	Category	Bidding Units	Supply	Agg Demand (R1)	Excess (R1)	Start-of-Round Price (R2)	Clock Price (R2)	% Increase (R2)
PEA001	New York, NY	Cat1	25,240	10	29	19	\$7,571,000	\$8,329,000	10.01%
PEA002	Los Angeles, CA	Cat1	19,410	10	28	18	\$5,823,000	\$6,406,000	10.01%
PEA003	Chicago, IL	Cat1	9,370	10	32	22	\$2,810,000	\$3,091,000	10.00%
PEA004	San Francisco, CA	Cat1	9,030	10	32	22	\$2,708,000	\$2,979,000	10.01%
PEA005	Baltimore, MD-Washington, DC	Cat1	7,840	10	28	18	\$2,353,000	\$2,589,000	10.03%
PEA006	Philadelphia, PA	Cat1	7,590	10	28	18	\$2,276,000	\$2,504,000	10.02%
PEA007	Boston, MA	Cat1	6,780	10	28	18	\$2,033,000	\$2,237,000	10.03%
PEA008	Dallas, TX	Cat1	6,450	10	32	22	\$1,936,000	\$2,130,000	10.02%
PEA009	Miami, FL	Cat1	6,290	10	28	18	\$1,888,000	\$2,077,000	10.01%
PEA010	Houston, TX	Cat1	5,890	10	32	22	\$1,768,000	\$1,945,000	10.01%
PEA011	Atlanta, GA	Cat1	5,440	10	28	18	\$1,631,000	\$1,795,000	10.06%
PEA012	Detroit, MI	Cat1	5,140	10	32	22	\$1,541,000	\$1,696,000	10.06%
PEA013	Orlando, FL	Cat1	4,560	10	32	22	\$1,369,000	\$1,506,000	10.01%
PEA014	Cleveland, OH	Cat1	4,100	10	32	22	\$1,229,000	\$1,352,000	10.01%
PEA015	Phoenix, AZ	Cat1	3,820	10	32	22	\$1,145,000	\$1,260,000	10.04%
PEA016	Seattle, WA	Cat1	3,790	4	16	12	\$1,138,000	\$1,252,000	10.02%
PEA016	Seattle, WA	Cat2	3,790	6	16	10	\$1,138,000	\$1,252,000	10.02%

¹² Price information is also available in a number of downloads, including the bid templates and the product status download.

¹³ For more information on rounding, see the Auction 110 Clock Phase Technical Guide, Section 9.2.

9.4. Downloadable Results

You can also download a number of different files containing results on the Downloads screen: My Bid Results, My Product Status, and My Bidder Status. See Section 10 for information on the Downloads screen.

10. Downloadable Files

The bidding templates can be found on the Place Bids screen. Other downloads are found on the Downloads screen. The downloadable files on the Downloads screen are grouped into three tabs - General, Configuration, and Audit, as shown in Figure 33 below.

Figure 33: Layout of the Downloads screen

The screenshot shows the Auction 110 interface. At the top, there's a header with the Federal Communications Commission logo, 'Auction 110 Clock Phase', and a '235 MISSING BIDS' alert. The right side shows 'ROUND 2 OPEN' and 'ROUND 2 ENDS' with a 'PLACE BIDS...' button and a timer at 45:14. The date and time are 10/05/2021 03:14:46 pm ET.

The left sidebar contains navigation items: Place Bids, Bid Summary, Bid Results, Prices, Messages, Downloads (selected), Auction Info, and Schedule. The user is identified as John O. Bidder, RELIABLE ACCESS, INC., with a Logout button.

The main content area has three tabs: General, Configuration, and Audit. Below these are two sub-tabs: Latest and By Round. A table displays the following data:

File	Description	Round	Format
My Bids	Submitted bids	2	csv
My Bid Results	Status of each bid after bid processing	1	csv
My Product Status	Status of each product	1	csv
My Bidder Status	Activity and financial totals for the bidder	2	csv

Note: Bid templates can be downloaded from the Place Bids screen.

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The files on the General tab are round-specific and become available at different times depending on when the underlying data is generated. The General tab can be viewed in two ways: “Latest” and “By Round”. By selecting “Latest”, you can view each file for the most recent round for which it has been generated. Selecting by “By Round” allows you to pick a specific round from a dropdown list and view all files that have been generated for that round.

If a file is not yet available for the round, it will be grayed out and cannot be downloaded. This is the case for the My Bid Results download in Figure 34 below. The message to the right of the icon indicates when the file will be available for that round.

Figure 34: Downloads screen where My Bid Results is not yet available

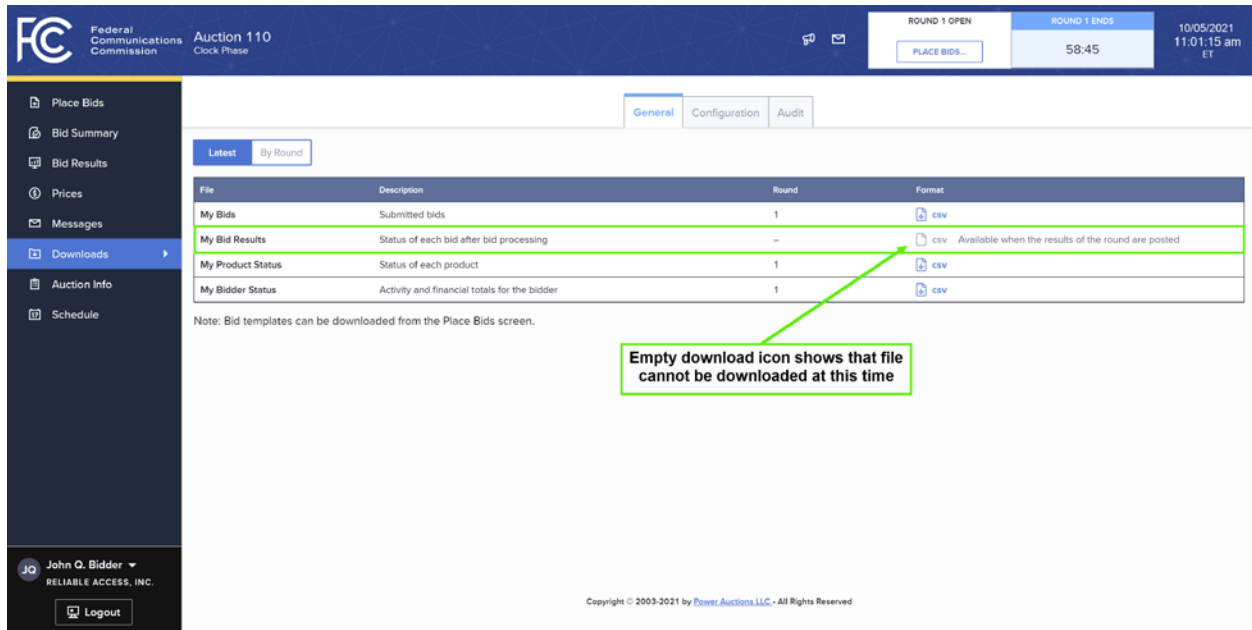


Table 2 below describes the three tabs of the Downloads screen—General, Configuration, and Audit — and the files on each tab along with when each file becomes available. Details about the specifications for downloadable files are available on the FCC website for Auction 110 (www.fcc.gov/auction/110) under the Education tab.

Table 2: Files available on the Downloads screen

Tab	Description and files	Availability for a given round
General (round-specific files)	My Bids – One record for each bid entered by the bidder and one record for each product for which the bidder had processed demand in the previous round but did not submit a bid in this round (missing bid)	Available when the prices for the round are announced Updated every time bids are submitted or deleted
	My Bid Results – One record for each product for which the bidder bid during the round or had a missing bid	Available when the round is posted
	My Product Status – Information about each product in PEAs that the bidder selected in its Form 175, including the aggregate demand, the posted price for the round, and the next round’s clock price	For Round 1, available when the prices are announced For later rounds, available when the round is posted and updated when the next round’s prices have been announced

Tab	Description and files	Availability for a given round
	My Bidder Status – Consists of a single record and provides overall information for the bidder for the round, including the bidder’s eligibility, activity, requested commitment, and processed commitment as well as bidding credit information for bidders that have claimed eligibility for a bidding credit	Available when the prices for the round are announced Updated every time bids are submitted or deleted, and when the round is posted
Configuration	My Markets – A list of the PEAs that the bidder selected in Form 175	Available throughout the auction (not specific to a round)
Audit	My Audit Log – Audit log of the bidder’s bidding actions	Available throughout the auction (not specific to a round) Updated every time a bidding action is performed for the bidder

Appendix 1: System Troubleshooting

If you continue to experience problems after following the troubleshooting instructions, please call the FCC Auctions Technical Support at (877) 480-3201, option nine; (202) 414-1250; or (202) 414-1255 (TTY) (8:00 a.m.–6:00 p.m. ET on business days).

Situation 1: Temporary connection issue

Figure 35: Temporary connection issue message

The screenshot displays the Auction 110 bidding system interface. At the top, the Federal Communications Commission logo and 'Auction 110 Clock Phase' are visible. A yellow banner message reads: 'YOU EXPERIENCED A TEMPORARY CONNECTION ISSUE. PLEASE REFRESH YOUR BROWSER.' Below this, a 'NO BIDS PLACED' notification is shown. The interface includes a navigation menu on the left with options like 'Place Bids', 'Bid Summary', 'Bid Results', 'Prices', 'Messages', 'Downloads', 'Auction Info', and 'Schedule'. The main content area shows 'BID ENTRY' with a status of 'IDLE' and a message: 'Based on your submitted activity, your next round eligibility will be too low to place bids.' Below this, there are four summary boxes: '600,000 bu Eligibility', '570,000 bu Required Activity (95%)', '0 bu Submitted Activity', and '\$0 Requested Commitment'. The 'CURRENT BID TEMPLATE' section includes 'Submitted Bids', 'STATIC TEMPLATES' (Default Bids, My Markets), and 'BID UPLOAD' (Select a CSV file, SELECT..., UPLOAD & SUBMIT). The 'QUICK ACTIONS' section has 'SUBMIT DEFAULT BIDS' and 'DELETE BIDS...'. A central box states 'The Round Is Open' with instructions to 'Upload a bid file or use quick actions to submit your bids.' The bottom right corner shows the copyright notice: 'Copyright © 2003-2021 by Power Auctions LLC. All Rights Reserved.'

You may see the yellow banner message shown in Figure 35 if you navigate to another tab in your browser for several minutes before returning to the auction system. To remove the banner message and ensure that the information on your screen is up to date, you must refresh your screen by either clicking the Refresh/Reload button in your browser or by simultaneously pressing the 'Ctrl' and 'R' keys on your keyboard.

Situation 2: Page cannot be displayed error message on first access

Figure 36: Microsoft Edge (Chromium) connection error message

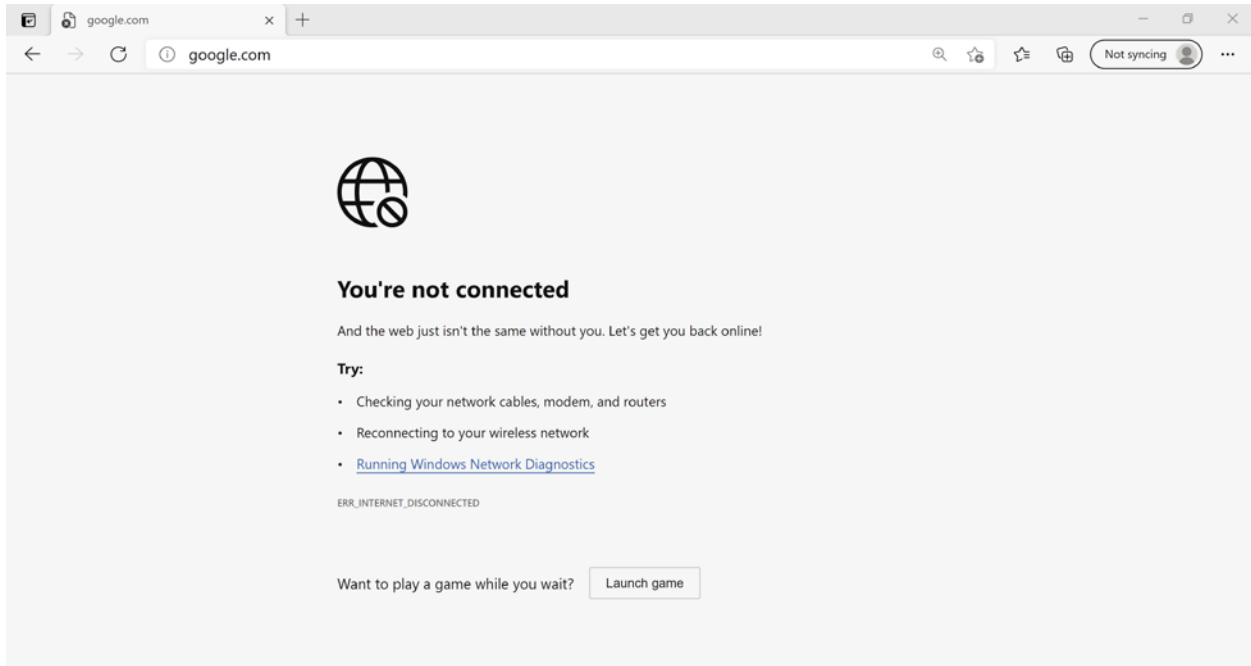
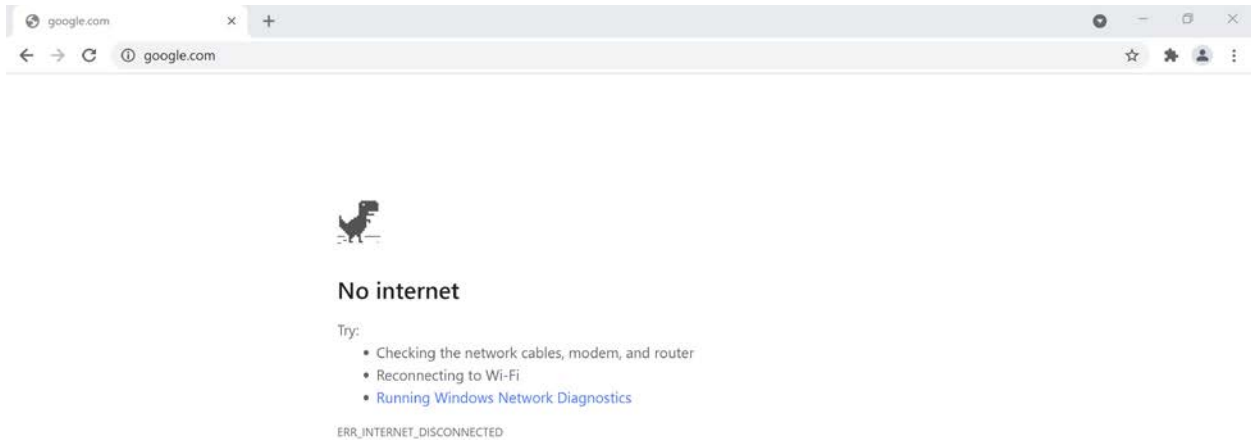




Figure 37: Google Chrome connection error message



If any of the screens shown above appear, complete the following steps:

- Confirm that the computer has external internet access. Try to access a common site on the internet such as www.google.com. If this is unsuccessful, the computer does not have external internet access.
- Confirm that you are using the correct URL for the bidding system.
- Confirm that your organization has not blocked access to the site. Your organization may only allow you to access certain external web sites. Check with your IT department.
- You may not have selected the “OK” button when the message appeared stating that you are about to enter a secure site. Re-start the browser and try again ensuring you click on the “OK” button.
- Confirm that you are using the correct browser version (see bidding system requirements in Section 3.1) by performing the following steps:
 - Edge: First, click on the tools icon  (which can be found in the top right-hand corner of your browser). Then click “Settings” and scroll down to “About Microsoft Edge.” Make note of the version number.
 - Chrome: First, click on the tools icon  (which can be found in the top right-hand corner of your browser). Then click “Help” followed by “About Google Chrome.” Make note of the version number.

Situation 3: Cookies must be enabled error message

The bidding system requires that cookies are enabled on your browser. If cookies are disabled, you will see a message stating that cookies should be enabled.

To enable cookies in Microsoft Edge (Chromium), complete the following steps:


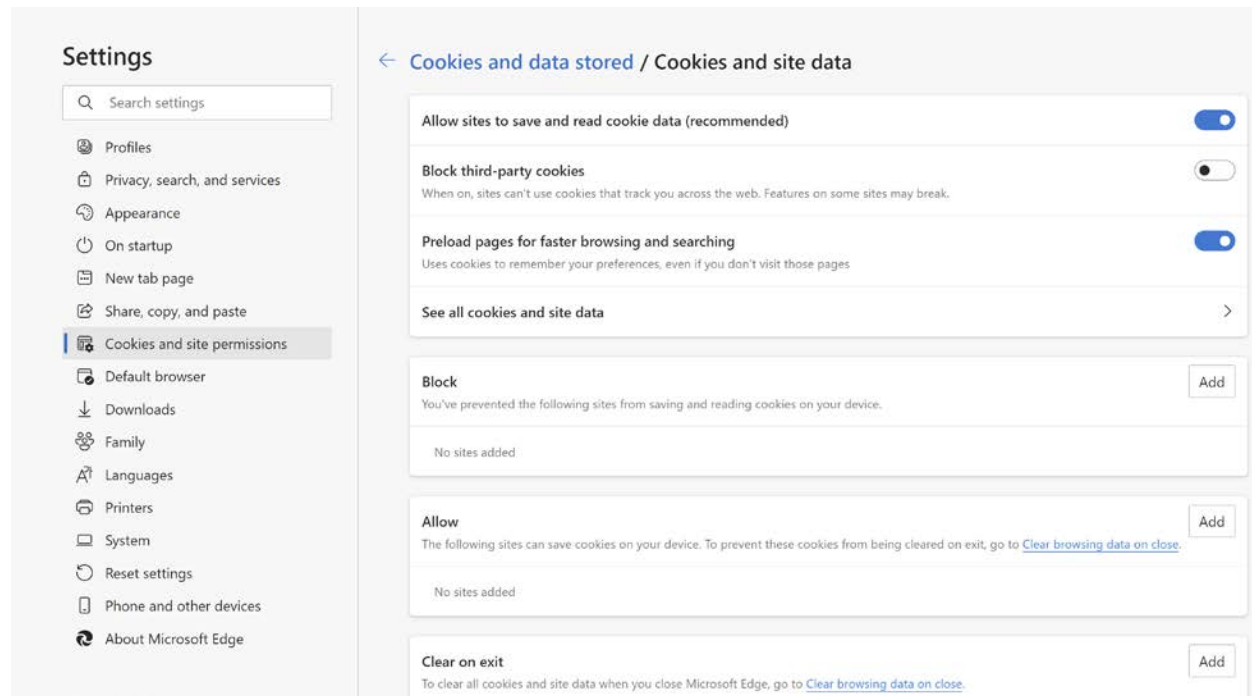
- Click on the tools icon  in the top right-hand corner of your browser.
 - Click on “Settings” and “Cookies and site permissions”.
 - Click on “Cookies and site data” and then slide the circle to the right next to the words “Allow sites to save and read cookie data (recommended)” in Figure 38.
 - Then, close the “Settings” tab.

Figure 38: Enabling cookies in Microsoft Edge (Chromium)



To enable cookies in Google Chrome, complete the following steps:


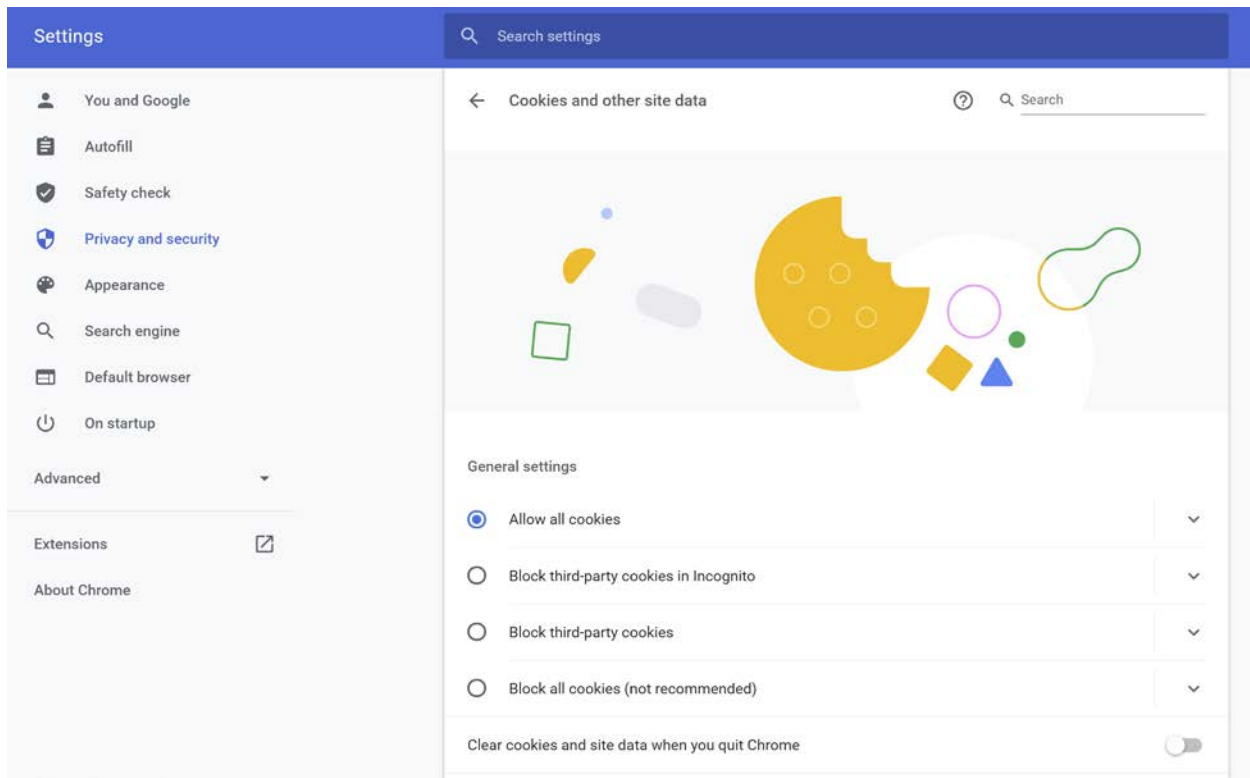
- Click on the tools icon  in the top right-hand corner of your browser.
 - Click on “Settings” and “Privacy and security”.
 - In the “Privacy and security” section, click on “Cookies and other site data” to display a screen similar to that shown in Figure 39.
 - Click the circle next to the words “Allow all cookies”.
 - Then close the “Settings” tab.

Figure 39: Enabling cookies in Google Chrome



Situation 4: JavaScript must be enabled error message

The bidding system requires that JavaScript is enabled on the browser used. If JavaScript is disabled, there will be a message stating that JavaScript has been blocked on the page.

To enable JavaScript in Microsoft Edge (Chromium), complete the following steps:


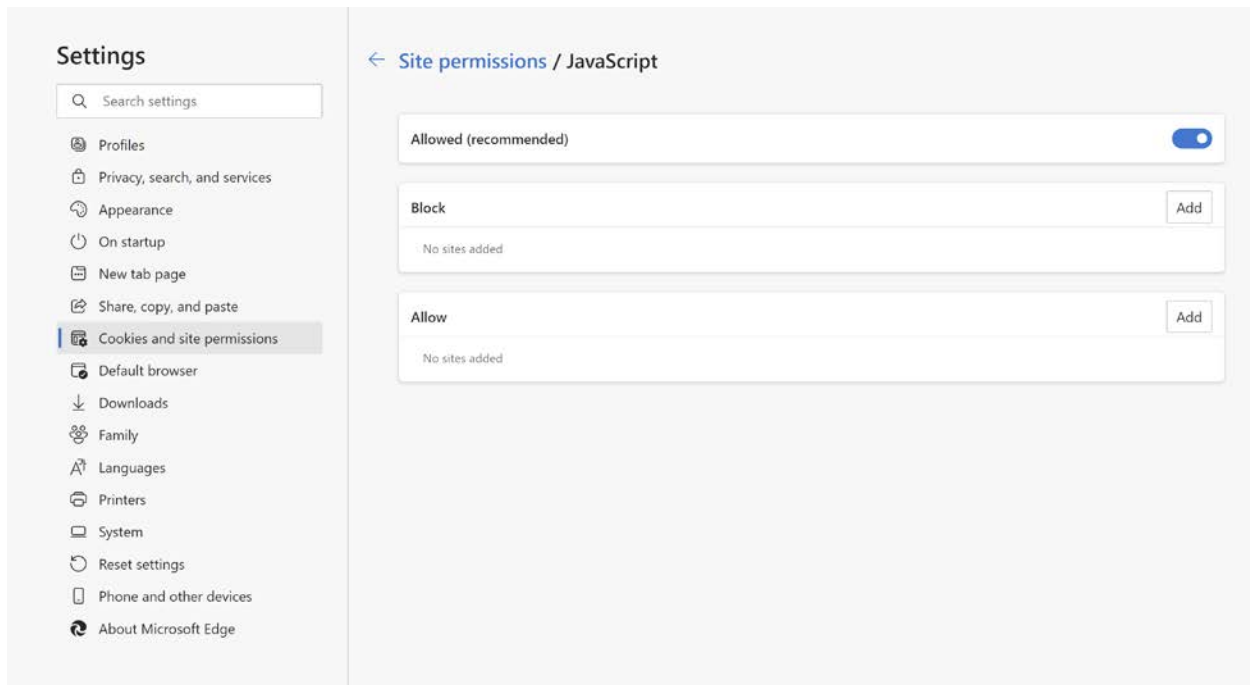
- Click on the tools icon  in the top right-hand corner of your browser.
 - Click on “Settings” and “Cookies and site permissions”.
 - Under “JavaScript” slide the circle to the right next to the words “Allowed (recommended)”, as shown in Figure 40.
 - Then, close the “Settings” tab.

Figure 40: Enabling JavaScript in Microsoft Edge (Chromium)

To enable JavaScript in Google Chrome, carry out the following steps:


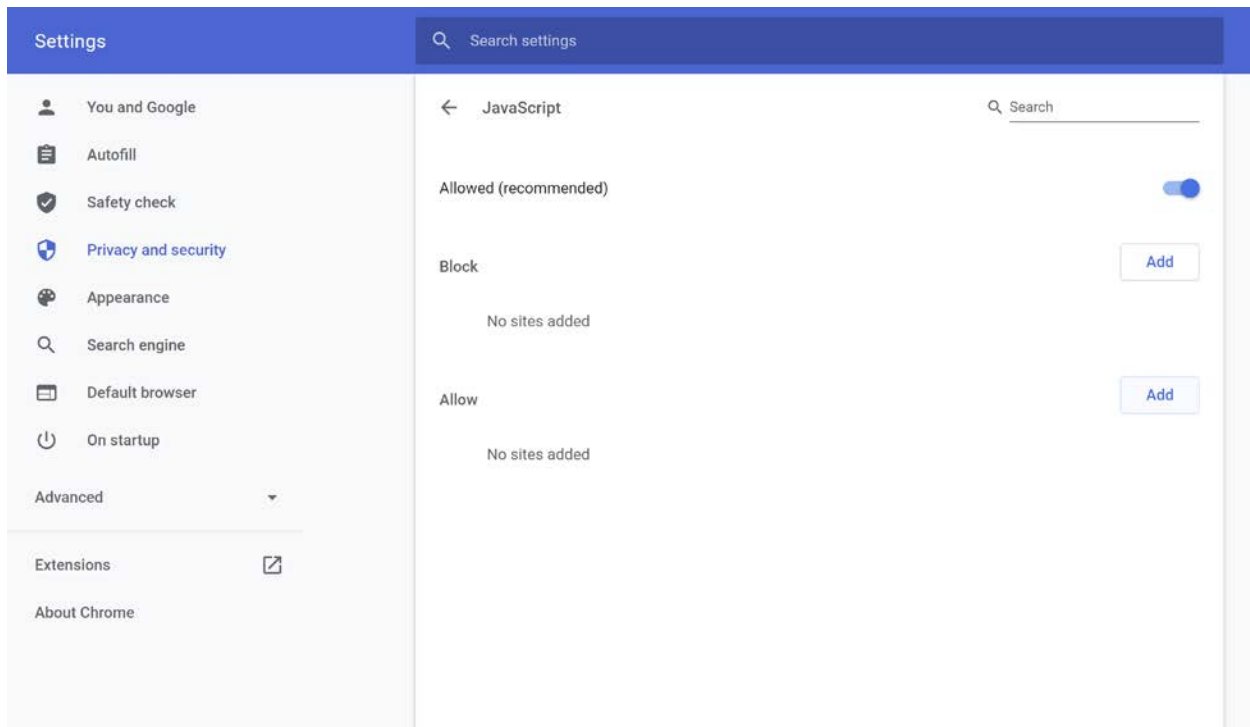
- Click on the tools icon  in the top right-hand corner of your browser.
 - Click on “Privacy and Security”.
 - In the “Privacy and security” section, click on the “Site settings” area, and then click on the “JavaScript” area to display a screen similar to that shown in Figure 41.
 - Slide the circle to the right next to the word “Blocked” so that the text “Allowed (recommended)” appears.
 - Then close the “Settings” tab.

Figure 41: Enabling JavaScript in Google Chrome



Situation 5: Page cannot be displayed error message when navigating to new screen

If you have been using the bidding system successfully and “page cannot be displayed” appears when you click on a link or a button, then complete the following steps:

- Click on the Refresh/Reload button to reload the page.
 - If that is successful, please verify any actions that you were taking when the message was displayed. If you were in the middle of placing bids, you should verify your bids using Bid Summary. You may need to place your bids again.
- Re-navigate to the bidding system URL and, if prompted, log in again.
- If that is successful, please verify any actions that you were taking, as discussed above.
- Your internet connection may have gone down. Confirm that your computer has external internet access. Try to access a common site on the internet such as www.google.com. If this is unsuccessful, the computer does not have external internet access.
- The bidding system may be down. To confirm whether the bidding system is down, first confirm that you have internet access and then attempt to access the auction portal and the login screen (see Section 3.2). If you are unable to view either page, or the page states that the bidding system is unavailable, then the bidding system may be down and you should call the Auction Bidder Line telephone number provided with the registration materials.

Situation 6: Page has expired error message when back button is clicked

Do not use the browser's back button to access a previous screen. To move between screens, use the links and buttons in the bidding system.

Situation 7: Computer or web browser crashes

If the browser crashes or the computer freezes, it is recommended that you reboot the machine (or use a different machine) to access the bidding system.

Please review any actions that you were taking when the computer crashed. If you were in the middle of placing bids, you should verify your bids using Bid Summary. You may need to place your bids again.

If the computer crashes while you are using the bidding system, you may access the bidding system using a different computer. When a user logs in to a second computer, whether the user has logged out of the first computer or not, the second login will automatically cause the user to be logged out of the first computer.

Situation 8: Certificate error message

If you access the bidding system and see a security message similar to that shown in Figure 42 (for Microsoft Edge (Chromium)) or Figure 43 (for Google Chrome), you should not proceed. Please call FCC Auctions Technical Support at (877) 480-3201, option nine; (202) 414-1250; or (202) 414-1255 (TTY).

Figure 42: Certificate security error message in Microsoft Edge (Chromium)

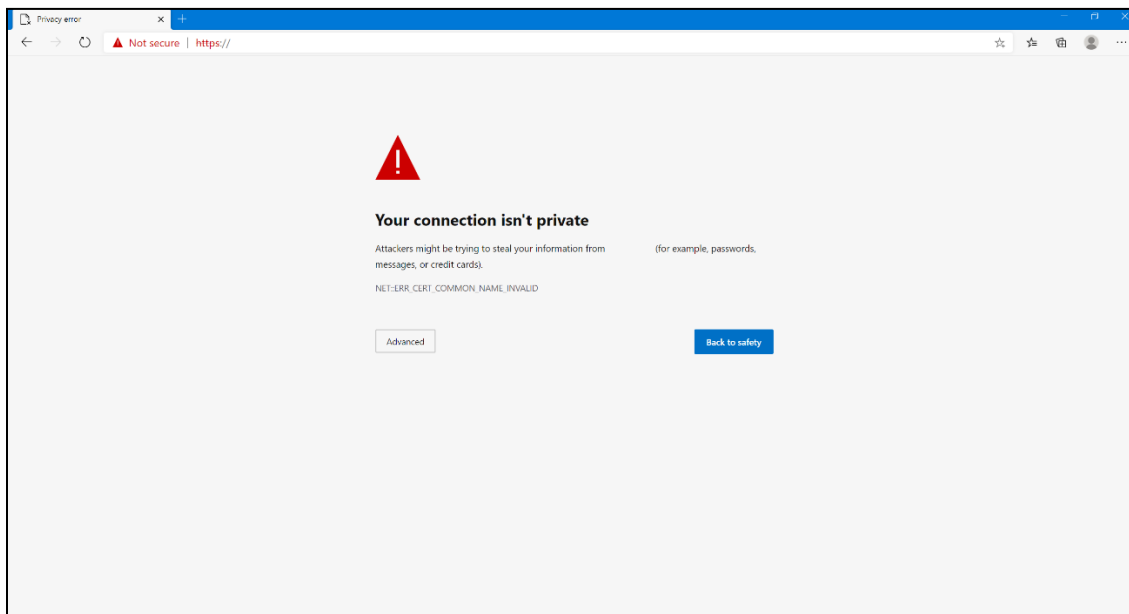
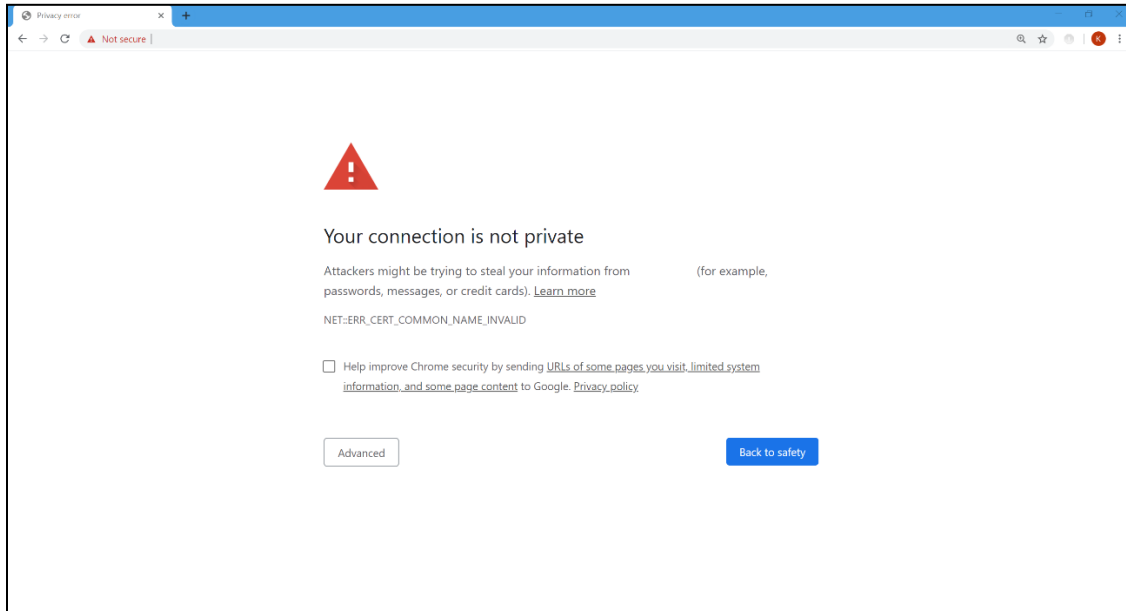


Figure 43: Certificate security error message in Google Chrome




Appendix 2: RSA SecurID® Token Information

For additional assistance with lost or damaged RSA tokens and for questions about changing a user (i.e., an authorized bidder), the person who has been designated as the contact person, or the certifying official on the bidder's FCC Form 175 application (designated person), should call the Auction Bidder Line telephone number provided with your registration materials.

1. Number of RSA Tokens Issued and Extra RSA Tokens

Each qualified bidder is issued three RSA tokens. Each bidder is permitted to identify up to three authorized bidders on its Form 175. Therefore, a bidder with fewer than three authorized bidders will have one or two extra tokens.

 *Bidders cannot use an extra RSA token unless they contact the FCC to activate the extra RSA token for a specific user.*

Each RSA token must be associated with a specific authorized bidder. RSA tokens are not interchangeable among authorized bidders. The FCC must reassign the token in the RSA server for the token to become functional.

2. Replacing Lost or Damaged RSA Tokens

In the event that an RSA token is lost or damaged, the person who has been designated as the authorized bidder, contact person, or certifying official listed on the bidder's FCC Form 175 should call the Auction Bidder Line telephone number provided with the registration materials to request activation of a replacement token.

3. Change of User (Authorized Bidder)

A qualified bidder may change or replace its authorized bidders. For more information on changing the authorized bidder assigned to an RSA token, the person who has been designated as the authorized bidder, contact person, or certifying official listed on the bidder's FCC Form 175 application should call the Auction Bidder Line telephone number provided with the registration materials.

4. Forgotten PIN

If an authorized bidder forgets his PIN, he should contact FCC Technical Support at (877) 480-3201, option nine; (202) 414-1250; or (202) 414-1255 (TTY) to have the PIN reset. Please note, however, that this process might not occur before a round ends. In this event, a bidder may lose bidding eligibility. FCC Technical Support is generally available Monday through Friday from 8 a.m. to 6 p.m. ET.

Appendix 3: Bid Upload Errors

The table below lists all the bid upload error codes along with the corresponding error messages that are displayed. The text displayed after the colon and the numbers at the very end of a message are just examples, for purposes of this user guide, of what could actually be displayed and are shown below in *italics>.*

Error Code	Error Message
E001	Your file does not have enough data in it.
E002	Your file exceeded <i>10</i> MB in size.
E003	The bid upload file must be a standard CSV file, encoded as an ASCII or UTF-8 file.
E004	Your file must be a csv file and must end in '.csv'.
E005	The first six fields in the header must be in this order: MARKET, CATEGORY, QUANTITY, PRICE, BID_TYPE, SWITCH_TO_CATEGORY.
E006	The round is not open.
E007	You are no longer eligible to bid.
E008	Your eligibility is <i>560</i> bu. You do not have enough eligibility to bid for any of your products. You are no longer eligible to place bids in this auction.
E010	Error: file missing.
E011	You must have submitted bids to delete.
E012	You cannot submit default bids if bids have already been submitted.
E013	You cannot submit default bids in Round <i>1</i> .
E014	Your file does not contain any bids.
E100	Market invalid or missing.
E101	You did not select this market on your auction application.
E102	Category invalid or missing for this market.
E103	Upload file must contain a bid for <i>PEA008-Cat1</i> , as it has processed demand.
E104	Upload file must contain a bid for <i>PEA016-Cat2</i> , as it has a submitted bid.
E200	Price not specified.
E201	Price must be a positive integer.
E202	Price must be equal to the opening price for this product, <i>\$950,000</i> .
E203	Price must be greater than or equal to the last round's posted price for this product, <i>\$265,000</i> .
E204	Price must be less than or equal to this round's clock price for this product, <i>\$277,000</i> .
E205	Duplicate Price: You cannot specify two bids at the same price for a product.
E300	Quantity not specified.

Error Code	Error Message
E301	Simple bid: Quantity must be an integer between 1 and 4. Switch bids: Quantity must be an integer greater than or equal to 0 and strictly less than 4.
E302	Duplicate Quantity: You cannot specify two bids with the same quantity for a product.
E303	Starting with your processed demand, quantities for a product must either all be increasing or decreasing as prices for that product increase.
E304	To maintain the same quantity as your processed demand, you must enter a bid at this round's clock price.
E306	The total quantity bid for <i>PEA123</i> must be less than or equal to 4.
E307	Starting with your processed demand, quantities for the "from" product of a Switch bid must all be decreasing as prices for that product increase.
E309	Invalid Quantity: must be 1.
E400	BID_TYPE cannot be null for a product with one or more submitted bids.
E401	BID_TYPE cannot be null for a product with processed demand. You must specify a price, quantity, and bid type.
E402	BID_TYPE cannot be null for a product that already has a bid in the file.
E404	You cannot place a bid for a product that already has a row with BID_TYPE = null.
E405	You cannot have two or more rows with BID_TYPE as null for the same product.
E500	You specified a delete request (BID_TYPE = DELETE), but there is no bid to delete for this product.
E503	Invalid BID_TYPE: <i>Switch</i> . BID_TYPE must be either Simple or DELETE in Round 1.
E504	BID_TYPE must be specified if PRICE, QUANTITY or SWITCH_TO_CATEGORY are specified.
E505	Invalid BID_TYPE: <i>Increase</i> . BID_TYPE must be either Simple, Switch, or DELETE.
E506	PRICE, QUANTITY, and SWITCH_TO_CATEGORY must be null when BID_TYPE is DELETE.
E507	Only one bid type per product is allowed.
E508	You specified a delete request (BID_TYPE = DELETE) for a product that already has a delete request in the file.
E509	BID_TYPE cannot be DELETE for a product with processed demand.
E550	SWITCH_TO_CATEGORY must be null unless the BID_TYPE is Switch.
E551	You must specify the SWITCH_TO_CATEGORY when the BID_TYPE is Switch.
E552	SWITCH_TO_CATEGORY must specify a different category than the category of the "from" product.

Error Code	Error Message
E553	Invalid SWITCH_TO_CATEGORY: <i>Cat5</i> . SWITCH_TO_CATEGORY must specify a valid category.
E554	You cannot submit a switch bid when the “from” product has no processed demand.
E555	You cannot specify a switch bid for a market with a single category.
E556	You cannot submit a switch bid when the “to” product has processed demand equal to its supply.
E557	The upload file should not contain rows for both the “from” and the “to” categories of a switch bid.
E558	The upload file must contain rows for both the “from” and the “to” categories in order to remove any switch bid on <i>PEA078</i> .
E600	Your submitted activity (<i>1800</i> bu) would exceed your contingent bidding limit (<i>1260</i> bu).
E700	Processing a bidding request by user <i>John Q. Bidder</i> . Please try again later.

Appendix 4: Glossary of Terms

Term	Definition
Activity	<p>Bidding activity is the total number of bidding units associated with a bidder's demands. During a round, and before the bids from the round are processed, the submitted activity shown on the Place Bids and Bid Summary screens is an estimate of activity that assumes that all the bids submitted so far in the round are applied during bid processing.</p> <p>After the bids of a round have been processed, the Bid Results screen shows the total number of bidding units associated with the bidder's processed demands for the round ("processed activity").</p>
Activity Requirement Percentage	<p>A percentage (expressed in terms of eligibility) that the processed activity must meet in order for a bidder's eligibility to remain unchanged in the next round. Initially, the activity requirement percentage will be set at 95%. The FCC retains the discretion to change the percentage during the auction within the range of 90% and 100%.</p>
Aggregate Demand	<p>The sum of processed demands by all bidders for a given product for a given round.</p>
Auction ID	<p>The FCC auction number for this auction, Auction 110.</p>
Bid Templates	<p>Three templates available on the Place Bids screen that can be used to prepare a bid file and to verify that bids have been properly submitted:</p> <ul style="list-style-type: none"> • Submitted Bids • Default Bids • My Markets
Bidding Credit	<p>A discount on a bidder's total payment for the licenses it wins in the auction.</p> <p>Bidders that qualify for a rural service provider bidding credit receive a 15% discount. Bidders that qualify for a small business bidding credit receive either a 15% or 25% discount. The total amounts of bidding credit discounts on new licenses are capped as described below.</p>
Bidding Credit Discount Caps	<p>The total amount of an eligible bidder's rural service provider bidding credit discount will be capped at \$10 million.</p> <p>The total amount of an eligible bidder's small business bidding credit discount will be capped at \$25 million. Of that, the small business bidding credit discount will be capped at \$10 million for bids on blocks in small markets.</p>
Bidding Unit	<p>Unit used for measuring activity and eligibility. Each PEA is assigned a number of bidding units. This number does not change during the auction.</p>
Clock Price	<p>The maximum price at which a bidder can submit a bid in the round for a given product.</p>

Term	Definition
Commitment	The sum, over all products, of the bidder's processed demand for a product multiplied by the product's posted price, for the round.
Contingent Bidding Limit	<p>The maximum number of bidding units that the bidder can bid for in a round.</p> <p>In Round 1, the contingent bidding limit is equal to the bidder's eligibility for the round. Starting in Round 2, the contingent bidding limit is 120% of the bidder's eligibility for the round. The FCC retains the discretion to change the percentage during the auction within the range of 100% and 140%.</p>
Default Bids	Bids to maintain the bidder's processed demands at this round's clock prices.
Eligibility	<p>The maximum number of bidding units for which the bidder can have processed demand after the round. For Round 1, this is also the maximum number of bidding units that the bidder may bid for in the round.</p> <p>For Round 1, the eligibility depends on a bidder's upfront payment. For every other round, a bidder's eligibility depends on its processed activity in the previous round and the activity requirement percentage.</p>
FRN	The FCC Registration Number, a unique identifier for each bidder.
Market ID	A unique identifier for each PEA in the auction.
Missing Bid	If a bidder fails to submit a bid for a product for which it has processed demand, the bidding system will consider that to be a missing bid, which will be processed as a bid request for a quantity of zero at the start-of-round price. A missing bid will not necessarily reduce the bidder's processed demand to zero after the round. The bidding system will apply as much of the missing bid request as it can, subject to the overall restriction that aggregate demand cannot fall below supply of a given product.
Opening Price	The Round 1 price for a product, also referred to as "minimum opening bid".
Posted Price	The price for a product after the bids of the round are processed. The posted price for a round becomes the start-of-round price of the next round.
Posted Round	A round status indicating that the bids from the round have been processed, and the results have been made available to the bidders through the bidding system.

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Price Point	The price point indicates, as a percentage, the distance of the bid price between the start-of-round price and the clock price. For example, the 0% price point refers to the start-of-round price, the 100% price point refers to the clock price, and the 50% price point refers to the average of the start-of-round price and the clock price. For bid processing, the bidding system converts bid prices into price points in order to determine the order of processing across all products.
Processed Activity	The total number of bidding units associated with the bidder's processed demand after processing the bids of the round. The bid processing algorithm ensures that processed activity does not exceed the bidder's eligibility for the round.
Processed Demand	The bidder's demand for the product after the bids for the round have been processed.
PRS	The Public Reporting System.
Requested Commitment	The total gross bid amount calculated at the clock price given all bids that the bidder has submitted so far in the round, assuming that all bids are applied during bid processing. During the round, bids for the round have not yet been processed, so the requested commitment, which is updated as bids are submitted, is an estimate of a bidder's commitment. This number is calculated and shown to the bidder on the Place Bids and Bid Summary screens.
Required Activity	The minimum total number of bidding units that the processed activity must meet in order for a bidder's eligibility to remain unchanged in the next round. The required activity is calculated by multiplying the activity requirement percentage by the bidder's eligibility for the round.
Reserve Price	The requirement that the total cash proceeds from the auction, net of bidding credits, must equal at least \$14,775,354,330 (which is 110% of the estimated relocation or sharing costs provided to the Commission by NTIA).
Round	The time period during which bids can be submitted.
Start-of-round Price	The minimum price at which a bidder can submit a bid in the round for a given product. The start-of-round price for a round for a product is equal to the posted price of the previous round for that product.
Submitted Activity	The total number of bidding units associated with all bids submitted up to that point in the round, assuming that all are applied during bid processing. The submitted activity cannot exceed the bidder's contingent bidding limit for the round.
Supply	The number of blocks available for a product. Supply may vary between 2 and 10 blocks depending on the product.