Regional Greenhouse Gas Initiative

Introduction to RGGI Auctions
RGGI States
RGGI in Brief

- Eastern states cap and reduce carbon dioxide emissions from the power sector
  - Allowances issued by states - distributed primarily through auctions
  - Fungible; Bankable; Tradable
- Regional cap
  - 119.8 MM-tons in 2021, declining each year for a 30% reduction by 2030
  - CCR: 11.98 million allowances in 2021
  - ECR: 11.31 million allowances in 2021
RGGI in Brief

- RGGI states have distributed 90% of allowances via quarterly allowance auctions
  - Open to all
  - Independent Market Monitor
  - Centralized platform for tracking: RGGI COATS
  - Historic clearing price range: $1.86 to $7.60
  - Over 1 billion allowances sold at auction
  - Over $3.9 billion in proceeds
Reinvestment of Proceeds

- The RGGI states may reinvest auction proceeds in strategic programs
  - Over $2.5 billion invested through 2018
  - Billions in consumer energy bill savings
  - Pollution reductions
RGGI Experience: A Triple Set of Benefits

- Environmental Benefits
- Consumer Benefits
- Economic Benefits
RGGI Experience: Environmental Benefits

• Significantly reduced power sector CO$_2$ pollution since program launched

• **Half** of total power generation in the RGGI states is clean or renewable

• Independent research shows RGGI is driving public health benefits (Abt Associates) as well as improving children’s health (Columbia University)
Reinvestment of Proceeds

- RGGI states reinvest auction proceeds in strategic programs.
  - Through 2018, states reinvested over $2.5 billion in energy efficiency, clean and renewable energy, direct bill assistance, and GHG abatement programs.
  - These programs have generated billions in consumer energy bill savings as well as additional pollution reductions.
RGGI Experience: Economic Benefits

Years 2015-2017

• $1.3 billion in net economic benefit
• 14,200 additional job-years
• $460 million in energy bill savings

All-time

• Net economic benefits on the order of $4 billion
• Tens of thousands of additional job-years

Source: Analysis Group, 2018 Report on RGGI Economic Impacts
Tutorial Outline

• Introduction and Overview
• Schedule
• What’s New for Auction 52
• Participation Requirements
• Review Process
• Financial Security
• RGGI CO₂ Allowance Tracking System Account
• Confidential Information

• Limitation on Communication
• Auction Platform (the “Exchange”) Overview
• Bid Limitations
• Cost Containment Reserve and Emissions Containment Reserve Overview and Mechanics
• Auction Examples
• Bid Value Examples
Auction 52

• June 2, 2021 (9:00 AM - 12:00 PM ET)
• Auction 52: NNNNNNN CO₂ allowances (“Initial Offering”) available for sale from Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont, and Virginia
• Minimum Reserve Price of $2.38 per CO₂ allowance
• Auction 52 will have only one offering of allowances
• The Emissions Containment Reserve mechanism is in effect
  • Auction 52 ECR is 11,307,333 ECR allowances
• The Cost Containment Reserve mechanism is in effect
  • Auction 52 CCR is 11,976,778 CCR allowances
Bidder Preparations

- All bidders must be qualified to participate
- Approximately 57 days to provide adequate time to process applications and arrange for financial security
- Question Submission
  - Send questions to: auctionmanager.enelxnorthamerica@enel.com
  - To the extent any relevant questions are not currently addressed in the FAQs, the document will be updated and reposted on Wednesday, April 14, 2021
Dates to Remember

- No later than 5:00 PM ET on Wednesday, April 21, 2021—Qualification Application and/or Intent to Bid due
- No later than 5:00 PM ET on Wednesday, May 26, 2021—Financial security due
- Bidder training sessions
  - 3, one-hour-long sessions from 1:00 to 4:00 PM ET on Tuesday, May 25, 2021
  - 3, one-hour-long sessions from 1:00 to 4:00 PM ET on Wednesday, May 26, 2021
<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td><strong>Release of Auction documents:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• <em>Auction Notice</em></td>
<td>Tuesday, April 6, 2021</td>
<td>No later than 5:00 PM</td>
</tr>
<tr>
<td>• <em>Frequently Asked Questions</em></td>
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<td><strong>RGGI Portal provides access to submit:</strong></td>
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<tr>
<td>• <em>Qualification Application</em></td>
<td>Tuesday, April 6, 2021</td>
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<td>• <em>Intent to Bid</em></td>
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<tr>
<td>• <em>Financial Security Information</em></td>
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<td><strong>Release tutorial</strong></td>
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<td>10:00 AM</td>
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<tr>
<td><strong>Update FAQs, as needed</strong></td>
<td>Wednesday, April 14, 2021</td>
<td>5:00 PM</td>
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<tr>
<td><strong>Auction forms deadline</strong></td>
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<td></td>
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<tr>
<td>• <em>Qualification Application</em></td>
<td>Wednesday, April 21, 2021</td>
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<tr>
<td>• <em>Intent to Bid</em></td>
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<tr>
<td><strong>Remediation notification deadline:</strong></td>
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<tr>
<td>• <em>Qualification Application</em></td>
<td>Wednesday, April 28, 2021</td>
<td>No later than 3:00 PM</td>
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<td>• <em>Intent to Bid</em></td>
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<tr>
<td><strong>Remediated auction forms deadline</strong></td>
<td>Wednesday, May 12, 2021</td>
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</table>

1 All due dates specified in the Auction Notice refer to the date and time on which the item(s) must be received by the Auction Manager.
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<thead>
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<tr>
<td>Auction Platform training sessions</td>
<td>Tuesday, May 25, 2021</td>
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<td>Auction Platform training sessions</td>
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<td>Financial security deadline</td>
<td>Wednesday, May 26, 2021</td>
<td>No later than 5:00 PM</td>
</tr>
<tr>
<td>Notification of participation status sent to Applicants</td>
<td>Friday, May 28, 2021</td>
<td>No later than 5:00 PM</td>
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<tr>
<td>Auction 52</td>
<td>Wednesday, June 2, 2021</td>
<td>9:00 AM ET - 12:00 PM</td>
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<td>Auction clearing price posted at <a href="https://www.rggi.org/">https://www.rggi.org/</a></td>
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<td>10:00 AM</td>
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<td>Optional cash settlement deadline</td>
<td>Wednesday, June 9, 2021</td>
<td>No later than 5:00 PM</td>
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<tr>
<td>Unused cash financial security return</td>
<td>Wednesday, June 16, 2021</td>
<td>No later than 5:00 PM</td>
</tr>
<tr>
<td>Allowance transfer and confirmation</td>
<td>Thursday, June 17, 2021</td>
<td>No later than 5:00 PM</td>
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</tbody>
</table>
What’s New for Auction 52 [1]

• Emissions Containment Reserve:
  • In the event the interim clearing price is less than the ECR trigger price, ECR allowances will be withheld from the Initial Offering until either (1) the clearing price equals the ECR trigger price or (2) the ECR withholding limit is reached
  • Once the annual withholding limit of ECR allowances is reached, no allowances can be withheld for the remainder of that calendar year
  • The ECR is reset at the start of each calendar year
  • The ECR will consist of 10% of the annual base budget of each state implementing the ECR each year
What’s New for Auction 52 [2]

- Minimum Reserve Price is $2.38 per CO₂ allowance
- The Emissions Containment Reserve ("ECR") for calendar year 2021 is 11,307,333 CO₂ allowances
  - All ECR allowances are available in Auction 52
- The Cost Containment Reserve ("CCR") for calendar year 2021 is 11,976,778 CO₂ allowances
  - All CCR allowances are available in Auction 52
- The ECR Trigger Price for 2021 is $6.00 per CO₂ allowance
- The CCR Trigger Price for 2021 is $13.00 per CO₂ allowance
- A list of definitions has been added as Auction Notice Section 9
Participation Requirements

Eligible Party

New Applicant

1. RGGI COATS Account
2. Qualification Application
3. Intent to Bid
4. Financial Security

Previously Qualified Applicant

Material Change

1. RGGI COATS Account (if applicable)
2. Qualification Application
3. Intent to Bid
4. Financial Security

No Material Change

1. Intent to Bid
2. Financial Security
New Applicants

- Open general account or retrieve compliance account number (if created) in the RGGI CO₂ Allowance Tracking System (RGGI COATS)
- Submit the *Qualification Application* through the RGGI Portal
- Submit the *Intent to Bid* through the RGGI Portal
- Meet the financial security requirements
Previously Qualified Applicant [1]

- Previously qualified applicant with a material change to information previously submitted becomes a new applicant
- Update and submit a new *Qualification Application* and *Intent to Bid* through the RGGI Portal
- Meet financial security requirements
- Material changes:
  - General Information: Any change constitutes a material change, except Street Address, City, State/Province, Postal Code, Country, Years in Business, and URL for Applicant’s Web Site
Material changes (continued):

- Authorized Auction Representative(s): Only a change to the Authorized Auction Representative(s) First Name and/or Last Name constitutes a material change
- COATS Account: Any change constitutes a material change
- Corporate Associations: Any change constitutes a material change
- Bidding Associations: Any change constitutes a material change
- Attestations: Any change constitutes a material change

For all other fields, please update the forms as needed
The *Qualification Application* is contained in the RGGI Portal on the Auction Platform (the “Exchange”)

- All sections of the *Qualification Application* are required for all new applicants or previously qualified applicants with a material change
- The RGGI Portal and *Qualification Application* provides:
  - Landing page with messaging on next steps
  - Auto-populated from the new applicant registration form or from a previously qualified applicant’s information
  - Auto save functionality
- Must be submitted no later than 5:00 PM ET on Wednesday, April 21, 2021
  - Submission window automatically closes at the deadline
The *Intent to Bid* is also contained in the RGGI Portal on the Auction Platform

- All sections of the online *Intent to Bid* are required for all applicants

Must be submitted no later than 5:00 PM ET on Wednesday, April 21, 2021

- Submission window automatically closes at the deadline
• Confirmations will be sent out via email immediately after successful submission

• Initial Review
  • Failure to provide any information required will result in the *Qualification Application* being deemed incomplete or otherwise deficient
  • Remediation notifications via email will be sent no later than 3:00 PM ET on Wednesday, April 28, 2021

• Remediation
  • Failure to remediate may result in qualification denial
  • Additional information must be provided no later than 5:00 PM ET on Wednesday, May 12, 2021
• State Review
  • Each state will review each Applicant’s *Qualification Application* and make a determination to grant or deny qualification to each Applicant

• Qualification Notification
  • Each Applicant will be notified via email no later than 5:00 PM ET on Monday, May 17, 2021 as to whether its qualification has been granted or denied
• Confirmations will be sent out via email immediately after successful submission

• Initial Review
  • Failure to provide any information required will result in the Intent to Bid being declared incomplete
  • Failure to submit a *Qualification Application* due to a material change will result in the *Qualification Application* being deemed incomplete or otherwise deficient
  • Remediation notifications via email will be sent no later than 3:00 PM ET on Wednesday, April 28, 2021
Intent to Bid Review and Determination [2]

• Remediation
  • Failure to remediate may result in Auction 52 participation or qualification denial
  • Additional information must be provided no later than 5:00 PM ET on Wednesday, May 12, 2021

• State Review
  • Each state will review each Intent to Bid and make a determination as to the completeness of each Applicant’s Intent to Bid

• Completeness Notification
  • Each Applicant will be notified via email no later than 5:00 PM ET on Monday, May 17, 2021 as to whether its Intent to Bid has been determined to be complete or not
Financial Security [1]

- Only three acceptable forms of financial security: (1) bond (2) cash in the form of a wire transfer or certified funds, (3) an Irrevocable Letter of Credit (ILOC)
- Financial security, in United States dollars (USD), must be received no later than 5:00 PM ET on Wednesday, May 26, 2021
- The amount of financial security will be used to set a bidding limitation
- Appendices are available in Word format at the auction website: https://www.rggi.org/auctions/auction-materials
  - Form of bond is provided in Appendix A and form of ILOC is provided in Appendix B
- No material changes will be permitted to the form of bond or ILOC
  - To the extent the submitted bond or ILOC differs from the forms provided, the Potential Bidder assumes the risk that the bond or ILOC may be rejected
Applicants must provide information regarding their financial security through the RGGI Portal

- Please refer to the RGGI Portal – Training and Support tutorial for information on how to submit the financial security information.

- All unused cash balances will be returned via Automated Clearing House (“ACH”) credit no later than Wednesday, June 16, 2021

- Each winning bidder who submits an ILOC or bond can settle its transaction with cash via a wire transfer
  - Wire transfers must be received no later than 5:00 PM ET on Wednesday, June 9, 2021
  - Failure to settle a transaction in this manner will result in a sight draft against the bond or ILOC on Thursday, June 10, 2021
Applicant’s RGGI CO₂ Allowance Tracking System (RGGI COATS) account is where awarded CO₂ allowances will be transferred. Applicant must have active RGGI COATS account to submit a Qualification Application. Either a “general” or “compliance” account may be registered. The majority of affected sources in the states participating in the RGGI control period have been approved by their respective state agencies for compliance accounts. An applicant without a compliance account may create and register a general account for the auction.
• If not already a RGGI COATS user, applicants are encouraged to start the user application process immediately to ensure establishment of a RGGI COATS general account before submitting CO$_2$ Allowance Auction Qualification Application – Version 3.3


• The User’s Guide may also be accessed by selecting the User’s Guide sub-menu option under the Reference menu option.
Registering to Use RGGI COATS

• In order to create a general account or to access an existing account in RGGI COATS, you must first register to be a user.

• A user account is assigned to one natural person and may not be shared. Each natural person who will access a RGGI COATS general account and/or compliance account as an Authorized Account Representative (AAR), Alternate AAR or electronic submission agent requires a personal user account (login name and password).

• Individuals who did not receive an email invitation to register may request a RGGI COATS user account via https://rggi-coats.org.
The RGGI CO$_2$ Allowance Tracking System (RGGI COATS) is the platform that records and tracks data for each state's CO$_2$ Budget Trading Program.

**Public Reports**

RGGI COATS enables the public to view, customize, and download reports of RGGI program data and CO$_2$ allowance market activity.

Access reports here:

- Special Approvals
- Offset Projects
- Accounts
- Account Representatives
- Sources
- Owner/Operator
- Transaction Price Report
- Quarterly Emissions
- Annual Emissions
- Control Period Emissions
- Summary Level Emissions

**RGGI COATS Accounts**

RGGI COATS enables market participants to receive and transfer CO$_2$ allowances, register offset projects, and submit offset project Consistency Applications and Monitoring and Verification Reports.

Registered users login below.

A login is required only for authorized account representatives (AARs), alternate account representatives (AAARs), or electronic submission agents to access compliance or general accounts.

**Username**

![Login Button]

Click here to register to become a RGGI COATS user.

Forgot your RGGI COATS username?
Registration Information for Access to COATS

Users who are representatives of RGGI COATS accounts and need to manage these accounts through the COATS system must complete the registration below to access the system. Registration is not required for members of the public who wish to access public reports and do not require ability to log in to the COATS system. Fields marked by * are required.

Step 1: Enter Information

- Title (Mr./Ms.)
- First Name *
- Last Name *
- Middle Initial
- Phone Number *
- Fax Number *
- Company Name
- Address *
- Address
- City *
- Country *
- State/Province
- Postal Code *
- Reason for requesting a login *

Enter required information in the appropriate fields.
Important: Enter a valid email address to receive notification of your completed registration as a user. Valid COATS passwords must be a minimum of seven characters in length and contain the following: at least one alphabetic character, and at least one numeric and one special characters.

**Required Fields:**
- Email Address
- Re-enter email address
- Email Salutation (e.g., Bill Smith)
- Create your COATS username
- Create your password
- Re-enter password

Complete the remaining required fields (indicated by an *) and then click Next.
Registering to use RGGI COATS (continued)

• Agree to the terms page displayed after clicking ‘Next’.
• Print, sign in blue ink, and submit the User Login Request Form to CSRA:
  
  CSRA International, Inc.
  650 Peter Jefferson Pkwy
  Suite 300
  Charlottesville, VA 22911

• Once CSRA has processed the User Login Request Form, you will receive notice at the email address you registered that you can access the system.
Creating a General Account

• Log into RGGI COATS via https://rggi-coats.org
• Select the Create General Account option
• The user creating the general account must be the AAR
Create Account: Enter Account Details

Create General Account

Create the name of your account as the first step in creating a general account. Then, click the Next button to continue.

Account Name

Account Type: General

Enter an Account Name

Next
Create Account: Designate Account Ownership

To create a General Account, any and all organization(s) with ownership interest in the allowances in the account must be disclosed. Select ownership organization(s) from the list below and move it from the "Candidate Organizations" box on the left to the "Selected Organizations" box on the right using the arrow (">") buttons between the boxes. If the organization you wish to select is not found within this list, click the "Add" button to create a new ownership organization.

Select organizations from the list

Use the arrows to move the organizations from one box to the other

If an organization is not in the list, click the Add button to create a new organization
Create Account: Select Alternate Authorized Account Representative

Select the optional Alternate Authorized Account Representative ("AAAR"), if any, for the General Account using the radio buttons in the grid below. The grid is initially blank and you must first enter filter criteria in the box to the right to display a specific AAAR or list of AAARs. The designated AAAR will have the same system permissions for the General Account as the AAAR. Note that the grid can be sorted by clicking on the grid column.

Use the filter to find a person

The AAAR grid is blank by default

If you cannot find a person using the filter, click the Add button to add a new user
Create Account: Review and Submit

Account Name: ABC Manufacturing General Account
Account Type: General
Authorized Account Representative: User, Industry
Alternate Authorized Account Representative: User II, Industry

Organizations

<table>
<thead>
<tr>
<th>Owner/Operator</th>
<th>Owner/Operator Role</th>
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</thead>
<tbody>
<tr>
<td>ABC Manufacturing</td>
<td>Owner</td>
</tr>
</tbody>
</table>

Certification Statement

I certify that I was selected as the CO₂ authorized account representative or the CO₂ alternate authorized account representative, as applicable, by an agreement that is binding on all persons who have an ownership interest with respect to CO₂ allowances held in the general account. I certify that I have all the necessary authority to carry out my duties and responsibilities under the CO₂ Budget Trading Program on behalf of such persons and that each such person shall be fully bound by my representations, actions, inactions, or submissions and by any order or decision issued to me by the Department or its agent or a court regarding the general account.

Entering your password below acknowledges that you have read and agreed to the above certification.

Enter password: [Input field]

If the information on the page is correct, enter your COATS system password, and click the Submit button.
The system messages confirm the account creation is complete.

General Account Number to register for auction.
Accessing a Compliance Account

- Verify role as the source RGGI representative in EPA’s CBS via https://camd.epa.gov/cbs as RGGI COATS mirrors the relationship for RGGI compliance accounts.
- Log into RGGI COATS via https://rggi-coats.org
Click on the Account Number link in the grid below to view account details. Use the filter criteria to the right to find a specific account or list of accounts more easily. Click the Export Data button under the grid to export the grid data to Excel (.csv). Also, note that the grid can be sorted by clicking on the grid column headers (first click is ascending, second click is descending).

Click on the hyperlinked Account Number to access the Compliance Account Details.
### Account Details

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<td>Closed on</td>
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<td>Allowances can be Transferred</td>
<td>Yes</td>
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<td>Allowances can be Acquired</td>
<td>Yes</td>
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**Compliance Account Number to register for auction.**

### Source Details

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<td>9630</td>
<td>ABC Source</td>
<td>9-6633-13579</td>
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Confidential Information

• Applicant may not publicly release confidential information
  • Confidential information includes, but is not limited to, qualification status, bidding strategy, bid price and/or bid quantity information, and information on financial security to the extent such information is not generally available to the public
Limitation on Communication

- After the relevant *Qualification Application* filing deadline, an Applicant may not communicate with any other Applicant or party about the RGGI auction that has not been disclosed in its qualification application, except as requested by the Auction Manager to remediate a *Qualification Application*.
Auction Overview [1]

• Electronic, internet-based auction platform
• Uniform-price, sealed-bid (single-round) auction format
• Bids ranked by their bid price from highest to lowest
  • Cumulative demand noted at each bid price
• Auction includes an Emissions Containment Reserve ("ECR") for
  • Auction 52 ECR is 11,307,333 CO₂ allowances
• Auction includes a Cost Containment Reserve ("CCR")
  • Auction 52 CCR is 11,976,778 CO₂ allowances
• Auction Notice provides clear guidance on determining the interim and final clearing price and allowance awards
Auction Overview [2]

- All tied marginal bids will be resolved by a random tiebreaking process.
- All bids that exist in the Auction Platform via user submission at the close of the auction will be considered binding offers and eligible for award.
  - Contingent bids are not permitted.
- Each bid price must be submitted in dollars and whole cents.
- Each bid quantity must be submitted in multiples of 1,000.
- Bidders can submit an unlimited number of bids; however, only one bid may be submitted for any given bid price.
- Bidders can cancel or change their bids at their discretion until the bidding window closes.
Bid Limitations [1]

- Reserve Price
  - The reserve price is $2.38 per CO₂ allowance
- Financial Security
  - The value of a bidder’s bids cannot exceed the amount of a bidder’s financial security
  - The value of a bidder’s bids is the maximum value the bidder would be liable to pay in a uniform-price auction format
    - This is the same approach utilized since Auction 2
Bid Limitations [2]

• Quantity of CO₂ Allowances
  • The maximum number of CO₂ allowances that an entity (i.e., an individual person, or an organization and its affiliates and/or agents), may bid for in a single auction is 25% of the CO₂ allowances offered for sale (“Initial Offering”)
  • Applicants are associated if they have ties that could allow them to act in concert or that could prevent them from competing actively against each other in an auction
  • There is no prohibition against associations among bidders; however, they must be disclosed properly
Bid Limitations [3]

- Quantity of CO₂ Allowances (cont.)
  - Corporate Associations
    - See Auction Notice for corporate association definition
  - Bidding Associations
    - Bidding associations only relate to CO₂ allowances offered for sale in a RGGI auction
    - See Auction Notice for bidding association definition
- All bid limitations are evaluated at the time of submittal
- The Auction Platform will not allow bids that violate any bid limitation to be submitted
Emission Containment Reserve
Overview and Mechanics

• The ECR is designed to support the price of CO₂ allowances
  • The ECR represents a budget (i.e., fixed number) of ECR allowances which, under certain circumstances, can be withheld from the Initial Offering
• Once the limit of ECR allowances available for withholding is reached, no allowances can be withheld for the remainder of that calendar year
• The ECR trigger price (“ECR Trigger Price”) for Auction 52 is $6.00 per CO₂ allowance
Cost Containment Reserve Overview and Mechanics

• The CCR is designed to moderate the price of CO₂ allowances
  • The CCR contains a number of CO₂ allowances that, under certain circumstances, will be offered for sale
• Once the pool of CO₂ allowances available in the CCR is exhausted, no CCR Allowances will be available for the remainder of that calendar year
• The CCR trigger price ("CCR Trigger Price") for Auction 52 is $13.00 per CO₂ allowance
Mechanics of the ECR & CCR: Clearing Price and Allowance Awards [1]

Scenario No. 1 – Total Demand > Initial Offering, ECR & CCR are not Triggered

- **Step 1: The Interim Clearing Price**
  - Interim Clearing Price = Bid price of the marginal bid or bids

- **Step 2: Triggering the ECR or CCR and the Final Clearing Price**
  - Interim Clearing Price > ECR Trigger Price
  - Interim Clearing Price < CCR Trigger Price
  - No ECR allowances are withheld & no CCR allowances are released in this scenario
  - Final Clearing Price = Interim Clearing Price

- **Step 3: CO₂ Allowance Awards**
  - Allowances awarded to bids with bid prices > Final Clearing Price
  - Tie breaker may apply for marginal bids with bid prices = Final Clearing Price
Scenario No. 2a – Total Demand ≤ Initial Offering, ECR Triggered

- Step 1: The Interim Clearing Price
  - Interim Clearing Price = Minimum Reserve Price

- Step 2: Triggering the ECR or CCR and the Final Clearing Price
  - Interim Clearing Price < ECR Trigger Price
  - In this scenario, ECR Allowances are withheld until Final Clearing Price = ECR Trigger Price

- Step 3: CO₂ Allowance Awards
  - Allowances awarded to bids with bid prices ≥ Final Clearing Price

Scenario No. 2b – Total Demand ≤ Initial Offering

- **Step 1: The Interim Clearing Price**
  - Interim Clearing Price = Minimum Reserve Price

- **Step 2: Triggering the ECR or CCR and the Final Clearing Price**
  - Interim Clearing Price < ECR Trigger Price
  - In this scenario, ECR Allowances are withheld until ECR withholding limit is reached
  - Final Clearing Price = Bid price of the marginal bid or bids and is < ECR Trigger Price

- **Step 3: CO₂ Allowance Awards**
  - Allowances awarded to bids with bid prices > Final Clearing Price
  - Tie breaker may apply for marginal bids with bid prices = Final Clearing Price
Scenario No. 3a – Total Demand > Initial Offering, ECR is Triggered

- **Step 1: The Interim Clearing Price**
  - Interim Clearing Price = Bid price of the marginal bid or bids

- **Step 2: Triggering the ECR or CCR and the Final Clearing Price**
  - Interim Clearing Price < ECR Trigger Price
  - In this scenario, ECR Allowances are withheld until Final Clearing Price = ECR Trigger Price

- **Step 3: CO₂ Allowance Awards**
  - Allowances awarded to bids with bid prices ≥ Final Clearing Price

Scenario No. 3b – Total Demand > Initial Offering, ECR is Triggered

- **Step 1: The Interim Clearing Price**
  - Interim Clearing Price = Bid price of the marginal bid or bids

- **Step 2: Triggering the ECR or CCR and the Final Clearing Price**
  - Interim Clearing Price < ECR Trigger Price
  - In this scenario, ECR Allowances are withheld until ECR withholding limit is reached
  - Final Clearing Price = Bid price of the marginal bid or bids and is < ECR Trigger Price

- **Step 3: CO₂ Allowance Awards**
  - Allowances awarded to bids with bid prices > Final Clearing Price
  - Tie breaker may apply for marginal bids with bid prices = Final Clearing Price

Scenario No. 4a – Total Demand > Initial Offering, CCR is Triggered

• Step 1: The Interim Clearing Price
  - Interim Clearing Price = Bid price of the marginal bid or bids

• Step 2: Triggering the ECR or CCR and the Final Clearing Price
  - Interim Clearing Price > CCR Trigger Price
  - In this scenario, CCR allowances are released until Final Clearing Price = CCR Trigger Price

• Step 3: CO₂ Allowance Awards
  - Allowances awarded to bids with bid prices ≥ Final Clearing Price
Scenario No. 4b – Total Demand > Initial Offering, CCR is Triggered

- Step 1: The Interim Clearing Price
  - Interim Clearing Price = Bid price of the marginal bid or bids

- Step 2: Triggering the ECR or CCR and the Final Clearing Price
  - Interim Clearing Price > CCR Trigger Price
  - In this scenario, CCR allowances are released until CCR is exhausted
  - Final Clearing Price = Bid price of the marginal bid or bids and is > CCR Trigger Price

- Step 3: CO₂ Allowance Awards
  - Allowances awarded to bids with bid prices > Final Clearing Price
  - Tie breaker may apply for bids with bid prices = Final Clearing Price
Auction Format Example No. 1

- Sample auction for 100,000 CO₂ allowances
- All bids are ranked by bid price from highest to lowest
  - Cumulative demand is noted at each bid
- Awards made until supply of CO₂ allowances is exhausted, which is Bidder B’s bid for 17,000 CO₂ allowances at $7.40

<table>
<thead>
<tr>
<th>Bidder Name</th>
<th>Bid Price</th>
<th>Bid Quantity</th>
<th>Cumulative Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bidder E</td>
<td>$8.00</td>
<td>21,000</td>
<td>21,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$7.95</td>
<td>18,000</td>
<td>39,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$7.80</td>
<td>23,000</td>
<td>62,000</td>
</tr>
<tr>
<td>Bidder D</td>
<td>$7.70</td>
<td>21,000</td>
<td>83,000</td>
</tr>
<tr>
<td>Bidder B</td>
<td>$7.40</td>
<td>17,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Bidder E</td>
<td>$7.10</td>
<td>12,000</td>
<td>112,000</td>
</tr>
<tr>
<td>Bidder C</td>
<td>$6.85</td>
<td>10,000</td>
<td>122,000</td>
</tr>
<tr>
<td>Bidder E</td>
<td>$6.80</td>
<td>10,000</td>
<td>132,000</td>
</tr>
<tr>
<td>Bidder B</td>
<td>$6.75</td>
<td>15,000</td>
<td>147,000</td>
</tr>
<tr>
<td>Bidder C</td>
<td>$6.25</td>
<td>20,000</td>
<td>167,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$6.20</td>
<td>25,000</td>
<td>192,000</td>
</tr>
<tr>
<td>Bidder C</td>
<td>$6.00</td>
<td>22,000</td>
<td>214,000</td>
</tr>
<tr>
<td>Bidder D</td>
<td>$5.10</td>
<td>10,000</td>
<td>224,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$5.05</td>
<td>13,000</td>
<td>237,000</td>
</tr>
</tbody>
</table>

- Clearing price is the bid price after the marginal bid, or $7.10 per CO₂ allowance
Auction Format Example No. 2

- Sample auction for 100,000 CO₂ allowances
- Bidder E’s, D’s, A’s, & B’s bids at $6.75 cause cumulative demand to exceed supply
  - Clearing price is the bid price of the tied marginal bids, or $6.75
- Tied marginal bids are broken by a random process

<table>
<thead>
<tr>
<th>Bidder Name</th>
<th>Bid Price</th>
<th>Bid Quantity</th>
<th>Cumulative Demand</th>
<th>Random Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bidder E</td>
<td>$8.00</td>
<td>13,000</td>
<td>13,000</td>
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</tr>
<tr>
<td>Bidder A</td>
<td>$7.50</td>
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<td>19,000</td>
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<tr>
<td>Bidder B</td>
<td>$7.10</td>
<td>8,000</td>
<td>27,000</td>
<td></td>
</tr>
<tr>
<td>Bidder D</td>
<td>$7.05</td>
<td>14,000</td>
<td>41,000</td>
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<tr>
<td>Bidder E</td>
<td>$7.00</td>
<td>9,000</td>
<td>50,000</td>
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<tr>
<td>Bidder A</td>
<td>$6.95</td>
<td>11,000</td>
<td>61,000</td>
<td></td>
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<tr>
<td>Bidder C</td>
<td>$6.85</td>
<td>18,000</td>
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<td>Bidder E</td>
<td>$6.75</td>
<td>10,000</td>
<td>89,000</td>
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</tr>
<tr>
<td>Bidder D</td>
<td>$6.75</td>
<td>5,000</td>
<td>94,000</td>
<td>1</td>
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<tr>
<td>Bidder A</td>
<td>$6.75</td>
<td>15,000</td>
<td>109,000</td>
<td>2</td>
</tr>
<tr>
<td>Bidder B</td>
<td>$6.75</td>
<td>10,000</td>
<td>119,000</td>
<td>4</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$6.25</td>
<td>30,000</td>
<td>149,000</td>
<td></td>
</tr>
<tr>
<td>Bidder C</td>
<td>$6.00</td>
<td>40,000</td>
<td>189,000</td>
<td></td>
</tr>
<tr>
<td>Bidder E</td>
<td>$5.85</td>
<td>35,000</td>
<td>224,000</td>
<td></td>
</tr>
</tbody>
</table>

- Allowances awarded to each tied bidder in increasing order of their random number
Auction Format Example No. 3 [1]

- Sample auction for 100,000 CO₂ allowances with an ECR of 50,000 allowances
- The ECR trigger price is $6.00 per CO₂ allowance

**Step 1: The Interim Clearing Price**

- Bidder A’s bid causes cumulative demand to exceed supply

<table>
<thead>
<tr>
<th>Bidder Name</th>
<th>Bid Price</th>
<th>Bid Quantity</th>
<th>Cumulative Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bidder E</td>
<td>$7.00</td>
<td>8,000</td>
<td>8,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$6.95</td>
<td>11,000</td>
<td>19,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$6.80</td>
<td>9,000</td>
<td>28,000</td>
</tr>
<tr>
<td>Bidder D</td>
<td>$6.70</td>
<td>11,000</td>
<td>39,000</td>
</tr>
<tr>
<td>Bidder B</td>
<td>$6.50</td>
<td>13,000</td>
<td>52,000</td>
</tr>
<tr>
<td>Bidder E</td>
<td>$6.00</td>
<td>12,000</td>
<td>64,000</td>
</tr>
<tr>
<td>Bidder C</td>
<td>$5.85</td>
<td>8,000</td>
<td>72,000</td>
</tr>
<tr>
<td>Bidder E</td>
<td>$5.80</td>
<td>9,000</td>
<td>81,000</td>
</tr>
<tr>
<td>Bidder B</td>
<td>$5.75</td>
<td>11,000</td>
<td>92,000</td>
</tr>
<tr>
<td>Bidder C</td>
<td>$5.25</td>
<td>8,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$5.05</td>
<td>12,000</td>
<td>112,000</td>
</tr>
<tr>
<td>Bidder C</td>
<td>$5.00</td>
<td>40,000</td>
<td>152,000</td>
</tr>
<tr>
<td>Bidder D</td>
<td>$4.25</td>
<td>16,000</td>
<td>168,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$4.15</td>
<td>13,000</td>
<td>181,000</td>
</tr>
</tbody>
</table>

- Interim clearing price is the bid price of the marginal bid or bids
Step 2: Triggering the ECR and the Final Clearing Price

- Since the interim clearing price is below the ECR trigger price, ECR Allowances are withheld
  - 58,000 ECR allowances are withheld from the Initial Offering

Step 3: CO₂ Allowance Awards

<table>
<thead>
<tr>
<th>Bidder Name</th>
<th>Bid Price</th>
<th>Bid Quantity</th>
<th>Cumulative Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bidder E</td>
<td>$7.00</td>
<td>8,000</td>
<td>8,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$6.95</td>
<td>11,000</td>
<td>19,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$6.80</td>
<td>9,000</td>
<td>28,000</td>
</tr>
<tr>
<td>Bidder D</td>
<td>$6.70</td>
<td>11,000</td>
<td>39,000</td>
</tr>
<tr>
<td>Bidder B</td>
<td>$6.50</td>
<td>13,000</td>
<td>52,000</td>
</tr>
<tr>
<td>Bidder E</td>
<td>$6.00</td>
<td>12,000</td>
<td>64,000</td>
</tr>
<tr>
<td>Bidder C</td>
<td>$5.85</td>
<td>8,000</td>
<td>72,000</td>
</tr>
<tr>
<td>Bidder E</td>
<td>$5.80</td>
<td>9,000</td>
<td>81,000</td>
</tr>
<tr>
<td>Bidder B</td>
<td>$5.75</td>
<td>11,000</td>
<td>92,000</td>
</tr>
<tr>
<td>Bidder C</td>
<td>$5.25</td>
<td>8,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$5.05</td>
<td>12,000</td>
<td>112,000</td>
</tr>
<tr>
<td>Bidder C</td>
<td>$5.00</td>
<td>40,000</td>
<td>152,000</td>
</tr>
<tr>
<td>Bidder D</td>
<td>$4.25</td>
<td>16,000</td>
<td>168,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$4.15</td>
<td>13,000</td>
<td>181,000</td>
</tr>
</tbody>
</table>

- Allowances are awarded to all bids with a bid price greater than or equal to the final clearing price
Sample auction for 100,000 CO$_2$ allowances with a CCR of 50,000 allowances

The CCR trigger price is $13.00 per CO$_2$ allowance

**Step 1: The Interim Clearing Price**

Bidder D’s bid causes cumulative demand to equal supply

<table>
<thead>
<tr>
<th>Bidder Name</th>
<th>Bid Price</th>
<th>Bid Quantity</th>
<th>Cumulative Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bidder A</td>
<td>$14.50</td>
<td>16,000</td>
<td>16,000</td>
</tr>
<tr>
<td>Bidder E</td>
<td>$14.00</td>
<td>17,000</td>
<td>33,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$13.95</td>
<td>21,000</td>
<td>54,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$13.80</td>
<td>24,000</td>
<td>78,000</td>
</tr>
<tr>
<td>Bidder D</td>
<td>$13.70</td>
<td>22,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Bidder B</td>
<td>$13.50</td>
<td>10,000</td>
<td>110,000</td>
</tr>
<tr>
<td>Bidder E</td>
<td>$13.45</td>
<td>9,000</td>
<td>119,000</td>
</tr>
<tr>
<td>Bidder C</td>
<td>$12.30</td>
<td>10,000</td>
<td>129,000</td>
</tr>
<tr>
<td>Bidder E</td>
<td>$13.05</td>
<td>7,000</td>
<td>136,000</td>
</tr>
<tr>
<td>Bidder B</td>
<td>$13.00</td>
<td>12,000</td>
<td>148,000</td>
</tr>
<tr>
<td>Bidder C</td>
<td>$12.68</td>
<td>20,000</td>
<td>168,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$12.05</td>
<td>12,000</td>
<td>180,000</td>
</tr>
<tr>
<td>Bidder C</td>
<td>$12.00</td>
<td>40,000</td>
<td>220,000</td>
</tr>
<tr>
<td>Bidder D</td>
<td>$11.25</td>
<td>16,000</td>
<td>236,000</td>
</tr>
</tbody>
</table>

**Interim clearing price is the bid price after the marginal bid**
Step 2: Triggering the CCR and the Final Clearing Price

- Since the interim clearing price is above the CCR Trigger Price, CCR Allowances are released
- CCR allowances are released from the CCR into the Initial Offering

Step 3: CO₂ Allowance Awards

<table>
<thead>
<tr>
<th>Bidder Name</th>
<th>Bid Price</th>
<th>Bid Quantity</th>
<th>Cumulative Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bidder A</td>
<td>$14.50</td>
<td>16,000</td>
<td>16,000</td>
</tr>
<tr>
<td>Bidder E</td>
<td>$14.00</td>
<td>17,000</td>
<td>33,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$13.95</td>
<td>21,000</td>
<td>54,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$13.80</td>
<td>24,000</td>
<td>78,000</td>
</tr>
<tr>
<td>Bidder D</td>
<td>$13.70</td>
<td>22,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Bidder B</td>
<td>$13.50</td>
<td>10,000</td>
<td>110,000</td>
</tr>
<tr>
<td>Bidder E</td>
<td>$13.45</td>
<td>9,000</td>
<td>119,000</td>
</tr>
<tr>
<td>Bidder C</td>
<td>$12.30</td>
<td>10,000</td>
<td>129,000</td>
</tr>
<tr>
<td>Bidder E</td>
<td>$13.05</td>
<td>7,000</td>
<td>136,000</td>
</tr>
<tr>
<td>Bidder B</td>
<td>$13.00</td>
<td>12,000</td>
<td>148,000</td>
</tr>
<tr>
<td>Bidder C</td>
<td>$12.68</td>
<td>20,000</td>
<td>168,000</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$12.05</td>
<td>12,000</td>
<td>180,000</td>
</tr>
<tr>
<td>Bidder C</td>
<td>$12.00</td>
<td>40,000</td>
<td>220,000</td>
</tr>
<tr>
<td>Bidder D</td>
<td>$11.25</td>
<td>16,000</td>
<td>236,000</td>
</tr>
</tbody>
</table>

- Allowances are awarded to all bids with a bid price greater than or equal to the final clearing price
Bid Value Example No. 1

- Bids are ranked by bid price from highest to lowest
- Bid price is multiplied by the bidder’s cumulative demand at that bid price to calculate a bid value
- The largest bid value calculated and therefore the maximum cost, is the total value of the bidder’s bids and is counted against the financial security bid limit - $502,500

<table>
<thead>
<tr>
<th>Bidder Name</th>
<th>Bid Price</th>
<th>Bid Quantity</th>
<th>Cumulative Demand</th>
<th>Bid Value at each Bid Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bidder A</td>
<td>$8.00</td>
<td>17,000</td>
<td>17,000</td>
<td>If this bid is accepted, Bidder A wins 17,000 CO₂ allowances and pays at most $8.00 per CO₂ allowance. $136,000.00</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$7.50</td>
<td>50,000</td>
<td>67,000</td>
<td>If this bid is accepted, Bidder A wins 67,000 CO₂ allowances and pays at most $7.50 per CO₂ allowance. $502,500.00 &lt; Max Bid Value</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$5.50</td>
<td>17,000</td>
<td>84,000</td>
<td>If this bid is accepted, Bidder A wins 84,000 CO₂ allowances and pays at most $5.50 per CO₂ allowance. $462,000.00</td>
</tr>
<tr>
<td>Bidder A</td>
<td>$5.00</td>
<td>15,000</td>
<td>99,000</td>
<td>If this bid is accepted, Bidder A wins 99,000 CO₂ allowances and pays at most $5.00 per CO₂ allowance. $495,000.00</td>
</tr>
</tbody>
</table>

Bidder A's maximum bid value is counted against the financial security bid limitation. $502,500.00
Bid Value Example No. 2

- Bids are ranked by bid price from highest to lowest
- Bid price is multiplied by the bidder’s cumulative demand at that bid price to calculate a bid value
- The largest bid value calculated and therefore the maximum cost, is the total value of the bidder’s bids and is counted against the financial security bid limit - $438,000

<table>
<thead>
<tr>
<th>Bidder Name</th>
<th>Bid Price</th>
<th>Bid Quantity</th>
<th>Cumulative Demand</th>
<th>Bid Value at each Bid Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bidder B</td>
<td>$6.85</td>
<td>10,000</td>
<td>10,000</td>
<td>$68,500.00</td>
</tr>
<tr>
<td>Bidder B</td>
<td>$6.25</td>
<td>20,000</td>
<td>30,000</td>
<td>$187,500.00</td>
</tr>
<tr>
<td>Bidder B</td>
<td>$6.05</td>
<td>21,000</td>
<td>51,000</td>
<td>$308,550.00</td>
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<tr>
<td>Bidder B</td>
<td>$6.00</td>
<td>22,000</td>
<td>73,000</td>
<td>$438,000.00</td>
</tr>
</tbody>
</table>

Bidder B’s maximum bid value is counted against the financial security bid limitation. $438,000.00
Thank you!

Website: https://rggi.org/auctions/auction-materials
Questions: auctionmanager.enelxnorthamerica@enel.com