

# Regulation XIII – New Source Review



Working Group Meeting  
October 8, 2020

Join Zoom Meeting

<https://scaqmd.zoom.us/j/98447755537>

Meeting ID: 984 4775 5537

Passcode: 418604

Teleconference Dial-In: 1-669-900-6833

# Agenda

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- Previous Working Group Meeting Summary
- Status of NSR Issues
- Re-Cap of Large Source Bank
- Surplus Discounting for ERCs
- Quantification of Offsets and ERCs
- Fee for Generating ERCs
- Conversion of RTCs to ERCs

# Previous Working Group Meeting Summary

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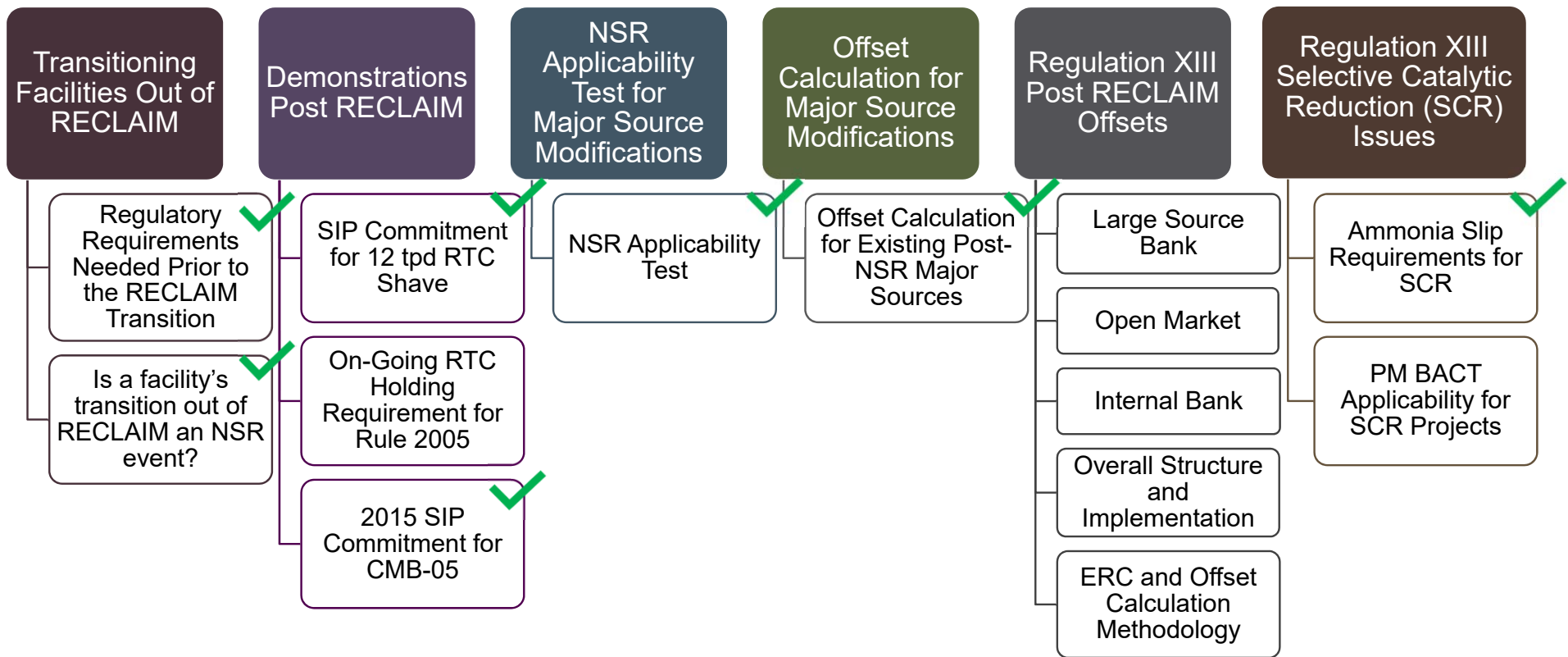
- Discussed amendments needed for the reclassification of Coachella Valley from Severe to Extreme non-attainment of the 1997 8-hour ozone National Ambient Air Quality Standard for:
  - Regulations XIII – New Source Review
  - Regulation XX – RECLAIM
  - Regulation XXX Title V

Regulation XIII New Source Review
<ul style="list-style-type: none"><li>• Rule 1302</li><li>• Rule 1303</li><li>• Rule 1306</li><li>• Rule 1309</li><li>• Rule 1315</li></ul>

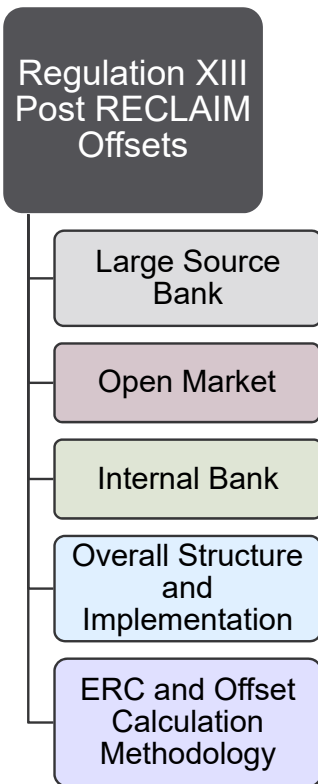
Regulation XX RECLAIM
<ul style="list-style-type: none"><li>• Rule 2000</li></ul>

Regulation XXX Title V
<ul style="list-style-type: none"><li>• Rule 3001</li><li>• Rule 3002</li><li>• Rule 3003</li></ul>

# Status of NSR Issues

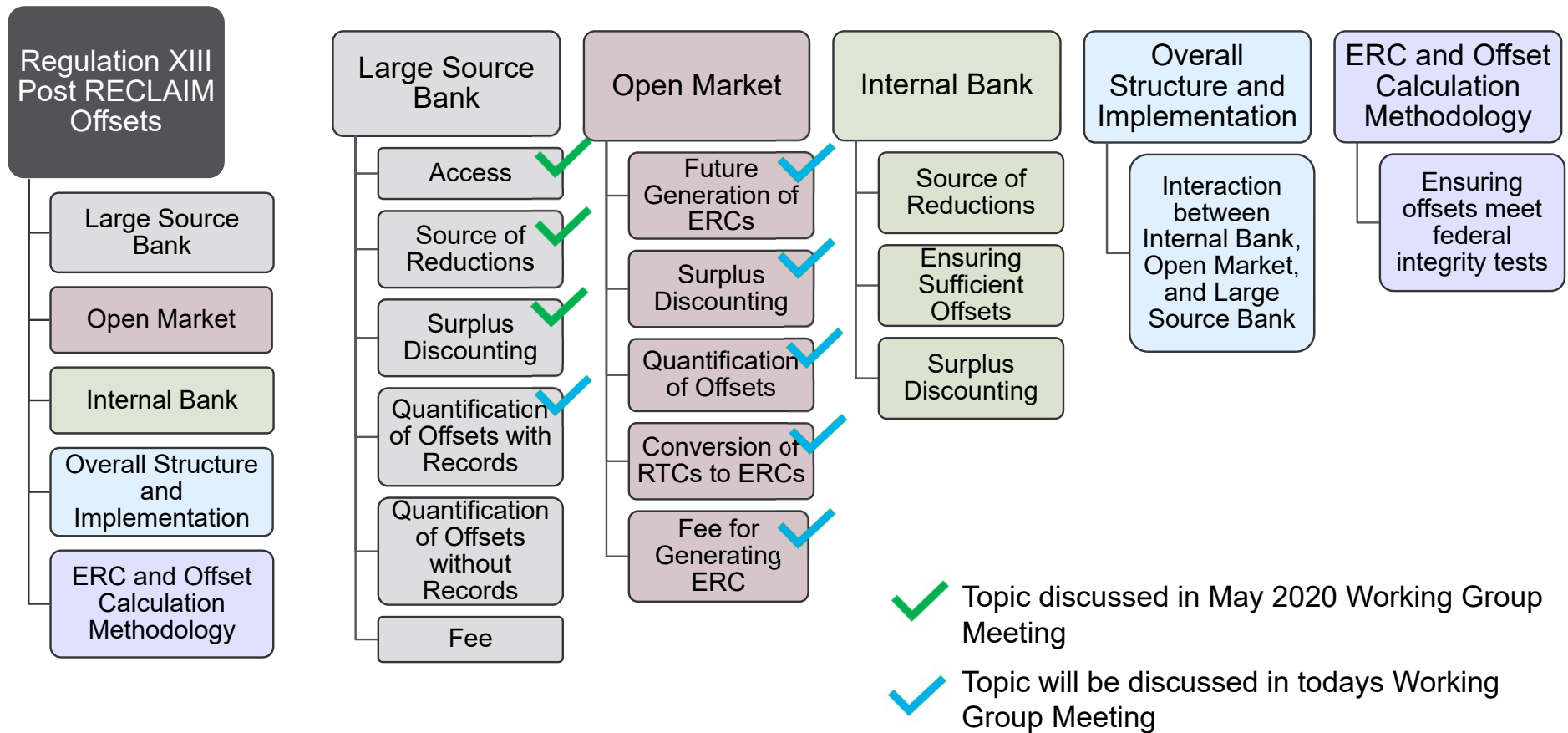


# Regulation XIII Post RECLAIM



- Ensuring offsets are available post RECLAIM is one of the most challenging issues for the RECLAIM transition
- There are a number of topics within each of sub-issues within “Regulation XIII Post RECLAIM Offsets”
- Staff has identified these topics for each of the sub-issues to track the progress with the overall issue of ensuring offsets are available post-RECLAIM

# Topics Under Each of the Sub-Topics Under Regulation XIII Post RECLAIM Offsets



## Re-Cap of Large Source Bank

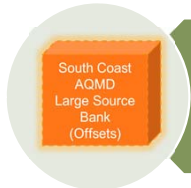
- At May 2020 Working Group Meeting staff discussed initial concepts for a Large Source Bank for NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10</sub>
- Discussed Federal Integrity Criteria for offsets enforceable, permanent, real, and surplus requirements
  - Discussion today will focus on quantifying offsets for the Large Source Bank when records are available
  - Quantification of orphan reductions and shutdowns will be discussed at a future Working Group Meeting



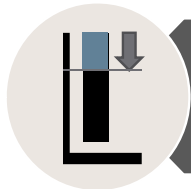
# Re-Cap of Large Source Bank



**Access to the Large Source Bank**  
PTE  $\geq$  4 tons per year either NO<sub>x</sub>, SO<sub>x</sub>, or PM<sub>10</sub>\*



**Source of Reductions**  
New reductions would seed Large Source Bank



**Surplus Discounting**  
Source-specific BARCT discount at generation and use



**Fee**  
Fee for using offsets – fee to be determined

\* Sources that are not eligible to use existing Internal Bank per Rules 1304 and 1309.1

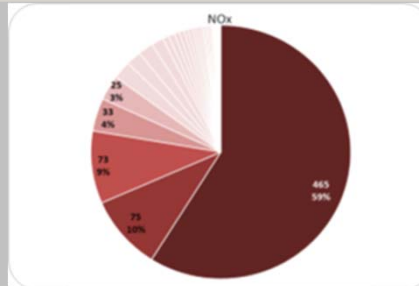
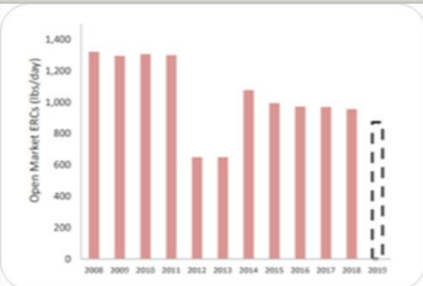


# Stakeholder Comments

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- At the May 2020 Working Group Meeting staff discussed the concept to direct all reductions to the Internal Bank and Large Source Bank and that future generation of ERCs would be restricted
- Some stakeholders had commented that:
  - Future generation of ERCs should be allowed
  - Operators tend not to generate ERCs because the discounting methodologies for ERCs is more rigorous, particularly when compared to Offsets for the Internal Bank
  - Although many operators do not go through the process to generate an ERC, this operation should be allowed

# Concerns for Individual and Entities Generating and Hold ERCs



Pollutant	Average Cost (\$/ton per year)
VOC	\$34,000
NOx	\$127,000
PM10	\$735,000
SOx	\$376,000

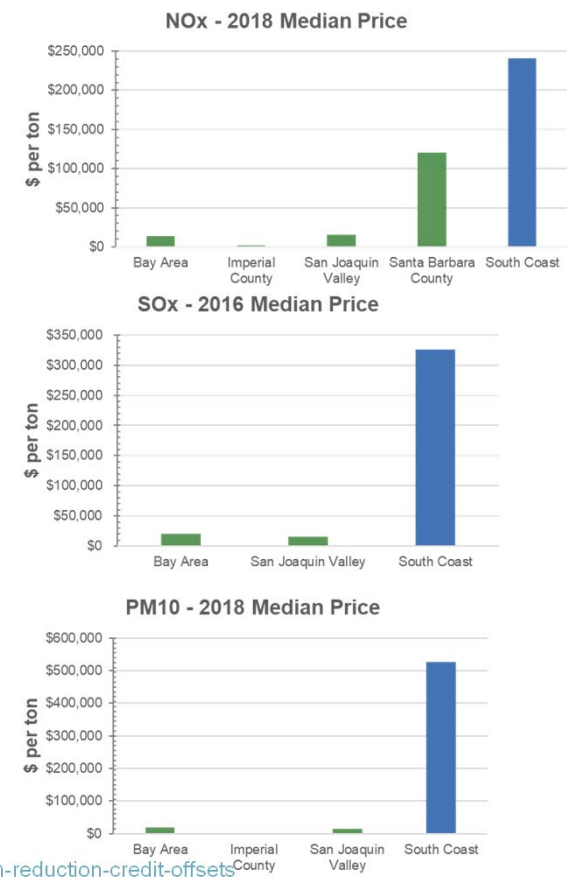
RECLAIM  
Facilities Can  
Deplete Supply  
of NOx ERCs in  
One Year

6 facilities hold  
90% of NOx  
ERCs

Average NOx  
ERC cost is  
\$127,000/ton  
per year

# Comparison of NOx, SOx, and PM10 ERC Prices to Other Air Districts

- South Coast AQMD ERC prices for NOx, SOx, and PM10 are substantially higher than other air districts
- Price of South Coast AQMD ERCs are generally more than 10 times higher than other air districts, with the exception of NOx ERCs for Santa Barbara Air Pollution Control District (APCD)
- Higher prices for Santa Barbara APCD NOx offsets can be attributed to
  - Tendency for small number of facilities to hold onto ERCs for future use
  - Demand for NOx ERCs for combustion projects
  - Provision that expires ERC within 5 years unless the holder renews the offset



\*Based on ERC information at <https://www.ourair.org/erc/> and conversation with David Harris

\* Emission Reduction Offsets Transaction Cost Summary reports for 2018 and 2016. <https://ww2.arb.ca.gov/new-source-review-emission-reduction-credit-offsets>

# Need for Large Source Bank

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Based on current availability and price of ERCs, the Open Market is not a viable source of offsets post-RECLAIM



As facilities transition out of RECLAIM, critical that sufficient offsets are available to avoid a permit moratorium



Ensure the price of ERCs does not inhibit the decision to modernize a facility



Creating a Large Source Bank provides a better assurance offsets are available, and available at a reasonable price

# Proposed Concept for Generation of ERCs for the Open Market

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- To ensure there are sufficient offsets available as facilities transition out of NOx RECLAIM, the Large Source Bank will be needed
- Existing ERCs can be sold, traded, and used in the Open Market as currently allowed
- Generation of ERCs for the Open Market will be allowed when a sufficient supply of offsets can be generated for the Large Source Bank NOx, SOx, and PM10
  - “Sufficient supply” will need to be defined and may be pollutant specific
- Staff will explore with the Working Group similar surplus discounting and generation requirements for offsets for the Large Source Bank and ERCs for the Open Market

## Surplus Discounting ERCs

- At the May 2020 Working Group Meeting, staff discussed surplus discounting approach for the Large Source Bank
- Recommended a source-specific BARCT discounting approach
  - South Coast AQMD Internal bank which applies a BARCT surplus discount in aggregate
  - Application of BARCT surplus discount to the same source category that created the offset is more accurate than a surplus discount in aggregate
- Key elements of the Large Source Bank BARCT surplus discount
  - Apply an equipment-specific BARCT discount that accounts for reductions required by applicable federal, state, or local rule or regulation
  - Application of BARCT discount at time of deposit into the Large Source Bank, annually, and when the offset is used, if needed

## Surplus Discounting of ERCs for the Open Market

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- Currently, to ensure ERCs are surplus, actual emissions are reduced to the amount which would be actual if current BACT were applied (Rule 1306 (c))
  - BACT discount is applied at time of generation with no additional discount at time of use
- Alternatively, a BARCT discount would be applied at time of generation and time of use, if needed
  - BARCT discount will account for reductions required by applicable rule, regulation, law, approved Air Quality Management Plan Control Measure or State Implementation Plan
  - Staff intends to apply the BARCT discount annually for the Large Source Bank to provide a more accurate balance of available offsets

# Details of the BARCT Discount for ERCs

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- Implementation of the BARCT discount would be based on the compliance dates in applicable rules
- Staff did consider applying the BARCT discount based on the emission rate of the ERC generated
- Rules with varying compliance paths that can lead to ambiguity in the timing and amount of the BARCT discount for a specific ERC such as
  - Alternative compliance dates and emission limits for replaced units
  - Alternative compliance dates and/or emission limits for units that are close to the final emission limit or are low use units
  - Alternative compliance dates and emission limits for innovative technologies
  - Implementation dates based on age of equipment



# Proposed Approach for ERC BARCT Discount

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- Staff is proposing that the BARCT discount be based on the percent reduction estimated in the applicable rule
  - Using the percent reduction of the applicable rule captures the various implementation scenarios
  - Streamlines application of the BARCT discounts since percent reductions are estimated during the adoption or amended of the applicable rule
- Staff recognizes that a percent reduction approach may not be as accurate as an equipment-specific BARCT discount, however, will provide the same overall reduction
- Staff is concerned that using an equipment-specific approach could delay the ability to use an ERC if there are disagreements on the timing and/or amount of the applicable BARCT discount

# Considerations for BARCT Discounting for Generation of ERCs for the Open Market

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- BARCT surplus discount will require discounting at time of generation and use, if needed
  - Future value of ERC is uncertain – new regulatory requirements may become effective prior to when the ERC is used
- BACT discount may be greater than a BARCT discount
  - As BARCT rules become more stringent, emission rates for some equipment categories or processes are the same as BACT
- May be an SB288 issue to change surplus discounting from BACT to BARCT
- Staff discussing with U.S. EPA
- Staff is seeking stakeholder input

## Quantification of ERCs for the Open Market and Offsets for the Large Source Bank

- At the May 2020 Working Group, staff did not discuss quantification of offsets for the Large Source Bank
- Rule 1306 is a starting point for quantification of offsets for the Large Source Bank when records are available
- Staff also reviewed quantification procedures in other air districts' New Source Review rules for comparison
- Discussion today will focus on quantification procedures when records are available
  - Orphan reductions will be discussed at a different Working Group Meeting

# Key Topics for Quantification Procedures When Records are Available

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Time period for calculating emission decreases



Records for estimating throughput and emission rate



Usage Factor



Averaging

# Time Period for Calculating Emission Decreases



- Under Rule 1306 emission decreases are based on each year during the two-year period immediately preceding the date of the ERC application<sup>1</sup> or other appropriate period determined by the Executive Officer
- Federal NSR defines actual emissions to be based on the past emissions immediately preceding the last two years (24 months) or other 24-month period which is representative of normal operation
- U.S. EPA allows two consecutive years over the previous five years to determine actual emissions

<sup>1</sup> For equipment or process modifications with emission decreases it is preceding the permit application

# Initial Recommendation for Time Period for Calculating Emission Decreases

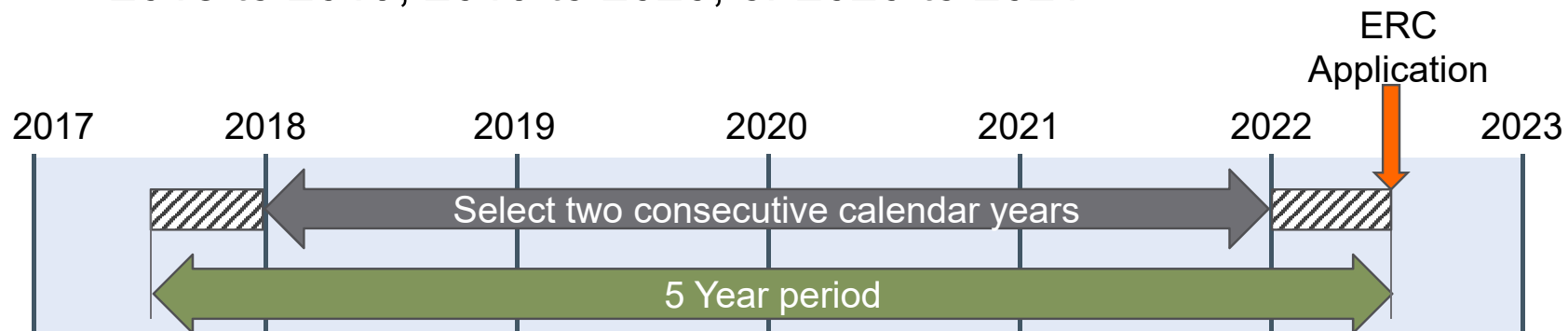


- For offsets for the Large Source Bank and ERCs for the Open Market, staff is recommending that emission decreases be based on:
  - Any two consecutive calendar years over the previous five years to determine actual emissions
  - Five-year period is immediately preceding the date of the ERC application
- Operator must have sufficient records for the two consecutive years to quantify the emissions decrease
- Can use shorter time period if two consecutive calendar years is not available
- Staff discussing with U.S. EPA

# Example of Two Consecutive Calendar Years Over Five-Year Period



- Scenario:
  - ERC application received June 30, 2022
  - 5 year “look back period” is July 1, 2017 to June 30, 2022
  - Operator can select any of the following two consecutive calendar years:
    - 2018 to 2019, 2019 to 2020, or 2020 to 2021



# Records for Estimating Throughput and Emission Rate



- Rule 1306 (c)(1) specifies that actual emissions be calculated:

“The sum of actual emissions, as determined from company records, shall include annual emissions declarations pursuant to Rule 301, or other data approved by the Executive Officer or designee, whichever is less...”



- References “Annual emissions declarations”
- Currently no reference to throughput, emission rate, days of operation, and any other factors needed to estimate emissions
- Emission rate is needed to compare to BARCT emission rate
- Days of operation are needed to calculate the annual average emissions



# Initial Recommendations for Records for Estimating Throughput and Emission Rate



- When estimating emission decreases, provide records for the unit or process operation to substantiate the:
  - Emission rate
  - Throughput
  - Days of operation
  - Load factor, if applicable
- Considering requiring facilities to report annual days of operation in Annual Emissions Reporting to streamline processing of offsets for the Large Source Bank and ERCs for the Open Market
- Maintain provision to allow operator to provide information as approved by the Executive Officer
- Add provision to require the operator to provide additional information to substantiate emission decrease, if requested by the Executive Officer



## Application of a Usage Factor

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- Rule 1306 (c)(2) requires that annual emissions be divided by the total number of actual operation days in each of the two years
- In addition, Rule 1306 (c)(3) applies usage factors depending on the number of operating days per year
  - 1.0 when operated 180 days or more,
  - 0.5 when operated 30 to 179 days, and
  - 0.0 when operated less than 30 days
- Application of the usage factor, further discounts the emission decrease beyond the BACT surplus discount

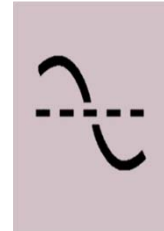
# Initial Recommendations for Application of a Usage Factor



- Staff recommends to remove the usage factor for quantifying offsets for the Large Source Bank and ERCs for the Open Market
  - Quantification approach is based on actual emissions accounting for actual operating days
  - Application of a usage factor double counts emission decreases when operations are less than 180 days
- May be an SB288 issue to remove the usage factor, staff will discuss with CARB
- Staff discussing with U.S. EPA

# Averaging Period for Establishing Base Emissions

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- Rule 1306 (c)(4) states that “the average value shall be calculated for those two years or other approved period”
- Staff is recommending to clarify that the “other approved period” will be if two consecutive calendar years of operating data is not available

# Comparison Between Current and Proposed Quantification of Emission Decreases

**Current ERC Quantification**

<p>Adjust Actual Emissions to BACT Year 1</p> <p>Divide Number of Actual Operating Days</p> <p>Multiply Usage Factor</p>	+	<p>Adjust Actual Emissions to BACT Year 2</p> <p>Divide Number of Actual Operating Days</p> <p>Multiply Usage Factor</p>	$\frac{\left( \left( \frac{4,500 \text{ lbs/year}_1}{200 \text{ days/year}_1} \right) \times 1 \right) + \left( \left( \frac{4,000 \text{ lbs/year}_2}{170 \text{ days/year}_2} \right) \times 0.5 \right)}{2}$
			<div style="border: 2px solid orange; padding: 5px; display: inline-block;"><b>17.13 lbs/day</b></div>

**Proposed Offset and ERC Quantification**

<p>Adjust Actual Emissions to BARCT Year 1</p> <p>Divide Number of Actual Operating Days</p>	+	<p>Adjust Actual Emissions to BARCT Year 2</p> <p>Divide Number of Actual Operating Days</p>	$\frac{\left( \frac{4,700 \text{ lbs/year}_1}{200 \text{ days/year}_1} \right) + \left( \frac{4,200 \text{ lbs/year}_2}{170 \text{ days/year}_2} \right)}{2}$
			<div style="border: 2px solid orange; padding: 5px; display: inline-block;"><b>24.1 lbs/day</b></div>

# Fees for Generating ERCs

**Rule 301 (Cont.)** (Amended July 12, 2019)

TABLE FEE RATE-B. SUMMARY OF ERC PROCESSING RATES, BANKING, CHANGE OF TITLE, ALTERATION/MODIFICATION, CONVERSION TO SHORT TERM CREDITS, RE-ISSUANCE OF SHORT TERM CREDITS, RETIREMENT OF SHORT TERM CREDITS FOR TRANSFER INTO RULE 2202, and TRANSFER OF ERCs OUT OF RULE 2202

Schedule I	Non-Title V	Title V
		FY 2019-20 and thereafter
Banking Application	\$4,769.34	\$5,976.43
Change of Title	\$842.49	\$1,055.71
Alteration/Modification	\$842.49	\$1,055.71
Conversion to Short Term Credits	\$842.49	\$1,055.71
Re-Issuance of Short Term Credits	\$842.49	\$1,055.71
Retirement of Short Term Emission Credits for Transfer into Rule 2202 and Transfer of ERCs Out of Rule 2202	\$283.34	\$355.06

- At the May Working Group meeting, some stakeholders had commented that one possible impediment to generating ERCs is the cost
- Currently Rule 301 establishes a flat fee for ERC Banking Applications of:
  - ~\$4,800 for non-Title V facilities
  - ~\$6,000 for Title V facilities
- Current fee structure does not account for the varying complexities of review of emission decreases for ERCs
- Staff is considering a fee structure that includes an initial filing fee plus a rate based on the number of hours spent on review and evaluation of the ERC

# Initial Recommendations For Fees for Generating ERCs

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- Base evaluation and review of ERCs on Rule 301(j)(7) establishes an application fee plus an hourly rate for inter-basin, inter-district, or interpollutant transfer of ERCs (See table below)
- Staff is recommending to use the same fee structure for generating ERCs
- Approach ensures South Coast AQMD recovers costs associated with reviewing and evaluating an ERC
- For simpler ERC evaluations, cost expected to be less than flat fee

Facility Type	Non-Title V Facility	Title V Facility
Initial Filing Fee	\$842	\$1,055
Hourly Rate	\$192/hour	\$241/hour

## Conversion of RTCs to ERCs

- Under Rule 2002 (c)(3) all NO<sub>x</sub> and SO<sub>x</sub> ERCs generated at the facility and held by a RECLAIM Facility Permit holder were reissued as RTCs
  - These RTCs were included in the facility's starting Allocation
  - These RTCs had a zero rate of reduction until 2000, and were adjusted at the same rate as other RTCs thereafter
- Under Rule 2002 (c)(4) non-RECLAIM facilities had the option to convert ERCs to RTCs
- Some stakeholders have requested that ERCs that were converted to RTCs be allowed to be converted back to ERCs
- Staff is exploring the conversion of RTCs back to ERCs for those facilities that were required to convert ERCs to RTCs under paragraph (c)(3)



# Possible Considerations for Criteria for Converting RTCs to ERCs

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- If the RTC is converted to an ERC, the value of the ERC would reflect any adjustments to RTCs pursuant to Rule 2002
- Limiting conversion of RTCs to ERCs to those facilities that originally held the ERCs at the start of RECLAIM that are still operating when RECLAIM transitions to command-and-control
- Conversion would occur at the end of RECLAIM prior to transitioning facilities
- Considering any ERCs where the facility is no longer operator, could be used in the Large Source Bank
- Total amount of conversions will be less than 2.6 tons per day of NO<sub>x</sub>

# Key Challenges with Conversion of RTCs Back to ERCs

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- Must demonstrate that RTCs are still surplus and were not used
  - Challenging since RTCs were not serialized
  - Difficult to track ERCs that were converted to RTCs and their use
- U.S. EPA has expressed concerns regarding ensuring offsets are surplus relative to SIP commitments
- Staff will continue to work with U.S. EPA and stakeholders

# Next Steps

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- Continue working on issues, encourage input from stakeholders
- Staff is working on second version of RECLAIM Transition Paper
  - Possibly cancel November Working Group meeting to allow staff to complete RECLAIM Transition Paper
  - Staff will provide a notification to Working Group a couple weeks prior to the November Working Group meeting

# Contacts

## General RECLAIM Questions

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