Regulation XIII – New Source Review

February 20, 2020
South Coast AQMD
Call-in #: 1-866-705-2554
Passcode: 8794752
Agenda

Summary of Last Working Group Meeting

Reducing Demand of Offsets

Summary

Next Steps
Previous Working Group Meeting Summary

- Discussed the supply of Emission Reduction Credits (ERCs) in the open market and supply of offsets in the internal bank.

- Discussed projections for internal bank offsets:
  - VOC, PM10, and SOx internal offsets projected to increase.
  - NOx internal offsets declining:
    - Annual BARCT discount greatest impact on offset balance.
    - Offsets supply will further depreciate with RECLAIM demand.
    - Depletion of offsets would be sooner if offsetting calculation changed to Actual-to-PTE.

- Stakeholders recommended that a minimum balance be set aside for essential public services and small emitting facilities, if former RECLAIM facilities are given access to offsets from the internal bank.
Reducing the Demand for Offsets
Background

- Staff committed to assess concepts to reduce the demand and increase the supply of offsets
- Availability of offsets are needed to ensure permits can be issued
- Working within the regulatory framework of the:
  - Federal Clean Air Act
  - SB288 which prohibits the South Coast AQMD from amending New Source Review rules or regulations to be less stringent than those that existed on December 30, 2002
Initial Concepts for Reducing Demand and Increasing Supply of Offsets

### Reducing Demand of Offsets
- Offset Exemptions
- NSR Applicability Using Air Quality Modeling
- Other?

### Increasing Supply of Offsets
- Refining BARCT Discounting Methodology
- ERC Discounting
- Conversion of RTCs for ERCs
- Mobile Sources
- Inter-pollutant Trading
- Other?
Framing the Issues

Reducing Demand of Offsets

- Offset Exemptions
- NSR Applicability Using Air Quality Modeling
- Other?

Question 1: What scenarios are exempt from offsetting when complying with a BARCT rule?

Question 2: Can air quality modeling be used to demonstrate no net increase?

Seeking input
Question 1: What scenarios are exempt from offsetting when complying with a BARCT rule?

**Background**

- Rule 1304 (c)(4) exempts a facility from offsetting if:
  - Source is installed or modified solely to comply with regulations provided there is no increase in maximum rating
  - Exemption for offsets only – no exemption for BACT
- Federal Clean Air Act (CAA) 182 (e)(2) exempts offsetting in Extreme Areas for:
  - Modification of an existing source if such modification consists of installation of equipment required to comply with the applicable implementation plan, permit, or this chapter
- CA Health & Safety Code (H&SC) §42301.2 has an offsetting exemption for:
  - Any emission increase at a source that results from the installation, operation, or other implementation of any emission control device or technique used to comply with a district, state, or federal emission control requirement
Offsetting exemptions under Rule 1304 (c)(4), Federal CAA 182 (e)(2), and CA H&SC §42301.2 overlap

- If scenarios qualify for offsetting exemption under Federal CAA 182 (e)(2) and CA H&SC §42301.2, no additional offsetting obligation
  - South Coast AQMD does not need to use internal bank offsets

Rule 1304 (c)(4), CAA 182 (e)(2), and CA H&SC §42301.2 address retrofits and installation of equipment for regulatory compliance

Slight differences between Rule 1304 and Federal CAA 182 (e)(2)

- Rule 1304 (c)(4) exemption applicable for regulatory compliance with rule for any pollutant
- Federal CAA 182 (e)(2) exemption only applicable for regulatory compliance required by an ozone precursor rule

Evaluated five scenarios that may qualify for an exemption from offsets under Rule 1304 (c)(4), Federal CAA 182 (e)(2), and CA H&SC §42301.2
Analysis of Rule 1304 (c)(4)

Rule 1304(c)(4) – Regulatory Compliance

“The source is installed or modified solely to comply with District, state, or federal air pollution control laws, rules, regulations or orders, as approved by the Executive Officer or designee, and provided there is no increase in maximum rating.”

“The source is installed or modified”
- Can apply to replacement equipment or retrofit

Regulatory Compliance
- Comply with District, state, or federal air pollution control laws, rules, regulations or orders

Other Limitations
- No increase in maximum rating
Analysis of Federal CAA 182 (e)(2)

“modification of an existing source”
- Federal reference to “existing source” is an existing facility

“modification consists of installation of equipment”
- Can be interpreted as installation of pollution control equipment or replacement equipment (basic equipment)

Regulatory Compliance
- Comply with applicable implementation plan, permit, or this chapter

Federal CAA 182 (e)(2) – Modifications

“The offset requirements of this part shall not be applicable in Extreme Areas to a modification of an existing source if such modification consists of installation of equipment required to comply with the applicable implementation plan, permit, or this chapter.”
Offsetting exemption under Federal CAA 182 (e)(2) applies to a “modification of an existing source if such modification consists of installation of equipment to comply…”

- Interpreted to include installation of replacement equipment

Under Federal NSR, a replacement unit\(^1\) is an existing emissions unit\(^2\) if:

- The unit is reconstructed or completely takes the place of an existing unit
- The unit is identical to or functionally equivalent to the replaced unit
- The replacement does not alter the basic design parameters of the process unit
- The replaced unit is permanently removed, disabled, or barred from operation by an enforceable permit

\(^1\) 40 CFR §51.165(a)(1)(xxi)
\(^2\) 40 CFR §51.165(a)(1)(vii)(B)
Equipment replacements cannot change the basic design parameters of the process unit to which the activity pertains.

A process unit could be any collection of structures and/or equipment and contain more than one emissions unit.

Examples of basic design parameters:

**Electric Generating Facility (EGF)**
- Maximum hourly heat input and maximum hourly fuel consumption rate
- Maximum hourly electric output rate and maximum steam flow rate

**Process unit that is not an EGF**
- Maximum rate of fuel or heat input
- Maximum rate of material input
- Maximum rate of product output
A district shall not require emission offsets for any emission increase at a source that results from the installation, operation, or other implementation of any emission control device or technique used to comply with a district, state, or federal emission control requirement, including, but not limited to, requirements for the use of reasonably available control technology or best available retrofit control technology, unless there is a modification that results in an increase in capacity of the unit being controlled.

CA H&SC §42301.2 – Offsetting exemption

"installation, operation, or other implementation of any emission control device or technique"
- Can be interpreted as installation of pollution control equipment or replacement equipment (basic equipment)

Regulatory Compliance
- Comply with a district, state, or federal emission control requirement (e.g. BARCT)

Other Limitations
- No increase in capacity of the unit being controlled

Analysis of CA H&SC §42301.2
- Can be interpreted as installation of pollution control equipment or replacement equipment (basic equipment)

- Comply with a district, state, or federal emission control requirement (e.g. BARCT)

- No increase in capacity of the unit being controlled
### Five Scenarios for Question 1

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<td>What pollutants are exempt from offsetting when installing controls?</td>
<td>Does a like-for-like replacement qualify for the offsetting exemption?</td>
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Scenario 1: What pollutants are exempt from offsetting when installing controls equipment?

**Example**
SCR is added to comply with the NOx limit in Rule 1146

**Question**
Will an increase in PM emissions from SCR be exempt from offsets?

**Analysis**
SCR is added to comply with South Coast AQMD rule Retrofit consistent with Rule 1304(c)(4), CAA 182(e)(2), and H&SC §42301.2

**Recommendation:** Co-pollutants associated with installing controls to comply with a South Coast AQMD ozone precursor rule are exempt from offsetting.
Scenario 2: Does a like-for-like replacement qualify for the offsetting exemption?

Example: Facility replaces an existing boiler with a replacement boiler to comply with the NOx limit in Rule 1146.

Question: If a unit is being replaced for the purpose of complying with a South Coast AQMD rule, is the replacement unit exempt from offsets?

Analysis: Replacement at BACT, no increase in capacity.

Recommendation: One for one equipment replacement to comply with a South Coast AQMD ozone precursor rule, with no increase in capacity, is exempt from offsetting.
Scenario 3: Will the replacement of two or more units with one unit qualify for the offsetting exemption?

**Example**
Facility replaces two existing small boilers with one large replacement boiler to comply with the NOx limit in Rule 1146.

**Question**
If one unit replaces two or more existing units for the purpose of complying with a South Coast AQMD rule, is the replacement unit exempt from offsets?

**Analysis**
Replacement at BACT, no increase in total capacity.
Replacement is to comply with South Coast AQMD rule.
Rule 1304(c)(4), CAA 182(e)(2), and H&SC §42301.2 all reference “install”.

**Recommendation:** An individual piece of equipment replacing two or more units to comply with a South Coast AQMD ozone precursor rule, with no increase in total capacity, is exempt from offsetting.
Scenario 4: Will the replacement of one unit with two or more units qualify for the offsetting exemption?

**Example**
Facility replaces an existing boiler with two or more boilers to comply with the NOx limit in Rule 1146

**Question**
If a unit is being replaced for the purpose of complying with a South Coast AQMD rule, are the replacement units exempt from offsets?

**Analysis**
Replacements at BACT, no increase in total capacity

Replacements are to comply with South Coast AQMD rule

Rule 1304(c)(4), CAA 182(e)(2), and H&SC §42301.2 all reference “install”

**Recommendation:** Two or more pieces of equipment that are replacing one unit to comply with a South Coast AQMD ozone precursor rule, with no increase in total capacity, are exempt from offsetting
Scenario 5: Will the replacement of two or more units with two or more units qualify for the offsetting exemption?

**Example**
Facility replaces two or more boilers with two or more boilers to comply with the NOx limit in Rule 1146

**Question**
If units are being replaced for the purpose of complying with a South Coast AQMD rule, are the replacement units exempt from offsets?

**Analysis**
Replacements at BACT, no increase in total capacity
Replacements are to comply with South Coast AQMD rule
Rule 1304(c)(4), CAA 182(e)(2), and H&SC §42301.2 all reference “install”

Recommendation: Two or more pieces of equipment that are replacing two or more units to comply with a South Coast AQMD ozone precursor rule, with no increase in total capacity, are exempt from offsetting
U.S. EPA Response to Question 1: What scenarios are exempt from offsetting when complying with a BARCT rule?

- Modification cannot be a voluntary expansion, which then installs controls
- Equipment has to be existing or replacement with no increase in capacity
  - Equipment capacity can be based on nameplate
- If modification due to regulatory compliance results in emission increase of co-pollutants, offsetting for co-pollutants is covered by the CAA 182 (e)(2) offsetting exemption
Recommendations Five Scenarios for Question 1

Scenario 1: Co-pollutants associated with installing controls to comply with a South Coast AQMD ozone precursor rule are exempt from offsetting.

Scenario 2: One for one equipment replacement to comply with a South Coast AQMD ozone precursor rule, with no increase in capacity, is exempt from offsetting.

Scenario 3: An individual piece of equipment replacing two or more units to comply with a South Coast AQMD ozone precursor rule, with no increase in total capacity, is exempt from offsetting.

Scenario 4: Two or more pieces of equipment that are replacing one unit to comply with a South Coast AQMD ozone precursor rule, with no increase in total capacity, are exempt from offsetting.

Scenario 5: Two or more pieces of equipment that are replacing two or more units to comply with a South Coast AQMD ozone precursor rule, with no increase in total capacity, are exempt from offsetting.

1 For the scenarios above, equipment replacements need to meet Federal NSR criteria specified in 40 CFR §51.165(a)(1)(xxi)
Question 2: Can air quality modeling be used to demonstrate no net increase?

- Staff is evaluating the NSR applicability for co-pollutants emitted from the installations and modifications that are needed to comply with a South Coast AQMD rule.
- Staff is exploring potential options that would allow some flexibility for BACT and offsetting for co-pollutants, such as:
  - Accounting for co-benefits based on regional or local modeling (e.g., 0.4 pounds of PM reduced for every pound of NOx reduced).
  - Focus is on installation of SCR and applicability of NSR for PM10/PM2.5.
- Sought input from U.S. EPA.
Question 2: Can air quality modeling be used to demonstrate no net increase? (Continued)

- **U.S. EPA response:**
  - No provisions in the Federal CAA allows modeling for NSR applicability that could be use to relieve a source from NSR requirements

- **South Coast AQMD recommendation:**
  - Staff will not pursue air quality modeling as a way to demonstrate no net increase for NSR applicability for co-pollutants
Next Steps

Increasing Supply of Offsets

- Refining BARCT Discounting Methodology
- ERC Discounting
- Conversion of RTCs for ERCs
- Mobile Sources
- Inter-pollutant Trading
- Other?

Ongoing discussion with U.S. EPA to verify the annual BARCT discount
Consider applying BARCT instead of BACT discount for ERCs
Explore with U.S. EPA if some RTCs can be converted back to ERCs
Can mobile source credits supply offsets to the internal bank?
Could offsets be generated with inter-pollutant trading?
Seeking input
# Contacts

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<th>General RECLAIM Questions</th>
<th>New Source Review</th>
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