



South Coast
AQMD

Regulation XIII – New Source Review

February 20, 2020

South Coast AQMD

Call-in #: 1-866-705-2554

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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

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

NSR Applicability Using Air Quality Modeling

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

Other?

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

Discussion and Analysis

- 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)

“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

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.”

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.”

Analysis of Replacement Equipment

- 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 unit¹ is an existing emissions unit² 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)

Analysis of Replacement Equipment (*Continued*)

- 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

Analysis of CA H&SC §42301.2

“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

CA H&SC §42301.2 – Offsetting exemption

“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.”

Five Scenarios for Question 1

Scenario 1: What pollutants are exempt from offsetting when installing controls?

Scenario 2: Does a like-for-like replacement qualify for the offsetting exemption?

Scenario 3: Will the replacement of two or more units with one unit qualify for the offsetting exemption?

Scenario 4: Will the replacement of one unit with two or more units qualify for the offsetting exemption?

Scenario 5: Will the replacement of two or more units with two or more units qualify for the offsetting exemption?

Scenario 1: What pollutants are exempt from offsetting when installing controls equipment?

Example SCR is added to comply with the NO_x 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 NO_x 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

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: 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 NO_x 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 NO_x 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 NO_x 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 NO_x reduced)
 - Focus is on installation of SCR and applicability of NSR for PM₁₀/PM_{2.5}
- 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



Ongoing discussion with U.S. EPA to verify the annual BARCT discount

ERC Discounting



Consider applying BARCT instead of BACT discount for ERCs

Conversion of RTCs
for ERCs



Explore with U.S. EPA if some RTCs can be converted back to ERCs

Mobile Sources



Can mobile source credits supply offsets to the internal bank?

Inter-pollutant Trading



Could offsets be generated with inter-pollutant trading?

Other?



Seeking input

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