BOARD MEETING DATE: October 2, 2015 AGENDA NO. 28

REPORT: Special Meeting of the Stationary Source Committee

SYNOPSIS: The Stationary Source Committee met Wednesday, September 23,

2015. Following is a summary of that meeting.

RECOMMENDED ACTION:

Receive and file.

Dennis Yates, Chair Stationary Source Committee

MN:am

Attendance

The meeting began at 1:00 p.m. In attendance at SCAQMD Headquarters were Committee Chair Dennis Yates and Committee Members Judith Mitchell, Ben Benoit and Dr. Joseph Lyou. Committee Member Shawn Nelson attended via teleconference. The meeting was also webcast.

INFORMATIONAL ITEM

Status Report on Proposed Regulation XX NOx RECLAIM Rule Amendments

The Special Stationary Source Committee included 30-minutes time slots for presentations from staff, an Industry RECLAIM Coalition and environmental/community representatives. Dr. Philip Fine, Deputy Executive Officer for Planning, Rule Development and Area Sources, provided an update of the proposed amendments to Regulation XX, which includes a 14 ton per day NOx RECLAIM Trading Credit (RTC) reduction for the top 90 percent of RTC holders and power plants. The amount of reduction would depend on the industry category, and the programmatic reductions would occur on a proposed schedule from 2016-2022. Also under consideration is the establishment of an Adjustment Account for new power plants that are required to hold RTCs at their potential to emit (PTE) level.

After Dr. Fine's presentation, Ms. Barbara Baird, Chief Deputy Counsel, presented information regarding the statutory requirements for Best Available Retrofit Control Technology (BARCT) that RECLAIM must meet, and discussed how Industry's RECLAIM proposal does not meet the legal requirements as described in the California Health and Safety Code.

Several Industry Representatives, Bill Quinn (California Council for Environmental and Economic Balance), Mike Carroll (Latham and Watkins), Sue Gornick (Western States Petroleum Association), and Curt Coleman (Southern California Air Quality Alliance) presented an industry proposal for the BARCT shave that amounts to approximately 8.8 tpd or less instead of 14 tons per day of NOx RTC reductions, and commented on the NOx RTC shave implementation schedule for the timing proposed to be used for reducing RTC holdings.

Evan Gillespie (Sierra Club) gave a presentation to the Committee in support of the staff proposal, but favoring even more stringent requirements. He also highlighted the energy production on hot summer days from power plants and solar generation to illustrate their view that additional power plants should not be sited in the South Coast air basin. Since this presentation ended before the allotted time provided, the Committee Chair Dennis Yates allowed other representatives from the environmental community to address the Board Members. Nine representatives from the community spoke, including Jim Stewart (Sierra Club). Testimony included the need for additional NOx reductions from RECLAIM sources, especially refineries and power plants, to help improve air quality.

Mayor Yates expressed concern that there is such a large disparity between the staff and industry proposals and asked if the rule would be ready for a November public hearing. Mayor Yates left the meeting at 2:30 p.m. and requested that Councilmember Mitchell moderate the remainder of the meeting.

Councilmember Mitchell stated that all the groups involved need to work toward a consensus and that she was concerned with the timing of the RTC reductions. Dr. Lyou stated that he was not concerned with the lack of consensus and recommended that if staff's analysis shows what level of NOx reductions are required to meet our obligations to clean the air and meet federal and state ambient air quality standards, we should proceed with presenting the current staff proposal to the full Board.

Mayor Benoit requested that SCAQMD staff address the Norton Environmental Consultants (NEC) issues with the BARCT analysis. Staff explained that there were reasonable differences in engineering assumptions but that the amount of emission reductions that would be calculated based on the NEC report had already been included in the adjustments that staff was recommending for the RTC reduction amounts.

Councilmember Mitchell recommended that this item also be presented at the October Stationary Source Committee Meeting for an update, and supported a November Board Hearing.

Supervisor Nelson also had concerns with SCAQMD staff's disagreement with NEC on the BARCT analysis and the selection of a 25-year equipment life, instead of a 10-year equipment life, as used by other regulatory agencies.

PUBLIC COMMENTS

During the public comment period, four representatives from the regulated and six members of the environmental community addressed the Committee. Edward Krisnadi (Montrose Environmental) recommended a change to Table 1 emission factors to enable a circuit board manufacturer that he represents to get a better allocation. Staff will continue to work with him on this issue. Marnie Dorsz (Montrose Environmental) voiced concerns on the Rule 219 exempt equipment relative to source testing requirements for certified boiler provisions of the proposed amendment and Joe Hower (Environ) had concerns on the current \$15,000 per ton safety valve trigger for RECLAIM program review. Mr. Hower was concerned that there would not be a sufficient response time, especially if the price trigger is over a twelve-month rolling average period. Representatives from the environmental community commented on the effects of air pollution in this area on their family members and others in their community and strongly urged the Board to support SCAQMD staff's proposal.

The meeting was adjourned at 3:05 p.m. The next regularly scheduled meeting of the Stationary Source Committee meeting will be held on October 16, 2015.

Attachments

- 1. Attendance Roster
- 2. NOx RECLAIM Presentation
- 3. NOx RECLAIM Presentation (2)
- 4. Industry RECLAIM Coalition Presentation
- 5. Environmental/Community Stakeholder Presentation

NAME	AFFILIATION
Mayor Dennis Yates	SCAQMD Governing Board Member
Councilmember Judith Mitchell	SCAQMD Governing Board Member
Mayor Ben Benoit	SCAQMD Governing Board Member
Supervisor Shawn Nelson (teleconference)	SCAQMD Governing Board Member
Dr. Joseph Lyou	SCAQMD Governing Board Member
Board Consultant Andrew Silva	SCAQMD Governing Board (Rutherford)
Barry Wallerstein	SCAQMD staff
Mohsen Nazemi	SCAQMD staff
Philip Fine	SCAQMD staff
Barbara Baird	SCAQMD staff
Kurt Wiese	SCAQMD staff
Jill Whynot	SCAQMD staff
Joe Cassmassi	SCAQMD staff
Mark Sedlacek	Los Angeles Department of Water & Power
Pete Corritori	Norton Engineering
James A. Norton	Norton Engineering
Frank Colcac	Tesoro
Craig Sakamoto	Exxon Mobil
Marie Olson	Derdau
Bill Lamarr	California Small Business Alliance
Linda Bermudez	Bizfed
Scott Weaver	ERM
Jim Stewart	Sierra Club

Marshall Waller	Phillips 66
Patty Senecal	Western States Petroleum Association
Sue Gornick	Western States Petroleum Association
Danielle Leker	Natural Resources Defense Council
Mary Ames	Sierra Club & NRDC Temecula
Felicia Bander	Sierra Club
Peter Whittingham	Curt Pringle & Associates
Thomas Cheng	Valero
Howard Chang	PPCLA
Kathy Prokey	York Engineering, LLC
Chuck Casey	City of Riverside
James Perez	City of Riverside
Edward Krisnadi	SCEC
Marnie Dorsz	SCEC
Kimet Lansing	New-Indy
A Ross	Tesoro
Daryl	Sierra Club
Spike Lewis	Sierra Club
Yvonne Watson	Sierra Club
Kathleen Katz	Sierra Club Temecula
Kent Minnult	Sierra Club
Scott Witcher	Element Market
Joe McLaughlin	Sierra Club

Jeff Wilson	Chevron
John Doyle	Chevron
Bill Quinn	CCEEB
Angelica Gonzalez	Sierra Club
Daniel McGivney	SoCal Gas
John Padlenski	Pod Technologies
B Sharma	Tesoro
Wayne Feragon	Norfesco
Evan Gillespie	Sierra Club
Art Silva	Pasadena
Jeff Wright	Riverside
Krishna Nand	EMP
Wendy Legachi	Sierra Club
Scott McBride	Miratech
Uve Sillat	SCE
Tom Gross	SCE
Alisa Moretto	IEEC
Jenifer Lee	Talperion
Lee Wallace	So Cal Gas
Kim Yapp	Pasadena Water & Power
Julio Santizo	
Marina Barrayam	Sierra Club
Selene Hernandez	Sierra Club

Raul Zendejas	Sierra Club
Elijah Cervantes	Sierra Club
Jacob Jackson	Sierra Club
Delilah Cervantes	Sierra Club
Alejandro	Sierra Club
Allen Hernandez	Sierra Club

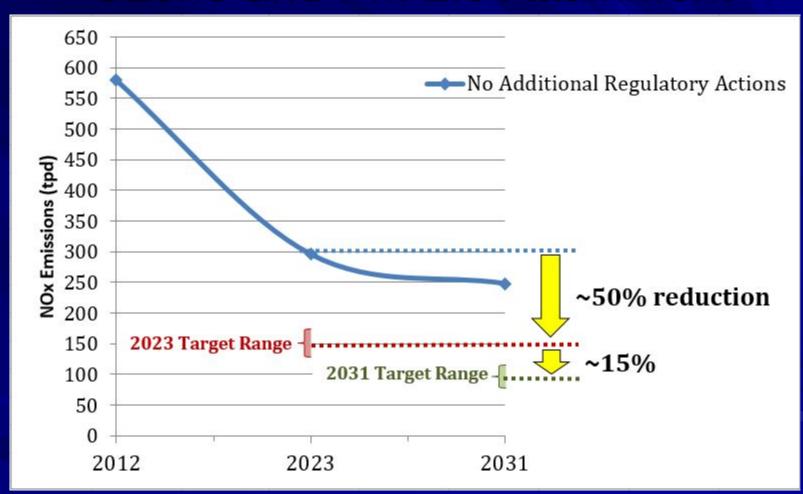
Proposed Amendments to Regulation XX – NOx RECLAIM Special Stationary Source Committee Meeting

September 23, 2015 SCAQMD Diamond Bar, CA

Background – RECLAIM

- RECLAIM originally adopted in 1993
 - Establishes annual facility-wide emission limits for NOx and SOx
 - Allows emission trading amongst facilities
 - Subject to reduction of limits over time
- Compliance options
 - Install air pollution controls
 - Process changes
 - Purchasing of RECLAIM Trading Credits (RTCs)
 from other facilities and investors
- Last shave amendment was in 2005

Significant NOx Reductions Needed for Ozone and PM 2.5 Attainment



Equipment Categories Identified with Potential Further NOx Reductions

- Refinery Gas Turbines
- Metal Heat Treating Furnaces >150 MMBTU/hr
- Sodium Silicate Furnace
- Glass Melting Furnaces
- Non-Refinery Internal Combustion Engines (Non-Power Plant)
- Cement Kilns
- Refinery Fluid Catalytic Cracking Units
- Non-Refinery Gas Turbines (Non-Power Plant)
- Coke Calciner
- Refinery Boilers/Heaters
- Refinery Sulfur Recovery Units/Tail Gas Units

Working Group Meetings*

- January 31, 2013
- March 20, 2013
- June 13, 2013
- September 19, 2013
- January 22, 2014
- March 18, 2014
- July 31, 2014

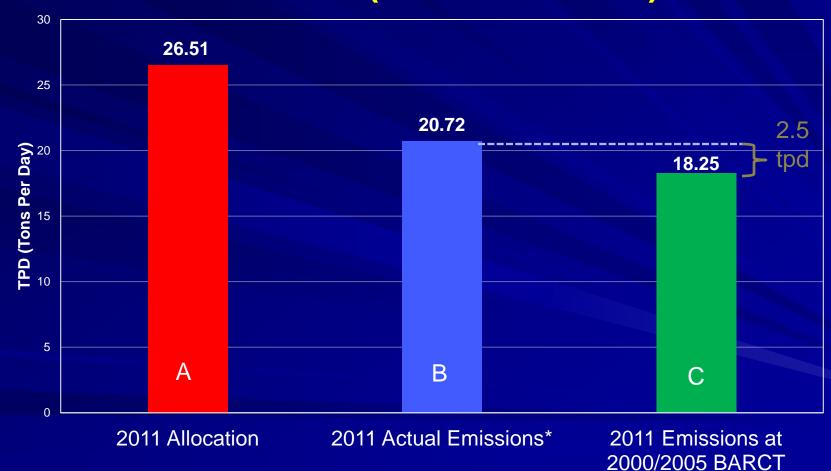
- January 7, 2015
- April 29, 2015
- June 4, 2015
- July 9, 2015
- July 22, 2015 (Public Workshop)
- August 19, 2015

^{*}Rulemaking Analysis initiated over 3 years ago

Major Proposed RECLAIM Amendments

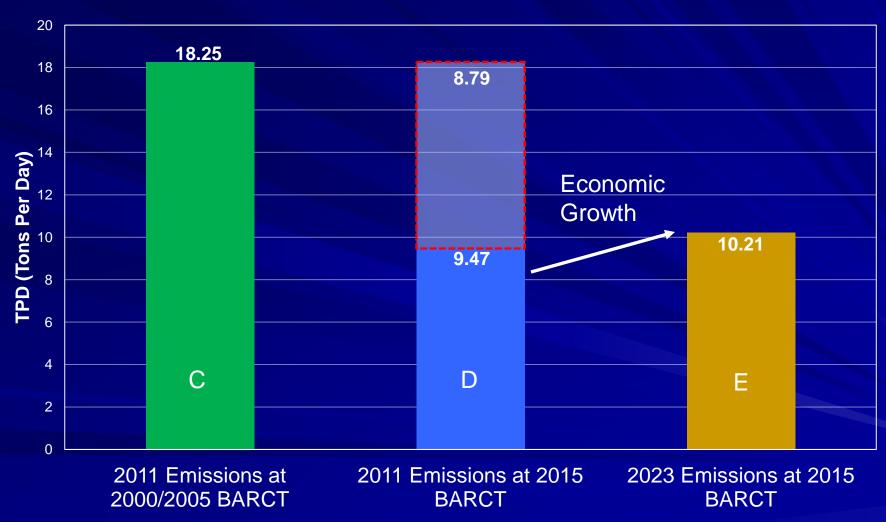
- BARCT Equivalency required by State law (H&SC § 40440 and § 40914)
- Total proposed RTC reductions = 14 tons per day based on BARCT analysis
- Updated BARCT emission factors
- Timing and distribution of shave
- Establishment of Adjustment Account for Power Plants

Comparison of NOx RECLAIM Emission Levels Relative to Total Allocation (2011 Base Year)

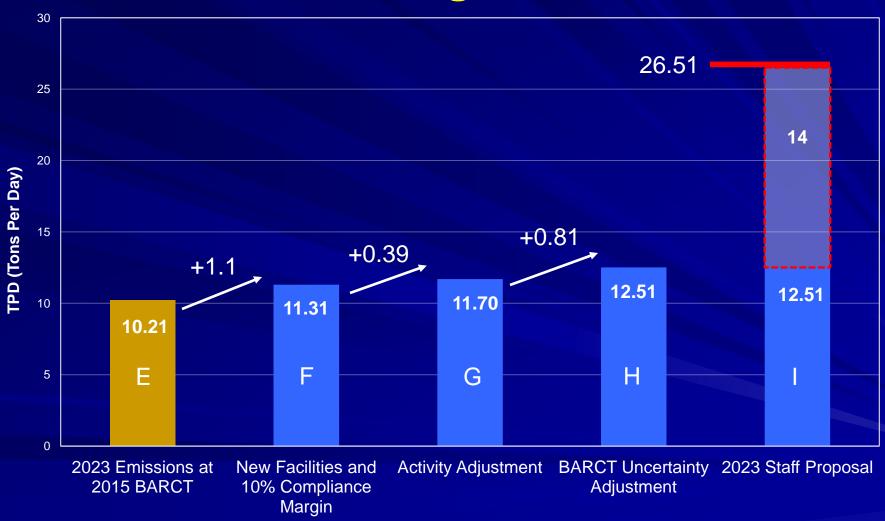


^{*}Includes 2012 Power Plant Calculated Emissions

2023 NOx Emissions at BARCT



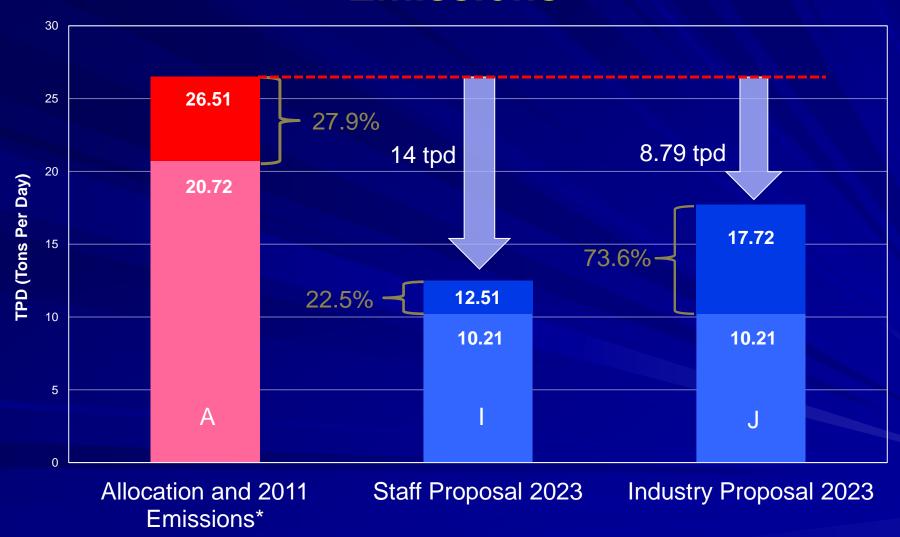
2023 Adjustments and Allocation Target



Key Issue: Amount of Shave

- BARCT Analysis
 - NEC Assumptions for Refinery Sector
 - SCAQMD Responses
 - Different approaches and engineering assumptions
 - No impact on proposed RTC reduction
 - Resulting 0.33 tpd difference less than proposed 0.81 tpd adjustment
- Industry proposal for shave amount (8.79 tpd)

NOx RECLAIM Allocations vs. Emissions



^{*}Includes 2012 Power Plant Calculated Emissions

Timing/Distribution of Shave

- Staff Proposal: 14 ton per day RTC reduction
 - 4 tons per day reduced in 2016
 - Remainder to be reduced equally from 2018 to 2022
 - Proposed reductions based on share of BARCT opportunities
 - Refineries and Investors: 66%
 - Non-Refinery facilities and power plants among the top 90% of RTC holders: 47%
 - 210 facilities not among the top 90% of RTC holders: 0% Facilities)

Key Issues

- Sufficient time for engineering, permitting, procurement, and construction
- Equity of shave distribution
- Addressing refinery turnaround schedules

NSR for Natural Gas Power Plants

- Newer power producing facilities required by federal NSR regulations to hold RTCs to offset their potential to emit (PTE), even though actual emissions are well below this level
- Adjustment Account for newer power producing facilities (already required to be at BACT or BARCT)
 - Assist compliance with NSR holding requirements
 - To be held by SCAQMD regionally
 - Difference between pre- and post- shave holdings
 - Not to be used to offset actual emissions unless state of emergency regarding power supply is declared by the Governor

Key Issues regarding Adjustment Account

- Regional account or held by individual facilities
- Criteria to access RTCs to offset actual emissions

10-Year Equipment Life

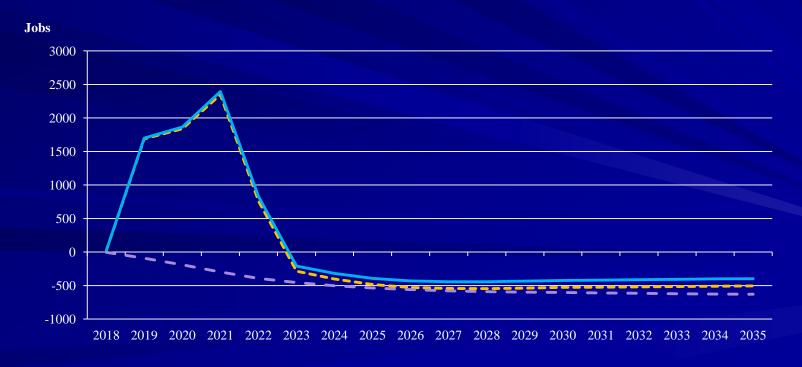
- Industry believes 10-year equipment life is appropriate given frequency of RECLAIM amendments
- Equipment lasts 25 years, thus 25-year life is appropriate and consistent with SCAQMD past practices
- Little or no equipment was identified as obsolete or a stranded asset from the last shave in 2005
- Even with future NOx shaves, not all equipment becomes obsolete / stranded assets

Costs and Job Impact of BARCT Installation

- Total Potential Cost: \$0.62 1.09 Billion (100% control installation)
- Average Annual Costs: \$52 \$63 MM
- Average Annual Job Impact: +13 to +90 (over 2018-2035)
- Not Expecting Shift from High-Pay to Low-Pay Jobs



- - Worst Case with All Control Related Labor and Devices Imported From Outside the Region



RECLAIM BARCT



Special Stationary Source Committee September 23, 2015

Barbara Baird Chief Deputy Counsel SCAQMD must adopt rules to require "best available retrofit control technology" (BARCT) for existing sources.

H & S Code § 40440(b)(1)



RECLAIM BARCT

BARCT is defined as: an emission limitation based on the "maximum degree of reduction achievable" considering "environmental, energy and economic impacts..."

H&S § 40406



CARB Legal Opinion, 1992

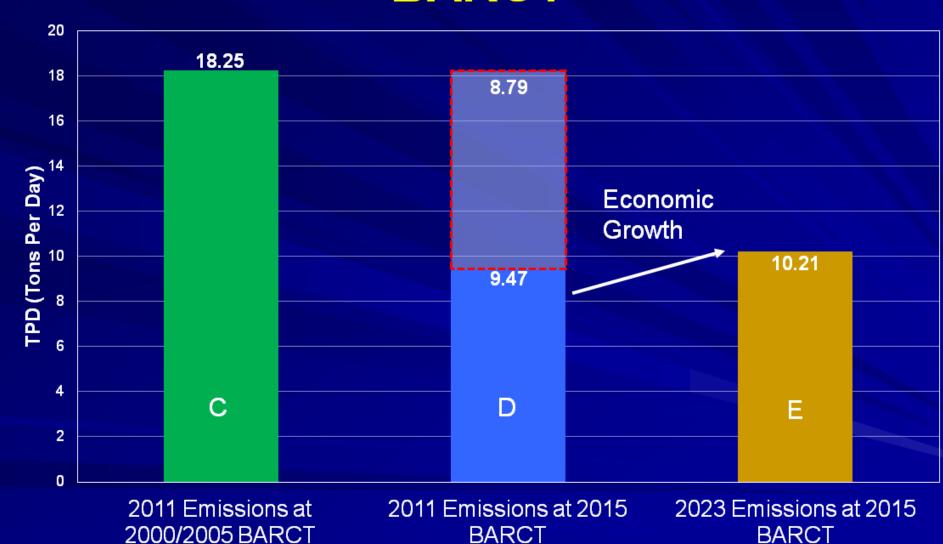
- BARCT can be met in the aggregate, including emissions trading
- But must be equivalent to what commandand-control would achieve
- Must be updated as technology advances



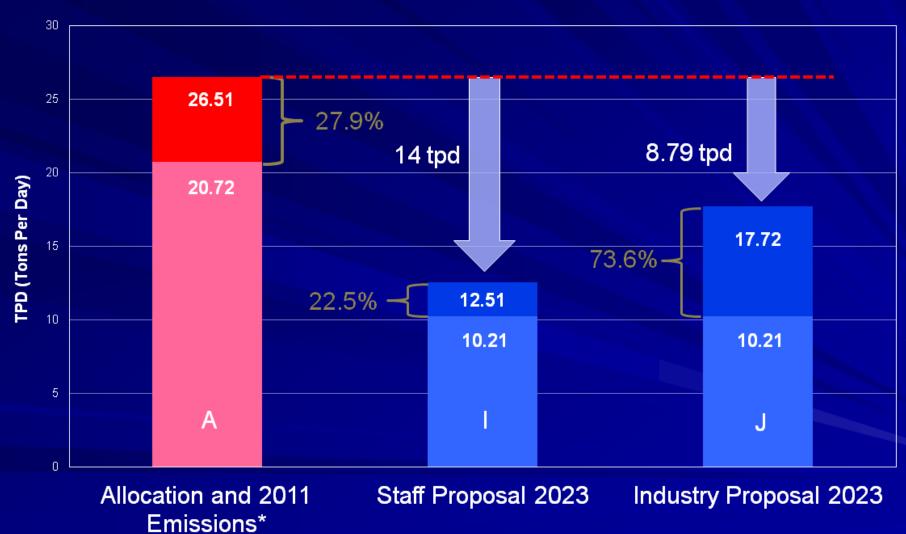
Industry Proposal

- Takes a goal derived from actual emission reductions, but then subtracts from allowable emissions
- Only guarantees small amount of actual reductions; rest are "paper reductions"

2023 NOx Emissions at BARCT



NOx RECLAIM Allocations vs. Emissions



^{*}Includes 2012 Power Plant Calculated Emissions



Industry Proposal (cont'd)

- Is not designed to attain "maximum reductions achievable" as required by H & S § 40406
- Is not equivalent to levels that would be achieved under command-and-control
- Does not meet legal requirements

Industry RECLAIM Coalition

California Asphalt Pavement Association (CalAPA)
California Construction & Industrial Materials Association (CalCIMA)
California Council for Environmental and Economic Balance (CCEEB)
California Manufacturers & Technology Association (CMTA)
California Metals Coalition (CMC)
California Small Business Alliance (CSBA)
Regulatory Flexibility Group (RFG)
Southern California Air Quality Alliance (SCAQA)
Western States Petroleum Association (WSPA)

Los Angeles Business Federation (BizFed)*
*Representing 272,000 businesses - employing 3 million people

NOx RECLAIM Shave 23 September 2015

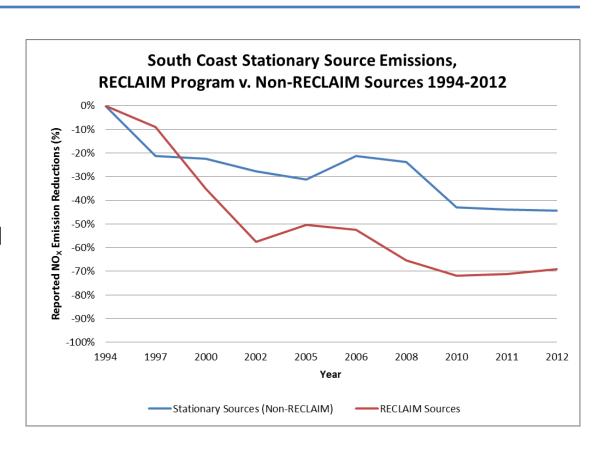
Industry Coalition's Objectives

- Preserve a successful program and a healthy RECLAIM market
- Reflect the emission reductions possible from advancements in BARCT between 2005 and 2015 (Technology Shave)
- Fulfill obligations in H&SC §39616(c) as opposed to the District's proposal which goes beyond BARCT
- Fulfill <u>at a minimum</u> the 2012 AQMP commitments to the State Implementation Plan (SIP) and USEPA
 - 3 to 5 tons per day NOx
- Recognize successful emission reductions from RECLAIM Program's 2005 shave

Emissions for RECLAIM facilities have declined faster than South Coast facilities under command & control rules (i.e., non-RECLAIM sources)

RECLAIM program's emissions have been reduced 69% since 1994

Non-RECLAIM stationary source emissions declined by about 44% during that same period



Sources: "RECLAIM Sources" data is reported (audited) emissions from SCAQMD RECLAIM Audit Report (March 2015). "Stationary Sources (Non-RECLAIM)" is taken from SCAQMD Air Quality Management Plans (1997, 2003, 2007, 2012) and AQMP Working Group Meeting #5, Agenda Item #3.

Legal Requirements

- Allows facilities the "flexibility to achieve emission reductions using methods which include, but are not limited to: add-on controls, equipment modifications, reformulated products, operational changes, shutdowns, and the purchase of excess emission reductions." 1
- CA Health & Safety Code (H&SC) §39616(c) requires on a program basis:
 - equal or greater emission reductions than command-and-control
 - equal or less cost than command-and-control
- Under the 2005 market adjustment, a 23% reduction in RTCs resulted in a 24% reduction in NOx RECLAIM emissions²
- The District is going BEYOND BARCT

¹ Source: SCAQMD Rue 2000(a).

² Source: SCAQMD Annual RECLAIM Audit Report, March 2015.

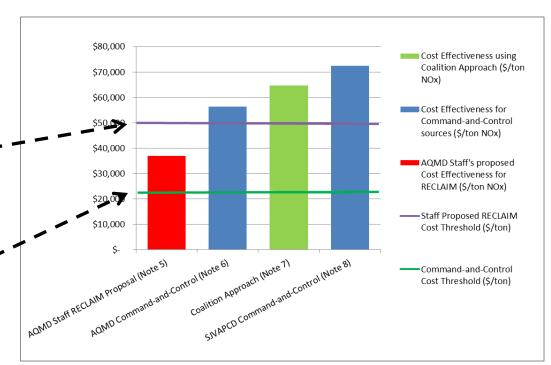
Staff Proposal would treat RECLAIM disproportionately as compared to Command-and-Control

RECLAIM program is required to be equivalent or less costly than command-and-control rules ¹

AQMD use of DCF method and 25year useful life overstates costeffectiveness of controls ²

Staff are proposing a cost effectiveness threshold that is twice that used for AQMD's command-and-control rules ³

Cost effectiveness threshold for this rule should be the same one used for command-and-control rules; \$22,500 per ton 4



Example is \$5M emission control project with 25 tpy NOx reduced. Notes: (1) H&SC 39616(c)(1). (2) Comparison of AQMD Staff method proposed v. AQMD BACT method. (3) Comparison of SCAQMD cost threshold in 2012 AQMP and 2015 RECLAIM. (4) SCAQMD 2012 AQMP. (5) AQMD Staff method proposed for RECLAIM in Preliminary Draft Staff Report (July 2015) using DCF method, 25-year Useful Life assumption, and 4% interest rate. (6) AQMD BACT Guidelines, Part C (2006) using DCF method, 10-year Useful Life assumption, and 4% interest rate. (7) Industry Coalition proposed method using LCF method, 10-year Useful Life, and 4% interest rate. (8) SJVAPCD BACT Guidelines.

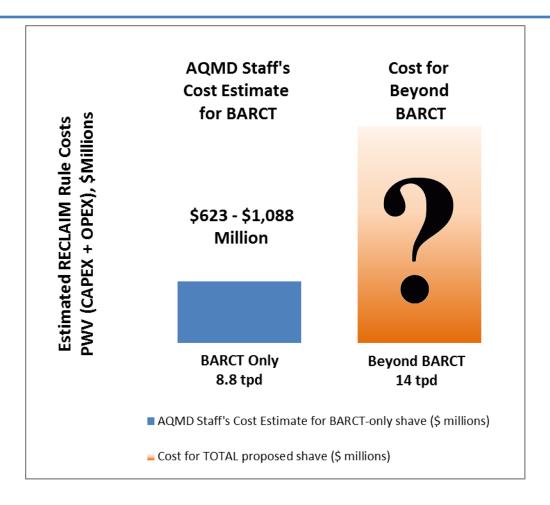
Command and Control Equivalency is not more than 6.6 TPD

- AQMD Staff's current analysis only demonstrates 7.9 TPD of reductions can be justified by technology advancement (i.e. BARCT) ¹
- AQMD Staff have not reconciled the discrepancies between their cost analysis and the recommendations of the third-party expert, Norton Engineering
- The Industry Coalition further believes corrections to the AQMD Staff's cost effectiveness methodology would trim BARCT reductions by an estimated 1.3 tpd²
- A reduction greater than 6.6 TPD would be **BEYOND BARCT**

¹ AQMD Preliminary Draft Staff Report, Proposed NOx RECLAIM Amendments, July 2015, p. 18. Presented BARCT reduction adjusted pursuant Staff's 0.85 TPD adjustment factor to account for discrepancies between Staff analysis and third-party expert, Norton Engineering.

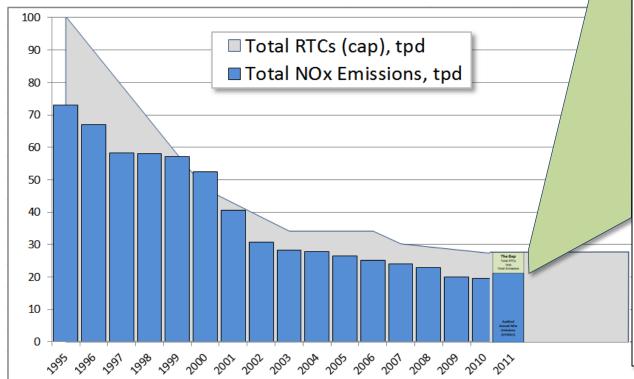
² Industry Coalition/ERM analysis of AQMD BARCT calculations assuming a 10-year useful equipment life (Sept 2015).

BARCT \$ + BEYOND BARCT



Sources: "AQMD Staff's Estimate for BARCT-Only Shave taken from SCAQMD Preliminary Draft Staff Report, Proposed NOx RECLAIM Amendments, July 2015, p. 23-24. To date, AQMD Staff have not provided a "Cost Estimate for the TOTAL proposed shave" of 14 tpd.

Mind the "Gap"



What is The Gap?

- The difference between the total RTCs issued and the total actual emissions.

What is in the Gap?

- All emitter's compliance margin holdings
- The utility sector's potential-to-emit holdings
- RTC investors' holdings
- NSR credits
- = ERCs converted to RTCs for future projects
- RTCs required for economic growth of existing emitters
- RTCs required for new businesses to move to the South Coast
- RTCs required for structural buyers

How big of a Gap is needed?

- Between 2005 – 2013, unused RTCs ranged from 5.1 to 9.1 tpd

¹ Source: SCAQMD, Annual RECLAIM Audit Report

Arbitrary Removal of RTCs

- CMB-01 Phase 1 (approved in the 2012 AQMP) explicitly considered and rejected removal of all RTCs in excess of actual emissions, except what was needed for the PM_{2.5} contingency measure (2 tpd)¹
- The proposed "compliance margin" of 10% is not adequate to meet the market's historical need for RTCs which have averaged in the 15-30% (5 to 9 TPD) range (except for the early 2000's power crisis)²
- The Industry Coalition approach negates the need for a "compliance margin"

¹Source: SCAQMD, 2012 AQMP. Page 4-9 states: "The control measure will seek further reductions of 2 tpd of NOx allocations if triggered." Appendix A, page IV-A-13 presents rationale for that conclusion.

² Source: SCAQMD, Annual RECLAIM Audit Report for 2013 Compliance Year, 6 March 2015. See Table 3-2.

Shave Implementation Schedule

- A shave of 4 TPD in 2 months does not allow adequate time for industry to install emission control projects which take several years to design, permit and implement¹
- It also conflicts with CMB-01 Phase 1 which explicitly considered and rejected removal of all RTCs in excess of actual emissions, except what was needed for the PM_{2.5} contingency measure (2 tpd)²
- The Industry Coalition supports a schedule consistent with approved Control Measure CMB-01 Phase 1, which begins with 2 tpd in the first year

¹Source: Industry Coalition letter to SCAQMD, August 21, 2015, p. 2.

²Source: SCAQMD, 2012 AQMP. Page 4-9 states: "The control measure will seek further reductions of 2 tpd of NOx allocations if triggered." Appendix A, page IV-A-13 presents rationale for that conclusion.

Summary of Concerns

- Size of the proposed District shave could imperil the RECLAIM program
 - Shave is well beyond amount indicated by BARCT analysis
 - Depth of District's proposed shave potentially requires market to function with amount of "unused" RTCs only seen during the power crisis
- Shave Implementation schedule is too aggressive
- District BARCT analysis is flawed
 - Staff has selectively disregarded the recommendations of Norton Engineering, the AQMD's third-party consultant
 - Inappropriately equates BARCT with BACT
 - Assumes technology will develop in extremely short timeframe and w/o safeguards provided under command and control rules
 - Understates true cost by assuming 25-year equipment life
 - Corrections to the BARCT analysis could reduce the 8.8 TPD by approximately 2 TPD

Please support:

- The Industry Coalition alternative technology shave
- A feasible and cost effective BARCT assessment including a 10 year useful life
- A reasonable and achievable implementation schedule



Health Advocates Position

- Rule is a good step towards fixing a flawed program
- Strong rule realizes a previous commitment to near term reductions.
- Emission reductions should total at least 14.85 tons.
- Timeline for reductions should be faster
- Focus on refineries and power plants
- Industry concerns don't hold water

Background

- South Coast facing steep reductions to meet 2023, 2032 NOx standards
- Missed 2010 1-hr standard
- Dirty air still plagues region
 - 1.1 million missed school days
 - 5,000 premature deaths
- Impact of dirty air inequitable

Cal. Health & Safety Code §39616.

- "The program will result in an equivalent or greater reduction in emissions at equivalent or less cost compared with current command and control regulations and future air quality measures that would otherwise have been adopted as part of the district's plan for attainment."
- Proposal should shave <u>at least</u> 14.85 tons per day.

The need for reductions is urgent

Year	Current Proposal	Health Advocates Proposal
2016	4 tpd	5 tpd
2018	2 tpd	3 tpd
2019	2 tpd	3 tpd
2020	2 tpd	2 tpd
2021	2 tpd	1.85 tpd
2022	2 tpd	0 tpd

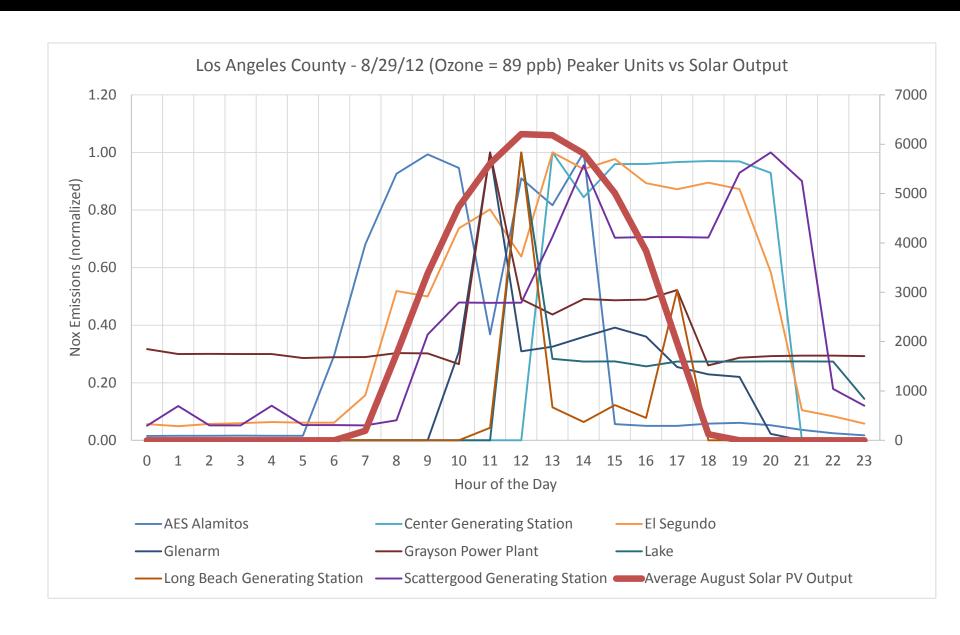
Focus on refineries & power plants



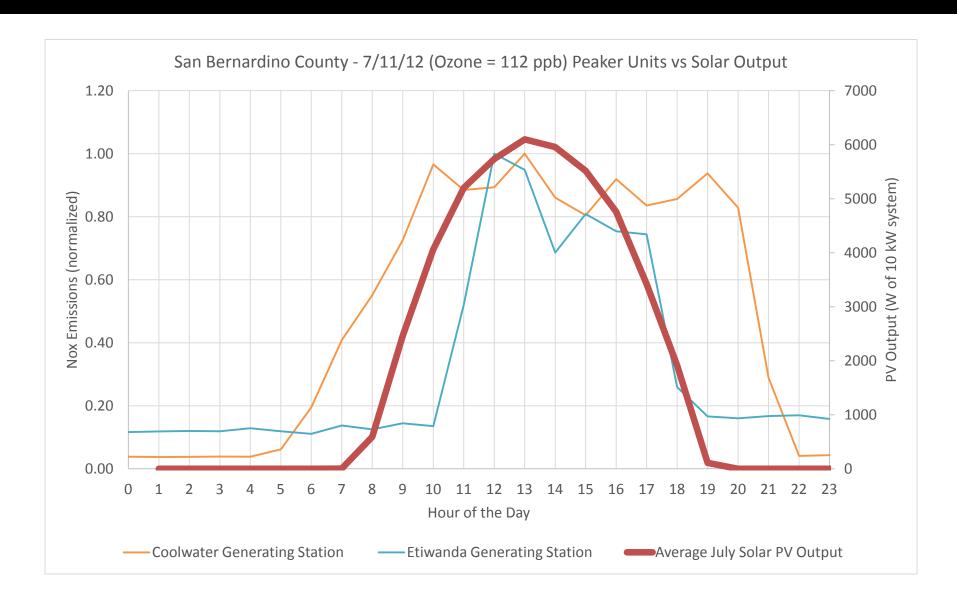
The Current Gas Boom

- Many power projects proposed for region:
 - Stanton Energy Reliability Center (98 MW)
 - Haynes (600 MW)
 - Harbor (449 MW)
 - Scattergood Generating Station (830 MW)
 - San Gabriel Generating Station (656 MW)
 - Huntington Beach/Alamitos (1,234 MW)
 - Sun Valley Energy Project (500 MW)

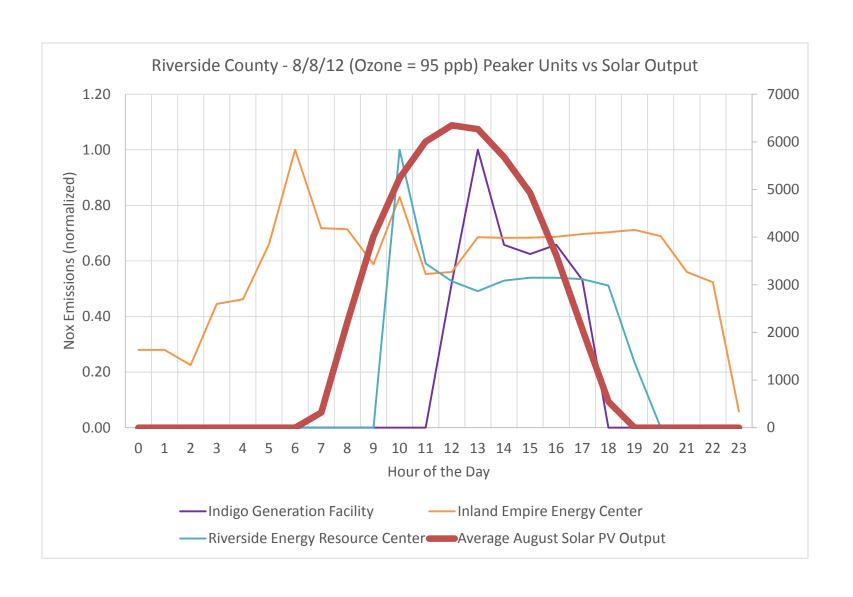
NOx, Gas Plants, and Solar Potential



Ozone, Gas, and Solar (cont'd)



Ozone, Gas, and Solar (cont'd)



Thank You