



California Environmental Protection Agency

AIR RESOURCES BOARD

2004 Report to the Legislature

**State Regulation on Emissions Trading Methodology
(HSC Section 39607.5)**

March 2004

Purpose of Report

California Health and Safety Code (HSC) §39607.5 requires the Air Resources Board (ARB) to: (1) adopt an emissions trading methodology for use by local air pollution control air districts (air districts), (2) prepare an annual report for the Governor and the Legislature summarizing the actions taken by the Board to implement this section, and (3) perform a periodic review of those trading programs implemented by the air districts.

This report provides a summary of the actions taken by ARB to implement HSC §39607.5 and the status of air district implementation of the trading programs subject to ARB's regulation.

State Regulation on Emissions Trading

In 1997, pursuant to the requirements of HSC §39607.5, the ARB adopted a State trading regulation¹ (State regulation) that establishes a trading methodology for stationary, mobile, and area source credits, consistent with air quality plans to achieve and maintain State and federal ambient air quality standards. Ambient air quality standards have been established for ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, particulate matter, and lead. Hydrocarbons and oxides of nitrogen are contributing pollutants (precursors) to the formation of ozone and particulate matter.

The State regulation is a general framework with criteria for air district programs; it is not a model rule that can be directly adopted by an air district to implement an interchangeable credit program. Therefore, while the regulation establishes the concept of an "interchangeable credit," the details of how such credits would be generated, banked, and used or traded must be specified in air district rules.

The State regulation identifies general requirements and criteria that air districts must meet in certifying, calculating, banking and using emission credits. The State regulation also assures that emission credits represent real reductions in air pollutants, that reductions are surplus to any reductions already required, and that reductions are not "double counted" or credited more than once.

Consistent with ARB's regulation, air district rules, and federal requirements, interchangeable credits can be used by the credit generator, traded for use by another source to meet its emission reduction requirements, or retained and "banked" for future trading and/or use. Credits can potentially be used in lieu of installation of control equipment, to offset new source emissions, to remedy the emissions impacts of equipment breakdowns, or retired for an environmental benefit.

A key principle established by the regulation is that of "equivalency" -- the use of interchangeable credits must not result in greater emissions than would otherwise have occurred on an annual or seasonally adjusted basis.

¹Title 17 California Code of Regulations Sections 91500 through 91508.

To the extent consistent with State and federal requirements, the State regulation allows limited trading of hydrocarbon emission credits that may also include toxic compounds provided certain safeguards are observed. These conditions include restricting the generation or use of credits that exceed air district-specified air toxic risk thresholds, and requiring public disclosure of those trades that could result in increased air toxics-related health risk.

Review and Current Status of Air District Trading Programs Under HSC §39607.5

Under a separate provision of HSC (§40920.6(c)), air districts must allow the use of credits to comply with best available retrofit control technology² (BARCT) requirements if the credits also comply with applicable air district rules. In order to accommodate this requirement within their regulatory structure, four air districts have adopted trading regulations: South Coast Air Quality Management District (South Coast District), Sacramento Metropolitan Air Quality Management District (Sacramento District), Bay Area Air Quality Management District (Bay Area District), and San Joaquin Valley Unified Air Pollution Control District (San Joaquin Valley District).

ARB has commented and provided technical assistance to each air district that has developed and adopted a trading program under HSC §39607.5 to ensure that each regulation met the requirements of State law. Where the air district regulations were intended as a revision to their State Implementation Plan (SIP), ARB forwarded them to the United States Environmental Protection Agency (U.S. EPA) once we determined the regulations complied with federal requirements.

The following sections summarize the trading regulatory programs adopted by the four air districts. Table A provides a status of federal and State actions regarding these regulations in tabular format.

South Coast District

The South Coast District has several credit rules and trading programs currently in effect. These include both trading in lieu of BARCT as well as the Regional Clean Air Incentives Market (RECLAIM). The RECLAIM program is a cap-and-trade program that allows the trading of nitrogen oxides (NOx) and sulfur oxide (SOx) emissions among over 350 industrial facilities. The South Coast District also administers an Air Quality Investment Program (AQIP). The AQIP allows sources subject to air district rules to voluntarily invest in the development of new and clean technologies that can be used to generate credits and ultimately expand their commercial applicability. A brief summary of the South Coast District's rules and programs is presented below:

- Regulation XX, NOx/SOx RECLAIM: Implemented since 1994. Federally approved as a SIP measure since 1998.

² BARCT is an emissions limitation or standard that applies to existing stationary sources of air pollution. A requirement under State law, it serves as part of a comprehensive control strategy to achieve clean air in California's nonattainment areas.

The South Coast District is implementing the RECLAIM Program. In its 2003 Air Quality Management Plan, they committed to review the program with the goal of achieving additional emission reductions.

- Rule 2501, Air Quality Investment Program: The South Coast District adopted Rule 2501 in 1997 and submitted it to U.S. EPA as a SIP revision the same year.

U.S. EPA has yet to take action on this rule, citing approvability issues. The program is being implemented for non-federal programs.

- Regulation XVI, Mobile Source Emission Reduction Credits: This regulation includes credit rules adopted beginning in 1996 covering retrofit and purchase of new cleaner burning vehicles, truck stop electrification, clean off-road mobile equipment, marine vessel retrofit programs, fuel cells for marine hotelling operations, and retrofit truck and trailer refrigeration units. With one exception³, ARB found that the credit rules met both State and federal requirements. ARB transmitted these rules to U.S. EPA as SIP revisions. U.S. EPA indicated that earlier rules adopted in the 1996-1998 timeframe did not meet federal requirements regarding enforceability and quantification protocols. Subsequent to these determinations, the South Coast District submitted more narrowly constructed pilot credit generation rules for the voluntary replacement of diesel-fueled heavy-duty vehicles or yard hostlers, with clean technologies; marine vessels and marine hotelling operations; truck and trailer refrigeration units; and truck stops. These pilot credit rules were federally approved in 2002 and 2003.
- Regulation XXV, Area Source Credits: First adopted in 1997, Rule 2506 applies to small unpermitted stationary sources, providing credits for the accelerated turnover of old, higher-emitting equipment. ARB found that the credit rule met both State and federal requirements. Following the air district's submittal of the original rule and rule revisions to ARB for review, ARB transmitted these rules to U.S. EPA as SIP revisions. U.S. EPA indicated the rule did not meet federal requirements regarding enforceability and quantification protocols.

In 2001, the South Coast District adopted a more targeted area source rule for agricultural pumps (Rule 2507), successfully addressing federal concerns regarding enforceability and quantification protocols. ARB submitted the rule to U.S. EPA in 2001 as a SIP revision. The rule was federally approved in 2002.

³ Rule 1605, Credits for the Voluntary Repair of On-Road Motor Vehicles Identified Through Remote Sensing Devices sunset in 1998 when the Enhanced Smog Check program went into effect.

Sacramento District

In 1996, the Sacramento District adopted Solutions for the Environment and Economic Development (SEED) Program. SEED is an alternative compliance program that leases emission reduction credits to new and existing permitted stationary sources. Loan fees are then used to fund innovative emission reduction programs necessary for Sacramento to attain federal and State ozone standards.

- SEED was adopted in 1996. Because the program was adopted prior to adoption of the State regulation, SEED was revised in 1997 and 2000 to clarify certain provisions and to fully meet the requirements of the State regulation, including provisions for equivalency and air toxic emissions impacts.
- ARB determined that the program met applicable State requirements and in 1997 transmitted the program to U.S. EPA for review and approval as a SIP revision.
- In 1998, U.S. EPA returned portions of SEED for incompleteness, citing rule deficiencies in the credit calculation protocols and credit audit procedures. U.S. EPA also indicated that federal rulemaking would await forthcoming federal guidance on economic incentive programs. The guidance was promulgated in 2001. However, the air district has requested no subsequent federal action on SEED.
- Pending action by U.S. EPA on the rule, the Sacramento District notifies credit users that use of credits for BARCT substitution is not federally enforceable.

Bay Area District

In 1998, the Bay Area District adopted Regulation 2, Rule 9, Interchangeable Emissions Reduction Credits. The rule allows permitted sources to use NO_x credits to achieve reductions required by BARCT regulations that are not contained in the federally approved SIP. The regulation allows facilities to average (i.e., bubble) emissions within the plant or within a limited contiguous zone in proximity to the plant provided emissions in the aggregate are equivalent to reductions that would otherwise have been required.

- ARB commented in 1998 that the rule met the requirements of State law and the State trading regulation.
- Because the trading program was not intended as a compliance mechanism for SIP measures, the regulation was not submitted to U.S. EPA as a SIP revision.

San Joaquin Valley District

In 1999, the San Joaquin Valley District adopted Rule 4501, Alternate Compliance for BARCT. The rule allows permitted sources to purchase credits to achieve reductions required by future-effective BARCT regulations including those measures that are contained in the federally approved SIP.

- ARB determined that the rule met the requirements of federal law, State law, and the State trading regulation, by specifying conditions intended to ensure equivalency with the approved SIP and avoid double counting.
- The rule was transmitted to U.S. EPA as a SIP revision in 1999. U.S. EPA returned the rule as incomplete, citing deficiencies associated with the demonstration that the credits would be surplus to reductions assumed in the SIP, and a lack of protocols to adequately quantify reductions on a source category specific basis.
- The San Joaquin Valley District has taken no action subsequent to U.S. EPA returning the rule.

TABLE A
STATUS OF STATE AND FEDERAL REGULATORY ACTIONS OF
AIR DISTRICT TRADING RULES SUBJECT TO HSC §39607.5

AIR DISTRICT	ADOPTED TRADING RULE (LAST AMENDED)	REGULATORY ACTION	
		ARB	U.S. EPA
SCAQMD	REGULATION XVI - MOBILE SOURCE OFFSET PROGRAMS		
	Rule 1605 Credits For The Voluntary Repair of On-Road Motor Vehicles Identified Through Remote Sensing Devices (1996)	No action.	No action.
	Rule 1610 Old-Vehicle Scrapping (1999)	Earlier version transmitted to U.S. EPA as a SIP revision in 1996. No action on 1999 amendments.	No action.
	Rule 1612 Credits For Clean On-Road Vehicles (1998)	1995 original rule transmitted to U.S. EPA as a SIP revision in 1997.	No action.
	Rule 1612.1 Mobile Source Credit Generation Pilot Program (2001)	Transmitted to U.S. EPA as a SIP revision in 2001.	Federally approved in 2002.
	Rule 1613 Credits For Truck Stop Electrification (1997)	Transmitted to U.S. EPA as a SIP revision in 1998.	No action.
	Rule 1620 Credits For Clean Off-Road Mobile Equipment (1998)	Original 1995 rule transmitted to U.S. EPA as a SIP revision in 1997. Subsequent revision has not been received by ARB.	No action.
	Rule 1623 Credits For Clean Lawn And Garden Equipment (1996)	Transmitted to U.S. EPA as a SIP revision in 1996.	Federally disapproved.
	Rule 1631 Pilot Credit Generation Program for Marine Vessels (2001)	Transmitted to U.S. EPA as a SIP revision in 2001.	Federally approved in 2002.

AIR DISTRICT	ADOPTED TRADING RULE (LAST AMENDED)	REGULATORY ACTION	
		ARB	U.S. EPA
	Rule 1632 Pilot Credit Generation Program for Hotelling Operations (2001)	Transmitted to U.S. EPA as a SIP revision in 2001.	Federally approved in 2002.
	Rule 1633 Pilot Credit Generation Program for Truck/Trailer Refrigeration Units (2001)	Transmitted to U.S. EPA as a SIP revision in 2001.	Federally approved in 2002.
	Rule 1634 Pilot Credit Generation Pilot Program for Truck Stops (2001)	Transmitted to U.S. EPA as a SIP revision in 2002.	Federally approved in 2003.
	REGULATION XX – REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM) (2001)	Original rules transmitted to U.S. EPA as a SIP revision in 1994; subsequent revisions also transmitted.	Federally approved in 1998. Subsequent revisions approved in 1998 and 2000.
	REGULATION XXV – INTERCHANGEABLE CREDIT TRADING PROGRAMS		
	Rule 2501 Air Quality Investment Program (1997)	Transmitted to U.S. EPA as a SIP revision in 1997.	No action.
	Rule 2503 Enforceable Procedures (1997)	Transmitted to U.S. EPA as a SIP revision in 1997.	No action.
	Rule 2506 Area Source Credits For NOx (1999)	Transmitted rule and subsequent revisions to U.S. EPA as a SIP revision in 1997, and 2000.	No action.
	Rule 2507 Pilot Credit Generation Program for Agricultural Pumps (2001)	Transmitted rule as a SIP revision in 2001.	Federally approved in 2002.
Sac Metro AQMD	SOLUTIONS FOR THE ENVIRONMENT AND ECONOMIC DEVELOPMENT (SEED) -- Consists of 4 rules: Rules 107, 204, 205, and 206		
	Rule 107 Alternative Compliance (Originally adopted in 1997; latest revision is 2000)	1997 rule transmitted to U.S. EPA as a SIP revision in 1997.	No action on original or subsequent submittals.
	Rule 204 Emission Reduction Credits (1996)	Transmitted to U.S.	Returned as

AIR DISTRICT	ADOPTED TRADING RULE (LAST AMENDED)	REGULATORY ACTION	
		ARB	U.S. EPA
		EPA as a SIP revision in 1997.	incomplete.
	Rule 205 Community Bank And Priority Reserve Bank (Originally adopted in 1997; latest revision is 2001)	Transmitted 1997 rule to U.S. EPA as a SIP revision in 1998. Latest revision not yet submitted to ARB.	Returned as incomplete.
	Rule 206 Mobile And Transportation Source Emission Reduction Credits (1996)	Transmitted to U.S. EPA as a SIP revision in 1998.	Returned as incomplete.
Bay Area AQMD	Reg. 2, Rule 9, Interchangeable Emission Reduction Credits (1998)	ARB determined that the rule met the requirements of State law and the State trading regulation. No SIP transmittal action was required.	N/A
San Joaquin District	Reg. IV, Rule 4501, Alternative Compliance in lieu of BARCT (1999)	ARB determined that the rule met the requirements of State law and the State trading regulation. Transmitted to U.S. EPA in 1999.	Returned as incomplete.