

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Draft Staff Report

Proposed Rule 2702 – Greenhouse Gas Reduction Program

December 2008

Deputy Executive Officer

Planning, Rule Development and Area Sources
Elaine Chang, DrPH

Assistant Deputy Executive Officer

Planning, Rule Development and Area Sources
Laki Tisopulos, Ph.D., P.E.

Director of Strategic Initiatives

Planning, Rule Development and Area Sources
Jill Whynot

AUTHORS:

Jill Whynot – Director of Strategic Initiatives

Contributors/Technical Assistance:

Tracy A. Goss, P.E. – Program Supervisor

Greg Hunter, Ph.D. – Air Quality Specialist

REVIEWED BY:

Kurt Wiese – General Counsel

Barbara Baird – District Counsel

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
GOVERNING BOARD**

Chairman: Dr. WILLIAM A. BURKE
Speaker of the Assembly Appointee

Vice Chairman: S. ROY WILSON, Ed.D.
Supervisor, Fourth District
Riverside County Representative

MEMBERS:

MICHAEL D. ANTONOVICH
Supervisor, Fifth District
Los Angeles County Representative

MICHAEL A. CACCIOTTI
Councilmember, City of South Pasadena
Cities of Los Angeles County/Eastern Region

BILL CAMPBELL
Supervisor, Third District
Orange County Representative

JANE W. CARNEY
Senate Rules Appointee

RONALD O. LOVERIDGE
Mayor, City of Riverside
Cities of Riverside County

JOSEPH K. LYOU, Ph.D.
Governor's Appointee

GARY C. OVITT
Supervisor, Fourth District
County of San Bernardino

JAN PERRY
Councilmember, 9th District
City of Los Angeles Representative

MIGUEL A. PULIDO
Mayor, City of Santa Ana
Cities of Orange County

TONIA REYES URANGA
Councilmember, City of Long Beach
Cities of Los Angeles County/Western Region

DENNIS YATES
Mayor, City of Chino
Cities of San Bernardino County

EXECUTIVE OFFICER:

BARRY R. WALLERSTEIN, D.Env.

TABLE OF CONTENTS

Executive Summary	1
Background	2
Legal Authority	4
Public Process	4
Summary of Proposed Rule 2702	7
Fees	10
California Environmental Quality Act	11
Socioeconomic Assessment	12
Draft Findings	12
AQMP/Legal Mandates	13
References	13
Response to Comments	13

EXECUTIVE SUMMARY

At the February 2008 Governing Board meeting, the Board approved development of the SoCal Climate Solutions Exchange, one of South Coast Air Quality Management District's (SCAQMD) Governing Board Chairman Dr. Burke's initiatives for 2008. The Board requested a two-step process. The first step was discussion of initial recommendations described in a White Paper, which was presented at the June 2008 meeting of the Governing Board. At that meeting, the Board provided direction to staff that rule development should proceed, which was the second step of the process.

In December, the Governing Board adopted Rules 2700 – General, and 2701 - SoCal Climate Solutions Exchange. Rule 2700 includes definitions and a table for conversion to carbon dioxide equivalents (CO₂E). Rule 2701 sets up the procedures for persons to generate greenhouse gas emission reductions that follow approved protocols. There are also specific directions from the Governing Board on addressing environmental justice issues. The proposal embodied in this staff report and Proposed Rule 2702 has been developed for the Board's consideration to enable an air quality investment program for certified greenhouse gas emission reductions. District staff would collect and pool money, select contractors through a Request for Proposal process, and certify greenhouse gas emission reductions.

The objectives of Proposed Rule 2702 are to provide high quality greenhouse gas emission reductions that enhance the local economy and capture needed co-benefits for Southern California as projects are implemented that achieve voluntary reductions of greenhouse gases.

The proposed rule includes mechanisms to recognize and quantify voluntary reductions, which would follow protocols that would be pre-approved by the SCAQMD Governing Board and have concurrence by CARB's Board or Executive Officer. A local program operated by SCAQMD can ensure that reductions are real, additional (surplus), quantifiable, verifiable, permanent over a specific time, and enforceable. This will be of value to facilities that need offsets for CEQA or other environmental mitigation, and may be of use for compliance with future AB 32 requirements or other programs.

Many greenhouse gas reduction strategies also have co-benefits of reducing toxic and criteria pollutants, which will further accelerate clean air objectives in Southern California. This can be especially beneficial in environmental justice areas when such strategies are implemented there.

Proposed Rule 2702 would enable SCAQMD staff to collect funds from parties that need certified emission reductions, pool those funds, and use them to reduce greenhouse gases. These projects would follow pre-approved protocols as part of Proposed Rule 2702 that may have been developed by CARB, SCAQMD staff, other air districts, or other entities, as long as the protocols have CARB approval. It is staff's intention to work closely with these other parties to develop as many protocols as possible to encourage voluntary and early actions and to be able to have those reductions quantified. SCAQMD staff will submit all protocols to be used for this Regulation for Governing Board approval via rule amendments. Protocols will also have concurrence from CARB's Board or Executive Officer before being presented to

the Governing Board for consideration. Proposed Rule 2702 includes 3 project protocols that have been approved by CARB that staff recommends the Governing Board approve as part of the initial rule package. Staff is proposing some local restrictions for use of the Manure Management Project Protocol under this rule to address potential environmental justice issues raised at the December Governing Board meeting. Other protocols are in development and would be approved by the Governing Board through future rule amendments.

Any certified reductions must be real, additional, quantifiable, verifiable, permanent (over a specified time period), and enforceable. Having pre-approved protocols and SCAQMD staff verification and enforcement will address these criteria. Certified reductions will only be issued after SCAQMD verification.

BACKGROUND

As climate change impacts are becoming better understood, more attention has been focused on reducing carbon dioxide and other greenhouse gases from actions by individuals, businesses, and all levels of government, ranging from cities to counties to nations.

The staff report for Rules 2700 and 2701, December 2008, includes information highlighting some of the uncertainty involved with many greenhouse gas offset programs, and examples where entities have purchased offsets to compensate for their carbon footprint.

Purchasing offsets can be voluntary or required, as part of the permitting process, as a result of a lawsuit, or in response to comments on CEQA documents or general plans. In many cases where a company cannot make adequate on-site changes to mitigate their carbon impacts, SCAQMD staff, and others throughout the state, are being asked what exchanges have credibility and how can one ensure that the reductions they are purchasing are real?

Recently, staff has analyzed, under CEQA, greenhouse gas emissions related to a Chevron project in the South Coast, and Chevron has agreed to pay the SCAQMD to mitigate greenhouse gas emissions that still result after on-site improvements. Many more projects are in the pipeline, and, many project proponents may be asked, or will choose, to obtain offsets as mitigation.

The staff at SCAQMD has decades of experience in issuing and certifying streams of emission reductions in the New Source Review (NSR) program, and also has developed and implemented rules for generation of mobile and area source short-term credits. Since 1994, SCAQMD staff has been implementing the Regional Clean Air Incentives Market (RECLAIM) which involves annual emission trading units and extensive tracking of trade activity. These experiences and lessons learned will help SCAQMD staff in the development and implementation of Proposed Rule 2702.

Background information is provided below to help set the context for why this initiative was introduced and how Proposed Rule 2702 can become an important local program that will contribute to addressing a global problem, and help local businesses needing greenhouse gas

reductions. SCAQMD involvement will provide confidence to emission reduction generators and subsequent users.

Climate Change

Global warming results from an imbalance in the amount of solar radiation that is absorbed by the Earth or reflected back into the atmosphere. When particles or gases in the atmosphere cause more solar radiation to reflect back to Earth, increased temperatures occur.

In 1988, the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) established the Intergovernmental Panel on Climate Change (IPCC), a scientific intergovernmental body to analyze climate change impacts. The *IPCC Summary for Policymakers of the Synthesis Report of the IPCC Fourth Assessment Report, November 2007*, reports that the prevailing scientific view is that warming of the climate system is unequivocal. There are increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level. The IPCC also reports that global greenhouse gas emissions due to human activities have grown since pre-industrial times, with an increase of 70 percent between 1970 and 2004.

For California, impacts have been projected for a range of climate change scenarios in 2070 – 2099 in a California Energy Commission (CEC) report, *Our Changing Climate: Assessing the Risks to California (2006)*. Business-as-usual is projected to result in 8 to 10.5 degrees Fahrenheit increase, with 90 percent loss of Sierra snow pack, 22-30 inches sea level rise and 3-4 times the number of heat wave days. Even with the Governor's aggressive target of lowering California's greenhouse gas emissions to 80 percent below 1990 levels by the year 2050, projected increases of 3-5.5 degrees Fahrenheit are expected to reduce Sierra snow pack levels by 30-60 percent, bring about 6-14 inches of sea level rise, and result in 2-2.5 times the number of heat wave days.

Additional climate change impacts include health problems resulting from exacerbation of air pollution due to increased temperatures which leads to increased ozone and particulate formation, and increased infectious diseases. Water-related issues include more droughts and flash floods, and a decrease in potable water supply and quality. Decreases in food supply, increases in wildfires, and decreases in forest productivity are also expected to occur.

Climate change is a global problem, one that will require actions at all levels of government and through other avenues (such as changes in consumer and personal choices) to resolve.

Voluntary Carbon Markets

There are voluntary carbon markets in the U.S. that have been, or are being, developed in response to efforts to reduce greenhouse gases. Voluntary markets allow individuals, businesses, and organizations to offset their carbon footprint through a variety of projects world wide.

The Chicago Climate Exchange (CCX) started in 2003 and has over 300 members. Members make a commitment to reducing greenhouse gases and are given allocations with a declining balance. Selling excess allocations or purchasing allocations to match emissions with the annual allocation are part of this cap-and-trade program. Qualifying offset projects can also

generate reductions which are traded on the CCX. Such offsets can be produced world-wide, which makes verification more challenging.

There will be more exchanges developing as climate change regulations become more prevalent in the U.S. In California, the CCAR is developing a registration and trading program for voluntary early reductions under AB 32, focusing on offsite reductions from sources that are less likely to be regulated. In 2006, CCX announced the formation of the New York Climate Exchange and the Northeast Climate Exchange, who will develop instruments for Regional Greenhouse Gas Initiative (RGGI) in 2009.

RGGI is an agreement that is signed by the Governors of 10 member states, including: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. The states agree to cap emissions from fossil-fuel fired electric generation plants larger than 25 MW at current levels for 2009. A cap-and-trade program is in place with a 10 percent decrease in greenhouse gas emissions from program participants by 2019.

LEGAL AUTHORITY

The SCAQMD obtains authority to adopt, amend, or repeal rules and regulations from Health and Safety Code Sections 39002, 40000, 40001, and 40725-40728.

PUBLIC PROCESS

The Governing Board established a Climate Change Committee, which met on March 20, 2008, May 28, 2008, August 13, 2008, September 19, 2008, and October 29, 2008 to work with staff on this initiative. In addition, climate change was discussed at the Governing Board's April 17, 2008 retreat.

Staff has been working with a Technical Advisory Group comprised of representatives from CARB, CCAR, environmental and community groups, industry, academic institutions, and local government. This group has helped brainstorm initial concepts and provided valuable insight and perspectives on key design elements. The input from this group has influenced staff's recommendations/concepts, which are reflected in this staff report. This group has met five times, on March 19, 2008, April 2, 2008, April 23, 2008, May 22, 2008 and October 2, 2008. The meetings were open to the public, and other attendees also provided beneficial input.

CAPCOA, CARB and CCAR staffs evaluated the protocols that are planned for development, added suggestions for others that would be beneficial and determined which air district or agency is best suited for developing specific protocols. This will maximize resources and avoid potential duplicative efforts. Protocols will need input by the other agencies, as well as the public, and are intended to be approved for use by SCAQMD, other air districts, CARB and CCAR. A larger selection of approved protocols will be helpful for facilities and for each of these agencies.

Protocols under development by SCAQMD staff include:

- Lawnmowers;
- Leaf blowers;
- Boiler efficiency;
- Replacement of refrigerants with high global warming potential; and
- Truck stop electrification.

Proposed Rule 2702

Proposed Rule 2702 will implement an air quality investment program for the SoCal Climate Solutions Exchange, which can help stimulate voluntary actions for reducing greenhouse gases. Greenhouse gas emission reductions that rigorously follow approved protocols and are monitored and certified by SCAQMD staff will provide confidence that emission reductions are real and will continue to be maintained over the life of the project. This will provide a valuable service for facilities needing CEQA mitigation now, and the certified reductions may have possible use with future AB 32 compliance. This will depend on regulations that CARB will develop.

The objective of the Proposed Rule 2702 is to provide a mechanism for parties to fund greenhouse gas emission reduction programs that the District will implement through Requests for Proposals for projects that follow pre-approved protocols. District staff would verify the emission reductions, which will result in high quality certified reductions. Certified greenhouse gas emission reductions can be beneficial for businesses or others that achieve voluntary, early reduction of greenhouse gases. The development of the protocols for quantification, and rules and procedures for certification of emission reductions, registration, tracking of the certified emission reductions will ensure that any reductions in this program will meet the key criteria for any program of this nature:

- Real – the reductions actually occur;
- Additional – the reductions are not required by any regulation or would not have happened anyway;
- Quantifiable – the reductions can be measured using tools or tests that are reliable and give confidence;
- Verifiable – the action that resulted in reductions can be audited and there is sufficient evidence to show that the reduction occurred and was quantified correctly;
- Permanent – the reduction will be real and additional over a specified time period; and
- Enforceable – there is an enforceable mechanism in place to ensure that the action is implemented correctly, such as a contractual agreement with specific conditions and terms.

Any reductions must follow approved project protocols so the quantification is of sufficient quality to ensure that the reductions are real, quantifiable, and verifiable. Certified reductions must also be additional. Additional is generally compared to regulatory

requirements and common practices. The basic concept for “additionality” is that the reductions would not happen anyway. Additional is sometimes compared to a regulatory deadline. Reductions that occur at least a specific amount of time before the required date can be considered additional. The protocols that are proposed for inclusion in Proposed Rule 2702 do not have a regulatory deadline that would be a factor. Some of the protocols under development, such as truck stop electrification, may have future regulations affecting that category. Truck stop electrification is one of the AB 32 early action measures which is scheduled for initiation of rule development by 2012. That would need to be addressed in this protocol relative to when actions would be additional to the rule requirements. Boiler efficiency projects, if implemented at facilities under a cap-and-trade program, may also be additional only until 2012.

Another important criterion is that any reductions be verifiable. SCAQMD staff would review projects, determine if the project properly followed the appropriate protocol, and the project was executed correctly. The certified reductions must be permanent, over a specified life time which relates to the additionality of the reductions. Any reductions must also be enforceable, through permit conditions, enforceable plans, or other mechanisms to help ensure the validity of the reduction.

Proposed Rule 2702 will facilitate local investments and projects can be initiated in environmental justice or non-attainment areas where co-benefits will be helpful. Staff will not add protocols to the rule if projects would result in significant adverse impacts in environmental justice areas. Local businesses and other parties will have certainty that reductions will be of high quality, although the future need or use for these credits is yet to be determined by regulatory agencies authorizing or allowing such use. Short term needs, before CARB develops the regulatory structure and measures to implement AB 32, include the use of such certified reductions as offsets for CEQA or other mitigation.

Many greenhouse gas reduction strategies also have co-benefits of reductions of criteria or toxic pollutants. These can be especially helpful in environmental justice areas. Promoting voluntary, and early, reduction projects in the District can help accelerate other important clean air objectives.

Design Principles

The following design principles were used in development of the Regulation XXVII:

- 1. Program development will occur in an open public process.*
- 2. Reductions will be real, quantifiable, verifiable, additional, enforceable, and permanent over a specified time period.*
- 3. Incentives will be available to encourage reductions in environmental justice areas.*
- 4. Program administration will be efficient, streamlined, timely, and without conflicts of interest.*
- 5. Fees associated with the SoCal Climate Solutions Exchange will enable the program to be self-sustaining.*
- 6. Information for the public and participants in the SoCal Climate Solutions Exchange will be transparent.*

SUMMARY OF PROPOSED RULE 2702

The purpose of this rule is to establish a voluntary program to encourage, quantify, and certify voluntary, high quality greenhouse gas reductions in the District. The District will issue Requests for Proposals (RFPs) and fund projects through contracts. Projects in the District will follow pre-approved quantification protocols. Many of the projects will also reduce criteria or toxic pollutants, and can be beneficial in environmental justice and non-attainment areas.

Any person may purchase certified emission reductions created for the Greenhouse Gas Reduction Fund. It is anticipated that a variety of uses may be satisfied by these certified emission reductions. A request must be submitted with a modest plan fee. The request would contain requestor information, the amount of greenhouse gas reductions requested, and the anticipated use of the reductions, if known. District staff would evaluate requests relative to the projected supply and demand, and let the requestor know within 30 days if the request can be accommodated. If a request is accepted, there is a Participation Fee of \$15 per metric ton due within 30 days. Once fees are received, the request is considered approved, and the Participation Fee is non-refundable, unless the Executive Officer determines that there will not be sufficient projects to meet that need within 5 years.

The proposed rule specifies requirements for the Greenhouse Gas Reduction Program, which would go into effect upon rule adoption. Up to 5 percent of the fees collected could be used for program administration. District staff would pool funds and implement projects following approved protocols, through Requests for Proposals. District staff will strive to do this in a timely manner. The proposed rule gives up to two years of fund collection, and provides for more time only through a public hearing and Governing Board approval.

If there are any extra greenhouse gas emission reductions resulting from implementation of these projects, they will be deposited into the Greenhouse Gas Reduction Program Reserve. Staff will seek Governing Board approval for subsequent use of any extra reductions. Any co-benefits that result from implementing projects to reduce greenhouse gases under this rule will be quantified to the extent possible. Future protocols are being evaluated and may include reductions of other pollutants.

Available emission reductions in the Reserve may be sold, with priority being given to use of reductions in the District, and on a first-come, first-served basis. Greenhouse gas emission reductions that are purchased from the Reserve are not transferable, unless the transfer is within common ownership. Greenhouse gas emission reductions may be purchased back by the Executive Officer, with Governing Board approval.

Use of Certified Emission Reductions

It is envisioned that certified greenhouse gas emission reductions generated pursuant to Proposed Rule 2702 could be beneficial for use in CEQA or other mitigations, retirement to reduce a carbon footprint (by an individual, household, facility, corporation, community, city, or other group), or other uses, if authorized. For example, if a California, Western Climate Initiative or national program includes offsets in a future cap-and-trade program for

greenhouse gases, certified emission reductions from this proposed rule may be useful for those programs.

Program Review

Rule amendment proceedings will be used for pre-approval of protocols to help ensure a good public process. Staff plans to bring protocols to the Governing Board from a variety of sources, including SCAQMD and other air districts, CARB, and other entities. Staff will seek CARB concurrence on protocols before bringing them to the Board for approval. This can occur either through a CARB Board adoption or their Executive Officer, as allowed through CARB's policy on voluntary early actions (February 2008.)

Information on projects and the use of certified greenhouse gas emission reductions will be public information. The District web site will be maintained to list what certified greenhouse gas reductions have occurred and are available for sale. Information will be provided as to the type of projects, location, emission reductions, and contact information.

An annual report will go to the Board each year to summarize the amount of revenue collected and used under this proposed rule, the types of emission reduction projects that have been implemented or are in process, the amount of greenhouse gas reduced, the amount of any co-benefits in criteria or toxic pollutants, the location of the emission reduction projects, any benefits in environmental justice areas, the number and types of facilities and others that have used the program, the balance of reductions remaining in the Reserve with recommendations for their use, and an evaluation of the adequacy of the fees.

Staff will recommend in the adopting resolution for these rules that third-party audits be conducted on program implementation.

Remedies

Contracts will be issued for projects that are expected to produce a specified amount of greenhouse gas emission reductions in a given amount of time. Some projects may not result in the full amount of reductions or may experience delays. In this case, the proposed rule requires that any shortfall, while not a violation of the rule, must be made up. The party that is specified in the contract as the responsible party would be required to submit Certified Emission Reductions to make up the shortfall plus an additional 10 percent within 12 months or less, as specified by the Executive Officer. This will help make sure that contract commitments are fulfilled without making rule violations a deterrent for potential projects.

Implementation Guidelines

Implementation guidelines will be developed to address implementation issues related to Proposed Rule 2702, including reduction verification procedures, inspections at project sites, etc. Staff will bring the initial guidelines and any substantive revisions to the Board for approval to ensure a transparent public process. The Implementation Guidelines can include the verification procedures that staff will follow, and other areas where implementation issues need to be documented or clarified. Substantive revisions will not include corrections of typographical errors or addition or change to information that would not change the emission quantification results.

Protocols

Proposed Rule 2702 includes a list of project protocols for use in this regulation. Protocols generally fall into two types – project protocols where specific actions can result in “additional” quantified reductions, and entity protocols which deal with how to quantify greenhouse gas emissions at a facility (or other broader application). For the purpose of this Regulation, protocols refer to a project protocol, rather than a facility or entity. Currently, there are 3 project protocols that have been developed by CCAR and approved by the CARB Board. These include forest and urban forest projects, and manure management.

At the December Governing Board meeting, Rule 2701 – SoCal Climate Solutions Exchange, was approved. Concerns were raised regarding potential environmental justice issues related to implementation of the manure management protocol. This proposed rule, and amendments to Rule 2701 will add restrictions for local projects that would fall under this rule for this protocol.

Staff is proposing that if a project is located in an environmental justice area, any equipment would be located greater than a quarter mile (1,320ft, 400m) of a sensitive receptor. A sensitive receptor means any residence including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade twelve (k-12) schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes. A sensitive receptor also includes long term care hospitals, hospices, prisons, and dormitories or similar live-in housing. This distance would conservatively provide protection for local residents and other sensitive receptors, and is based on land use guidance criteria for new school sites. Environmental justice areas for the District have two components – poverty level and air quality. An environmental justice area has 10 percent or more of the population below the federal poverty level and the top 15 percent particulate exposures or more than 1,000 in a million cancer risk. Data from the Multiple Air Toxic Exposure Study (MATES III) is being used to update the environmental justice map for the District, and this will be used for the local requirements for the manure management protocol. Sensitive receptors include schools, public and private (kindergarten through grade 12), licensed daycare centers, hospitals, and convalescent homes. This distance is recommended in land use guidance criteria for new school sites as a conservative distance to protect health of students from agricultural and stationary source emissions. The land use guidance criteria recommended this distance from the review of documents addressing appropriate minimum distances between sensitive receptors and sources.

CAPCOA members and District staff are developing other protocols which can be brought to the Board as rule amendments. At this time, District staff is working on protocols for the following project categories, and will develop each protocol in collaboration CARB, and have a public workshop before Governing Board consideration:

- boiler efficiency;
- truck stop electrification;
- lawn mowers;
- leaf blowers; and
- replacement of refrigerants.

FEES

This section of the staff report summarizes the different fees that would be associated with this proposed rule. The intent is to have fees support the implementation of the program and be reasonable for the program participants.

For Proposed Rule 2702, a request would be filed for purchasing certified greenhouse gas emission reductions. This would be the initial plan filing fee under Rule 306 subdivision (c), which is currently \$112.30. Once a request is approved, the person would pay a Participation Fee of \$15 per metric ton of reductions.

The Participation Fee was based initially on a review of several sources of information. Staff evaluated the price per metric ton for projects under the European Climate Exchange (ECX), and the Chicago Climate Exchange (CCX), which are two of the largest regional exchanges for trading voluntary and regulated carbon reduction credits. Staff also estimated the price per metric ton for offsets being sold by different brokers, and estimated the costs for protocols listed in Proposed Rule 2702 and others that may be added in the future.

The average price for carbon credits varies between systems, and is highly dependent on whether the credits are certified to be compliant with protocols under the United Nation's Clean Development Mechanism (CDM). The CDM is part of the Kyoto protocol and produces large amounts of offsets, often from poorer countries. CDM projects cover a wide variety of projects, for example, landfill methane capture, biogas, waste recovery, hydropower, and biomass in countries all over the world.

The following information is as of mid November, 2008.

In the EXC, CDM credits are called Certified Emission Reductions (CERs), and the average price since the inception of trading in August 2007 is approximately \$25 per metric ton in the United States and \$30 in Europe per metric ton. Trading volume is about 2 million metric tons per day in European.

The CCX trades Carbon Financial Instruments, (CFIs) which are not CDM compliant. The average price since 2003 is about \$3.50 per metric ton. Trading volume is about 50,000 metric tons per day, including future and spot contracts. Projects include offsets generated through the following protocols: agricultural methane, coal mine methane, landfill methane,

agricultural soil carbon, rangeland soil carbon, forestry, renewable energy, and ozone depleting substance destruction. Project by project review is also possible for energy efficiency and fuel switching and CDM projects.

CCAR has recently established a mechanism for tracking ownership of Carbon Reduction Tons (CRTs) that represent reductions in carbon emissions conforming to CCAR protocols. No information is available on cost for this new program at this time. Current CCAR protocols include the categories of forestry, urban forestry, landfills, and livestock. Several other protocols are in development.

In addition to exchanges, there are numerous brokers that list carbon offsets for sale. Staff looked into current prices being offered for a variety of projects. Eight different landfill gas destruction projects located throughout the United States ranged from \$5 to \$17 per metric ton. Landfill gas projects in the District would not be considered surplus because such reductions are required by rule here, so these costs were not considered in setting the price for this program. One truck stop electrification project offered a metric ton of CO₂E for \$10, but that was through a donation to help offset costs that had already occurred. A California dairy methane project was listed on one broker's web site for \$10 per metric ton.

In CARB's Economic Analysis (Appendix G) for the AB 32 Proposed Scoping Plan (October 2008), they estimated through modeling that facilities under a cap-and-trade program would be willing to pay a maximum of \$10 per metric ton for reductions to achieve their annual emission limits. This is a preliminary estimate based on a general equilibrium model of the California economy (E-DRAM) which includes 186 sectors, including industry, government, and households. The E-DRAM estimate was obtained by placing a broad-based carbon fee on the California economy and looking at the associated impact on carbon emissions. As the fee is increased in the model, it is assumed that any carbon emission generating a smaller benefit for the emitter than the associated fee will be eliminated. Using this methodology, CARB's result show that a \$10 per metric ton fee on carbon is sufficient to obtain the reductions outlined in the AB 32 Proposed Scoping Plan. This analysis implies that there are many options for reducing carbon emission in the California economy that can be achieved at a cost of \$10 per metric ton or less.

The Western Climate Initiative (WCI) released design recommendations for a WCI Regional cap-and-trade program on September 23, 2008. The scope is similar to the AB32 Proposed Scoping Plan cap-and-trade program, with similar sectors participating. The WCI would allow up to 49 percent of the total emission reductions from 2012 to 2020 to be met by offsets and allowances from other GHG emission trading systems that are recognized by the WCI Partner jurisdictions. Economic modeling for the design recommendations assumed an offset supply curve that delivers at most 5% of the total emission reductions. Under these assumptions, the WCI analysis estimated that 57% of these offsets could be supplied at a price of \$19 per metric ton.

The Participation Fee and other fees for these rules would be evaluated periodically and revisions would go to the Board in a public hearing.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Pursuant to the requirements of the California Environmental Quality Act (CEQA), a Program Environmental Assessment (PEA) was prepared for Proposed Rule 2702 – Greenhouse Gas Reduction Program, and circulated for a 30-day public review and comment period from November 4, 2008 to December 3, 2008. The potential environmental impacts from the proposed project were determined to be not significant, so no mitigation measures were required. Any public comments received on the Draft PEA will be responded to and included in the Final PEA. Changes to the proposed project were made since the release of the Draft PEA based on public input. These changes have been evaluated by SCAQMD staff and it has been concluded that they would not change any conclusions made in the Draft PEA or substantially worsen environmental impacts analyzed in the Draft PEA. Therefore, pursuant to CEQA Guidelines §15073.5, recirculation is not necessary since the information provided does not result in new significant effects.

SOCIOECONOMIC ASSESSMENT

Proposed Rule 2702 represents a voluntary program. Businesses and individuals will not participate in the proposed program if there is no perceived benefit. As such, no negative socioeconomic impacts are expected. Since the rules do not significantly affect air quality or emissions limitations, the law does not require a socioeconomic assessment.

DRAFT FINDINGS

Health and Safety Code Section 40727 requires the SCAQMD to adopt written findings of necessity, authority, clarity, consistency, non-duplication and reference.

Necessity

A need exists to adopt Proposed Rule 2702 to provide a mechanism to incentivize the early reduction of greenhouse gases to assist in achieving additional (surplus) early emission reductions by providing a transparent public process, as well as a consistent mechanism to generate reductions that are real, additional, quantifiable, verifiable, permanent and enforceable.

Authority

The SCAQMD Governing Board obtains its authority to adopt, amend, or repeal rules and regulations from California Health & Safety Code Sections 40000, 40001, 40702, and 40725 through 40728, inclusive.

Clarity

The proposed rule has been written or displayed so that its meaning can be easily understood by persons directly affected by them.

Consistency

The proposed rule is in harmony with and not in conflict with or contrary to, existing statutes, court decisions or state or federal regulations.

Non-Duplication

The proposed rule does not impose the same requirements as any state or federal regulations. The adoption is necessary and proper to execute the powers and duties granted to SCAQMD.

Reference

By adopting the proposed rule, the SCAQMD Governing Board will be implementing, interpreting, and making specific the provisions of the California Health & Safety Code 40000 (District's primary authority to regulate air pollutants from non-vehicular sources) Section 40001 (rules to achieve ambient air quality standards) and 38562 (CARB rules including market-based rules to reduce greenhouse gases.)

AQMP/LEGAL MANDATES

The proposed rule is not the result of a control measure of the 2007 AQMP and there are no legal mandates to implement the program; however, the proposed rule is intended to create a mechanism to quantify high quality additional (surplus) reductions of greenhouse gases, per the Governing Board's direction.

REFERENCES

SoCal Climate Solutions Exchange White Paper, South Coast Air Quality Management District, June 2008.

Staff Report for Proposed Rules 2700 – General and 2701 – SoCal Climate Solutions Exchange, November 2008.

South Coast Air Quality Management District (SCAQMD) Air Quality Issues in School Site Selection Guidance Document, June 2005, revised May 2007, pages 8-9.

RESPONSE TO COMMENTS

A public workshop was held in Diamond Bar on September 4, 2008. Approximately 20 people attended. The following text summarizes comments and staff responses to the key comments related to Proposed Rule 2702 raised at the meeting, as well as written comments received by November 20, 2008. Some of these comments and responses are the same as those included in the Staff Report for Rules 2700 and 2701, as they are common to both efforts.

General Comments

1. Comment: The Legislature gave ARB, with input from the CPUC and the CEC, the directive to develop a program to address GHG emissions from stationary sources. It is now deeply engaged in this effort. We believe that a SoCal Climate Solutions Exchange could lead to a fragmentation of California's global warming control effort. For example, the whole issue with "additionality" or "surplus" gets very challenging if multiple agencies are defining these terms in a different manner.

Response: Staff, in its comments to CARB on the Scoping Plan, requested that CARB define “additional.” Since CARB would be reviewing the protocols, and protocols will not be added to Rule 2701 or Proposed Rule 2702 without CARB’s concurrence, there should not be any inconsistencies when determining additionality for this program. In addition, Regulation XXVII is completely voluntary as to reduction generation and use; therefore, it is unlikely that SCAQMD’s program would lead to a fragmentation of the state’s climate change effort.

2. Comment: There is no need for a new credit program at the local level. If a facility wishes to get credit for reductions it generates at a facility, it can already do so through CCAR and soon, through the ARB. The credits issued by these organizations would be highly fungible and verifiable.

Response: This will be a voluntary program, so project proponents can choose what program to be involved with. The staff’s intent is to use consistent protocols as CARB, and to have concurrence by either the CARB Board or Executive Officer. CCAR may wish to approve protocols developed by or for the SCAQMD, as well. The purpose of SCAQMD’s Exchange program is to provide an additional option for local entities to generate high quality greenhouse gas reductions and for any user who prefers local reductions.

3. Comment: The program has insufficient checks and balances. As we understand the proposal, the District would be the responsible party for all aspects of the trading program – credit generation, credit issuance, verification, establishing price, credit registration and brokering the credits, as well. We know of no other system where one entity has control over all aspects of such a program. The current practice of disaggregating these responsibilities, especially the verifying and brokering aspects, to parties with well-developed skills in each area has worked well in a wide variety of trading markets. The lack of third-party oversight, checks and balances, and the insular nature in this proposal could unnecessarily undermine the integrity of the system, its participants, the products traded, and quite possibly the core mission of the SCAQMD to attain federal and state air standards.

Response: The District has implemented many programs involving credit generation and issuance, and has had many roles in these programs. The following table illustrates many of these examples, and the actions that District staff has been involved in. For example, the RECLAIM AQIP had the same roles for the District as what is proposed for the SoCal Climate Solutions Exchange.

SCAQMD Credit Programs

	Receive \$	Generate Reductions	Verify	Issue	Register	Track Trades
ERCs	N	N	Y	Y	Y	Y
Moyer	Y	Y	Y	n/a	n/a	n/a
1309.1	Y	Y	Y	n/a	n/a	n/a

RTCs	N	N	Y	Y	Y	Y
2202 AQIP Private	N	N	Y	Y	Y	Y
2202 AQIP SCAQMD	Y	Y	Y	n/a	n/a	n/a
RECLAIM AQIP/ Mitigation Fee	Y	Y	Y	Y	Y	Y
Mobile & Area Source Credits	N	N	Y	Y	Y	Y
SoCal Climate Exchange Reductions	N	N	Y	Y	Y	Y

The following table illustrates the roles involved in different exchanges. With the exception of verification, the proposed SoCal Climate Solutions Exchange is not different from major exchanges, such as CCX or ECX.

<u>ROLE</u>	SoCal Climate Solutions Exchange	CCAR	CCX	ECX
Protocol Development	✓	✓	✓	✓
Verify	✓	no	no	no
Register	✓	✓	✓	✓
Track Trades	✓	✓	✓	✓
Run Market	?	no	✓	✓

Staff does not agree that implementing this program will affect its core mission. In fact, when properly designed, Proposed Rule 2702 may generate co-benefits in criteria pollutants and air toxic reductions that facilitate meeting the District’s core mission. The adopting resolution will include periodic independent audits. The program will be implemented transparently, with public information available on the web and a comprehensive annual report.

4. Comment: There are too many roles for the District in this program. It would be appropriate for the District to approve project applications or to verify their performance, but not both.

Response: For Proposed Rule 2702, the District’s Governing Board would approve the project selection and the staff would serve as verifiers for the emission reductions. District staff have extensive experience in many credit generation and offset type programs, including mobile and area source credits, projects under Carl Moyer, RECLAIM mitigation fee program, rideshare offsets, and others. In many of these programs, staff has done multiple roles, including both project selection, and review of reductions. We have staff knowledgeable of the sources that will be involved with the protocols and have the experience to do this effectively. To help address the concern raised, staff is recommending periodic program audits and a transparent process.

5. Comment: SCAQMD will be taking on significant liabilities associated with operating or contracting out the operation, of a central counter-party clearing Exchange

(similar to CCX or CME). These risks include counter-party credit risk, collecting and maintaining performance bonds and margins, and negotiating all trade settlement contracts.

Response: This will be evaluated further and staff will make recommendations to the Governing Board regarding which market functions, if any, should be pursued. Staff is recommending issuance of a Request for Proposals for potential services in this area. Should the Board approve the request, it would be issued after the relevant Board meeting. Staff would explore the possibility of hiring one or more parties. The Request for Proposals is written very generally, and staff is interested in evaluating the responses to see what services might be offered.

6. Comment: A packet of comments and information related to Rules 2700 and 2701 was submitted to staff and the Governing Board on October 30, 2008 from the California Environmental Justice Movement. The materials included a declaration against carbon trading as a means to address climate change, a related news release, a fact sheet with reasons why trading is not a solution to climate change and an article and several postings relating to carbon offsets in EJ Matters for Climate Change. This information stresses that previous experience with carbon trading in the European Union has been problematic, and that emission reductions are not being realized. These stakeholders are opposed to carbon trading and offset use, and the continued use of fossil fuels. They support direct regulations, conservation, and other measures that will move us away from fossil fuel and nuclear power, and that do not impact environmental justice communities.

Response: Staff appreciates the concerns about the validity of some offsets, which is why Rules 2700, 2701 and Proposed Rule 2702 are being developed. Staff believes that adopting a local program can help address some of the concerns about the validity of reductions. Proposed regulations do not in themselves authorize or prohibit the use of these certified reductions. Placing use restrictions on credit generation would significantly limit the effectiveness of the District program by directing sources to non-AQMD greenhouse gas verifiers or registers. The adopting resolution includes direction to staff that additional protocols will not be added unless there are no significant adverse impacts in environmental justice communities. Staff is working on potential limitations regarding greenhouse gas emission reductions from manure management to evaluate potential environmental justice concerns, and has deferred consideration of that protocol until February 2009.

Protocols

7. Comment: SCAQMD should not restrict the definition of approved protocols. Other qualified organizations, such as EPA, The Climate Registry, the Western Climate Initiative, and many international agencies and groups have developed protocols that should be available for use in this program. The District would have to validate protocols for hundreds of sources, which is infeasible. Adding protocols to the rule will result in delays.

Response: Staff wants to be as inclusive as possible, consistent with the reliability of the protocols and intends to develop a robust list of protocols for use in this program.

The list of protocols in the rule could include protocols developed by any organization, provided they would result in additional reductions in the District. Protocols need to be prioritized based on the likely use in the Basin, emission reduction, whether reductions could be verified, and cost effectiveness. By adding the protocols specifically in Proposed Rule 2702, this ensures a public process. There will be some delay in this process, but staff will try to keep this to a minimum.

8. Comment: There should be consistency between protocols that are approved by CARB and those in Rule 2702. There should be no delay between these two approvals.

Response: SCAQMD staff will closely follow the development of protocols and will bring protocols approved by CARB to the SCAQMD Governing Board as quickly as possible. Staff did not want to automatically approve such protocols without giving the public the opportunity to have input, which will be provided by taking Proposed Rule 2702 through the amendment process to add protocols.

Interaction with Other Programs

9. Comment: CARB has a policy to encourage early, voluntary greenhouse gas reductions, although the process for how this will be implemented is not yet defined. SCAQMD staff should work with CARB staff in a formal process to give more certainty regarding what actions would be additional, and qualify for the SoCal Climate Solutions Exchange.

Response: Staff from the two agencies are working together on development of protocols and on the concepts for this regulation. For Regulation XXVII, the protocols will be approved by both the SCAQMD Governing Board and will have concurrence by the Executive Officer or CARB Board. SCAQMD staff agrees that it would be beneficial for CARB to provide guidance in the Scoping Plan on what reductions would be considered additional.

10. Comment: Can reductions generated under Rule 2701 be sold under different markets or will they have to be sold through an SCAQMD exchange?

Response: Reductions could be listed on any exchange that allowed them.

11. Comment: How will greenhouse gas emission reductions that occur as a result of SCAQMD rule for criteria pollutants be handled for emission inventory purposes?

Response: Any SCAQMD rule provisions would not affect how emission inventories are done. Greenhouse gas emission inventories are based on actual emissions, so to the extent that an SCAQMD rule reduces greenhouse gas emissions, there would be less emissions to report.