



## Interchangeable Emission Reduction Credits

### Part 1

#### Introduction

In 1996, the Bay Area Air Quality Management District (“Bay District”) in San Francisco began developing a rule to establish an interchangeable emission reduction credit (“IERC”) trading market for area, stationary, and mobile sources. Both the 1990 Federal Clean Air Act amendments and State law encourage development of economic incentive programs, including emission reduction credit markets, as alternatives to traditional “command and control” air pollution regulation. Since the 1970’s, the Bay District has used emission reduction credits to offset emissions from new and modified stationary sources. The draft IERC rule represents its first attempt to establish a trading market for interchangeable emission reduction credits — e.g., credits generated from mobile and area sources that can be used for compliance with future stationary source reduction requirements.

The Bay District plans to hold a public workshop on its draft rule on February 27, 1998. Communities for a Better Environment (“CBE”), an environmental justice organization, is reviewing the draft rule and the Bay District expects the group will oppose the rule. CBE has already mounted a legal challenge to the South Coast Air Quality Management District’s car scrapping program in Los Angeles (a program designed to remove older, higher polluting cars from service in exchange for credits). CBE argues that the South Coast’s car scrapping program has created toxic “hot spots” near low-income minority neighborhoods, and that some car scrapping credits the South Coast granted do not represent real emission reductions.

From CBE’s perspective, what comments would you submit to the Bay District on the draft IERC rule? Would you recommend that CBE oppose *all* market trading programs? Is the

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Bay District's draft IERC rule essentially the same as the South Coast's Rule 1610 that CBE objects to? What specific changes to the draft rule do you recommend?

## Overview: California Air Pollution Regulation

**The State Air Resources Board** State law establishes the California Air Resources Board ("CARB"), which coordinates State-wide efforts to meet ambient air quality standards and conducts research on air pollution. In addition, State law mandates that CARB regulate air pollution from motor vehicles. CARB's web site is: <http://www.arb.ca.gov>.

**Air Pollution Control Districts** To develop and enforce local air pollution rules and regulations, CARB divided California into 35 Air Pollution Control Districts or Air Quality Management Districts. Under State law, the air districts have primary authority for controlling non-mobile source air pollution. The air districts must submit plans to CARB showing how ambient air quality standards will be attained. A District Board governs each air district. It generally includes city council members and mayors from the counties in the air district. Each District Board appoints an Air Pollution Control Officer as the district's chief executive officer. State law also mandates at least one Hearing Board in each air district, comprised of five members (a lawyer, an engineer, a medical professional, and two public members). The Hearing Boards make rulings on permits, variances, and abatement orders, after holding public hearings.

The Bay Area Air Quality Management District encompasses seven counties and part of two other counties in the San Francisco Bay Area, as shown below.

**Fig. 1. The Bay Area Air Quality Management District**



**Air Basins** State law requires that CARB establish air basin boundaries based on meteorological and geographic conditions (and considering political boundaries when practicable). The air basin concept is similar to managing water resources based on watershed boundaries. CARB has divided California into fourteen air basins. The area within an air basin shares the same air masses and the ambient air quality is similar. The San Francisco Bay Area Air Basin covers almost the same area as the Bay District, except that the air basin includes *all* of Sonoma and Solano Counties.

**Best Available Retrofit Control Technology** Under California Health & Safety Code §40914, all air districts not in attainment with State ambient air quality standards must either: (1) demonstrate they will meet the State air standards by imposing five percent annual emission reductions, or (2) adopt all feasible control measures, including Best Available Retrofit Control Technology (“BARCT”). California Health & Safety Code §40606, attached in Exhibit A, defines BARCT as:

an emission limitation that is based on the maximum degree of reduction available, taking into account environmental, energy and economic impacts by each class or category of source.

Historically, the Bay District has not been able to consistently meet the State one-hour average ozone standard of nine parts per hundred million. Air data from monitoring stations in the Bay District shows that the one-hour average ozone standard was exceeded on 28 days in 1995, and on 34 days in 1996. The Bay District has not been able to make the five percent per year emission reduction “showing” required by State law, as described above. Therefore, all existing permitted stationary sources in the Bay District that emit CO and NO<sub>x</sub>, ozone precursors, must adopt the Best Available Retrofit Control Technology standards defined in Bay District rules. To date, the Bay District has developed 63 BARCT rules for various permitted stationary sources, including, e.g., gasoline dispensing facilities, synthetic solvent dry cleaning operations, geothermal power plants, and glass melting furnaces. The Bay District’s web site, <http://www.baaqmd.gov>, contains the text of BARCT Regulation 8 (encompassing Rules 1-51) and BARCT Regulation 9 (encompassing Rules 1-12).

Of the 63 existing Bay District BARCT rules, two become effective in the year 2000:

- Rule 9-10 regulating NO<sub>x</sub> and CO emissions from boilers, steam generators, and process heaters at petroleum refineries, and
- Rule 9-11 regulating NO<sub>x</sub> and CO from electric utility boilers.

The Bay District plans to issue an additional BARCT rule governing cement kilns. The Bay District may also tighten existing BARCT Rule 8-16 to require *aqueous* industrial cleaning solvents.

**Fig. 2 Bay District BARCT Rule Development**

<b>63 Existing BARCT Rules</b>	<b>2 Existing BARCT Rules Effective in Year 2000</b>	<b>2 Future BARCT Rules Planned</b>
<ul style="list-style-type: none"> <li>• Regulation 8, Rules 1-51</li> <li>• Regulation 9, Rules 1-9, 12</li> </ul>	<ul style="list-style-type: none"> <li>• Regulation 9, Rule 10 (petroleum refineries)</li> <li>• Regulation 9, Rule 11 (electric utilities)</li> </ul>	<ul style="list-style-type: none"> <li>• More stringent Regulation 8, Rule 16, requiring <i>aqueous solvents</i></li> <li>• New cement kiln BARCT rule</li> </ul>

## Emission Offset and Trading Programs: Four Examples

### Example #1: The Bay District's Existing ERC Offset Program

The Bay District's existing emission reduction credit ("ERC") program began operating in the 1970's under the District's New Source Review ("NSR") rule. The NSR rule has two components. First, all new or modified stationary sources must adopt Best Available Control Technology ("BACT"). Second, all new or modified sources that emit more than 15 tons per year of NO<sub>x</sub> or Precursor Organic Compounds ("POCs")<sup>1</sup> on a facility-wide basis, must also provide *offsets* for the emissions exceeding the 15 tons per year threshold. For new emissions of 50 or more tons per year, a 1:1.15 offset ratio applies. For new emissions greater than 15 tons per year but less than 50, a 1:1 offset ratio applies.

Stationary sources can generate ERC offsets in two ways: by permanent shutdown or emissions overcontrol. The Bay District calculates ERCs by comparing emissions during the shutdown or overcontrol period with baseline emissions. The baseline emission level is generally the maximum emission level legally allowed during any 12 month period in the last five years. Regulations 2-2 and 2-4 describe the Bay District's existing ERC offset program.

### Example #2: RECLAIM: The South Coast's NO<sub>x</sub>/SO<sub>2</sub> Trading Market

The South Coast Air Quality Management District in Los Angeles has the worst air quality in the country. To help meet Federal ambient air quality standards by 2010 (the current goal), the South Coast District instituted the Regional Clean Air Incentives Market ("RECLAIM") in January 1994. Under RECLAIM, about 330 industries and businesses emitting four or more tons of NO<sub>x</sub> or SO<sub>2</sub> per year must make annual emission reductions until 2003. For this group of sources, this represents almost an 80% reduction in these

<sup>1</sup> Under Bay District Regulation 2-2-228, POCs are defined as all carbon compounds, except carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate and methane, and excluding Non-Precursor Organic Compounds ("NPOCs") as defined in Rule 2-2-227. Along with NO<sub>x</sub> and CO, researchers believe POCs significantly contribute to ozone formation in the lower atmosphere.

emissions. To meet facility emission limits, sources may install any control equipment they choose. Sources that reduce their emissions more than required earn credits they can bank or trade. The 2003 emission cap levels apply until 2011, when the RECLAIM program expires unless renewed.

By spring 1996, RECLAIM facilities had traded more than 100,000 tons of emission reduction credits for more than \$10 million. In 1996 trading, NO<sub>x</sub> credits good in 1996 sold for \$154 per ton, while NO<sub>x</sub> credits good in 2010 sold for \$1729 per ton. In the same year, SO<sub>2</sub> credits good in 1996 sold for \$142 per ton, while SO<sub>2</sub> credits good in 2010 sold for \$2117 per ton. A 1996 RECLAIM audit showed that 86% of the participating facilities were meeting their emission reduction targets. The facilities were also on track to reduce NO<sub>x</sub> emissions by 77 tons per day and SO<sub>2</sub> emissions by 15 tons per day, by 2003.

In 1995, Ann Sholtz founded the Automated Credit Exchange (“ACE”). In partnership with the Pacific Stock Exchange, ACE operates an electronic auction system for buying and selling RECLAIM credits through the internet. After credit trading in January and February 1998 showed the greatest demand ever, Sholtz identified a short term credit scarcity:

Over the last six months, more firms’ allocation of credits have fallen near emission levels. As a result, many short-term credit prices have jumped sharply, and long-term credits streams have become precious.<sup>2</sup>

Joe Hower, a senior manager at Environ, a Los Angeles-based RECLAIM facility participating in ACE markets since 1996, predicted the trend toward higher credit prices would continue through the end of 1998:

A few years back when RECLAIM was in its infancy, credits were abundant. Many large companies – including petroleum, manufacturing and environmental giants – were hoping their allocations would be adjusted so that the surplus of RTCs could continue indefinitely. That’s not the case, so firms are taking action. Some are placing tighter controls on their emissions, but many more are going to the market, as the recent ACE results show.<sup>3</sup>

In addition to SO<sub>2</sub> and NO<sub>x</sub> trading, the South Coast had originally planned to trade VOC<sup>4</sup> credits under RECLAIM. But controversy over baseline VOC emission levels erupted in 1995. The South Coast discovered that using baseline VOC emission data from the late 1980’s would actually allow VOC emissions to increase. Industry groups favored using the

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<sup>2</sup> PR Newswire, March 26, 1998.

<sup>3</sup> Id.

<sup>4</sup> “Volatile organic compounds” or VOCs are toxic carbon-containing compounds that readily evaporate. The term is used by some to refer to a smaller group of chemicals included within the Bay District definition of Precursor Organic Compounds (Regulation 2-2-228) that are considered more toxic than other organic compounds.

higher, pre-recession VOC baseline levels, while environmentalists favored using lower VOC emission baseline levels from the early 1990's, when the economy had cooled. At the same time this controversy arose, the membership of the South Coast's District Board changed, resulting in a perceived pro-business shift in the Board's decision-making. Eventually the South Coast abandoned its plan to expand RECLAIM to cover VOC trading.

### **Example #3: Rule 1610: The South Coast's Car Scrapping Program**

In January 1993, the South Coast adopted Rule 1610 to reduce NO<sub>x</sub>, VOCs, CO, and PM emissions from motor vehicles. Under Rule 1610, Exhibit B to this case study, the South Coast issued mobile source emission reduction credits ("MERCs") in exchange for taking older, higher-polluting vehicles off the road. Under the rule, passenger cars and light-duty trucks in model years 1981 and earlier qualify as "old vehicles." The South Coast estimates that 1.9 million vehicles in their district fit this description. Once acquired, MERCs last up to three years, based on the assumption that the old vehicles could have been driven three more years if they had not been scrapped. Regulated sources can generate or buy MERCs for compliance with certain future-effective stationary source emission reduction requirements.

The Los Angeles car scrapping program has drawn wide criticism. Some activists argue that the program discriminates against the poor by making low-cost cars and used car parts hard to find. Classic car owners, collectors, and car scrapping yards claim the program will dry up the spare parts market for old cars because Rule 1610 requires that old vehicles be destroyed.

CBE has challenged Rule 1610 in court, filing a Federal Clean Air Act citizen suit against Los Angeles refineries that have used the rule: Unocal, Chevron, Tosco, and Ultramar Diamond Shamrock. In its citizen suit, CBE alleges that using car scrapping credits as alternate compliance with the South Coast's marine vapor recovery rule (designed to control VOC emissions during tanker loading), exposes Latino communities in the Los Angeles harbor district to toxic VOCs, including benzene, a human carcinogen. CBE alleges that the VOC credits used by the refineries contain less toxic constituents than those continuing to be released during tanker loading operations. Five other Los Angeles area refineries chose to install marine vapor recovery equipment at costs ranging from about \$4 to \$30 million dollars, rather than purchase VOC credits. CBE's citizen suit is pending in U.S. District Court in the Central District of California.

In a separate administrative action against CARB and the South Coast, CBE is challenging Rule 1610's constitutionality under Title VI of the 1964 Federal Civil Rights Act. This action is currently pending before U.S. EPA's Civil Rights Office.

Recently, the South Coast decided to overhaul its entire Rule 1610 car scrapping program. An April 25, 1998 article from the Los Angeles Times describing the situation is attached as Exhibit C. CBE's comments on the South Coast's car scrapping rule are attached as Exhibit D.

### **Example #4: The U.S. EPA's Acid Rain SO<sub>2</sub> Trading Program**

EPA began its acid rain SO<sub>2</sub> trading program in 1995. This trading program aims to reduce power plant emissions linked to acid rain formation, as required by the 1990 Federal Clean Air Act amendments. Under the amendments, all electric power plants must reduce and cap their SO<sub>2</sub> emissions. At the same time, power plants may trade any excess emission reductions they achieve. The trading program's first phase required that the largest emitting power plants make interim reductions. In the year 2000, the trading program's second phase will begin and additional plants may elect to participate in the trading program and provide alternative emission reductions.

EPA data collected during the trading program's first two years (1995 and 1996) show that the Phase I utilities surpassed the SO<sub>2</sub> reductions required by their statutory emission reduction caps by 35%. In the 24 states where most of the emission reductions took place, sources achieved their mandated reductions even though electricity generation increased in those states during the 1995-1996 period.

These excess reductions also cost less to achieve than predicted. Analysts estimated reduction costs would range from \$350 to \$1000 per ton of SO<sub>2</sub>. Credit trading prices have been much lower, ranging from \$62 to \$170 per ton. And, though the ecological effects of the SO<sub>2</sub> emission reductions during 1995 and 1996 cannot be determined at this early date, preliminary data indicates that sulfate deposition has decreased in many areas.

## **Statutory and Regulatory Guidance for Emission Reduction Programs**

EPA promulgated economic incentive program ("EIP") regulations and published related guidance in the Federal Register in April 1994 (well after the Clean Air Act's November 15, 1992 deadline for doing so). These regulations, now codified as 40 CFR Part 51.490, apply to EIPs that states implement in non-attainment areas. The regulations also provide discretionary guidance for EIPs that states implement in attainment areas. EPA is continuing to revise its EIP regulations and guidance, however, and intends to publish revisions in the Federal Register later in 1998. EPA's open market trading rule for ozone smog precursors, proposed in 1995, provides additional guidance to states on developing credit trading programs. See, e.g., 60 Fed. Reg. 39668, Aug. 3, 1995 and 60 Fed. Reg. 44290, Aug. 25, 1995, not attached.

In 1995, the California Legislature passed Assembly Bill 1777, now codified as California Health & Safety Code §39607.5(a), which requires that CARB develop an ERC calculation methodology for stationary, mobile, and area sources. Under this law, CARB must address credits "issued under market-based incentive programs, when those credits are used interchangeably." On May 22, 1997, CARB adopted a regulation establishing an ERC calculation methodology applicable state-wide. Section 39607.5 and the CARB regulation are attached in Exhibit A and Exhibit E, respectively.

The California Legislature also passed Senate Bill 456 in 1995, which created further incentives for developing ERC programs. California Health & Safety Code §§ 40714.5 and 40920.6 codify this bill, as amended in 1996. These code provisions are attached in Exhibit A.

The new law requires that air districts calculate the cost-effectiveness of rules or regulations they adopt in the future. If a stationary source demonstrates that its regulatory compliance costs will exceed the cost-effectiveness dollar amount the air district calculates, the source may choose an alternative compliance mechanism that produces equivalent reductions at an equal or lesser cost per ton. One such alternative compliance mechanism the statute encourages is voluntary reduction of emissions from *unregulated* sources, in place of additional higher-cost reductions from regulated sources. The statute specifically authorizes air districts to use ERCs to meet future BARCT requirements.

## **The Bay District's Draft IERC Rule**

The Bay District's draft IERC rule, attached as Exhibit F, presents a voluntary, cost-effective, alternate mechanism to comply with some Bay District regulations. The basic steps in the proposed IERC rule are as follows:

1. A source generates interchangeable credits by reducing POCs, NPOCs, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> or CO emissions from a mobile, area, or stationary source.
2. The source submits an IERC banking application to the Bay District's Air Pollution Control Officer.
3. The Bay District approves, conditionally approves, or denies the banking application, within 60-90 days.
4. The Bay District issues a banking certificate for approved IERC applications.
5. Within 10 calendar days after the Bay District makes its application decision, any dissatisfied person may appeal the decision to the Bay District's Hearing Board.
6. Sources must submit additional IERC applications to conduct the following transactions:
  - transfer ownership of banked IERCs;
  - convert ERCs to IERCs;
  - use IERCs to meet NSR offset requirements; and
  - use IERCs in lieu of compliance with future BARCT rules.
7. The Bay District maintains a banking register recording all applications, deposits, withdrawals, and transfers.

### **How credits are generated**

Emission reductions from the following sources can generate IERCs:

Stationary sources are any article, machine, equipment, operation, contrivance or related grouping of these things, which may produce

and/or emit air pollutant and possess or possessed a valid District permit during the IERC generation period.

Mobile sources are on and off-road vehicles, boats, ships, aircraft, farm equipment, lawn, garden, and utility equipment, light and heavy duty industrial/construction equipment, and other similar sources.

Area sources are non-mobile sources in the District that do not require permits, e.g., unpermitted stationary sources (residential water heaters subject to a NO<sub>x</sub> manufacturing standard or gas-fired boilers with a firing rate less than 10 million BTUs/hour) and consumer products.

Area, mobile or stationary sources may generate interchangeable emission reduction credits by reducing their emissions during “credit generation periods,” or CGPs. These credit generation periods may last up to twelve consecutive months. The draft IERC rule limits the number of credit generation periods allowed depending on the credit source and the emission reduction method. For mobile and area sources, the rule allows three credit generation periods. If a source generated credits by *curtailing*<sup>5</sup> a stationary source, the draft rule allows unlimited credit generation periods. But, the Bay District must re-evaluate the emission reduction credits every three years to ensure that the credits are still *surplus* when compared to the then-effective BARCT requirements. (The Bay District may “ratchet down” BARCT requirements in the future if the District fails to meet ambient air quality standards.) The Bay District incorporated unlimited credit generation periods for curtailed stationary sources because achieving these reductions often requires significant expenditures. For other types of emission reductions from stationary sources, e.g., shutdown, the draft rule authorizes a maximum of five credit generation periods.

The Bay District anticipates that interested parties may seek to generate credits by:

- replacing small internal combustion engines with electric motors;
- scrapping old cars;
- implementing employer-based trip reduction programs; and
- electrifying ground support vehicles at airports.

Petroleum refineries and electric utilities may be interested in generating or buying credits to meet future BARCT requirements applicable to their industries. For example, in the year 2000, BARCT Rule 9-10 will regulate NO<sub>x</sub> and CO emissions from boilers, steam generators, and process heaters at petroleum refineries. The Bay District believes that refineries may wish to generate their own interchangeable NO<sub>x</sub> credits by overcontrolling boilers, and apply the credits towards NO<sub>x</sub> BARCT compliance for furnaces at the same facility. In other words, overcontrolling NO<sub>x</sub> emissions from boilers may cost less than retrofitting furnaces to meet stricter NO<sub>x</sub> BARCT standards. Also in the year 2000, BARCT Rule 9-11 will regulate NO<sub>x</sub> and CO emissions at electric utilities. The Bay District believes

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<sup>5</sup> The draft IERC rule defines *curtailment* as an emission reduction from a permitted stationary source achieved by using additional abatement equipment or a process modification.

that these utilities may generate or purchase IERCs as alternate compliance with these future BARCT requirements.

Once generated, IERCs have a limited shelf life. Credits generated from stationary sources must be used within five years from the last day of the credit generation period. For credits generated from mobile and area sources regulated by CARB, Bay District staff will establish the credit use lifetime using a CARB protocol for the specific source involved. Credits generated from other mobile and area sources regulated by the Bay District must be used within three years from the last day of the credit generation period.

### **How credits are calculated**

The Bay District will use the following equation to calculate most IERCs:

$$(\text{baseline emissions}) - (\text{emissions during the credit generation period}) = \text{IERCs}$$

To calculate baseline emissions for the source generating the credits, the applicant will select an emission baseline period. This baseline period must be a consecutive time period, up to twelve months long, during the five years preceding the initial emission reduction. The applicant must have sufficient operational records during the selected baseline period to allow the Bay District to calculate baseline emissions.

When a stationary source shuts down, the interchangeable credits generated equal the annual baseline emissions. When a stationary source curtails emissions or otherwise reduces emissions to generate IERCs, the Bay District will calculate the credits using one of the following two methods. (The applicant will select the calculation method used.) In the first method, Bay District staff will use the equation above, subtracting emissions during the credit generation period from baseline emissions. In the second method, staff will subtract new maximum District-approved permitted emission levels from the baseline emissions.

To calculate IERCs generated from area and mobile source emission reductions, the Bay District will subtract emissions during the credit generation period from baseline emissions. The Bay District will rely on *source-specific protocols* that it develops to calculate the baseline and CGP emissions. A source-specific protocol calculates emissions based on monitoring data, standard emission factors, and other relevant information. The Bay District has proposed this source-specific protocol approach because no single pre-determined methodology can be applied to all mobile and area source operations. Instead, as applicants submit banking certificate applications to the District, the District will develop an appropriate source-specific protocol that includes the elements specified in section 2-9-604. These elements include monitoring, recordkeeping, and reporting necessary to enforce credit generation. If, for example, an operator retires 300 leaf blowers to generate NO<sub>x</sub> credits, the Bay District will develop a leaf blower protocol that uses field data on average daily use, seasonal use, and other relevant operating conditions to calculate baseline emissions and credits generated. Once developed, the Bay District will use the protocol for all leaf blower IERC banking applications.

## Obtaining IERC Banking Certificates

Sources must obtain an IERC banking certificate from the Bay District before using or trading IERCs. (In contrast, sources may generate ERCs *concurrently* with their use.) As defined in section 2-9-200 of the draft rule, to obtain a banking certificate, the IERCs must be:

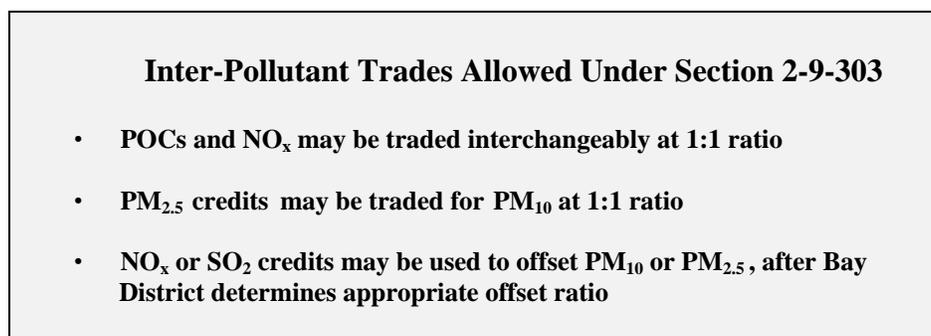
- real,
- permanent,
- quantifiable,
- enforceable, and
- surplus.

The banking certificate will include the credit owner's name, the credit amount in pounds or tons per year, and the effective date and expiration date for the credits. As noted above, sources can bank IERCs for: precursor organic compounds, non-precursor organic compounds, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, and CO. IERC owners can use or trade banked credits on a 1:1 basis for the same pollutant.

## Inter-pollutant Trading

Credit owners can also conduct inter-pollutant trades or use the credits themselves in this manner, in accordance with the draft rule's section 2-9-30, summarized in Figure 3.

**Fig. 3 Inter-Pollutant Trades**



## How credits can (and can't) be used

Under section 2-9-302 of the draft rule, regulated entities may use IERC credits to comply with the following requirements:

- Future-effective Best Available Retrofit Control Technology ("BARCT") requirements (those that become effective after the date the Bay District adopts the final IERC rule).
- New Source Review ("NSR") offset requirements for new or modified stationary sources with pre-determined limited lifetimes. The stationary source must surrender

sufficient offsets to cover the new or modified source's entire limited lifetime, before startup occurs.

- Supplementing a temporary emission cap increase, if the temporary increase does not trigger New Source Review requirements. The Bay District applies emission caps to most stationary sources. Emission caps function like a bubble and can apply to groups of sources or to a single source. Exceeding the cap by more than 10 pounds per day triggers NSR review requirements. Sometimes facilities seek approval for a temporary emission cap increase so they can increase production to meet higher demand without violating their emission cap. Using IERCs to temporarily supplement a cap would eliminate the need for the applicant to obtain a variance before a temporary production increase.

Regulated entities may *not* use IERCs as alternate compliance with the following requirements:

- Any emission standard in effect for an existing source at or before the adoption date of the IERC rule.
- Best Available Control Technology (“BACT”).
- New Source Performance Standards (“NSPS”). EPA promulgated these rules requiring that new sources use certain pollution control equipment or meet prescribed emission limits or concentrations.
- National Emission Standards for Hazardous Air Pollutants (“NESHAPs”), including NESHAPs developed based on Maximum Achievable Control Technology (“MACT”) under the 1990 Federal Clean Air Act amendments.
- State and Bay District limits or control requirements for toxic emissions.

Figure 4, below, compares the major characteristics of the draft IERC rule and the existing Bay District ERC program for NSR offsets.

## **Conclusion**

You are CBE's attorney. Recommend a strategy for addressing the draft IERC rule, including whether CBE should use its limited resources on this matter at all. What comments, if any, should CBE provide on the draft IERC rule? Are the objections made by CBE to the Rule 1610 car scrapping program in the South Coast equally applicable to the draft IERC rule? Are there other concerns that CBE should raise given that the draft IERC rule addresses more than just car scrapping?

**Case Study Exhibits**

- Exhibit A: Selected California Health & Safety Code provisions
- Exhibit B: South Coast Air District Rule 1610
- Exhibit C: April 25, 1998 article from Los Angeles Times
- Exhibit D: CBE comments on South Coast's car scrapping program
- Exhibit E: California Air Resources Board IERC regulations
- Exhibit F: Proposed Bay District IERC Rule

Fig. 4 Summary Table for ERC and IERC Rules

Characteristic	Existing ERC Rule	Draft IERC Rule
Sources generating credits:	stationary sources only	stationary, mobile, and area sources
Credit generation period (“CGP”):	CGP concept does not apply; credits are generated instantaneously with shutdown and overcontrol of a stationary source and are presumed to last in perpetuity	CGP means a consecutive period of up to 12 months during which emissions are permanently and enforceably reduced, compared to baseline emissions
Number of credit generation periods allowed:	CGP does not apply	Number of CGPs depends on source: <ul style="list-style-type: none"> <li>• Curtailed stationary sources: 3 (with renewal periods available indefinitely)</li> <li>• other stationary sources: 5</li> <li>• mobile and area sources: 3</li> </ul>
Credit use lifetime (do credits expire if not used within a certain time?):	ERCs must be used on an annual basis	IERC expiration depends on credit source: <ul style="list-style-type: none"> <li>• stationary sources: 5 years from the last day of the CGP</li> <li>• mobile and area sources regulated by CARB: depends on the CARB protocol</li> <li>• other mobile and area sources: 3 years from the last day of the CGP</li> </ul>
How regulated entities can use credits:	<ul style="list-style-type: none"> <li>• NSR offsets only</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance with future BARCT requirements</li> <li>• NSR offsets (only for limited lifetime projects)</li> <li>• Temporary emission cap increases (if NSR not triggered)</li> </ul>
Credit calculation:	<ul style="list-style-type: none"> <li>• for overcontrol, ERCs are equal to baseline emissions minus overcontrol emissions</li> <li>• for shutdowns, ERCs are equal to baseline emissions</li> </ul>	<ul style="list-style-type: none"> <li>• for stationary sources: same as ERC calculations</li> <li>• for mobile and area sources: same equation applies, but calculations based on source-specific protocols developed by CARB or the Bay District</li> </ul>