VIA E-MAIL

July 20, 2010

Clerk of the Board
California Air Resources Board
1001 I Street, Sacramento
California 95814

Electronic submittal: http://www.arb.ca.gov/lispub/comm/bclist.php

Re: **Proposed Regulation for Energy Efficiency and Co-Benefits Assessment of Large Industrial Facilities** (California Code of Regulations, title 17, subchapter 10, article 2.1)

Dear Sir/Madam:

Valero Energy Corporation ("Valero") appreciates this opportunity to provide comments regarding the California Air Resources Board ("CARB") proposed regulation for energy efficiency and co-benefit emission assessments of large industrial facilities, as posted for public comment on June 2, 2010. Valero owns and operates two refineries in the state of California with a combined throughput capacity of over 305,000 barrels per day and markets our products on a retail and wholesale basis through an extensive pipeline distribution system. Additionally, Valero is one of the nation's largest retail operators, with a significant presence in California as well as 37 other states.

As a result of our operations in California, Valero has significant experience with many of the issues addressed through this proposed rulemaking. We have identified numerous concerns in the proposed rule and offer the following comments to improve upon the efforts of CARB in crafting a workable regulation for both industry and the administration.

1. Integration with the GHG Cap and Trade Program:
   It is critical for Valero, as well as the entire refining industry, that the GHG reductions ultimately identified and implemented through this regulation are creditable under the AB32 Cap-and-Trade Program, and will apply towards meeting our GHG reduction obligations under the cap. "Cap-and-Trade" and "Command-and-Control" regulations are typically viewed as uniquely separate approaches to achieving GHG reductions, and while not mutually exclusive, indicate a strategy by the agency that some emission reductions must be mandated, as opposed to letting market-based approaches uncover the reductions. CARB has repeatedly characterized this proposal to industry as only a "fact-finding mission" and have rejected requests to clarify how or if reductions stemming from the identified energy efficiency projects will be treated under the Cap-and-Trade program. While many would see the emission reductions gained through efficiency (even if mandated) as an obvious inclusion in the Cap-and-Trade program, the resistance the agency is displaying on clarifying this issue indicates internal discussions on the subject are continuing. This lack of certainty this creates is concerning for the following reasons:

- Energy efficiency is the first, best choice for refining operations to reduce GHG emission. The majority of remaining approaches are either unproven at industrial scales (sequestration), or tremendously cost ineffective and disruptive to operations (replacement of existing units with new technology). It is imperative that CARB not view the reductions achieved by a "command-and-control" regulation as "outside" the scope of the Cap-and-Trade program. To disallow these reductions will severely restrict, and perhaps prohibit, our ability to meet reduction obligations under the Cap.
- The Cap-and-Trade program will be more robust if GHG emission reductions from energy efficiency projects can be considered as "credits" and tradeable as other allowances. As some facilities may find greater reductions through efficiency than others, those with greater reductions may have surplus credits in a given year that can be sold/traded, supporting the overall market-based approach. The treatment of GHG reductions stemming from the efficiency regulation as "outside the cap" will reduce the viability of the Cap-and-Trade through reduced participation and eliminate market-based incentives for refiners.

While it is clear that CARB has not taken a specific position on this issue, support from the regulated community for this proposal can be enhanced with the addition of a brief statement outlining how future reductions achieved through implementing the projects indentified by this regulation will be included within the scope of the Cap-and-Trade Regulation.

2. Scope of Energy Assessments:

Section 95154(b)(1) of the draft regulation requires facilities to "Identify potential improvement projects for equipment, processes, or systems that cumulatively account for at least 95 percent of the facility's total greenhouse gas emissions reported" and to "Include a comprehensive assessment of potential energy efficiency improvement opportunities". Taken collectively, the scope of information requested in this paragraph and the extent to which CARB believes potential efficiencies savings are available, is immense. This proposal lays the foundation to regulate the totality of energy efficiency opportunities within refineries – an especially troubling proposition if the resulting reductions are disallowed under the Cap-and-Trade program. While CARB states that many of the projects identified may not be initiated, the proposed regulatory text does not provide such assurances.

- Inherent in this requirement is the belief that virtually everything that emits GHGs in the refinery is "inefficient" in some manner and therefore should be analyzed for improvements. CARB provides no basis for this assertion, as well as no basis for the requirement to address at least 95% of the GHGs reported – other than implying that, as under the GHG inventory regulation, 5% of a sources emission may be counted as *de minimis*. Rather than requiring a blanket assessment of *everything*, CARB should limit the focus to a meaningful (and manageable) number such as the top 10 emission reduction projects, or focus only on fuel combustion.
- The definitions of equipment, processes, or systems, when viewed collectively, include everything from individual pumps or flanges to all process units that make up the "crude-train" in a refinery. A comprehensive assessment of each of the equipment, processes, and systems at a refinery is untenable and unproductive. CARB must revise these definitions so as to limit the granularity for which efficiency reviews are required, or apply a de minimis threshold for each potential project, below which an official analysis is unnecessary. Otherwise, this section of the proposal can be construed to require an analysis of each

electric motor for the installation of high-efficiency windings, each pump/valve for leak-less operation, or each process heater for steam economizers.

- The requirement to include "indirect emission" e.g. electricity, imported steam, etc., opens the analysis further to sources for which there is no on-site reduction in either GHGs or co-pollutants. Including these sources potentially will obligate facilities to commit capital on GHG reduction projects which will not benefit the facility – effectively making the cost effectiveness infinite. As this proposal clearly contemplates a cost component in the analysis, we recommend that CARB eliminate the requirement to count indirects unless a mechanism is crafted by which a facility can obtain some degree of GHG credit for their investments.

3. <u>The Inclusion of Air Toxics:</u>
While the AB32 scoping plan directs CARB to assess GHG reductions "taking into account co-pollutant benefits", there are significant concerns with the manner these benefits would be identified and addressed under this proposed regulation. For instance:
    - Regulatory Redundancy: An effective regulatory program already exists to address air toxics: The Air Toxics "Hot Spots" Information and Assessment Program was established by AB 2588 (Stats. 1987, ch. 1252) and is set forth in HSC sections 44300-44393. The goals of the "Hot Spots" program are to collect emission data, identify facilities having localized impacts, ascertain health risks, notify nearby residents of significant risks, ***and require that owners of significant-risk facilities to reduce their risks below the level of significance***. Refiners are subject to this regulation and have already undergone this hot-spot assessment. Consequently, the toxics emissions that CARB purports to identify for potential reductions have, in fact, already been identified and addressed per the obligations set out under AB 2588. As such, none of the toxic substances CARB identifies in this regulation should pose a risk and thus cannot be relied upon as a "co-pollutant benefit" in reducing GHG emissions.
    - Identifying Risk versus Emissions: Emissions of the identified air toxics in and of themselves are not, as CARB indicates in the Statement of Reasons for Proposed Rulemaking, indications of "risk" as defined through cancer and non-cancerous health effects. Nevertheless, lacking a true risk assessment of these substances, CARB seems to make the presumption that the existence alone of these substances at facilities constitutes some risk for which a "co-pollutant benefit" can be obtained through its reduction. We assert that, lacking a true risk analysis for the air toxics in question, CARB cannot make any justifiable statements regarding the "co-pollutant benefit" (or lack thereof) in reducing these substances.
    - Dioxins/Furans: The inclusion of dioxin and furans on the list of air toxics for refiners in this regulation solely on the basis of other substances having scores greater than 50 is misleading and unfounded. As stated above, unless a solid risk assessment is performed to identify/quantify "risks", then a co-pollutant benefit cannot be claimed and consequently these substances should not be considered under this rule.
    - Air Toxic co-benefits should not be a driving force: The inference through the structure of this proposal is that reductions in GHGs will equate to meaningful reductions in air toxics. This is not true in all circumstances for a variety of reasons:
        - With a few exceptions such as FCC units, there is limited overlap between sources emitting GHGs and sources emitting air toxics. The energy efficiency CARB looks

to promote will largely come from reduced fuel gas consumption. Air toxic emissions from fuel gas combustion are negligible, both in mass and in constituents.

- Efficiency gained through reduced electricity will not affect refinery air emissions at all.
- Even the ability to affect GHG emission from the FCC regenerator is severely limited in that it is a "process-related emission" and not a "fuel combustion related emission": the stoichiometries from the regenerator reactions are not amenable to manipulation without fundamental changes in the catalysts regeneration process.

To the extent that the "Hot Spots" program may not have addressed all significant air toxics, Valero has significant concerns that the overt focus on air toxics will drive ARB to examine processes to maximize air toxic reductions, at the expense of maximizing GHG reductions projects. It is recommended that air toxics emissions should not be a driving force in this regulation, but should only be quantified, for the purposes of understanding emission impacts, <u>after</u> GHG reduction projects have been identified.

4. <u>CARB Cost-Effectiveness Review of this Regulation:</u>
CARB waives the requirement to perform a cost-effectiveness determination on this regulation by stating that "The proposed regulation does not require any actions to reduce emissions, nor claim any emission reductions associated with implementation of the regulation. Therefore, a traditional cost-effective analysis is not appropriate." Instead CARB rationalizes a "no adverse impact" determination by generalizing that affected sources are large companies that can simply bear the costs of performing the audits. While this may be superficially accurate, it belies the fact that this regulation forms the foundation for identifying significant, long-term emission mitigation projects. With this rulemaking, CARB has effectively bifurcated the process of identifying and implementing efficiency projects – a legally questionable maneuver. At a future date when CARB institutes rulemaking to implement the efficiency projects *determined through this rulemaking*, CARB must take into account the cost of both identifying and executing energy efficiency projects, as they are fundamentally related steps that cannot be separated financially, separate rulemakings notwithstanding.

5. <u>Conservation vs. Efficiency:</u>
Inherent in the assessment and analysis requirements of this proposal is the concept that improved efficiency equals lower GHG emissions. However, this argument fails to acknowledge the situation where efficiency can be improved, but emissions are held to the same level while process output is increased. For example, if a process heater is can be modified to increase heat absorption by 10%, there are two possible outcomes:
   - First, fuel gas is reduced by an equivalent amount, as less is needed to heat the same amount of process fluid.
   - Alternatively, a facility will hold fuel gas consumption at the same level, and run more process fluid through the heater since it can absorb more heat per unit of gas.

The first scenario is more appropriately termed "energy conservation" and will result in a decrease in GHG emissions. The second scenario does not reduce emissions, yet energy efficiencies are still gained. While this proposal does not address this difference, the overall premise appears to be that the efficiency projects identified will necessarily lead to emission reductions. This, in turn, implies that increases in production, while holding fuel consumption constant, will not be allowed and

possibly enforced through permit limitation. The implication of these potential permit limits to enforce the energy conservation aspect of the efficiency audits is beyond the scope of this proposal. However, we recommend CARB make very clear in the text of the regulation whether the goal is conservation or efficiency, as this distinction can have a significant impact on future refinery operations.

6. Applicability Threshold and Indirect Emissions:
   Section 95151 of the proposed rule outlines the applicability criteria (generally) as "*Operators of a facility with stationary sources in California that produce greenhouse gas emissions of 0.5 million metric tonnes of carbon dioxide (CO2) equivalent (MMTCO2e) or more annually. This total is to be determined by the reporting submitted by the facility operator to comply with the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions…*". We note that this criterion will overlook facilities that use large amounts of electricity but have few on-site emission sources. Such facilities could be exempt from this regulation, when in fact their indirect energy, when converted to CO_2e, clearly triggers compliance. To the extent that CARB maintains the requirements for affected facilities to analyze indirect emissions, we recommend that CARB clarify the 0.5 million MT CO_2e threshold to include indirect emissions so as to avoid the scenario described above.

7. Emergency Equipment should be Exempt:
   Section 95152 of the proposal lists those sources for which the regulation would not apply. Paragraph (c) lists "mobile and portable equipment" as exempt from consideration. Valero recommends that equipment used for emergency situation purposes also be added to this list, as they too are insignificant sources of emission and operated infrequently.

8. Timeline for Employing 3rd Party Assessors and Incomplete Reports:
   Section 95158(a) discusses the conditions and circumstances around incomplete Assessment reports and 3rd-party involvement. With regards to when the agency deems a report "incomplete", paragraph (a) implies a degree of flexibility by stating "*If the Assessment Report is deemed incomplete, the Executive Officer will notify the facility operator in writing, via either an electronic submission or hard copy, of the determination of an incomplete Assessment Report and may require the operator to conduct a third-party assessment following the requirements in section 95159*. However, Section 95159(a)(1) states that "*Within 60 days of receiving notification from ARB of its determination of an incomplete Assessment Report, the operator must submit a written application to the Executive Officer for approval of the operator's chosen third party assessor.*" There is conflicting language regarding the requirement to employ a 3rd-party auditor once an assessment is deemed incomplete. Valero recommends revising §95159(a)(1) such that a 60-day clock begins only after the agency has specifically requested a 3rd-party audit, and not automatically if the agency deems an assessment incomplete. This flexibility is especially important in that §95158(a) does not guarantee affected facilities the ability to negotiate disputes over the assessment report: "*The facility operator and the Executive Officer may mutually agree to a longer time period for reaching a decision on the completeness of the Assessment Report,…*"

Valero strongly urges CARB to revise the proposed rule consistent with these comments. Valero believes that, if crafted consistent with our recommendations, this rule could achieve the common

objectives of CARB and the regulated community by providing a useful foundation on which to base our strategy for energy efficiency and greenhouse gas control, while simultaneously protecting public health, the environment, conserving energy, and maintaining safe refinery operations for those who work within the facilities and those that live in the surrounding communities. We look forward to the promulgation of a final rule that is reasonable, technically feasible, and cost effective. On behalf of Valero, please contact me at (210) 345-4620 should you have any questions or need clarifications concerning our comments.

Sincerely,

Matthew H. Hodges
Senior Manager, Regulatory Affairs
Government Relations
Valero Energy Corporation