



ENVIRONMENTAL DEFENSE FUND

finding the ways that work

August 11, 2008

Mary D. Nichols, Chairman
California Air Resources Board
1001 I Street
Sacramento, CA 95812
(916) 445-5025 (Fax)

RE: Draft Scoping Plan Comments – Industry

Dear Chairman Nichols,

Environmental Defense Fund (EDF) applauds the California Air Resources Board (CARB) on the release of the *Climate Change Draft Scoping Plan: A Framework for Change*. The draft Scoping Plan represents an important milestone in California's implementation of the landmark Global Warming Solutions Act of 2006 (AB 32), the first state-level cap on the greenhouse gas pollution that causes global warming.

EDF respectfully submits the following comments in response to the draft Scoping Plan, and looks forward to collaborating with CARB and other stakeholders in the coming months as further materials, including the evaluation supplements, are made available.

Sincerely,

Derek Walker
Director, California Climate Initiative
Environmental Defense Fund

Industry Sector

Environmental Defense Fund supports the proposed requirements on heavy industry (refineries, cement plants, large stationary sources, power generation, etc.) in the draft Scoping Plan. Requiring large polluters to perform energy efficiency audits while also including total emissions in a multi-sector cap-and-trade program will enable industry to quickly find and make the lowest cost emissions reductions available to them. Further, by combining energy efficiency audits with co-pollution benefit audits, the draft Scoping Plan recommendation will help both businesses and CARB identify greenhouse gas emissions reductions strategies that also reduce conventional air contaminants. Although the final use of co-pollution benefit audits is not made explicit, Environmental Defense Fund supports the use and strengthening of traditional tools like rule provisions and permit conditions (as named in the draft Scoping Plan) to achieve substantial and necessary criteria pollutant and toxic air contaminant reductions, especially in areas historically burdened with these pollutants.

While we agree with CARB's recommendation for a robust, multi-sector cap-and-trade program, CARB should apply the mandatory reporting to entities emitting 10,000 MTCO₂ instead of 25,000 MTCO₂ and seek to include these additional sources in the cap-and-trade program at the appropriate time. Including more sources in the cap-and-trade program will achieve more co-pollutant emissions reductions as smaller businesses improve their efficiency and decrease fuel use and would parallel the threshold being considered in Congress.

Comments on Other Measures under Evaluation

Meeting the statewide emissions reduction goals under AB 32 will require implementing a range of emissions reduction measures. For emissions reductions unable to be captured through market-based measures, Environmental Defense Fund recommends CARB work quickly to assess the cost-effectiveness of direct regulations to reduce greenhouse gases.

Industry Sector: California Refining and Oil / Gas Production Industry

Although the refining and oil production sector is likely to be under a cap-and-trade program, CARB has nevertheless proposed direct regulations for these sectors. One main reason for this approach is that CARB is attempting to quantify the total amount of greenhouse gas, criteria pollutant, and hazardous air pollutant emissions reductions possible from the refining and oil/gas production industry. As discussed in prior comments to the agency, knowing the total emissions reduction potential from individual facilities will be unlikely because of the differences between them. While some production facilities have spent large sums of money to modernize equipment, others have trailed behind and are seeking to catch up to the industry average. Furthermore, while some oil and gas fields have sought emissions reductions through participation in voluntary programs, others have not. Although Environmental Defense Fund supports the efforts to improve the data on existing emissions reduction opportunity, we also observe that the lack of accurate quantification of the total potential reductions should not prevent these sector from being included in a cap-and-trade program.

Recommendation: CARB should perform an independent analysis to determine the most equitable method of allowance allocation.

Over the past several years, individual California refineries have been steadily expanding their production to meet increased fuel demand. Methods to achieve this production increase have ranged from refinery creep (through debottlenecking and equipment modernization) to installation of additional processing units. This increase in individual facility production and emissions rates has offset reductions from the closing of a few major refineries, (e.g. Pacific refinery). While the emissions growth rate for the entire refinery sector has remained somewhat flat, emissions rates at each facility have increased in most cases. Therefore, as CARB moves forward to develop a mandatory cap-and-trade program that includes refineries, Environmental Defense Fund recommends this sector be the subject of an independent analysis to determine the most equitable method of allowance allocation. Such an emissions trend would lean toward allocation based on emissions performance benchmarking. CARB should also examine and compare growth rates for California refinery emissions to refineries in the WCI region (outside California) and determine whether a uniform allocation method is appropriate.

Recommendation: CARB may want to delay the development of direct refinery energy efficiency regulations until the energy efficiency audits are complete.

Compared to greenhouse gas reduction projects in other sectors, initiating a major energy efficiency improvement project at a refinery may be the highest cost facility modification. However, in addition to generating greenhouse reductions, these changes also create massive energy savings that correlate to large monetary savings per facility. Environmental Defense Fund supports the measure to require energy efficiency audits at these facilities and identify where changes can be made, both to achieve emissions reductions and to save large amounts of money in the long-run.

Although Environmental Defense Fund supports the efficiency audit measure, we also are aware of the potentially long timelines associated with the making the type of equipment modifications identified in the Scoping Plan Appendices (installing new boilers, modernizing flare systems, replacing hydrogen plants, etc.). Therefore, in order to ensure that facilities have the best knowledge about where to make investments in their facilities, CARB should make sure these audits meet rigorous accounting criteria and deliver usable results. Upon completion of these audits, CARB should perform in-depth analysis and public discussion of how cost-effectiveness determinations will be used to decide whether specific efficiency improvement projects will be required, whether to initiate an industry-wide intensity standard, or whether all emissions reductions will be captured in the cap-and-trade program.

Recommendation: CARB should commit to developing a more accurate fugitive emissions accounting protocol and emissions reductions quantification protocol for the refining and oil and gas sector.

Environmental Defense Fund supports the inclusion of refineries and oil and gas production facilities within the cap-and-trade program. However, fugitive emissions estimation protocols rely heavily on assumptions and emissions factors that are difficult to verify. In addition, there are currently no accepted fugitive emissions reduction project protocols for either industry. Therefore, we recommend that CARB commit to developing a more accurate fugitive emissions accounting protocol and emissions reductions quantification protocol for the refining and oil and gas sector, subsequently noting that commitment in the final Scoping Plan. Although efforts are underway at regional organizations like the Western Regional Air Partnership, California should play a leading role in these efforts. Such an approach would be in line with the recommendations of the California Market Advisory Committee and would be consistent with the discussion of offsets in other sections of the draft Scoping Plan.

Recommendation: CARB should work with appropriate state agencies to develop tools that quantify and document enhanced oil recovery-generated carbon dioxide reductions.

Enhanced oil recovery (EOR) using carbon dioxide from industrial sources is a developed practice for improving well yields in mature fields. During this process, large amounts of carbon dioxide remains below ground, trapped where the removed oil used to reside. This technology is in place across Texas as well as in some parts of California. Although it should not qualify as sequestration in the absence of appropriate monitoring and verification, enhanced oil recovery represents the bulk of carbon dioxide that has been trapped underground thus far in the United States, and many petroleum reservoirs will make excellent sequestration sites. Environmental Defense Fund therefore recommends CARB work with the California Department of Conservation's Division of Oil and Gas and other appropriate state agencies to determine what methods can be used to quantify and document the emissions benefit of EOR in the state. If no such methods are deemed sufficient, Environmental Defense Fund recommends CARB work with these agencies to develop the approved tools to quantify and document EOR-generated carbon dioxide reductions. Furthermore, we recommend these efforts be included in the final Scoping Plan and characterized as potential emissions reduction strategies.

Industry Sector: Cement Industry

Environmental Defense Fund supports the discussion in the draft Scoping Plan of both including cement plants in the cap-and-trade program as well as the potential value of achieving demand reduction by changing the traditional make-up of cement and concrete. Through taking action to recognize the benefits of blended materials, CARB will encourage innovative practices already taking hold in California and elsewhere. It is critical, however, that any rulemaking to require certain blending ratios be accompanied by strategies to prevent leakage and undue cost impacts on the California cement industry.

Industry Sector: Boiler and Engine Operations

Improving boiler and engine efficiency has received little attention even though the strategy carries a potentially significant energy savings benefit through reducing fossil fuel use.

Environmental Defense Fund supports efforts to provide training, education, auditing assistance, etc. to owners and operators of boilers and engines. However, if the mandatory cap-and-trade program is extended to include sources whose annual emissions are 10,000 MTCO₂e or higher (as opposed to 25,000), many of the emissions benefits would accrue through the market because a price on carbon would reward those able to reduce their fuel use. Furthermore, if the cap-and-trade program included natural gas sector emissions associated with core and non-core customers, engine and boiler efficiency improvements are more likely to be demanded by energy suppliers seeking to reduce their emissions.